

A ROMAN RURAL LANDSCAPE AT KEMPSFORD QUARRY, GLOUCESTERSHIRE

By Paul Booth and Dan Stansbie

An area of 6 ha just east of Kempsford was examined in 2000-2001 in advance of gravel extraction. The earliest features belonged to a field system defined by ditches probably dug in the late Iron Age. This was replaced in the early Roman period by a very regular layout of trackways linking field systems to settlements lying just outside the excavated area, all part of a programme of radical landscape reorganisation in the wider region. The nearby settlements probably went out of use in the 3rd century, but the fields probably remained in use for pasture. The main trackway was re-established in the later Roman period and a substantial timber stockade built alongside it. Occasional human and animal burials, both in the fields and at trackway junctions are an interesting aspect of the use of this landscape.



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By Paul Booth and Dan Stansbie

with contributions by

*Edward Biddulph, Dana Challinor, Bethan Charles, Kate Cramp, Mark Robinson,
Ian Scott, Ruth Shaffrey, Elizabeth Stafford and Annsofie Witkin*

Illustrations by

Amy Tucker

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Summary

An area of 6 ha just east of Kempsford was examined in 2000–2001 in advance of gravel extraction. The site saw little archaeologically detectable activity before the late Iron Age or possibly a little later, when a ditched field system was established. This was superseded in the early Roman period by a very regular layout of trackways, linking nearby settlements (just outside the excavated area) with wider field systems. After a hiatus of uncertain duration in the 3rd century the principal trackway was re-established, by which time the adjacent settlements were probably out of use, though a substantial post-built stockade was contemporary with this late trackway. Environmental evidence suggests an emphasis on pastoral agriculture, and horse bones were prominent in the small animal remains assemblage. Track-junction and other locations were used intermittently throughout the Roman period for burial. The chronology and apparently planned character of the Roman layout from the early 2nd century are discussed in the context of wider developments in settlement patterns in the region.

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INTRODUCTION

Project Background (Figs 1–6)

In 1997 the Oxford Archaeological Unit (OAU, now Oxford Archaeology – henceforward OA) carried out an archaeological evaluation of some 8 ha (centred at NGR SU 167969) of land east of Kempford village, 4 km south of Fairford and 5 km south-west of Lechlade in the Upper Thames Valley (OAU 1998) (Fig. 1). The site lay immediately south-west of Kempford Quarry (Multi-Agg), and was examined in advance of determination of an application to extend the gravel quarry. This work had been preceded by a desk-based assessment, which had identified features of probable archaeological significance on aerial photographs, and fieldwalking which had picked up stone rubble and Roman tile, suggesting the presence of a Roman building. In addition, other archaeological sites were known from the near vicinity (see below).

The evaluation, a 2% sample of the proposed extraction area consisting of 33 trenches, showed that the features observed from the air, principally of linear character, were mostly of Roman date, apparently representing a trackway and field systems. In the north-western part of the site, however, occupying a very slight rise in the generally level surface of the field, a more dense concentration of features included structural remains with stone based components, corresponding to the scatter recorded in fieldwalking. These suggested the presence of at least two buildings, one with stone foundations, interpreted as forming a modest Romanised farmstead (Fig. 6). The small quantity of pottery recovered was mainly of early Roman date, with some sherds perhaps of late Iron Age origin. A very limited number of middle Iron Age sherds and a single late Roman sherd were also noted. It was agreed that the north-western part of the site would be removed from the area of proposed quarrying, ensuring preservation of the structural remains *in situ*. Planning permission for gravel extraction was therefore granted for an area of c 6 ha, with a condition requiring a programme of archaeological work to ensure preservation of features by record. A brief for the work was prepared by Charles Parry of Gloucestershire County Council and a corresponding Written Scheme of Investigation was agreed in 2000.

Observation of topsoil stripping and subsequent excavation and recording were undertaken by OA over an extended period in 2000 and 2001. The site was divided into three areas of approximately equal size which were stripped in sequence, proceeding from north-west to south-east (Figs 2–5). The project archive and finds have been deposited with The Corinium Museum, Cirencester.

Physical and archaeological background

The site is located on the first gravel terrace of the River Thames at c 75 m OD. The southern end of the

site lies 600 m north of the Thames and aerial photographs indicate the position of a former watercourse running roughly north-south some 300 m east of the site. Within the excavated area the top of the subsoil sloped generally from north-west to south-east, from about 74.8 m OD to about 73.8 m OD. The natural subsoil consists of yellow silty gravel with patches of sand and alluvial silt. Within the stripped area the topsoil consisted of a friable mid-grey brown silt loam with inclusions of gravel, measuring from 0.16 m to 0.40 m in depth. In the northern part of the field, roughly corresponding to the area of preservation *in situ*, an intervening subsoil of mid-greyish brown silt clay with gravel and sand inclusions, probably an earlier ploughsoil, was also seen in places.

This area of Thames Valley gravels is archaeologically very rich and this evidence is briefly summarised here from information contained in the Gloucestershire Sites and Monuments Record, and in the reports cited. Evidence has derived principally from aerial photography and from the examination of some of these sites in the context of gravel extraction. There is no evidence for Neolithic or Bronze-Age activity in the immediate environs of Kempford Quarry, but aerial photographs show clusters of ring ditches (probable Bronze-Age round barrows) within 500 m of the site to the north-west and slightly further distant to the north-east and east-south-east. The last of these groups includes a number of ring ditches which form part of a very extensive complex of cropmarks on the north bank of the Thames (see further below). With the exception of these ring ditches, however, the majority of known features in the immediate area relate to the Iron Age and Roman period.

Substantial middle and middle-late Iron Age settlements have been examined at Claydon Pike and Thornhill Farm, some 3.5 km north-east of the present site (Miles *et al.* forthcoming; Jennings *et al.* 2004), and recently at Horcott (Lamdin-Whymark *et al.* in preparation), c 2.5 km to the north-west. Features examined by OA in 1995 at Stubbs Farm, barely 200 m north-east of the site, included the remains of a multiple ditched sub-circular enclosure, 52 m in diameter, with a possible posthole structure at its centre. This enclosure, of uncertain function, was poorly dated but can probably be assigned to the Iron Age (Miles *et al.* forthcoming). The evaluation carried out by OA at the present site in 1997 recovered some ten sherds of middle Iron Age pottery from the extreme north-west corner of the area examined.

Roman finds are associated with many of the cropmark sites in the Kempford area, including a dense complex centred 1.5 km east of the present site on the north bank of the Thames. Cropmark features to the north-west between the present site and RAF Fairford are not closely dated, though some may be of post-Roman date (see below). A less dense spread of linear cropmarks north and north-east of the site can be shown to be mostly Roman in date from

A Roman Rural Landscape at Kempford Quarry, Gloucestershire

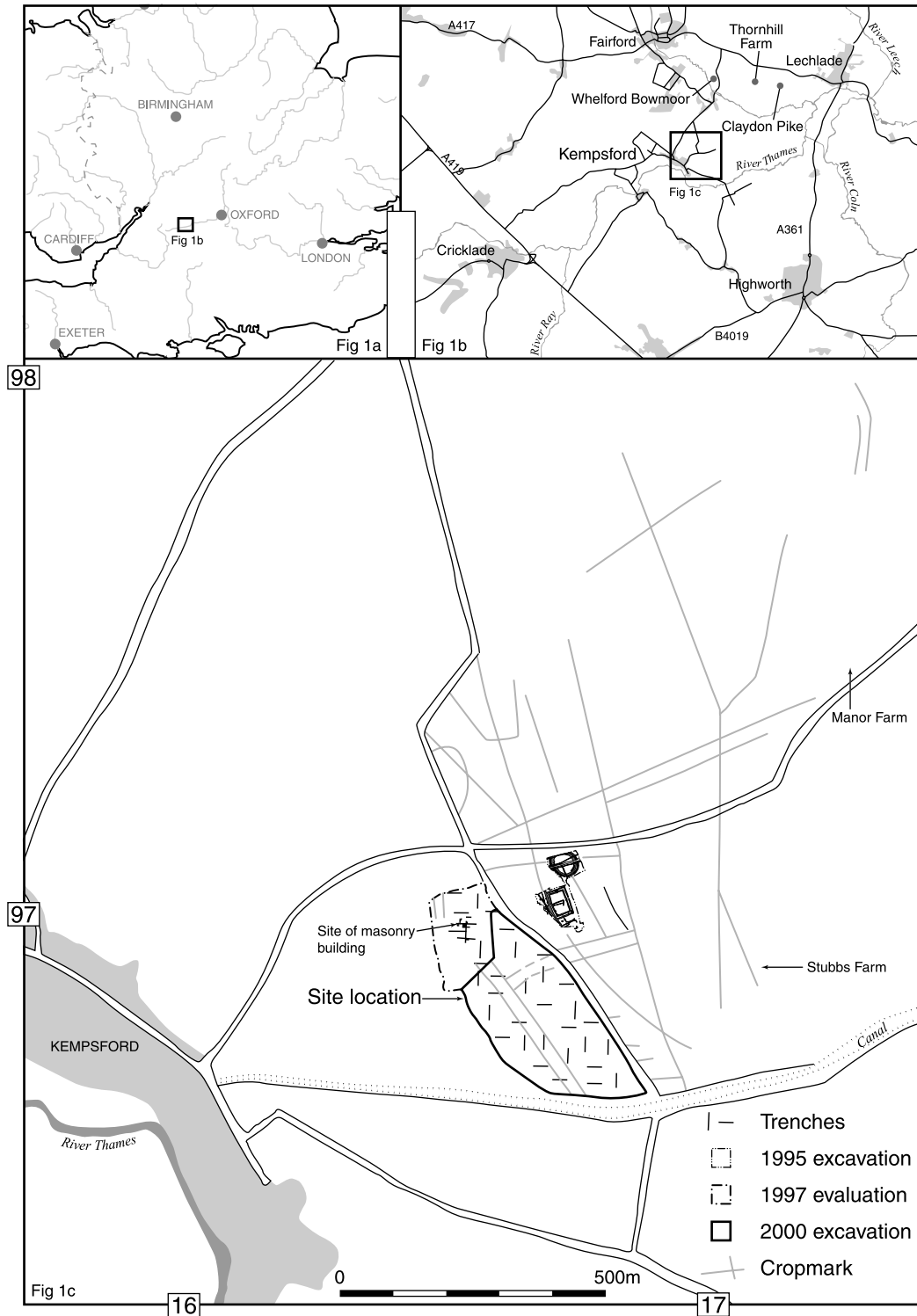


Figure 1 Kempford Quarry; site location.

evaluation work at Manor Farm (OAU 1991) and by association with further excavated features at Stubbs Farm, lying immediately south of the Iron Age enclosure mentioned above. The principal Roman feature there was a double-ditched rectangular enclosure, 53 m × 42 m, with an entrance on the

eastern side. The small assemblage of associated Roman pottery and tile suggested a date in the 2nd century AD. Further afield, late Iron Age sites at Horcott, Thornhill Farm and Claydon Pike developed into early Roman settlements, but only Claydon Pike continued to be occupied throughout

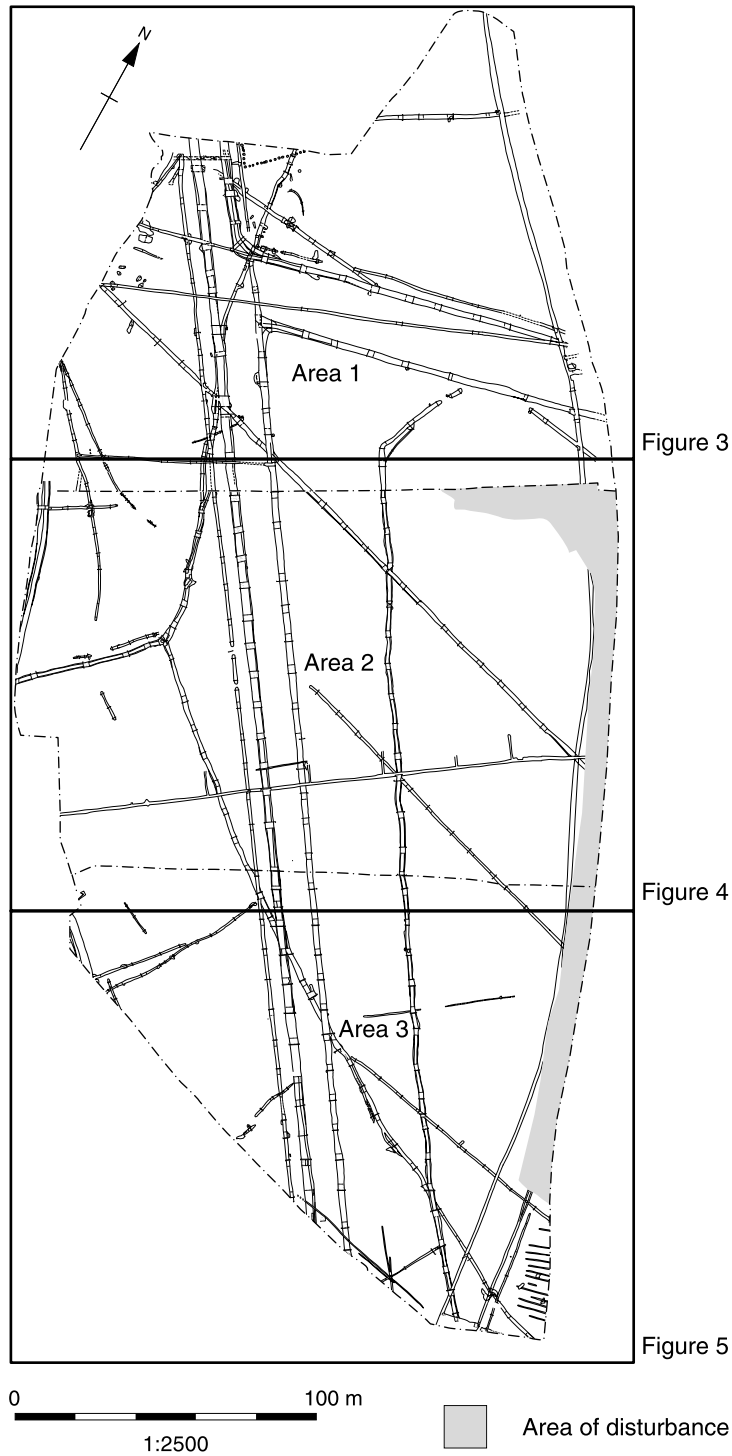


Figure 2 The area of the Kempford MultiAgg quarry excavation.

the Roman period. Sites such as Whelford Bowmoor grew up *de novo* in the 2nd century.

A single Anglo-Saxon burial is known from just north of Kempford village, while some 700 m south-west of the site a ford over the Thames (presumably of earlier origin) was protected by an earthwork in the Saxon period. By the late 11th century there was a church in Kempford and in the early 12th century a

castle or strongly fortified manor house was built on the Saxon earthwork. The land around medieval Kempford was drained by a network of ditches and channels which probably originated before 1133, when a 'Black Dyke' was recorded (Herbert 1981, 97). There was arable land immediately to the north of Kempford village street in the medieval period, and fieldwalking of cropmarks north of the village

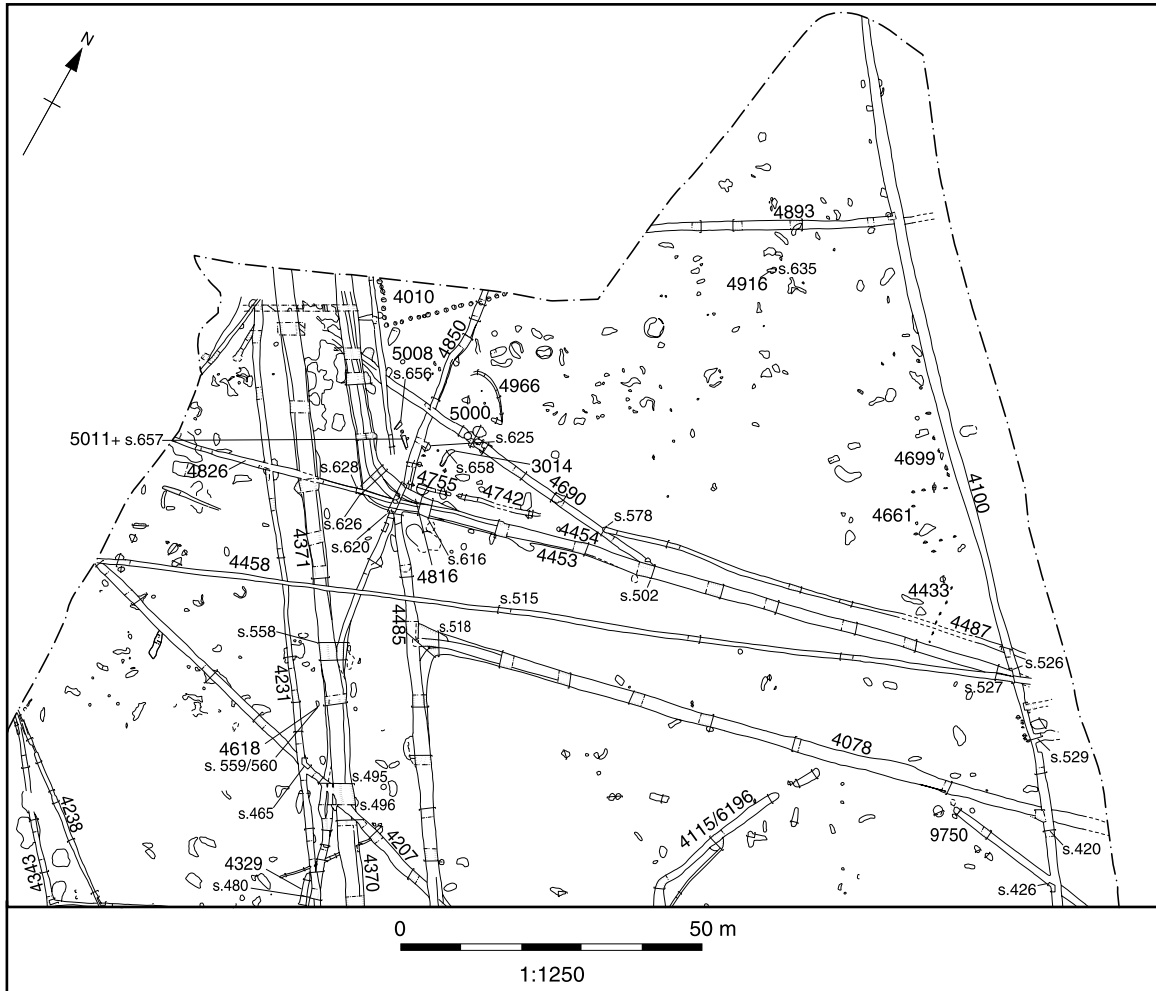


Figure 3 Detailed plan of the north part of the excavation area.

has identified surface concentrations of medieval pottery here. Much of the rest of the agrarian land was under pasture.

The castle was demolished in the 17th century and Kempford House was built in its place. This was pulled down in turn in 1790 and the site is now partly occupied by Manor Farm. The agricultural land remained unenclosed until 1801. The Thames and Severn Canal cutting through the village and forming the southern boundary of the present site was constructed in 1789 and fell into disuse in 1927.

THE EXCAVATION

Methodology

The area was stripped of topsoil under archaeological supervision using 360° excavators fitted with toothless ditching buckets. The stripping was carried out at sporadic intervals over an extended period of time, sometimes in very poor conditions. The stripped areas were planned and archaeological hand-excavation and recording was undertaken in

line with the provisions of the Written Scheme of Investigation.

Summary of results

The following summary of the site sequence is very condensed; the full context record can be consulted in the project archive. There is little evidence for activity prior to the Roman period, although a substantial number of undated tree-throw holes may have been prehistoric in date. Three pieces of worked flint were recovered, all of which are of Mesolithic date but one of which had been reworked in the Beaker period. The archaeological sequence was divided into seven phases on the basis of stratigraphic relationships and, to a lesser extent, artefactual evidence. The first five phases were assigned to the Roman period and the last two were medieval to post-medieval/modern. The earliest phase (1) consisted of earlier Roman or possibly later Iron Age field systems, associated with several cremations. This was superseded by a second phase (2) of early Roman land boundaries/ field systems. These were

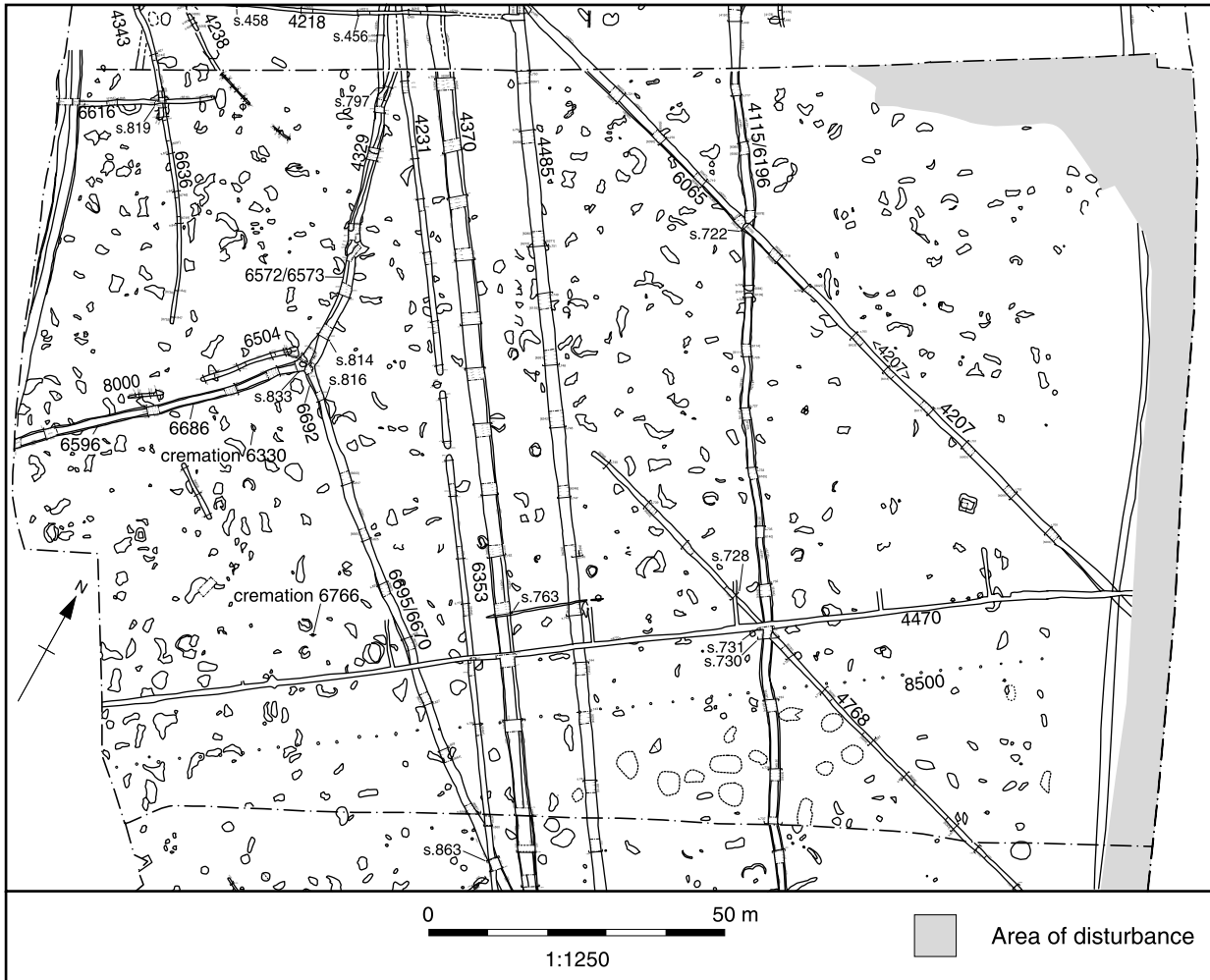


Figure 4 Detailed plan of the central part of the excavation area.

in turn superseded by (or may have been contemporary with) Roman trackway ditches established in the 2nd century (3), which were cut by a series of three parallel ditches of mid Roman date (4). Once these ditches had gone out of use the trackway ditches were reinstated, perhaps by the middle of the 3rd century AD (5). A rectangular post-built structure and several inhumations were also assigned to this phase. There is then no evidence of activity until the late medieval or early modern period (6) when a number of field boundary ditches were dug. Superseding these were two modern ditches and an associated fence-line (7).

A substantial number of features could not be assigned to a phase. The great majority of these, however, were discrete features probably of natural origin, such as tree-throw holes and hollows in the upper surface of the gravel terrace. More problematic were questions relating to the phasing as established. Not all aspects of this can be regarded as secure. The main points of difficulty are discussed in the individual phase descriptions below.

In the following narrative features are generally referred to in terms of group or structure numbers.

Features such as major ditches, for example, included many component cut numbers which are not usually referred to individually, although they do appear on the published section drawings.

Phase 1 (Figs 7–9)

Summary

The earliest dated phase of activity at Kempford comprised a series of ditches defining irregular land boundaries. A group of intercutting ditches 4850/4329/6572/6573/6692/6595 orientated north-south and then north-west/south-east bounded a group of enclosures to its south-west. Four further groups of ditches/gullies 6596/6686, 6836/6844/6782, 7015/7016 and 7289, defined roughly rectangular enclosures abutting the north-west/south-east ditch to its south-west. The most northerly of these groups was reinforced or replaced by two sections of ditch 6504/8000 which ran parallel to it, approximately 2.5 m to its north. To the north of these features were three groups of north-west/south-east orientated ditches 4343/6636/4238 which perhaps related to an



Figure 5 Detailed plan of the southern part of the excavation area.

enclosure lying to their south-west. These cut a north-east/south-west orientated linear ditch 6616. All of these ditches went through at least one major phase of recutting and probably more. Indeed ditch 6692 was largely cut away by ditch 6595 and survived only in short lengths. However, there were no major alterations to the layout of the landscape during the phase, and the recutting possibly represents piecemeal maintenance. There were two cremations (6330 and 6766) within the enclosure defined by ditches 6596/6686, 6595/6670 and 6844/6836/6782 (locations shown on Fig. 4). Both were within pits without urns and contained nails but no other grave goods. The ditches produced a sparse assemblage of middle Iron Age and early Roman pottery indicating that this phase probably dated to the early Roman period.

