

# Iron Age and Roman Settlement at Old Shifford Farm, Standlake

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## SUMMARY

*Excavations were undertaken by the Oxford Archaeological Unit in 1988–9 in advance of gravel extraction, on a site lying on the north bank of the Thames two kilometres upstream of its confluence with the river Windrush. A late Iron Age and early Roman farmstead lay on the first gravel terrace on the edge of the floodplain. This modest site had a mainly pastoral economy, though fields were apparently cultivated from the settlement. Imports were few and there was little evidence of Romanization before the site was abandoned at the end of the 1st or very early 2nd century AD. Finds of 2nd- and 3rd-century AD pottery suggest that the area may have been used as arable fields, manured from a nearby site, but there is no evidence of occupation until a small settlement was established at the end of the 3rd century AD, to the north of its predecessor. This site lay on the north side of a trackway, part of an extensive drove and trackway system linking late Roman sites along the north bank of the Thames, and associated with ditched fields and paddocks. Only the eastern periphery of the occupation area was examined, together with the trackway and field systems north and south of it. It appears to have been an agricultural community probably still mainly engaged in pastoralism. It was of low status, although Roman wares were acquired.*

## ACKNOWLEDGEMENTS

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Thanks are also due to the hard-working OAU staff who excavated the site and to Mark Roberts and Helen Glass who supervised the work. Mark Maillard fieldwalked and metal-detected over the area and provided invaluable evidence on the late Roman site and medieval land use.

I am grateful to all my colleagues at OAU for their help, but particularly to Tim Allen for advice and discussions throughout the project work and to Frances Healy who edited the text and whose guidance was much appreciated. Julian Munby provided information on the medieval landscape and Karen Nichols and Paul Hughes drew the illustrations. Arthur MacGregor and Martin Henig have kindly commented on the copper alloy small finds, Chris Salter commented on the metal working evidence, Bob Wilson on the bone small finds, and Paul Booth listed the coins.

Bob Bewley and Roger Featherstone of the Royal Commission on the Historical

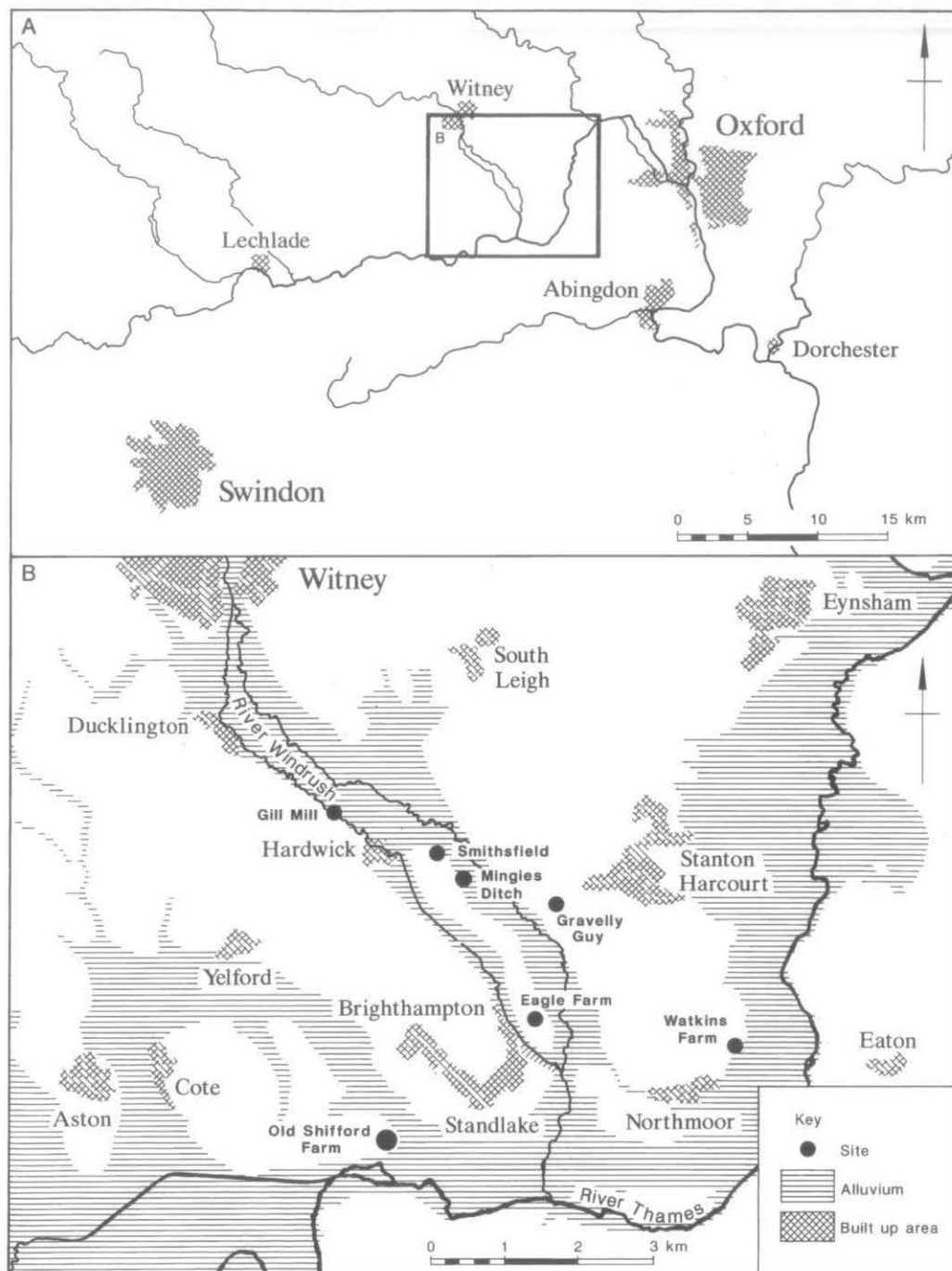


Fig. 1. Site location and geology showing excavated Iron Age and Roman sites in the locality.

Monuments of England (RCHME) very kindly agreed to plot the cropmarks on the site; the plot was undertaken by Caroline Dyer. They also arranged for permission to reproduce the RCHME surveys.

#### LOCATION OF ARCHIVE

The archive will be deposited with the Oxfordshire County Museums Service.

#### LOCATION, TOPOGRAPHY AND GEOLOGY

The site is situated in the Upper Thames Valley, 12 km. west of Oxford, in the parish of Aston, Bampton and Shifford (SP 382 022) (Fig. 1). The modern farm of Old Shifford is located 700 m. west of the site and the nearest village, Standlake, 1.5 km. to the east (Fig. 2). The archaeological investigations were undertaken over an area of 15 hectares in advance of gravel extraction by Sands and Gravels (Standlake) Limited. The land had previously been used for arable agriculture.

The site lies c. 300 m. north of the river Thames as it flows west-east to the north of the Corallian ridge, and 2 km. west (upstream) of its confluence with the river Evenlode. It is situated on the low-lying first gravel terrace (c. 63.6 m. OD) at the edge of the Thames floodplain (Fig. 1). The excavation site is shown on the Geological Survey map<sup>1</sup> as lying in an area of alluvium but, although pockets of alluvium were found in places beneath the modern ploughsoil and above the archaeological features, the area inhabited in the past was sited upon relatively well-drained land above the level of flooding. A tongue of alluvium to the east indicates the site of an old water course shown as a stream on Davis' 1793/4 map<sup>2</sup> but now a drainage ditch. To the west the ground rises and the modern farm and deserted medieval village of Shifford lie on an outcrop of Oxford Clay, overlooking the north floodplain of the Thames.

#### ARCHAEOLOGICAL BACKGROUND

'But few consecutive seasons have passed during the last forty years without the discovery of human remains in the parish of Standlake and the adjoining hamlet of Brighthampton, in the parish of Bampton, by persons employed in digging gravel for the repair of roads', thus Stephen Stone in 1857.<sup>3</sup> Little has changed in the intervening years, and advancing gravel extraction has resulted in the excavation, salvage, and, too often, destruction without record, of many archaeological sites in the lower Windrush Valley. A considerable body of data has accumulated about settlement patterns, landscape development, land use and interrelations between sites, especially in the Iron Age and Roman periods.<sup>4</sup> Aerial reconnaissance<sup>5</sup> and fieldwalking<sup>6</sup> add substantially to the excavated evidence (Fig. 2).

<sup>1</sup> Geological Survey of Britain, Sheet 236, Witney.

<sup>2</sup> R. Davis, *Survey of Oxfordshire* (1793-94).

<sup>3</sup> S. Stone, 'Account of certain (supposed) British and Saxon remains recently discovered at Standlake, in the County of Oxford', *Proc. Soc. Antiq. London*, iv (1857), 92-3.

<sup>4</sup> G. Lambrick, 'The Development of Prehistoric and Roman Farming on the Thames Gravels', in M. Fulford and E. Nichols (eds.), *Developing Landscapes of Lowland Britain. The Archaeology of the Gravels: A Review* (Soc. Antiq. London Occas. Pap. xiv, 1992), 78-105.

<sup>5</sup> Documented, for example, by D. Benson and D. Miles, *The Upper Thames Valley: An Archaeological Survey of the River Gravels*, (Oxford Arch. Unit Survey ii, 1974).

<sup>6</sup> L. Armstrong, 'Standlake, Oxfordshire', *South Midlands Arch.*, ix (1979), 31-7.

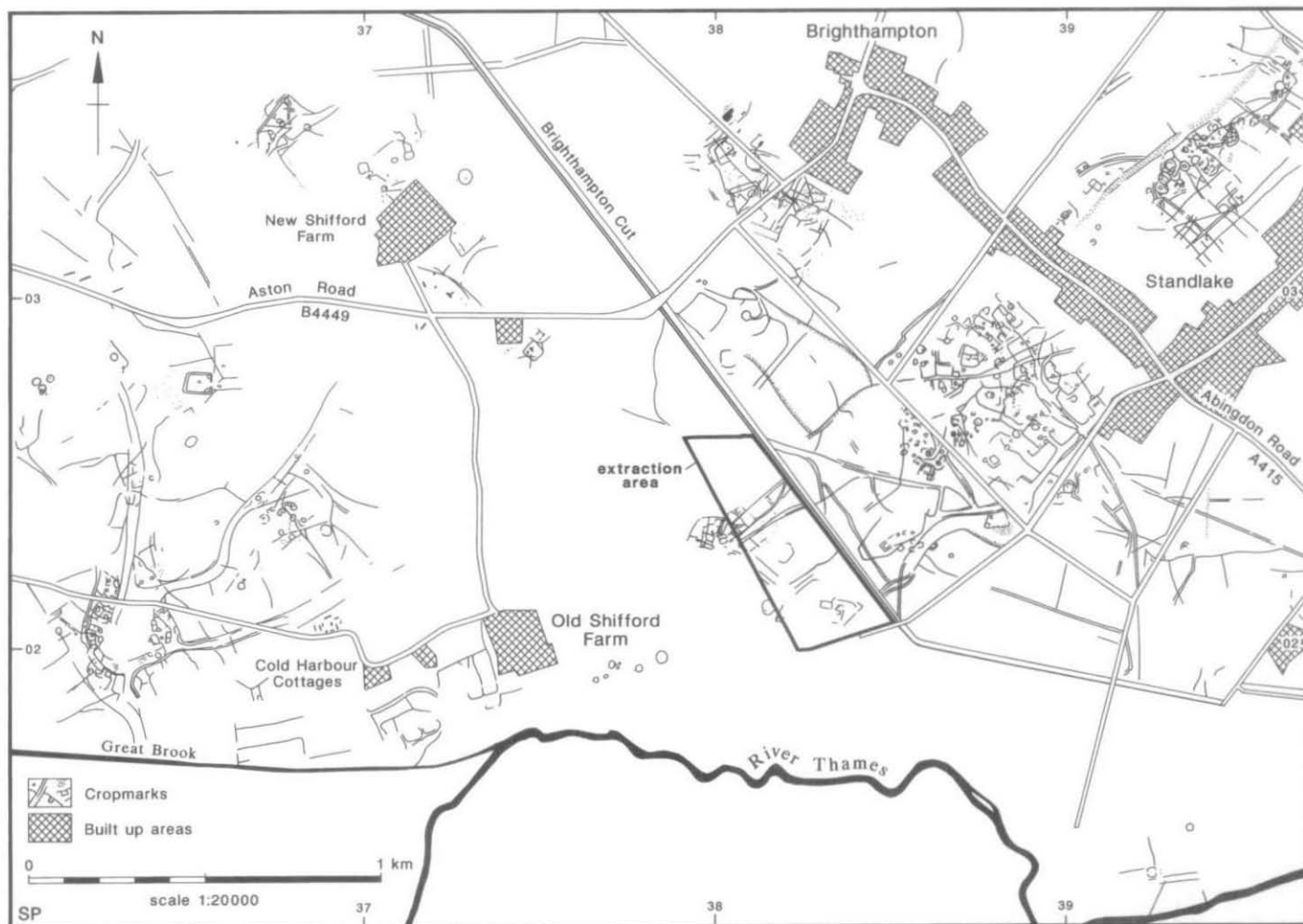


Fig. 2. The Old Shifford Farm locality, showing the development site and cropmarks based on the RCHME 1:10,000 plot and reproduced with their permission.



Throughout the Upper Thames Valley Neolithic and Bronze Age activity is attested by flint scatters, located on the gravel terraces in modern ploughsoil and not uncommonly redeposited in features of a later date.<sup>7</sup> Neolithic flints were recovered during fieldwalking between the Old Shifford Farm site and the village of Standlake in the late 1970s,<sup>8</sup> and cropmarks of ring ditches and other possible prehistoric features are visible in these fields.

Iron Age settlement in the area is well known. Indeed, one of the first excavations in the country of an Iron Age occupation site was undertaken by Stephen Stone in 1857 on Standlake Downs,<sup>9</sup> a site where salvage work was also undertaken by Bradford<sup>10</sup> and Riley<sup>11</sup> in the 1940s. More recently, the OAU has excavated several Iron Age sites in the Lower Windrush Valley, notably at Watkins Farm, Northmoor,<sup>12</sup> and Mingies Ditch, Hardwick-with-Yelford,<sup>13</sup> where middle Iron Age enclosed settlements lay respectively on first gravel terrace and floodplain, and at Gravelly Guy, Stanton Harcourt,<sup>14</sup> an early to late Iron Age open settlement on the second gravel terrace (Fig. 1). At Farmoor, 12 km. downstream, Iron Age sites lay on the opposite bank of the Thames, on first gravel terrace and floodplain.<sup>15</sup> The low-lying settlements are associated with pastoral farming, whereas the higher site at Gravelly Guy had a more mixed economy. Changes in settlement layout and very often location are common on these sites at the turn of the middle and late Iron Age.<sup>16</sup> Iron Age finds from the immediate vicinity of Old Shifford include pottery from Standlake<sup>17</sup> and pottery and a brooch from Cote (Oxfordshire Sites and Monuments Record PRN 5585).

This part of the Upper Thames Valley was only slowly affected by the Roman conquest, as demonstrated by the slow introduction of wheel-thrown pottery and Romanized wares. Very few imported items or coins have been found on local early Roman rural sites, and settlement type appears little altered from the preceding period. Most known late Iron Age and early Roman sites in the Windrush Valley area are on the second gravel terrace or higher; the nearest excavated example is at Gravelly Guy,<sup>18</sup> but sites have been excavated on the first gravel terrace, for example at Smithsfield, Hardwick-with-Yelford,<sup>19</sup> and at Eagle Farm, Standlake.<sup>20</sup> Many Roman finds have been made in the vicinity of Old Shifford Farm, in gravel workings, fieldwalking and ditch digging. A 2nd-century necked jar came from the adjacent field.<sup>21</sup> More numerous have been finds of late Roman material, especially between the site and Standlake,<sup>22</sup> which seem to be associated with a field and droveway system. Settlement shift in the 2nd century AD is a common phenomenon in the area and has been documented at, for example, Gravelly Guy<sup>23</sup> and Watkins Farm.<sup>24</sup> Reorganization of the landscape in

<sup>7</sup> R. Holgate, *Neolithic Settlement of the Thames Basin* (Brit. Arch. Rep. cxiv, 1988).

<sup>8</sup> Armstrong, op. cit. note 6, 32.

<sup>9</sup> Stone, op. cit. note 3.

<sup>10</sup> J.S.P. Bradford, 'An Early Iron Age Settlement at Standlake, Oxon.' *Antiq. Jnl.*, xxii (1942), 202-14.

<sup>11</sup> D.N. Riley, 'A Late Bronze Age and Iron Age Site on Standlake Downs, Oxon.' *Oxoniensia*, xi-xii (1946-7), 27-43.

<sup>12</sup> T.G. Allen, *An Iron Age and Romano-British Enclosed Settlement at Watkins Farm, Northmoor, Oxon.* (Thames Valley Landscapes: the Windrush Valley i, 1990).

<sup>13</sup> T.G. Allen and M. A. Robinson, *The Prehistoric Landscape and Iron Age Enclosed Settlement at Mingies Ditch, Hardwick-with-Yelford, Oxon.* (Thames Valley Landscapes: the Windrush Valley ii, 1993).

<sup>14</sup> G. Lambrick, T.G. Allen and F. Healy, *Gravelly Guy, Stanton Harcourt: the Development of a Prehistoric and Romano-British Landscape* (Thames Valley Landscapes, in prep.).

<sup>15</sup> G. Lambrick and M. Robinson, *Iron Age and Roman Riverside Settlements at Farmoor, Oxfordshire* (Counc. Brit. Arch. Res. Rep. xxxii, Oxford Arch. Unit Rep. ii, 1979).

<sup>16</sup> Lambrick, op. cit. note 4, 83.

<sup>17</sup> Armstrong, op. cit. note 6, 35.

<sup>18</sup> Lambrick et al., op. cit. note 14.

<sup>19</sup> T. Allen, 'Hardwick-with-Yelford: Smithsfield', *South Midlands Arch.* xvii (1981), 124-7.

<sup>20</sup> T.G. Allen and J.P. Moore, 'Eagle, Farm, Standlake', *South Midlands Arch.* xvii (1981), 96-7.

<sup>21</sup> *Oxoniensia*, xxxi (1966), 155.

<sup>22</sup> For example, *Oxoniensia*, xxvi-xxvii (1962-3), 338; xxix-xxx (1964-5), 192.

<sup>23</sup> Lambrick et al., op. cit. note 14.

<sup>24</sup> Allen, op. cit. note 12, 83.

the later Roman period can be seen in the abundant cropmark evidence for villages linked by an extensive trackway system and associated with large areas of ditched fields (Fig. 2), suggesting much greater stability in the settlement pattern.<sup>25</sup> The adjacent settlement near Standlake seems to have been a substantial site at the junction of several droeways. There is no evidence of direct Roman control over land ownership; changes may have been the result of communal reorganization as previous land systems had become outmoded.

Excavation of the Saxon cemetery at Brighthampton by Stephen Stone in 1859 and 1863 pointed to early Saxon occupation in this area.<sup>26</sup> Few Saxon settlements have been excavated, though cropmarks indicate that sunken-featured buildings are widespread, for example at Cote House and at Brighthampton.<sup>27</sup>

Davis' *Survey of Oxfordshire*<sup>28</sup> shows the excavation area to lie within arable fields, previously the open fields of the small township of Shifford. The fields between the excavations and the Thames were pasture.

#### HISTORY OF SITE INVESTIGATION AND EXCAVATION STRATEGY

Air photographs of this area had revealed cropmarks on the site of the proposed development and these were described in the 1974 Thames Gravel Survey.<sup>29</sup> This evidence has been enhanced by subsequent flying: a more recent survey of the Thames gravels by RCHME at 1:10,000 updates the cropmark evidence, and the information relating to the Old Shifford area is reproduced here, superimposed on modern topographical detail (Fig. 2). RCHME also kindly undertook a plot of the development area at 1:2,500 at OAU's request (Fig. 3). The photographs show a ditched track or droeway running along the edge of the gravel terrace, above the floodplain, joined by others running down towards the river and up onto higher ground. These tracks were associated with field ditches. In the development area, a probable settlement site was identified by a concentration of enclosures grouped around an open space on the north side of the main track. Other, less regular, oval and sub-rectangular enclosures were observed, especially in the south of the field, as well as pits and later ridge and furrow cultivation.

In the late 1980s the presence of the cropmarks and the proximity of the finds of Iron Age and Roman material described above prompted Oxfordshire County Council to request a field evaluation in advance of planning consent for gravel extraction. Ten machine-excavated trenches 1.5 m wide, representing approximately 2% of the threatened area, were examined by Tim Allen of OAU in 1988 (Fig. 4, Trenches A-K).<sup>30</sup> Archaeological features were identified over much of the proposed development area. The field ditches and enclosures of a 1st-century AD occupation site were found in the south-east of the field, in an area where oval and sub-rectangular enclosures could be seen from the air, and a possible waterhole of similar date was found a little to the north. The trackway and field boundary ditches in the north of the development site were shown to be later Roman in date, and contemporary finds were recovered by Mark Maillard whilst fieldwalking over the settlement site. Although gravel extraction did not impinge on the centre of the settlement, features such as a hearth, pits and dark occupation soils were found in the assessment trenches in the north-west, indicating that domestic activity extended into the threatened area. It was not possible to evaluate the north part of the field because of a standing crop, and the modest budget did not allow for salvage work. The nature of the archaeological remains in this area is thus uncertain.

Modern and medieval ploughing had removed all traces of floor surfaces and had truncated the below-ground archaeology. Features were nonetheless reasonably well preserved and insubstantial

<sup>25</sup> Benson and Miles, *op. cit.* note 5, 100.

<sup>26</sup> S. Stone, *Proc. Soc. Antiq. London*, 2nd ser., ii (1867-70), 441-3.

<sup>27</sup> Benson and Miles, *op. cit.* note 5, 41 and 46.

<sup>28</sup> Davis, *op. cit.* note 2.

<sup>29</sup> Benson and Miles, *op. cit.* note 5, 44.

<sup>30</sup> T. Allen, *Old Shifford Farm, Standlake, Assessment by Oxford Archaeological Unit* (1988), OAU Evaluation Report.



Fig. 3. Cropmark plot by RCHME of the extraction area, © R.C.H.M.E. Crown Copyright.

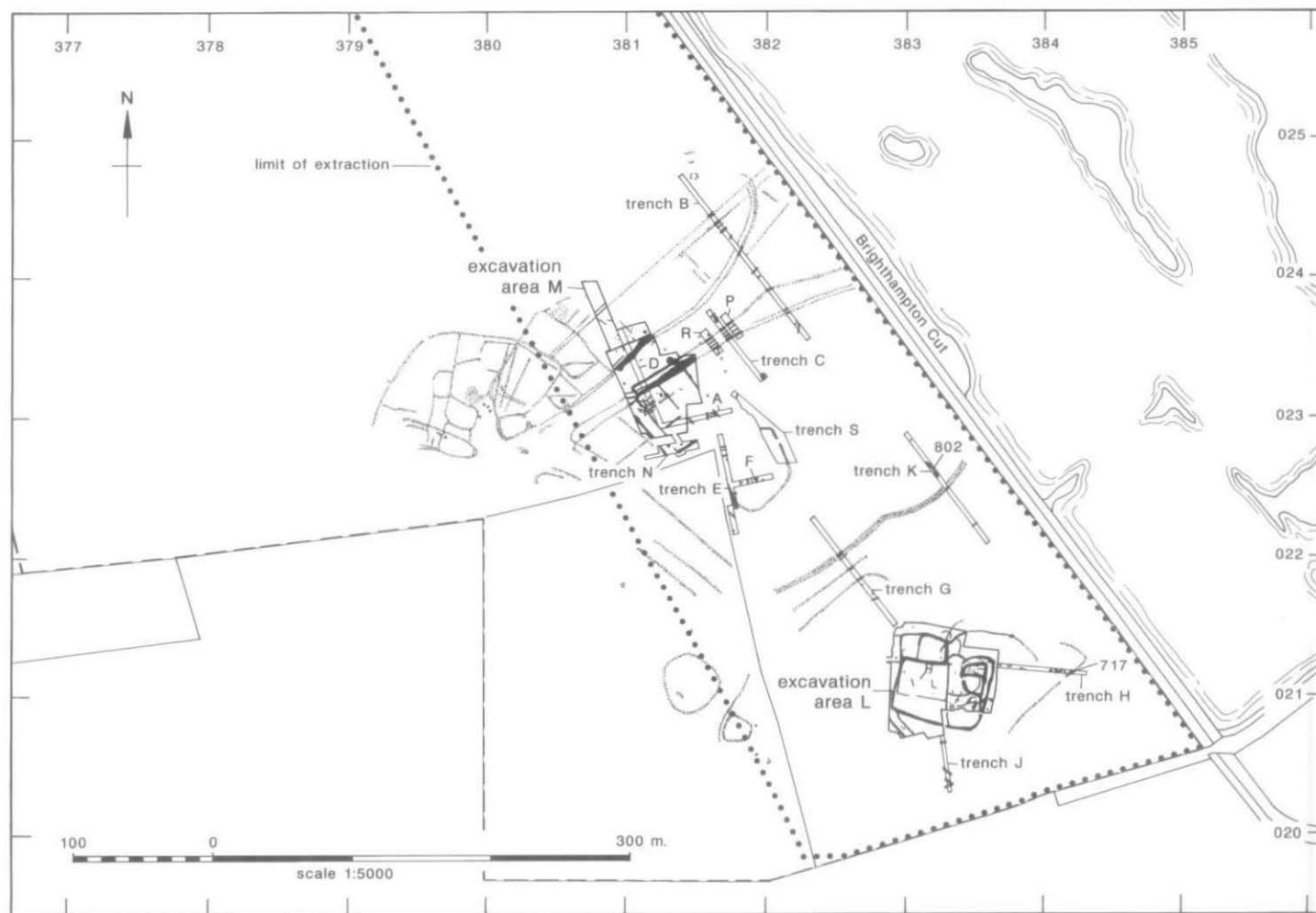


Fig. 4. Location of excavation and evaluation trenches in relation to the cropmarks.

remains like postholes and hearths had survived. It was apparent that a complete plan of the early site could be recovered, and that the environmental evidence was sufficiently well preserved to enable the economy of both sites and their surrounding landscape to be reconstructed.

The lower Windrush Valley has been the subject of intensive landscape survey in the last twenty years, and it was evident that Old Shifford Farm could yield valuable information about the causes and processes underlying the area's changing settlement patterns and land use through time. That it had been occupied in the early and late Roman periods was of great significance, as it had not previously been possible to compare early and late Roman rural settlement on adjacent sites.

On the basis of the evaluation evidence and the site's potential to contribute to regional settlement studies, two areas were selected for further investigation by open-area excavation. This work was directed in the field by Gill Hey.

Two excavation areas (Fig. 4, L and M) were stripped of ploughsoil down onto the undisturbed natural gravel with a JCB excavator. Over the early settlement an irregular area of c. 4,230 sq. m. was exposed within a rectangle measuring approximately 75 m. by 70 m. (Trench L), and a further 1,500 sq. m. were observed during later topsoil stripping by the gravel company. Over the late Roman site (Trench M) a rectangular area c. 80 m. long and averaging 40 m. wide was stripped, with an extension to the north of 35 m. x 10 m. This comprised approximately 3,550 sq. m. Additionally, three trenches were excavated to the south and east of Trench M to assess the extent of field boundaries (Trenches N to S). The western limit of extraction as originally drawn (shown on Fig. 4) was redefined during site work, and only a 10-m. margin existed between the western excavation limit and the edge of extraction (which was occupied by a standing crop during archaeological investigations). Resources did not permit the complete excavation of the site, and effort was concentrated on establishing the stratigraphic sequence of the enclosure ditches, obtaining datable assemblages from them, examining domestic features within the enclosures, and attempting to locate structures. Approximately 15% of the archaeological features on both sites were excavated by hand, although, as the earlier site was larger, more actual excavation took place on it. Soil samples for sieving and flotation were taken from a range of features of different periods within the settlements.

Upon completion of hand excavation, sections of some enclosure ditches were emptied by JCB machine in order to recover larger finds groups. A total length of 95 m. was excavated in this fashion from nine ditches on the early site and 44 m. from five ditches on the late site. No pottery was recovered from the early site by this method, and only a very small amount of fired clay. Some fairly large groups of bone were retrieved, but as this coarse approach was likely to yield only large bones, the process may have biased the sample rather than enhanced it. Machine-trenching on the later site yielded more finds. Only one previously poorly-dated ditch produced pottery, however, and this was the only instance on the site where the pottery contradicted the spatial and stratigraphic evidence, even though the ditch had appeared to be discrete! Excavation by these means may easily miss disturbance.

## ARCHAEOLOGICAL DESCRIPTION

The excavated evidence is described by the major phases through which the sites seemed to have developed. Although there were junctures at which settlement layout appeared to have changed in a conscious and planned way, development was probably more organic and continuous than a breakdown by phase indicates. In addition, it was often not possible to group all contexts confidently into a phase. No vertical stratigraphy survived on the site and the evidence provided by physical relationships between features was limited; many contexts were discrete. In analyzing the data and developing the phasing adopted here, account was first of all taken of the physical relationships between features. Spatial patterning of features and their character were then used in tandem with datable finds to produce the most plausible interpretation of the evidence. Few finds were particularly diagnostic and the relatively short-lived nature of both settlements meant that finds were of limited value in distinguishing between individual phases. The scheme presented here is, therefore, an interpretation of the evidence, and its limitations should be borne in mind.

## EARLIER PREHISTORIC

A small quantity of worked flint, ranging in date from Mesolithic or early Neolithic to early Bronze Age, and a single sherd of pottery in a Neolithic fabric were recovered. No features predating the late Iron Age were found and the material derived from later features and the modern ploughsoil. Rather more came from the southern area (Trench L) than the northern (Trenches M, C and D) but, as noted above, more excavation was undertaken in Trench L, so the difference is probably not significant. Early and late material came from both areas.

## THE LATE IRON AGE/EARLY ROMAN OCCUPATION

*TRENCH L* (Figs. 5–10), by GILL HEY and ALISTAIR BARCLAY

Trench L comprised the majority of a late Iron Age/early Romano-British settlement site, which was occupied over about one hundred years (Fig. 5). During this time it underwent two major modifications of plan and one lesser one.

*Phase 1* (Fig. 6)

*Summary.* The earliest phase of occupation on the site was represented by a series of penannular ditches and gullies, mainly located in the eastern part of the excavated area. At the centre was a large D-shaped enclosure (1018, 1038 and 1044) with an entrance towards the north-east. At the north-east entrance lay a group of postholes which did not form a recognizable structure, but which could either have been the remains of a circular building or associated with a gate and/or small pens in the entranceway. They are thought to belong to this phase because the south terminal of the enclosure and adjacent gullies contained quantities of domestic debris and charcoal, although only a little fired clay was recovered from the postholes themselves. Short stretches of linear gullies lay just beyond the entrance (1037 etc.), the form of which was obscured by later ditch digging. Small features within the enclosure may also have been contemporary.

A smaller, penannular, gully was situated to the south of the D-shaped enclosure and gullies and ditches of a more substantial enclosure lay just beyond, to the south-east.

To the north-west, other curvilinear features were excavated, including a semicircular gully (1056) which may have delimited a house site.

Small quantities of finds were recovered from this phase. Of this material, relatively dense concentrations came from the terminal of the D-shaped enclosure (1038) and an adjacent gully (1037), including 75% of all the pottery and 80% of the fired clay from this phase, most of the burnt stone, some bone and a fired clay loomweight. The semicircular gully, 1056, also yielded a relatively large group of finds. Soil samples from 1037 and 1056 had quite large numbers of carbonized seeds, including a very little wheat and barley. Reasonable quantities of bone were also recovered from the south side of the D-shaped enclosure (1018).

*The D-shaped Enclosure.* The main enclosure was subcircular, probably D-shaped in plan with a north-east entrance 9.6 m wide. The interior was approximately 28 m × 22 m and was defined by a series of shallow ditches (1018, 1038 and 1044). 1018 enclosed the southern part of the area. It was U-shaped in profile and had an average width of 1 m and depth of 0.4 m (Fig. 10, Section 7). To the east it had been cut through by ditch 1035, but ditch 1038 represents its continuation. 1038 bounded the enclosure on its eastern side up to the north-east entrance where it in-turned sharply. The ditch became progressively deeper from 0.14 m at its west end to 0.7 m at the south terminal of the enclosure. Dark grey clay was found at the base of the ditch here (Fig. 10, Section 60) indicating that it may have served as a sump. Charcoal and a fairly dense concentration of finds in the uppermost layers (see above) suggest rubbish deposition, possibly from a nearby structure. Much of the north part of ditch 1038 had been removed by the later cutting of ditch 1036. The western boundary of the enclosure appeared to have been destroyed by the later north-south linear ditch, 1062; the D-shaped enclosure ditches were seen to turn in both the north and south to run on the approximate alignment of 1062 and were observed in section to be cut by it.

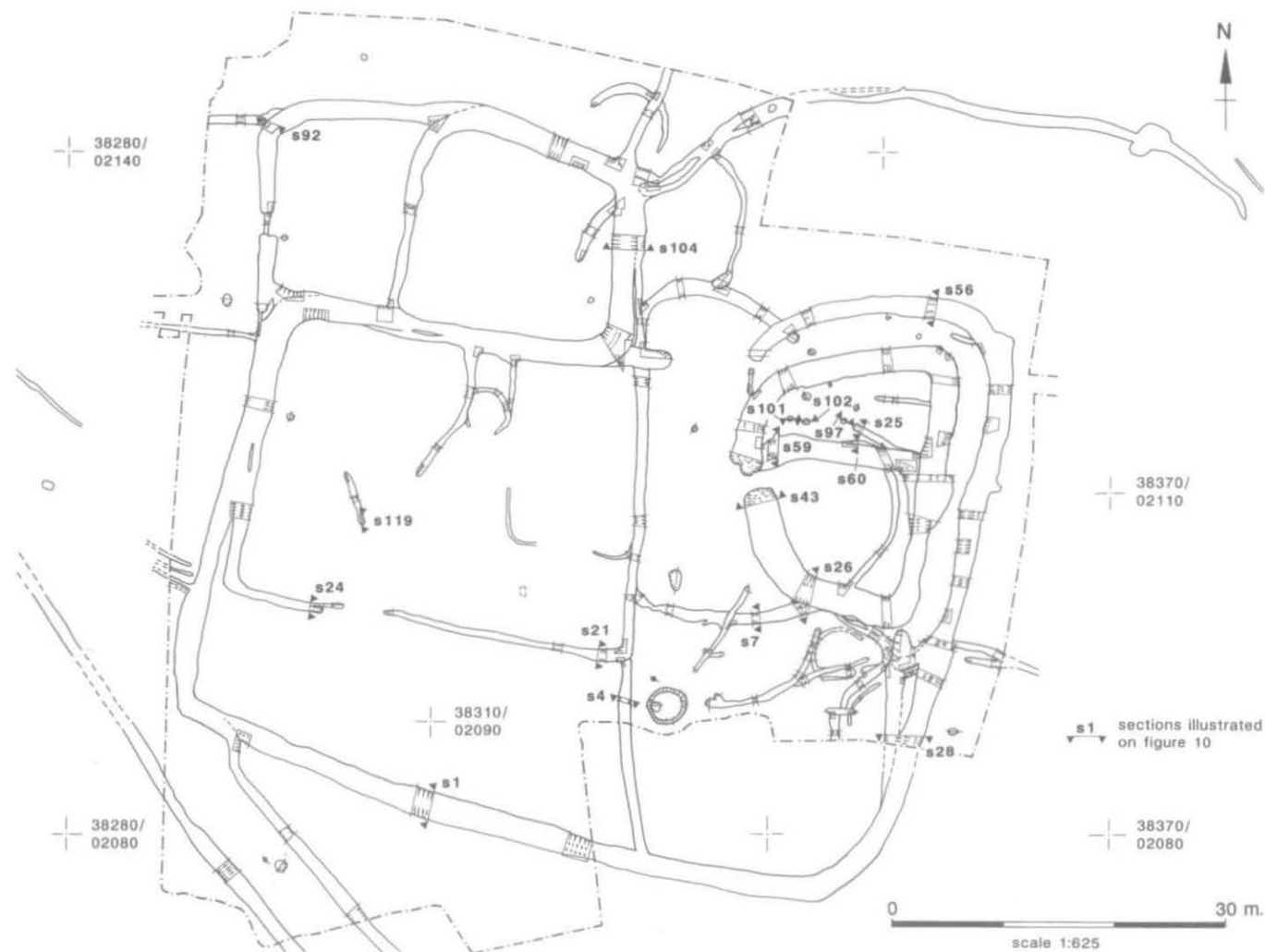


Fig. 5. Trench L: site plan.