Description

Main boundary (Fig. 8)

Ditch 4850 was a linear ditch orientated roughly north-south and approximately 90 m in length. It averaged 1.23 m in width by 0.44 m in depth. It was

generally U-shaped in profile and there were no recuts. The fills consisted of silty clay and silty sand with inclusions of gravel, flint and charcoal. Small amounts of Roman pottery and animal bone were recovered from the fills.

Ditch 4329 was a linear, slightly sinuous ditch running north-north-west/south-south-east and approximately 49 m in length. It averaged 1.33 m in width by 0.50 m in depth. It was U-shaped in profile and had no recuts. Its lower fill consisted of gravel and its upper fill of silty clay with inclusions of gravel and flecks of charcoal. Small amounts of early Roman pottery and animal bone were recovered from the fills.

Ditch 6572 was a curvilinear ditch continuing the general alignment of ditch 4329. It was approximately 20 m in length and averaged 0.51 m in width by 0.18 m in depth. It had a U-shaped profile, and was recut by ditch 6573. The ditch fills generally consisted of sandy silt with inclusions of gravel and contained small amounts of early Roman pottery and animal bone.

Ditch 6573 was effectively a recut of ditch 6572 and the two were approximately the same shape.

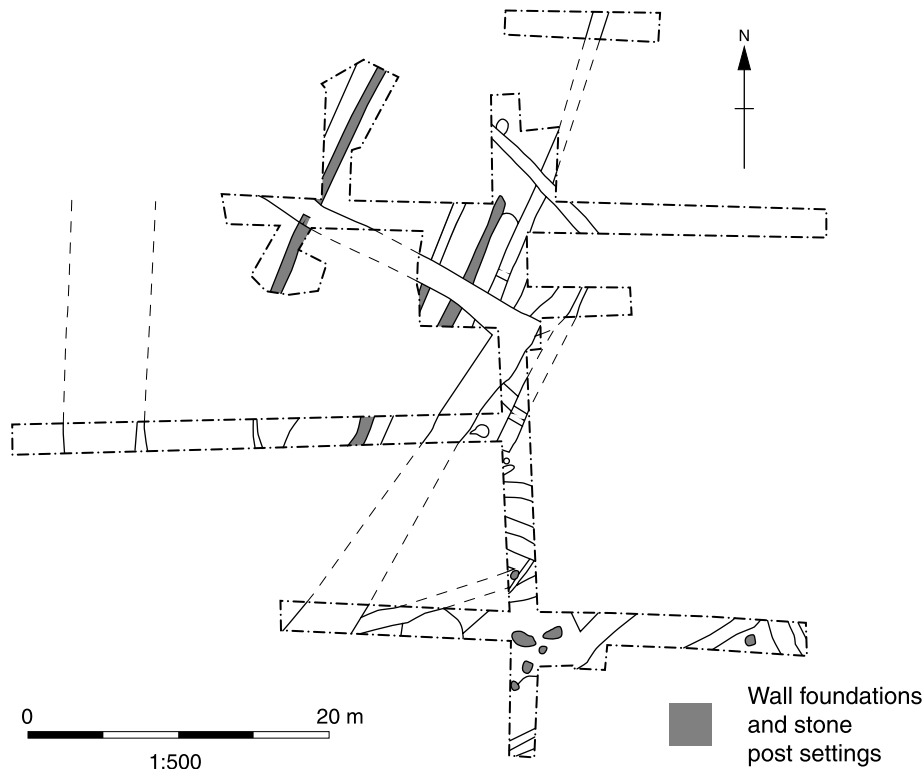


Figure 6 Area of masonry building found during the 1997 evaluation.

Ditch 6573 was approximately 35 m in length and averaged 0.82 m in width by 0.28 m in depth. It was U-shaped in profile and had no recuts. The ditch fills comprised silty sand, clay silt and silty gravel and contained small amounts of early Roman pottery and animal bone.

Ditch 6692 was a linear ditch which had been largely cut away by ditch 6595. It was visible in two stretches each about 7 m long, although it may originally have been up to 182 m in length. The surviving lengths were aligned north-west/south-east. Its extant width was 0.4 m on average and it averaged 0.44 m in depth. It was U-shaped in profile and showed no sign of recuts, although it may be argued that ditch 6595 was effectively a recut of it. The fill consisted of silty clay with inclusions of gravel, flint and flecks of charcoal. No finds were recovered from this ditch.

Ditch 6595 was a linear, slightly sinuous ditch orientated north-west/south-east. It was approximately 280 m in length and averaged 1.07 m in width by 0.29 m in depth. It was U-shaped in profile and was recut up to three times in places. Its fills consisted of silty clay with inclusions of gravel, fragments of limestone and charcoal flecks. It contained small amounts of early Roman pottery and animal bone.

Enclosure boundaries

Ditch 6596 was a slightly sinuous curvilinear ditch orientated north-east/south-west. It was

approximately 50 m in length and averaged 1.43 m in width by 0.30 m in depth. In profile it had a flattish base and steeply sloping but irregular sides. There were no recuts. It was filled by deposits of silty clay with inclusions of gravel, limestone, lenses of sand and flecks of charcoal. It contained small amounts of Roman pottery and animal bone.

Ditch 6686 was a linear ditch orientated north-east/south-west and approximately 40 m in length. It recut part of ditch 6596. It averaged 1.35 m in width by 0.25 m in depth. It was U-shaped in profile and had no recuts. Its fills comprised silty clays with inclusions of gravel and charcoal flecks.

Gully 6836 south-east of 6596/6686 was a curvilinear ditch orientated north-east/south-west and measuring approximately 31.5 m in length. It averaged 0.72 m in width by 0.16 m in depth. It was U-shaped in profile and was recut at least once. The ditch fills comprised silty clay and clay/silt with inclusions of gravel, limestone and flecks of charcoal but contained no finds.

Gully 6844 was a shallow linear ditch running north-east/south-west. It was approximately 21 m in length and averaged 0.58 m in width. It averaged 0.21 m in depth and had a U-shaped profile. There were no recuts and the ditch fill comprised silty clay with inclusions of gravel and charcoal. No finds were recovered from the ditch fill.

Gully 6782 ran alongside ditch 6844 on a north-east/south-west alignment and was 33 m in length. It did not meet the ditch 6836/6844 alignment so

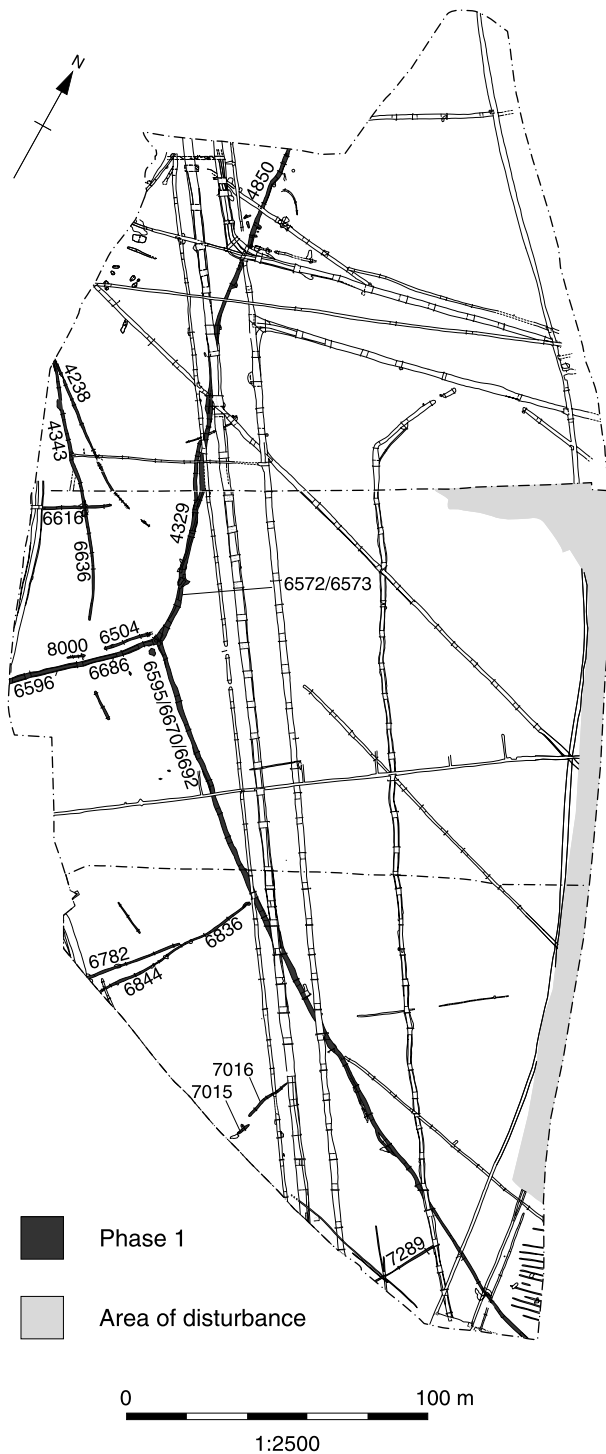


Figure 7 Phase 1 early Roman field system.

their relative chronology is uncertain. It averaged 0.59 m in width and 0.21 m in depth. The ditch profile was U-shaped and the fills comprised clay silt with no inclusions. No recuts were visible in section and there were no finds from the fills.

Gully 7015 lay south-east of ditch 6836/6844 and was a shallow linear feature only 4.65 m in length aligned north-east/south-west. It averaged 0.60 m in

width and 0.14 m in depth. In profile it was U-shaped and showed no sign of recuts. It was filled with a silty clay with no inclusions. No finds were recovered from the fill.

Gully 7016 was a linear, slightly sinuous ditch orientated north-east/south-west. It was 16.70 m in length and averaged 0.67 m in width by 0.13 m in depth. It had a flattish base with steep irregular sides. There were no recuts. The fill comprised clay silt with no inclusions. No finds were recovered from this ditch.

Gully 7289 ran on a straight south-west/north-east alignment for a distance of 24.5 m from the edge of the site. It ranged from 0.70 m to as little as 0.20 m in width and was up to 0.40 m deep. The profile was steep sided, either with a flat or a rounded V-shaped base. The fill of silty clay contained no finds.

Other boundaries

Ditch 6504 was a linear ditch or gully 16 m in length and orientated north-east/south-west. It averaged 0.51 m in width by 0.18 m in depth. In profile it was U-shaped and it had been recut once. The lower fill was a sandy loam with inclusions of gravel and the fill of the recut was a silty loam also with inclusions of gravel. The fills did not contain any finds.

Ditch 8000 was a linear ditch or gully 6 m in length and orientated north-east/south-west. It averaged 0.58 m in width by 0.29 m in depth. It was irregular in profile and was not recut. Its fill comprised a sandy loam with inclusions of gravel and did not contain any finds. This feature, with 6504, lay immediately north-west of and parallel to ditch 6596/6686 and may have been related to it.

Ditch 4343 ran alongside ditch 4238, which lay to its north-east. The ditch was orientated north-west/south-east and was 43 m in length. It averaged 0.77 m in width and 0.25 m in depth. It was V-shaped in profile. There were no recuts and the fill comprised clay loam with inclusions of gravel and flecks of charcoal. There were no finds from the fills.

Ditch 6636 was a curvilinear ditch orientated north-west/south-east continuing the line of ditch 4343 to the south. It was 46.5 m in length and averaged 0.77 m in width by 0.38 m in depth. In profile it was U-shaped and no recuts were evident in section. The fills comprised silty sand and contained no finds.

Ditch 4238 consisted of a series of ditch/gully segments forming a curvilinear boundary 64 m in length and orientated north-west/south-east. It diverged from the line of ditch 4343 on a slightly more easterly alignment. It averaged 0.43 m in width by 0.20 m in depth. It varied in profile, being V-shaped in some places and U-shaped in others. There were no recuts. The fills were generally silty loams with some clay loams, both with inclusions of gravel. There were no finds.

Ditch 6616 was a linear ditch 26.5 m in length and orientated north-east/south-west, being cut by 6636. It averaged 1.37 m in width by 0.26 m in length. It was

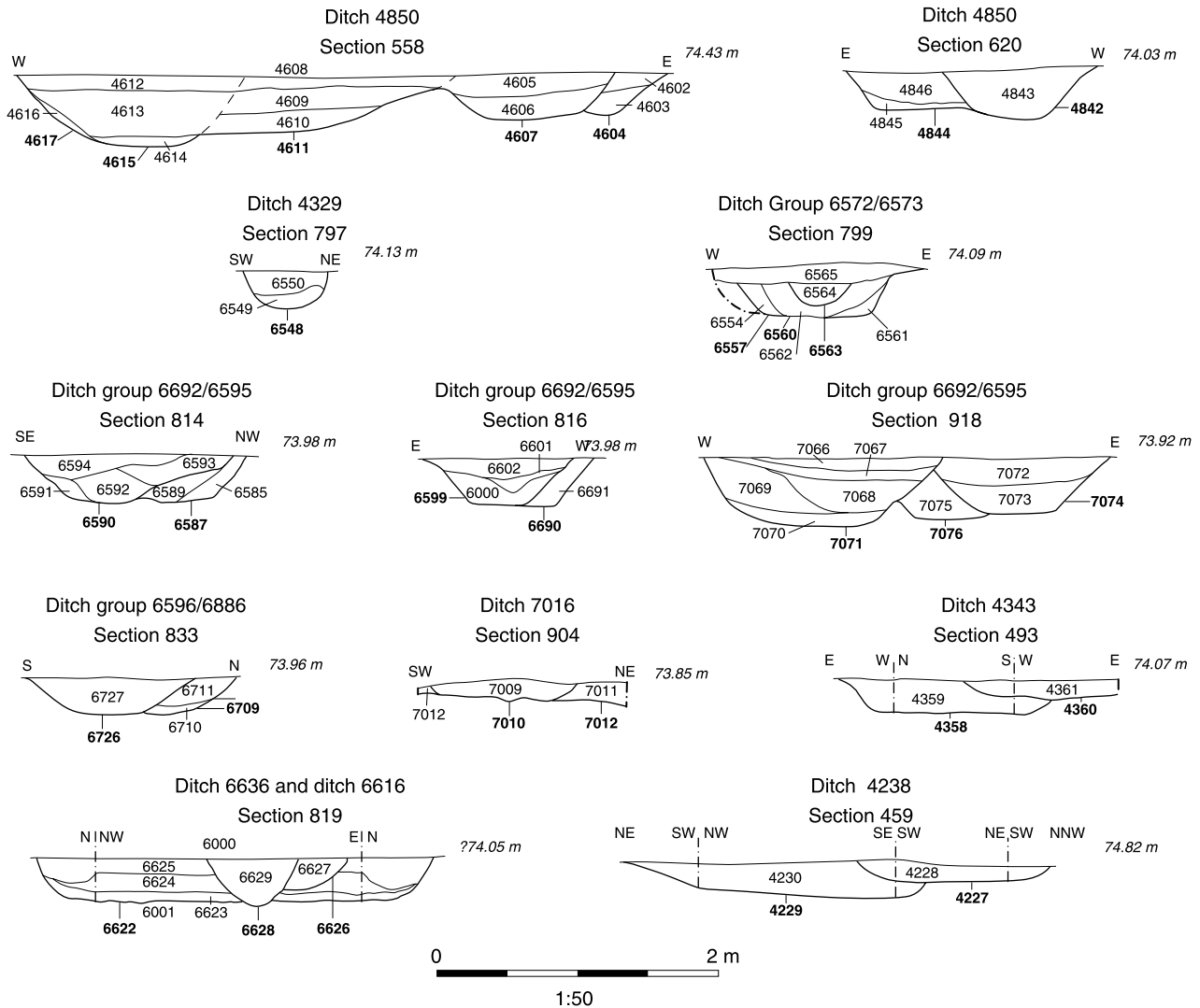


Figure 8 Phase 1 ditch sections.

U-shaped in profile and was recut at least twice. Its fills consisted of silty clay and silty loam with inclusions of gravel and yellow sand and contained no finds.

Cremations (Fig. 9)

Cremation Pit 6330 lay 5.5 m south-east of ditches 6596/6686 and 12 m south-west of ditches 6595/6670. It was oval in shape measuring 0.79 m in length by 0.50 m in width and 0.16 m in depth. It was U-shaped in profile having steep sides and an irregular base. The fill comprised a dark grey/black silty clay with inclusions of charcoal, burnt bone and gravel. Finds from the fill included a ceramic building material fragment, hobnails and a number of larger iron nails. The larger nails, some of which bore traces of mineralised wood, appeared to be burnt, suggesting either that the deceased was cremated in a coffin or that a box or similar object was placed on the pyre. The hobnails, however, were only very slightly blackened and were probably

from shoes placed with the burial after cremation. The finds indicate at least an early-Roman date.

Cremation Pit 6766 lay 42 m south-east of ditch 6596/6686 and 14 m south-west of ditch 6595/6670. It was irregular in shape and measured 0.48 m in width by 0.79 m in length and 0.07 m in depth. In profile it was saucer shaped, with steep sides and an irregular base and was cut into the fill of a probable tree hole of irregular profile (6768). It had clearly been heavily truncated and root disturbed. The fill comprised friable brownish black sandy silt with inclusions of charcoal and bone. A single nail was found within the fill. The spatial relationships of this cremation and the presence of the nail suggest an early-Roman date.

Phase 2 (Figs 10–11)

Summary

The Phase 1 enclosures were superseded by a long linear land boundary orientated south

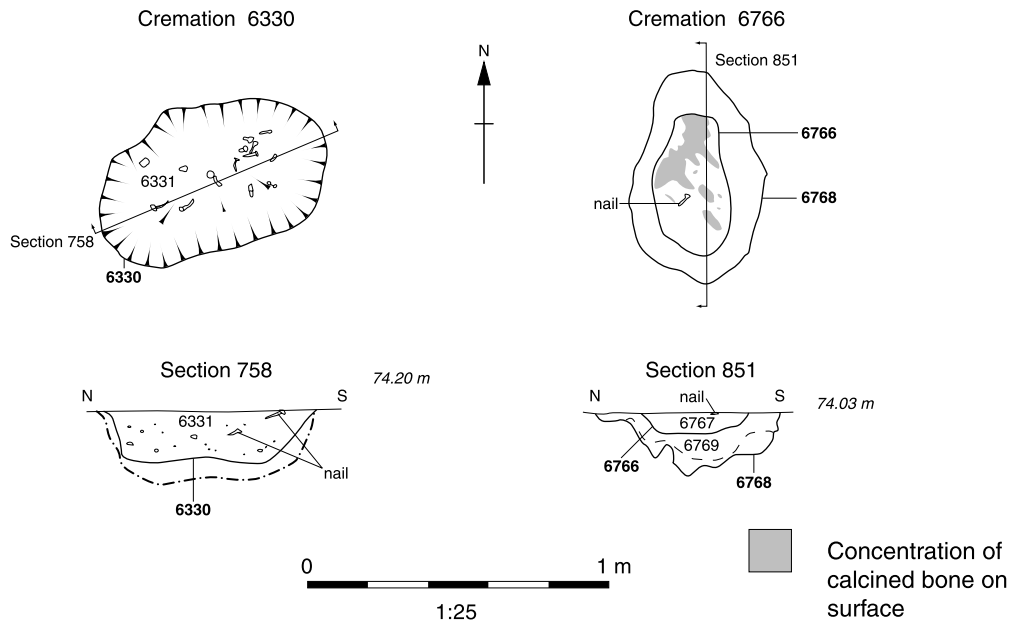


Figure 9 Phase 1 cremation burials.

east/north-west (4115) extending from the south-eastern margin of the site but turning to the north-west at its north-eastern end where it ended in a terminal. A second ditch (4127) about 5 m long continued the same alignment approximately 3 m to the north-east of this terminal. A third ditch (9750) orientated east/west with an opposing terminal lay to the east. Together these may have defined the entrance to a putative enclosure to the south-east. Ditch 4115 was recut by ditch 6196 as far as the point where it turned to the north-west. The spatial relationship of these ditches to the Roman trackway to the north and a small assemblage of Roman pottery suggests an early Roman date.

Description

Ditches (Fig 11)

Ditch 4115 was aligned south-east/north-west, turning off at an angle of 45° to the north-east at its northern end. It was U-shaped in profile with a flat base and steep sides. The ditch was 318 m in length and averaged 1.44 m in width. In depth it was 0.42 m on average. In places there were up to six recuts, but these may be assumed to represent localised activity. Two or three recuts were more usual. The ditch fills mostly comprised clay/silts with gravel, sand and charcoal inclusions and contained small amounts of abraded early Roman and middle Iron Age pottery, along with some scattered animal bone.

Ditch 6196 was also linear and was effectively a recut of ditch 4115, although the recut stopped short of the point where ditch 4115 turned to the north-east. It was 297 m in length and averaged 1.40 m in width. In depth it was 0.40 on average. It was consistently bowl-shaped in profile and did not

show any sign of recuts. The fill comprised silty clay with inclusions of gravel and was largely sterile.

Ditch 4127 was a short linear feature orientated north-east/south-west on the alignment of ditch 4115. It was about 5 m in length by 0.42 m in depth and 1.05 m in width on average. There were no recuts and the fills comprised clay silts with inclusions of gravel and sand. There were no finds.

Ditch 9750 was linear in plan and orientated east/west. It ran for a distance of 28 m from west to east where it ran beyond the limit of excavation. It averaged 1 m in width and 0.45 m in depth. There were no recuts and the ditch fills comprised clay/silts with gravel, sand and charcoal inclusions. There were no finds.

Phase 3 (Figs 12–15)

Summary

The enclosure boundaries of Phases 1 and 2 were superseded by substantial linear ditches running across the site from north-west to south-east and from north-east to south-west. These ditches bounded a north-west/south-east orientated trackway, which was joined near its northern end by a second trackway running in from the north-east. Ditch 4370 ran from north-west to south-east and continued beyond the limits of the excavation area at the south-eastern end of the site. It was recut on at least one occasion. At its north-western end it was cut away by ditch 4371, which recut 4370 along its entire length and extended beyond the limits of the site to the north-west and south-east. Running parallel to ditches 4370 and 4371 for a distance of 38 m and then turning north-east to form the north-eastern arm of a north-east/south-west trackway

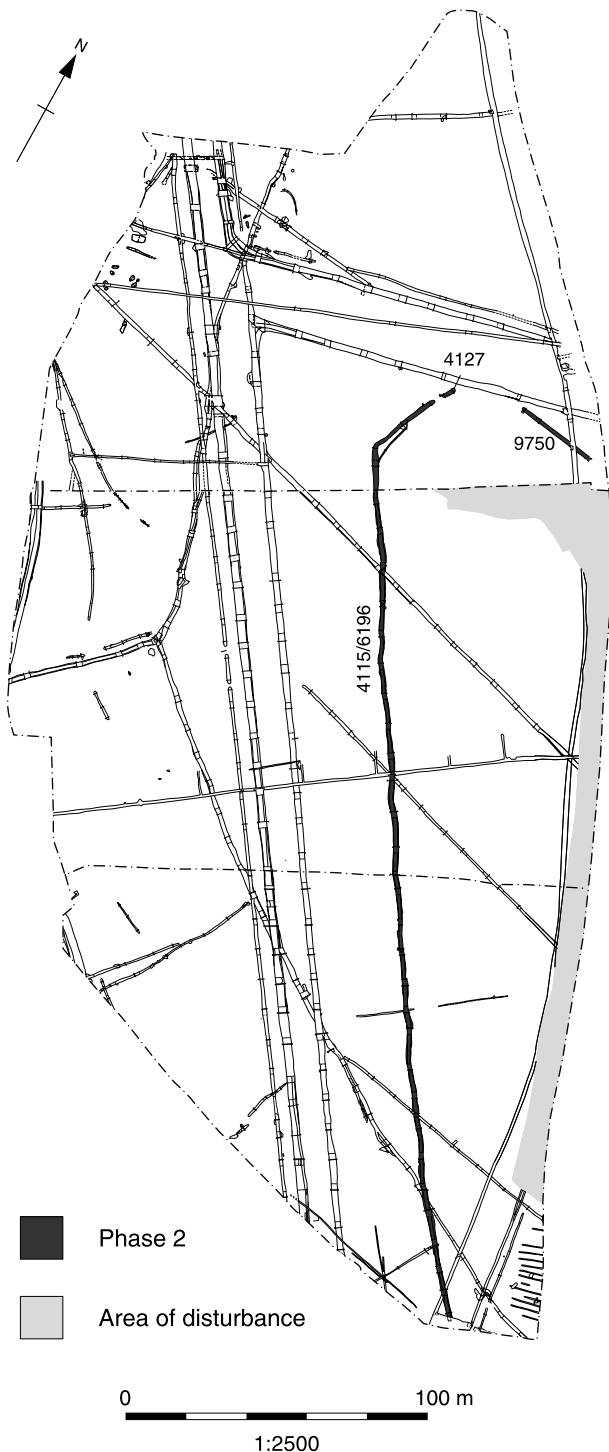


Figure 10 Phase 2 early Roman field boundary.

was a set of three ditches 4876, 4453 and 4454. Ditch 4876, the earliest of the three, was visible only in the inside corner formed by these ditches as they turned to the north-east, the remaining part of it having been cut away by 4453, which was in turn recut by 4454. Running parallel to ditches 4876, 4453 and 4454, 15 m to their south-east was ditch 4078, which formed the south-eastern arm of the

north-east/south-west trackway and was recut at least three times. Ditch 4078 was cut away at its south-western end by a later trackway ditch as it turned to the south-east and it may be assumed that a further ditch forming the north-eastern boundary of the north-west/south-east trackway was completely truncated by this later ditch. The evidence suggests that the trackway ditches went through at least three phases of recutting. However, there is no evidence for a major remodelling of the landscape during this period. A minor modification to the layout of the site occurred when two linear ditches (4690 and 5000) with opposed terminals forming a small entrance, cut off the internal angle of the multiple boundary ditch formed by 4876, 4453 and 4454.

A horse burial and two human cremations lay within the space defined by the addition of these ditches. The horse burial was articulated and nearly complete and lay within a pit (5014), where it was overlain by one of the cremations (5017). The other cremation (4857) was unaccompanied and lay within another pit nearby. No grave goods were recovered from these cremations but one lay in a pit cutting an early Roman ditch; neither is likely to be later than the late 2nd or early 3rd century. A human inhumation (4619 in grave 4618) lay immediately to the south-west of the south-western ditch approximately 48 m from the north-western limit of the excavation. This is unlikely to have belonged to the late Roman period as it would have lain within the limits of the trackway at that time, but there is no independent dating evidence. A section of curvilinear ditch (4966) to the north-west of ditch 4690 and 5000 probably belonged to this phase of activity, as it contained an assemblage of 2nd- and 3rd-century pottery. The position of this phase in the stratigraphic sequence and sporadic finds of 2nd- and 3rd-century pottery indicate that its inception should be assigned to the 2nd century AD but that some of the ditches may have been infilling in the 3rd century.

Description

North-west/south-east trackway (Fig 13)

Ditch 4370 was a linear ditch 262 m in length and orientated north-west/south-east. It averaged 0.99 m in width and 0.37 m in depth. It was generally U-shaped in profile, having a flat base and concave sides. It was recut on at least one occasion. The lower fills often consisted of gravel and generally lacked inclusions while the upper fills consisted of silty clay and contained some gravel and charcoal. Occasional fragments of limestone and pieces of pottery and animal bone were recovered from these fills, but generally finds were scarce. The animal bone assemblage from the northern part of the ditch, such as it was, tended to be dominated by horse bones.

Ditch 4371 was a linear ditch running the length of the site (some 360 m) and orientated north-west/south-east. It averaged 1.56 m in width by 0.40 m in

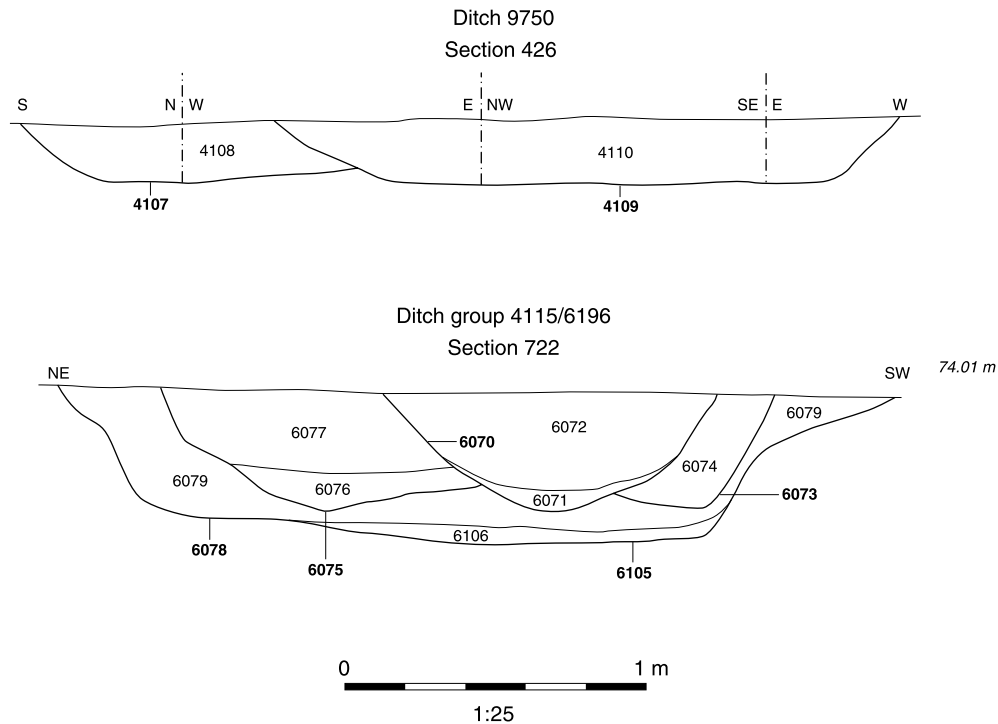


Figure 11 Phase 2 ditch sections.

depth. It was also U-shaped in profile and showed no signs of recutting. The fills consisted of silty clay or clayey silt and contained inclusions of charcoal, gravel and limestone fragments. Pottery and animal bone from the fills were scarce, although the forelimbs of a horse were recovered from ditch section 6382. The animal bone assemblage from the northern part of the ditch was again dominated by horse.

East-north-east/west-south-west trackway (Fig. 13)

Ditch 4876 was a curvilinear section of ditch 61 m in length running north-west/south-east from the north-west site margin before turning east-north-east at the trackway junction. It was 1.08 m wide on average and 0.30 m deep. In profile it was roughly U-shaped, having a flat base and steeply sloping sides. No recuts were evident. The fills comprised silty sands and silty clay. Inclusions of gravel and sand were relatively common along with occasional fragments of charcoal, burnt stone, limestone and animal bone.

Ditch 4453 was a right-angled ditch 111 m in length. It was orientated north-west/south-east for 49 m and then turned east-north-east, running on for a further 62 m at which point it was cut away by ditch 4454. It probably originally extended as far as the north-eastern site edge. It averaged 1.32 m in width by 0.41 m in depth. In profile it was U-shaped having a flat base and concave sides. It was recut at least once. The fills consisted of silty clays, clay-silts and silty sands. There were inclusions of gravel,

sand, flint and shell along with occasional fragments of charcoal. A relatively substantial assemblage of Roman pottery was recovered from the fill along with some animal bone. Much of the animal bone assemblage consisted of horse bone, particularly horse teeth.

Ditch 4454 was also a right-angled ditch measuring 203 m in length. It was essentially a recut of 4453 and followed the same alignment. In width it averaged 1.56 m and in depth 0.33 m. It was varied in profile, being U-shaped in some places and bowl shaped in others. Its fills consisted of silty sands and silty clays with inclusions of gravel and occasional fragments of charcoal. Finds from the ditch fills consisted of occasional pieces of pottery and fragments of animal bone. A significant proportion of the animal bone came from horses.

Ditch 4078 was a linear ditch 153 m in length and orientated east-north-east/west-south-west. On average it was 1.84 m wide and 0.35 m in depth. In profile it was U-shaped and there were at least three recuts. The fills comprised mainly silty clays and clay loams with inclusions of gravel and charcoal. Small amounts of pottery and animal bone were recovered, horse again comprising a significant proportion of the latter.

Features at the trackway junction (Fig. 15)

Ditch 4690 was a linear ditch 41 m in length and orientated east/west. It averaged 1.28 m in width and 0.14 m in depth. It had a flat bottom and steeply sloping sides. There were no recuts. The ditch fills

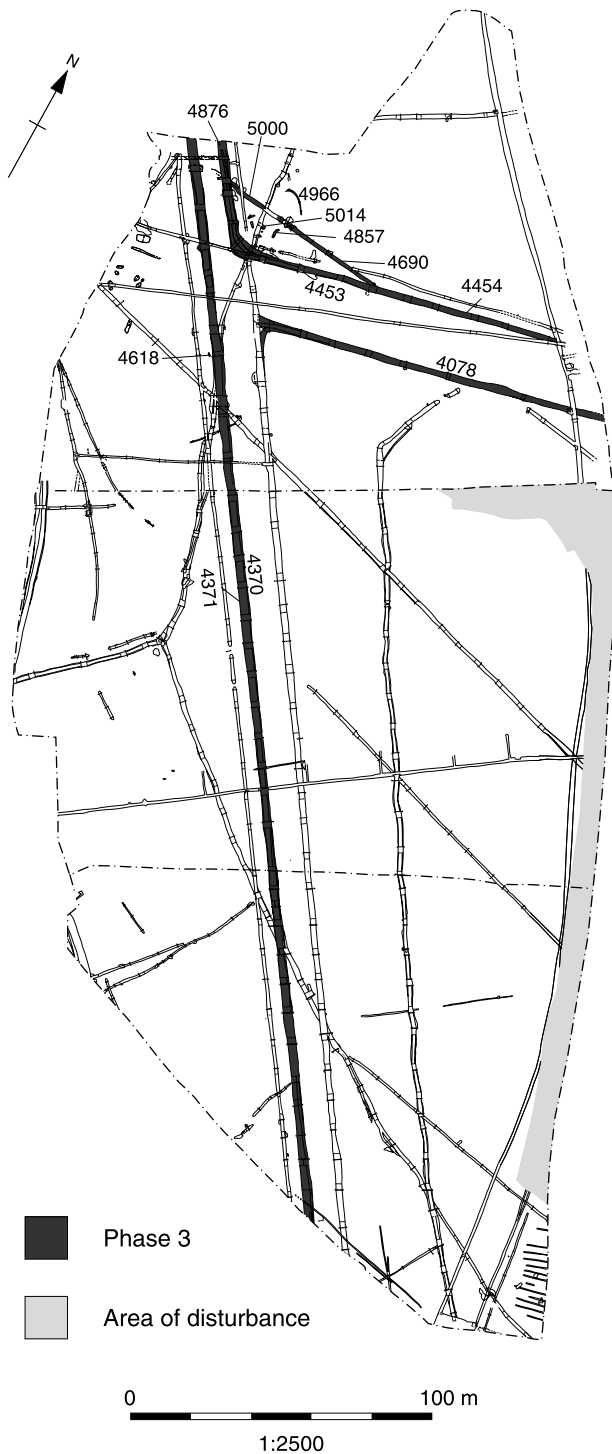


Figure 12 Phase 3 mid Roman trackway and burials.

comprised silty clays and clay loams with some sandy clay, with inclusions of gravel, along with some charcoal, fragments of limestone and flint. A few sherds of 2nd- to 3rd-century Roman pottery came from the fill of the terminal at the west end of the ditch.

Ditch 5000 was a linear ditch 29 m in length and orientated east/west, corresponding to ditch 4690.

There was a gap of c1.2 m between the terminals of the two features. Feature 5000 averaged 1.6 m in width and 0.25 m in depth and had a flat base and steeply sloping sides. There were no recuts. The fills consisted of silty clays with inclusions of charcoal and gravel. Some burnt stone and sherds of early Roman pottery were recovered from the east terminal of the ditch.

Ditch 4966 was a curvilinear gully approximately 14 m in length and curving round from west to south-east just north of the opening between ditches 4690 and 5000. It averaged 0.47 m in width by 0.15 m in depth. In profile it was generally U-shaped having a gently curved base and steeply sloping sides. No recuts were apparent in section. The ditch fill was silty clay with inclusions of gravel and flecks of charcoal. Ten sherds of Roman pottery (most of which were 2nd- to 3rd-century in date) and some burnt limestone were recovered from the fill.

Cremation/Horse burial 5014 (Fig. 14a) consisted of the articulated skeleton of a horse lying on its left side and orientated south-west/north-east with a human cremation (5017) overlying it. These lay within an oval pit with a saucer-shaped profile. The pit was 2.3 m in length, 1 m wide and 0.32 m deep. Underlying the partly plough-disturbed skeletal material (5018) was a basal fill of yellowish brown silty clay with inclusions of gravel and patches of sand. Overlying this and forming the matrix within which the bone was deposited was a dark brown silty clay containing charcoal flecks. There were no associated finds.

Cremation 4857 (Fig. 14b) consisted of the charred remains of a human skeleton lying in an oval pit measuring 2.50 m in length by 0.60 m in width and 0.20–0.30 m deep, located immediately east of horse burial 5014. The pit was saucer shaped in profile and had evidence of *in situ* burning. The lower fill (4856) comprised a light yellowish brown (burnt) sandy loam with charcoal flecks and fragments of pale orange clay. The upper fill (4855), which formed the matrix in which the human remains were deposited, was a dark blackish brown clay loam with much charcoal. This fill contained a fragment of a rotary quern, but it is unclear if this was a deliberate or an accidental occurrence. A modern field drain had truncated the feature.

Isolated burial

Inhumation 4619 (Fig. 14b) was located immediately south-west of the main north-west/south-east trackway just south of the trackway junction. The sub-rectangular grave cut (4618) was aligned north-west/south-east and measured 1.8 m in length by 0.4 m in width and 0.29 m in depth. In profile it had vertical sides and a flattish base. It contained an adult human skeleton (4619) extended and lying on its right side. A fill of dark brown silty clay loam with inclusions of gravel and charcoal flecks overlay the skeleton. A cluster of hobnails was found at its feet.

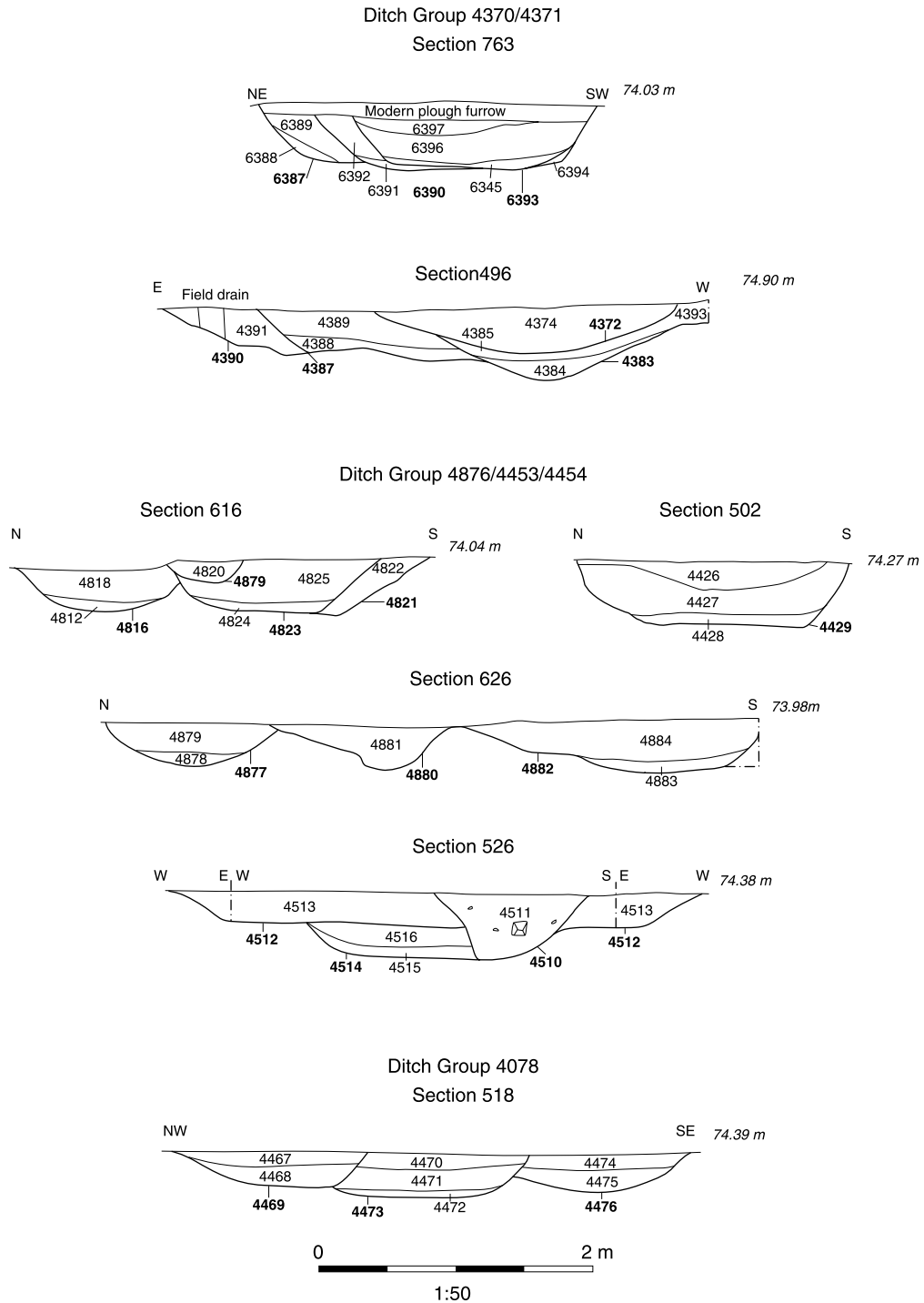


Figure 13 Phase 3 ditch sections.

Phase 4 (Figs 16–17)

Summary

A series of three roughly parallel ditches (4207, 4768 and 7201) was laid out on an east-south-east/west-north-west axis. The most northerly of these cut across the silted up Phase 2 trackway ditches and ran beyond the limits of the excavation at both ends. The other two features, which lay approximately

60 m and 165 m to the south respectively, ran beyond the limit of the excavation to the east and ended in terminals immediately to the east of the trackway. Very small quantities of Roman pottery from ditch 4207, together with the fact that this feature cut the Phase 3 trackway ditches and was cut by the Phase 5 trackway, indicate that these ditches may be assigned to the 3rd or (less likely) early 4th century.

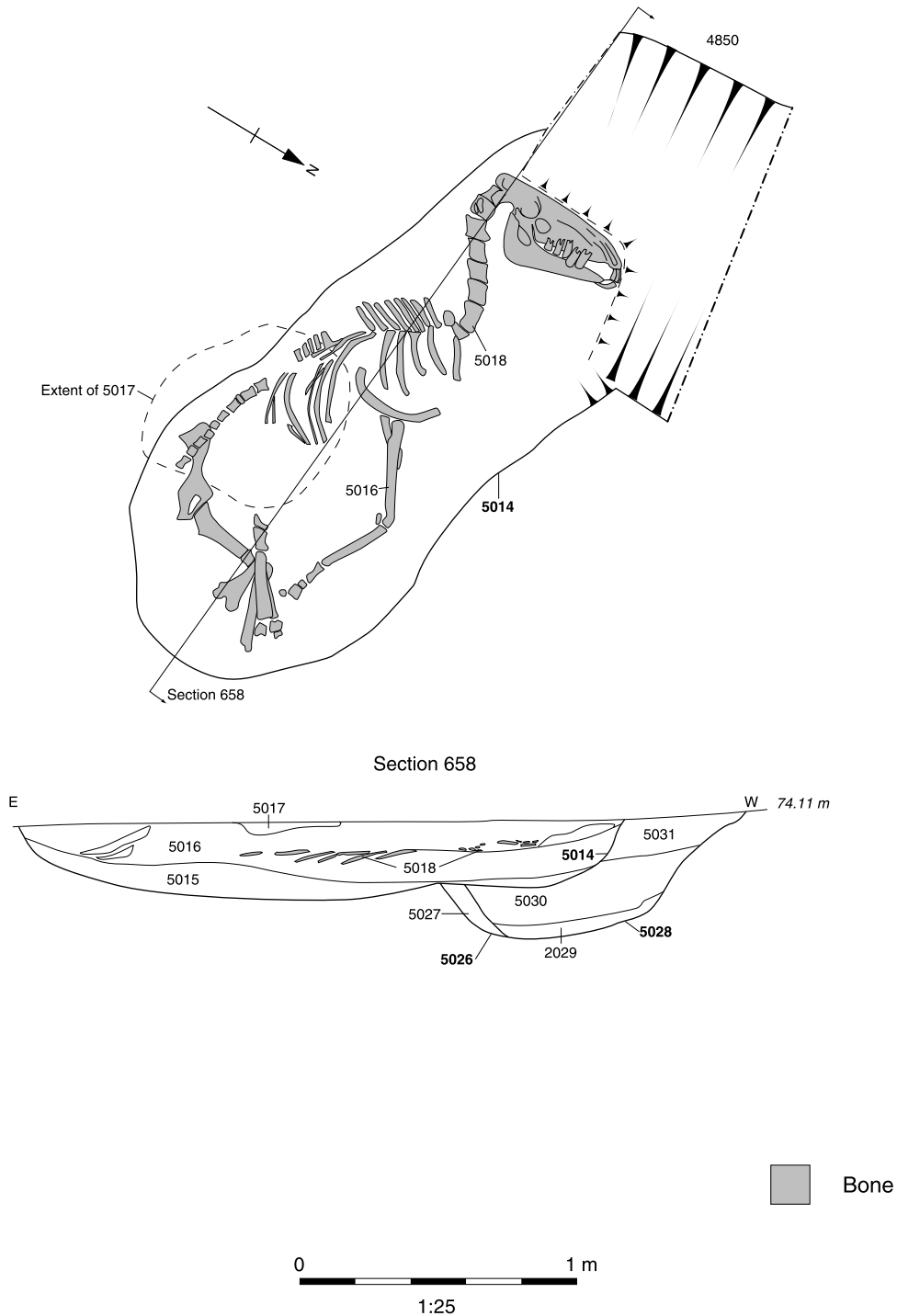


Figure 14a Phase 3 horse burial/human cremation.

Description

Ditch 4207 was a linear ditch 206 m in length and aligned east-south-east/west-north-west. It averaged 1.10 m in width and 0.31 m in depth. In profile it was generally U-shaped having steep sides and a flat base. An earlier cut on the same alignment (6065) was identified on the south-west edge of the feature in the middle third of its length. The ditch fill

consisted of silty clay with inclusions of gravel, charcoal and limestone and lenses of reddish sand. Very small amounts of middle Iron Age and middle Roman pottery came from the fill. The latter included a single small colour-coated sherd, probably of Nene Valley ware, but not closely dated.

Ditch 4768 was a linear ditch exactly parallel to 4207 and 101 m in length. It averaged 0.81 m in width and 0.32 m in depth. In profile it was roughly U-shaped

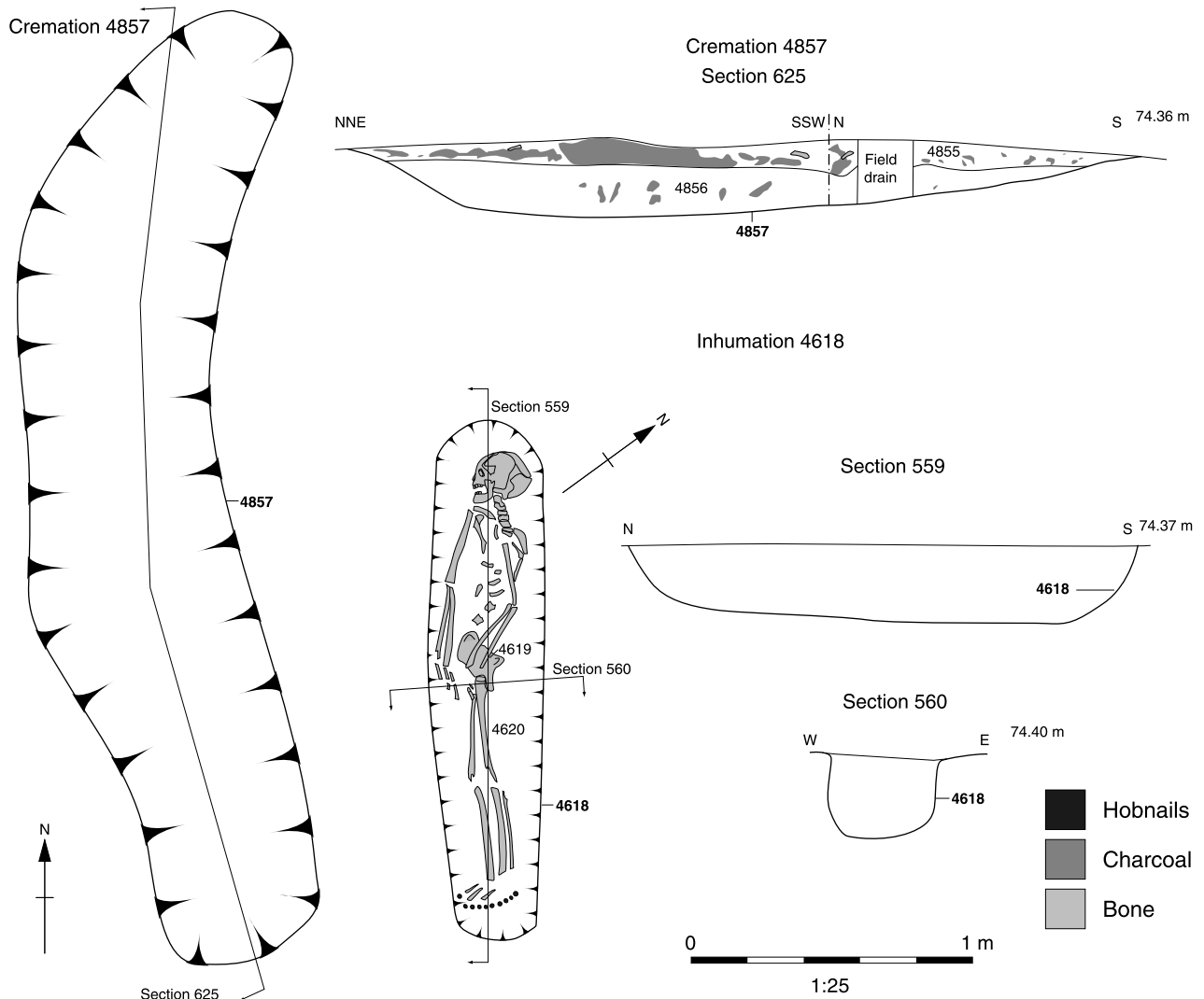


Figure 14b Phase 3 cremation and inhumation.

having a narrow concave base and steeply sloping sides. The ditch fills generally consisted of silty clay with inclusions of charcoal and gravel. There was some burnt limestone from the fills and a very small amount of chronologically undiagnostic Roman pottery.