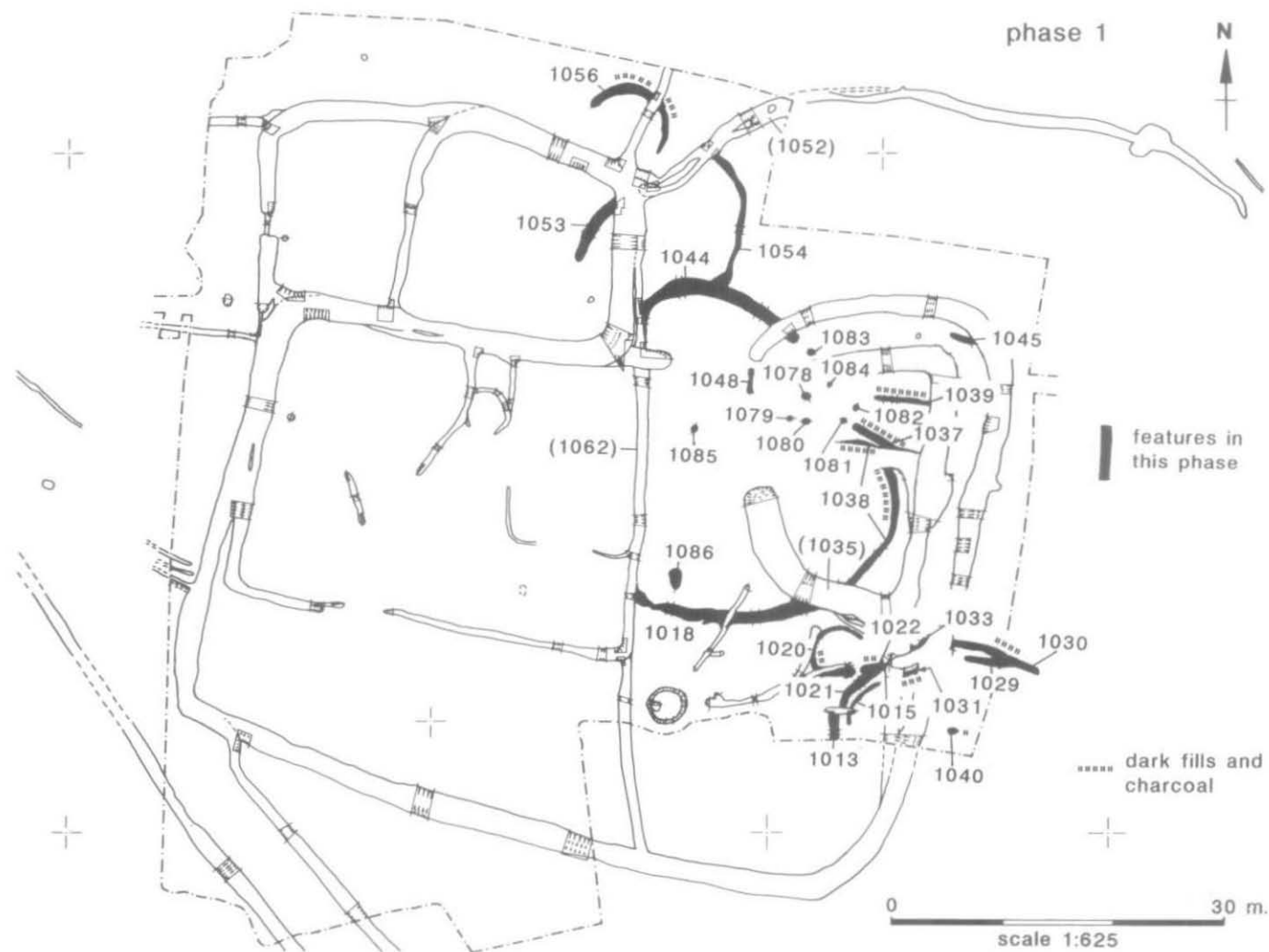


Fig. 6. Trench L: Phase 1.



Alternatively, a less substantial fence or hedge may have formed the western side which is now no longer visible. The presence of entrances along this stretch must be considered. The northern arm of the enclosure was formed by shallow ditch 1044 (up to 0.4 m. deep) with a profile similar to 1018, curving west from the northern terminal of the enclosure where, unlike the southern terminal of the ditch, it was shallow (c. 0.2 m.) and relatively finds-free. There are indications of a recut to north and south, possibly representing a localized event. There was no slumping from banks evident in any of the ditch sections.

Pit 1085 and posthole 1086, lying within the enclosure, could be contemporary.

The enclosure ditches produced only a small quantity of domestic refuse, most of which came from the eastern and southern stretches of the ditch. Pottery, fired clay and burnt stone had been discarded predominantly around the southern terminal, in contrast to animal bone which mostly came from the southern section of the ditch.

Running up to the entrance of the main enclosure were two short, linear gullies, 1037 (Fig. 10, Section 25) and 1039, both of which had dark, burnt fills and contained domestic refuse: pottery, animal bone and fired clay. Ten metres to the north-east a similar feature, 1045, had largely been destroyed by later ditch digging and modern ploughing. These gullies are thought to belong to the entrance arrangements of Phase 1 as they are cut by Phase 3 contexts and no burnt domestic debris related to the Phase 2 occupation was located nearby.

A group of seven postholes (1078-84) 0.5 m to 0.6 m in diameter and 0.15 m. to 0.2 m. deep, (Fig. 10, Sections 97, 101 and 102) was found within the entrance of the enclosure. The postholes can be interpreted in two ways. They could have belonged to a circular structure: although a building here would have blocked off access to the internal space, the presence of quantities of domestic debris in the southern terminal of the D-shaped enclosure (and nearby gullies 1037 and 1039), argue for nearby domestic occupation. The form of the destroyed western arm of the enclosure is uncertain; it could have included an alternative entrance. However, although the southern postholes formed an arc, the other features do not make a very convincing building plan and the postholes could be more readily explained as a gateway and/or small pens in the enclosure entrance.

To the north the enclosure ditch was abutted by a shallow, curving gully (1054) which ran north and west. It was cut by ditch 1052 to the north-west but did not continue beyond it. No datable artefacts were recovered from 1054 but its position, respecting the larger enclosure, and its general similarity of fill suggests that it belongs to the same phase. In the same area, a short gully (1053) found running south-west from a later enclosure may also be of Phase 1.

A curving gully to the north (1056), enclosing a semi-circular space 6.5 m. in diameter, may belong to this phase. It would also fit within Phase 2. The gully became progressively deeper and wider to the west end, where it was around 0.4 m. deep and c. 0.6 m. wide. Dark soil and charcoal filled the upper part of the ditch (except in the east) and it may have encircled a house.

A small, shallow penannular enclosure (1020), 5 m. in diameter and around 0.5 m. wide and 0.25 m. deep, lay 5 m. south-south-east of the D-shaped enclosure. It had an east-facing entrance and some charcoal flecking in the fill.

In the south-east, a series of shallow, discontinuous, curving gullies may have bounded part of a large enclosure lying south-east of the excavated area. Of these 1029, 1031 and 1015 appeared to be earliest. They were much truncated by ploughing and some over-machining but were between 0.1 m. and 0.3 m. deep and 0.4 m. to 0.7 m. wide. Charcoal was found in some fills. Pit 1040 with a charcoal fill lay within the arc of these gullies and may be contemporary with them. Only small quantities of pottery and bone were recovered from these features.

### *Phase 2 (Fig. 7)*

*Summary.* The curvilinear complex of Phase 1 was superseded by rectilinear enclosures, formed mainly of narrow, shallow ditches. These were laid out to the west of Phase 1 features, possibly respecting the line of the western boundary of the large, D-shaped enclosure. Indeed, the D-shaped enclosure may have remained in use. The main surviving rectangular enclosure had an entrance to the south and contained internal linear divisions and curvilinear gullies. The evidence strongly suggests that another rectilinear enclosure adjoined it to the north, although this had been largely cut away by later ditches. Part of a Phase 2 enclosure was also found to the south-east. Linear and curvilinear gullies and a stack-ring lay in the enclosed space.

It is possible that alterations took place in this phase with the creation of more substantial enclosures in the south-east and north-west, but the ditches resemble more closely Phase 3 features and they are described with that phase.

Finds from this phase were mostly recovered from the main rectangular enclosure and associated features on the south-east edge of it. A particularly large deposit of fired clay (1617 g., nearly 50% of the total from this phase), came from the western entrance terminal (1003), including part of an oven wall, along with pottery, burnt stone and charcoal. Features with charcoal-rich soils lay nearby. It seems likely that a house stood in this area. Another building may have lain in the area of the south-

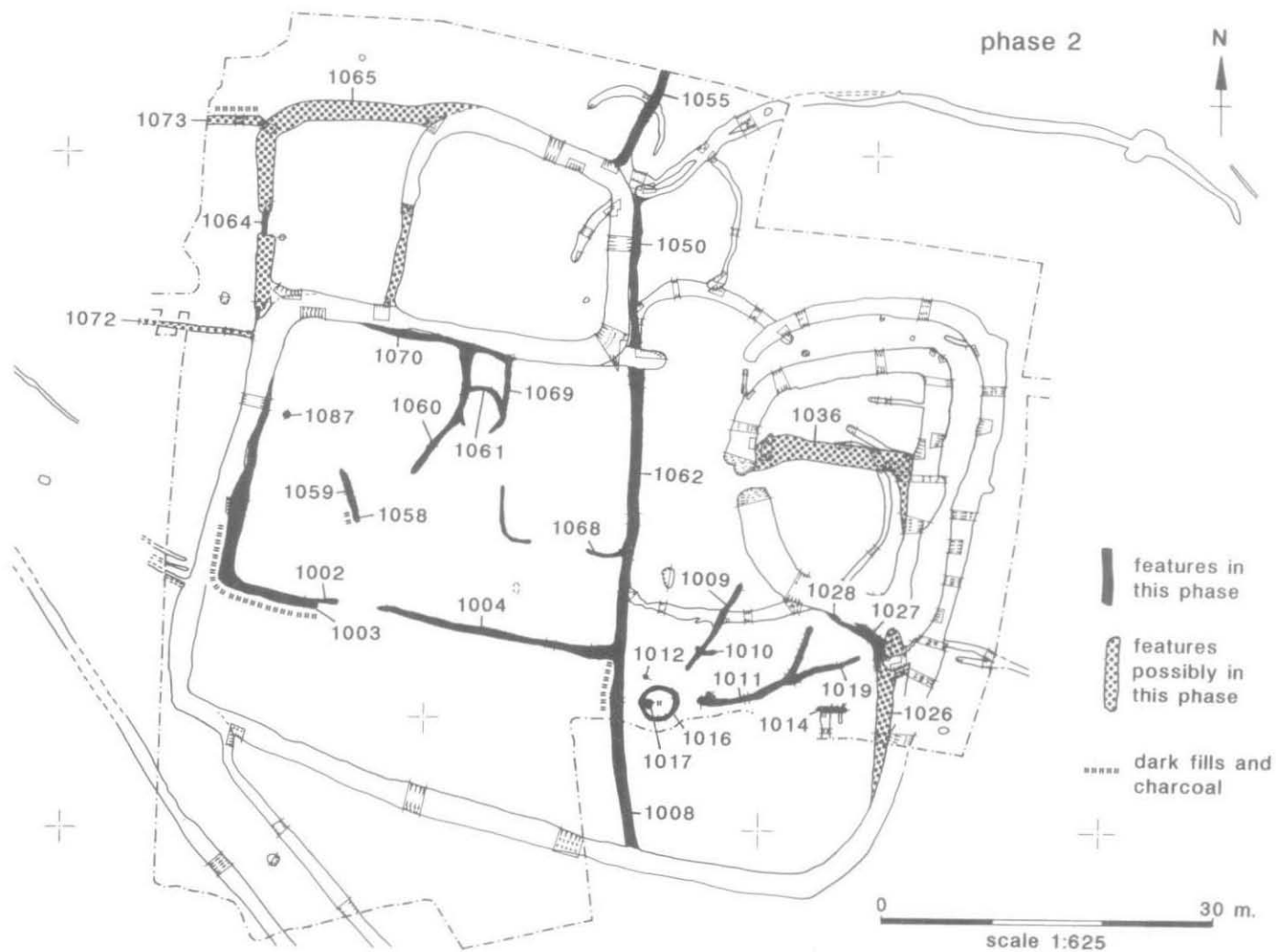


Fig. 7. Trench L: Phase 2.

east of the main enclosure (1004), the adjoining ditch (1008) and the adjacent stack ring (1016), where the largest concentrations of pottery occurred. Quantities of fired clay (including part of an oven plate) and burnt stone also came from these contexts, along with a loomweight fragment and the highest concentration of bone from the phase. Reasonable quantities of pottery were also recovered from the curvilinear features in the north of the rectangular enclosure (1060, 1061), though with little other material.

Five soil samples came from Phase 2 features, although only two contained more than twenty carbonized items (1008 and 1014). 1008 had large quantities of weed seeds (could this have come from thatch?) and little cereal, whereas 1014, which lay away from presumed domestic areas, had more than twice as many cereals as weeds, including two flax seeds. Was this area associated with cereal processing? Little chaff was recovered from any of the features.

*The Main Enclosure.* The largest enclosure had internal dimensions of 33 m.  $\times$  24 m. and an entrance 3.5 m. wide, slightly off-centre to the south. 1003 (and 1002) formed the south-west side of the enclosure, 1004 the south-east and 1062 the east. Gullies 1002, 1003 and the western part of 1004 were very slight, being only 0.4 m. wide and 0.1 m. to 0.15 m. deep (Fig. 10, Section 24). This is probably a result of differential ploughing and uneven topsoil stripping. The ditches appeared to have been recut and the enlargement of south-east ditch, 1004, only at its eastern end (Fig. 10, Section 21), suggests that the entrance may have been enlarged substantially at the same time. A slight unevenness of fill here may suggest a bank on the south (external) side. The ditch had mostly been cut away to the north but 1070 could be a remnant of the northern side. The enclosure was subdivided by a small, rectangular enclosure (1068, 1069), 10.5 m.  $\times$  7.5 m. in the north-east corner. The ditches here were shallow and heavily eroded by ploughing, but there appeared to be an opening to the south. A small penannular ditch (1061), 4 m. in diameter, cut this enclosure and was cut in turn by an irregular linear gully (1060). The penannular ditch appeared to have an entrance to the south, although it is possible that the shallow ditch had been ploughed away and this had once been a circular feature, possibly enclosing a stack of fodder. In the south-west of the main enclosure lay a short stretch of gully (1059) and two postholes (1058, 1087; Fig. 10, Section 119). Burnt material, pottery, bone and fired clay finds concentrated in these features and the adjacent enclosure ditch (1002 and 1003), suggesting domestic activity here. Deposits of refuse were also found in the south-east corner of the enclosure.

*The Northern Rectilinear Enclosure.* Lengths of ditch observed beneath and cut by Phase 3 ditches strongly suggested that a rectilinear enclosure lay to the north. Ditch 1050 would have formed the eastern side of such an enclosure, continuing the line of 1062 and, similarly, 1064 which was only visible at the entrance and terminal of a Phase 3 enclosure, may have been a continuation north of 1003. Otherwise, Phase 2 ditches had been cut away. A linear ditch, 1055, cut by northern Phase 3 ditches ran north-east from it.

*The South-Eastern Enclosure.* Another subrectangular enclosure abutted the south-east corner of the main enclosure. The southern side of this enclosure lay beyond the excavated area, though its plan was exposed during topsoil stripping by the developers. Ditch 1008 bounded the enclosure to the west. It terminated at its junction with the central enclosure, respecting it, although its top fills had been clipped by the recutting of the enclosure ditch. In size and shape (Fig. 10, Section 4) it resembled the nearby enclosure ditch 1004. Next to the stack-ring (see below) its fill contained quantities of domestic refuse. Slumping from the east side of the feature seems more likely to have derived from the excavation of the stack ring than the bank of the enclosure ditch. The south and east side of the enclosure was cut by ditches 1000 and 1026, but 1027 and 1028, running north from ditch 1026, may represent its continuation. Unless it had been designed to be in use with the D-shaped enclosure of Phase 1, the enclosure was open to the north, though access may have been controlled by linear gullies 1009, 1010, 1011, 1014 and 1019. These gullies were aligned between the entrance and a small, circular feature, 1016, 3 m. in diameter with an external bank. Similar features in the region have been interpreted as stack rings for fodder. A shallow post-pit, 1017, which lay within the western edge of the gully, might have held a post for a hayrick structure. Posthole 1012 lay to the north.

### Phase 3 (Fig. 8)

*Summary.* The rectilinear enclosures of Phase 2 were substantially enlarged in Phase 3. The main, central enclosure of Phase 2 was probably abandoned and replaced by a larger, subrectangular enclosure which also encompassed the Phase 2 south-eastern enclosure. The first phase of the new enclosure seems to have had entrances to the north and east. The enclosure was later extended to the north by an L-shaped ditch (1041) which created an entrance 7 m. wide to the north. A smaller,

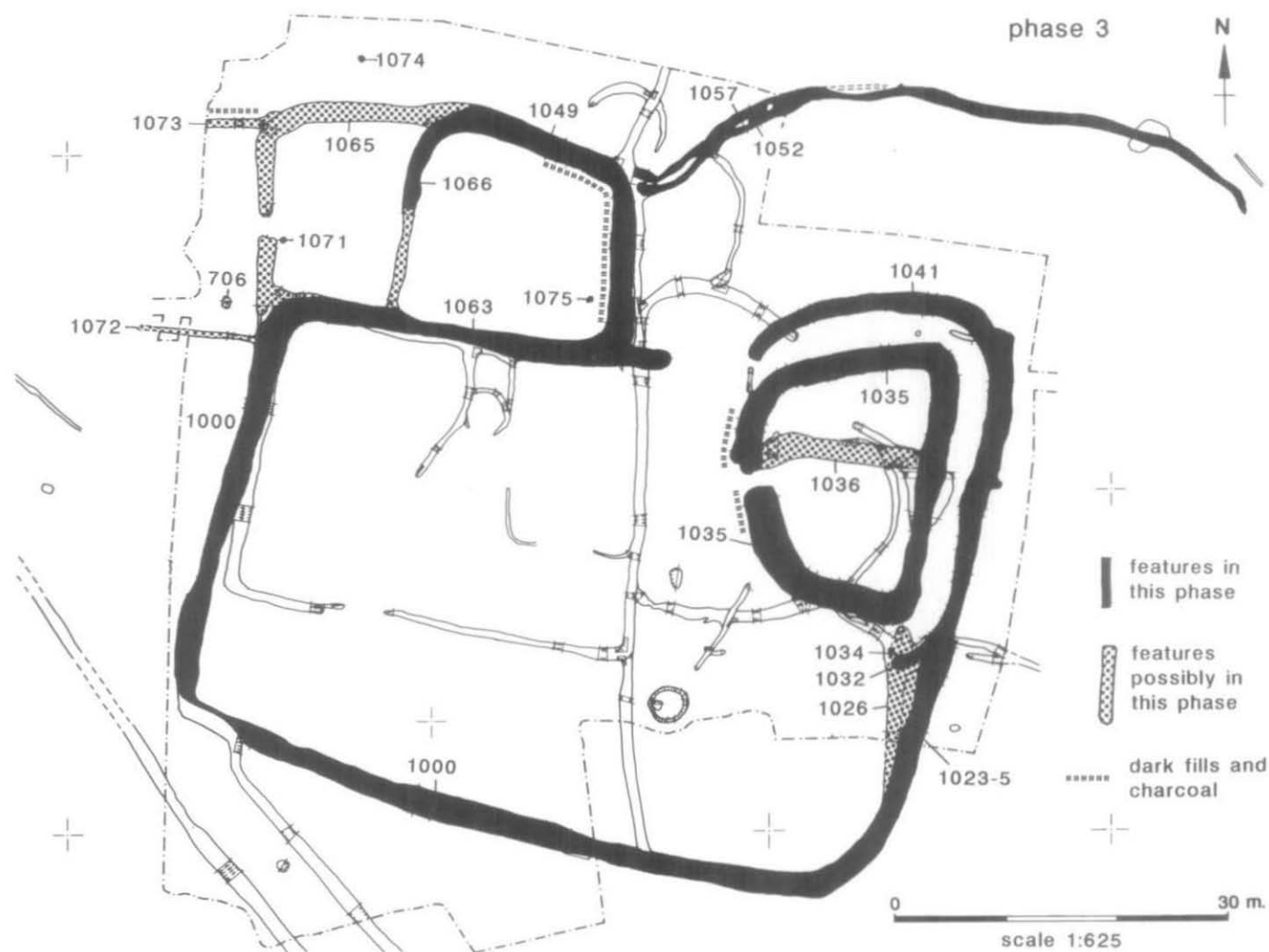


Fig. 8. Trench L: Phase 3.

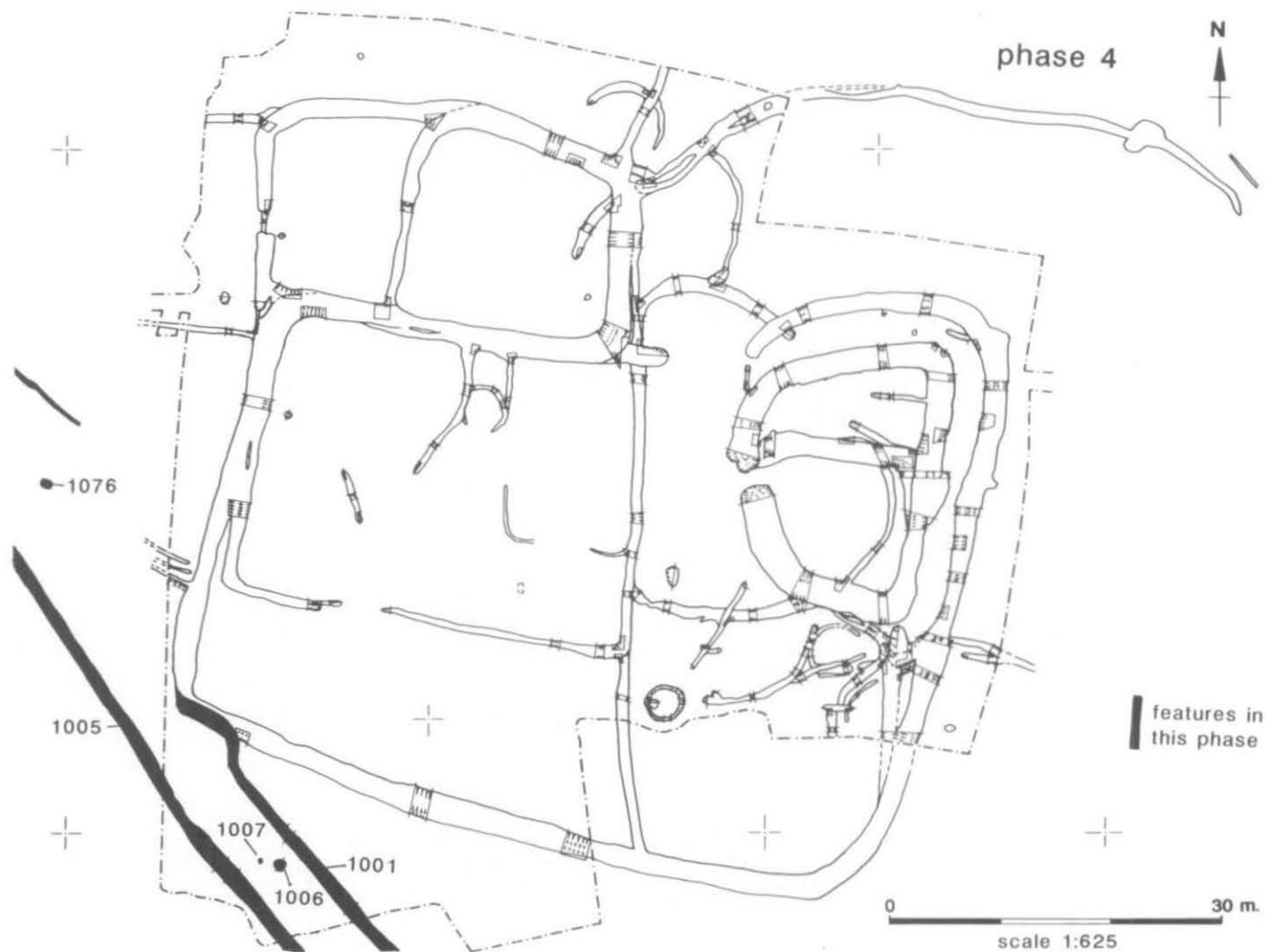
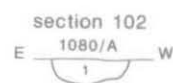
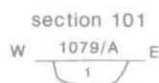
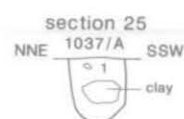
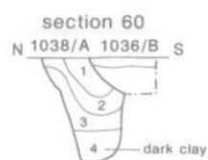
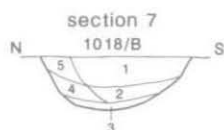
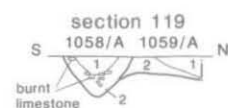
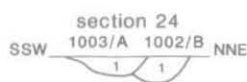
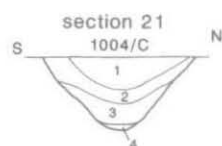
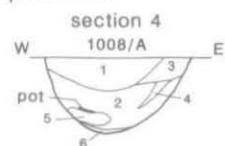


Fig. 9. Trench L: Phase 4.

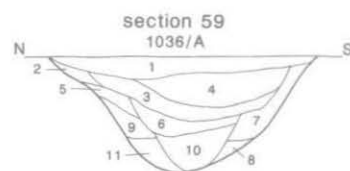
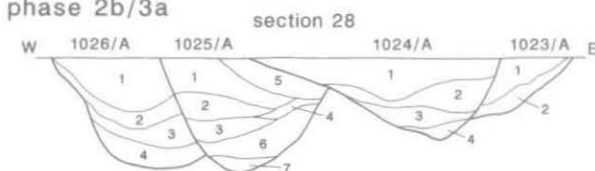
## phase 1



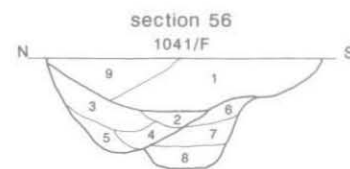
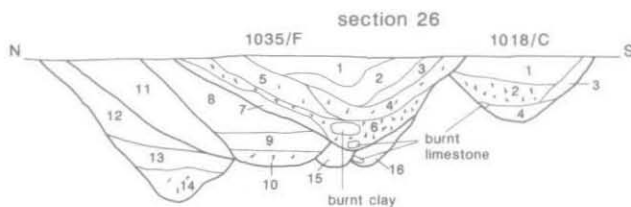
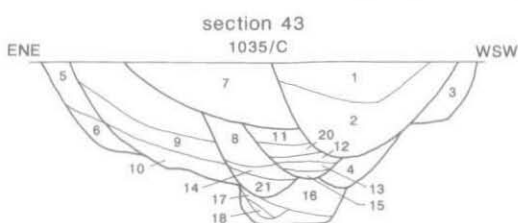
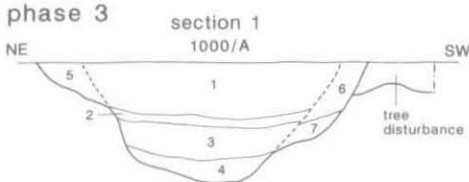
## phase 2



## phase 2b/3a



## phase 3



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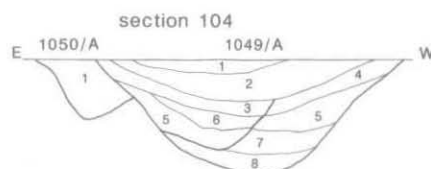
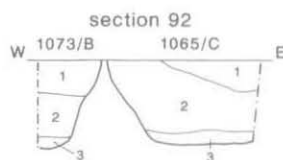


Fig. 10. Trench L: Sections.

subrectangular enclosure (1035) with curving corners and a substantial and oft recut ditch was excavated within its north-eastern arm, creating a narrow space, 3 m. wide, between the two ditches. The quantity of finds and charcoal at the terminals of the smaller enclosure suggested that it contained a building. The evidence for banks next to the ditches was very slight but *tended* to hint at an external bank for both features and thus the space between the ditches would have been filled with the upcast from the inner feature.

The northern enclosure was recut with an entrance to the west which opened onto a field, paddock or trackway running west. Quite large finds groups and two good environmental samples came from the north-west corner of the enclosure and the east end of the adjoining ditch. A few pits and postholes lay in this area. The enclosure seemed to have been subdivided. It was later recut and the western part may have been abandoned. A square enclosure would thus have been created with a wide entrance to the south-west. A posthole lay in the south-east corner and charcoal and quantities of domestic debris found in the ditches on the east side (1049) suggested a building in this area. No indication of the position of a bank could be discerned from the fills.

Shallow, irregular boundary ditches curved around the north-east of the settlement, abutting the north-east corner of the northern enclosure and forming a funnel-like entrance into the main enclosure.

The greatest quantity of finds from this settlement came from Phase 3 features, and the preservation of material was much better, the average sherd weight rising to 24 g. for the final cuts of the enclosure ditches. The small, subrectangular enclosure (1035), particularly its terminals, and the east side of the northern enclosure (1049) produced the densest finds groups, hinting at the presence of nearby structures. All categories of material were present in quantity in these two areas, including both stratified brooches and many of the other small finds from this site, especially the worked stone. All the chaff from this phase came from a terminal of 1035 and spike rush and burnt shells of aquatic molluscs in ditch 1049 suggest burnt reed from thatch.

Other concentrations of material lay in the north-west around 1073 and 1065, where pottery, burnt stone and a fired clay spindle whorl were found with good carbonized samples of cereal and weed seeds; on the north side of enclosure ditch 1041 where the heaviest concentration of pottery was recovered and some burnt stone, though with little other material; and the south side of the main enclosure (1000) where a reasonably large group of bone and pottery was located. Ditches 1041 and 1000 yielded little carbonized material.

*The Main Enclosure.* A large subrectangular enclosure 60 m. east-west and 40 m. north-south was formed by the digging of ditch 1063 to the north and 1000 (Fig. 10, Section 1) to the west and south. These ditches were more substantial than those of the preceding phase, typically 1.2 m. to 1.5 m. wide and 0.8 m. deep. Initially 1026 (Fig. 10, Section 28) seemed to have formed the eastern arm, terminating just to the south of later ditch 1035. The enclosure was probably completed to the north-east by ditch 1036 (Fig. 10, Section 59), a feature resembling 1026, but cut away on its eastern side by 1035. In this case, there would have been an entrance to the east as well as in the c. 10 m wide space between 1036 and 1063.

The north-east part of this enclosure was later remodelled by the realignment and extension of ditch 1026 to run further north and curve round to the west (1041). Ditch 1000 was probably recut at the same time. Ditch 1041 had at least three cuts, including one slightly deeper and more flat-bottomed (0.72 m. deep and around 1.1 m. wide) than the rest (Fig. 10, Section 56). The entrance between ditch 1063 and the terminal of 1041 was 7 m. wide. Within and running parallel to this ditch at a distance of c. 3 m. from its north and east side, was the equally deep ditch of a smaller D-shaped enclosure, 1035. The ditch had been recut on at least eight occasions and the cuts were, on average, 1.2 m. wide and 0.7–0.9 m. deep, deepening to 1.1 m. at the terminals; the interior measured approximately 18 m. north-south by 14 m. east-west (Fig. 10, Sections 26 & 43). The enclosure opened to the west, with a narrow entrance 2 m. wide into the larger enclosure. Quantities of refuse were recovered from it, especially from the terminals, suggesting that domestic activity took place within.

*The North-West Enclosure.* To the north-west the earlier subrectangular enclosure ditches of Phase 2 were recut by ditches 1063, 1049 (Fig. 10, Section 104) and 1065, forming an elongated rectangle. This was subdivided by an early cut of 1066 creating two enclosures, 16 m. by 11 m. and 18 m. by 16 m. respectively. A 2 m. wide entrance in the west side opened into a field or paddock 18 m. wide, formed by parallel ditches 1072 and 1073. Ditch 1073 was quite substantial (0.7 m. wide and 0.56 m. deep) and had a dark, charcoally topmost layer. It clearly terminated at the corner with 1065 (Fig. 10, Section 92). 1072, which was more slight, resembled 1073 in its narrow, U-shaped profile.

A posthole, 1071, lay just within the entrance to the north enclosure and was possibly a gatepost. A shallow pit, 706, lay in the enclosure or trackway to the west. Posthole 1074 lay to the north.

The eastern part of the north enclosure was recut (later cuts of 1049; Fig. 10, Section 104; and 1066), c. 2 m. wide and 0.75 m. deep, and a broad entrance 9 m. wide was created in the south-west. The west part of the enclosure did not seem to have been recut and may have been abandoned. A posthole lay within the south-east corner of the enclosure. Charcoal and domestic refuse were found in the east side of this enclosure.

*The North-East Settlement Boundary.* The north-east side of the settlement was enclosed by shallower ditches, 1052/1057 (around 0.7 m. wide and 0.3–0.4 m. deep), which abutted the north-east corner of the northern enclosure. The ditch was recut at least once. It mostly lay beyond the excavated area but was traced for a distance of 57 m. during topsoil stripping by the gravel company and can be seen extending a further c. 15 m. on the air photographs (Fig. 4).

#### *Phase 4 (Fig. 9)*

A trackway 5 m wide ran north-west to south-east across the south-eastern corner of the settlement (ditches 1001 and 1005), cutting Phase 3 enclosure ditch 1000. The northern ditch of the trackway kinked as it joined the earlier enclosure ditch. Two pits and a posthole were found within the line of the track.

Only a very small quantity of pottery, fired clay and bone was recovered from these features.

#### *ASSESSMENT TRENCHES (Fig. 4)*

Beyond the excavation area the assessment trenches showed that ditches were more extensive than the cropmark evidence suggested. Unfortunately, the vast majority were undated and hence it is impossible to be certain to which phase of activity they belong. Several were aligned on the axis of the trackway ditches in the north of the area and can be assumed to be later Roman in date. Some early Roman pottery was, however, recovered from features in Trench E and other features can be suggested from their form to be early, for example a waterhole in the centre of Trench F (503) and a large subrectangular enclosure c. 50 m. by 40 m., within which Trench F lay (also seen in Trench S).

Particularly critical is the dating of the two waterlogged samples from ditches 802 and 717 in the east (Trench K) and south-east (Trench H) of the site. These provided evidence of open grassland in the surrounding area but neither yielded sherds of pottery. Dated contexts in this area were late Iron Age and early Roman but the early dating of the waterlogged features should be treated with caution. The environmental evidence would be more consistent with what is known of the late Iron Age/early Roman occupation.

Grog-tempered pottery found in later contexts to the north could be derived from manuring of fields from the early site.

#### *LATE ROMAN OCCUPATION*

##### *TRENCH M (Figs. 11–18), by GILL HEY and RIC TYLER*

Trench M lay on the eastern periphery of a later Roman settlement. Excavations here (Fig. 11) exposed an E–W ditched driveway, with fields and paddocks north and south of it, a NW–SE trackway joining the main route and occupation on the east edge of the settlement site.

#### *Phase 1 (Fig. 12)*

*Summary.* The earliest phase of activity within Area M was represented by a fragmentary series of shallow field boundary ditches roughly aligned north-east to south-west, with a single, short stretch of ditch running at right angles to this. Finds recovered from these features were few, suggesting that they



lay away from an established settlement. The features were characterized by lighter-coloured clay fills and finds of an earlier date than the other features on this site. However, as only the ditches in the south had stratigraphic relationships with later contexts and finds were very scarce, their phasing is tentative. A pit to the south-east was assigned to this phase on ceramic grounds but its inclusion is conjectural.

*The Field Boundary Ditches.* Running north-east to south-west across the southern end of the excavated area were two parallel ditches, 2011 and 2056, 15 m. apart. These ditches were around 0.4 m. wide and 0.15 m. to 0.2 m. deep. The eastern end of 2056 (Fig. 18, Section 315) was destroyed by Phase 3 ditch digging but, although its western continuation was unclear it did seem to run west of the excavation trench, turning slightly northwards in this area. Ditch 2011 was approximately 21 m. long (Fig. 18, Section 158). Its eastern terminal was located; its western end was cut away by a later feature. Ditches 3041 and 3042 ran north-east to south-west, 7 m. south of 2056. 3042 was cut by Phase 2 features but neither feature clearly belong with any phase.

In the north of the excavation area, ditch 2037 ran on a similar alignment to ditches 2011 and 2056. It was slightly more substantial, being 0.7 m.  $\times$  0.25 m. deep with a broad U-shaped profile (Fig. 18, Section 176). Running roughly perpendicular to it was a shallow gully 8 m. long (2039) with early pottery in its southern terminal. Parallel to 2037 was a ditch of similar dimensions, 2036, which may be contemporary. Also in this area was a shallow ditch, 2038, running east to west and terminating south of 2037. Its alignment suggests it may be of a different phase.