Ditch 7201 was a linear ditch approximately 85 m in length and aligned roughly east-west. It was assigned to this phase solely on the basis of a broad similarity of alignment and character with features 4207 and 4768. It averaged 1.00 m in width and 0.30 m in depth. In profile it was generally U-shaped with a narrow concave base and steeply sloping sides. The ditch fills were generally silty clays with inclusions of gravel and charcoal. There were no finds.

Phase 5 (Figs 18–22)

Summary

The diagonal ditches of Phase 4 went out of use and the Phase 3 north-west/south-east trackway was

re-instated with slightly narrower and shallower ditches (4231 and 4485/5007). Section drawings indicate that the trackway ditch was completely recut at least once during this phase. Ditch 4231 ran parallel to Phase 3 ditch 4371 approximately 3 m to its south-west. Ditch 4485 followed the assumed line of the north-east side of the Phase 3 trackway for most of its length, cutting across the point where the north-east/south-west trackway joined the north-west/south-east route, but terminating at the line of the north-west side of the north-east/south-west track. After a gap of about 8 m the line of ditch 4485 resumed (ditch 5007), running parallel to (north-east of) the Phase 3 trackway ditch for the rest of its length. A new boundary ditch (4755/4742/4487) followed the line of the north-western ditch of the Phase 3 north-east/south-west trackway approximately 3 m to its north-west. This had two gaps allowing north-west/south-east access.

Approximately 50 m further to the north-west of this line a second new ditch (4893) ran approximately parallel to it. This ran beyond the limit of the

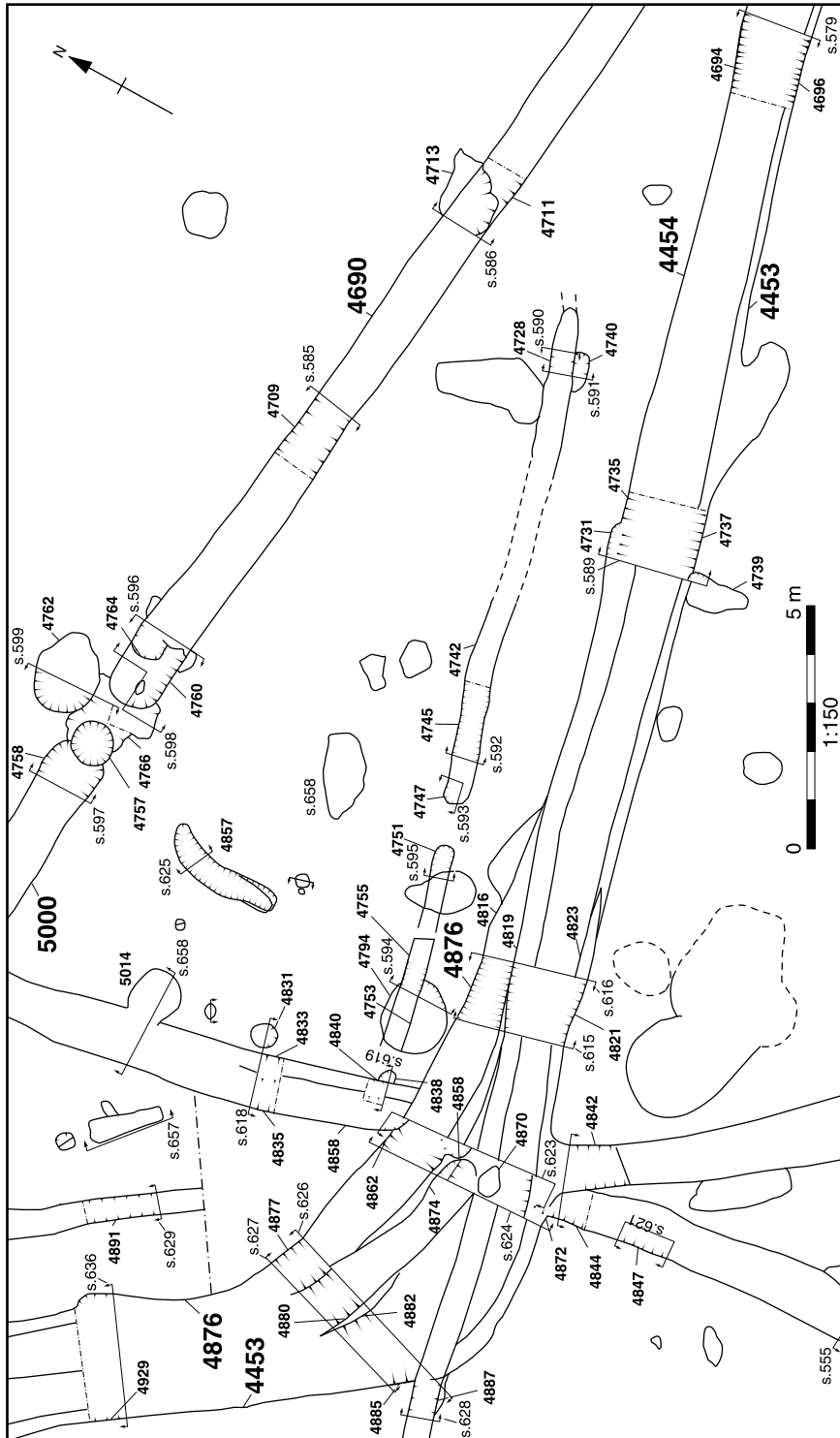


Figure 15 Ditches 4453, 4454, 4690, 4876 and 5000.

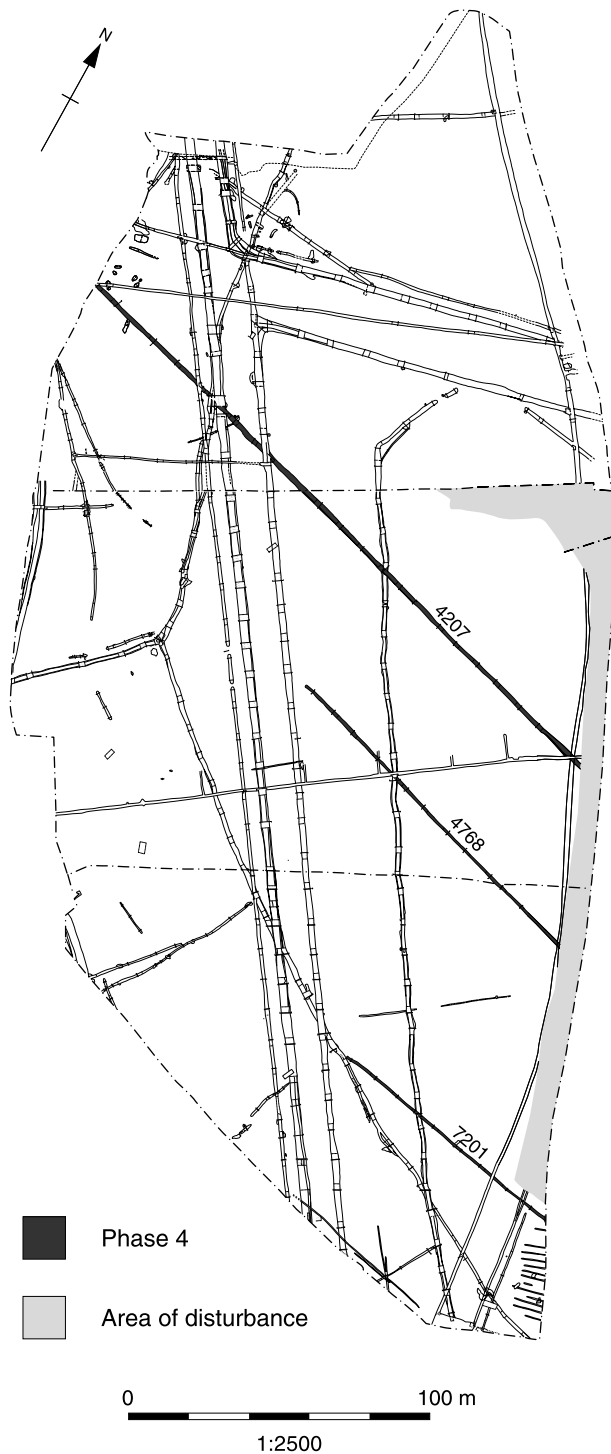


Figure 16 Phase 4 mid Roman ditch systems.

excavation to the west and petered out just before the limit of the excavation to the north-east. Taken together these ditches defined a rectilinear enclosure within the north-east angle of the former trackway junction. At the northern margin of the site a substantial rectangular post-built structure (4010) lay immediately north-east of ditch 5007 with one side running parallel to it. This structure extended beyond

the limits of excavation to the north-west, although it probably lay in the corner of the putative enclosure. On the other side of the north-west/south-east trackway from the post-built structure was the edge of a substantial pond or waterhole (5121) extending westward beyond the limit of the excavation. The date of this feature is uncertain but the only finds recovered from it were of 4th-century date.

Immediately north of the gap in trackway ditch 4485/5007 were two inhumations (5008 and 5011), aligned north-east/south-west and north-west/south-east respectively. A third, north-east/south-west inhumation (4916) lay approximately 6 m south-east of 4893 and 45 m to the north-east of structure 4010.

Description

Trackway ditches (Fig. 19)

Ditch 4231 was a linear ditch approximately 346 m in length and orientated north-west/south-east. It had two gaps, 2.6 and 1 m wide respectively and c 9.5 m apart, situated about half way along its revealed length. In width it averaged 1.16 m and in depth 0.19 m. It was saucer-shaped in profile. The basal fills consisted mainly of gravel with some silty clay. The upper fills comprised silty clay with inclusions of gravel and charcoal. Small quantities of Roman pottery along with animal bone and some fragments of limestone were recovered from the fills.

Ditch 4485 was a linear ditch approximately 330 m in length and orientated north-west/south-east. The spacing between 4485/5007 and 4231 increased slightly from c 15 m at the south-east end of the site to 19 m at the north-west. Ditch 4485 was 1.98 m wide on average and 0.46 m in depth. In profile it was generally U-shaped. It had been recut once. The fills consisted mainly of clay/silt or silty clay with some sandy silt and contained inclusions of gravel, flint and charcoal with some fragments of limestone. There were small amounts of late Roman pottery, mainly black-burnished and reduced coarse wares, from the ditch fills along with some animal bone. A significant proportion of the animal bone found at the northern end of the ditch was horse bone, particularly horse teeth, which may have come from horse skulls deposited in the ditch.

Ditch 5007 was the north-westerly continuation of the line of ditch 4485. It extended some 20 m south-eastwards from the north-west edge of the site. It averaged 0.9 m in width and 0.16 m in depth, with a rounded profile. The fill was dark brown silty clay loam with gravel and charcoal inclusions and produced small quantities of ceramic building material and animal bone.

North-east 'enclosure'

Ditch 4755 was a linear ditch 5.5 m in length and orientated north-east/south-west. It averaged 0.75 m wide by 0.16 m in depth, becoming shallower towards its western end, which was not clearly

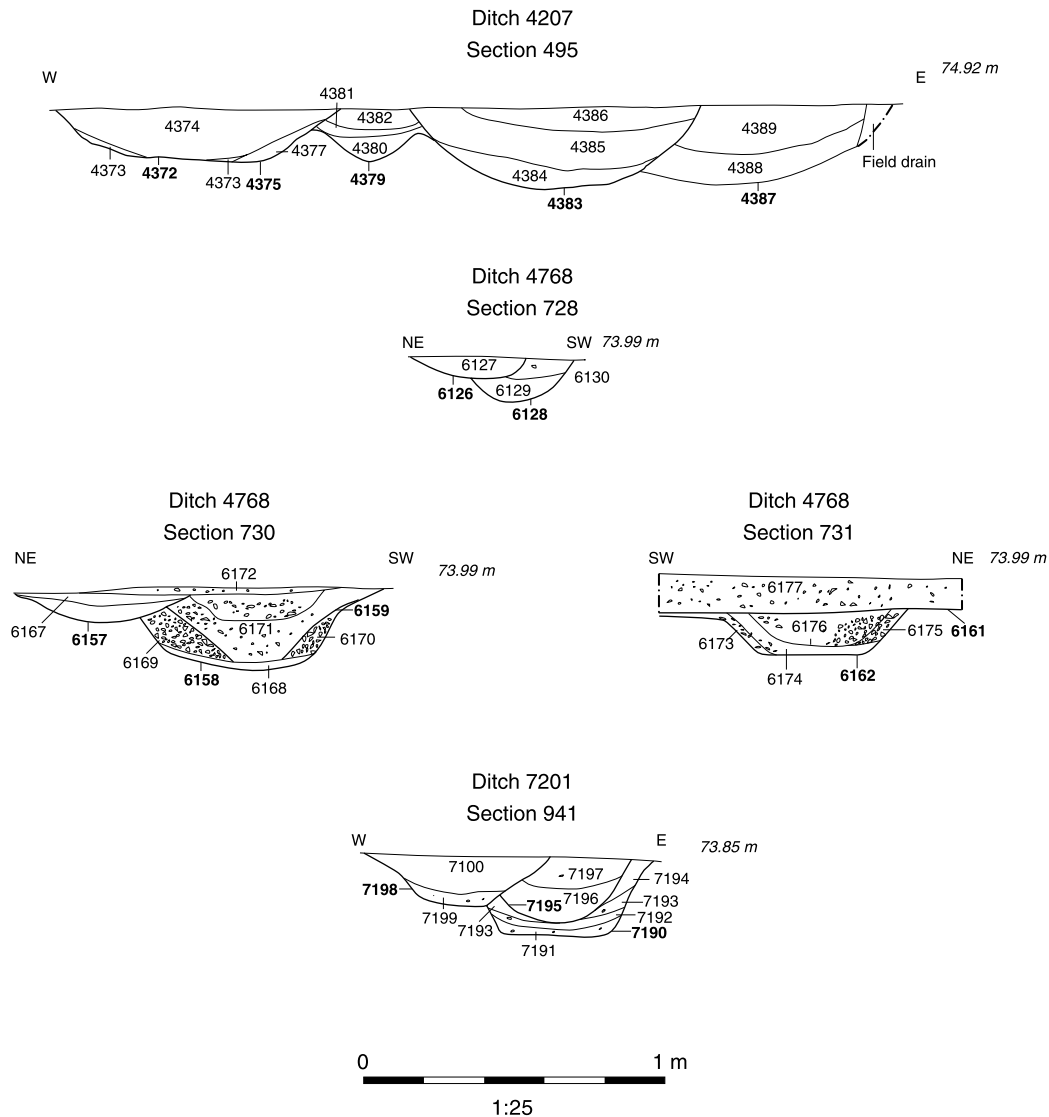


Figure 17 Phase 4 ditch sections.

defined. In profile it was generally U-shaped. Its fills consisted of silty clay with lenses of gravel and charcoal flecks. A relatively substantial deposit of 21 sherds of Roman pottery came from its fill.

Ditch 4742 was a linear ditch 14 m in length and orientated north-east/south-west, on the same line as 4755 with a gap of *c* 0.9 m between their terminals. It averaged 0.74 m in width and 0.21 m in depth. In profile it was saucer-shaped having a flat base and steeply sloping but shallow sides. The fills comprised silty clays with inclusions of gravel and charcoal, a small amount of 2nd- to 3rd-century Roman pottery and some burnt limestone.

Ditch 4487 was a linear ditch 57.5 m in length and orientated north-east/south-west. On the same alignment as 4755 and 4742, it terminated some 10 m from the north-east end of the latter adjacent to the Phase 3 ditch 4690 which closed off the corner of the Phase 3 trackway junction. Ditch 4487 averaged 0.76 m in width and 0.4 m in depth. In profile it was

U-shaped with a flat base and steep but shallow sides. The fill consisted of silty clay with inclusions of gravel, charcoal flecks and burnt limestone. There were no finds.

Ditch 4893 was a linear ditch approximately 73 m in length and orientated north-east/south-west. It averaged 1.31 m in width by 0.41 m in depth. It was U-shaped in profile having a rounded base and steep sides. It had been recut once. The ditch fills comprised silty clay with inclusions of gravel, flecks of charcoal and fragments of limestone. A single sherd of Roman pottery was recovered from the fill.

Structures

Structure 4010 (Figs 20–21) lay only partly within the excavated area at the north-west edge of the site. The surviving features indicate a rectilinear but not perfectly rectangular post-built structure with minimum dimensions of 21 m north-east/south-

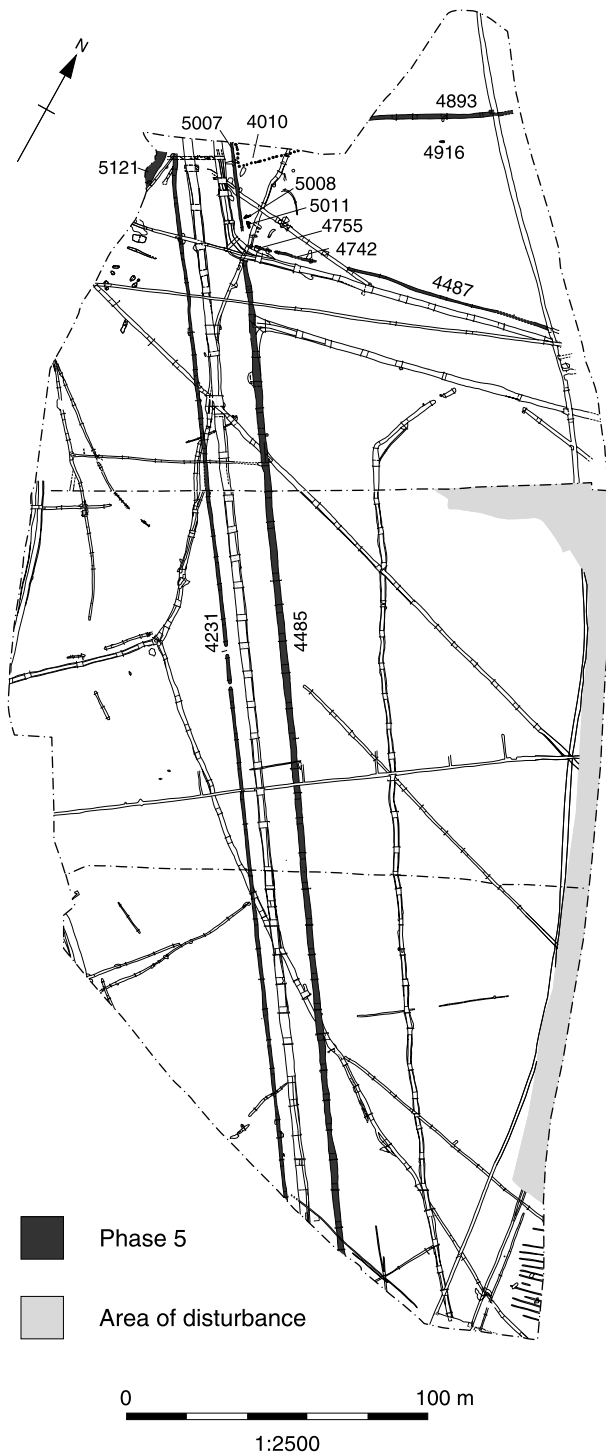


Figure 18 Phase 5 late Roman trackway ditches and building.

west \times 8 m north-west/south-east. The postpits were mostly sub-circular in plan and averaged 0.59 m in diameter by 0.24 m in depth. The gaps between postpits varied somewhat, but in general these features were very evenly spaced, with their centres 1.25 m to 1.5 m apart with only one exception (the anomalous feature 4588, which may have been a replacement for 4065). In profile the post pits were

generally U-shaped. Most were packed with irregular pieces of limestone within a matrix of dark reddish brown silty clay with inclusions of gravel, charcoal flecks and shell. In a limited number of cases the spacing of the packing stones indicated the location of vertical posts some 0.15–0.2 m across. There were no finds from any of these features. The post pits of the south-west side of the structure were dug only 0.7 m from the edge of the trackway boundary gully 5007 and clearly respected its line. There was no evidence of internal features of any kind within the structure.

Pond 5121

This large amorphous feature at the margin of the site had minimum dimensions of 20 m by 8 m and was at least 0.62 m deep. It had steeply sloping sides and an irregular base. The primary fill (5122) was a plastic silty clay with inclusions of charcoal, gravel and limestone fragments. Above this was a secondary fill of dark greyish brown clay again containing gravel and limestone fragments, as well as animal bone. Six sherds of pottery dated to the 4th century suggest that the feature was silting up in the late Roman period.

Inhumations

Inhumation 5009 (Fig. 22) lay prone in a trapezoidal cut (5008) with the left arm flexed under the torso. The grave cut was orientated north-east/south-west and had vertical sides and a horizontal base. It was 1.82 m in length by 0.42 m wide at its north-eastern end and 0.22 m wide at its south-western end. It was between 0.11 m and 0.16 m in depth. A fill of mid greyish brown sandy clay with inclusions of gravel and flint overlay the skeleton. There were no grave goods or other finds.

Inhumation 5012 (Fig. 22) lay supine in a rectangular cut (5011) orientated north-west/south-east. The cut had vertical sides and a horizontal base. It was 1.98 m in length by 0.56 m in width and 0.15 m in depth. A fill of mid greyish brown silty clay and gravel overlay the skeleton. Some 16 nails, some with remains of mineralised wood adhering, were present.

Inhumation 4917 (Fig. 22) lay supine in a rectangular cut (4916) orientated north-west/south-east. The cut had vertical sides and a horizontal base. It was 1.5 m in length by 0.46 m in width and 0.16 m in depth. A compact fill of very dark greyish brown silty clay loam with inclusions of gravel and charcoal flecks overlay the skeleton. There were no grave goods to accompany the body. The skeleton (4917) was in poor condition having suffered from plough damage and had lost its skull.

Phase 6 (Figs 23–24)

Summary

Several field boundary ditches were laid out across the Roman trackway ditches running north-west/

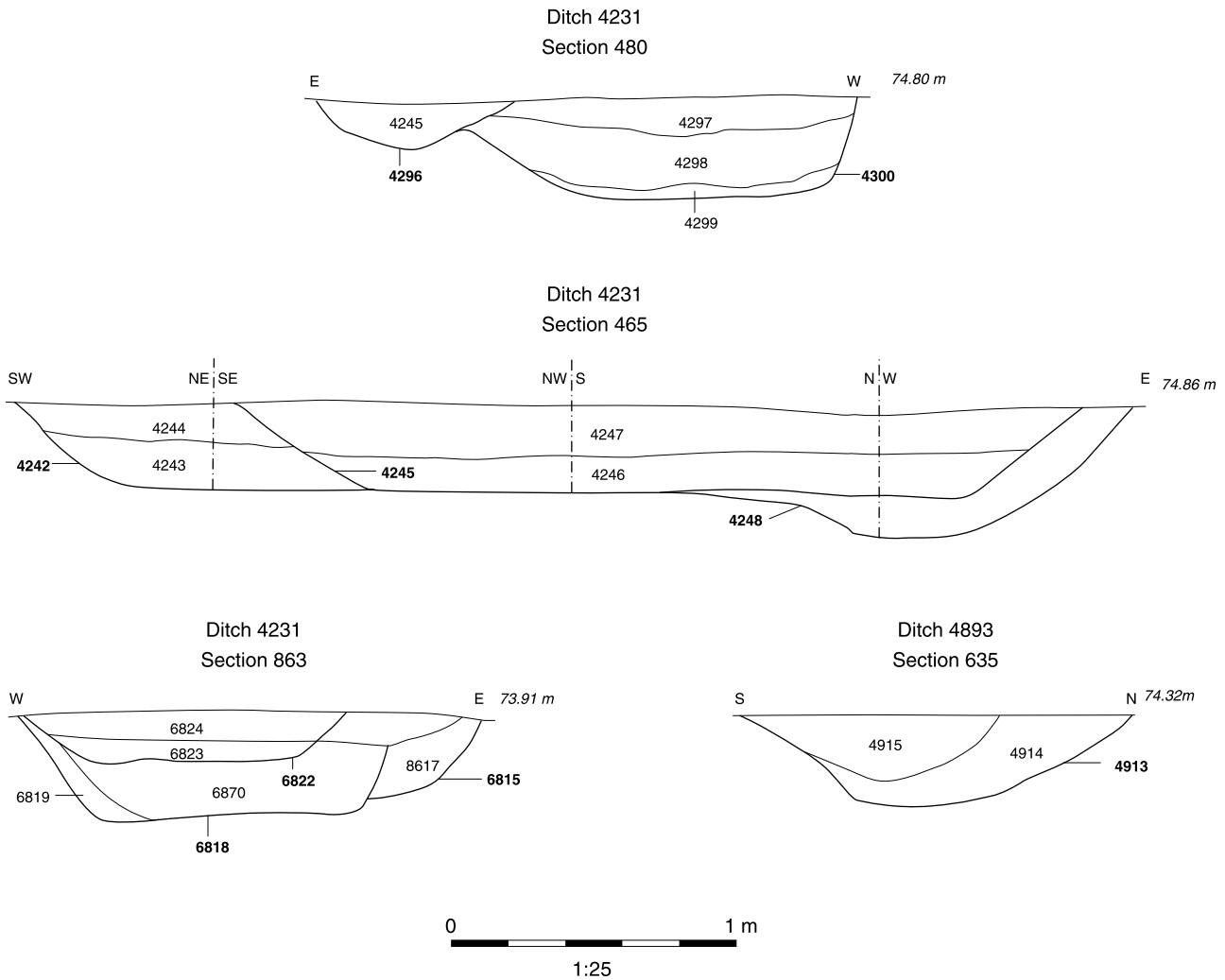


Figure 19 Phase 5 ditch sections.

south-east and north-east/south-west. Ditch 4100 curved round the eastern side of the site along its entire length and reflected the line of the modern field boundary, running beyond the limits of the excavation at both ends. Further post-medieval to modern field boundaries were located at the western edge of the site (features 6772 and 6774). These two main alignments were probably joined by other ditches in Phase 7.

Two shorter lengths of ditch were assigned to this phase. Ditch 4218 ran from south-west to north-east cutting across the Phase 1 enclosure boundaries and Phase 2 and 4 trackway ditches, but did not extend any further north-east than the north-eastern edge of the north-west/south-east Roman trackway. Ditch 4826 was orientated north-east/south-west and also cut across the trackway ditches in the north-western corner of the site. These two features were notable in relating to Roman ditch alignments and their date is not certain, though 4218 produced post-Roman ceramic building material. A small group of medieval and post-medieval pottery indicates that the main features of this phase were filling in the post-medieval period.

Posthole structures, including fence-lines and a probable small building, lay adjacent to ditch 4100 in the north-eastern part of the site. These were not independently dated but their character and proximity to ditch 4100 suggests a post-medieval date, at least. They may be assigned either to Phase 6 or 7.

Description

Ditch 4100 was a linear ditch traced over a distance of some 445 m. It was aligned north-west/south-east at the north-east edge of the site and further south curved to a roughly north-south alignment. It averaged 0.89 m in width by 0.19 m in depth. Its profile was generally wide and shallow with a flat base and steeply sloping sides. There were no recuts. The fills consisted of clay loams or silty clays with inclusions of gravel, limestone and flecks of charcoal. Finds were scarce although some medieval and post-medieval pottery was present.

Ditch 6772 was a curvilinear ditch aligned north-west/south-east traced over a distance of 60.5 m. It was 1.5 m wide and 0.85 m deep and U-shaped in

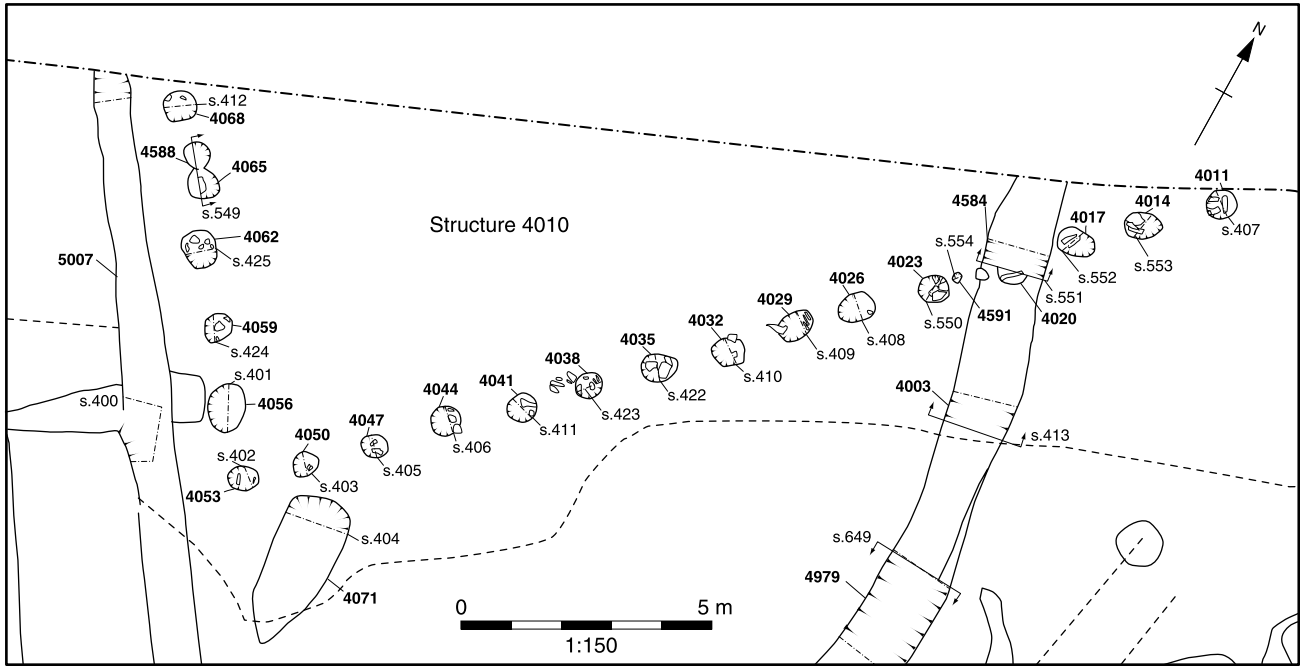


Figure 20 Building 4010.

profile, with steeply sloping (if slightly irregular) sides and a rounded base. The single fill, a dark brown silty clay with occasional gravel inclusions, also contained a modern horseshoe.

Ditch 6774, of similar plan to 6772 and cut by it, was 47 m in length. It was broader and shallower than 6772, being up to 2 m across and 0.5 m deep with a saucer-shaped profile. The single fill was of light brown silty clay very similar to the fill of 6772 and produced a single iron nail.

Ditch 4218 was a linear ditch 60 m in length and orientated north-east/south-west. On average it was 0.60 m in width by 0.10 m in depth. It was generally wide and shallow in profile with a flat base and concave sides. There were no recuts. The fill consisted of clay loam with inclusions of gravel and fragments of brick. No pottery was recovered from the fill.

Ditch 4826 was a linear ditch approximately 51 m in length and orientated north-east/south-west. It averaged 0.7 m in width by 0.36 m in depth. Its profile was concave. There were no recuts. Its fill consisted of silty clay with inclusions of gravel and charcoal. A single sherd of (presumably) residual Roman pottery was recovered from the fill.

Posthole structures in NE part of site

Fence structure 4660 defined a square enclosure 8.5 m × 6.5 m consisting of ten postholes (4661, 4663, 4679, 4665, 4667, 4669, 4671, 4677, 4675 and 4673). These were U-shaped in profile and averaged 0.30 m in diameter and 0.25 m in depth. They were filled with red brown silty clay which produced no finds.

Fence-line 4699 was aligned north-west/south-east and was 7 m long, consisting of four postholes (4699,

4701, 4703 and 4705). The postholes were U-shaped in profile and averaged 0.45 m in diameter by 0.19 m in depth. The fills, of red brown clay loam, contained no finds.

Fence-line 4433 was aligned north-south and was 10 m long, consisting of five postholes (4433, 4435, 4437, 4439 and 4441). The postholes were U-shaped in profile and averaged 0.20 m in diameter by 0.20 m in depth. The fills, of grey brown silty loam, again contained no finds.

Posthole group 4547 was a cluster of seven postholes averaging 0.30 m in diameter and 0.44 m in depth. They were U-shaped in profile and packed with limestone. No finds were recovered from the fills.

Phase 7 (Figs 24–25)

Summary

Two ditches and a fence-line ran across the site from south-west to north-east. Ditch 4458 cut the Roman trackway and the north-west/south-east post-medieval boundary ditch 4100 at the north-western end of the site. Ditch 4770 cut the early Roman enclosures and the Roman trackways further to the south-east. Immediately to the south-east of ditch 4770 was a fence-line running parallel to it (8500). The form of these features indicates a modern date and the small assemblage of post-medieval pottery was probably residual.

Description

Ditch 4458 was 151 m in length and orientated north-east/south-west. Its average width was 0.91 m and its average depth 0.31 m. It was generally

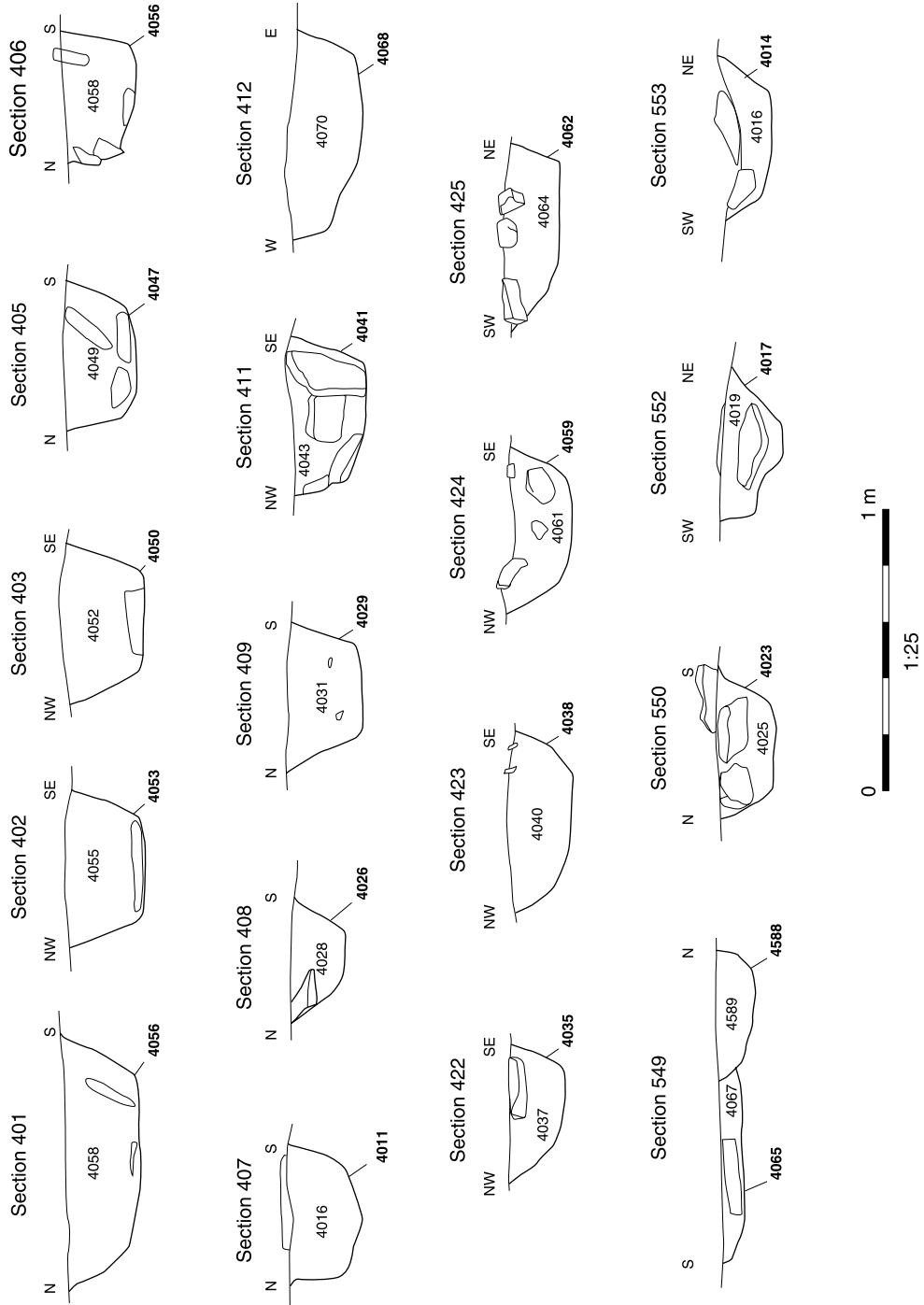


Figure 21 Building 4010 posthole sections.

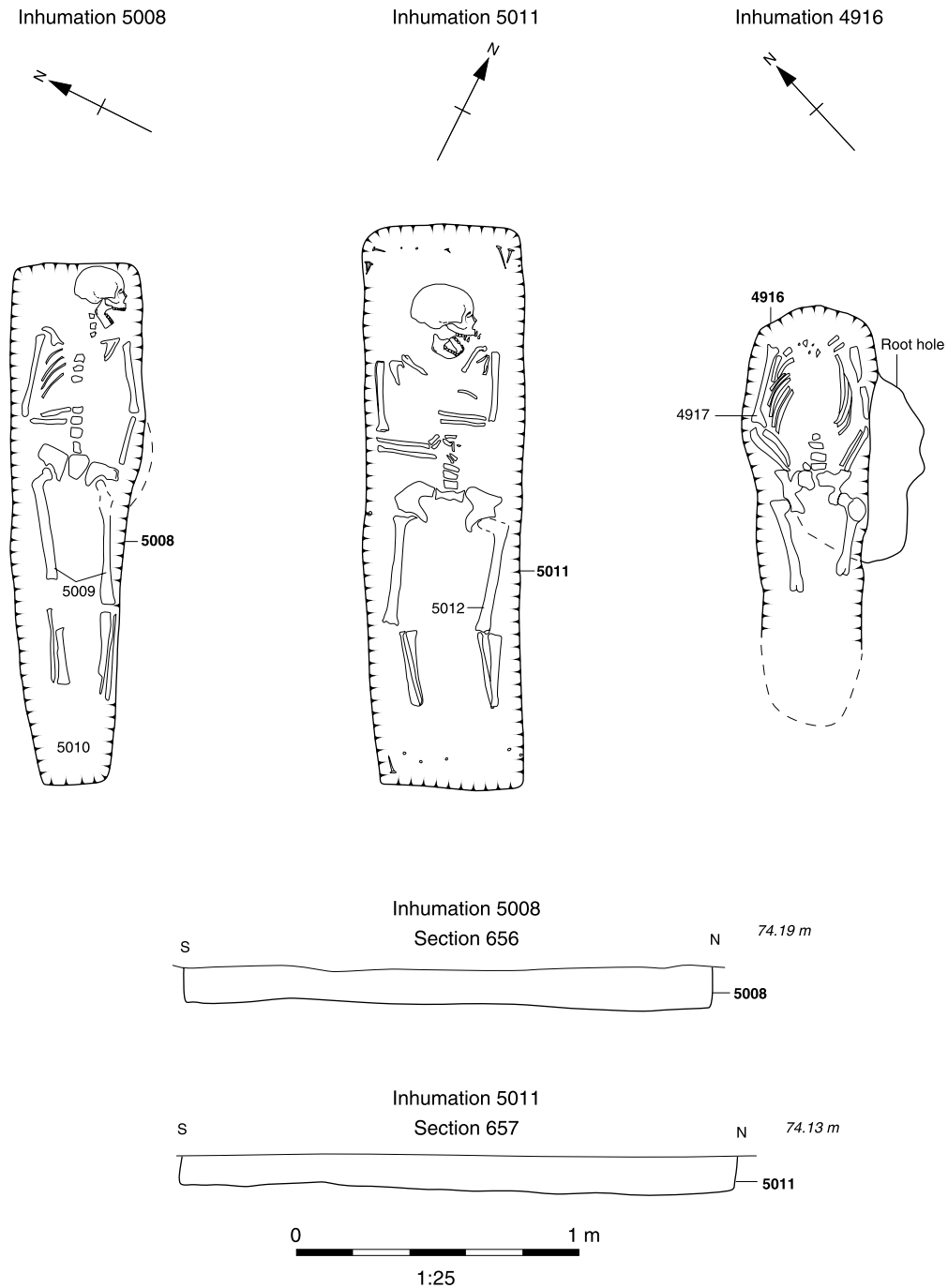


Figure 22 Phase 5 burials.

U-shaped in profile having a rounded base and concave sides. There were no recuts. The fills were clay loams and silty clay loams with inclusions of gravel, limestone, shell and charcoal flecks. A small assemblage of post-medieval pottery was recovered from the fill.

Ditch 4470 was a linear ditch 161 m in length by 0.70 m in width on average. It was orientated north-east/south-west. It had short stretches of linear ditch, no more than 8 m in length extending north-westwards from it at irregular intervals. It was not

excavated so no finds or information on fills and depth were recovered.

Fence-line 8500 was orientated north-east/south-west, running parallel to 4470 some 10 m south-east of it. It was 160 m in length and consisted of postholes 0.20 m – 0.40 m in diameter spaced at regular intervals of approximately 2.5–3 m.

Unphased Features (Fig. 26)

A large number of tree-throw holes lay in dense scatters all over the site. These may represent earlier

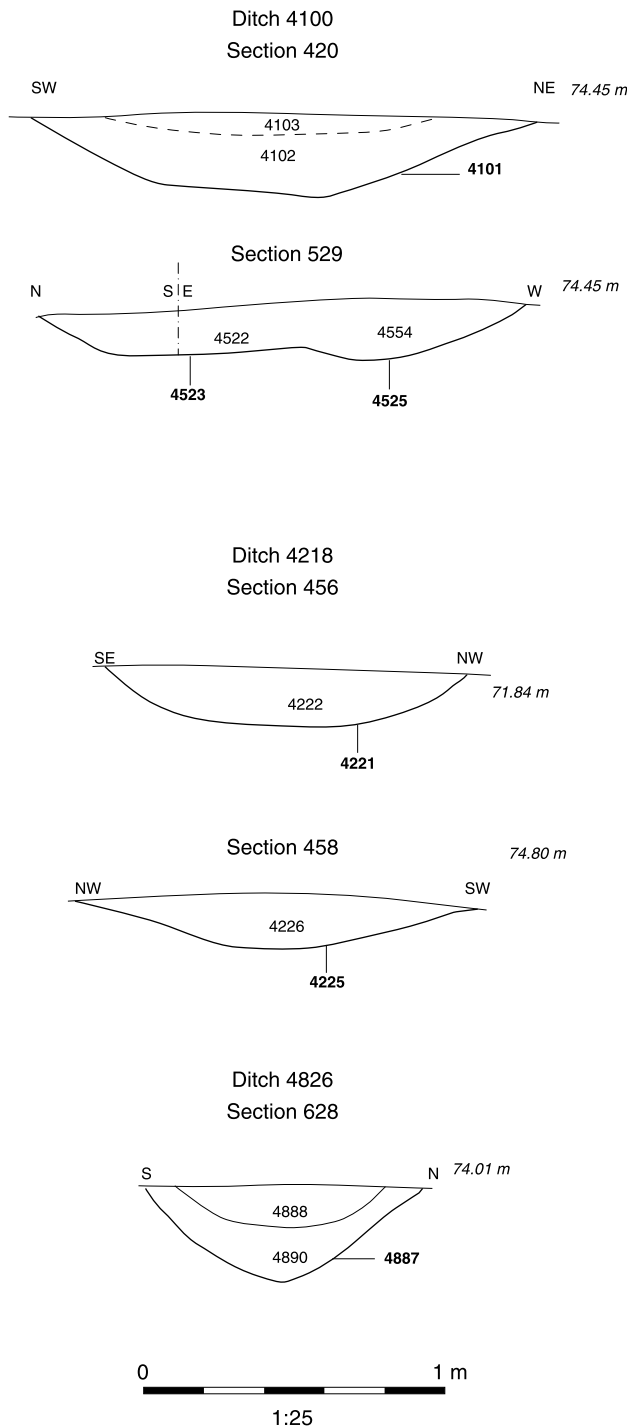


Figure 23 Phase 6 ditch sections.

prehistoric clearance of the area but may have been of several different periods. Additionally there were a number of discrete features such as pits and short stretches of ditch, some of which were excavated but none of which produced any dating evidence. Very little dating evidence was recovered from the tree-throw holes, but three pieces of worked flint provide

some support for the interpretation of some of these features as being of prehistoric date.

THE FINDS AND ENVIRONMENTAL ASSEMBLAGES

Pottery (Fig. 27) by Edward Biddulph

Introduction

A total of 438 sherds of pottery, weighing 2286 g, were recovered from the site. Most (413 sherds, 2127 g) dated to the Roman period. The middle Iron Age (2 sherds, 44 g) and post-medieval (23 sherds, 115 g) periods were represented to lesser extents. With an average sherd weight of 5 g, the condition of the pottery was poor. Sherds were small and surfaces often abraded, reducing the level of confidence given to form and fabric identification. Undiagnostic reduced coarse wares dominated the assemblage and in consequence many contexts were poorly dated. Some 54% (by weight) of the total pottery derived from context groups which could only be assigned a broad 'Roman' date range. Inevitably, this makes questions relating to phases of activity and pottery supply difficult to address satisfactorily.

The pottery was recorded using Oxford Archaeology's standard system. The assemblage was sorted into fabric or ware groups based on surface appearance and major inclusion types. Where possible, fabrics have been referenced (in bold in the list below) to the National Roman Fabric Reference Collection (Tomber and Dore 1998) where fuller descriptions are given. The pottery was quantified by sherd count and weight (see Table 1). Vessel types, occasionally identified using Young's Oxfordshire corpus (1977), were quantified by estimated vessel rim-equivalents (EVE) (see Table 2).

Fabrics: Iron Age, handmade

- LN3 Moderately fine limestone-tempered fabric.
- LN4 As LN3, but with coarser temper.

Fabrics: Roman

- S30 (**LEZ SA 2**). Lezoux Central Gaulish samian ware
- S40 East Gaulish samian ware
- F51 (**OXF RS**). Oxfordshire red/brown colour-coated ware
- F52 (**LVN CC**). Nene Valley colour-coated ware
- F60 Unsourced red colour-coated wares
- A11 (**BAT AM 1/2**). South Spanish (Dressel 20 etc) amphora fabric
- M21 (**VER WH**). Verulamium region white ware mortarium fabric
- M41 (**OXF RS**). Oxfordshire red/brown colour-coated mortarium fabric
- W20 General sandy white wares

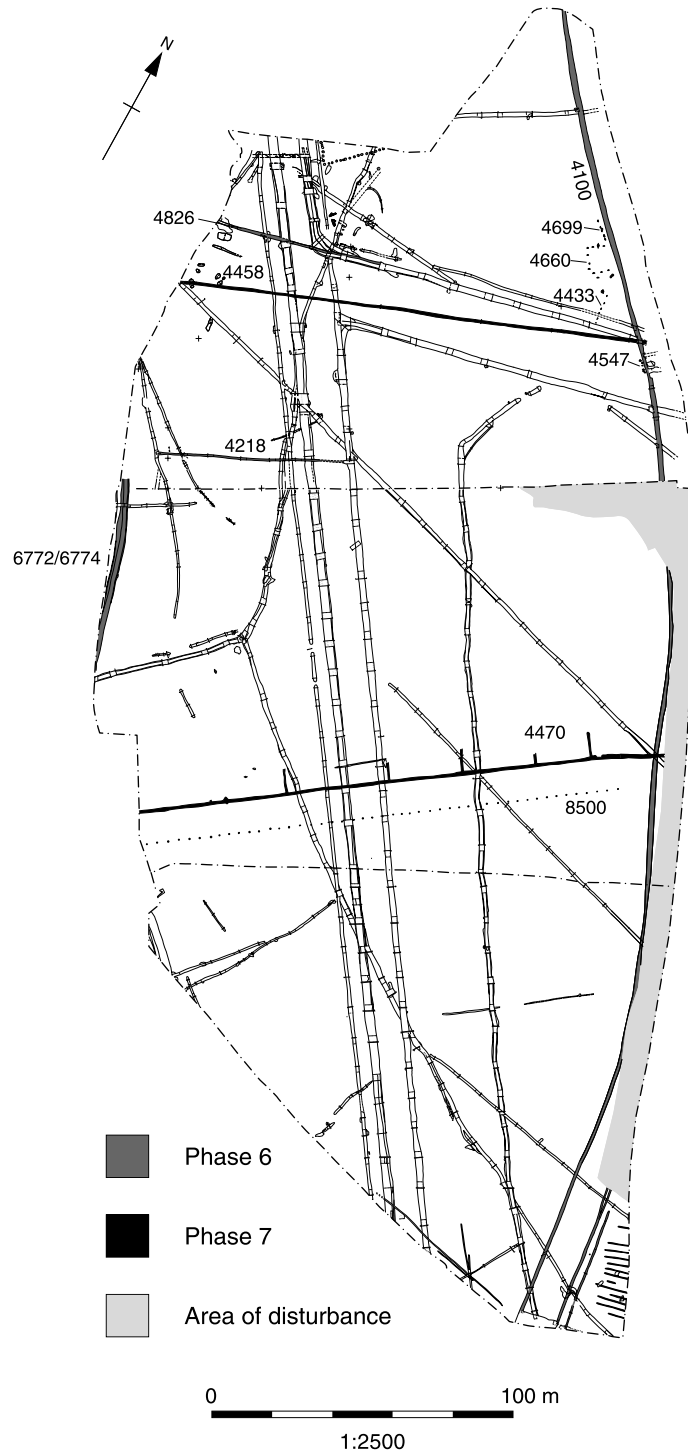


Figure 24 Phase 6 post-medieval land boundaries and Phase 7 modern drains and fence line.

Q20	General white-slipped oxidised wares	R30	General fine/medium sandy grey wares
E80	(SOB GT). 'Belgic' type grog-tempered ware	R35	Moderately fine abundantly sandy reduced ware.
O10	General fine sandy oxidised wares	R37	Fine sand grey ware, occasional iron and grog inclusions, light grey core and smooth or burnished surfaces (cf Booth 1997, 115-9)
O20	General coarse sandy oxidised wares	R50	Sandy black-surfaced wares
O21	Oxfordshire sandy oxidised ware	R90	General very coarse reduced fabrics, usually grog-tempered
O80	General very coarse oxidised fabrics, usually grog-tempered		
R10	General fine sandy grey wares		
R20	General coarse sandy grey wares		

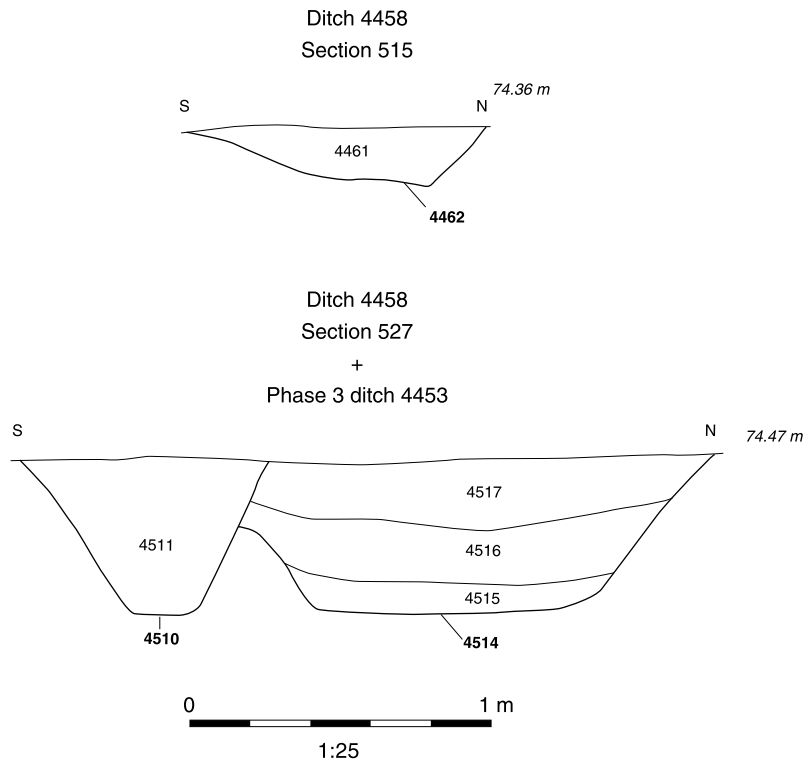


Figure 25 Phase 7 ditch sections.