Shallow ditches 2064 and 2046 lay on a similar axis to Phase 1 features but seem more likely to be associated with Phase 4 activity in this area.

*Other Features.* A discrete pit, 2015, 0.72 m. in diameter and 0.56 m. deep, was assigned to Phase 1 on the grounds of the early pottery which was retrieved from it.

### Phase 2 (Fig. 13)

*Summary.* A new field system was laid out on a similar alignment to that of Phase 1 and a north-west to south-east droveway becomes evident for the first time. This trackway, located across the centre of the excavated area between ditches 2019 and 2035, is clearly visible on aerial photographs and was an important feature of the 3rd- and 4th-century settlement, linking it with contemporary sites to the east. South of the trackway lay an enclosure or field, near the entrance to which was a small complex of intercutting gullies which could represent a series of small animal pens in the north-west corner of the field. Several pits lay in the same area. These features had completely filled with reddish-brown silty loam and were hard to distinguish from the subsoil into which they were cut. No ditches of this, or indeed any, phase on this site provided clear information on the location of banks.

The date of a trackway leading south-east parallel to the west boundary of the field is uncertain. The surviving ditches seem to belong to the Phase 3 organization.

A small quantity of pottery (including some large sherds) came from these features but less than one gramme of bone.

*The Trackway.* Ditches 2019 and 2035 defined the north and south sides of a wide droveway which can be traced to either side of the excavated area on air photographs. They ran roughly parallel and c. 28 m. apart. The contemporaneity of ditches north and south of the trackway is impossible to establish with any certainty at any period of the occupation, but is exacerbated here because datable finds from the features are so scarce. Ditch 2019 seems most likely to be the earliest northern ditch because it appeared (on flimsy grounds, as the area had been heavily machined) to be cut by later trackway ditches. Ditch 2019 (0.9 m. wide and 0.32 m. deep; Fig. 18 Section 151) was visible for 22 m. within the excavation area and extended beyond the site. To the south the trackway was bounded by ditch 2035 which was of more substantial proportions (1.6 m. wide and 0.57 m. deep; Fig. 18, Section 311), possibly because it also defined the north-west corner of a field. This enclosure ran at least 85 m. south-west to north-east. In the west it turned to run south-east, probably continuing as 3003 (Fig. 18 Section 240); the strange shape in plan is accounted for by variable machining depths because of a deep alluvial pocket in this area which overlay the Roman features. Neither ditch showed signs of having been recut.

Ditch 2055 to the south lay on a similar alignment and would seem to fit well with the layout of this phase, forming the southern edge of the field with an entrance in the south-west c. 14 m. wide. Its open, U-shaped, shallow profile (0.85 m. wide  $\times$  0.24 m. deep) resembles other Phase 2 ditches. However, pottery finds suggest a later date for this feature, possibly as part of the Phase 3 layout.

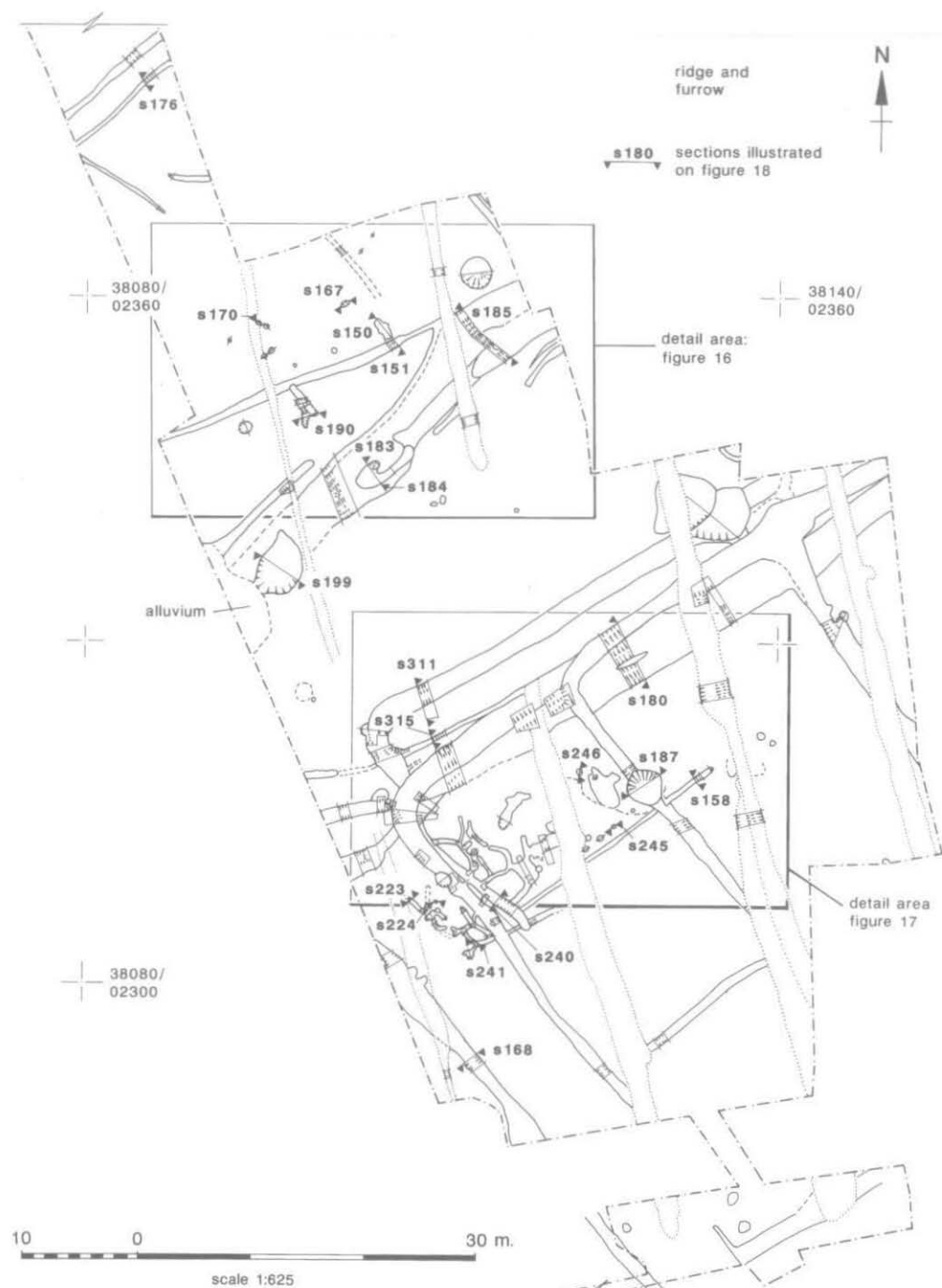


Fig. 11. Trench M: site plan.

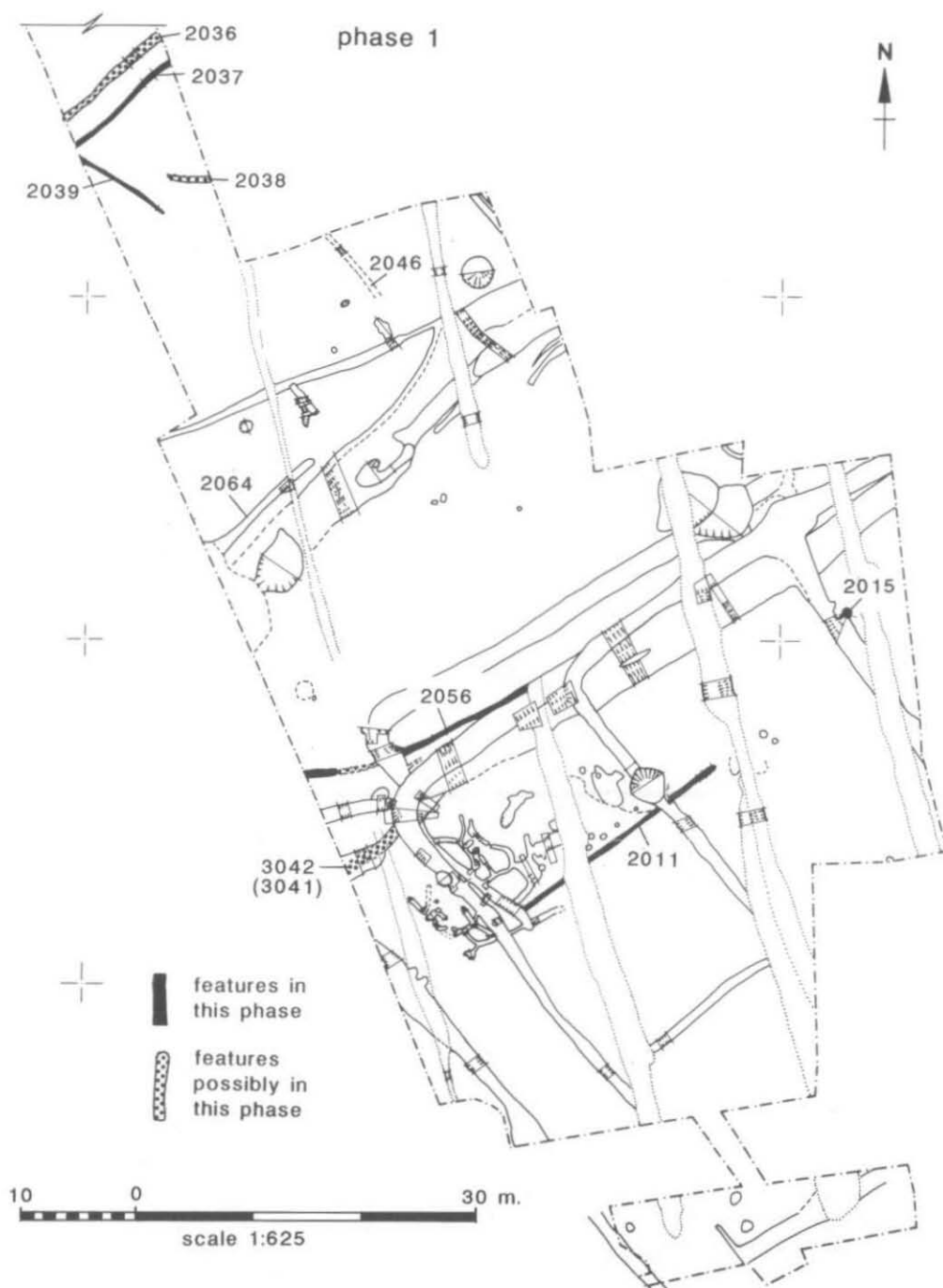


Fig. 12. Trench M: Phase 1.

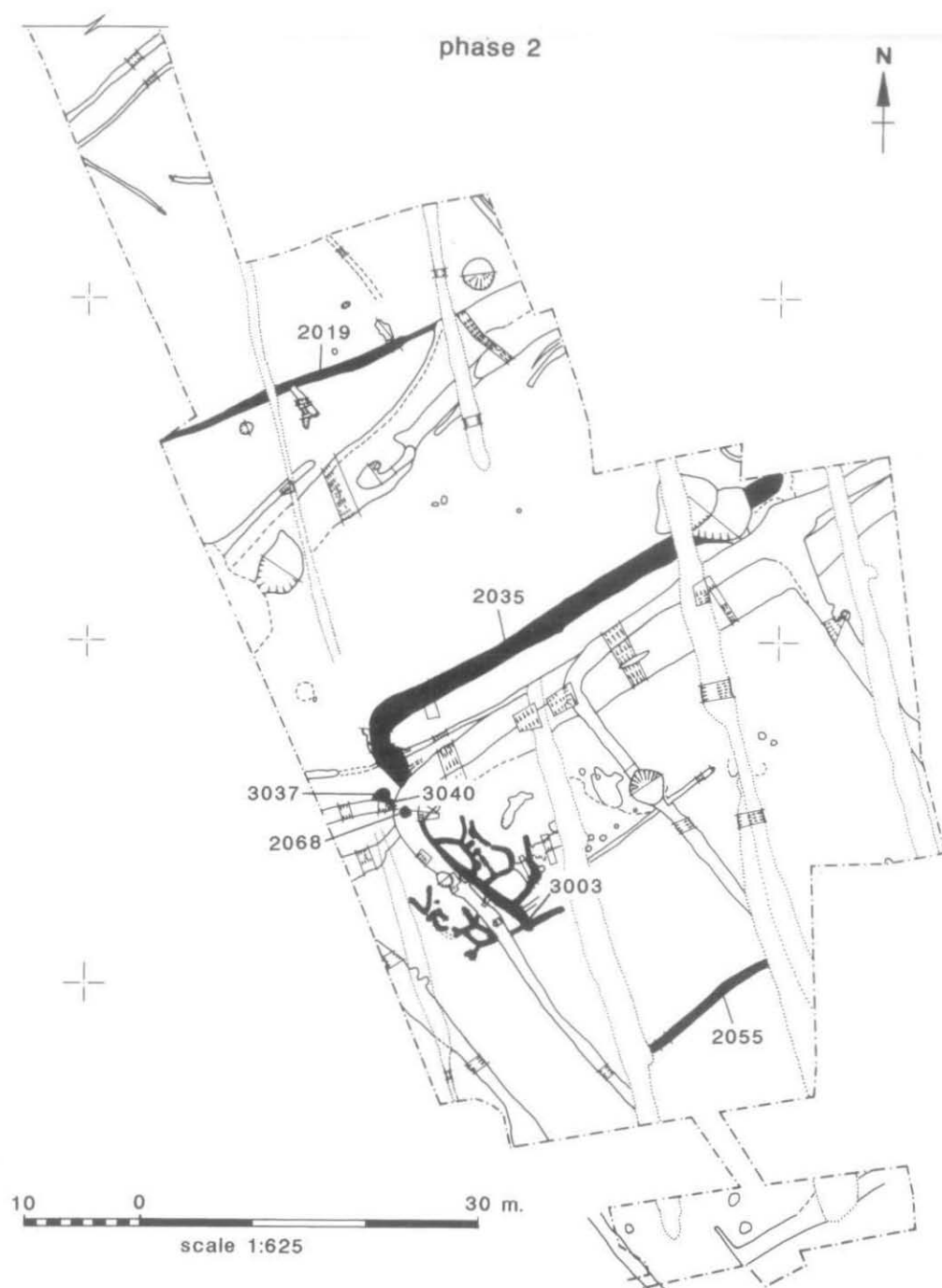


Fig. 13. Trench M: Phase 2.

*Small Enclosures and Pits.* Concealed beneath a pocket of alluvium to the south of trackway ditch 2035, was located a complex of small, shallow, inter-cutting, curvilinear gullies and related postholes (contexts 2070-1, 3005-26, 3028-32 and 3047-9; Fig. 18, Sections 223-4 & 241). The reddish-brown, sandy-clay fills of these features were all very similar, making the establishment of relationships highly problematic and development within the complex impossible to recognize. They were generally U-shaped in profile and 0.15 m. to 0.3 m. wide and 0.06 m. to 0.2 m. deep. Some cut ditch 3003 and some were clearly cut by it, but all seemed to form a related group, cut by Phase 3 contexts. This complex can be best interpreted as a series of small pens at the edge of the field, near its entrance.

Three pits, 3037, 3040 and 2068 lay near the north-west corner of the field but were much cut away by later ditches. Pits 3037 and 3038 were shallow (at 0.25 m), but pit 2068, found in the bottom of ditch 2008, was 1 m. deep. They all had silty-clay fills.

### Phase 3 (Fig. 14)

*Summary.* The Phase 3 ditches redefined the droveway on a broadly similar alignment to that of Phase 2, although the northern side of the track ran in a slightly more northerly direction. The track was around 25 m. wide. The ditches were recut on several occasions, especially to the south where, as in Phase 2, they also formed a field boundary. The western side of the field was exposed and an entrance in the south-west corner was observed.

A second track, 7 m. wide, was apparent in this phase joining the main droveway in the west of the excavation area and running to the south-east, parallel to the west side of the field. It is suggested that this ran towards the river for at least 360 m. and is the same feature as that examined in the south of evaluation Trench E, excavated in Phase 4 of Trench L and in the south of evaluation Trench J (Fig. 4).

Larger groups of pottery and bone were recovered from these features, particularly from southerly field and trackway ditch 2008, where much horse bone was found. A little fired clay, including the corner of a loomweight and a plate, three nails, part of a quernstone and a whetstone were also found.

*The Main Trackway Ditches.* The north boundary of the track was defined by ditch 2058 which was recut at least four times (2029 and 2028; Fig. 18, Section 185). It was cut a little further to the south than its predecessor and ran in a more northerly direction. All the ditches had U-shaped profiles and were 0.4 m. to 0.5 m. deep. They varied in width from 0.7 m. to 1.4 m.

On the south side of the track, ditch 2020, 2008 and 2054 was similarly cut south of Phase 2 ditches (Fig. 18, Section 180). Several recuts were visible in sections across it. The earliest cuts of these ditches (2020) were similar in size to those on the north but the final cuts were more substantial (ditch 2008, c. 1.6 m. wide and 0.8 m. deep).

*The Southern Field System and Secondary Trackway.* The ditches on the south side of the track also formed the north boundary of a field, similar to that of Phase 2, but larger (48 m. north-west/south-east) and with an entrance further to the south. The ditches became much more shallow in this direction, although this is partly due to differential topsoil stripping.

A secondary trackway ran along the western side of this field, 7 m. wide, its western side defined by ditch 3051 (Fig. 18, Section 168). This track could be traced in assessment trenches and Trench L excavation area for a distance of 360 m.

Ditch 3004 ran from the west edge of the site to the north-west corner of ditch 2008, where it terminated. As it respects ditch 2008 it may be contemporary, but as it would have barred access between the trackways it seems unlikely to belong here. Later finds in the top of ditch 2008 suggest it may have been in use into Phase 4 and 3004 may have been excavated at that stage.

### Phase 4 (Fig. 15)

*Summary.* During Phase 4 domestic (or possibly industrial) activity appears to have expanded from the settlement nucleus eastwards, along the sides of the main trackway. The trackway ditches were in use for at least part of this phase, though they were less substantial, and entranceways were created to north and south into areas of activity. The large field to the south was subdivided.

Groups of postholes were uncovered in both activity areas, although no coherent structures could be discerned. Several pits were also dug in these areas (Figs. 16-17), some containing hearth material. Large

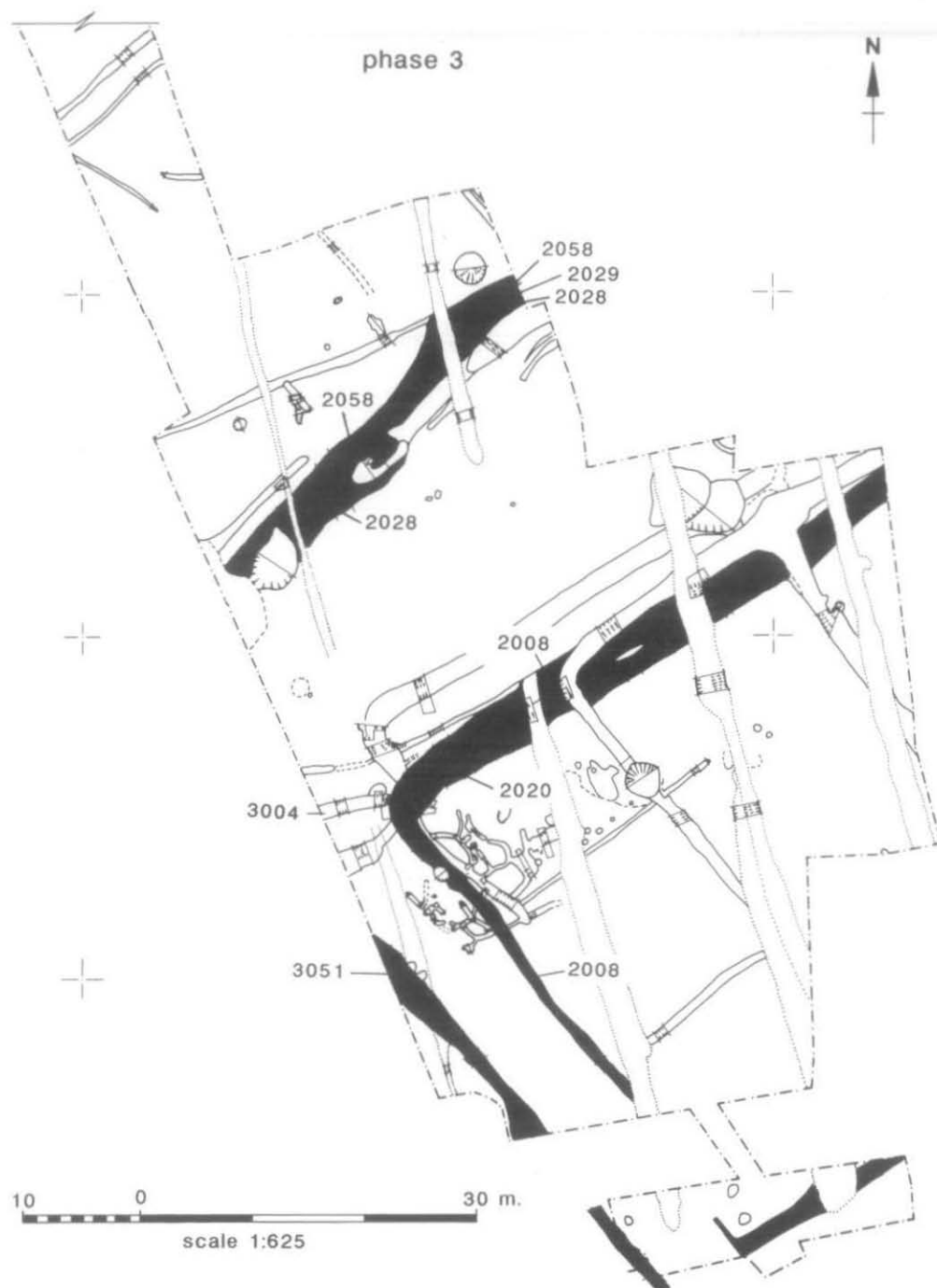


Fig. 14. Trench M: Phase 3.

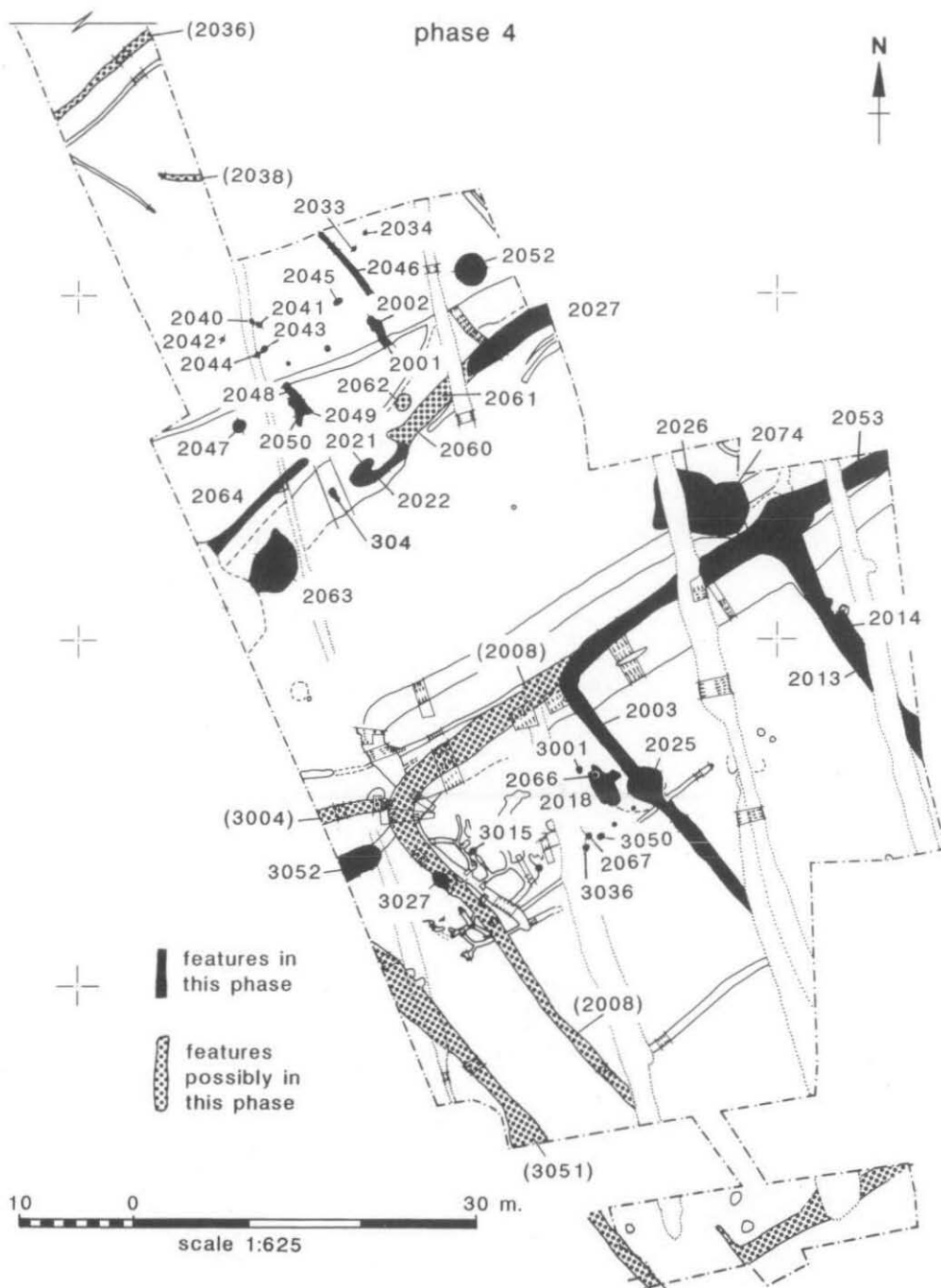


Fig. 15. Trench M: Phase 4.

pits, possibly for flax retting, were located on the edge of the trackway implying a less formal demarcation of space. Several other deep pits can be seen on the air photographs along the trackway to the east.

A feature of both areas of activity was shallow scoops or short lengths of gully, filled with dark and charcoal-rich soils and overlain with limestone and conglomerate rubble, often burnt. These features were often in pairs. It was uncertain whether the overlying stone was associated directly with the scoops or had merely collected (survived) in depressions during demolition/decay, or indeed that they were all a result of the same activity. They may, however, be related to some kind of crop processing. One such feature contained two mid to late 1st-century AD brooches (Fig. 22, SFs 172 and 173).

The only substantial assemblages of finds from this settlement came from this phase. Average pottery sherd size was, however, low (14 g.) and many abraded sherds were found. Most bone also came from this phase of which 67% came from gullies, pits and stone spreads, rather than from ditches, where most of the site's finds were recovered. Horse, cow and unidentified large mammal bone was concentrated in the ditches and sheep/goat and unidentified medium mammal bones in pits and other small features. Worked stone included Niedermendig lava quern.

Only two Trench m. contexts contained more than twenty carbonized seeds: pit 2025 and the top of pit 2063. 2025 yielded quite a lot of cereal (though only two identified seeds; of wheat). 2063 was notable for its quantity of wheat chaff, which was greater than the total assemblage for the rest of the site. These two pits had lower waterlogged fills which yielded numerous capsule fragments and a few seeds of flax.

Several beetles which are associated with human occupation, including woodworm beetle, came from waterlogged deposits in pit 2063, hinting at the proximity of a building. A honey bee was also found in this context.

*The Trackway and Field System.* To the north, the north-east to south-west trackway was defined by a shallow ditches 2064 and 2027, terminating 15 m. apart. Hollows probably still existed in the top of the earlier ditch system. To the south the eastern part of the trackway ditch was recut (2053) and a new field system was created, to the east of the old, and the field was divided into smaller plots by open U-shaped ditches, 0.3 m. to 0.4 m. deep (2003, 2013 and 2014). Similar ditches on the alignment of the trackway at the west edge of the site (3052 and 3004) terminated at what had been the north-west corner of a field in the previous phase (2008), leaving a gap of 18 m. into this area from the trackway. It is possible that 2008 remained open at first. The secondary trackway is no longer clearly visible, but could have been in use.

*Activity Areas.* Two distinct areas of activity were defined, one to the north and the other to the south of the trackway (Figs. 16 & 17).

To the north of the trackway was found a group of postholes (2040–2044) c. 0.4 m. in diameter and 0.15 m. deep (Fig. 18, Section 170). Two other, unexcavated postholes lay in the same area. No coherent building plan could be discerned from these, however. The postholes lay within a possible rectangular enclosure formed by ditch 2064 to the south and gully 2046 (shallow and mostly lost in machining) to the east. Ditches to the north could be part of this enclosure. Two small, shallow pits found in the same area (2045 and 2047; Fig. 18, Section 167) had fills of charcoal-rich soil and burnt clay and five flat limestone slabs had been placed in the bottom of oval pit 2045. 2045 yielded 180 g. of pottery datable to the later 3rd century AD and this may imply that activity in this area began in the later stages of Phase 3. Domestic refuse was otherwise notably lacking.

South of the postholes and north of the trackway were scoops and shallow gullies filled with dark soil and burnt limestone and overlain by horizontally-laid burnt limestone and conglomerate slabs (2049, 2050, 2051; Fig. 18, Section 190). A posthole with rubble packing cut one of these scoops (2048). Another, similar feature was located in the same area in an evaluation trench (305), though this was thought to have been cut by Phase 3 trackway ditches. A little further to the east another area, mostly of unburnt limestone rubble (2001, 2002) (Fig. 18, Sections 150–1), lay in uneven hollows and the top of ditch 2019. This was found in a matrix of dark clay loam.

East of gully 2046 were two small postholes (2033–4) and a large circular pit (2052), 2.48 m. in diameter and 1 m. deep with a very mixed fill.

Cut into the top of Phase 3 boundary ditch 2028 were two short, adjacent lengths of gully (2021 and 2022; Fig. 18, Sections 183–4). Amongst the dark, charcoal-rich soil and burnt clay filling gully 2021 was part of a clay hearth and two 1st-century AD brooches (Fig. 22, SF 173 and 172). Spreads of dark soil and finds (2060–2) were encountered in the adjacent area over the tops of the Phase 3 boundary ditches. These were probably associated with the demolition/decay of Phase 4 structures.

To the south of the trackway was another area of Phase 4 activity, lying to the west of boundary ditch 2003 (Fig. 17). A group of postholes (2066–7, 3001, 3036, 3050; Fig. 18, Sections 245–6) was found in this area, some of



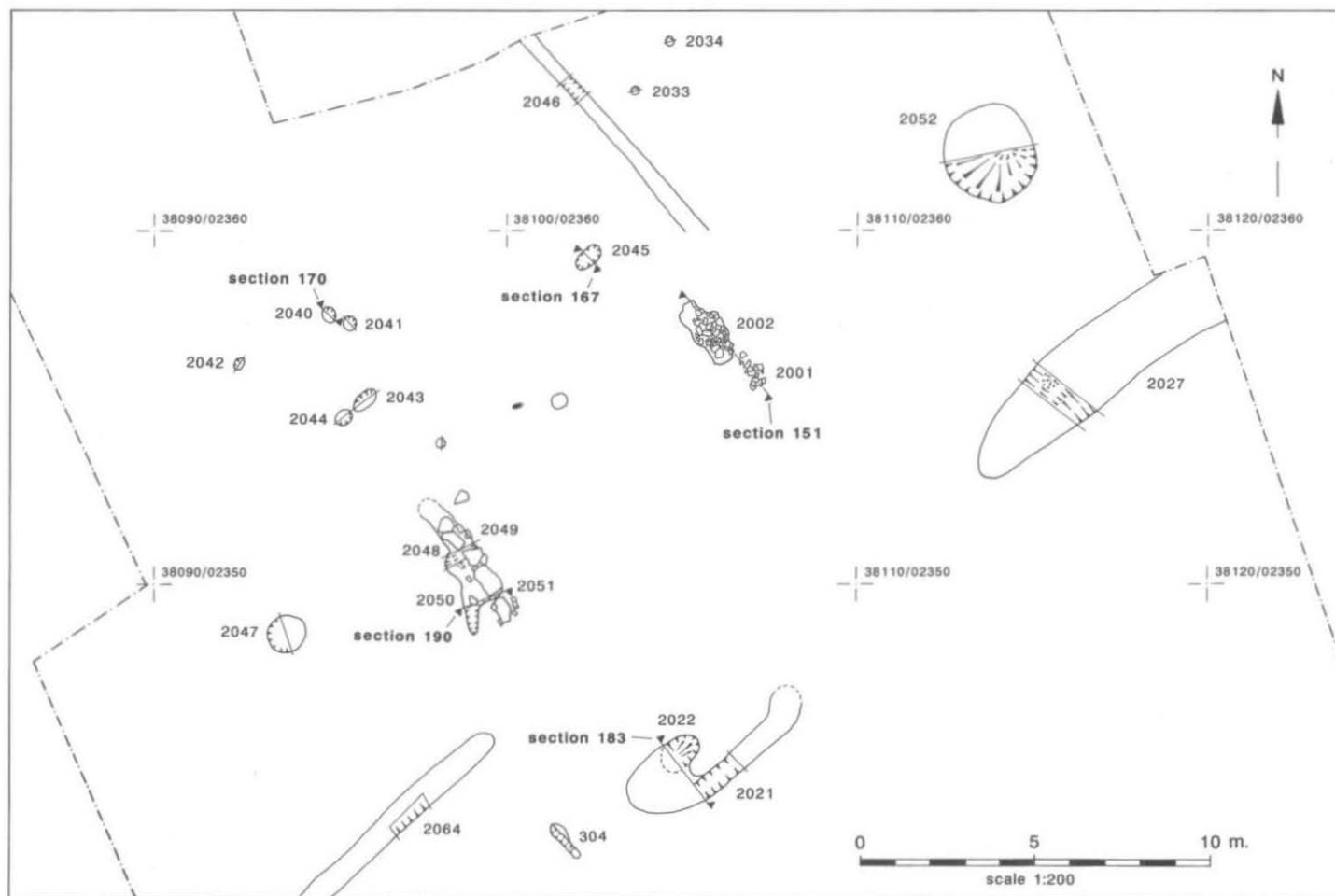


Fig. 16. Trench M: Domestic area in north.

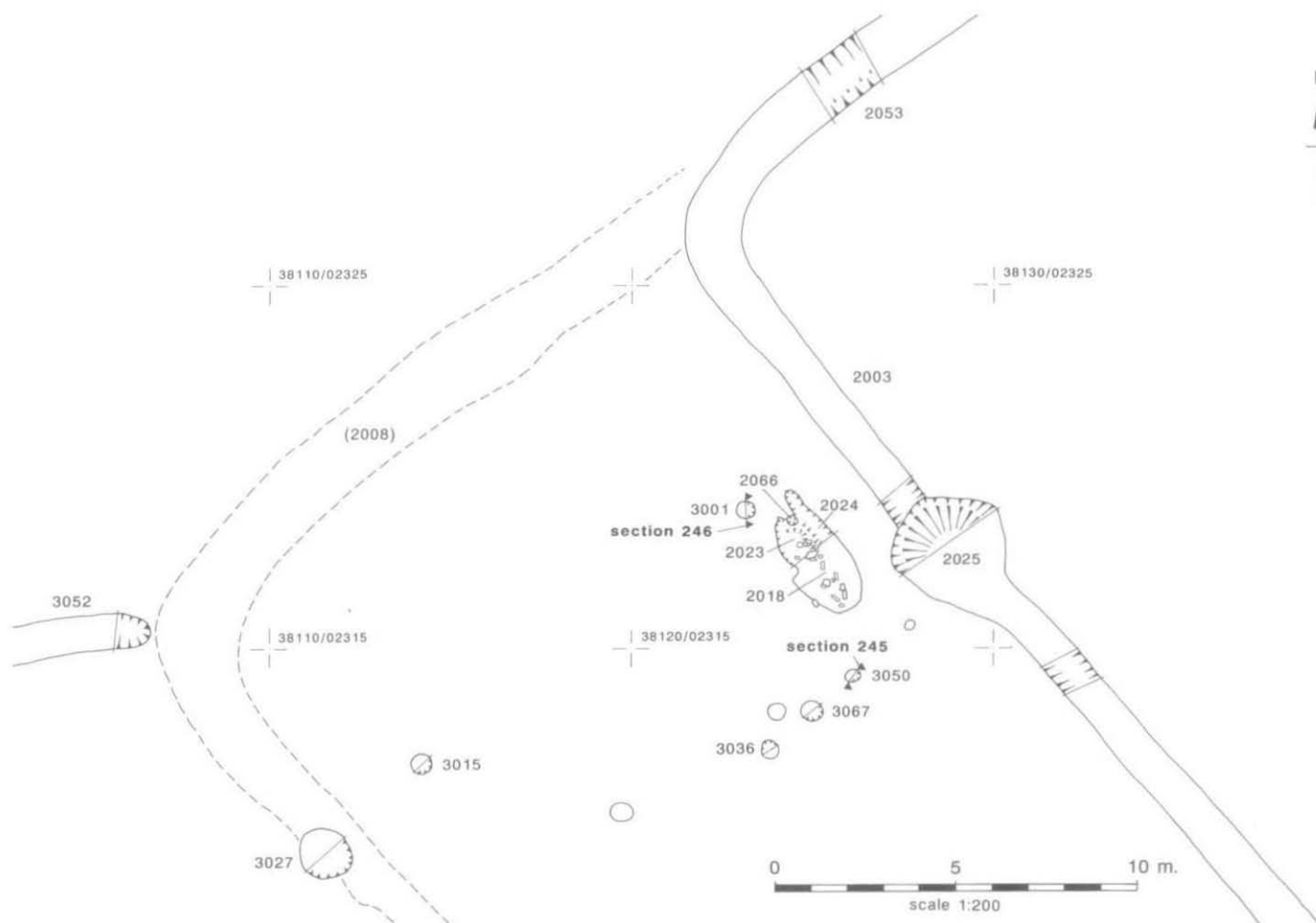


Fig. 17. Trench M: Domestic area in south.

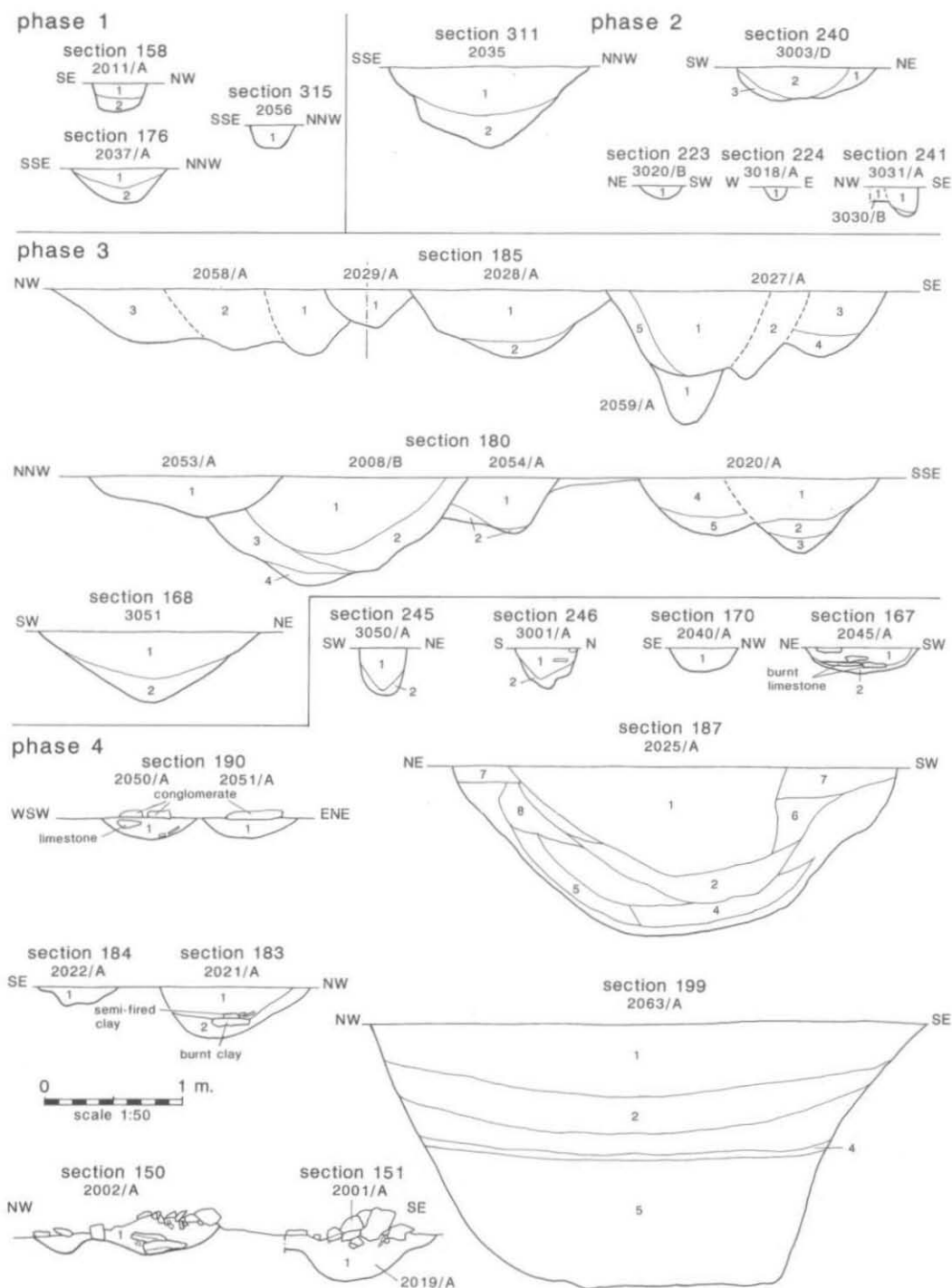


Fig. 18. Trench M: Sections.

which could have formed two sides of a rectangle. They were, however of variable size (between 0.35 m. and 0.56 m. across and 0.15 m. and 0.34 m. deep) and no clear plan could be discerned. Lying on the eastern edge of the postholes were two parallel short lengths of gully, one of which cut a small posthole (2066). Over the dark fills of these features was a dump of dark soil with charcoal, limestone, conglomerate, patches of gravel, pottery and bone (2018). The adjacent boundary ditch (2003) had charcoal flecking in its main, central fill.

*Flax-Retting Pits.* Two large bowl-shaped pits (3027, 2025) lay to east and west of the postholes south of the trackway, both cutting enclosure ditches. They contained very mixed material and the upper fill of 2025 contained considerable quantities of finds in a dark soil, presumably derived from the adjacent activity (Fig. 18, Section 187). The lower fill of 2025 contained numerous capsule fragments and a few seeds of flax. It may have been dug for flax retting and was probably deliberately backfilled.

Three large, deep pits (2063, 2026 and 2074) (Fig. 18, Section 199) lay on the edge of the trackway. They were irregular in shape, between about 4 m. and 5 m. across and approximately 2 m. deep. They had dark, silty, clay waterlogged lower fills. The environmental material found in 2063 suggested that they also were used for flax retting. The location of such deep features on the edge of the trackway is curious and may suggest a less formal use of space in this area by this time.

Part of a curving gully lay just within the excavation area to the north-east of the pits, and a NW-SE ditch was located in the north-east. They were not examined.

#### ASSESSMENT TRENCHES

The assessment trenches evidenced the extent of the field system associated with this settlement, not all of which can be seen on the air photographs. Although few of the features examined yielded datable finds, several sections were excavated across the east to west driveway ditches, for example in Trenches B and C (Fig. 4). Fields adjacent to them and on the same alignment can be assumed to be contemporary, for example those examined in Trench G.

The continuation of the trackway running south-east from Trench M was located in the south end of Trench E (408), cutting across the Phase 3 ditches of Trench L (see above, Trench L, Phase 4) and at the south end of Trench J (713).

As discussed above, the dating of waterlogged ditches 717 and 802 is uncertain.

#### MEDIEVAL

##### *Trench M, Phase 5* (Fig. 11)

Medieval ridge and furrow cut across Trench M. The furrows were aligned approximately north-south and were spaced 14 m. apart.

## THE ARTEFACTS

POTTERY, by JANE R. TIMBY, written 1993, revised 1995

#### *Introduction*

Some 4,000 sherds of pottery, weighing c. 58 kg., were recovered. The assemblage broadly consists of two discrete chronological groups: a later Iron age/early Roman assemblage from Trench L and a later Roman assemblage from Trench M. The two trenches are accordingly treated separately in the following report.

Work on the pottery from the site was initially undertaken by Sarah Green, who recorded the assemblage and established a fabric and form series. Originally, the assemblage was sorted into fabric

types and quantified by weight and sherd count. A number of sherds were selected for illustration. Additional material was recorded by this author using the system already established, and the data previously recorded were used for the preparation of the report. In the following account the nature of the assemblage is briefly assessed and a summary for the two main trenches (L and M) presented, following the phasing described above. This is followed by a short discussion and a catalogue of the illustrated sherds.

A description of the fabrics and their associated forms can be found in Appendix 1. The codes for the Iron Age and Roman wares have been changed to conform as closely as possible to the present OAU fabric system. In some cases it would appear that several fabrics have been subsumed into ware types (i.e. grey sandy wares) and no attempt has been made here to try to refine these.

### *Nature of the Assemblage*

Of the c. 4,000 sherds recorded some 400 (3.7 kg.) were recovered from the evaluation trenches (A-F, H and J), 965 (15.2 kg.) from Trench L, and the remaining 2,725 (39.1 kg.) from Trench M. The condition of the material was variable. The earlier assemblage was for the most part relatively well-preserved with a number of sherds clearly deriving from the same vessels. The average sherd weight for Trench L increased from 11 g. in Phase 1 to 19 g. in Phase 3, decreasing slightly to 13 g. in Phase 4. The Roman material appeared superficially to be slightly less well-preserved although the average sherd weight falls around 12-15 g. for Trench M, Phases 1, 3 and 4, increasing to 22 g. for Phase 2. Material from the medieval ridge and furrow (Phase 5) showed a much lower average sherd weight of just under 9 g. Possibly due to the greater homogeneity of fabric, joining of sherds was less evident compared to the earlier material. Colour-coated wares had for the most part lost their surface finish. The majority of the pottery from Trench L was recovered from the enclosure ditches and to a lesser extent from the circular gullies and other features. Recutting of ditches along the same alignment has inevitably caused a certain amount of redeposition of material. The pottery from Trench m. was largely recovered from sections through the field ditches and especially from pits.

The domestic centre appears to have shifted north in the later Roman period, and although a small number of later Iron Age/early Roman sherds occur residually in amongst the later pottery, there is no evidence ceramically to suggest continuity of occupation, an apparent hiatus being present from the 2nd-early 3rd centuries.

### *Description*

#### *Evaluation Trenches*

The evaluation trenches generally produced fairly small groups of material. The pottery recovered from Trenches C, E and H/J mainly comprised late Iron-Age/early Roman wares, whilst that from Trenches A, B and F consisted of mainly late Roman wares comparable to the pottery from Site M. The material from Trench D was a mixture of early and later wares. A quantification of fabrics by sherd number and weight for each trench forms part of the archive.

#### *Trench L (Table 1)*

*Phase 1.* The small number of contexts assigned to Phase 1 produced a variety of handmade and wheel-turned vessels in sand- (E21+), flint- (E64), grog- (E80, E85) and limestone/shell-tempered fabrics (C12, C14-16, C20). Most of the sherds were recovered from gullies 1037 and 1038, with very small groups from contexts 1015, 1018, 1029, 1039, 1045, 1056 and 1086. Other features allocated to this phase did not produce pottery. Vessel forms include several jar/bowls with beaded rims (Fig. 19, 1-3) and a wheelmade necked cordoned bowl (Fig. 19, 4). Such types were current in the latter half of the 1st century BC into the early 1st century AD.

*Phase 2.* Slightly more pottery, 168 sherds, was recovered from Phase 2 features, especially from the gullies of the rectangular enclosure (1002, 1003, 1004, 1062/1050). Further small groups were recovered from ditch 1008 which contained a number of sherds from the same vessels distributed vertically through the section, and the curved

TABLE 1. INCIDENCE OF FABRICS BY PHASE FOR TRENCH L

Phase TF No.	1 No.	Wt.(g.)	2 No.	Wt.(g.)	3 No.	Wt.(g.)	4 No.	Wt.(g.)
C12	6	46	65	595	74	558	1	10
C14-16	4	25	5	59	53	439	1	12
C20	1	2	2	40	4	126	-	-
C22	-	-	-	-	65	715	-	-
E21+	13	130	15	401	16	82	-	-
E64	27	295	-	-	2	100	-	-
E80	23	252	77	801	174	4335	14	231
E82	-	-	-	-	5	284	-	-
E83	-	-	-	-	18	815	-	-
E85	1	2	2	10	29	505	-	-
E86	-	-	-	-	2	195	-	-
E90	-	-	3	165	6	180	-	-
E91	1	10	10	235	42	1388	-	-
E96	-	-	-	-	110	1691	1	15
A21	-	-	1	105	-	-	-	-
R22	-	-	-	-	-	-	6	42
W22/W12	-	-	-	-	1	25	-	-
O20	-	-	-	-	1	1	-	-
Unclass.	-	-	1	1	-	-	-	-
TOTALS	86	970	168	2412	602	11439	23	310

gullies 1055, 1060 and 1061. Gully 1060 was the only deposit from this trench to produce a sherd of Roman amphora, probably from a Dressel 2-4,<sup>31</sup> a type which was imported from the later 1st century BC.

The same fabrics found in Phase 1 occur, with the exception of flint fabric E64 which seems to disappear. New fabrics present include E85, E90, E91 and the Dressel 2-4 amphorae (A21). Forms include similar vessels to those in Phase 1 with beaded rim, everted rim, and rounded thickened rim jars/bowls (Fig. 19, 6-12). A basesherd from 1003/A/1 has a pierced base (Fig. 19, 5). A date in the first half of the 1st century AD may be appropriate for this group of wares.

*Phase 3.* A larger quantity of pottery was recovered from features allocated to Phase 3, amounting to some 600 sherds (11.4 kg). The material principally derives from ditches 1000, 1026, 1035, 1036, 1049 1063 and 1065. A small unfeatured group of native wares was recovered from Ditch 1023 and its associated cut 1025. Smaller groups were also recovered from 1024, 1041 and 1066. The same fabrics and forms found in Phase 2 seem to continue with little apparent change. Additional handmade fabrics appearing for the first time include a Malvernian limestone-tempered jar (C22) and grog variant E96. Roman wares also appear for the first time; a sherd of Oxfordshire whiteware (W22/12) from 1035 and a small fragment of oxidized sandy ware (O10) from 1049. Both these sherds may be later intrusions. The majority of wares recovered belong to the grog-tempered category accounting for 67% by sherd number (69% by weight). Many of these sherds are relatively large, representing substantial parts of vessels. Several show clear evidence of use in the form of external sooting, leaching, calcareous lining and burnt residues. The same basic jar/bowl forms continue although there appears to be an increase in wheel-turned and wheelmade types (Fig. 20, 13-20; Fig. 21, 22-26).

On current dating evidence the Phase 3 assemblage is likely to date to the mid to later 1st century AD. Disregarding the two possibly intrusive Roman sherds, there is no evidence of Romanization in the pottery from Phase 3.

*Phase 4.* Twenty-three sherds (310 g.) were recovered from Phase 4. These were mainly from context 1001, a possible trackway ditch, with a single sherd from feature 1032. Ditch 1001 contains a small number of wheelmade Roman sandy grey ware sherds (R22) dating to the later 1st or early 2nd century. The only featured sherd is from a wide-mouthed bowl (Fig. 20, 21) from 1001.

<sup>31</sup> Class 10 as defined by D.P.S. Peacock and D.F. Williams, *Amphorae and the Roman Economy* (1986).

TABLE 2. INCIDENCE OF FABRICS BY PHASE FOR TRENCH M

Phases TFNo.	1 No.	Wt.(g.)	2 No.	Wt.(g.)	3 No.	Wt.(g.)	4 No.	Wt.(g.)	5 No.	Wt.(g.)
C11	—	—	3	130	8	34	216	2989	—	—
C12	—	—	—	—	2	9	3	35	—	—
C14-16	1	4	—	—	8	51	41	823	—	—
C20	—	—	—	—	—	—	2	40	2	32
E21+	—	—	—	—	—	—	1	2	—	—
E80	4	62	—	—	5	72	25	862	—	—
E81	—	—	—	—	1	3	—	—	—	—
E90	—	—	—	—	5	22	16	480	1	1
E91	4	20	—	—	12	234	44	587	—	—
E96	—	—	—	—	1	4	—	—	—	—
B11	—	—	3	16	12	205	113	795	1	4
W11	—	—	—	—	1	20	—	—	—	—
W12/22	12	125	—	—	3	51	36	192	—	—
W23	—	—	—	—	—	—	50	435	3	15
O10/11	—	—	—	—	4	15	9	65	—	—
F51	—	—	16	493	45	656	234	3056	13	45
M22	—	—	—	—	4	332	18	602	1	3
M31	—	—	1	25	—	—	9	320	—	—
M41	—	—	3	90	8	150	14	250	—	—
R20	31	320	72	1445	199	2990	1188	16803	51	474
O20	—	—	—	—	—	—	14	84	1	4
R22	—	—	1	10	15	150	84	1537	2	83
Q21	—	—	—	—	—	—	3	20	2	20
A11	—	—	—	—	—	—	7	150	—	—
S	—	—	—	—	2	165	13	92	—	—
Unclass.	1	75	—	—	3	55	9	94	3	10
Med./Pmed.	—	—	—	—	—	—	4	50	2	23
TOTALS	53	6706	99	2209	338	5218	2153	30363	82	714

*Trench m.* (Table 2)

*Phase 1.* Only fifty-three sherds, from several contexts (2011, 2015, 2039, 2056, 3011 and 3041), were associated with Phase 1. The number of sherds is insufficient to permit clear dating for most of these contexts, although three sherds of pre-Roman grog-tempered ware may suggest contemporaneity with Trench L or be redeposited. The presence of a small number of grey sandy wares would indicate a date into the early 2nd century or later. Ditch 3041 (Phase 1/2) may have become filled in slightly later, since it produced mainly Oxfordshire whiteware and grey sandy ware but no diagnostically late material comparable with that from Phase 2 features.

*Phase 2* contained slightly more material, ninety-nine sherds (2209 g.) largely from ditches 2035 and 2055, with smaller quantities from 302, 2068 and 2069. These comprised a mixture of pre-Roman native types accompanied by Roman wares, for example Dorset BB1 and Oxford colour-coated ware. The latter, from 2035 with a single sherd from 302, indicates a date in the later 3rd to early 4th century.

*Phase 3.* Material from contexts allocated to Phase 3 total 338 sherds (5218 g.). Taking the material as a whole, 2% by weight comprises pre-Roman native wares, 13% Oxfordshire colour-coated ware, 60% grey sandy wares and 1% late shelly ware. A small number of potentially later 2nd to 3rd century wares are present, for example samian, and a white ware mortarium, of Young's form M11,<sup>32</sup> but the sherds are worn, burnt, or, in the case of one samian

<sup>32</sup> C.J. Young, *The Roman Pottery Industry of the Oxford Region* (Brit. Arch. Rep. xliii, 1977).

TABLE 3. A.2 ROMAN WARES

TF No.	Common Name/Description	Forms	No.	%	Wt.(g.)	%
Imports						
A11	Dressel 20	Amphorae	9	—	247	—
A21	Dressel 2-4	Amphorae	1	—	105	—
S30	Samian	Dr.27, 18/31, 37, 18/31R	15	—	257	—
Regional wares (non-local)						
B10	Dorset BB1	Jars, dishes, bowls	136	5	1093	3
C11	Late Midlands shelly	Jars, bowls, dish	256	9	3372	9
Local wares: Oxfordshire industry						
W11	Parchment ware		1	—	20	—
W12/22	White wares	Young W46, W33, BW2	58	2	446	1
W23	Burnt white ware		54	2	467	1
O10/11	Oxidized wares		13	—	80	—
Q21	White-slipped wares		3	—	20	—
F51	Colour-coated wares	Young C28, C44, C45, C48, C51, C81, C83, C94	295	11	4216	11
M22	Whiteware mortaria	Young M17, M22	24	1	992	3
M31	White-slipped mortaria	Young WC4, WC7	10	—	345	—
M41	Colour-coated mortaria	Young C97, C100	27	1	577	1
Other miscellaneous ware, ?local						
R20	Misc. grey sandy wares	Jars, bowls/dishes, lid, jug	1700	63	24295	63
O20	Orange sandy ware	Jar	1	—	10	—
O10/20	Misc. oxidized ware	Jar	1	—	10	—
R22	Grey sandy ware 1st-2nd	Jars, tankard	102	4	1780	5
TOTALS			2720	100	38431	100

vessel, repaired. A particularly large group recovered from ditch 2008 included several Oxfordshire wares, for example Young's forms W46, C45, M22, 044, M100 and bowl (Fig. 21, 28), late shelly ware and late BB1 types. Of particular note is an unusual Oxford colour-coated base with a raised internal flange (Fig. 21, 29). A small quantity of pre-Roman native ware and samian was also present. A final silting is suggested to occur in the mid to late 4th century for this feature. Small groups were also recovered from ditches 2028, and 2058 with wares dating to the later 3rd and 4th centuries.

*Phase 4.* Most of the pottery from Trench m. is placed in this phase, some 2,100 sherds (30.4 kg.). Ceramically there appears to be very little difference between Phases 3 and 4, with the same range of forms and fabrics. Residual 1st-century material is still present and accounts for 7% by weight. Of the other main groups, grey sandy wares account for 60%, Oxfordshire colour-coats for 10% and Midlands shelly ware for 10%. A small amount of intrusive post-medieval material is present from 2003.

Moderately large groups were recovered from ditches 2003, 2020E (3052) and pit 2063. A *terminus post quem* for 3052 is again provided by Oxfordshire wares, in particular a bowl of Young's type C94 and a jar of his type BW2 in production AD 240-400. Late 4th-century ware is also present from the dark occupation soils (2018, 2024, 2060 and 2062), stone spreads (2001, 2002), gullies 2022, 2023, 2050 and 2064, and pits 2025, 2026, 2048, 2052 and 2063.

*Phase 5.* The smaller group of sherds from the last phase were mainly recovered from furrows 2005, 2007, 2017, 2032 and 2065. As might be expected, the sherds from these features tend to show a smaller average weight and a moderate degree of abrasion. No sub-Roman material appeared to be present. Medieval and post-medieval material was present in 2032 and 2005.



### Discussion

On present evidence the earliest indication of settlement at Old Shifford can be placed at the end of the 1st century BC/first half of the 1st century AD. The pottery from the early period is dominated by grog-tempered wares with handmade and wheel-turned vessels, mainly jars and bowls. Conspicuous by its almost complete absence is the ubiquitous coarse limestone- and fossil shell-tempered ware (Oxford fabric C24). This fabric is particularly common on sites dating to the earlier part of the Iron Age in the Thames valley and appears to have been displaced by other types during the 1st century BC. This distinguishes Old Shifford from many of the other rural farmstead-type sites investigated in the area, which all date either to the early and/or middle Iron Age, like Farmoor,<sup>33</sup> Watkins Farm,<sup>34</sup> Mingies Ditch,<sup>35</sup> Thornhill Farm, Lechlade, Gloucestershire,<sup>36</sup> or the earlier settlement area at Gravelly Guy.<sup>37</sup>

The first occupation phase at Old Shifford appears to extend into the final first or early 2nd century, perhaps only lasting three or four generations. The latest wares from Trench L, most of them from the late trackway ditches, include handmade and wheelmade Savernake wares and Roman grey wares, indicating a change from an essentially native to a Roman economy. Following abandonment the site was reoccupied, with a slight shift in focus, during the 3rd and 4th centuries with occupation debris continuing to accumulate in features into at least the second half of the 4th century. In this respect the site closely resembles Watkins Farm where there was evidence for early Romano-British settlement succeeding the middle Iron Age site after a break, and subsequently 3rd- to 4th-century activity in the locality. The pottery from Watkins Farm, however, lacks the very late Roman wares, in particular the shelly wares (fabric C11),<sup>38</sup> suggesting that occupation continued slightly later at Old Shifford.

Late Roman occupation is also attested at the Vicarage Field, adjacent to the Iron Age site at Gravelly Guy,<sup>39</sup> at Eagle Farm, Standlake<sup>40</sup> and at Farmoor.<sup>41</sup> Other early 'Roman' sites such as Thornhill Farm, Gravelly Guy and Smithsfield, do not appear to have been reoccupied at a later date.

The assemblage from Old Shifford conforms to the pattern beginning to emerge from other rural sites in the region, in that the wares are largely local products from the Oxfordshire industries. Foreign imports are usually few and restricted to small quantities of samian and amphorae. This may reflect lack of access to such items, an inability to purchase fine tableware or products, such as olive oil and wine, or simply a lack of desire for items clearly related to Roman eating and drinking habits. It is also partly a reflection of chronology – such imports are most common on Roman or 'Romanized' sites in the 1st and 2nd centuries, whereas many of the Thames valley sites appear to remain essentially native in character until perhaps the later 1st or early 2nd century AD.

Regional imports such as Dorset BB1 (fabric B11) are present, but again in small quantities, 5% by sherd count of the total Trench m. assemblage. Other regional imports at Old Shifford include products of the Savernake industry in North Wiltshire (fabric E81; see the relevant entry in Appendix 1), showing further links to the west.

As with most rural domestic assemblages, jars dominate the form range accounting for 62% by rimsherd count. Pottery from the earlier phases at Old Shifford appear to be exclusively jars and bowls and it is not really until Phases 3 and 4 in Trench m. that other vessels such as beakers, tankards, lids, dishes and mortaria occur.

<sup>33</sup> Lambrick and Robinson, *op. cit.* note 15, 35–46.

<sup>34</sup> Allen, *op. cit.* note 12, 32–46.

<sup>35</sup> Allen and Robinson, *op. cit.* note 13, 70–7.

<sup>36</sup> J.R. Timby, 'The Pottery from Thornhill Farm, Fairford' (in prep.).

<sup>37</sup> Lambrick et al., *op. cit.* note 14.

<sup>38</sup> S. Raven, 'The Roman Pottery' (1990), in Allen, *op. cit.* note 12, 46–52.

<sup>39</sup> N. Thomas, 'Excavations at Vicarage Field, Stanton Harcourt', *Oxoniensia*, xx (1955), 1–28.

<sup>40</sup> Allen and Moore, *op. cit.* note 20.

<sup>41</sup> Lambrick and Robinson, *op. cit.* note 15, 46–54.

*Description of Illustrated Sherds**Trench L, Figure 19*

1. 1037/B. Phase 1. Handmade beaded rim jar/bowl. Fabric C12.
2. 1038/B/1. Phase 1. Handmade beaded rim jar/bowl. Fabric E64.
3. 1038/A. Phase 1. Handmade beaded rim jar/bowl. Brown to dark grey in colour with a sparse temper of large limestone grits (up to 6 mm.), shell, flint and iron. Fabric C20. Diameter c. 180 mm.
4. 1038/B. Phase 1. Wheelmade necked, cordoned bowl. Fabric E80. Diameter 180 mm.
5. 1003/A/1. Phase 2. Basesherd with two drilled holes. Fabric E80.
6. 1003/A/1. Phase 2. Large, handmade everted rim jar with a slight raised cordon at the base of the neck. Diameter 230 mm. Dark grey fabric E80.
7. 1004/C. Phase 2. Everted rim wheelmade jar with a slight cordon. Diameter 160 mm. Single extant ?suspension hole through neck. Burnished exterior in a dark grey-brown fabric E80.
8. 1008/A/1. Phase 2. Short everted rim and basesherd from a brownish-orange jar/bowl. Fabric C12.
9. 1008/A/3. Phase 2. Rim and basesherd from a large beaded rim, handmade jar/bowl. Diameter 200 mm. Fabric E80.
10. 1008/A/4,3,1. Phase 2. Jar/bowl with everted thickened rim and a bulged shoulder. Diameter 160 mm. Handmade with a wheel-turned finish. Mid grey-brown fabric E91.
11. 1050/C/1. Phase 2. Beaded rim jar in a black handmade fabric C12. Sooting on the exterior surface. Diameter c. 140 mm.
12. 1060/1. Phase 2. Small necked, cordoned bowl in a wheelmade brownish-grey fabric E80. Diameter 130 mm.

*Trench L, Figure 20*

13. 1073/A/1. Phase 3. Small jar/bowl in a brownish-black ware with sparse grog and sand. Fabric E80. Diameter 120 mm. Possible decoration in the form of finger-nail arcs on the shoulder of the vessel.
14. 1063/A/2. Phase 3. Substantial part of a handmade jar in fabric C22. Slight trace of vertical and horizontal burnishing on the exterior. Diameter 240 mm.
15. 708. Phase 3. Handmade/wheel-turned jar with a black exterior and light brown interior and core. Sandy texture with a sparse to moderate temper of grog up to 1.5 mm. Fabric E80. Diameter 180 mm.
16. 1035/F/1. Phase 3. Small wheel-turned beaded rim bowl. Diameter 120 mm. Mid-grey fabric E91. Possibly a Savernake Forest product.
17. 1026/F/1. Phase 3. Beaded rim, handmade bowl. Diameter c. 220 mm. Black sandy fabric E21+.
18. 1041/A/3. Phase 3. Base from a jar with a large central hole flanked by two smaller holes drilled through after firing. Orange-brown with a dark grey interior and core. Fabric E80.
19. 1041. Phase 3. Several sherds from a moderately large, narrow-necked jar. Diameter 120 mm. Wheelmade with a reddish-brown grog-tempered fabric. Fabric E96.
20. 1049/B/2. Phase 3. Wheelmade jar/bowl. Diameter 160 mm. Dark grey-black exterior with a mid-brownish-orange interior. The fabric is tempered with a sparse to moderate frequency of grog, with rare organic and limestone inclusions. Fabric E80.
21. 1001/1. Phase 4. Wide-mouthed bowl with a rolled rim. Diameter 230 mm. Fabric E64.

*Trench L, Figure 21*

22. 702. Phase 3. Base from a jar with five evenly spaced holes drilled through after firing. Reddish-brown interior and black exterior and core. Fabric E80.
23. 703. Phase 3. Bowl with a slightly shaped thickened rim. Diameter c. 180 mm. Fabric C12. Sooting on the exterior rim and upper body.
24. 703. Phase 3. Wheelmade necked bowl. Diameter 180 mm. Dark grey-brown colour with a dark brown core. Fabric C12.
25. 1026/F/1. Phase 3. Small handmade bowl with a short vertical rim. Diameter c. 100 mm. Fabric E80.
26. 1035/L/2. Phase 3. ?Wheelmade bowl with a dark grey exterior and brown interior. Fabric E83. Some external sooting on the rim and body.

*Trench M, Figure 21*

27. 2020/E/1. Phase 3. Handled tankard in an abraded grey sandy ware. Fabric R22. Diameter 120 mm.
28. 2008/B/1. Phase 3. Small hemispherical bowl with a rolled rim. Diameter 135 mm. Finely micaceous orange ware with a blue-grey core. Specks of white limestone are present in the fabric. Traces of a dark red colour-coat mostly worn. Fabric F51.
29. 2008/H. Phase 3. Base from an Oxfordshire colour-coated bowl with an unusual internal vertical flange. Fabric F51.

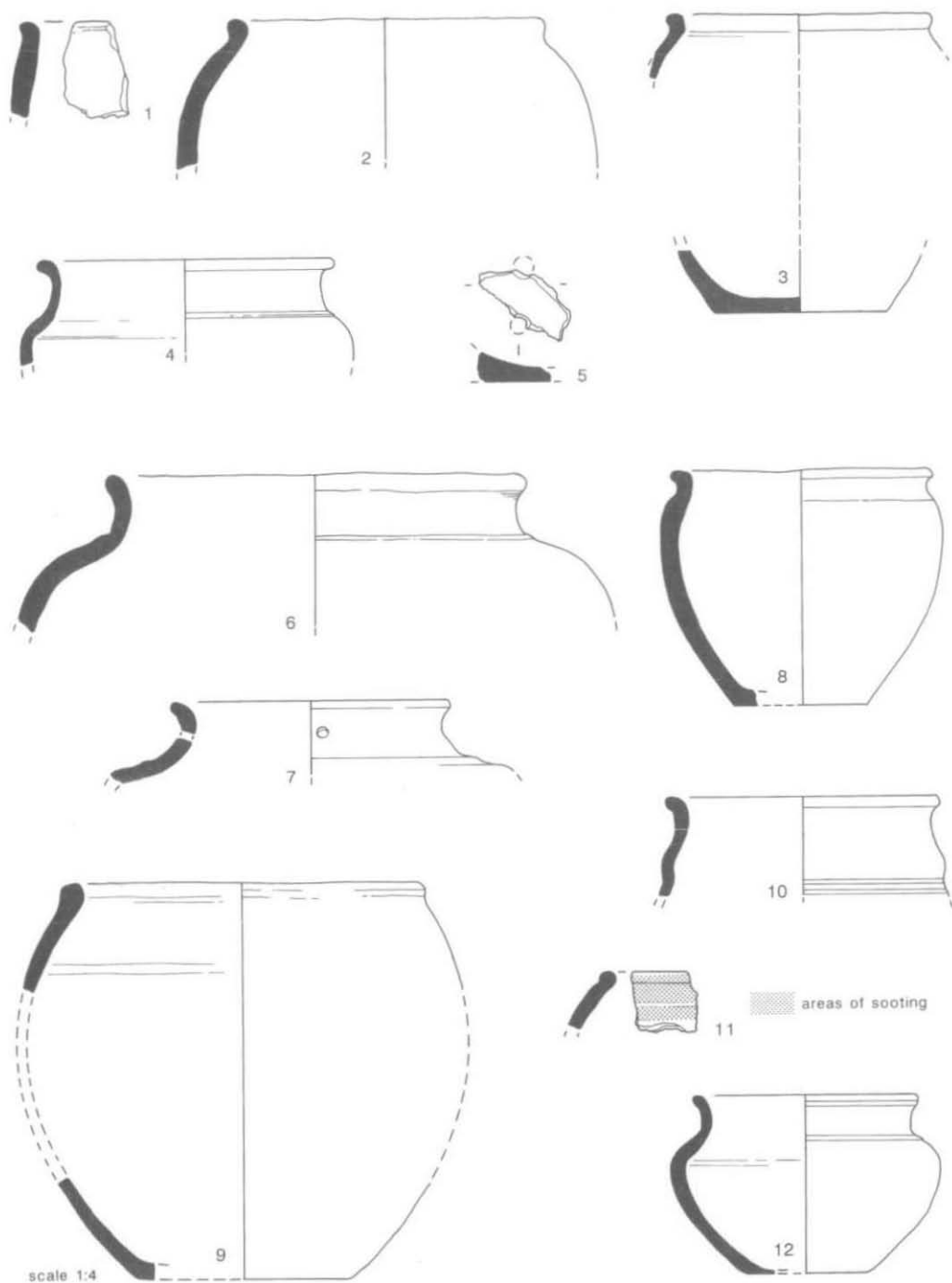


Fig. 19. Pottery from Trench L.

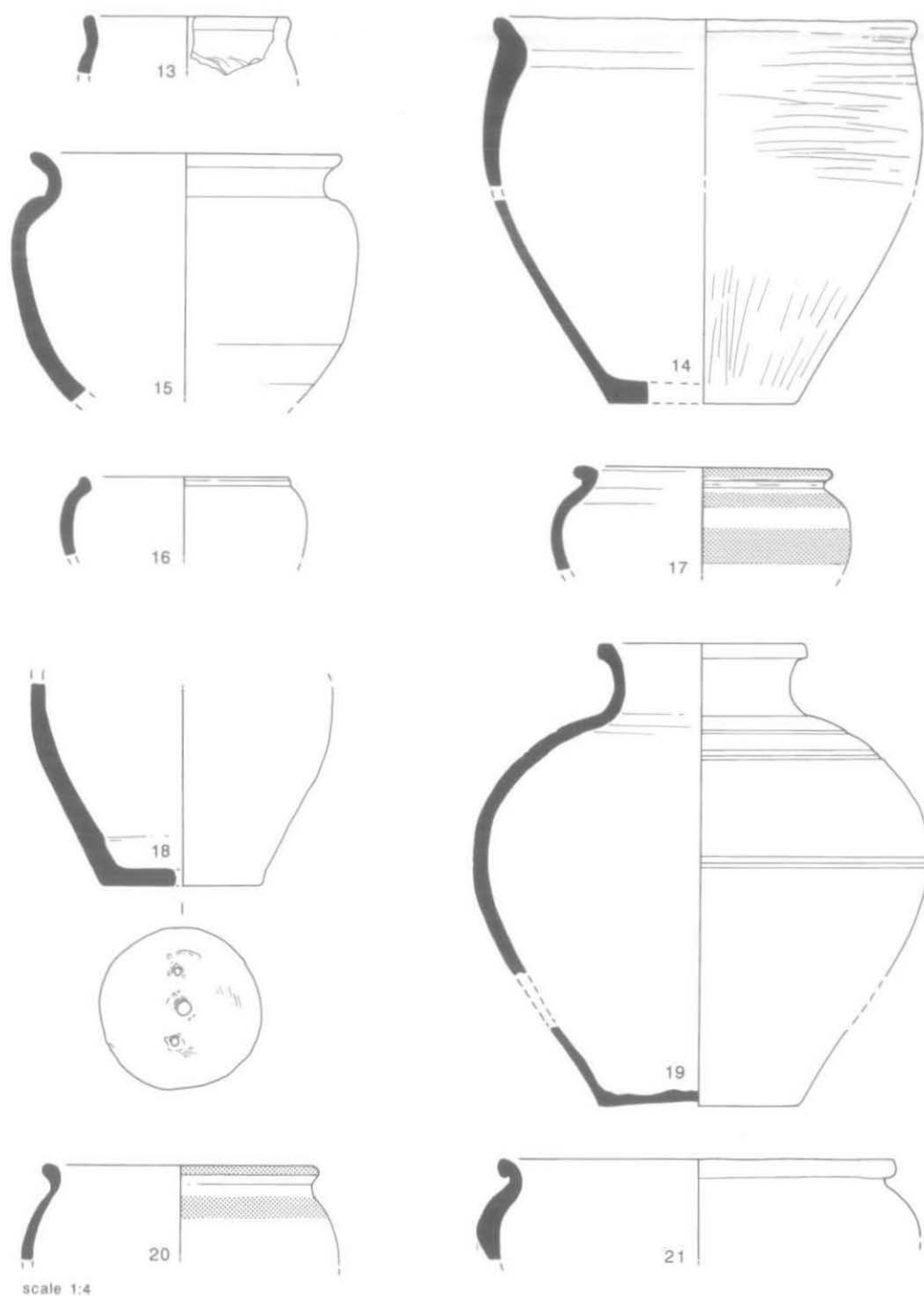


Fig. 20. Pottery from Trench L.