- B11 **(DOR BB 1)**. Standard Dorset black-burnished ware 1
 Z30 Post-medieval fabrics (see below).

The three sherds of grog-tempered ware (E80) suggest late Iron Age or early Roman activity at the site. The fabric virtually stands in chronological isolation, as there is little other pottery specifically to support it. The small number of limestone-tempered body sherds may also belong to this period, though a middle Iron Age date is also feasible. The use of limestone temper during the later Iron Age is typical within the region, for example at Watchfield, Oxfordshire (Laidlaw 2001, 255) and Groundwell Farm, Wiltshire (Gingell 1982, 61) and the Cotswold Water Park sites of Thornhill Farm and Claydon Pike (Miles *et al.* forthcoming).

The site yielded a range of fine and specialist wares, although overall quantities were low. Among them was Central and East Gaulish samian. As with the assemblage generally, sherds were small, making fabric identification difficult. While it is almost certain that the central Gaulish samian – typically 2nd century in date – derives from Lezoux, the source for the East Gaulish ware – possibly Rheinzabern or La Madeleine – is far from clear. Amphorae were another import to the site. Again, these formed a small proportion. Just 5 sherds were found, all from South Spain and possibly deriving from Dressel 20 olive oil containers. These typically arrived from the late 1st to early 3rd centuries. British fine wares (F51, F52 and F60) were poorly

represented. The identification of the single sherd of Nene Valley colour-coated ware (fabric F52) is doubtful; a New Forest source is a likely alternative. Oxidised wares, including a white-slipped sherd, formed a significant proportion of the assemblage. A sandy red ware fabric (O20) was commonest. Oxfordshire mortaria were limited to a single example (Young 1977, type C100) in red colour-coated fabric (M41). A Verulamium region source can be given to two mortarium sherds – both possibly from the same bead-and-flanged vessel dating to the late 1st or early 2nd century.

The majority of the reduced wares, without good survival of identifiable rims, are chronologically bland. Fabrics R30 and R35 dominate the assemblage, together accounting for about half of it by weight and sherd count. Both fabrics are probably of local origin, though the former could include Oxford products. The latter derives from the North Wiltshire kiln sites, among them Purton, some 13 miles southwest of Kempsford. Indeed, supply of Oxfordshire coarse wares is likely to have been limited. Fabric R37, distinctive with a light grey core and burnished surfaces but in many respects similar to North Wiltshire products, makes only a token appearance at Kempsford. The fabric is significant at Asthall, where it forms 38% of the assemblage by sherd count (Booth 1997, 114), and at other sites in North Oxfordshire such as Wilcote. Kempsford may well have been beyond the fabric's normal range of distribution. Intriguingly, Savernake ware from north Wiltshire is conspicuously absent, though the



Figure 26 Unphased features.

reason for this is likely to be chronological. Coarse tempered 'storage jar' fabrics (O80 and R90) are represented. Black-burnished ware, probably from Dorset, makes an important contribution to the assemblage, being the third best represented fabric by all measures. This fabric also formed a high proportion of the larger assemblage from nearby Claydon Pike and was particularly common at

Stubbs Farm, immediately adjacent to the present site, where it amounted to c41% of the total sherds (but only 31% by weight), confirming the importance of the Dorset industries as suppliers to Kempsford (Booth forthcoming). Black-burnished ware was also well-represented at other sites in the area such as Whelford Bowmoor and Neigh Bridge, Somerford Keynes, but in these cases, while the total quantity of black-burnished wares was similar to that at Kempsford, the representation of local 'imitations' was at least as high as that of Dorset material. At Kempsford some sherds currently assigned to fabric R50 may actually belong to B11, or more likely represent such locally-made copies of Dorset products.

Vessels

Rims did not survive well. Relatively few were recovered, and those present had broken at the neck, making identification of vessel forms difficult. Indeed, Table 2 suggests that survival was uneven. Bowls (class H) were best represented, unusually displacing jars as the commonest vessel class. Jars (class C) were also exceeded by dishes (class J) and the indeterminate bowl/dish category (class I), if taken together.

The site yielded single examples of a number of bowl types. A flanged, straight-sided bowl (type HB) in black-burnished ware was of later 2nd century date, while two bowls (types HA and HC) in oxidised fabrics carry a probable 3rd/4th century date. A necked bowl (HD) in dark-surfaced ware (R50) and a stamped bowl (Young 1977, type C83) in Oxfordshire colour-coated ware (F51) were among the best preserved vessels. The latter is also the latest, dating to the 4th century, although the fabric was generally scarce on the site.

Dishes, or probable dishes, were relatively well-represented. Like the bowls, these have a later Roman emphasis. Plain and flanged black-burnished dishes were present. Locally-produced varieties were limited to two examples – one plain, the other bead-rimmed. A possible Drag 31 samian dish arrived from East Gaul. All but one of the jars identified were the ubiquitous medium-mouthed CD type. A 'cooking-pot type' jar (CK) was available in black-burnished ware. Drinking-related vessels were limited to beakers, including a 'jar' beaker in fabric R50 (possibly B11), and a Nene Valley colour-coated vessel, both surviving as body sherds only. Tankards were not recognised.

Chronology and discussion

The condition and size of the assemblage precludes a proper understanding of site chronology. The paucity of diagnostic pieces has resulted in the majority of contexts being dated simply to the Roman period. In contexts containing intrinsically datable pottery, assemblages were very small and provided few chronological checks for individual pieces, rendering the extent of residuality difficult to assess. Dates of

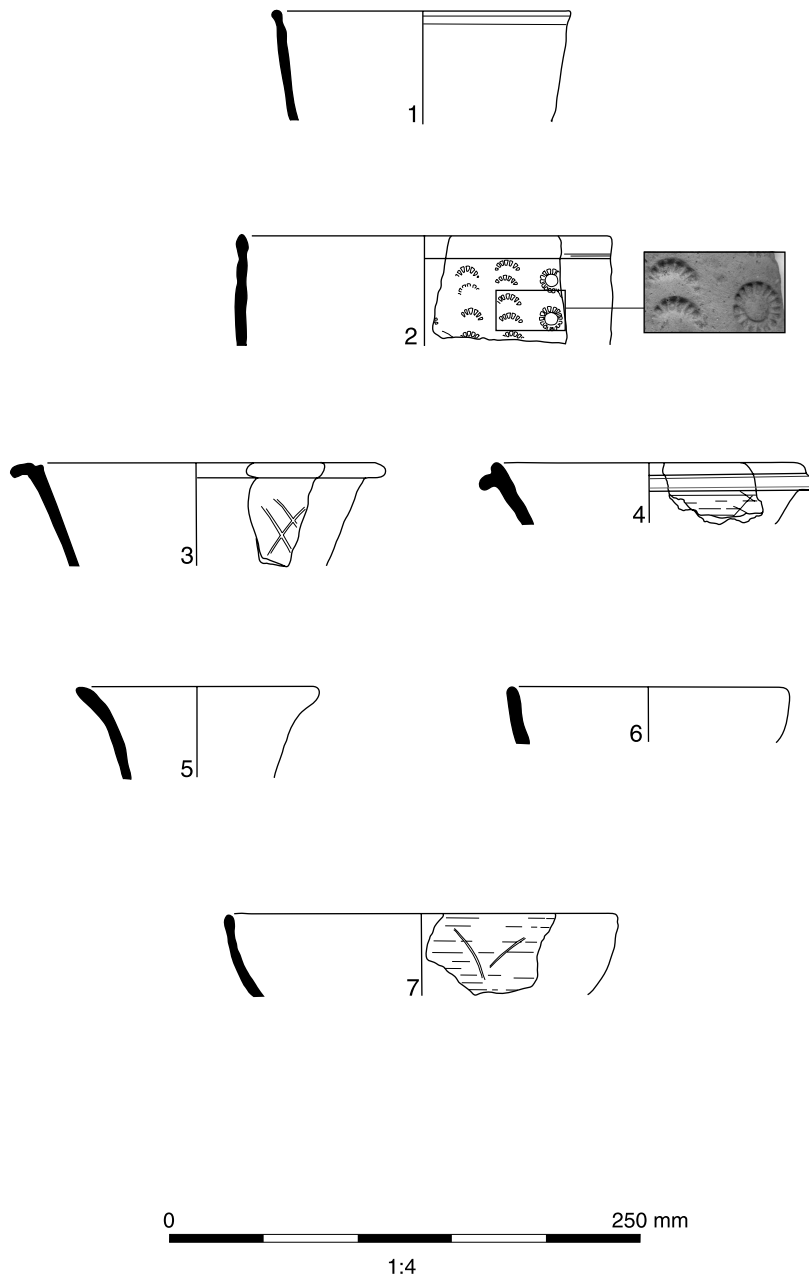


Figure 27 Roman pottery.

deposition derived from the pottery must therefore be regarded as tentative at best and, at worst, unreliable. That said, the range of pottery present provides some idea of the chronological emphases at Kempford, though it should be stressed that the reliance on a few intrinsically datable pieces may skew the picture.

On this basis, limited activity during the middle or late Iron Age is attested by the presence of limestone-tempered fabrics. These may be supported by the grog-tempered ware, although the date of this extends into the early Roman period (cf Laidlaw 2001, 259). Stronger evidence for early Roman activity is provided by the Verulamium-region mortaria. These arrived at the end

of the 1st century AD or in the first half of the 2nd, judging by the dating of such pottery at, for example, Lechlade (Hartley 1993, 115), Asthall (Booth 1997, 115), and Appleford, among others. At Kempford, the fabric may be placed within the 2nd century. The absence of characteristically 1st-century pottery, such as Savernake ware, a mainstay of the early Roman assemblage at nearby Hatford (Booth 2000, 41), is curious, and may signal a gap in activity at Kempford during this time. The absence of South Gaulish samian adds weight to this suggestion. A greater proportion of pottery is dated to the mid Roman period (later 2nd to mid 3rd century AD), as indicated by the presence of samian and black-burnished ware. Activity during the

Table 1 Quantification of pottery fabrics.

Fabric	Sherds	% sherds	Weight (gm.)	% wt	EVE	% EVE
LN3	5	1	36	2	–	–
LN4	1	<1	8	<1	–	–
S30	2	<1	3	<1	–	–
S40	4	1	21	1	0.03	2
F51	3	1	38	2	0.11	7
F52	1	<1	4	<1	–	–
F60	3	1	11	<1	–	–
A11	5	1	144	6	–	–
M21	2	<1	66	3	–	–
M41	1	<1	14	1	–	–
W20	2	<1	24	1	–	–
Q20	1	<1	4	<1	–	–
E80	3	1	38	2	–	–
O10	9	2	40	2	0.11	7
O20	26	6	62	3	–	–
O21	6	1	24	1	0.11	7
O80	4	1	130	6	–	–
R10	13	3	50	2	0.05	3
R20	2	<1	34	1	–	–
R30	95	22	575	25	0.18	12
R35	115	26	466	20	0.25	16
R37	1	<1	4	<1	–	–
R50	42	10	81	4	0.10	6
R90	8	2	86	4	–	–
B11	61	14	208	9	0.45	29
Z30	23	5	115	5	0.17	11
TOTAL	438	–	2286	–	0.62	–

late Roman period (later 3rd to late 4th century AD) is attested by the presence of Oxfordshire red colour-coated ware and late Roman forms in black-burnished ware. However, the proportion of late Roman pottery overall does not appear to match that of the previous period. Pottery consistent with a late Roman date, including 4th-century white ware mortarium types and shell-tempered wares, as at Rough Ground Farm, Lechlade (Booth 1993, 139), is largely absent. Activity, it seems, may have extended into the 4th century, but at a reduced level, or ceased before the second half of the

century. This chronology, with its mid Roman emphasis, is consistent with that obtained from the slightly larger assemblage from the immediately adjacent Stubbs Farm site.

With an average sherd weight of 5 g, the condition of the pottery was poor. Large groups had not been permitted to accumulate. Each context group weighed an average of 18 g. Both statistics suggests that the pottery deposition was almost incidental to the filling of the mainly linear features and certainly occurred after prior disturbance and relocation.

The presence of a few regional and continental imports suggests trade links beyond the immediate vicinity of the settlement, and hints at the adoption, possibly during the 2nd century, of Roman eating and food preparation habits. Nevertheless in its representation of fine and specialist wares (at 5.8% of Roman sherds) the assemblage is at the upper end of the range seen in a group of low-status rural sites in the area, from Old Shifford Farm, Standlake (Timby 1995, 129) at 0.2% to Hatford (Booth 2000) at 5.1% (cf Henig and Booth 2000, 173, fig. 6.11) and further sites such as Watchfield (Laidlaw 2001, 262) and may be comparable with them. However, the size and nature of the assemblage means that the picture in this regard is uncertain.

Post-medieval pottery

Post-medieval pottery amounted to 23 sherds, weighing 115 g. Much of this comprised sherds of red earthenware (46 g), some with internal glazing. A 17th- to 19th-century date is likely. Creamware, dating to the 18th-19th century, formed another significant group (43 g). Two forms – a bowl and a jug – were recognised. The remaining pottery included assorted porcelain and coarse grey ware.

Catalogue of illustrated pottery (Fig. 27)

The vessels here are presented in typological order. Context numbers are placed at the end of each entry.

- 1 Fabric O21, type HA carinated bowl. ?Late Roman. 6028.
- 2 Fabric F51, Young (1977) type C83 carinated stamped bowl. 4th century. 5123.

Table 2 Vessel classes by ware group. Quantification by EVE.

Class	Ware group					Total EVE	% EVE
	S	F	O	R	B		
Bowls (H)	–	0.11	0.22	0.25	0.06	0.64	46
Dishes (J)	0.03	–	–	0.05	0.15	0.23	17
Jars (C)	–	–	–	0.15	0.06	0.21	15
Bowls/dishes (I)	–	–	–	0.03	0.18	0.21	15
Jars/bowls (D)	–	–	–	0.1	–	0.1	7
Total EVE	0.03	0.11	0.22	0.58	0.45	1.39	–
% EVE	2	8	16	42	32	–	–

- 3 Fabric B11, type HB straight-sided flanged bowl. Mid Roman. 6228.
- 4 Fabric B11, type IA straight-sided flanged bowl or dish. Late Roman. 4426.
- 5 Fabric O10, type HC curving-sided bowl. ?Late Roman. 6384.
- 6 Fabric R30, type JB curving-sided plain-rimmed dish. Mid/late Roman. 6246.
- 7 Fabric B11, type JB curving-sided plain-rimmed dish. Mid/late Roman. 6297.

Ceramic Building Material
by Paul Booth

Some 4.5 kg of ceramic building material (CBM) was recovered. The assemblage was generally well fragmented and most pieces were quite abraded, a characteristic likely to be a consequence of soil conditions as much as of repeated redeposition. The material was scanned very rapidly and the principal characteristics of the assemblage noted. Fabrics were not quantified systematically.

A total of 88 fragments (3905 g) of CBM were dated to the Roman period on the basis of fabric and/or form; 6 fragments (227 g) were of post-medieval/modern date and a further 18 (477 g) were of uncertain date. This category generally comprised amorphous or flat fragments in sandy fabrics for which a Roman or later date seems equally possible. Only the Roman material is discussed further.

The majority of the tile fragments were in a slightly soft, sand-free fabric typically with a multi-coloured (swirly orange and yellow) section characteristic of the Minety industry. A smaller number of uniformly darker red sand-free pieces may also have derived from this source. Fabrics with variable quantities of sand inclusions were also present, but less common. These occasionally incorporated small amounts of calcareous inclusions, both rounded limestone and shell. One box flue fragment was in a very heavily sand-tempered fabric.

The fragmented nature of the assemblage meant that attribution to tile type was difficult, but the following categories were recorded (Table 3).

The flat fragments, though relatively small, were generally from quite substantial tiles. They ranged from 30–40 mm in thickness, but the majority of pieces noted were about 40 mm thick, suggesting that these pieces may have been from ‘bricks’ rather than from tegulae.

Table 3 Quantities of Roman tile types.

Type	No. fragments	Weight (gm.)
Tegula	2	271
Imbrex	2?	173
Box flue	9	952
Flat, uncertain type	14	2025
Miscellaneous fragments	61	484
<i>Total</i>	88	3905

Like the majority of the other finds from the site the CBM presumably derived from the nearby farmstead. The present assemblage, although larger, reflects precisely the character of the material derived from that site in the 1997 evaluation, which included box flue and probable ‘floor tiles’ (OAU 1998, 13).

Worked Stone (Fig. 28)
by Ruth Shaffrey

Description

The assemblage of worked stone is limited but includes objects which are suggestive of nearby settlement such as rotary quern fragments, a whetstone, possible roof stones and probable architectural fragments. None of the objects is complete and much of the stone was burnt and slightly damaged.

Of the two rotary quern fragments, one is too small for its original shape to be reconstructed and the other (SF 404) is from a flat-topped, Romano-British quern with a diameter of 340 mm (Saunders 1998). This was found in the fill (4855) of a cremation pit. Both querns are made from Old Red Sandstone from the Forest of Dean and the style of the more complete fragment is typical of ORS, though slightly smaller than average (Saunders 1998). Old Red Sandstone querns are found on most Romano-British sites in Gloucestershire that produce quern fragments and its presence at Kempford is therefore in keeping with the known evidence.

Amongst the other worked stone is a single elongate and square-sectioned whetstone, probably made from Kentish Rag and found in ditch fill 4234. Several fragments of Pennant sandstone were also found in ditch fills (4734 and 4297) and although they are fragmentary and retain no worked surfaces, they have a naturally flat and thin shape which would have been suitable for roofing. Other evidence of structural stonework survived in the form of two possible pieces of building stone, one of which is a moulded fragment of a shelly oolitic limestone in a curved ogee form (SF 422).

Catalogue of worked stone (Fig. 28)

- 1 Upper rotary quern fragment of Curwen’s flat-topped type with slightly concave grinding surface and straight edges leaning in slightly. Measures 340 mm diameter × 42.5 mm maximum thickness (at edge). Is pecked all over. Remains of a possible slight hopper. Old Red Sandstone, quartz conglomerate from the Forest of Dean. 4855. SF404. Fill of cremation pit, phase 1. Early Romano-British.
- 2 Moulded architectural fragment, probably part of an ogee. Has two worked and slightly curved faces at right angles to the flat end. Fragment measures 170 mm long × 70 mm wide × 50 mm high. Oolitic limestone. 5081. Sf 422. Ditch fill, Unphased.
- 3 Whetstone. Broken and worn at both ends. Square section and three long flat faces. One of these is much smoother than the others. Measures 60 mm remaining length × 20 × 16 mm. Pale slightly greenish grey fine grained sandstone, probably Kentish Rag. 4234. Ditch fill, Phase 4. Mid Romano-British.

Not illustrated

- 1 Two possible roof stone fragments. No evidence of working remains but could be fragments from roof stones. Fine grained

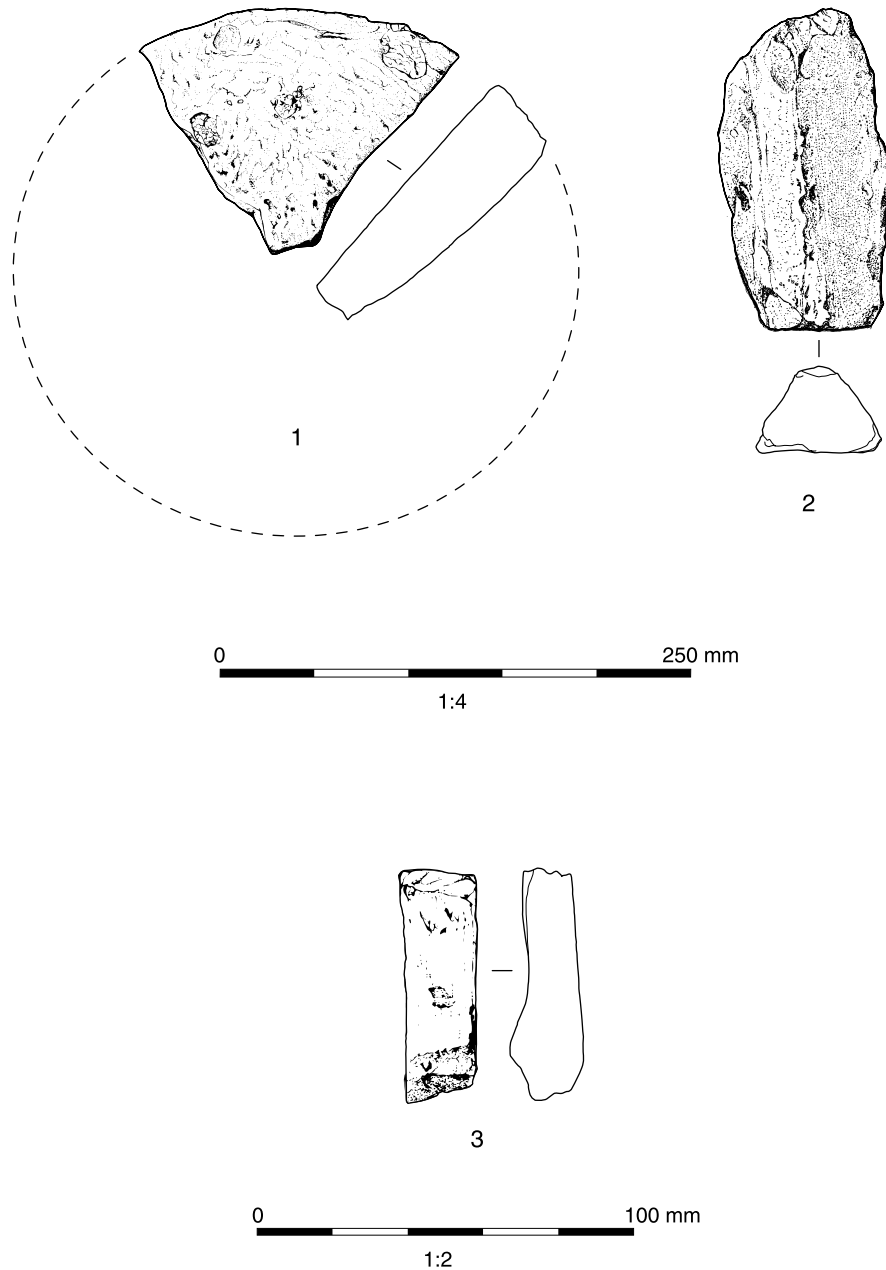


Figure 28 Worked stone.

- pale purple slightly micaceous sandstone, probably Pennant sandstone. 4734. Phase 2. Early Romano-British.
- 2 Two possible roof stone fragments. Thicker than those from 4734 but still thin and flat naturally and showing no signs of working. Lithology as 4734, probably Pennant sandstone. 4297. Unphased.
 - 3 Worked chunk of unknown function, possibly architectural. Has one smoothed face and two edges which are not quite square to one another. Burnt. Measures 78 × 51 × 29 mm thick. Shelly limestone. 4307. Phase 4. Mid Romano-British.
 - 4 Possible worked chunk of unknown function. Burnt. One possible worked face. Measures 76 × 66 × 58 mm. Burnt limestone. 4864. Phase 4 Mid Romano-British.
 - 5 Probable rotary quern fragment. Two worked, flat and parallel surfaces. One of these is a smooth slightly convex face suggesting it might be a lower stone. There are no edges or centre. Burnt. Measures 44 mm thick × unknown diameter. Probably Old Red Sandstone. 4944. Unphased.

Flint by Kate Cramp

The excavation produced a total of three struck flints (Table 4). No burnt unworked flint was recovered.

Context 4133 contained a lightly corticated, tertiary blade-like flake in a slightly damaged condition. The piece was probably struck using a soft-hammer percussor, and exhibits platform edge abrasion and dorsal blade scars. An area of heavy use-damage associated with the distal right-hand spur suggests that the flake was utilised as a piercing tool. A broad Mesolithic date would be most appropriate for the piece, although it would not be inconsistent with an early Neolithic industry.

Table 4 Flint by type and context.

Category	Ctx 4133	Ctx 4956	Ctx 6708	Total
Blade			1	1
Blade-like flake	1			1
Backed knife		1		1
Total	1	1	1	3

A proximally broken backed knife was recovered from context 4956. The knife consists of a broad, tertiary blade that has been finely and invasively retouched on both lateral margins. The blade, which exhibits moderate iron-staining, probably dates to the Mesolithic; the character of the retouch, however, and the observation that it truncates the iron-staining, suggests that the blade was reworked as a backed knife in the Beaker period.

Context 6708 produced a heavily damaged distal-trimming blade. Technologically, the piece probably dates to the Mesolithic or perhaps early Neolithic period. The blade possesses an abraded, linear platform and was probably struck using a soft-hammer percussor.

Although the assemblage is very small, it is significant that the flints from the site can all be dated broadly to the Mesolithic or early Neolithic period and that there is no later prehistoric flint work. Indeed, even the possible Beaker knife appears to have been manufactured on a reworked Mesolithic blank. Given the relatively poor condition of the flints and their thin distribution across the site, it would be reasonable to interpret the assemblage as

the redeposited remains of very low-density, earlier prehistoric activity.