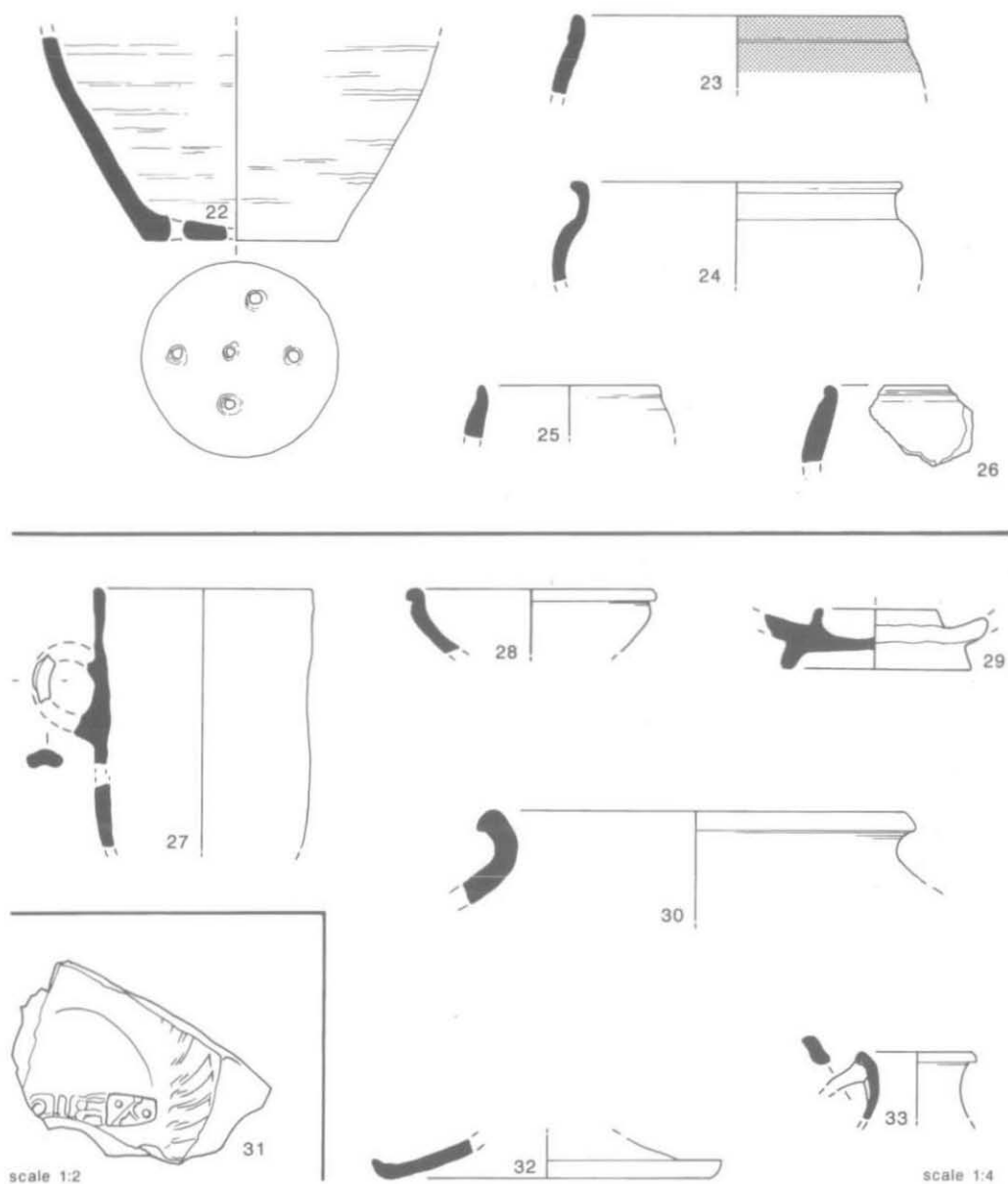


Fig. 21. Pottery: 22-26 from Trench L, 27-33 from Trench M.

30. 2021/A. Phase 4. Wide-mouthed handmade storage jar. Diameter 238 mm. Dark grey with a reddish core. Fabric E90. Burnt residue present on the interior surface.  
 31. 2063/A/1. Phase 4. Oxfordshire colour-coated basesherd with a central illegible potter's stamp. Fabric F51.  
 32. 2063/A/3. Phase 4. Wheelmade lid in a grey fine-medium sandy ware. Diameter 190 mm. Fabric R20.  
 33. 2023/A. Phase 4. Single-handled jug in a grey sandy ware. Diameter 66 mm. Fabric R20.

### Appendix 1. Description of Fabrics

The earlier material has been arranged according to the main inclusions in the fabrics whilst the later material is arranged by source where known.

#### A1 Later Iron-Age/early Roman wares

##### A.1.1 Grog-tempered wares

E80: A large group broadly defined as grog-tempered but in reality including a number of sub-types the most distinctive of which are described below. The wares share the common characteristics of a smooth, soapy feel and a temper dominated by subangular grog with variable additional inclusions of sand, calcareous material, organic matter, mica, and iron compounds.

Forms: Vessels include both handmade, wheel-turned and wheelmade jar and bowl types. Total no: 618 Weight: 10,779 g.

##### E81 (+ E91): Savernake ware.<sup>42</sup>

Two fabrics can be distinguished: a handmade one (E81) used almost exclusively for large storage jars and a finer wheelmade one (E91). The storage jars appear to have achieved a regional distribution prior to the Roman conquest demonstrated by their occurrence on a number of sites in Gloucestershire, for example, Bagendon,<sup>43</sup> pre-military Kingsholm<sup>44</sup> and Frocester.<sup>45</sup> Sherds in this fabric have been recorded only from Trench M, but examples probably occur from Trench L included under TF 2.

E81: No. 4; weight 76 g. E91: No. 13; Wt. 140 g.

E82: A moderately soft ware with a very sandy texture of a slightly open nature. The exterior is generally dark grey-black in colour with a buff core and interior surface. The paste contains a sparse frequency of dark red-brown or grey grog and fine rounded quartz sand. Vessels are handmade.

E83: A dark brown handmade ware with a dark grey-black core. A smooth, soapy feel but with a slightly irregular surface. The paste contains a sparse to moderate frequency of subangular grog up to 2 mm. and shows a hackly fracture.

E85: A mid to light brown ware with an orange or dark grey core, distinguished by a sandier texture. The paste contains a sparse to moderate frequency of subangular to rounded grog up to 2 mm. in size, rare large rounded quartz grains up to 3 mm. and occasional organic inclusions. Occurs as handmade jars/bowls.

E86: A very smooth soapy, moderately soft ware, grey or light brown in colour. The paste contains a moderate frequency of dark grey-black and lighter coloured grog ranging from very fine up to 3 mm. in size. Appears to be used for thick-walled handmade storage jars. One sherd (1035/L/5) carries burnished line decoration.

E90: Similar fabric to TF2 but distinguished by additional common to abundant fine, rounded quartz sand mostly less than 0.5 mm. in size but with occasionally larger macroscopically visible grains. The ware usually occurs in a black or grey range of colours.

Forms: Both handmade and wheel-turned vessels occur in this fabric. No 31; Weight 848 g.

E91 +: A moderately hard, generally light grey ware, occasionally red-brown, with a dark or light grey core. The paste contains a common frequency of dark grey grog. As above a number of variants occur in this group some of which are likely to be from the Savernake kilns (see also E81).

<sup>42</sup> E.K. Annable, 'A Romano-British Pottery in Savernake Forest, Kilns 1-2', *Wiltshire Arch. Nat. Hist. Mag.* lviii (1961), 42-155; V. Swan, 'Oare reconsidered and the origins of Savernake ware in Wiltshire', *Britannia*, vi (1975), 37-61.

<sup>43</sup> E.M. Clifford, *Bagendon: A Belgic Oppidum* (1961), figs 68-70.

<sup>44</sup> J.R. Timby, 'The Pottery from Coppice Corner, Kingsholm, Gloucestershire' (forthcoming).

<sup>45</sup> J.R. Timby, 'The Pottery', in E. Price, *Excavations at Frocester Court, Gloucestershire* (forthcoming).

Forms: Vessels include handmade storage jars and smaller wheel-turned and wheelmade jars and bowls. The latter show both beaded rim and necked, thickened rim types. The date range is likely to be from the first half of the 1st century AD through to the 2nd century. No. 110; Weight 2,441 g.

E96: An evenly coloured reddish-brown ware with a grey core. The fabric has a smooth, soapy feel and contains a moderate frequency of sub-angular to rounded grog, rare red iron and limestone. Occurs at Old Shifford principally as wheelmade jars and bowls, although known in a wider repertoire of forms from other sites. A single beaker sherd was recovered from 1049/E/6. The fabric is a common one found across the Hertfordshire-Buckinghamshire-Bedfordshire region and extending down into Hampshire.<sup>46</sup> Dating evidence from Skeleton Green suggests that the ware first appears during the last quarter of the 1st century BC. At Prae Wood, near St Albans its first appearance is dated to the early years of the 1st century AD, but it is not regarded as common until AD 30–50. A similar chronological trend has been noted at Silchester, Hampshire, where the majority of forms occur in the first half of the 1st century AD.<sup>47</sup>

#### A.1.2 Limestone/shell-tempered

C12: A soft handmade ware with a common density of fine fossil shell, rounded limestone and calcite, the fragments usually less than 0.5 mm. Variable surface coloration ranging from orange-brown to dark grey. Within the group two distinct sub-types can be distinguished; one a harder black ware with grey core and a white speckled surface from a sparse frequency of fine shell and limestone accompanied by dark grey-black rounded clay pellets (C24 variant). A coarser variant also occurs where fragments frequently attain 2 mm. in size and occasionally up to 5 mm. (C24).

Forms: Handmade, wheel-turned and wheelmade jars and bowls. Usually matt but occasionally with a burnished finish. Some sherds show blackened residues on the internal surfaces. No. 174; weight 1381 g.

C14/C15: A relatively soft fabric with a moderate to common frequency of fossil shell temper. The vessel colour ranges from a mid orange-brown to a dark brown or black. At least two fabric types have been put into this fabric category (C14 and C15). A rare variant (C16) contains a sparser amount of fossil shell accompanied by equal quantities of dark red-brown rounded to sub-angular iron up to 2.5 mm. across.

Forms: Handmade jars/bowls. No. 94; weight 1215 g.

C20: A moderately soft fabric with a poorly sorted, sparse to moderate frequency, of rounded limestone and variable amounts of other constituents such as flint, iron, quartz and clay pellets. The fabric has a fine sandy texture.

Forms: Handmade/wheel-turned vessels including jars, bowls and a single fragment from a lid.  
No. 20; weight 428 g.

#### C22: Malvernian limestone-tempered ware.

A moderately soft, handmade fabric with a common frequency of angular Palaeozoic greyish limestone up to 1.5 mm. in size. Sherds are usually black or mid-brown in colour. This fabric probably equates with Peacock's Malvernian type B1 with a postulated source in the Malvernian region.<sup>48</sup>

Forms: Handmade jars usually with a squat, internally thickened rim. The exterior surfaces are frequently burnished. Usually date from the later 1st century BC continuing to feature up to the mid 1st century AD. One vessel from 1063 has a burnt internal residue. No. 65; weight 715 g.

#### A.1.3 Flint-tempered

E64: A moderately hard fabric with black or red-brown surfaces and a grey or brown core. The paste contains a sparse to moderate temper of angular calcined flint, mostly finer than 1.5 mm, sparse pellets of red iron and fine quartz sand.

Forms: Handmade and wheelthrown jars/bowls. A sherd from 303 has a calcareous deposit on the internal surface. No. 29; weight 395 g.

<sup>46</sup> I. Thompson, *Grog-Tempered 'Belgic' Pottery of South-Eastern England* (Brit. Arch. Rep. cviii, 1982), 22.

<sup>47</sup> J.R. Timby, 'The Pottery', in M.G. Fulford, *Late Iron Age and Early Roman Calleva: Excavations on the Forum-Basilica, Silchester 1980–1986* (forthcoming).

<sup>48</sup> D.P.S. Peacock, 'A Petrological Study of Certain Iron Age Pottery from Western England', *Proc. Prehist. Soc.*, xxxiv (1968), 414–27.

## A.1.4 Sandy ware

Miscellaneous group including fabric E21:

A hard, black or dark grey fabric tempered with a common to abundant frequency of moderately well-sorted quartz sand with a scatter of larger rounded grains (0.5 mm. and less in size). Occasional inclusions of iron, flint and limestone also feature.

Forms: Vessels are handmade or wheel-turned. The groups appears to contain a mixture of Iron Age and late Iron Age/early Roman wares which were not originally differentiated. No. 47; weight 619 g.

A.2 Roman wares are summarized in Table 3.

## POTTERY SMALL FINDS, by JANE R. TIMBY

*Perforated pottery counter.* Handmade grey sandy ware with grog. Fabric E80. Diameter 40 mm. 1065. SF 156.

*Re-used wheelmade jar base.* Very thin. Grey fabric with a common to abundant frequency of dark grey sub-angular grog, sparse limestone. ?Fabric E91. 1041/A/1. SF 137.

## NEOLITHIC SHERD, by ALISTAIR BARCLAY

*Neolithic Bowl/Peterborough Ware.* 1041/F/3. A single body sherd weighing 2 g, tempered with very angular calcined flint. Buff exterior and black interior surfaces.

## FIRED CLAY, by ALISTAIR BARCLAY, HELEN GLASS and GILL HEY

The excavations produced a total of 661 fragments/9,563+ kg. of fired clay, the composition and provenance of which are summarized in Table 4. The assemblage includes objects/tools used in the production of textiles, refractory clay fragments from ovens and metalworking, structural clay with wattle impressions and a number of miscellaneous, probably domestic, objects.

*Fabrics*

The fired clay was subdivided into seven fabric groups.

*Fabric 1* – with frequent inclusions: up to 7% subangular limestone grit and shell platelets with rare ironstone grit and occasional organics. 649 fragments/8954 g.

*Fabric 2* – with infrequent inclusions: very fine shell platelets (less than 1 mm), ferruginous pellets (less than 2 mm.) and burnt-out organic voids. 1 fragment/42 g.

*Fabric 3* – slightly sandy fabric with frequent inclusions: limestone oolites, oolitic limestone gravel. 4 fragments/46 g.

*Fabric 4* – with quartz sand, shell and large pieces of angular grog. 1 fragment/94 g.

*Fabric 5* – Pale brown, moderately hard fabric with sparse inclusions of angular flint up to 1 mm. and limestone up to 3 mm. The number of air voids within the fabric could indicate poor preparation of the clay. 1 fragment.

*Fabric 6* – abundant subangular quartz up to 1 mm. Common oolitic limestone fragments, both subangular and subrounded, occasional limestone oolites and shell platelets 3–12 mm. 1 fragment/6 g.

*Fabric 7* – common subangular and subrounded quartz and occasional glauconitic pellets. 1 fragment/315 g.

The entries in this and the subsequent catalogues are ordered as follows: object type, completeness, description, measurement(s), context, small find number. L = length, D = diameter, W = width, T = thickness.



TABLE 4. SUMMARY OF FIRED CLAY BY PHASE

Phase	Context	Fragments	Weight (g.)	Fabric	Comment
<b>TRENCH L</b>					
Phase 1	1037	9	76	1	Wattle impressions
	1038	16	798	1	Loomweights (SF 131 and 207), wattle impressions
	1039	5	16	1	
	1044	2	7	1	
	1078	1	39	1	Wattle impressions
	1085	2	67	1	
Subtotal		35	1003		
Phase 2	711	3	65	1	
	711	1	16	6	?Loomweight
	1002	11	117	1	
	1003	69	1617	1	Oven wall (SF 200)
	1004	1	750	1	Loomweight (SF 121)
	1004	1	315	7	Loomweight
	1008	7	45	1	
	1009	1	20	1	
	1011	1	8	1	
	1014	8	15	1	
	1017	3	5	1	
	1050	1	3	1	
	1058	4	8	1	
	1060	4	12	1	
	1070	73	395	1	Wattle impressions
Subtotal		188	3456		
Phase 3	701	5	31	1	
	701	1	5	3	
	710	3	21	1	
	710	1	5	3	
	1000	13	123	1	
	1024	11	60	1	Wattle impressions
	1025	11	42	1	
	1026	6	65	1	Wattle impressions
	1035	26	249	1	Six fragments with wattle impressions
	1036	7	35	1	
	1041	6	28	1	Wattle impressions
	1049	251	3262	1	Disc (SF 137), oven wall (SF 249) and 15 fragments with wattle impressions
	1057	6	51	1	Loomweight (SF 252)
	1063	3	14	1	Wattle impressions
	1065	27	265	1	Spindlewhorl (SF 156), wattle impression
Subtotal		377	4256		
Phase 4	1006	2	4	1	
	1076	5	98	1	
Subtotal		7	102		
<b>TRENCH M</b>					
Phase 3	305	2	29	1	
	305	2	6	2	Plate
	307	5	150	1	
	307	2	36	3	Loomweight
Subtotal		11	221		
Phase 4	2021	36	266	1	
	2022	2	4	1	
	2026	1	42	2	
	2026	1	?	5	Plate
	2060	1	29	1	
	2063	1	94	4	Plate (SF 341)
	2063	1	?	?	Plate
Subtotal		43	435+		
TOTAL		661	9561+		

*Early Roman*

*Loomweight.* Fragment from small, triangular loomweight. Fabric 7, 315 g. T 48 mm. 1004/D, SF 121.

*Loomweight.* Corner and side fragments from one or more large loomweights, 1 perforation. Oxidized reddish-brown. Fabric 1 with rare large angular flint. 717 g. T 100 mm. 1038/A-B, SFs 131 and 207.

*Loomweight.* Fabric 6, 16 g. 711.

*Loomweight.* Corner fragment, probably from a loomweight. Fabric 1, 106 g. 1057/D/1, SF 252.

*Spindlewhorl.* (Missing) Discoidal. Complete. 39 g. D 42 mm. T 11 mm. 1065, SF 156.

*Ceramic disc.* Slightly lipped around edge and domed in centre of one face. Fabric 1, 635 g. D 59 mm. T 3 mm. 1049/A/1, SF 137.

*Oven wall.* Fragments from the wall of a clay-lined oven. Fabric 1, 63 fragments/1590 g. 1003/A/1, SF 200.

*Oven wall.* Fragments from the wall of an oven. Fabric 1, 29 fragments/395 g. 1049/E/6, SF 249.

*Late Roman*

*Loomweight.* Corner fragment. Fabric 3, 10 g. 307.

*Plate-like object.* Fabric 2, 6 g. 305.

*Plate-like object.* Fabric 4, 94 g. D 210 mm, T 21 mm. 2063/A/1, SF 342.

*Plate or disc.* Missing. Fragment of a flat clay disc. Fabric 5, 2026/A/1.

*Disc or plate* Missing. Fragment of a fired clay disc. 2063/A/2.

*Plate.* Incomplete. Four refitting fragments from a plate or lid. The outer surface is oxidized reddish-brown and has vegetation impressions and shallow, linear grooves. Possible lipping along the inner, broken edges. Fabric 1, 750 g. L 267 B 118 mm. T 20 mm. 2021/A, SF 341.

*Discussion*

The fired clay reflects a range of domestic and industrial activities including metalworking (see below), textile production, food preparation and storage. Although nearly all the fired clay derives from secondary contexts, it is a good indicator of the former presence of settlement structures.

There are a number of weights used in the different stages of textile manufacture, including at least four triangular loomweight fragments and a spindlewhorl. Further loomweights are probably represented amongst the indeterminate fragments which make up most of the assemblage. The fragmentary plate-like objects (SFs 156 and 342 and context 711) could have functioned as lids for storage vessels of wood or clay.<sup>49</sup> No briquetage was recovered.

Most of the fired clay consists of indeterminate oxidized reddish-brown amorphous fragments. Much of this material may derive from broken ovens and hearths, although none were found *in situ*. At least one lump grades from ceramic to unfired clay, indicating that it was part of a structure fired *in situ*. Thirteen contexts contained structural fired clay with wattle impressions, possibly deriving from the walls of clay ovens or of wattle-and-daub buildings. One fragment with a flat edge and concave surface is from the lower part of an oven wall, and a second fragment with a rounded edge could be from an oven plate.<sup>50</sup> No visible residues from either industrial or domestic activities were observed. Ingate fragments and several pieces of highly fired ceramic (described below) provide some evidence for bronze casting.

<sup>49</sup> Cf. J. Sanders, 'The Roman pottery', in Lambrick and Robinson, *op. cit.* note 15, 54, fig. 28:124-7.

<sup>50</sup> Cf. C. Poole, 'Objects of fired clay', in B. Cunliffe, *Danebury: An Iron Age Hillfort in Hampshire, Volume 2, The Excavations, 1969-1978: the Finds* (Counc. Brit. Arch. Res. Rep. lii, 1984), 115-21.

## METAL WORKING, comments by CHRIS SALTER

*Mould fragment.* Fragment of ingate from mould. For bronze casting. D 34 mm., weight 28 g. 1016, SF 244

*Other possible fragments of mould matrix.* Weight 2 g. 1016/A (flot from soil sample)

*Fuel ash slag.* Weight 45 g. 1065/C

The mould fragment, along with other fragments of mould matrix, indicates limited working of copper alloy on site. The fuel ash slag could be from bronze casting, but could also come from any high-temperature hearth. There was no evidence of smithing.

## ROMAN COINS, by DR CATHY KING

A group of thirty-one Roman coins from Old Shifford Farm has a chronological distribution typical of Romano-British sites despite its small size. The periods in which coins are most heavily concentrated are 260–286 (5 coins, 16.1%), 330–348 (8 coins, 25.1%) and 364–378 (5 coins, 16.1%) although they range in date from the 1st/2nd centuries AD to the late 4th century. Only three of the 4th-century coins could be attributed to a mint, a BEAT TRANQLITAS VOTIS XX from London, an VRBS ROMA and a VICTORIAE DD AVGG Q NN from Trier. There were four ancient copies: a core of a plated denarius, a DIVVS CLAUDIVS copy of the 270s, an imitation of GLORIA EXERCITVS (two standards) belonging in the period 330 to 348 and a FEL TEMP REPARATIO minim minted c. 348–360.

All the coins were metal detector finds:

1. SF103. Core of plated denarius. Illegible. 1C–2C.
2. SF180. Antoninianus (imitation). Claudius II, Consecratio type with altar. c AD 270–280.
- 3–6. SF110, SF194, SF359, SF362. Antoninianus. Illegible radiate. c AD 260–286.
7. SF190. AE2. ?Constantine I, MARTI CONSERVATORI. AD 310–313.
8. SF184. AE2. Constantine I, MARTI PATRI PROPVG. AD 310–313.
9. SF189a. AE3. Constantine I, VIRTVS EXERCIT VOT XX. AD 317–320.
10. SF189b. AE2. Crispus, BEAT TRANQLITAS VOTIS XX. London. RIC VII, 251. AD 320–325.
11. SF355. AE3. VRBS ROMA, wolf and twins. Trier, mint mark uncertain. AD 330–335.
12. SF193. AE3. CONSTANTINOPOLIS, victory on prow. AD 330–335.
13. SF315. AE3. Obverse illegible, GLORIA EXERCITVS 2 standards. AD 330–335.
- 14 and 15. SF186, SF360. AE4. Obverse illegible, GLORIA EXERCITVS 1 standard. AD 335–341.
16. SF188. AE4. Helena or Theodosia, reverse illegible. AD 335–341.
17. SF185. AE4 (imitation). Obverse illegible, GLORIA EXERCITVS 2 standards. AD 330–348.
18. SF358. AE3. Constans, VICTORIAE DD AVGG Q NN. Trier. LRBCI, 140–140a. AD 341–348.
19. SF361. AE3. Obverse illegible, FEL TEMP REP fallen horseman. AD 348–360.
20. SF183. AE4 (imitation). Obverse illegible, FEL TEMP REP fallen horseman. c AD 348–360.
21. SF191. AE3. Valentinian I, GLORIA ROMANORVM. AD 364–378.
- 22 and 23. SF179, SF357. AE3. Obverse illegible, GLORIA ROMANORVM. AD 364–378.
- 24 and 25. SF162, SF363. AE3. Obverse illegible, SECVRITAS REIPUBLICAE. AD 364–378.
26. SF352. AE3. Gratian, VOT XV MVLT XX. AD 378–388.
27. SF182. AE3/4. Obverse illegible, SALVS REIPUBLICAE. AD 388–402.
28. SF181. AE3. Illegible. 4C
- 29 and 30. SF187, SF356. AE4. Illegible. 4C.
31. SF346. Illegible fragment 3C–4C.

## COPPER ALLOY SMALL FINDS, by LEIGH ALLEN and HELEN GLASS, with comments by Martin Henig and Arthur MacGregor

The twenty-nine copper alloy finds are catalogued below by period. The majority were unprovenanced metal-detector finds, only five objects coming from stratified contexts. Four of these are Roman brooches dating to the mid to late 1st century. Among the unstratified material there are a further two brooches,

one of which is a lion bow variant, the lion's head has become very stylized and the brooch itself is very abraded. There are few good examples of this type from Britain.<sup>51</sup> The remaining identifiable Roman find is a fine twisted bracelet with a simple hook and loop fastening dating to the late 4th or early 5th century.<sup>52</sup>

The medieval and post-medieval periods are represented by an assortment of personal items, including buckle frames in a range of simple designs, buckle plates, mounts, rings and buttons. There is also a fragment from a cast pellet bell decorated with a geometric design. These are common from the early post-medieval period through to the 18th and 19th centuries for use on animal harnesses, most frequently horse harnesses.<sup>53</sup>

#### *Late Iron Age/Early Roman*

*Brooch.* Langton Down type AD 43–75, incomplete. The spring is obscured within an almost cylindrical casing. The head of the brooch is wide and square. The catchplate (although damaged) is perforated with a subtriangular opening. The standard reeding decoration found on the Langton Down type is here replaced by a single median rib and plain side mouldings. The pin is missing.<sup>54</sup> L 43 mm. 1035/F/5, SF 132. Fig. 22.

*Brooch.* Hod Hill type, incomplete. Fragment of the ribbed bow and catchplate.<sup>55</sup> L 25 mm. 1049/E/8, SF 154.

#### *Late Roman*

*Brooch.* Colchester derivative, complete. Plain bow with encased spring. L 46 mm. 2021/A, SF 172. Fig. 22.

*Brooch.* Hybrid type with a coiled hinge mechanism, incomplete.

The upper part of the bow is ribbed, with side wings at the point where the bow narrows as with the Hod Hill type.<sup>56</sup> The spring and bar are like the Dolphin brooch.<sup>57</sup> L 45 mm. 2021/A, SF 173. Fig. 22.

*Pin.* Incomplete. Pin with rectangular section tapering to a point, broken at the upper end, possibly from a penannular brooch. L 49 mm. 2003/B, SF 170.

#### *Unstratified Roman Finds*

*Brooch.* Lion bow variant, incomplete. Stylized lion head on the bow.<sup>58</sup> L 30 mm. SF 115.

*Brooch.* Dolphin type, incomplete. The spring is encased and the bow is flattened with a central ridge, 1st century AD.<sup>59</sup> L 24 mm. SF 331.

*Bracelet.* Complete. Fashioned from a twisted copper alloy rod with a square section. One terminal is flattened into a rounded plate with a central perforation, the other tapers to form a circular-sectioned hook. Mid 4th to early 5th century.<sup>60</sup> D 59 mm. SF 161. Fig. 22.

#### *Unstratified Medieval and Post-medieval Finds*

*Buckle frame.* Incomplete. Oval, lipped frame, notch for the pin, which is missing.<sup>61</sup> L 22 mm. SF 112.

<sup>51</sup> R. Hattat, *Ancient Brooches and Other Artefacts* (1989), 44–5.

<sup>52</sup> A.C.C. Brodribb, A.R. Hands and D.R. Walker, *Excavations at Shakenoak Farm, Nr Wilcote, Oxfordshire, Vol. III* (1972), 71.

<sup>53</sup> S. Margeson, *Norwich Households: Medieval and Postmedieval Finds from the Norwich Survey Excavations 1971–78* (East Anglian Arch., 1993), 213–14.

<sup>54</sup> Cf. R. Hattat, *Iron Age and Roman Brooches* (1985), 35–7, fig. 15; I.M. Stead and V. Rigby, *Baldock: the Excavation of a Roman and Pre-Roman settlement 1968–72* (Britannia Mono. Ser. vii, 1986), 113, fig. 45, nos. 87–95.

<sup>55</sup> Cf. R. Hattat, *op. cit.* note 51, fig. 179, no. 1500.

<sup>56</sup> Cf. *ibid.* fig. 181, no. 849.

<sup>57</sup> Cf. *ibid.* fig. 160, no. 1509.

<sup>58</sup> Cf. *ibid.* fig. 166, nos. 779, 1466.

<sup>59</sup> Cf. *ibid.* fig. 157, no. 17.

<sup>60</sup> Cf. Brodribb et al., *op. cit.* note 52, 69–72, fig. 30, no. 131.

<sup>61</sup> Cf. G. Egan and F. Pritchard, *Medieval Finds from Excavations in London, 3: Dress Accessories c. 1150–1450* (1991), 74–5, nos. 306–311.

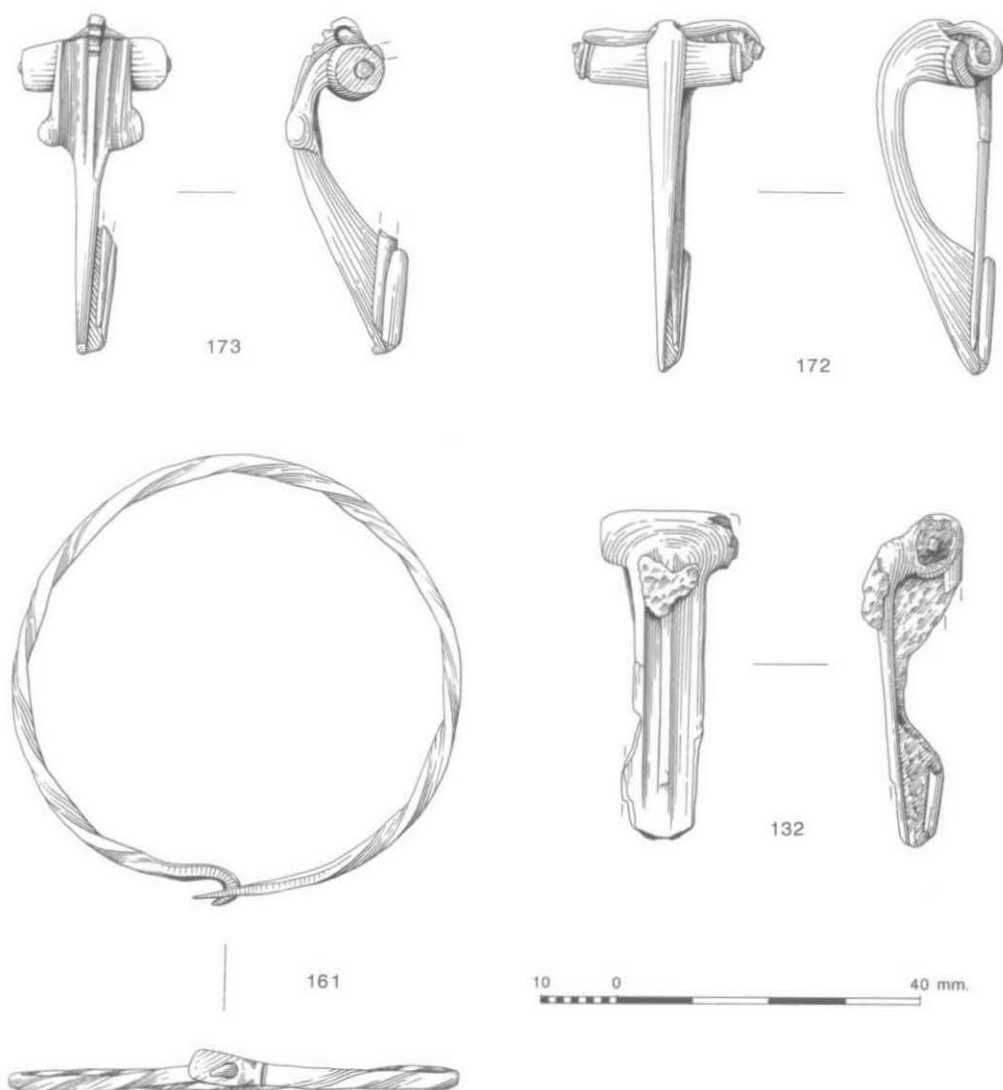


Fig. 22. Objects of copper alloy.

*Buckle frame.* Complete. Double oval frame, lipped on both outside edges, the central bar projects at the sides. Early post-medieval.<sup>62</sup> L 30 mm. SF 290.

*Buckle frame.* Incomplete. Rectangular buckle frame curved in profile, central bar and pin missing. L 22 mm. SF 291.

*Buckle frame.* Incomplete. Trapezoidal frame decorated with two incised grooves and a fluted outside edge. The frame is plated with non-ferrous metal. The bar and pin are missing. L 30 mm. SF 297.

<sup>62</sup> Cf. Margeson, *op. cit.* note 53, 28–30, fig. 16, nos. 168–173.

*Buckle frame.* Incomplete. Fragment from an oval buckle frame, right-angled rabbets at each corner. L 51 mm. SF 303.

*Buckle frame.* Incomplete. Fragment from a D-shaped buckle frame with a three-lobed outline and scroll decoration on the lobes. L 23 mm. SF 295.

*Buckle plate.* Incomplete. Rectangular buckle plate recessed for the frame, three circular perforations for rivets, single line of punched triangular decoration around the edge, the plate is gilded.<sup>63</sup> Medieval. L 34 mm. SF 364.

*Belt stiffener.* Complete. Cast, plain belt stiffener, two spikes on the reverse for attachment. Plated with non-ferrous metal. Post-medieval.<sup>64</sup> L 35 mm. SF 319.

*Mount.* Complete. Circular mount with single central perforation and three incised grooves across the diameter. Two circular lobes protrude from the mount, each with a central perforation for a rivet. L 20 mm. SF 296.

*Ring.* Incomplete. Large ring fragment, D-shaped section. L 68 mm. SF 301.

*Buttons (x 2).* Incomplete. Cast plain circular buttons with a flange around the circumference. Plated with non-ferrous metal. D 18 mm. SF 325.

*Buttons (x 8).* Complete. Seven blazer buttons, plain circular discs with integral attachment loops. Post-medieval.<sup>65</sup> One dome-headed button with iron attachment loop. Plated with non-ferrous metal. D 28 mm. (max.). SF 326.

*Pellet bell.* Incomplete. Fragment from a cast pellet bell decorated with geometric design.<sup>66</sup> D 21 mm. SF 318.

*Thimble.* Incomplete. Straight-sided, flat-topped thimble with a plain band at the base and regularly spaced, mechanically punched indentations above. L 19 mm. SF 160.

*Paper clip rivet.* Incomplete. Diamond-shaped fragment of copper alloy sheet with the ends folded to the centre and back, possibly used as a patch for fabric or vessels.<sup>67</sup> L 15 mm. SF 106.

*Binding.* Incomplete. Sheet of copper alloy binding rolled to form a cone with a pinched end. L 42 mm. SF 107.

*Point.* Incomplete. Part of the shank and tip from a point. L 38 mm. SF 304.

*Disc.* Complete, plain. D 27 mm. SF 332.