Ironwork
by Ian R. Scott

Introduction

The assemblage from Kempford comprises 209 objects or fragments, 10 of which are from Phase 6/7 (post-medieval/modern) contexts and 10 from unphased contexts. The remaining objects are either from Phase 1 (early Romano-British) or Phase 5 (late Romano-British), and comprise exclusively nails and hobnails. The Phase 6/7 and unphased material includes nails, a probable ox-shoe, a socket implement of uncertain function, structural fittings including part of a hinge strap and two fragments of plate. A full catalogue of the ironwork is available in archive; the Roman assemblage is summarised in Table 5.

Discussion

The assemblages from both early and late Roman phases comprise entirely hobnails, nails and nail fragments. The material warrants little further discussion beyond a brief note of the contexts from which it was recovered.

Phases 1–3: Early Romano-British

The majority of both hobnails and nails are from a single context, 6331, in grave 6330. The hobnails will

Table 5 Roman ironwork by phase.

Phase	Feature	Type	Context	Identification/Description	No
1	6330	Cremation burial	6331	hobnails, complete.	48
			6331	complete nails	2
				almost complete nails	1
				nail fragments with head	19
				nail stem fragments	28
				Total	50
3	5014	Horse burial/human cremation	5016	nail fragments	5
			5017	nail almost complete	1
3	5090	Trackway ditch	5093	nail, point rolled over, perhaps to form a loop. Type 1	1
5	4618	Inhumation burial	4619	hobnails, complete	16
			4620	hobnails, excluding stem fragments	48
5	5011	Inhumation burial	5013	complete nails	3
				almost complete nails	1
				nail fragments with head	3
				nail stem fragments	13
				Total	20
5	7058	Trackway ditch	7060	nail, almost complete.	1

derive from the footwear of the deceased. All of the identifiable nails are simple hand-made nails of Manning type 1a (Manning 1985, 13 and fig. 32) and most would fit into the size range 60 mm (2 in) to 75 mm (3 in), although there are fragments of at least two smaller nails or tacks perhaps no more than 25–30 mm (1–1¼ ins) long from context 6331. Nails in the 2 in to 3 in range are the commonest size of wood nails even today, and they would be of an appropriate size for use in the construction of coffins. The nails from contexts 5016 and 5017, both in feature 5014 associated with a horse burial, are of similar size to those from context 6331.

Phase 5: Late Romano-British

The hobnails from Phase 5 are all from a grave (4618) and presumably represent the remains of the shoes or sandals worn by the deceased. The majority of the nails come from context 5013 (feature 5011) and are coffin nails. The type of nails and their size range are similar to those found in Phase 1 context 6331.

Miscellaneous Finds by Paul Booth

A variety of materials were present in very small quantities. These included glass (6 fragments), clay pipe (2 stem fragments), fired clay (38 amorphous fragments, 336 g) and slag (5 or 6 small lumps). All the identifiable material was of post-medieval/modern date. A number of very small fragments of oyster shell were also recovered from four contexts. These may mostly have been intrusive, but fragments in a Phase 1 primary ditch fill (context 6678 in ditch 6595) were securely stratified.

Human Skeletal Remains by Annsophie Witkin

Introduction

Four cremations (4855, 5017, 6331 and 6767) dating to the early Roman period, one inhumation (4917) perhaps dating to the 2nd–3rd century AD and three inhumations (4619, 5009 and 5012) dating to the late Roman period underwent full osteological and palaeopathological analysis. The complete report, including details of the methodology, is available in the project archive. The results have been summarised for publication.

Most of the bone from the cremations was in good condition, but fragments from all four were abraded. None of the cremations was complete and the amount of bone recovered was relatively small in each case. All were adults but only one (4855) could be tentatively sexed, in this case as male. Two of the cremations may have been placed in boxes prior to burial; a third (4855) was an unurned *bustum* burial, and cremation 5017 was found overlying a horse burial. Burnt animal bone was also present with this cremation.

The inhumations were all in poor condition. Three were male (4917, 5009 and 5012) and one was female (4619). Skeleton 4917 was a mature adult (over 40 years of age) and the rest were young adults (18–25 years).

The cremations

Quantification and context

The four early Roman cremation burials were located within two distinct areas. Cremation burials 4855 and 5017 were situated in the north-east angle of the trackway junction, within a small triangular enclosure formed by ditches 4690, 4850 and 4861. Cremation 4855 was located in an oblong cut (4857); the shallow pit had evidence of *in situ* burning and may have been the location of the cremation itself. Cremation 5017 consisted of a spread of cremated human bone overlying a horse burial (5018). Cremations 6331 and 6767 were located within a large enclosure, just west of the north-west/south-east trackway, in the south-western part of the site. Both were in shallow sub-circular pits. The principal characteristics of the cremated material are summarised in Table 6.

Age and sex

All cremations were of adult individuals. The individual in cremation 4855 was aged between 30 and 40 years old and cremation 5017 was possibly a young adult, no more than 30 years of age. This was based on the open nature of the identified cranial sutures. The other two cremations, 6331 and 6767, could not be aged any closer than adult. Only cremation 4855 could be sexed, and is likely to have been a male, based on the presence of large muscle attachments and large bones.

Pathology

One of the individuals (6767) had apathological lesion present. Striated lamellar bone was present on fibula fragments. This type of lesion is indicative of an infection of the outer surface of the bones and is known as periostitis. The lesion was not active at the time of death.

Pyre technology and ritual

The burnt bone from cremations 5017, 6331 and 6767 all contained white and blue/grey fragments.

Table 6 Summary of cremated bones.

Context	Period	Weight (gm.)	NI	Age (years)	Sex	Pathology
4855	Early Roman	665	1	30–40	M?	
5017	Early Roman	117	1	18–25?	?	
6331	Early Roman	254	1	Adult	?	
6767	Early Roman	119	1	Adult	?	Healed periostitis

Cracking and fissuring of the fragments was also present. This indicates that the cremation process appears to have been successful and complete. Cremation 4855 had mainly black fragments. Some smaller bones in the 5 mm category were only charred and largely unburnt. The majority of the bones in the 10 mm group consisted of large black fragments from the lower limb. Cranial elements were generally white and well calcified. This suggests that the pyre may have been poorly tended which resulted in the incomplete cremation process. This may explain why the cremation deposit was buried in the cremation pit itself and not removed for burial elsewhere.

Weight and fragmentation of bone

Observations at modern crematoria have shown that collectable fragments (<2 mm fraction) from an adult cremation weigh 1000–2400 g with an average of 1650 g. Weights of 1600–3000 g have also been cited but it is unclear whether this also includes the weight of bone dust (McKinley 1997, 68). The weights of the Kempsford Quarry deposits varied between 117 g and 665 g (see Table 6). These relatively low weights may signify selection of bones for a token deposit. However, the most likely explanation is that the low weight is due to significant post-Roman disturbance, principally in the form of ploughing.

The level of fragmentation and fragment size of the Kempsford Quarry cremations are within the normal ranges observed (McKinley 1994). There is nothing to suggest that any deliberate fragmentation of the burnt bone took place prior to burial.

Skeletal elements within the burial

Fragments from all body part groups were present amongst all the cremations. In general, fewer fragments from the upper limb were identified than any other body group. This was related to the fragment size, but humeri, ulnae and radii can be easily confused with femora and fibulae. When fragments are generally small, fewer fragments may therefore be identified. The relatively high proportion of cranial fragments is due to the ease of identification since the bone morphology displayed is unique to this part of the skeleton.

The general low proportion of identified bones from the axial part of the skeleton may be due to the high degree of spongy bone within this part of the body. These bones are more fragile than the bones from the limbs and are therefore more susceptible to degradation within disturbed deposits such as these. However, since bone from all areas of the skeleton was included in the burials this suggests that there was no preference in the selection of bones included in the cremations.

Animal bone and pyre goods

The only pyre goods identified comprised cremated animal bone found with cremation 5017. Identified

bones consisted of sheep/goat and bird (see Charles, below) in very small quantities.

The Inhumations

Quantification and context

The four inhumation burials (4619, 4917, 5009 and 5012) were all situated in the north-eastern part of the site. Skeleton 4619 (Phase 3; Fig. 14b) was buried extended and lying on its right side with the head facing west. Hobnails were found in the grave fill by the feet, although it is unclear whether the footwear was worn on the feet or placed by their side. Skeleton 5009 (Phase 5; Fig. 22) was buried in a prone position against the southern side of the grave. The position of the body suggested that the individual had been laid out on the north side of the grave in a supine position and then rolled into the grave. The left arm therefore ended up flexed underneath the torso with the right arm extended. Skeletons 4917 and 5012 (Phase 5; Fig. 22) were both buried supine with the arms flexed at the elbow and the legs extended and parallel. Sixteen coffin nails were present in the fill of grave 5011 (skeleton 5012).

Condition and completeness

All skeletons were incomplete and in poor condition, principally because of post-Roman ploughing. Bones were crushed and the outer surfaces were badly eroded. Only fragmented long bone shafts were present; hands, feet and ribs and vertebrae were completely absent on skeletons 5009 and 5012. On skeleton 4619, a few bones from the hands and feet were present and vertebral fragments were present from skeletons 4619 and 4917. The pelvic elements were also largely missing with only fragments present. All crania were considerably fragmented and all of the teeth present were loose. The cranium on skeleton 4917 was missing due to plough damage and the lower legs due to machining damage.

Age and Sex

Due to the fragmentary nature of the bones and the largely missing pelvic elements, the determination of sex was difficult. Skeleton 5009 was definitely a male individual, 4917 a probable male and 4619 a definite female. It was not possible to establish the sex of skeleton 5012 in the laboratory but notes taken by the writer during the excavation suggested that this was probably a male too. Skeleton 4917 was a mature adult (over 40 years old) and the rest were young adults (aged between 18 and 24).

Dental pathology

All of the teeth from the individuals were loose. It is therefore not possible to ascertain whether the missing teeth from skeleton 5009 and 5012 were lost ante- or post-mortem. Multiple carious lesions were

present on the dentition of skeleton 5009 and 4619. These were generally small and present on the pre-molars and molars. Skeleton 5012 and 5009 also had slight calculus deposits. Dental caries and calculus are generally a result of poor oral hygiene. Enamel hypoplasia was present on the mandibular canines of skeleton 5009. These lines on the enamel surface are formed during periods of growth arrest during the developing of the tooth crown. These bouts of growth arrest have been linked to periods of childhood diseases, weaning and malnutrition (Hillson 1996, 166–167).

Skeletal pathology

Skeleton 4619 had small patches of lamellar bone on the medial aspects of the tibiae shafts. The infection, which was healed, involves only the surface of the bones and is known as periostitis. The precise aetiology is not known but the infection may have been caused by minor shin trauma.

The older individual, skeleton 4917, had spinal degenerative changes on the vertebral segments of the lower back. The new bone formation of the joint margins and considerable pitting of the joint surfaces are associated with the ageing process (Roberts and Manchester 1995, 107). The condition would have caused intermittent back ache and stiffness.

Skeleton 5009 exhibited moderate porosity on the parietals. This type of lesion, porotic hyperostosis, is known to be caused by anaemia, likely to have occurred due to the body’s response to an infectious disease. The lesion was healed by the time of death and it was likely that the anaemia had occurred during childhood.

Discussion

The cremations of the early Roman period

Though none of the cremations was complete and undisturbed it is clear that three different funerary rituals were involved. Cremation 4855 was a *bustum* cremation, where the pyre site was also the place of burial for the burnt human remains. The pit (4857) was quite deep (0.3 m) and may therefore represent a deeper under-pyre pit, a so-called *grubenbustum*. This deeper pit allowed the cremation to burn down into the pit and the remains were then buried *in situ* (McKinley 2000, 39). This type of cremation has been

found sporadically in Roman cremation cemeteries throughout England, with 20 *busta* having been excavated quite recently at the Roman cemetery at Pepper Hill, Kent (Boyle 2001, 97); however, it remains relatively rare.

Two of the cremations (6331 and 6767) contained iron nails. In the former case these appeared to have been burnt, which may indicate the body was placed on the pyre in a coffin or accompanied by a wooden box, rather than that the burnt bone had been buried in or with a wooden container such as a box. Burials of the latter type were more common, however, with most examples coming from south-eastern England (Philpott 1991, 13).

Cremation 5017 was deposited on top of a horse burial (Fig. 14a), but it is unclear whether this was a deliberate or an accidental association. The author has not been able to identify any other examples of burnt human bones being placed on top of the burial of a relatively young horse, although dog skeletons found occasionally in late Roman inhumation burials have been interpreted as family pets killed to accompany the dead (Toynbee 1971, 50). In the case of cremation 5017, a small quantity of burnt immature sheep/goat and bird bone was also found, presumably from animals and birds placed on the pyre.

The inhumations of the middle and late Roman period

There was little consistency in burial practice amongst the inhumations at Kempford (summarised in Table 7), but all conform to common or (usually) well-recognised late Roman modes of burial.

Skeleton 4619 was on its side which is relatively unusual. It has been suggested that this body position of an adult burial may have been determined by the position of the body where death occurred in the sleep (Philpott 1991, 71). It is possible that burial 4917 had been decapitated. This is suggested by the shape of the grave cut, which as defined would not have had room to accommodate the head. The skull could have been placed in the vicinity of the feet, where the grave was extensively disturbed. Prone burials (such as 5009, a young adult male) are a well-known phenomenon, particularly in the 4th century AD, but are quite rare and almost always less common than decapitations (Philpott 1991, 74; for the instance of both rites in late Roman

Table 7 Summary of inhumation burial practices.

Grave cut	Skeleton Number	Orientation	Body Position	Grave furnishing	Burial Container
4618	4619	Northwest-southeast	On its right side	Shoes (hobnails)	None
4916	4917	Northeast-southwest	Extended, supine, possibly decapitated	None	None
5008	5009	Northeast-southwest	Extended, prone	None	None
5011	5012	Northwest-southeast	Extended, supine	None	Coffin (nails)

cemeteries in Oxfordshire see Booth 2001, table 2). Prone burial therefore seems to have occurred only in special circumstances. Possible interpretations of such treatment include: expression of complete lack of care in a hastily conducted burial, a means to dishonour the dead, the attitude at death prevented normal laying out, or a reflection of some physical, mental or moral defect in life (Philpott 1991, 74–5). Other examples where the body has been described as being rolled into the grave include two burials from Ashton in Northamptonshire and one from Smith’s Pit, Cassington in Oxfordshire (Philpott 76).

One individual was buried with footwear. The majority of such burials are found in south central England, generally on rural sites (Philpott 1991, 167). Relatively common in the 4th century AD, this rite may have been associated with a belief that the deceased needed shoes in the afterlife (Hope 1999, 59).

Only one burial (5011) had evidence for a wooden coffin. Provision of coffins seems to have been variable in late Roman cemeteries in the region and was very rarely universally employed (cf Booth 2001, 28).

Animal Bone
by Bethan Charles

Introduction

A total of 17,600 (21,150 g) fragments of bone was recovered in hand-excavation. A large proportion of these elements were re-assembled reducing the total number of fragments to 2064, of which 1748 (85%) were identified to species (see Table 8). In addition to the hand-collected material a further 13 (76 g) fragments of bone were recovered from environmental samples sieved through meshes of > 10 mm and 10–4 mm.

The calculation of the numbers of species recovered from the site used the total fragment method. All fragments of bone were counted including elements from the vertebral centrum, ribs and long bone shafts. The minimum number of individuals was not calculated because only a small number of identified elements recovered from the site were not part of articulating skeletons. All caprine bones are listed as sheep, since no goat bones were positively identified (following the criteria of Boessneck 1969 and Prummel and Frisch 1986). The ageing of

animals was based on tooth eruption and epiphyseal fusion, following Silver (1969) and O’Connor (1982) for horse, cattle and sheep, Payne (1973) and Grant (1982) for sheep, and Halstead (1985) and Grant (1982) for cattle. Data from Higham (1967), Bull and Payne (1982) and Grant (1982) as defined by Hambleton (1999) were used for pigs. Horse tooth eruption and wear follows Levine (1982). The measurements taken were those defined by von den Driesch (1976). The determination of the sex of the cattle and sheep was based on examination of the medial wall of the acetabulum since the majority of innominate bones were incomplete.

Condition

The condition of the bone was graded from 1 (best preserved) to 5 (unrecognisable) using the criteria stipulated by Lyman (1996). The majority of the bone was grade 3 and below, apart from the horse burial, which was fragmented but otherwise in reasonable condition. Most other bones were greatly fragmented and had evidence of severe chemical etching. The bones belonging to medium-sized animals such as sheep were in particularly poor condition and it is certain that sheep and pig are under-represented in the assemblage. It was also clear that evidence of marks on many of the bones were obscured due to the poor surface condition of much of the bone.

Three unidentified bones from the site, one of which was from a late Roman ditch deposit, had been burnt black. Two bones, one from a mid-Roman and the other from a late Roman deposit, had evidence of carnivore gnaw marks. Butchery marks were only observed on six of the cattle bones from the site, three of which were from phased Roman contexts, and one sheep tibia from a mid-Roman deposit. All of the marks were chop marks apart from two cattle tibia bones from unphased context 4511 which had saw marks and appeared to have been partially hollowed.

Results

The majority of the bones identified from the site belonged to cattle and horse. Table 8 is slightly misleading in terms of representation since many bones were recorded from the horse and sheep

Table 8 Total number of hand collected animal bones by phase and species.

Period	Phase	Horse	Cattle	Sheep	Pig	Dog	Red Deer	Domestic Fowl	Uniden tified	Total
Early Roman	1	1	6	0	0	0	0	0	6	13
Mid Roman	3	1466*	13	81***	0	1	0	0	61	1622
Mid Roman	4	0	0	0	0	0	0	0	4	4
Late Roman	5	72**	33	4	1	1	1	0	164	276
Unphased	0	25	21	7	0	3	3	9	81	149
Total		1564	73	92	1	5	4	9	316	2064

* 1456 (5332 gm.) of these fragments came from a single horse (fill 5018 cut 5014)

** 62 (1862 gm.) of these fragments came from the partial remains of an articulated horse from ditch 6382 (fill 6385)

*** 77 (80 gm.) of these fragments came from a neo natal lamb from context 5024 (cut 5023)

Table 9 Summary of skeletal elements of horse and cattle.

Element	Phase						Total
	1		3		5		
	Horse	Cattle	Horse	Cattle	Horse	Cattle	
Skull							
Mandible			1		1	1	3
Teeth	1	4	4	3	5	3	20
Atlas						1	1
Axis						2	2
Scapula			1		1	2	4
Humerus		1		2	1	2	6
Radius			2		1	1	4
Ulna						1	1
Pelvis				1		3	4
Femur						1	1
Tibia					1	2	3
Metapodial			1	4		3	8
Phalanges						1	1
Vertebrae						8	8
Ribs				1			1
Calcaneus			1	2		2	5
Total	1	5	10	13	10	33	72

This table does not include the horse skeletons 5018 and 6385.

skeletons (identified in Table 8); details of the elements recorded for cattle and horse, omitting articulated remains, are presented in Table 9. Despite the biases, particularly in the representation of horse, it is clear that all the main domestic species are present in the assemblage.

Very little information was recovered from the sieved material, almost certainly due to the poor preservation of much of the bone from the site. A dog metacarpal from unphased context 5057 was the only fragment identified to species. A further nine unidentified fragments were unphased and three were assigned to Phase 1.

Although cattle and horse dominate the assemblage it is likely that the diet of the inhabitants in this area mostly consisted of cattle, sheep and pig. Horses are unlikely to have been kept primarily for their meat as they would have been expensive to maintain and provided few secondary products. There is no evidence before the medieval period of the use of horses to pull ploughs.

Of particular interest was the partial remains of a horse burial 5018 found in grave cut 5014 (Fig. 14a). The horse was on a north-east/south-west orientation with its head to the south-west facing north. It was on its left side and apart from the skull and a fragment of the right tibia, all elements recovered were from the left side, probably due to the right side having been ploughed away. The surviving bones were very fragmentary. Both the back and front legs were slightly flexed. A human cremation overlay the horse burial, but it is not clear whether

this was a deliberate or an accidental association. Evidence from the bone fusion rates and the tooth height wear measurements of the horse indicated that the animal was approximately six to seven years of age.

Measurements were taken from elements of the two articulated horse skeletons in order to calculate their approximate height, using the conversion factors of Kieserwalter (in von den Driesch and Boessneck 1974, 334). The results are given in Table 10.

Very few sheep bones were recovered from the site, the majority belonging to a neo-natal lamb recovered from pit 5023. All of the long bone fragments were present in addition to part of the

Table 10 Selected measurements of horse bones.

Date	Context	Element	Greatest length (mm)	Estimated withers height (m)	Estimated average withers height (hands)
MR	5018	Metacarpal	224	1.44	14.7
MR	5018	Metatarsal	268	1.43	
MR	5018	Radius	343	1.49	
LR	6385	Metacarpal	227	1.46	14.8
LR	6385	Metacarpal	228	1.46	
LR	6385	Radius	332	1.44	
LR	6385	Radius	336	1.46	

skull and both mandibles. The ribs and vertebrae were very fragmented. There was no indication as to the cause of death and the burial was not dated. The condition of the bones is consistent with that of other material from the site, however, and suggests a Roman date.

A single fragment of a pig mandible was recovered from late Roman ditch fill 4607. Evidence from tooth wear suggests an animal approximately 27 to 36 months old at death.

Six fragments of dog bone were recovered from the site. However, only two were from phased features and included a dog's tooth from late Roman ditch 6436 and part of a mandible from mid Roman ditch 4473. Dogs were almost certainly kept as working animals and would have assisted in herding livestock and protecting the site, as well as perhaps being used in hunting.

The remains of a partially complete domestic fowl skeleton were recovered from unphased deposit 6921. It is uncertain if this is connected to the Roman period of activity at the site.

The only evidence of possible utilisation of wild resources was the recovery of red deer antlers from some of the ditch fills. Two fragments from large shed antlers (stage E/F, Schmid 1972, 88–89) were recovered from unphased contexts 6765 and 7056. Whilst there was no evidence that the antlers had been worked the condition and fragmentation of the bone may have obscured any marks that may have been present. A further two fragments were recovered from ditch 6920 and from late Roman ditch 7071.

Conclusion

The very poor condition of much of the bone from this site has clearly affected the recovery of some of the smaller elements. However, regardless of the clear bias in the assemblage towards the recovery of the cattle and horse bones there does appear to be disproportionately high number of horse bones. These are noticeably concentrated in the northern part of the site.

Molluscs

by Elizabeth C. Stafford

Introduction

A total of 22 samples were examined, all from bulk samples from ditch and gully sections which were dated stratigraphically or by direct association with pottery sherds to the late Iron Age/early Roman, Romano-British and post-medieval periods. The aim of the investigation was to provide information on local environment change from molluscan remains.

Methodology

Analysis was carried out on small 2 litre samples specifically collected for the retrieval of molluscs. In addition, the flots of larger bulk samples from other

features, primarily allocated for the retrieval of charred plant remains, were also examined in order to provide a more comprehensive assessment for the periods represented across the site. The samples were floated onto 0.5 mm mesh and the resultant flots air-dried. The residues were then sieved over 0.5 mm mesh, and again air-dried. All 22 flots were scanned in order to determine whether land snails were preserved and to assess their taxonomic content. Twelve were selected for more detailed examination, giving a spatial and chronological spread across the site, but excluding samples with a high percentage of residual or intrusive material, and particularly those from intercutting sections. Both flots and residues were sorted under a low-power binocular microscope and identifiable mollusc fragments extracted. Flotation appeared to have been very good. However, the residues from the bulk samples were very large, and consequently only a proportion of the residue was sorted; numbers for the remaining fraction were estimated. Quantification consisted of counts of whole shells and fragments of apices.

Results (Fig. 29)

Molluscan preservation was generally good and all samples contained adequate numbers of individuals for analysis. Table 11 gives the minimum number of individuals represented by the mollusc fragments for each of the samples. Figure 29 presents a selected number of samples from different phases as percentage frequency histograms to illustrate the character of the assemblages. Nomenclature follows Kerney (1999). Habitat information has been indicated following Robinson (1979; 1993).

Comparative evidence

The evidence for relatively wet conditions during the late Iron Age and Roman periods accords well with other evidence from sites in the Upper Thames Valley from which similar molluscan assemblages have been recovered from archaeological features. Previous work at late Iron Age sites such as Claydon Pike (Miles *et al.* forthcoming) and Thornhill Farm (Jennings *et al.* 2004) on the edge of the first gravel terrace, Gravelly Guy (Allen and Lambrick 2004) and Mingies Ditch (Allen and Robinson 1993, 142–151), indicates a rise in the water table and increased flooding. This accords with the general model for the Upper Thames with flooding occurring adjacent to the river and low-lying terraces in the late Bronze Age and throughout the Iron Age and Roman period, associated with an increase in land clearance for agriculture (Robinson and Lambrick 1988).