*Strip.* Incomplete. Angled strip with a rectangular section, Circular perforation through the section of the strip, possibly a fragment from a buckle frame; the perforation is for the central bar. L 23.5 mm. SF 321.

*Object.* Incomplete. Flattened rectangular strip with projecting curved prong. L 36 mm. SF 300.

*Object.* Incomplete. Cast copper alloy fragment from a circular object, slightly dished. L 30 mm. SF 302.

#### IRON SMALL FINDS, by LEIGH ALLEN and HELEN GLASS

The thirty-one iron objects are catalogued below by period. The majority are unprovenanced metal detector finds. Only eight of the fifteen objects from stratified contexts are identifiable: seven are nails from late Roman contexts, the other is a fragment from the blade of a knife. Among the unstratified finds there are a whittle tang knife and a snaffle bit which are attributable to the Roman period.

<sup>63</sup> Cf. Egan and Pritchard, op. cit. note 61, 110–14, fig. 72, nos. 499–514.

<sup>64</sup> Cf. Margeson, op. cit. note 53, 40–1, fig. 23, no. 288.

<sup>65</sup> Cf. M. Biddle and L. Cook, *Object and Economy in Medieval Winchester* (1990), 571–81, fig. 155, nos. 1753.

<sup>66</sup> Cf. Margeson, op. cit. note 53, 213–14, fig. 162, no. 1761.

<sup>67</sup> Cf. D.C. Mynard and R.J. Zeepvat, *Excavations at Great Linford* (Bucks Arch. Soc. Mono. iii, 1991), 164–5, fig. 75, nos. 180–1.

The medieval and post-medieval periods are represented by personal items, including buckle frames and horse gear, among the latter a single horseshoe and two spur buckles.

*Late Iron Age/Early Roman*

*Knife blade.* Incomplete. Tip only from a very badly corroded knife blade. L 53 mm. 1049/A/3, SF 138.

*Point.* Incomplete. Tip only, square section. L 18 mm. 1011/B, SF 125.

*Rod.* Incomplete. Iron rod, circular in section, tapers towards one end. L 115 mm. 1060/A/1, SF 141.

*Strip.* Incomplete. Rectangular section, curved in profile. L 22 mm. 1011/B, SF 124.

*Object.* Incomplete. Strip expanded at one end to form a circle with a circular perforation through the centre, possible hinge plate terminal.<sup>68</sup> L 51 mm. 1035/B/1, SF 126.

*Late Roman*

*Nail.* Incomplete. Manning's type 3.<sup>69</sup> L 126 mm. 2002, SF 345.

*Nail.* Complete. Circular-flanged head, square-sectioned shank, Manning's type 1A. L 68 mm. 2018/A, SF 163.

*Nail.* Complete. Small domed head, short square-sectioned shank, Manning's type 8. L 23 mm. 2018/A, SF 169.

*Nail.* Complete. Circular-flanged head, square-sectioned shank, Manning's type 1A. L 35 mm. 2018/A, SF 171.

*Nail.* Complete. Circular-flanged head, square-sectioned shank, Manning's type 1A. L 70 mm. 2064/A/1, SF 122.

*Nail.* Incomplete. Head missing, square-sectioned shank. L 53 mm. 3046/A/1, SF 347.

*Nails* (x 2). Complete and incomplete. I. Circular-flanged head, square-sectioned shank, Manning's type 1A, L 92 mm. II. Head missing, square-sectioned shank. L 72 mm. 2008/H, SF 344.

*Strip.* Incomplete. Rectangular, with a rectangular section. L 51 mm. 2003/D, SF 365.

*Strip.* Incomplete. Rectangular, broken at both ends with a rectangular section. L 54 mm. 2018/A, SF 168.

*Strip.* Incomplete. Rectangular, curved in profile with a rectangular section. L 35 mm. 2033/A/3, SF 353.

*Unstratified*

*Buckle frame.* Incomplete. Rectangular frame curved in profile. There are holes in the frame for a separate central bar. Two lobes with a point between them decorate the outside edge, the pin is missing. L 41 mm. SF 323.

*Buckle frame.* Incomplete. Rectangular frame curved in profile. There are holes in the frame for a separate central bar, plain outside edge, the pin is missing. L 35 mm. SF 324.

*Whittle tang knife.* Complete. Triangular blade with a straight edge, and a back which continues the line of the tang, Manning's type 11A.<sup>70</sup> Mid 1st century. L 145 mm. SF 314.

*Whittle tang knife.* Incomplete. Tang and blade both broken, the shoulder is expanded to form a square-cut bolster. Post-medieval, 17th century.<sup>71</sup> L 67 mm. SF 316.

*Horseshoe.* Incomplete. Single narrow web from a horseshoe, with lobate profile, two countersunk nail holes and slightly raised calkins. L 77 mm. SF 114.

<sup>68</sup> Cf. *ibid.* 196–7, fig. 102, no. 361.

<sup>69</sup> W.H. Manning, *Catalogue of the Romano-British Iron Tools, Fittings and Weapons in The British Museum* (1989), 134–7.

<sup>70</sup> *Ibid.* 114, pl. 54, Q34.

<sup>71</sup> I.H. Goodall, *Object and Economy in Medieval Winchester* (1990), 835–60, fig. 258, no. 2857.

*Snaffle bit*. Incomplete. The single bar is slightly curved with loops at either end, the side rings are large and circular.<sup>72</sup> L 282 mm. SF 327.

*Spur buckle*. Complete. Rectangular buckle frame with central bar and pin, passing through a tongue and waisted strap end, allowing free movement.<sup>73</sup> L 40 mm. SF 322.

*Spur buckle*. Incomplete. Circular buckle with central bar and pin, passing through a tongue and waisted strap end, allowing free movement.<sup>74</sup> L 20 mm. SF 113.

*Slide key*. Incomplete. Bow and part of the stem of a slide key, the bit is missing. L 75 mm. SF 317.

*Ring and link*. Incomplete. Circular ring with a fragment of a figure of eight-shaped link attached. L 36 mm. SF 329.

*Triangular plate*. Incomplete. Single circular perforation in one corner, broken along one edge. L 100 mm. SF 1.

*Rod*. Incomplete. Iron rod, circular in section, expanded and flattened at one end. L 118 mm. SF 108.

*Strip*. Complete. Rectangular strip with rectangular section, curved to form a flattened ring. L 21 mm. SF 305.

*Strip*. Incomplete. Iron strip, rectangular in section, curled over at one end. L 96 mm. SF 5.

*Strip*. Incomplete. Trapezoidal-shaped strip, curved in profile, decorated with an incised groove around the edge. L 23 mm. SF 116.

*Object*. Complete. D-shaped object with small triangular plate attached with a rivet through it. L 69 mm. SF 330.

#### LEAD SMALL FINDS, BY LEIGH ALLEN AND HELEN GLASS

All sixteen lead objects are unstratified, the identifiable objects comprise small weights, probably for fishing nets, pot rivets and shot.

##### *Unstratified*

*Weight*. Complete. Pyramidal weight with a square central perforation. L 26 mm. SF 331.

*Weight*. Complete. Cylindrical weight formed from a rolled lead sheet. L 17 mm. SF 306.

*Weights* (× 2). Complete. I. Spherical weight with a square central perforation. D 17 mm. II. Pyramidal weight with a circular central perforation. L 14 mm. SF 298.

*Shot* (× 3). Complete. Spherical pieces of shot, flattened areas where they have been rammed. D 11–17 mm. SFs 104, 105, 299.

*Pot rivets* (× 5). Complete. L 18–56 mm. SFs 117, 292–4, 289.

*Strip*. Incomplete. D-sectioned with a central ridge running along the length of the strip. There are incised lines on either side of the ridge. L 30 mm. SF 333.

*Strip*. Incomplete. Irregular in shape with a rectangular section. L 29 mm. SF 102.

*Waste*. Incomplete. 90 fragments/1397 g. of lead waste were recovered, all unstratified contexts.

<sup>72</sup> Cf. Manning, *op. cit.* note 69, 66–7, pl. 28, no. H9.

<sup>73</sup> Cf. Mynard and Zeepvat, *op. cit.* note 67, 181, fig. 88, no. 258.

<sup>74</sup> Cf. *ibid.* 181, fig. 88, no. 260; Margeson, *op. cit.* note 53, 223, fig. 170, no. 1810.



*Object.* Complete. Bucket-shaped object with an ovoid base, there are two holes in the base, possibly a weight. L 16 mm. SF 320.

*Object.* Incomplete. Irregular-shaped lead sheet curved at one edge, with striations on one side and a geometric design on the other. L 45 mm. SF 101.

#### GLASS SMALL FINDS, by LEIGH ALLEN and HELEN GLASS

Only one fragment of glass was recovered from a secure late Roman context:

*Vessel fragment.* Incomplete. Fragment of bluish, matt/glossy, free-blown vessel glass, possibly from the base of a bottle. L 30 mm. 2063/A/1, SF 177.

#### STONE OBJECTS, by FIONA ROE with HELEN GLASS

A total of twelve stone objects were recovered, most of them from the later settlement. Three are identifiable as coming from rotary querns, two from late Roman contexts and one unstratified example.

The small assemblage contains types of stone typical of finds from Roman contexts in the Upper Thames region. There are two quern materials, Upper Old Red Sandstone and lava, presumed to be of the Niedermendig variety. Quartz Conglomerate from the Upper Old Red Sandstone of South Wales or the Forest of Dean, probably transported via the Rivers Wye and Severn, was widely used in the area for rotary querns during the Roman period, occurring for example at Roughground Farm, Lechlade, Gloucestershire,<sup>75</sup> Gravelly Guy<sup>76</sup> and Abingdon Vineyard.<sup>77</sup> Niedermendig Lava is similarly of widespread occurrence, being recorded for instance again at Abingdon Vineyard and also at Worton Rectory Farm, Yarnton.<sup>78</sup> River transport up the Thames would have facilitated the acquisition of this superior quern material.

The single whetstone (SF 3) appears, on macroscopic examination, to be of Pennant Sandstone, probably obtained from the Upper Coal Measures in the Bristol area. No other examples have been recorded from Oxfordshire to date, though the material was in use generally for whetstones during the Roman period.<sup>79</sup>

The earlier finds from the site include a quern fragment of Upper ORS sandstone (from context 1035/C/16). The local gravels were probably the source of the materials used for rubbers.<sup>80</sup> There are two irregularly-shaped rubbers of shelly limestone (SFs 127, 155), one (SF 155) well worn into facets, though the exact purpose for which it was used is uncertain. A slab-shaped piece of fine-grained Greensand (SF 367) from one of the assessment trenches was probably used with a saddle quern, although all the other grinding equipment from the site is likely to have belonged to rotary querns.

Identifications marked \* are by Fiona Roe.

#### *Late Iron Age/Early Roman*

*Rubber.* Incomplete. \*Shelly oolitic limestone, probably Corallian from local gravels. Rubber with two worn surfaces. L 120 mm., T 43 mm. 1035/C/15, SF 127.

*Quern fragment.* Incomplete. \*Upper Old Red Sandstone sandstone. Small fragment, burnt, with one worn surface. L 40 mm. 1035/C/16.

<sup>75</sup> T. Allen, T. Darvill, S. Green and M. Jones, *Excavations at Roughground Farm, Lechlade, Gloucestershire: a Prehistoric and Roman Landscape* (Thames Valley Landscapes: the Cotswold Water Park i, 1993), 160.

<sup>76</sup> P. Bradley, F. Roe and G. Wait, 'Stone' (forthcoming), in Lambrick et al., op. cit. note 14.

<sup>77</sup> T.G. Allen, in prep.

<sup>78</sup> G. Hey, in prep.

<sup>79</sup> D.T. Moore, 'The Petrography and Archaeology of English Honestones', *Jnl. Arch. Science*, x, 61-73.

<sup>80</sup> L. Richardson, W.J. Arkell and H.G. Dines, *Geology of the Country around Witney* (Geological Survey of Britain, Memoir for Sheet 236, 1946).

*Pebbles*. Incomplete. Burnt quartzite. Fragments of burnt quartzite pebbles were recovered from contexts 702, 1036/C and 1041/G/1.

*Rubber*. Incomplete. \*Grey, shelly limestone, probably Corallian from local gravels. Rough rectangular block, irregular use as rubber on five sides. L 105 mm., W 70 mm. 1049/E/7, SF 155.

#### *Late Roman*

*Quernstone*. Incomplete. \*Upper Old Red Sandstone quartz conglomerate. Quern fragment with one worn surface. T 50 mm. (max.). 8/2, SF 6.

*Whetstone*. Incomplete. \*Pennant Sandstone. Upper and lower surfaces smoothed, one worn edge. L 45 mm., T 15 mm. (max.). 305, SF 3.

*Quernstone*. Incomplete. \*Upper Old Red Sandstone Quartz Conglomerate. Well finished edge and one worn surface. T 57 mm. (min.), 60 mm. (max.). 307/1, SF 7.

*Rotary quernstone*. Incomplete. Coarse quartzitic conglomerate, ?from Upper Old Red Sandstone. Upper quernstone fragment, the grinding surface is smooth, the hopper is cut at a slight angle. D 360 mm. (max.), T 80 mm. (max.), 50 mm. (min.), hopper D 25 mm., angle of slope 13°. 2018/A, SF 166.

*Rotary quernstone*. Incomplete. Coarse quartzitic conglomerate, ?from Upper Old Red Sandstone. Lower quernstone fragment, with a well finished edge. D 470 mm. (max.), T 58 mm. 2018/A, SF 366.

*Objects*. Incomplete. \*Niedermendig Lava. 6 small fragments. Total weight 57 g. 2018/A/1, Sfs 164, 165.

*Object*. Incomplete. \*Niedermendig Lava. 5 small fragments. Total weight 15 g. 2005/C.

#### *Assessment Trenches*

*Rubber*. Incomplete. \*Fine-grained calcareous sandstone, probably Lower Greensand. Slab, one worn surface. L 120 mm., W 26 mm. 404, SF 367.

#### *Unstratified*

*Rotary quernstone*. Incomplete. Coarse quartzitic conglomerate, ?from Upper Old Red Sandstone. A near-complete lower rotary quernstone with central hopper. D 330 mm., T 65–40 mm., D hopper 25 mm. SF 158.

BONE SMALL FINDS, by LEIGH ALLEN and HELEN GLASS, with comment and species identifications by Bob Wilson

Both worked bone objects were stratified. One is a grooved and polished metapodial, believed to have been used in conjunction with a loom, possibly as a lease rod. Similar examples have been recovered from middle Iron Age contexts at Farmoor<sup>81</sup> and at Watkins Farm,<sup>82</sup> and from late Iron Age contexts at Ashville Trading Estate.<sup>83</sup> The other bone object is a polished cattle vertebra.

*Grooved and polished metapodial*. Complete. Sheep metatarsal. Slight transverse grooving and a thinning of the bone at either end. The polish is enhanced near the grooved areas. There are striations either side of the grooves.<sup>84</sup> L 107 mm. 304, SF 4.

*Object*. Cattle neck vertebra, incomplete. The neural spine has been removed and it has been polished on the dorsal and anterior surfaces. The body of the vertebra is damaged. This possibly occurred during the butchery process. L 82 mm. 301.

<sup>81</sup> Lambrick and Robinson, *op. cit.* note 15, 55, fig. 29, no. 3.

<sup>82</sup> Allen, *op. cit.* note 12, fig. 28, no. 7.

<sup>83</sup> M. Parrington, *The Excavation of an Iron Age Settlement, Bronze Age Ring-ditches and Roman Features at Ashville Trading Estate, Abingdon (Oxfordshire) 1974–76* (Counc. Brit. Arch. Res. Rep. xxviii, Oxford Arch. Unit Rep. i, 1978), fig. 61, no. 39.

<sup>84</sup> Cf. L. Sellwood, 'Objects of bone and horn', in Cunliffe, *op. cit.* note 50, 389–92, fig. 7.3, no. 3.192.

## THE WORKED FLINT, by PHILIPPA BRADLEY

A small assemblage of forty-one pieces of worked flint and four pieces of burnt unworked flint was recovered from the site. No earlier prehistoric features were found, the flint was redeposited in Iron Age and later features. The assemblage is summarized in Table 5.

*Discussion*

The majority of the flint is of fairly good quality, ranging in colour from dark-brown to dark-grey. Cortex where present tends to be thin, quite smooth and white in colour. Some iron staining was also noted; the flint is generally quite abraded and battered. A derived source for the majority of this material seems likely. The material represents a background scatter.

Both hard and soft hammers were used and, although the numbers are small, some controlled knapping appears to have been taking place, for example, blades and blade-like flakes from Trench L and an opposed platform blade core and core rejuvenation flake from Trench M. This controlled knapping may be Mesolithic or earlier Neolithic in date. Without diagnostic retouched forms or debitage it would be difficult to refine the dating further.

The occurrence of hard hammer-struck, squat flakes with occasional hinge fractures would indicate less controlled knapping, possibly of later Neolithic or Bronze Age date. The only diagnostic retouched piece recovered was a burnt 'thumbnail' scraper from Trench L which may indicate an early Bronze Age date. The other retouched forms recovered are fairly unspecific types, including scrapers from Trench C and a utilized flake from Trench M. The scrapers are on thin blanks and have been neatly retouched; a Neolithic or early Bronze Age date would not be out of place for these artefacts.

TABLE 5. STRUCK FLINT

Trench	Flakes	Chips	Cores	Retouched forms	Burnt unworked flint	Totals
L	20 (inc. 5 blades and blade-like flakes)	1	—	1 'thumbnail' scraper	4	26
M	9 (inc. 1 core rejuvenation flake)	—	1 opposed platform blade core 1 core fragment	1 utilised flake with edge gloss	—	12
C	—	1	—	1 end and side scraper 1 end scraper	—	3
D	3	—	—	—	—	3
U/S	1	—	—	—	—	1
TOTAL	33	2	2	4	4	45

## BURNT STONE

The burnt stone is recorded in Table 6. The majority of this material was burnt limestone. Limestone is not found in the immediate vicinity of the site and the nearest source is in the Witney area, at a distance of c. 8 km.

TABLE 6. BURNT STONE

	Fragments	Kg.
Trench L. Phase 1	12	3.6
Trench L. Phase 2	46	12.7
Trench L. Phase 3	181	53.2
TOTALS	239	69.5

## THE BIOLOGICAL EVIDENCE

THE ANIMAL BONES, by PRISCILLA LANGE

### *Introduction and Methods*

The main excavation and the evaluation trenches together yielded 949 bones and fragments. 93% of the bones in Trenches L and M were found in stratified contexts. 25% of the bone was newly broken, but the sample as a whole is in any case characterized by heavily fragmented bone due to chop marks (75%). Though fragmented, the bone itself was well preserved. It was hand-collected during excavation, except for the fragments from thirty-two sieved and floated soil samples. The sample may therefore be heavily biased by the abundance of large mammals and the absence of small mammals, fish and birds,<sup>85</sup> though it is to be noted that fish and bird bones were not recovered from the sieved and floated samples.

This report concentrates on the two main excavated areas, Trench L, occupied from the late Iron Age to the final 1st/early 2nd century AD, and Trench M, mostly dated to the later 3rd and 4th centuries AD. Although each has been divided into four phases, the numbers of animal bones from some phases are too small to allow meaningful comparisons to be made between them (Table 7). For this reason the bone from each Trench is amalgamated in order to produce a sufficiently large sample for discussion.

Due to the fragmentation of bone, the following general categories were used for classification when species identification was not possible: large mammal (ULM, cattle/horse size); medium mammal (UMM, sheep/goat size); and small mammal (USM, hare size). It is important to emphasize that these are only general size categories. Ribs and vertebrae (excluding cervicals) were also placed in these categories.

Sheep and goats were differentiated using the criteria of Boessneck,<sup>86</sup> Prummel and Frisch<sup>87</sup> and Payne.<sup>88</sup> Horse teeth were aged by the system devised by Levine.<sup>89</sup> Ageing of cattle, sheep/goat and pig mandibles was done using wear on the mandibles as suggested by Grant.<sup>90</sup> Epiphyseal fusion was also utilized, using the compilations of Amorosi.<sup>91</sup> Several pigs' canines were sexed following Schmid<sup>92</sup> and were tentatively aged following Bull and Payne.<sup>93</sup> The measurements recorded in Table 11 were made following the method of von den Driesch.<sup>94</sup>

<sup>85</sup> S. Payne, 'Partial recovery and sample bias: the results of some sieving experiments', in E.S. Higgs (ed.), *Papers in Economic Prehistory* (1972), 49-64.

<sup>86</sup> J. Boessneck, 'Osteological Differences between Sheep (*Ovis aries* Linné) and Goat (*Capra hircus* Linné)', in D. Brothwell and E. Higgs (eds.), *Science in Archaeology* (1969), 331-58.

<sup>87</sup> W. Prummel and H.-J. Frisch, 'A guide for the distinction of species, sex and body size in bones of sheep and goat', *Jnl. Arch. Science*, xiii (1986), 567-77.

<sup>88</sup> S. Payne, 'Morphological distinctions between the mandibular teeth of young sheep, *Ovis*, and goats, *Capra*', *Jnl. Arch. Science* xii (1985), 139-47.

<sup>89</sup> M.A. Levine, 'The use of crown height measurements and eruption-wear sequences to age horse teeth', in B. Wilson, C. Grigson and S. Payne (eds.), *Ageing and Sexing Animal Bones from Archaeological Sites* (Brit. Arch. Rep. Internat. Ser. cix, 1982), 223-50.

<sup>90</sup> A. Grant, 'The use of tooth wear as a guide to the age of domestic ungulates', in *ibid.* 91-108.

<sup>91</sup> T. Amorosi, *A Postcranial Guide to Domestic Neo-Natal and Juvenile Mammals* (Brit. Arch. Rep. Internat. Ser. dxxxii, 1989).

<sup>92</sup> E. Schmid, *Atlas of Animal Bones* (1972).

<sup>93</sup> G. Bull and S. Payne, 'Tooth eruption and epiphyseal fusion in pigs and wild boar', in Wilson et al., *op. cit.* note 89, 55-71.

<sup>94</sup> A. von den Driesch, *A Guide to the Measurement of Animal Bones from Archaeological Sites* (Peabody Museum Bulletin, 1, 1976).

TABLE 7. ANIMAL BONE FRAGMENT FREQUENCY

	Cattle		Sheep/Goat		Pig		Horse		Dog		Deer		Bird		ULM		UMM		USM		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TRENCH L																						
Phase 1	13	27	6	12	6	12	2	5	—	—	—	—	—	—	13	27	7	15	1	2	48	9
Phase 2	16	22	12	17	3	4	3	4	1 <sup>1</sup>	1	1	1	—	—	18	25	18	25	1	1	73	14
Phase 3	86	22	48	12	15	4	38	10	2	0.5	4	1	1	0.3	123	32	72	19	—	—	389	73
Phase 4	6	32	4	21	—	—	1	5	—	—	—	—	—	—	4	21	4	21	2	0.4	19	4
Unstratified	3	43	2	29	—	—	—	—	1 <sup>1</sup>	14	1	14	—	—	—	—	—	—	—	—	7	1.3
Total	124	23	71	12.9	24	4.5	44	8.2	4	0.7	6	1.1	1	0.2	158	29.5	101	18.8	2	0.4	536	
TRENCH M																						
Phase 1	—	—	3	50	—	—	—	—	—	—	—	—	—	—	—	—	3	50	—	—	6	2
Phase 2	1	25	1	25	—	—	1 <sup>2</sup>	25	—	—	—	—	—	—	1	25	—	—	—	—	4	1
Phase 3 <sup>3</sup>	22	17	10	8	2	1	24	18	4	3	—	—	—	—	65	49	5	4	—	—	132	37
Phase 4	35	17	24	11	9	4	11	5	8	4	2	1	1	0.5	64	30	56	26	1	0.5	211	60
Unstratified	2	17	1	8	—	—	3	25	1	8	—	—	—	—	4	33	1	8	—	—	12	3.3
Total	60	16.4	39	10.7	11	0.3	39	10.7	13	3.6	2	0.6	1	0.3	134	70	65	17.8	1	0.3	365	
Evaluation trenches	10	21	6	13	2	4	5	10	2	4	3	6	—	—	17	35	3	6	—	—	48	
GRAND TOTAL																						
	194		116		37		88		19		10		2		309		169		3		949	

<sup>1</sup> one partial dog counted as 1<sup>2</sup> articulated horse backbone counted as 1<sup>3</sup> fox mandible not included

## Trench L

### Relative Frequency of Animals

The most abundant animals by fragment count are cattle, sheep/goat, horse and pig, with very small amounts of dog, deer and bird (Table 7). The unidentified mammals account for just under 50% of the sample. The bones are not evenly spread throughout the four phases but are primarily concentrated in Phase 3. However, although the quantities of bone in Phases 1 and 2 are small, the proportions of different species vary little through time, with the exception of horse bone, which is much more common in Phase 3. The majority of bones in all phases, and all the bones from Phase 3, came from enclosure ditches, especially ditches 1000, 1035 and 1049 (Table 8).

Cattle are most numerous in all phases. Of the identified fragments, 45% are from cattle, 26% from sheep/goat, 16% from horses and 9% from pigs. In general, pigs are poorly represented in all phases. Horses are twice as common as pigs on fragment count, but this could be due to the sample bias noted above and to the fact that pig bones are more friable than horse bones. Horse bones are particularly numerous in ditch 1035. Similar percentages of chopped bone are found in ditches (30%), gullies (21%) and postholes/pits (23%). Weathered and burnt bone is more common in gullies than in the other features. The percentage of gnawed bone is similar in all kinds of feature (Table 8). Deer and bird bones were uncommon and were all found in ditches.

There were only two instances (two mandibles) which were tentatively identified as goat following Payne.<sup>95</sup> Goat bones may therefore be present, but the majority of the fragments must be considered to be sheep. There are three skulls which are definitely sheep, two being from polled sheep.

### Anatomical Representation and Butchery

In Table 9 the bones are divided according to the groups suggested by Uerpmann.<sup>96</sup> The bones are allocated to three groups which represent the meat value of each bone. Group A consists of bones from the vertebral column (excluding the tail), upper leg bones, and bones of the shoulder and pelvic girdle: these are the muscular parts with a high meat value. Group B contains bones from the lower leg and skull (brain and jaw musculature), mandible (jaw musculature and tongue) and ribs and sternum: these have a medium meat value. Group C encompasses the face bones, tail and feet, and represent the lowest meat value.

Although cattle bones are concentrated in group B, all the bones from the carcass are represented. Cattle were therefore being slaughtered and butchered in the vicinity of the site, and the bones dumped into the ditches and gullies. Although the sample is small, groups A and C have comparable percentages. Group B, however, is inflated by the number of mandibles and loose teeth which preserve much better than other parts of the carcass. The long bones (i.e. humerus, radius, ulna, femur and tibia) were heavily chopped, either when the carcasses were being disarticulated or to break open the bones for marrow. Some of the proximal or distal articulations of the long bones and metapodials were cut in half longitudinally. The mandibles are also chopped, either to disarticulate from the cranium or to gain access to the tongue and cheek meat.

Cut marks were seen only occasionally. There are a mandible with two cuts buccally below the condyle for the removal of cheek meat; a humerus with cuts proximally in order to disarticulate it from the scapula, and another humerus with five marks on the deltoid tuberosity made by running a heavy blade or cleaver along the bone to remove meat and other soft tissue; a proximal radius with seven cuts were medio-caudal, consistent with dismemberment from the humerus; an astragalus with four cuts, pointing to dismemberment with the tibia; a metatarsal with cuts consistent with dismemberment from the phalanges; and one metacarpal and two phalanges with cuts consistent with skinning.

With sheep/goats and pig the highest percentages are again found in group B (Table 9). Again the amount of mandibles and loose teeth is high compared to other bones in the group. The absence of any sheep/goat humerus fragment in group A is noteworthy, since the distal humerus, at least, preserves relatively well. Again, the relative absence of wrist/ankle bones and phalanges could be due to the fact that sieving was not carried out consistently. Otherwise, most of the bones of the carcass are represented for sheep/goat. The pig bones are too few to permit any conclusions, but it is noteworthy that, although pig metapodials are large and distinctive and should have preserved relatively well, not one was identified.

The bones of sheep/goat and pig were also heavily chopped. The chop marks were very similar to those of cattle, so that the long bones are chopped to disarticulate them from each other or to gain access to the bone marrow, but unlike the cattle bones they were not chopped in half longitudinally. There was only one sheep/goat bone with cut marks: a naviculo-cuboid which had two parallel cuts dorsally, indicating dismemberment from the

<sup>95</sup> Op. cit. note 88.

<sup>96</sup> H.P. Uerpmann, 'Animal bone finds and economic archaeology: a critical study of "ostearchaeological" method', *World Arch.* iv (1973), 307-22.

TABLE 8. DISTRIBUTION OF BONE FRAGMENTS AND BONE ALTERATION WITHIN FEATURES

% = % of fragments within feature type

	Ditches		Gullies		Postholes/pits		Trackway ditches	
	Fragments	%	Fragments	%	Fragments	%	Fragments	%
TRENCH L								
Cattle	102	84	11	9	7	6	1	1
Sheep/Goat	59	84	7	10	4	6	—	—
Pig	19	79	5	21	—	—	—	—
Horse	42	95	1	2	—	—	1	2
Dog	3	100	—	—	—	—	—	—
Red deer	3	100	—	—	—	—	—	—
Roe deer	2	100	—	—	—	—	—	—
Bird	1	100	—	—	—	—	—	—
ULM	142	90	11	7	5	3	—	—
UMM	85	84	10	10	6	6	—	—
USM	—	—	2	100	—	—	—	—
Totals	458	86	47	9	22	4	2	0.4
Chopped	139	30	10	21	5	23	—	—
Cut	10	2	1	2	—	—	—	—
Burnt	44	9	13	28	3	14	—	—
Gnawed	30	6	4	8	2	9	—	—
Weathered	18	4	16	34	1	4	2	100
TRENCH M								
Cattle	37	64	2	3	19	33	—	—
Sheep/Goat	20	53	4	10	14	37	—	—
Pig	5	45	—	—	6	45	—	—
Horse	31	86	—	—	5	14	—	—
Dog	10	83	—	—	2	17	—	—
Red deer	—	—	—	—	1	100	—	—
Roe deer	—	—	—	—	1	100	—	—
Bird	—	—	—	—	1	100	—	—
ULM	81	62	9	7	40	31	—	—
UMM	16	25	9	14	39	61	—	—
USM	1	100	—	—	—	—	—	—
Totals	201	57	24	7	128	36	—	—
Chopped	98	49	3	12	72	56	—	—
Cut	5	2	—	—	2	1	—	—
Burnt	6	3	1	4	4	3	—	—
Gnawed	16	8	1	4	28	22	—	—
Weathered	33	15	—	—	5	4	—	—

metatarsal. There was only one pig bone which had cut marks: a radius with three oblique cuts medio-caudally to separate it from the humerus.

Horse bones are most abundant in groups B and C (Table 9), suggesting that they were not consistently utilized for meat. Of the few bones in group A, a femur displays a chop mark to break the head from the shaft, and a humerus has a similar chop mark to break part of the head. In group B the radii show chop marks to break the distal shaft from the proximal shaft; two mandibles have chop marks to break the area behind the third molar and the mandibular condyle. In group C one metacarpal has an oblique chop on the distal articulation; two distal metapodials have been chopped off from the rest of the shaft; one distal metapodial was chopped in half longitudinally; one first phalange has a chop on the proximal articulation. None of the horse bones show any cut marks.

The partial remains of a dog aged older than two years were found in ditch 1050, consisting of two cervicals, six thoracics, ten ribs, a scapula, and two metacarpals. In enclosure ditch 1035, a complete articulating radius and ulna were found from an animal older than one and a half years. None of the bones had any cut or chop marks.

Red and Roe deer were identified and have been amalgamated in Table 7. Only three bones were identified as Red deer: a complete patella, a complete fibula and a complete incisor. A Roe deer distal tibia (the proximal articulation chopped off) and a fragment of antler were identified. The only bird bone was an unidentifiable fragment of a humerus.

#### *Age and Sex*

Epiphyseal fusion of the bones<sup>97</sup> and wear on the mandibles<sup>98</sup> were used to determine the age at which the animals died or were killed. The sex determination was limited to cattle, sheep/goats and pigs. Three cattle metacarpals were sexed according to Howard's indices.<sup>99</sup> One cattle horn-core was aged and sexed according to Armitage.<sup>100</sup>

Although the sample was small, an attempt was made to quantify the fragments with unfused or fused epiphyses. Most of the cattle bones (85%) had fused epiphyses, but there were several cattle bones which pointed to very young animals: a first phalange from a foetus and an unfused scapula which would indicate an animal younger than seven to ten months. An unfused proximal first phalange and one unfused distal metacarpal point to animals younger than one to one-and-a-half years, and two unfused distal femora and one unfused distal radius indicate animals younger than three-and-a-half to four years. But the overall tendency was for cattle to be killed around or after the age of three-and-a-half to four years.

The sample was much smaller for sheep/goats, but there were also indications of foetuses in the form of two unfused proximal metacarpals. One unfused distal metatarsal belonged to a sheep younger than two-and-a-half years and two unfused proximal calcanea to animals younger than three-and-a-half to four years. Only one pig fused proximal radius belonged to an animal older than one year.

Only nine cattle mandibles or isolated teeth could be aged using the method devised by Grant<sup>101</sup> (Fig. 23). Two were killed when they were under one year but four were killed under three years, which would indicate animals killed for meat, and three mandibles came from animals which were at least five years old when they died. The evidence for sheep/goat mandibles and isolated teeth is similar except that there were no animals killed under a year old (Fig. 23). Perhaps the few older mandibles were from animals kept for maintaining the herd of cattle and sheep/goats. There were only five pig mandibles and isolated teeth. Most (three) of these animals appear to have died between one year and two years old, while two died when they were over two years old.

One horn core of cattle was identified as a medium-horn bull from age group 4 (seven to ten years old), using the criteria of Armitage.<sup>102</sup> Two cattle metacarpals were identified, one from a female and one a female/castrate.

Six pig lower canines were sexed following Schmid:<sup>103</sup> three males and three females were identified. Two of the males had mature dentition and one was a juvenile. All of the pig third molars measured fell within the domestic pig range.<sup>104</sup>

All the horse bones are from fused bones (a fused axis suggests an animal eight years or older when it died). The teeth were aged according to Levine.<sup>105</sup> Half of the horse teeth which could be aged (eight) belonged to animals older than six years, the other half belonging to animals older than eleven years or older (Table 10).

#### *Metrical Data*

There were two horse metacarpals in which the greatest length could be measured (Table 11). One fell within the range of horses from Ashville Trading Estate, Barton Court Farm, Watkins Farm and Farmoor<sup>106</sup> at just over

<sup>97</sup> Cf. the compilation in Amorosi, op. cit. note 91.

<sup>98</sup> A. Grant, op. cit. note 90.

<sup>99</sup> In R.M. Luff, *A Zooarchaeological Study of the Roman North-Western Provinces* (Brit. Arch. Rep. Internat. Ser. cxxxvii, 1982).

<sup>100</sup> P. Armitage, 'A system for ageing and sexing the horn cores of cattle from British Post-Medieval sites (with special reference to unimproved British longhorn cattle)', in Wilson et al., op. cit. note 89, 37-54.

<sup>101</sup> Op. cit. note 90.

<sup>102</sup> Op. cit. note 100.

<sup>103</sup> Op. cit. note 92, pl. IV.

<sup>104</sup> Luff, op. cit. note 99.

<sup>105</sup> Op. cit. note 89.

<sup>106</sup> B. Wilson, 'The animal bones', in Parrington, op. cit. note 83, table XXI; 'Faunal remains: animal bones and marine shells', in D. Miles (ed.), *Archaeology at Barton Court Farm, Abingdon, Oxon.* (Counc. Brit. Arch. Res. Rep. 1, Oxford Arch. Unit Rep. iii, 1986), table XXII, microfiche 8:E5; 'The animal and fish bones', in Allen op. cit. note 12, 57-61; for Farmoor metacarpal measurement see Luff, op. cit. note 99, table 2:18.



TABLE 9. ANATOMICAL REPRESENTATION OF THE MAIN DOMESTICATES BY FRAGMENT COUNT

Group		Cattle No.	%	Sheep/Goat No.	%	Pig No.	%	Horse No.	%
TRENCH L									
A	Scapula	5		4		2		0	
	Humerus	7		0		0		1	
	Innominate	3		2		2		0	
	Femur	8		2		0		1	
	Cervical	2		1		0		3	
	Total	25	22%	9	14%	4	19%	5	12%
B	Skull/Cranium	2		3		0		2	
	Maxilla	13		11		3		4	
	Mandible	19		15		11		5	
	Radius	9		1		1		4	
	Ulna	3		2		1		0	
	Tibia	8		7		0		1	
	Total	54	49%	39	58%	16	76%	16	38%
C	Skull/Face	3		1		1		1	
	Carpal	2		0		0		1	
	Metacarpal	7		6		0		3	
	Astragalus	2		1		0		1	
	Calcaneum	1		2		0		1	
	Tarsal	2		1		0		2	
	Metatarsal	5		7		0		1	
	Phalange 1	5		0		0		4	
	Phalange 2	3		1		0		1	
	Phalange 3	1		0		0		3	
	Metapodial	1		0		0		3	
	TOTAL	32	29%	19	28%	1	5%	21	50%
TRENCH M									
A	Scapula	4		4		0		1	
	Humerus	1		1		1		1	
	Innominate	2		2		0		1	
	Femur	7		0		1		5	
	Cervical	6		0		0		1 <sup>1</sup>	
	Total	20	38%	7	16%	2	18%	9	26%
B	Skull/Cranium	0		1		2		1	
	Maxilla	0		5		1		1	
	Mandible	11		14		2		10	
	Radius	4		2		1		5	
	Ulna	0		1		0		3	
	Tibia	2		7		1		1	
	Total	17	32%	30	68%	7	64%	21	60%
C	Skull/Face	0		0		2		1	
	Carpal	2		0		0		1	
	Metacarpal	5		2		0		1	
	Astragalus	1		0		0		1	
	Calcaneum	0		0		0		0	
	Tarsal	3		0		0		0	
	Metatarsal	2		4		0		0	
	Phalange 1	2		1		0		0	
	Phalange 2	0		0		0		0	
	Phalange 3	1		0		0		0	
	Metapodial	0		0		0		1	
	TOTAL	16	30%	7	16%	2	18%	5	14%

<sup>1</sup> Axis and 7 articulated cervicals counted as 1

A = highest meat value, B = medium meat value, C = lowest meat value

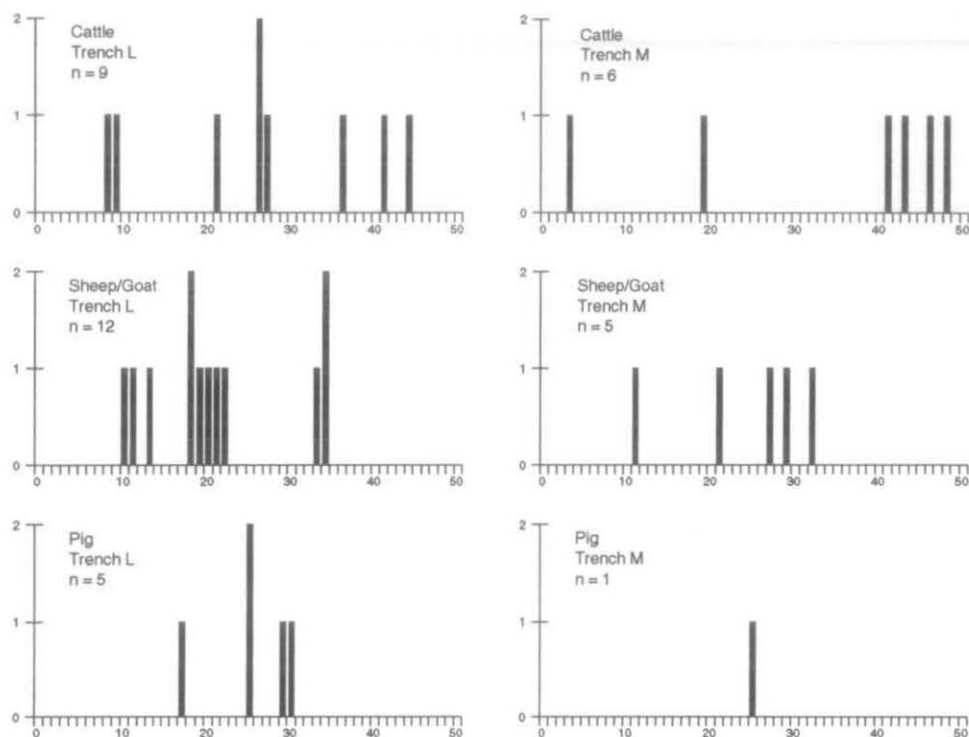


Fig. 23. Mandible wear stages of cattle, sheep/goat and pig.

twelve hands. One metacarpal, however, had a slightly larger greatest length than is normal for late Iron Age sites and perhaps shows the Romano-British influence on horse stock.<sup>107</sup> One dog radius is from a large specimen but it falls within the measurements compiled by Harcourt for Iron Age dogs.<sup>108</sup>

#### *Pathological notes*

One horse metatarsal has the two rows of small tarsals and the astragalus fused to the proximal articulation. There is pitting which may indicate osteoarthritis. The injury could have been caused by the animal being used as a pack horse. A horse second phalange has exostoses around its mid-body and the proximal articulation has been worn. This injury is reported by Baker and Brothwell as high ring bone. A cattle second phalange also has similar exostoses related to high ring bone. The cause of these injuries may be excessive strain due to the animals being used for draught purposes.<sup>109</sup>

#### *Trench M*

##### *Relative Frequency of Animals*

The most abundant animals in Trench m. by fragment count are cattle, sheep/goat, horse, dog and pig, with minimal amounts of deer and bird (Table 7). Unidentified mammals account for 55% of the sample. Of the

<sup>107</sup> Luff, *op. cit.* note 99.

<sup>108</sup> R.A. Harcourt, 'The dog in prehistoric and early historic Britain', *Jnl. Arch. Science*, i (1974), 151-75.

<sup>109</sup> J. Baker and D. Brothwell, *Animal Diseases in Archaeology* (1980).

TABLE 10. ESTIMATED AGES OF HORSE MANDIBLES AND MAXILLAE

	Less than 2.5 years	4-6 years	6-10 years	11-20 years
TRENCH L	0	0	4	4
TRENCH M	1	1	2	2

identified fragments 37% were cattle, 24% sheep/goat, 23% horse, 8% dog and 7% pig. The bones are concentrated in Phases 3 and 4 in which domestic (or industrial) activity encroached into the area but the site remained at the periphery of the settlement. In Phases 2 and 3, all the bones come from enclosure or trackway ditches. In Phase 4 bone was recovered from pits, gullies, stone spreads and enclosure and trackway ditches, almost 40% of the bones coming from pits and very little from stone spreads. Phase 3 ditch 2008 contained as many bones of horse as cattle. Percentages of cattle, horse and unidentified large mammal were higher in ditches, whereas sheep/goat and Umm. were more common in pits. 22% of the bone from pits was gnawed as compared to 8% from ditches. Weathered bone formed a higher component of the ditch assemblages. Deer and bird remains were uncommon and were all found in pits.

There was only one first phalanx identified as a goat from Trench M. One skull was identified as belonging to a sheep.

#### *Anatomical Representation and Butchery*

The meat-bearing bones of cattle are evenly distributed in Trench m. (Table 9). The only exceptions are cranium bones which are totally absent. It is possible that these bones were so broken up that they were placed in the general size categories, but maxillas are fairly diagnostic and none were identified. Perhaps the heads (minus mandibles) were separated from the carcass and dumped in another area not excavated. The long bones are heavily chopped, either to disarticulate them from each other or in order to gain access to the marrow. The mandibles were also heavily chopped. There were three bones with cut marks: a pelvis with one short cut below the acetabulum on the ischium in order to dismember the femur from it; a metacarpal which had two oblique cuts on mid-shaft cranially, possibly for filleting;<sup>110</sup> and five parallel cuts on the dorsal proximal edge of a naviculo-cuboid to separate it from the metatarsal.

Sheep/goat bones are concentrated in group B, characterized by a high number of mandibles and loose teeth. Groups A and C are present in equal amounts. A similar distribution is seen in pigs, but here the sample is extremely small. The sheep/goat and pig bones were also heavily chopped in the same manner as the cattle; unlike cattle, however, they had no cut marks.

The horse bones fall principally in groups A and B, perhaps suggesting that horse meat was eaten at this time. The horse bones were chopped in the same way as cattle bones, including longitudinal chops through long bones. There was one humerus with four oblique cuts medially to separate it from the radius. An articulated backbone and ribs had several vertebrae chopped laterally perhaps to remove the meat from this area.

Dog remains were more numerous in this trench: from Phase 3 there is one lower canine; one fragment of an ulna; one humerus and one os penis. In Phase 4 three partial skulls; two loose incisors; 2 different fragments of ulna; and one fibula shaft were recovered. Unfortunately, the bones did not yield any helpful measurements for comparison with measurements taken by Harcourt.<sup>111</sup> None of these bones had any cut or chop marks. One fragment of a posterior mandible was identified as a fox.

Only two deer bones were found in Trench M: one Roe deer radius (proximal articulation chopped off); and a Red deer complete incisor. A badly preserved tarsometatarsus is the only bird remain from this trench.

#### *Age and Sex*

Epiphyseal fusion and the wear on mandibles and loose teeth were used to estimate age at death of cattle, sheep/goats, pigs and horses. 85% of the cattle bones have fused epiphyses and only three have unfused ones. These bones (one unfused distal metacarpal and two unfused distal femora) point to animals killed under three years. The mandible wear (Fig. 23) points to one animal killed or having died shortly after being born and one killed at the optimum for meat, but most (four) were killed or died when they were old and past their prime for meat production. Further evidence of the presence of old animals was a cattle cervical vertebra which had fused epiphyseal caps indicating an animal older than eight years.

<sup>110</sup> L.R. Binford, *Bones: Ancient Men and Modern Myths* (1981).

<sup>111</sup> Op. cit. note 108.

TABLE 11. SELECTED MEASUREMENTS

		Trench L		Trench M	
	Measurement	No.	Range (mm)	No.	Range (mm)
CATTLE					
Atlas	BFcd	—		2	74.12–102.31
	GLF	—		2	67.39–92.47
Scapula	GLP	2	52.87–55.00	—	
Humerus	Bd	3	70.22–82.17	1	82.74
	BT	3	64.97–75.28	1	70.94
Radius	Bp	2	70.62–74.00	2	65.26–80.51
	Bd	1	71.90	—	
Ulna	BPC	2	34.86–40.94	—	
Femur	Bd	1	95.37	2	83.55–86.26
	DC	2	37.22–37.97	1	45.63
Tibia	Bd	3	51.90–53.87	2	51.42–55.39
Astragalus	Gl1	1	57.65	1	72.67
	Glm	1	55.37	—	
Metacarpal	GL	2	176.88–180.00	—	
	Bp	1	47.21	—	
	SD	2	24.40–27.60	1	32.35
	Bd	2	48.79–55.28	—	
Metatarsal	GL	1	222.00	—	
	Bp	2	45.79–48.14	—	
	SD	1	27.51	—	
	Bd	1	54.13	—	
Naviculo-cuboid	Gb	1	45.38	3	49.44–60.62
1st phalange	GL	2	50.89–52.56	2	54.95–61.84
	Bp	2	25.10–26.07	2	25.38–34.71
	SD	4	20.64–22.37	2	23.24–27.20
	Bd	2	23.07–23.58	2	23.75–31.02
2nd phalange	GL	2	35.00–35.19	—	
	Bp	2	25.45–25.29	—	
	SD	2	19.61–20.29	—	
	Bd	3	19.97–24.25	—	
3rd phalange	DLS	—		2	53.90–61.39
	Ld	—		2	42.75–46.15
	MBS	—		2	16.89–20.51
SHEEP/GOAT					
Scapula	GLP	1	29.08	—	
	LG	1	23.10	—	
	BG	1	18.06	—	
Ulna	DPA	1	25.90	—	
	SDO	1	20.36	—	
	BPC	1	14.70	1	15.84
Tibia	Bd	1	23.03	2	24.76–25.33
Metacarpal	Bp	1	20.41	1	17.81
Metatarsal	Bp	2	16.37–17.21	1	19.08
	SD	2	9.74–10.61	1	11.24
1st phalange	GL	—		2	33.47–35.15
	Bp	—		2	11.57–12.93
	SD	—		2	8.60–10.45
	Bd	—		2	10.35–12.16
PIG					
Radius	Bp	1	27.74	—	
Ulna	DPA	1	33.13	—	
	BPC	1	20.32	—	

		Trench L		Trench M	
	Measurement	No.	Range (mm)	No.	Range (mm)
DOG					
Scapula	GLP	1	30.21	—	
	LG	1	25.79	—	
	BG	1	17.59	—	
	SLC	1	23.91	—	
Humerus	Bd	—		1	34.02
	SD	—		1	12.66
Radius	GL	1	177.56	—	
	Bp	1	18.49	—	
	SD	1	11.97	—	
	Bd	1	26.39	—	
HORSE					
Scapula	LG	—		1	57.25
	BG	—		1	46.35
	SLC	—		1	65.29
Humerus	BT	1	71.24	1	52.05
	SD	1	31.15	—	
Radius	Bp	—		2	73.30–83.38
	BFp	—		2	69.63–74.54
	Bd	2	63.84–65.62	—	
	BFd	2	54.12–57.18	—	
Ulna	DPA	—		2	52.53–61.43
	BPC	—		2	41.30–44.74
Astragalus	GH	1	56.71	1	57.91
	GB	1	56.42	1	60.26
	BFd	1	47.51	1	50.47
	LmT	1	55.87	—	
Metacarpal	GL	2	199.23–216.07	—	
	Bp	1	46.29	—	
	Dp	2	28.78–30.82	—	
	SD	3	26.67–29.92	—	
	Bd	3	41.05–45.23	—	
	Dd	3	29.75–33.20	—	
	DD	3	19.45–21.91	—	
Metatarsal	Bp	1	42.10	1	46.66
	Dp	—		1	37.61
	SD	1	24.56	1	27.68
	Bd	1	43.82	—	
1st phalange	GL	2	74.63–77.28	—	
	Bp	2	47.33–51.70	—	
	BFp	1	46.78	—	
	SD	3	29.18–32.54	—	
	BFd	2	39.21–41.03	—	
3rd phalange	Bd	2	41.56–43.63	—	
	GB	1	70.47	—	
	BF	1	45.27	—	
	Ld	1	43.39	—	

The evidence for epiphyseal fusion and wear on mandibles is less numerous for sheep/goats. Only one distal metatarsal was found unfused indicating an animal younger than eighteen to twenty-eight months. There were only five mandibles which could be aged according to the wear on teeth (Fig. 23). Four of these represent animals under three to four years, only one having fully mature dentition.

Only one pig mandible could be aged. It was from an animal which died when it had just acquired all its mature dentition, at around three years. Although several bones were identified as from immature pigs, it was not possible to age them further due to chop marks or other fragmentation.

There were several unfused horse bones from Trench M. One complete unfused radius and an immature femur

shaft point to animals younger than one year at death; and two unfused distal radii to animals which died at less than three to four years. An articulated backbone consisted of five cervicals and seven thoracics with unfused epiphyses indicating a horse which died when it was younger than five years old. The evidence for maxillary and mandibular teeth confirms this pattern, at least one individual dying at less than two-and-a-half years and one from the range of four to six years (Table 10). The rest died at mature ages.

Only one sheep innominate could be sexed as a female.<sup>112</sup> One cattle innominate was also sexed as a female and one fragmentary metacarpal could be sexed as a female/castrate.

#### *Metrical Data*

Although horse metapodials were found, none produced length measurements due to fragmentation.

#### *Pathological Notes*

No cases of pathological deformations were found.

#### *Discussion*

There were no differences in the butchery of the animals through time and species. There were also no major differences in the anatomical representation of cattle, sheep/goat and pigs in both trenches. The only major difference in the anatomical representation is that the percentage of meat-bearing horse bones increases in Trench M, suggesting that the consumption of horse meat was greater in Trench m. than in Trench L.

There were few differences in the percentages of the main domesticates in the two trenches. In both areas cattle was almost twice as abundant as sheep/goat. Pigs were found in very small numbers and horses were more common than pigs. This assemblage can be paralleled at the nearby site of Watkins Farm.<sup>113</sup> Although there is evidence for immature cattle, sheep/goats and pigs in both areas, it is only from Trench m. that there is evidence for the rearing of horses. This is similar to data recovered from Watkins Farm.

Although the sample was small, there were no major differences through time in the ages at which animals were killed, as identified by the pattern of mandible tooth-wear and epiphysal fusion. It appears that both cattle and sheep/goat were killed at certain peaks: just after a year old, at around one to two years and finally at above three to five years. Since there were relatively few newborn animals killed, it can be suggested that animals were kept for a variety of purposes, for example meat consumption, dairying, wool and draught. The contribution of deer and birds to the diet appears to have been minimal in both trenches.

*Note* (Gill Hey): After the completion of this report and just before it went to press a box of animal bone from Trench m. and finds recovered during soil flotation and sieving came to light. There was insufficient time to analyze this bone, although the bags of sieved material were scanned for small mammals, fish and bird bones and their absence has been noted in the introduction to the report.

#### PLANT AND INVERTEBRATE REMAINS, by MARK ROBINSON

##### *Introduction*

Both Trench L and Trench m. were situated on a relatively high part of the Thames floodplain. Although partly covered with alluvium, there was no evidence that the sites experienced flooding during the Roman period. A few waterlogged features were present although preservation was not very good in most of them. Carbonized plant remains and mollusc shells were evident in some of the deposits. Samples were taken for flotation and laboratory analysis.

<sup>112</sup> Cf. Boessneck, *op. cit.* note 86; Prummel and Frisch, *op. cit.* note 87.

<sup>113</sup> B. Wilson, 'The animal and fish bones', in Allen *op. cit.* note 12, 57-61.

*The Samples and Results*

Sixteen samples from each Trench, averaging 12 litres, were floated over a 0.5 mm. mesh and sorted for carbonized plant remains. Brief details of these samples are given in Table 12. The carbonized plant remains, with the exception of wood charcoal, were identified. The results for those samples from which more than twenty items were identified have been listed individually in Table 13. The results from those samples with fewer than twenty items have been combined into totals for the remaining late Iron Age/early Roman and late Roman samples in the Table. Macroscopic silica fragments of plants, which resulted from the complete oxidation of their organic components,<sup>114</sup> were noted in three of the flots. Identifications have been listed in Table 14.

Mollusc shells were present in all the flots and extremely numerous in several. Flotation is not a reliable method for the quantitative analysis of mollusca. However, it was clear that there were some differences between the flots from the two periods. Therefore the number of samples for which species was present was recorded for each period in Table 15. It was noticed that some of the shells were burnt and their presence has been recorded separately in Table 16.

TABLE 12. SAMPLES FOR CARBONIZED PLANT REMAINS

Context	Sample no.	Context type	
TRENCH L			
1000/A	4	ditch	
1000/C	15	ditch	
1003/A	16	gully	
1008/A	5	ditch	
1014/B	6	gully	Burnt snails
1016/A	1	gully	
1035/F	8	ditch	Burnt snails
1035/L	7	ditch	
1036/C	9	ditch	
1037/B	10	gully	
1041/S	3	ditch	
1049/A/3	1	ditch	Burnt snails
1056/B/1	12	gully	
1059/A	17	gully	
1065/C/1	14	ditch	Burnt snails
1073/A/1	13	ditch	Burnt snails
TRENCH M			
2003/D	23	ditch	
2008/B	32	ditch	
2008/G	25	ditch	
2025/A/1	21	pit	
2028/A	30	ditch	
2035/C	31	ditch	
2036/A	26	ditch	
2047/A	27	pit	
2052	29	pit	
2055	24	ditch	
2063/A/1	19	pit	
2064/A	28	gully	
2074/A/3	20	pit	
3003/D/1	34	ditch	
3013/A/1	36	gully	
3027/A/9	35	pit	

<sup>114</sup> M. Robinson and V. Straker, 'Silica skeletons of plant remains from ash', in J.M. Renfrew (ed.), *New Light on Early Farming* (Edinburgh University Press, 1990), 3-13.

TABLE 13. CARBONIZED SEEDS AND CHAFF

		1008/A	1014/B	1035/F	1037/B	1049/A/3	1056/B/1	1065/C/1	1073/A/1	Other Trench L samples	2047/A	2063/A/1	Other Trench M samples
NON-CEREAL SEEDS													
<i>Papaver argemone</i> L.	Poppy	—	—	—	—	1	—	—	—	—	—	—	—
<i>Thlaspi arvense</i> L.	Field Penny-Cress	—	—	—	—	—	—	—	—	—	—	—	1
<i>Silene</i> cf. <i>latifolia</i> Poir.	White Campion	—	—	—	—	—	—	5	—	—	—	—	—
<i>Stellaria media</i> gp.	Chickweed	—	—	—	—	—	—	—	—	1	—	—	1
<i>Atriplex</i> sp.	Orache	6	2	1	—	1	—	4	9	—	5	—	1
Chenopodiaceae indet.		—	—	—	—	—	—	—	4	1	—	—	1
<i>Linum usitatissimum</i> L.	Flax	—	2	—	—	—	—	—	—	—	—	—	—
cf. <i>Medicago lupulina</i> L.	Black Medick	—	1	1	—	—	—	36	—	—	—	—	2
<i>Lathyrus nissolia</i> L.	Grass Vetchling	—	—	—	—	—	—	—	—	1	—	—	—
<i>Vicia</i> or <i>Lathyrus</i> sp.	Vetch, Tare, etc	—	—	—	—	—	2	3	3	1	—	—	2
cf. <i>Vicia</i> or <i>Lathyrus</i> sp.	Vetch, Tare, etc	1	—	1	3	1	3	8	10	1	—	—	2
<i>Polygonum aviculare</i> agg.	Knotgrass	1	—	1	—	—	—	2	1	—	—	—	1
<i>P. persicaria</i> L.	Redshank	—	—	1	—	—	—	—	—	—	—	—	—
<i>Rumex</i> sp.	Dock	5	—	1	—	—	1	1	3	—	—	—	4
<i>Hyoscyamus niger</i> L.	Henbane	—	—	—	—	—	—	—	—	—	—	—	—
<i>Solanum</i> cf. <i>nigrum</i> L.	Black Nightshade	—	—	—	—	—	—	—	1	—	—	—	—
cf. <i>Odontites verna</i> (B.) Dum.	Red Bartsia	3	1	—	—	—	—	—	—	1	—	—	1
<i>Plantago major</i> L.	Great Plantain	—	—	—	—	—	—	1	—	—	—	—	—
<i>P. lanceolata</i> L.	Ribwort Plantain	—	—	—	—	—	—	—	—	1	—	—	—
<i>Sherardia arvensis</i> L.	Field Madder	—	—	—	—	1	—	—	—	—	—	—	—
<i>Galium aparine</i> L.	Goosegrass	3	—	—	—	—	—	1	2	1	—	—	3
<i>Valerianella rimosa</i> Bast.	Cornsalad	—	—	—	1	—	—	—	—	—	—	—	—
<i>V. dentata</i> L. (Pol.)	Cornsalad	—	—	—	—	—	—	1	—	—	—	—	—
<i>Anthemis cotula</i> L.	Stinking Mayweed	—	—	—	—	—	—	—	—	—	—	1	1
<i>Tripleurospermum inodorum</i> (L.) Sch.	Scentless Mayweed	—	—	3	—	—	—	—	—	—	—	—	—
<i>Centaurea</i> sp.	Knapweed, etc	—	—	—	—	—	—	—	—	—	—	—	1
<i>Carduus</i> or <i>Cirsium</i> sp.	Thistle	—	—	—	1	—	—	1	1	—	—	—	1
<i>Eleocharis</i> S. <i>Palustres</i> sp.	Spike rush	2	1	—	—	8	—	1	4	—	3	2	3
<i>Carex</i> spp.	Sedge	1	—	—	1	2	—	2	1	3	1	1	4
<i>Bromus</i> S. <i>Eubromus</i> sp.	Brome	—	—	—	—	—	—	—	—	1	—	—	1
Gramineae indet.	Grass	1	3	9	—	1	1	42	1	3	1	—	1
Not further identified		5	2	5	1	2	1	—	5	9	3	1	5
Total non-cereal seeds		28	12	23	7	17	8	108	35	24	13	5	37



		1008/A	1014/B	1035/F	1037/B	1049/A/3	1056/B/1	1065/C/1	1073/A/1	Other Trench L samples	2047/A	2063/A/1	Other Trench M samples
GRAIN													
<i>Triticum spelta</i> L.	Spelt Wheat	1	—	2	—	—	—	—	—	—	1	—	1
<i>T. cf. aestivum</i> tp.	Bread-type Wheat	—	—	—	—	—	—	—	—	—	—	—	—
<i>Triticum</i> sp.	Wheat	1	2	3	—	1	—	1	3	—	1	2	3
<i>H. vulgare</i> L. emend.	6-row Hulled Barley	—	—	—	—	—	—	1	1	—	—	—	—
<i>H. vulgare</i> L. emend.	6-row Barley	1	—	1	—	—	—	—	1	—	—	—	—
<i>H. Vulgare</i> L. emend. or <i>distichon</i>	L. Hulled Barley	—	—	—	—	—	—	2	1	—	—	—	—
<i>H. vulgare</i> L. emend, or <i>distichon</i> L.	Barley	—	3	1	—	1	1	8	5	2	—	—	2
<i>Avena</i> sp.	Oats	—	—	5	—	—	—	1	2	—	—	—	—
cf. <i>Avena</i> sp.	Oats	2	1	1	1	—	—	4	2	1	—	—	—
Cereal indet.		10	22	22	13	9	11	62	59	20	15	8	30
Total Grain		15	28	35	14	11	12	79	74	23	17	10	37
CHAFF													
<i>Triticum spelta</i> L.	Spelt Wheat – glume bases	—	—	1	—	—	—	—	—	—	1	7	4
<i>T. dicoccum</i> Shüb. or <i>spelta</i> L.	Emmer or Spelt Wheat – glume bases	—	—	2	—	—	1	—	—	1	1	34	4
<i>Triticum</i> sp.	Wheat – brittle rachis nodes	—	—	—	—	—	—	—	—	—	—	2	—
<i>Triticum</i> sp.	Wheat – awn rachis nodes	—	—	2	—	—	—	—	—	—	—	—	1
<i>Hordeum</i> sp.	Barley – rachis nodes	—	—	2	—	—	—	—	—	1	—	—	—
<i>Avena</i> sp.	Oats – awn fragments	1	—	1	1	—	—	—	—	—	—	—	1
Total Chaff Items		1	0	8	1	0	1	0	0	2	2	43	10
Volume of soil processed (litres)		15	16	10	17	20	17	17	15	76	7	8	166

TABLE 14. SILICIFIED SEEDS AND CHAFF

		1035/F	2021/A	2063/A/1
<i>Lithospermum arvense</i>	Corn Gromwell – seed	–	1	1
<i>Eleocharis S. Palustris</i> sp.	Spike Rush – seed	–	6	3
<i>Triticum</i> sp.	Wheat – awn frags.	135	–	–

During the evaluation which preceded the main excavation, two probably late Iron Age/early Roman ditches, 717 (Trench H) and 802/2 (Trench K) were found to contain poorly preserved organic material. A sample from each was floated and examined for macroscopic plant remains. The examination was not exhaustive, so the species lists are incomplete, but an indication of abundance was recorded.

Waterlogged deposits were not noticed during the excavation of the late Iron Age/early Roman part of the settlement in Trench L. However, the flot from the carbonized plant sample from 1035/L, the D-shaped later enclosure, was seen to contain plant remains which had been preserved by waterlogging. They were sorted, identified and their abundance recorded.

Two late Roman waterlogged pits, 2025 and 2063, were excavated in Trench M. The organic deposits in them were well preserved. A sample of 250 g. from each was washed over a 0.2 mm. mesh and sorted for macroscopic plant remains, which were identified and counted.

The results for waterlogged seeds are given in Table 17 and for other waterlogged plant remains in Table 18. Insect remains were present in the waterlogged samples, but insufficient resources were available to analyze them in detail. However, species of particular interest were noted.

The analyses were undertaken at the University Museum, Oxford. Nomenclature for plant remains follows Clapham et al.,<sup>115</sup> that for mollusca follows Kerney<sup>116</sup> and Waldén.<sup>117</sup>

### *Aspects of the Late Iron Age/Early Roman Environment and Economy*

#### *General Conditions*

The botanical and molluscan evidence suggests an open landscape with little woody vegetation. While the settlement contained much disturbed ground, it was probably surrounded by grassland. The products of arable agriculture were present in sufficient quantities to suggest the possibility that there were also cultivated areas.

#### *Grassland*

The waterlogged plant remains from sample 1035/L included a strong grassland element, with seeds of *Potentilla anserina* (silverweed), *P. reptans* (creeping cinquefoil), *Prunella vulgaris* (self-heal) and *Leontodon* sp. (hawkbit) all well represented. Pastureland is suggested by the numerous fragments of scarab dung beetles of the genus *Aphodius* from the same sample. The layout of the various small late Iron Age/early Roman enclosures is suggestive of the management of domestic animals.

#### *Waste and Disturbed Ground*

Sample 1035/L contained numerous seeds from plants of various disturbed ground communities. They included annuals such as *Atriplex* sp. (orache) and *Anthriscus caucalis* (bur chervil). There were very many seeds of *Hyoscyamus niger* (henbane) a plant which was formerly common on middens and around settlements. There were also several seeds of *Papaver somniferum* (opium poppy) which could either have been grown along with the *Hyoscyamus* or could have been cultivated. Nutrient-rich mud is suggested by seeds of *Chenopodium rubrum* tp. (red goosefoot) and *Juncus bufonius* gp. (toad rush). Such a habitat perhaps resulted from pasture in the settlement being churned up by the trampling of stock.

Abundant seeds of *Urtica dioica* (stinging nettle) were probably derived from neglected areas within the settlement. The nettle-feeding weevil *Apion urticarium*, which no longer occurs in the region, was present.

<sup>115</sup> A.R. Clapham, T.G. Tutin and D.M. Moore, *Flora of the British Isles* (3rd edn. 1987).

<sup>116</sup> M.P. Kerney, 'A list of the fresh and brackish-water Mollusca of the British Isles', *Jnl. Conchology Lond.* xxix (1976), 26–8.

<sup>117</sup> H.W. Waldén, 'A nomenclatural list of the land Mollusca of the British Isles', *Jnl. Conchology Lond.* xxix (1976), 21–3.

TABLE 15. MOLLUSCA

	Trench L	Trench M
<i>Carychium</i> sp. inc. <i>tridentatum</i> (Risso)	—	11
<i>Aplexa hypnorum</i> (L.)	—	2
<i>Lymnaea truncatula</i> (Müll.)	9	9
<i>L. palustris</i> (Müll.)	—	1
<i>L. peregra</i> (Müll.)	1	1
<i>Planorbis planorbis</i> (L.)	4	2
<i>Anisus leucostoma</i> (Milt.)	8	1
<i>A. vortex</i> (L.)	—	1
<i>Bathymphalus contortus</i> (L.)	1	1
<i>Armiger crista</i> (L.)	1	—
<i>Succinea</i> or <i>Oxyloma</i> sp.	2	—
<i>Cochlicopa</i> sp.	8	6
<i>Vertigo pygmaea</i> (Drap.)	7	3
<i>Pupilla muscorum</i> (L.)	8	2
<i>Vallonia costata</i> (Müll.)	—	12
<i>V. pulchella</i> (Müll.)	8	2
<i>V. excentrica</i> Sterki	13	9
<i>Discus rotundatus</i> (Müll.)	—	1
<i>Vitrina pellucida</i> (Müll.)	—	1
<i>Vitrea</i> sp.	—	1
<i>Nesovitrea hammonis</i> (Ström.)	—	3
<i>Argopecten nitidula</i> — (Drap.)	—	2
<i>Oxychilus cellarius</i> (Müll.)	—	7
<i>Helicella itala</i> (L.)	2	1
<i>Trichia hispida</i> gp.	12	15
<i>Cepaea</i> sp.	1	1
Total number of samples with molluscs	16	16

TABLE 16. BURNT MOLLUSC SHELLS

	Trench L	Trench M
<i>Lymnaea truncatula</i> (Müll.)	2	—
<i>Gyraulus albus</i> (Müll.)	1	—
<i>Anisus leucostoma</i> (Milt.)	3	—
<i>Vertigo antivertigo</i> (Drap.)	2	—
Total number of samples with burnt shells	5	0

### The Ditches

The occurrence of the snails *Lymnaea truncatula* and *Anisus leucostoma* suggests that the enclosure ditches held stagnant water for much of the year. Permanent standing or slowly moving water in some of the ditches is suggested by more fastidious aquatic mollusca such as *Planorbis* and *Armiger crista*.

The two waterlogged probably late Iron Age/early Roman ditches away from the main area of settlement, 717 and 802, both had submerged aquatic floras of *Ranunculus* s. *Batrachium* sp. (water crowfoot), *Callitriche* (starwort) and *Chara* sp. (stonewort). 802 also contained a seed of the tall emergent plant *Sparganium* sp. (bur-reed), which would be characteristic of a slowly flowing ditch.

The most abundant and consistently present terrestrial snails in the late Iron Age/early Roman ditches and gullies, were *Vallonia excentrica* and *Trichia hispida* gp. Other terrestrial mollusca included *Cochlicopa* sp., *Pupilla muscorum* and *Vallonia pulchella*. They suggest that conditions along the top of the ditches ranged from dry to moist short grassland or sparse herbaceous vegetation. There was no evidence from the mollusca or the waterlogged plant remains for hedgerows or even coarse vegetation along these boundaries.

TABLE 17. WATERLOGGED SEEDS

		717	802/2	1035/L	2025/A/4	2063/A/5
<i>Ranunculus cf. acris</i> L.	Buttercup	—	—	+	—	—
<i>R. cf. repens</i> L.	Buttercup	—	—	++	1	1
<i>R. S. Batrachium</i> sp.	Water Crowfoot	+++	+++	—	—	—
<i>Thalictrum flavum</i> L.	Meadow Rue	—	—	+	—	—
<i>Papaver rhoeas</i> tp.	Poppy	—	—	+	4	—
<i>P. argemone</i> L.	Poppy	—	—	+	—	—
<i>P. somniferum</i> L.	Opium Poppy	—	—	++	—	—
<i>Fumaria</i> sp.	Fumitory	—	—	++	1	—
<i>Brassica rapa</i> L. ssp. <i>sylvestris</i> (L.) Jan.	Wild Turnip	—	—	—	—	1
<i>Coronopus squamatus</i> (Forsk.) Ash.	Swine Cress	—	—	—	1	—
<i>Thlaspi arvense</i> L.	Penny-Cress	—	—	+	—	—
<i>Capsella bursa-pastoris</i> (L.) Medic.	Shepherd's Purse	—	—	—	2	—
<i>Viola S. Melanium</i> sp.	Pansy	—	—	+	—	—
<i>Silene cf. latifolia</i> Poir.	White Campion	—	—	+	—	—
<i>Cerastium cf. fontanum</i> Baug.	Mouse-ear Chickweed	—	—	++	1	4
<i>Myosoton aquaticum</i> (L.) Moen.	Water Chickweed	—	+	—	—	—
<i>Stellaria media</i> gp.	Chickweed	—	—	++	11	29
<i>Montia fontana</i> L. cf. ssp. <i>chondrosperma</i> (Fen.) W.	Blinks	—	—	+	—	—
<i>Chenopodium polyspermum</i> L.	All-Seed	—	—	++	3	—
<i>C. album</i> L.	Fat Hen	—	—	+	1	1
<i>C. rubrum</i> L. or <i>botryodes</i> Sm.	Goose Foot	—	—	++	—	—
<i>Atriplex</i> sp.	Orache	+	—	+++	2	6
Chenopodiaceae indet.		—	—	—	5	—
<i>Linum usitatissimum</i> L.	Flax	—	—	—	1	2
<i>L. catharticum</i> L.	Dwarf flax	—	—	++	4	1
<i>Medicago lupulina</i> L.	Black Medick	—	—	—	—	3
<i>Filipendula ulmaria</i> (L.) Max.	Meadow-Sweet	—	+	+	1	1
<i>Rubus fruticosus</i> agg.	Blackberry	—	—	—	1	—
<i>Potentilla anserina</i> L.	Silverweed	+	—	+++	—	—
<i>P. cf. reptans</i> L.	Creeping Cinquefoil	—	—	++	3	2
<i>Aphanes arvensis</i> agg.	Parsley Pierr	—	+	—	1	2
<i>Crataegus cf. monogyna</i> Jacq.	Hawthorn	—	—	—	—	11
<i>Callitriche</i> sp.	Starwort	+	+	—	—	—
<i>Chaerophyllum temulentum</i> L.	Rough Chervil	—	—	—	3	1
<i>Anthriscus caucalis</i> Bieb.	Bur Chervil	—	—	+++	—	—
<i>Conium maculatum</i> L.	Hemlock	—	—	—	3	1
<i>Aethusa cynapium</i> L.	Fool's Parsley	—	—	+	1	2
<i>Polygonum ariculare</i> agg.	Knotgrass	—	—	++	4	2
<i>P. persicaria</i> L.	Red Shank	+	—	++	2	—
<i>P. lapathifolium</i> L.	Pale Persicaria	—	—	+	—	—
<i>Rumex conglomeratus</i> Mur.	Dock	+	—	—	1	1
<i>Rumex</i> sp.	Dock	+	—	—	1	1
<i>Urtica urens</i> L.	Small Nettle	—	—	++	3	—
<i>U. dioica</i> L.	Stinging Nettle	—	+	+++	179	11
cf. <i>Anagallis arvensis</i> L.	Scarlet Pimpernel	—	—	+	—	—
<i>Hyoscyamus niger</i> L.	Henbane	—	—	+++	—	1
cf. <i>Odontites verna</i> (B.) Dum.	Red Bartsia	—	—	+	—	2
<i>Mentha</i> sp.	Mint	—	+	+	1	1
<i>Lycophys europaeus</i> L.	Gypsy-wort	—	+	++	2	—
<i>Prunella vulgaris</i> L.	Self-heal	—	—	++	2	—
<i>Ballota nigra</i> L.	Black Horehound	—	—	—	4	—
<i>Lamium</i> sp.	Deadnettle	—	—	+	2	—
<i>Galeopsis</i> sp.	Hemp-nettle	—	—	+	—	—
<i>Glechoma hederacea</i> L.	Ground Ivy	—	—	—	—	1
<i>Plantago major</i> L.	Great Plantain	—	—	—	6	1
<i>Galium aparine</i> L.	Goosegrass	—	—	—	—	1
<i>Sambucus nigra</i>	Elder	—	—	—	1	10

717 802/2 1035/L 2025/A/4 2063/A/5

<i>Valerianella dentata</i> (L.) Pol.	Lamb's Lettuce	-	-	+	-	1
<i>Anthemis cotula</i> L.	Stinking Mayweed	-	-	-	10	16
<i>Achillea</i> sp.	Yarrow	-	-	-	1	-
<i>Carduus</i> sp.	Thistle	-	-	++	1	-
<i>Carduus</i> or <i>Cirsium</i> spp.	Thistle	-	-	-	3	-
<i>Leontodon</i> sp.	Hawkbit	-	-	++	-	1
<i>Sonchus asper</i> (L.) Hill	Sow-thistle	-	-	++	32	1
<i>Alisma</i> sp.	Water-Plantain	-	++	-	-	-
<i>Juncus effusus</i> sp.	Tussock Rush	-	-	++	80	20
<i>J. bufonius</i> sp.	Toad Rush	-	-	+++	30	50
<i>J. articulatus</i> sp.	Rush	++	-	++	110	20
<i>Sparganium</i> sp.	Bur-reed	+	-	-	-	-
<i>Eleocharis</i> S. <i>Palustres</i> sp.	Spike Rush	-	-	++	1	3
<i>Carex</i> spp.	Sedge	-	-	-	3	-
<i>Bromus</i> S. <i>Eubromus</i> sp.	Brome Grass	-	-	-	-	2
Cereal indet.	Cereals	-	-	-	1	1
Gramineae indet.	Grass	+	-	++	19	2
TOTALS					549	217

+ present, ++ several, +++ abundant

TABLE 18. OTHER WATERLOGGED PLANT REMAINS

717 802/2 1035/L 2025/A/4 2063/A/5

Bryophyta	Moss - stem with leaves	-	-	-	-	+
<i>Chara</i> sp.	Stonewort - oospores	++	+	-	-	-
<i>Crataegus/Prunus</i> tp.	Hawthorn/Sloe - thorn	-	-	-	++	+
Deciduous leaf fragments		-	-	-	-	++
Deciduous tree (not <i>Salix</i> )	- bud scales	-	-	-	-	8
Leaf abscission pad		-	-	-	+	+
<i>Linum usitatissimum</i> L.	Flax - capsule fragments	-	-	-	17	18
<i>Peridium aquilinum</i> (L.) Kuhn	Bracken - frond fragments	-	-	-	+	-
<i>Salix</i> sp.	Willow - buds	-	-	-	-	10
<i>Salix</i> sp.	Willow - capsules	-	-	-	-	87
<i>Trifolium</i> sp.	Clover - flower	-	-	-	1	1
<i>Triticum spelta</i> L.	Spelt Wheat - glume bases	-	-	-	-	4
<i>T. dicoccum</i> Shub. or <i>spelta</i> L.	Emmer or Spelt Wheat - glume bases	-	-	-	-	2

+ present, ++ abundant

*Arable Crops*

The majority of the samples processed for carbonized plant material contained identifiable non-charcoal remains. Most was clearly of arable origin. A very high proportion of the grain could not be further identified and carbonized chaff was sparse. The two main cereals were barley and wheat, with barley remains somewhat outnumbering those of wheat. The only wheat identified to species was *Triticum spelta* (spelt wheat) and the only barley species to be confirmed was *Hordeum vulgare* (six-row hulled barley). *Avena* sp. (oats) were present but all the remains could have been of *Avena fatua* (wild oats). There were also two seeds of *Linum usitatissimum* (flax) in sample 1014/B. Flax tends to be very much under-represented in carbonized assemblages and, despite there being much evidence from waterlogged remains for its importance in the region during the Roman period, there have been very few finds of charred flax seeds.

The charred weed seeds from the late Iron Age/early Roman samples together comprised an assemblage typical of Roman sites on the Upper Thames gravels. *Vicia/Lathyrus* spp. (vetches and tares) comprised a high proportion of them. *Galium aparine*, (goosegrass), which is favoured by autumn sowing, was present. In addition to the tall-growing weeds such as the vetches and the goosegrass, there were also seeds of low-growing species, such as

*Sherardia arvensis* (field madder), suggesting that at least some of the crops had been harvested close to the ground. The majority of the weeds are species which would have readily grown on the well-drained, circumneutral soils of the gravels. However, as is usual for Iron Age and Roman carbonized weed seed assemblages from the gravels, there were also a few seeds of wet ground plants, particularly *Eleocharis* cf. *palustris* (spike rush), suggesting that the arable plots extended onto waterlogged soils. One of the samples, 1065/C/1, contained numerous seeds of *Medicago lupulina* type (black medick) and unidentified Gramineae (grasses). Although they could have been arable weeds, it is possible that this sample had a component of burnt hay in addition to charred cereal.

The ratio of the different parts of the carbonized assemblages for the late Iron Age/early Roman period was

51.4% grain:2.3% chaff:46.3% non-cereal seeds.

However, the poor state of the grain in many of the samples suggested that much of the more combustible chaff could have been fully oxidized. This was confirmed by the discovery in sample 1035/F, which contained only eight charred chaff items, of 135 silica awn fragments. The carbonized plant material from the site is best seen as the waste from the parching, de-husking and fine sieving of hulled cereal grain. As such, the site could either have been a producer or just an importer of grain. The concentration of carbonized plant remains is very much dependent on the type of deposit sampled. However, the concentration of non-charcoal remains in the late Iron Age/early Roman deposits was, at 2.8 items per litre, forty times greater than at the late Iron Age pastoral site of Thornhill Farm, Lechlade, Gloucestershire.<sup>118</sup> However, the majority of the carbonized remains at Thornhill Farm had non-arable origins. While the concentration of Roman carbonized plant remains from Gravelly Guy, a site on the second gravel terrace which was certainly involved in arable agriculture, was ten times greater than from late Iron Age/early Roman Old Shifford,<sup>119</sup> it remains possible that the site was growing its own cereals. The soil would also have been suitable for the cultivation of flax (see below).

#### *The Burnt Mollusc Shells*

Five of the samples for carbonized plant remains contained burnt mollusc shells. Interestingly, they were all marsh or aquatic species and two of the species, *Gyraulus albus* and *Vertigo anticertigo* were only found in a burnt state. It seems most likely that these shells had been imported on aquatic vegetation perhaps reeds for thatch, which was subsequently burnt.

### *Aspects of the Late Roman Environment and Economy*

#### *General Conditions*

The botanical and molluscan evidence suggests a relatively open landscape but scrub, perhaps in the form of hedges, was at least locally present. Waste ground was certainly present and it is possible that flax was cultivated. However, the importance of grassland remains uncertain.

#### *Grassland*

The waterlogged seeds from the two late Roman pits (2025/A/4 and 2063/A/5) included a few seeds of grassland plants. At least one beetle from the genus *Aphodius* was present. However, there was not the strong evidence for grassland in the immediate vicinity of the deposits that was found for the early period.

#### *Waste and Disturbed Ground*

As before, there were waterlogged seeds from various annual weeds such as *Stellaria media* (chickweed) which grew on disturbed ground around the settlement. Remains from plants of neglected ground included *Conium maculatum* (hemlock), *Ballota nigra* (black horehound) and *Urtica dioica* (stinging nettle). The nettle-feeding weevil *Apion urticarium* was again present.

#### *The Ditches and Scrub*

There was similar molluscan evidence that many of the later Roman ditches held stagnant water for at least part of the year. However, the terrestrial molluscan faunas were different from those of the earlier period. *Vallonia excentrica* and *Trichia hispida* were again present, but they had been joined in the majority of the ditches by *Carychium tridentatum* and *Vallonia costata*. Their presence suggests taller vegetation in or alongside the ditches. Some shade-

<sup>118</sup> M. Robinson, forthcoming.

<sup>119</sup> L. Moffett, 'The evidence for crop processing products from the Iron Age and Romano-British periods at Gravelly Guy, and some earlier prehistoric plant remains' (forthcoming), in G. Lambrick et al. op. cit. note 14.

loving species such as *Aegopinella nitidula* and *Oxychilus cellarius* were also present. This difference can be explained either by the later boundaries being more permanent and in some way protected from grazing or by their having been hedged. Both waterlogged pits contained *Crataegus/Prunus* type (hawthorn, sloe, etc.) thorns. Sample 2063/A/5 contained in addition numerous seed capsules of *Salix* sp. (willow) and *Crataegus* cf. *monogyna* (hawthorn). It is possible that these shrubs were growing in hedges along the boundaries.

#### *Arable Crops and Flax Retting*

There was not such a high concentration of carbonized plant remains from the late Roman phase as from the earlier period, there being only 0.9 identifiable non-wood charcoal items per litre. Spelt wheat and barley were again present, although remains of wheat outnumbered remains of barley. The weed floras were relatively similar, although *Anthemis cotula* (stinking mayweed) was present in two of the samples. Waterlogged seeds of *A. cotula* were identified from the two late Roman pits. It is a plant which, on present evidence, seems to be a Roman introduction to the region and was absent from all the late Iron Age/early Roman samples from the site. The ratio of the different charred elements from the late Roman samples was

36.8% grain:31.6% chaff:31.6% weed seeds.

This difference was probably due more to the better state of preservation of the chaff than to any change in agricultural practice.

Although there were no carbonized flax remains from the samples, both waterlogged pits contained numerous capsule fragments and a few seeds of flax. It is possible that these pits had been used for flax retting. Such debris might also be interpreted as debris from the threshing of flax capsules for their seeds, and indeed similar material from a well at the Barton Court Farm Roman Villa was unlikely to have resulted from retting.<sup>120</sup> A Saxon beet of flax which had been left to ret without prior rippling was, however, found in a channel at Yarnon.<sup>121</sup> Disarticulated capsule segments and seeds surrounded it. The pits at Old Shifford were of an appropriate size and depth below the water table for retting. After the beets had been removed, the capsule fragments and seeds would have remained behind.

It is possible that flax cultivation and processing was an important activity on the site. The soils of the high part of the floodplain/first gravel terrace would have been more suitable than the drier soils of the second terrace for growing flax, while the high water table would have been convenient for the creation of retting pits. Flax is a nutrient-demanding crop which would probably have been rotated with cereal cultivation.

#### *Other Aspects*

Sample 2025/A/4 contained a frond fragment of *Pteridium aquilinum* (bracken). It is a plant of acid soil unlikely to have grown on the site and had perhaps been imported for animal bedding.

Sample 2063/A/5 contained several individuals of *Anobium punctatum*, the woodworm beetle, and *Pinus* fur, a beetle which tends to occur indoors. Given the small size of the waterlogged sample, this is sufficient to hint at the proximity of a building.

Sample 2063/A/5 also contained the head of a worker of *Apis mellifera*, the honey bee. While this does not necessarily indicate beekeeping, it shows honey and beeswax as potential resources. A honey bee was also found in Roman deposits at Claydon Pike, Gloucestershire.<sup>122</sup>

## DISCUSSION

### EARLIER PREHISTORIC

Prehistoric flintwork and a Neolithic sherd in the topsoil and redeposited in the Iron Age and Roman features indicate sporadic use of the site from the Mesolithic through to the Bronze Age, although no features of these periods have survived. There was little to differentiate the material collected in the north and south of the field. As discussed above, such scatters are not unusual in the area and they probably represent small-scale and short-lived occupation sites otherwise ploughed away.

<sup>120</sup> M. Robinson, 'Waterlogged plant and invertebrate remains', in Miles, op. cit. note 106, microfiche 9:D11.

<sup>121</sup> G. Hey and M. Robinson, in prep.

<sup>122</sup> M. Robinson, unpublished.

## LATE IRON AGE AND EARLY ROMAN OCCUPATION

A small farmstead was established at Old Shifford Farm at the end of the 1st century BC or first half of the 1st century AD (Fig. 5), as indicated by the handmade and wheel-turned grog-tempered wares. It probably accommodated no more than a single extended family. Occupation on the site lasted only about a hundred years, the site being abandoned at the end of the 1st or the beginning of the 2nd century AD. A brooch dating from c. AD 43 to 75 was recovered from an enclosure ditch of the final occupation phase.

The site lay at the edge of the first gravel terrace, bordering the Thames floodplain. The cropmarks show that the majority of this site was exposed in the excavations, with the exception of its eastern boundary ditches. The excavated evidence also points to an enclosure just beyond the south-east corner of the stripped area. Beyond the settlement area the extent of late Iron Age and early Roman features is uncertain. Field boundary ditches can be seen on aerial photographs and were exposed in the evaluation trenches, but finds were seldom recovered from them and their date is unclear. In general, however, finds from evaluation trenches in the south-east of the site (Fig. 4, Trenches G–K) were late Iron Age/early Roman in date. A large subrectangular enclosure at SP 38200 02250, a subcircular enclosure and pits in the field to the west and a probable waterhole in the centre of Trench F are more typical of early Roman features than late. The majority of the field ditches visible on the air photographs are, however, late Roman in date.

Several distinct phases of activity can be discerned from the spatial and stratigraphic information, although developments in settlement layout were probably much more organic than this suggests. As stated above it was not always possible to be confident of the ascription of individual contexts to a phase, and the layout must be taken as a guide to general development, the particulars of which are uncertain even if the generalities remain valid. The longevity of individual phases is equally uncertain, partly because of the difficulties of distinguishing between contemporary and redeposited pottery sherds.

The earliest settlement had a curvilinear arrangement of enclosures and penannular ditches, centred on a large D-shaped enclosure (Fig. 6). This was replaced by a rectilinear settlement layout, at first defined by narrow, shallow ditches (Fig. 7), and later by much more substantial ditches (Fig. 8).

Buildings have rarely been identified on late Iron Age settlements in the region,<sup>123</sup> almost certainly a reflection of the methods by which they were constructed. This is exemplified nearby at Gravelly Guy, where over thirty buildings were identified from postholes and/or ring gullies in the early to middle Iron Age settlement, in contrast to two at most in the late Iron Age/early Roman settlement (broadly contemporary with Trench L at Old Shifford) despite substantial accumulations of occupation debris in enclosure which suggested there had been houses within them.<sup>124</sup> Mass-walled buildings may have been constructed for which evidence would not have survived and a turf building was proposed for the middle Iron Age site at Farmoor.<sup>125</sup> It has been suggested that dense concentrations of occupation debris in ditches and gullies are often a reliable guide to house sites.<sup>126</sup> Concentrations of pottery, small finds, fired clay, burnt stone and charcoal were particularly useful for

<sup>123</sup> T. Allen, D. Miles and S. Palmer, 'Iron Age Buildings in the Upper Thames Region', in B. Cunliffe and D. Miles (eds.), *Aspects of the Iron Age in Central Southern Britain* (OUCA Mono. ii, 1984), 89–101.

<sup>124</sup> Lambrick et al., op. cit. note 14.

<sup>125</sup> Lambrick and Robinson, op. cit. note 15, 70–1.

<sup>126</sup> Allen et al., op. cit. note 123, 90–1, 100.



suggesting domestic areas at Old Shifford Farm. Only one structure could be discerned from posthole evidence: a group of postholes forming an irregular oval lay in the entrance of the earliest, D-shaped enclosure and is believed to belong to the first phase of occupation on spatial grounds (see above, *Archaeological Description*). The postholes could also be interpreted as a gate and associated pens. There was, however, a dense accumulation of refuse in adjacent gullies which strongly suggested a house nearby. Another building probably lay within a curving gully to the north-west (Fig. 6, 1056). In Phase 2, houses probably lay within the central subrectangular enclosure (1004, etc.), including one near or just beyond its south-east corner. Domestic activity was more clearly evident in the final phase of occupation, when refuse and spreads of charcoal-rich soil indicate that the eastern section of the northern enclosure and the subcircular enclosure to the east (1035) were the sites of houses. Deposits of pottery, fired clay and small finds were particularly substantial in these areas.

Few pits and postholes were encountered and the structural remains were mostly of ditched animal enclosures and pens which ringed the farm buildings. Ditch sections provided little evidence of the location of banks but where indications were present they *tended* to suggest external banks around the enclosures. The proximity of the permanent water table would have inhibited the excavation of deep grain storage pits. The settlement layout strongly suggests the importance of herding and its form, particularly that of the final occupation phase with its substantial enclosures, pens and funnel-like entrance, resembles other sites in the Upper Thames Valley, for example the middle Iron Age site at Mingies Ditch<sup>127</sup> and the middle Iron Age and early Roman site at Watkins Farm,<sup>128</sup> where animal husbandry is known to have been important. One other small, probably agricultural feature, belonging with Phase 2 occupation, lay in the south-east enclosure. It comprised a circular gully 3 m. in diameter with an internal post off-set from centre, a form paralleled on other sites in the region and interpreted as an enclosure for stacking animal fodder.<sup>129</sup>

There was a strong correlation between finds of pottery, fired clay, burnt stone and charcoal and, as stated above, these have been taken to indicate the presence of buildings. Some of the fired clay would have been wall daub. Mark Robinson suggests (see above, *The Biological Evidence*) that burnt shells of aquatic molluscs may have been introduced onto the site with reeds for thatch. No other structural remains were recovered.

Gnawed and weathered bones were uncommon in the ditches (6% and 4% respectively, Table 7), but weathered bones were much more common in the gullies (34%), where burnt bone was also more frequent (although the sample is small). This suggests that material in ditches was covered more rapidly after being dumped there, whereas gully material may have accumulated from the occupation surface. The low percentage of burnt bone in ditches (9%) as compared to gullies (28%) *may* indicate that burnt material was middened to provide manure for fields and not dumped with other domestic refuse. The quantities of bone from different contexts were generally too small to suggest differential deposition of animal species in different feature types. However, the concentration of horse bone in the ditches to the near-exclusion of other context types (Table 7) should be noted; much derived from ditch 1035.

Finds indicate that the site was a simple, low-status farming establishment in the late Iron Age and early Roman period with few contacts beyond the local area. There is very limited

<sup>127</sup> Allen and Robinson, *op. cit.* note 13.

<sup>128</sup> Allen, *op. cit.* note 12.

<sup>129</sup> Allen et al., *op. cit.* note 123, 91.

evidence of Romanization. Wheel-made pottery is increasingly common through time but vessel forms (jars and bowls) closely mirror those of the preceding Iron Age. Only a single sherd of amphora was recovered. This pattern is common in this part of the Upper Thames Valley and Jane Timby suggests that this may reflect either a distaste for Roman wares and eating habits or lack of access to them. Pottery was probably acquired from local sources, though the increasing presence of Savernake and Malvernian wares may suggest an extension in local trade networks. A quern fragment of Upper Old Red Sandstone from the Forest of Dean or South Wales was recovered from the latest occupation phase.

Items of dress ornamentation were very few in Trench L, comprising two incomplete, copper alloy brooches, one of Langton Down and one of Hod Hill type, and an iron pin.

A mould fragment from copper-alloy working and a little fuel ash slag may indicate some metal working on site. There was no evidence of iron working or smithing and there were only a small number of iron objects, of which an iron knife was the one substantial item.

The location of the nearest contemporary settlement is unknown (possibly in the area of Standlake to the east), and the extent of the land exploited from the site is thus uncertain. The environmental evidence suggests that the settlement was surrounded by grassland, as would be expected on the low-lying first gravel terrace and floodplain, and this may not have been extensively ditched. Short grassland or sparse herb vegetation was evidenced within the settlement itself, extending to the edges of the ditches which were not apparently hedged. The use of some enclosures for animals is confirmed by the recovery of much dung beetle from the waterlogged terminals of ditch 1035 and the presence of weeds of disturbed ground in many of the samples, consistent with pasture within the enclosures being churned by trampling of stock. The permanent water table probably lay at around 1 m. to 1.2 m. below the contemporary ground surface and stagnant water lay in the deeper ditches. Evidence of slowly-flowing water was recovered from ditches to the east and north-east of the settlement, near the stream.

Quantities of cattle bone (45% of bone identified) suggest that these may have been the main animals kept, with lesser amounts of sheep (26%), horse (16%) and just a few pigs (9%). The evidence indicates that cattle, sheep and pigs were reared on site and for a variety of purposes: small-scale consumption, dairy, wool and draught. Animals were slaughtered at a variety of ages (but mainly after three-and-a-half years), butchered and eaten on the site. Horses do not seem to have been consistently utilized for meat, but some chop marks suggest that they were eaten occasionally. One horse was used for draught purposes and another probably as a pack animal. As on other Iron Age and early Roman sites in the Upper Thames, horse bone was relatively abundant and horses tended to die or be slaughtered when quite old. It has been suggested that horses were reared on the lower meadows of the floodplain and first gravel terrace.<sup>130</sup> Wild meat resources were rarely exploited.

Parts of three loomweights and a fired clay spindle whorl indicate that textile production took place on site. Flax was also grown in the vicinity and two carbonized flax seeds were recovered from a Phase 2 gully.

Although the area is low-lying and the economy seems to have been mainly pastoral, arable agriculture was probably also undertaken. This accords well with evidence elsewhere in the Upper Thames Valley, suggesting widespread arable cultivation at this time, even on the floodplain.<sup>131</sup> Most weeds were those of well-drained soils but some were from wet

<sup>130</sup> B. Wilson, 'The animal species at Ashville', in Parrington, *op. cit.* note 83, 135; 'The animal and fish bones', in Allen, *op. cit.* note 12, 61; Allen and Robinson, *op. cit.* note 13, 143-5; B. Levitan, 'Vertebrate remains' (forthcoming), in Lambrick et al., *op. cit.* note 14.

<sup>131</sup> G. Hey, 'Yarnton Floodplain', *South Midlands Arch.* xxiii (1993), 82-5; Lambrick, *op. cit.* note 4, 99.

ground, supporting the suggestion of cultivation on low-lying ground. The majority of the carbonized samples contained some seeds from arable fields; barley was the most common crop, with wheat and some oats (though these could be wild).

The evaluation evidence suggests that the trackway impinging on the south-west corner of the site and cutting the Phase 3 boundary ditches was a continuation of that examined in Trench M, running south towards the river. It is thus later Roman in date and the finds recovered from it must have been redeposited from the earlier settlement or manuring of fields in the earlier Roman period.

This site has much in common with its contemporaries on the first gravel terrace and floodplain in the region, for example Smithsfield, Hardwick-with-Yelford and Eagle Farm, Standlake.<sup>132</sup> It is one of a group of small, low-status, fairly short-lived farmsteads which exploited the extensive grasslands of the Thames floodplain. As such, it shares some characteristics of specialized middle Iron Age pastoral sites on these topographies, for example Mingies Ditch<sup>133</sup> and Farmoor.<sup>134</sup> It was, however, more permanent and, unlike them, Old Shifford probably grew its own crops, suggesting a self-sufficient establishment, in contrast to a pattern of settlements consuming rather than producing crops and possibly dependent upon larger and higher sites.<sup>135</sup> It may be that until the late Roman period these locations were characterized by relative settlement mobility.

Reasons for the abandonment of the settlement are not known but several other sites in the area ceased to be occupied at much the same time,<sup>136</sup> for example Smithsfield and Gravelly Guy, and there are few known later 2nd-century settlements. It may be that sites were reorganized into larger and more nucleated communities at this period.

#### LATER ROMAN OCCUPATION

There was no known occupation on the Old Shifford site between the beginning of the 2nd century AD and the end of the 3rd century, when a small rural settlement was established 370 m. north of its predecessor (Fig. 11, Trench M). This site was occupied into the late 4th century AD. Finds of 2nd- and possibly 3rd-century pottery do occur, however, in trackway ditches cutting across the early site, in the Phase 1 ditches of the later site and redeposited in late Roman contexts. Many probably derive from agricultural use of this area, from field ditches and manuring of fields farmed from another settlement. It is possible that the earliest ditches on the later Roman site formed part of an early to mid-Roman field system, although they have the same alignment as the later droveway and field ditches. A few (five) 2nd- to 3rd-century coins were also recovered from the modern ploughsoil during metal detecting.

The late Roman settlement at Old Shifford also lay on the first gravel terrace, at the bottom of a slight rise of Oxford Clay on which the modern farm now lies. The cropmarks show the centre of the occupation site as an arc of subrectangular enclosures grouped around an irregular open space lying to the north of a wide droveway (Fig. 3), and the settlement appears large enough to have been occupied by several families. This area was

<sup>132</sup> T.G. Allen, pers. comm.

<sup>133</sup> Allen and Robinson, op. cit. note 13.

<sup>134</sup> Lambrick and Robinson, op. cit. note 15.

<sup>135</sup> Lambrick, op. cit. note 4, 94-7.

<sup>136</sup> *Ibid.* 83-4.

not threatened, but fieldwalking over it by Mark Maillard located a concentration of late Roman finds. The Roman droveway was part of an extensive track system and ran east towards a Roman site near the modern village of Standlake and west towards a settlement between Cold Harbour Cottages and Cote. The enclosure on the south-east corner of the settlement seems particularly substantial. Several pits are visible on the north edge of the open area. Open spaces, resembling village greens, are characteristic of these roadside settlements in the region; they can be seen from the air at Standlake and have been excavated at Roughground Farm, Lechlade, Gloucestershire<sup>137</sup> and at Appleford, further down the Thames valley.<sup>138</sup> It has been suggested that they may have functioned as livestock markets.<sup>139</sup>

The 1989/90 excavations lay on the eastern periphery of the late Roman settlement and examined the droveway running east from the site and enclosures and fields north and south of it. A trackway running south from the east-west route, and leading towards the Thames and floodplain pasture was also exposed. Evaluation trenches further east showed that field boundaries and enclosure ditches lay in this direction, even if they are not visible as cropmarks.<sup>140</sup> Later Roman pottery was recovered from several of these features. The evidence points to a relatively open and treeless environment with fields and droveways bounded by ditches and hedges. Areas of waste and disturbed ground lay around the settlement.

The earliest activity on site M was the excavation and maintenance of the ditches draining the main droveway, which were recut on many occasions. A secondary track joined the main route at the west edge of the excavations. Its ditches were not as frequently cleaned out, and the stratigraphic evidence suggests that it was created (or formalized) at a later stage in the life of the settlement (Phase 3). Enclosure ditches bounded rectangular fields or paddocks. These were hedged (or possibly had very coarse vegetation on the edge) and hawthorn, sloe and willow were present. None of the ditches provided any evidence of the position of banks. The permanent water table lay at about 1.2 m. below the ground surface and stagnant water lay in the ditches for much of the year. Only in its final phases of use, within the 4th century AD, did occupation encroach onto this area from the centre of the settlement. The remains probably represent domestic buildings surrounded by features associated with agricultural processing.

Groups of postholes to north and south of the track suggest that there were structures in both areas, although in neither case were coherent building plans recovered. The structure to the north was associated with hearth pits, and a deep adjacent pit yielded beetles, including woodworm beetle, which tend to occur in domestic areas. Both areas were associated with shallow parallel gullies which may have been edged, and in one case floored over, with stone (gravel conglomerate and limestone). As discussed above (*Archaeological Description, Trench M, Phase 4*), the function of these features is uncertain but they may have been associated with agricultural processing. Several large deep pits had been dug in the vicinity of both structures and along the edge of the track. These were deep enough to contain waterlogged material from which numerous capsule fragments and some seeds of flax were recovered. It is proposed that these pits were dug down to the water table in order to ret flax, which would have been grown in the low-lying fields nearby. The cropmark evidence suggests that several more deep pits had been dug along the edge of the track to the east. Some of the latest occupation features, including three of the deep flax-retting pits, cut the droveway ditches, and it seems

<sup>137</sup> T. Allen et al., *op. cit.* note 75.

<sup>138</sup> J. Hinchliffe and R. Thomas, 'Archaeological Investigations at Appleford', *Oxoniansia*, xlv (1980), 9–111.

<sup>139</sup> Lambrick, *op. cit.* note 4, 103.

<sup>140</sup> Allen, *op. cit.* note 30.

possible that the latter ceased to be maintained in the final phases of occupation. No features encroached onto the track itself, however, suggesting that the route was retained.

Finds densities from the early trackway and field boundary ditches were low, and only in the Phase 3 ditches did large groups of finds accumulate. This presumably reflects the increasing proximity and/or density of domestic occupation. The average weight of pottery sherds was generally low for all periods (14 g. overall) but was greatest (22 g.) in the Phase 2 ditches, which were not subsequently recut and in which rubbish may have been directly dumped. One of the Phase 3 ditches (2008) had particularly high concentrations of horse bones. The percentage of weathered bone from ditch sections (15%) was twice as high as that found on the early site, presumably indicating that ditches did not fill (deliberately or naturally) so rapidly away from domestic areas. As on the earlier site, pottery, small finds, fired clay, stone and charcoal was found in features adjacent to the buildings. Phase 4 was the only phase in which the majority of the finds did not derive from ditches, being found in pits, stone and charcoal spreads, and shallow gullies and scoops. This phase had quite a low average sherd weight (14 g.) and much of the pottery was abraded. This material may represent the deposition of refuse which had accumulated elsewhere, and it is notable that the percentage of gnawed bone from these features was considerably higher (22%) than that found elsewhere on either site. The percentage of unidentifiable bone was also higher. Higher percentages of large animal bones (cattle, horses and unidentified large mammals) in the ditches and of sheep/goat and unidentified medium mammals in the pits and spreads may indicate differential deposition of refuse.

There is little from the excavations to denote a high-status settlement. It is apparent, however, that the inhabitants had access to 'Roman' items and acquired some beakers, tankards and dishes, as well as mortaria, suggesting a change in the preparation and serving of food. Third- and 4th-century coins were recovered from the modern ploughsoil, although none from excavated features. Pottery was still, however, mostly from the immediate region, the fineware being almost exclusively Oxford colour-coats. Lead pot rivets from the ploughsoil show that pottery was curated. More worked stone from distant sources was found on the late site. This mostly derived from the south-west of Britain but a small amount of Niedermendig lava quern was also recovered.

The small finds similarly indicate an absence of wealth. Two brooches were found with much fired clay in a shallow gully of the final occupation phase. These brooches were both of early Roman date and must have been heirlooms. The pin from another brooch and a fine twisted copper bracelet were also recovered (the latter was unstratified). A fragment of a glass vessel came from one of the deep pits.

Iron objects comprised nine nails, one strip and a plate fragment. A few pieces of slag from the evaluation trenches and two pieces from a stone spread may indicate that smithing took place on the occupation site, though not in the area of the excavation.

Fewer animal bones were recovered from the later Roman site than from its predecessor and the extent of grassland is uncertain from the environmental evidence. There was also not such a high concentration of carbonized plant remains on the site, which presumably reflects the distance of the sample locations from the centre of occupation. The presence of hedges and rough vegetation, such as nettles, on the edge of the ditches masks the broader landscape picture. The extent of arable *versus* pasture is thus uncertain and it is impossible to tell whether there were hay meadows, as attested elsewhere at this time, for example at Claydon Pike and Farmoor.<sup>141</sup>

<sup>141</sup> Lambrick, *op. cit.* note 4, 101.

Cattle remained the most commonly found species (37% of the identified animal bone fragments) with sheep (24%) and horse (23%) and a few pigs (7%). As before, animals were reared, slaughtered, butchered and consumed on site. Immature horse bones were found and chop and cut marks suggest that horses were eaten, though presumably their importance as pack and draught animals was primary. The small sample may suggest that cows were kept to a slightly greater age but animals continued to be slaughtered at all ages. A fragment of bracken frond may have been introduced to the site with material for animal bedding. As before, wild resources were present in only tiny numbers. A loomweight and a bone weaving implement provide limited evidence of weaving on site.

A similar range of crops seem to have been grown as in the early Roman period, although wheat was slightly more common than barley in the samples. No oats were identified. Flax was also grown and its processing may have formed an important part of the economy. The find of a honey bee indicates that honey and beeswax may have been available.

Parallels for the late Roman occupation of this site are harder to come by. None of the other trackway settlements in the area have been excavated, although contemporary tracks and field ditches were examined at Watkins Farm.<sup>142</sup> The late Roman site at Gill Mill, 6 km. up the Windrush Valley, is of a different, and higher-status character. Evidence elsewhere in the Upper Thames Valley, particularly at Farmoor, suggests that the pattern of small rural settlements within an organized, ditched and hedged landscape was widespread. The late Roman occupation at Farmoor was similarly more 'Romanized' than its predecessors, and the evidence there suggested a more varied and intensive farming regime than had previously operated, though the emphasis was still on pastoralism.<sup>143</sup>

#### ROMAN TRANSITIONS

Comparisons were sought between the early and late occupation of the site in order to shed some light on the mechanisms of and reasons for settlement shift. There are, however, difficulties in making direct comparisons between the data from the two sites at Old Shifford, as it is not possible to compare like with like. Excavations on the early site examined the centre of the occupation, and the material derives mainly from domestic or adjacent contexts, whereas excavations on the later site lay at the periphery of the settlement and much of the sample derived from field and trackway ditches, filled in before there was any domestic activity on this site. It is therefore not surprising that smaller groups of material were generally recovered from features on the later site (though the quantity of pottery was greater). Patterns of rubbish disposal can be expected to be very different on the edge of a site than in domestic areas, and would presumably be more formalized in a larger settlement than within a single family unit.

Broad conclusions can be reached, however. It is, for example, clear that by the late Roman period the landscape was organized, settlement location had become stable and settlement size had, apparently, grown. Trackways linked occupation sites over several kilometres and more clearly defined fields with ditched and probably hedged boundaries appeared. Greater control was seemingly exerted over property boundaries and land use at a wider level than had previously pertained, possibly by the Roman state or mediated in the

<sup>142</sup> Allen, *op. cit.* note 12.

<sup>143</sup> Lambrick and Robinson, *op. cit.* note 15, 139.



locality on a communal basis. Associated with these changes was the increasingly Romanized character of rural society in the area. At Old Shifford, this is exemplified by the acquisition of 'Roman' tableware and the preparation of foods in a different fashion, as indicated by the presence of mortaria. At other rural sites in the area, such as Farmoor, herbs of mediterranean origin (dill and coriander) appeared,<sup>144</sup> and the find of a honey bee at Old Shifford may suggest that here, too, the range of foods was widening. Smaller, ditched fields may reflect the cultivation of a greater range of crops and other land uses, including horticulture,<sup>145</sup> and may indicate a more intensive use of land.

In other ways, however, there is surprisingly little difference between the two periods of occupation. Both sites were small, low-status agricultural settlements with limited contacts beyond the immediate region. The range of crops grown remained similar, with a slight suggestion that wheat replaced barley as the most common cereal by the 4th century AD. There was too little material to assess changes in crop production; flax was evidently important in the late period but was grown by the earlier inhabitants too. The relative proportions of animals reared also remained much as before, although there was a slight decrease in cattle in favour of horse and horse rearing may have become more important. It may be that the farming regime had become more varied but the evidence is equivocal.

#### MEDIEVAL

No post-Roman occupation was encountered and no Saxon finds were recovered on the site. In the medieval period the land formed part of the open fields of Shifford, and ridge and furrow cultivation was attested in the northern excavation area. Numbers of medieval and post-medieval finds were recovered from the modern ploughsoil by Mark Maillard during metal detecting. These were largely found in the north of the development area and comprised dress items (especially buttons and shoe buckles) and horse bits. It is proposed that a medieval track from Shifford to Standlake followed or lay to the south of the Roman droveway, leading east along what is now a hedge from Shifford and joining the present Horns Way just to the west of Standlake. The cropmarks show an interesting correlation between the Roman trackways and Saxon sunken-featured buildings, supporting the long-lived use of these routes.

<sup>144</sup> Ibid. 120-1.

<sup>145</sup> Ibid. 127.