Discussion

Due to the broad sampling intervals within the features and between the different phases it was not

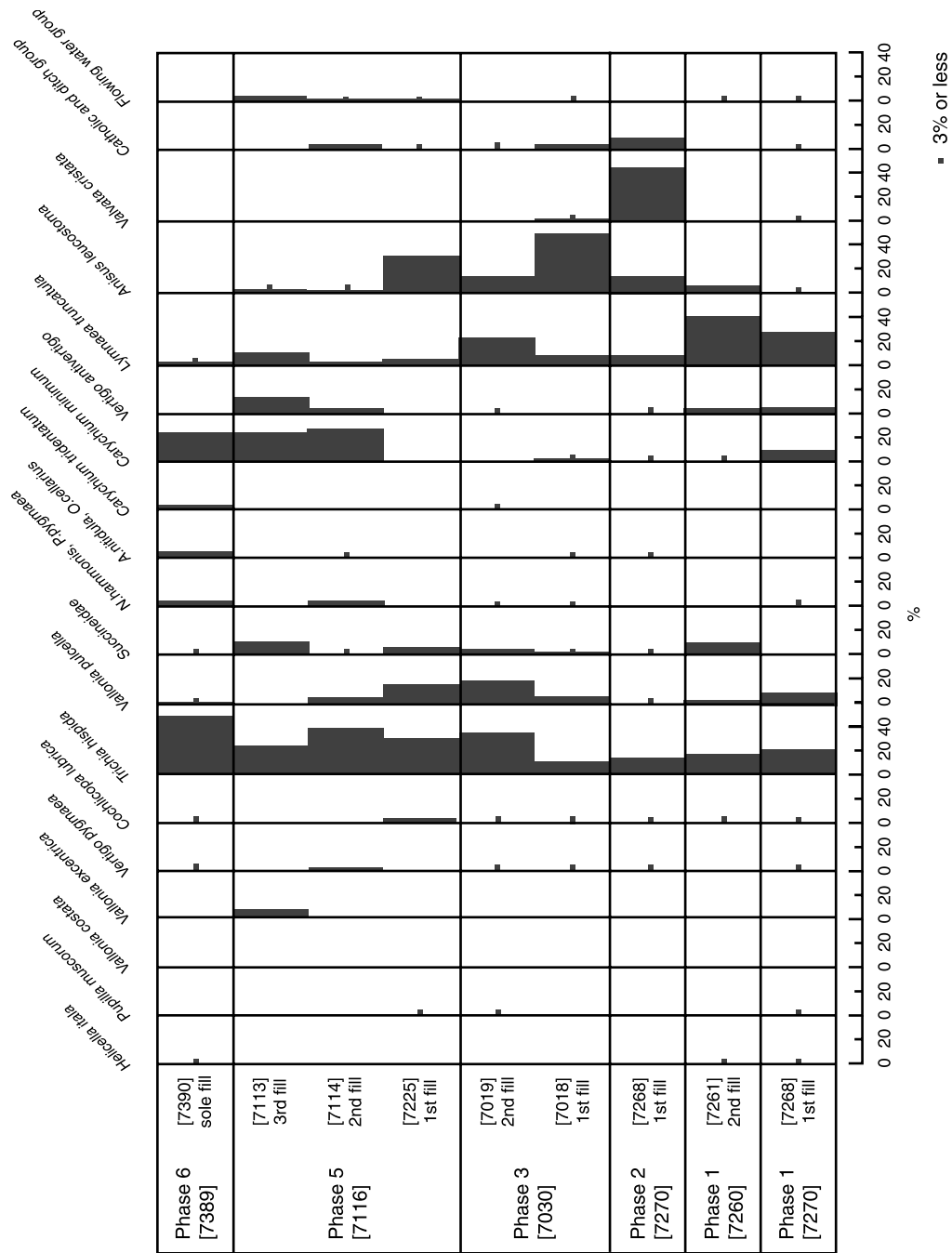


Figure 29 Percentage frequency histogram of molluscan assemblages.

Table 11 Results of molluscan analysis (minimum numbers of individuals).

Phase		1	1	2	3	3	3	3	5	5	5	5	6
Context		7114	7261	7268	7018	7019	5050	5049	7225	7114	7113	7103	7390
Sample		22	30	31	40	41	42	43	27	26	25	21	38
Cut		6704	7260	7270	7030	7030	5033	5033	7116	7116	7116	7101	7389
Fill		1st	2nd	1st	first	2nd	1st	2nd	1st	2nd	3rd	1st	sole
Sample Location		C	S	S	S	S	N	N	S	S	S	C	S
Volume processed (litres)		18	2	16	2	2	2	2	2	2	2	9	2
Total no. shells		605	114	566	348	125	54	110	124	196	36	1530	249
Taxa													
<i>Valvata cristata</i>	D	3		279	8		1	1					
<i>Valvata piscinalis</i>	F									1			
<i>Bithynia sp.</i>	F	2	2		2				2	2	2	4	
<i>Carychium minimum</i>	(M)s	58		4	5		5			54	2	146	54
<i>Carychium tridentatum</i>	Ts					1							9
<i>Carychium sp.</i>	(M)s	1	2	1	4						7	63	12
<i>Aplexa hypnorum</i>	S			2	4	1		7				11	
<i>Lymnaea truncatula</i>	S M	158	36	23	31	20	15	8	4	8	4	104	7
<i>Lymnaea sp. cf truncatula</i>	S M		18			10	2						
<i>Lymnaea palustris</i>	S M	2		17	9			1	1	2		6	
<i>Lymnaea sp.</i>	S M C	40		38				2	3			37	
<i>Planorbis planorbis</i>	C											2	
<i>Anisus leucostoma</i>	S	6	7	77	174	16	2	32	39	3	1	336	
<i>Gyraulus albus</i>	C									8			
<i>Succinea/Oxyloma sp.</i>	Mo	20	11	5	9	6	2	31	9	3	4	14	2
<i>Cochlicopa lubrica</i>	(M)		1		2		1					4	
<i>Cochlicopa sp.</i>	(M)	2	1	1	3	1	1		5			15	4
<i>Vertigo antivertigo</i>	M	32	4	3		1	1	3		7	5	27	
<i>Vertigo pygmaea</i>	(M)o	10		1	3	3	3			5		33	3
<i>Pupilla muscorum</i>	To	2				1	1		1			18	
<i>Vallonia costata</i>	To							7					
<i>Vallonia excentrica</i>	To										1	8	
<i>Vallonia pulcella</i>	(M)o	73	2	4	13	10	6	3	15	10		301	5
<i>Vallonia sp.</i>	(M)o To	14	2	3	16	7	4		7	3	1	251	2
<i>Punctum pygmaea</i>	C											4	2
<i>Nesovitrea hammonis</i>	C	1			5	2				9		54	10
<i>Aegopinella nitidula</i>	Ts	1		4	5					1			15
<i>Helicella itala</i>	To	2	1										3
<i>Trichia hispida</i>	C (M) o	178	26	99	40	45	10	15	38	79	9	92	121
<i>Cepea sp.</i>	C (M)									1			*
<i>Helicidae indet.</i>	C (M)		1		1	1							
<i>Psidium sp.</i>	M,S, D, C, F				14								

F = Flowing water (M) = Terrestrial species that can live in wet conditions * = present
M = Obligate marsh T = Terrestrial
S = Slum o = open
D = Ditch s = shaded
C = Catholic c = catholic

possible to detect any environmental changes in the assemblages in detail. However some broad trends were recognised.

In general the different phase assemblages were very similar in character. The composition of the molluscan faunas suggests that three different groups of species are present, each of which would have occupied its own ecological niche. These include:

- Freshwater slum species showing a preference for, or tolerance of, poor water conditions such as small bodies of water subject to drying, to

stagnation and considerable temperature variation (Evans 1972, 200). These were probably living in stagnant water accumulating in the base of the ditches, A significant component consisted of *Lymnaea truncatula*, an amphibious species, and *Anisus leucostoma* which is regarded as a 'slum' aquatic species of drying ponds, marshes and stagnant ditches (Boycott 1934, 129–30, 144).

- Obligate marsh species and terrestrial species that can live in wet conditions. These were probably living in the vegetation, reeds and damp grass on

the edges of the ditches above the level of the water. These include *Succinea/Oxyloma* sp., *Vertigo anti-vertigo*, *Carychium minimum*, *Vallonia pulcella* and *Trichia hispida*.

- Terrestrial dry ground species that probably represent the wider site environment. *Vallonia costata*, *V. excentrica*, *Helicella itala*, *Pupilla muscorum* and *Vertigo pygmaea* suggest dry open grassland, although *Vertigo pygmaea* sometimes lives in marshes together with *Vertigo anti-vertigo* (Evans 1972, 143). There was no indication of woodland or scrub in the vicinity.

In general the features were probably sufficiently waterlogged to allow water to stand at least temporarily as well as being sufficiently undisturbed to permit the growth of reeds and rushes. The presence of *Succinea/Oxyloma* species, *Vallonia* species and *Vertigo pygmaea*, indicative of open environments such as damp grassland, suggests the absence of dense growth of trees and shrubs along the sides of the ditches. Indeed species of *Succinea* have been described as being positively phototropic (Boycott 1934). There was no indication of woodland or scrub in the vicinity.

Closer examination of the assemblages reveals that the primary fills of the features contain high percentages of *Anisus leucostoma*, whereas the secondary fills see an increase in *Lymnaea truncatula*, obligate marsh species and wet ground terrestrial species such as *Vallonia pulcella*, *Trichia hispida* and *Succinea* sp. Ecologically it has been suggested *Anisus leucostoma* requires the wettest conditions, with *Lymnaea truncatula* having the greatest tolerance of drying (Robinson 1988, 107). In addition *Succinea* sp. often climbs erect vegetation such as reeds growing in drainage ditches and can survive long periods in moist ground litter. The difference in the assemblages probably reflects silting up of the ditches over time. Initially they probably held permanent water. As they become shallower they would have held less water and experienced an increased growth of vegetation such as long grasses/reeds.

The occasional presence of flowing water molluscs was noted. These included *Bithynia* species and *Valvata piscinalis*, that are more likely to have lived within or on the edges of the main river channel. These shells may have been transported onto the gravel terrace by over-bank flood episodes, more so in the southern part of the site. If this is the case it is possible that elements of the terrestrial molluscs may also have been transported in this way although the numbers were relatively low in the samples examined. The site is very close to the edge of the floodplain and has been flooded in recent years. Aerial photographs also indicate the presence of a buried palaeochannel c 300 m to the east and south-east of the site although this has not been dated. It is however possible that these shells may also represent a residual element from the terrace gravels themselves. Unfortunately no control samples of the gravels were retrieved from the site for

comparison. Localised areas of shell-bearing gravels have been recorded in the vicinity of the site, to the east, at Gravelly Guy (Mark Robinson pers. comm.).

There is some indication perhaps of wetter conditions in Phases 2 and 3 (mid Roman) with an increase in slum species *Anisus leucostoma*, and large numbers of the ditch species *Valvata cristata* in the primary fill of ditch 7270, which may indicate permanent, perhaps slowly-moving water within the ditches. Marsh species such as *Vertigo anti-vertigo*, *Succinea/Oxyloma* species, and terrestrial species that can live in wetter conditions such as *Carychium minimum* are also fewer. Overall this implies a rise in the water table on the site and wetter conditions within the ditches. This does not necessarily imply poorer ground conditions across the entire site during these periods and the ditch system may well have provided an efficient method of drainage in which relatively dry ground prevailed (Mark Robinson pers. comm.).

No samples were retrieved from Phase 4. Slightly drier conditions within the ditches are perhaps indicated again in the southern part of the site during Phase 5 (late Roman), becoming much drier by Phase 6 (post-medieval). This is evidenced by increases in percentages of *Carychium minimum* and *Vallonia pulcella* in the secondary and tertiary fills, essentially terrestrial species probably occupying moist areas at the base of grass roots. In addition there are consistently large numbers of *Trichia hispida*, a catholic terrestrial species, which occurs in abundance in damp places such as meadows and marsh. There is a distinctive absence of ditch species and lower percentages of slum species *Lymnaea truncatula* in Phase 5, suggesting that the ditches were relatively drier in this period.

Waterlogged Macroscopic Plant and Insect Remains

by Mark Robinson

Introduction

Waterlogged organic sediments were found in the bottom of some of the excavated ditches. Assessment identified three samples as having potential for more detailed analysis:

Sample 32, Context 7269, Ditch 7270, Section 955, Phase 2, early Roman

Sample 34, Context 7338, Ditch 7335, Section 972, Phase 2, early Roman

Sample 44, Context 5057, Ditch 5058, Section 660, Phase 3, mid Roman

Ditches 7270 and 7335 were both early components of the main Phase 2 ditch group 4115 and were located at the extreme south-east end of the site. Ditch 5058, at the opposite end of the site, was a component of an early ditch on the south-west side of the principal trackway, probably a part of ditch group 4370. One kg of each sample was washed over onto a 0.25 mm sieve to extract organic remains.

Table 12 Waterlogged Seeds.

	Ditch	7270	7335	5058
	Context	7269	7338	5057
	Sample	32	34	44
<i>Ranunculus cf. repens</i>	creeping buttercup	+	+	-
<i>R. S. Batrachium sp.</i>	water crowfoot	-	-	+
<i>Potentilla anserina</i>	silverweed	+	+	-
<i>Rumex sp.</i>	dock	-	+	-
<i>Urtica dioica</i>	stinging nettle	+	-	-
<i>Mentha cf. aquatica</i>	water mint	-	-	+
<i>Lycopus europaeus</i>	gypsy wort	++	+	-
<i>Alisma sp.</i>	water plantain	-	-	+
<i>Juncus effusus</i> gp.	tussock rush	+	+	-
<i>J. bufonius</i> gp.	toad rush	-	+	-
<i>J. articulatus</i> gp.	rush	+	-	+
<i>Eleocharis cf. palustris</i>	spike rush	+	+	+
<i>Carex</i> spp.	sedge	+	++	++
<i>Glyceria sp.</i>	flote grass	-	-	+

+ present, ++ several

The flots were scanned in water under a binocular microscope. The waterlogged seeds and Coleoptera fragments observed were identified. The results are given in Tables 12 and 13.

Interpretation

The results from Samples 32 and 34, the early-Roman ?enclosure ditches were similar. Seeds from plants of marsh habitats, such as *Carex* sp. (sedge), *Juncus* spp. (rushes) and *Lycopus europaeus* (gypsy wort), predominated. Some of these plants also grow in damp pasture and a few seeds of pastureland plants, such as *Ranunculus cf. repens* (buttercup) and *Potentilla anserina* (silverweed), were present. Insect remains were sparse but included the small water-beetle *Helophorus cf. brevipalpis*, which was probably living in water in the ditches and the dung beetle *Aphodius* sp. It is likely that the enclosure ditches were associated with the grazing of domestic animals.

Table 13 Coleoptera.

	Ditch	7270	7335	5058
	Context	7269	7338	5057
	Sample	32	34	44
<i>Bembidion biguttatum</i>		+	-	-
<i>Pterostichus</i> sp.		+	-	-
<i>Helophorus</i> sp. (<i>brevipalpis</i> size)		+	+	-
<i>Megasternum obscurum</i>		-	-	+
<i>Hydrobius fuscipes</i>		-	-	+
<i>Ochthebius</i> sp.		-	+	+
<i>Anotylus sculpturatus</i>		-	-	+
<i>Aphodius</i> sp.		+	+	+
<i>Apion</i> sp.		-	-	+
<i>Notaris acridulus</i>		-	-	+

+ present

There was no evidence for the proximity of any woodland or scrub.

The evidence from Sample 44, the mid-Roman trackway ditch, suggested wetter conditions than in the earlier ditches. The seeds were all from aquatic and marsh plants. They included *Ranunculus* S. *Batrachium* sp. (water crowfoot), *Alisma* sp. (water plantain) and *Carex* spp. (sedges). Two species of water-beetle, *Hydrobius fuscipes* and *Ochthebius* sp., were found. The weevil *Notaris acridulus*, which feeds on emergent and marsh vegetation, was also present. The ditch probably held permanent, perhaps slowly-moving, water. The terrestrial insects again included the scarabaeid dung beetle *Aphodius* sp., so it is likely that some domestic animals were present in the vicinity. There was no evidence of scrub species to suggest a hedge alongside the ditch.

Wood Charcoal

by Dana Challinor

Introduction

Four samples were chosen for charcoal analysis, all from cremation burials that were probably of later 1st- to 2nd-century AD date. The dating resolution was not sufficient to allow for any temporal differences between the samples to be determined and it is most likely that the burials were broadly contemporary. The aims of the charcoal analysis were to determine the taxonomic composition of deposits relating to the cremation process and to investigate the evidence for the selection of fuel wood during this period.

Methodology

The samples were processed by flotation in a modified Siraf-type machine, with sample sizes of 18–40 litres in volume. The resultant flots were air-dried and sub-sampled, where necessary, using a riffle box. The sub-samples were then divided into fractions using a set of sieves and fragments >2 mm were identified. The charcoal was fractured and sorted into groups based on the anatomical features observed in transverse section at x10 and x20 magnification. Representative fragments from each group were then selected for further examination using a Meiji incident-light microscope at up to x400 magnification. Identifications were made with reference to Schweingruber (1990), Hather (2000) and modern reference material. A total of 390 fragments were examined. Classification and nomenclature follow Stace (1997).

Results (Fig. 30)

The results by fragment count are given in Table 14. Four taxa were positively identified. The taxonomic level of identification varied according to the biogeography and anatomy of the taxa:

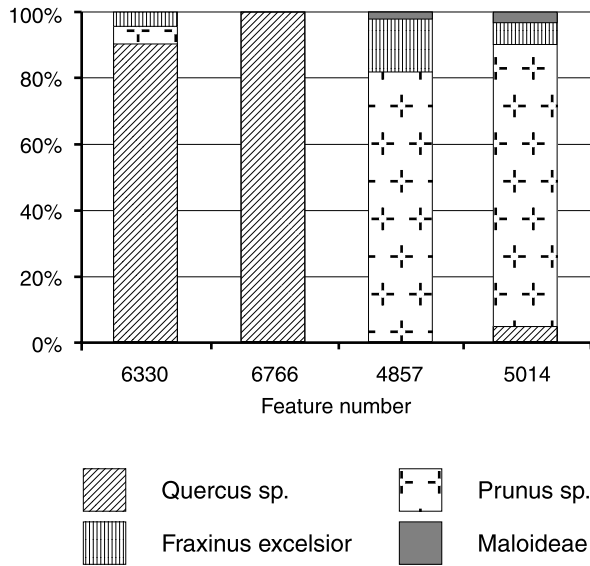


Figure 30 Taxonomic composition of charcoal samples.

- *Quercus* sp. (oak), tree, two native species not distinguishable anatomically.
- *Prunus* spp., includes *P. spinosa* (blackthorn), *P. avium* (wild cherry) and *P. padus* (bird cherry); differentiation between these species was not possible with the Kempford charcoal but it was thought that only one species was represented in the assemblage.
- Maloideae, subfamily of various shrubs/small trees including *Pyrus* sp. (pear), *Malus* sp. (apple), *Sorbus* spp. (rowan/service/whitebeam) and *Crataegus* sp. (hawthorn), rarely distinguishable by anatomical characteristics.
- *Fraxinus excelsior* (ash), tree, sole native species.

The preservation of the charcoal was generally good, although it was quite fragmented with most fragments less than 4 mm in size. There were a few fragments in all samples categorised as indeterminate, which were not identifiable because of poor preservation or an unusual cellular structure. Sample

7, context 6331, produced a larger quantity of indeterminate fragments as the charcoal was highly vitrified, having a glassy appearance indicative of high temperatures. It is likely that these indeterminate fragments represent additional specimens of taxa positively identified at the site.

Discussion

It is clear from the analysis that the charcoal assemblages of the four cremation deposits differ markedly in the dominance of *Prunus* (cherry type) or *Quercus* (oak) (Fig. 30). This may be significant since it coincides with the potential temporal difference between cremations 6330 and 6766 (Phase 1 – 1st–2nd century AD) and cremations 4857 and 5014 (Phase 3 – 2nd century AD). Nevertheless, the samples are similar in several regards which are worth noting. First, there was a limited range of taxa in all the cremation assemblages. Second, three or four taxa were identified in each assemblage, with the exception of sample 10, which was considerably smaller in size (Table 14). Third, if the percentage of each taxon in the samples is analysed, it is apparent that a single taxon dominates each assemblage.

The predominance of a single taxon in prehistoric cremation assemblages has been noted at various sites and taken as evidence of deliberate ritual selection (see, for example, Straker 1988; Thompson 1999). Little charcoal analysis has been published on Romano-British cremation deposits but there is some recent evidence from sites in Kent that indicates a similar predominance of a single taxon (Challinor 2000; 2001; forthcoming). This is particularly interesting in the Romano-British period as evidence for the fuel used for other activities, such as domestic and industrial, suggests that there was little systematic collection of fuel wood (Murphy 2001, 17–18). Unfortunately the Kempford samples are too few to provide meaningful site-specific comparisons, but recent charcoal analysis elsewhere suggests that Romano-British fires often incorporated a range of woodland taxa, which had been collected in an

Table 14 Results of charcoal analysis by fragment count.

Phase	AD 2nd cent.		AD 1st-2nd cent.	
Sample number	2	5	7	10
Context number	4855	5017	6331	6767
Feature number	4857	5014	6330	6766
Volume floated	40	34	40	18
% flot identified	1.6	50	12.5	100
<i>Quercus</i> sp.	oak	–	4	79
<i>Prunus</i> sp.	cherry type	102	79	5
Maloideae	hawthorn, apple, pear etc	2	3	–
<i>Fraxinus excelsior</i>	ash	20	6	3
Indeterminate		3	9	26
Total fragments	127	101	113	49

apparently haphazard manner depending on what was locally available (Challinor 2003).

Oak seems to be the fuel wood most consistently used at other funerary sites and it has excellent burning properties (Challinor forthcoming; Gale 2004; Robinson 1995). The burning properties of *Prunus* would depend upon which species was selected but they are all moderately dense grained wood which make a reasonable fuel in enough quantity. However the burning properties of the wood do not appear to be the primary factor in fuel wood selection as *Fraxinus* (ash), which is a superior wood for burning (Edlin 1949), is only present in the samples in small quantities. It is more likely to have been included accidentally or as pyre goods, although there were no identifiable artefacts (other than nails) associated with the cremations at Kempsford. The evidence indicates a change in the preferred choice of fuel wood species, which may relate to changes in woodland composition over time rather than ritual concepts. Evidence from the Iron Age/Romano-British cemetery at Westhampnett, West Sussex, suggests that a range of wood types, including reused structural timbers, were used and that preferences for the selection of particular trees is likely to have corresponded to the availability of taxa in the local area (Gale 1997, 82).

In conclusion, the results from the analysis of the charcoal from four cremation burials at Kempsford Quarry supports the theory of ritual use of wood in funerary pyres in the Roman period. There is an apparent change in the species selected but the cause of this cannot be determined from the charcoal record; it may relate to changes over time in woodland composition, woodland management, ritual ideas or it may be merely that there was no single preferred species for ritual purposes.

DISCUSSION

The absence of significant pre-Roman activity on the site is striking, but it is possible that the site was sufficiently low-lying to have been suitable only for non-settlement purposes before the Roman period. Extensive spreads of tree-throw holes indicate that the landscape was quite heavily wooded at one time. These features are undated so the chronology of woodland clearance is not known, except that where relationships were observed in all cases the tree holes were earlier than archaeological features, and the limited molluscan, plant and insect evidence is consistently indicative of a very open landscape by the Roman period. The presence of significant numbers of probable Bronze-Age round barrows within a relatively short distance of Kempsford implies that the gravel terraces of the Thames were substantially if not completely cleared of woodland by this time. A comparable situation is demonstrable at sites such as Butler's Field, Lechlade (Robinson 1998).

The Phase 1 features may belong to the early Roman period, but they could have originated

slightly earlier. They appear to represent part of a field system, with contrasting arrangements of smaller enclosure (to the south-west) and a large undivided area to the north-east. There is no indication, however, of any relationship between these features and the sub-circular enclosures excavated in 1995 at Stubbs Farm, lying c 150 m north-east of the site. These are thought to be of middle Iron Age date, but direct evidence is almost entirely lacking.

Like the Phase 1 features at Kempsford Quarry, however, the Stubbs Farm enclosures were disregarded by the more rectilinear layouts of the early-middle Roman period. At Kempsford Quarry these are most clearly shown by the Phase 3 and later trackways, but the largest of the features attributed to Phase 2 shared the same north-west/south-east alignment as the principal Phase 3 trackway. There is no direct evidence for the relationship of the Phase 2 and Phase 3 features. Both cut Phase 1 features and were in turn cut by Phase 4 features. Their relative chronology presented in the narrative above is based on the (admittedly subjective) impression that the very small quantity of pottery recovered from ditch group 4115/6196 was slightly earlier than that from the earliest trackway ditches. The ceramic evidence cannot be regarded as definitive, however. The Phase 2 features could have been broadly contemporary with or even a little later than the inception of the trackways. Indeed the arrangement of features 4127 and 9750 may suggest that they respected the line of the south-east side of the north-east/south-west aligned trackway. If this was the case, however, the interpretation of these features in relation to the trackways is difficult – 4115/6196 would have defined a long narrow strip on average roughly 30 m wide on the north-east side of the principal trackway. The question of the relative chronology of Phase 2 and 3 features must therefore remain open.

The most notable characteristic of the Phase 3 features was their remarkable straightness. The general north-west/south-east alignment, if not pre-figured by the main Phase 2 ditch, demonstrates a complete abandonment of previous land division within the area of the site. A slightly wider view, however, suggests a closer relationship to earlier features than indicated within the excavation. Amongst the cropmark features recorded east of the site (since destroyed by quarrying) was a curving linear feature that broadly mirrored the alignment of the main Phase 1 boundary, though varying between c 130 and 200 m distant from it. This feature formed or was reused as the west side of the early Roman double-ditched rectangular enclosure at Stubbs Farm, to which other elements of the rectilinear (Phase 3 and later) landscape layout were clearly related. Of course these equivalences cannot be demonstrated conclusively, but amongst other things they suggest that there was no significant hiatus between the Phase 1 and Phase 3 layouts and that, while the remodelling of the landscape seen in Kempsford Quarry in Phase 3 was radical and comprehensive, it did not involve the

total abandonment of the wider earlier landscape – the Stubbs Farm enclosure potentially provided a link between the two.

The precise chronology of this change is not easily established. Phase 3 features contained pottery assigned to the 2nd–3rd centuries, but no closely dated material was associated with the earliest ditch fills of this phase. The pottery assemblage from the rectangular enclosure at Stubbs Farm was almost entirely of 2nd-century date, with a suggested start date of around AD 120. The pottery associated with the farmstead evaluated in 1997 was dated in a range from the late 1st century to the mid 3rd century, but again with a strong 2nd-century emphasis. Establishment of this complex around the beginning of the 2nd century or slightly later seems very likely and intensive use within the 2nd century is certain.

It is almost certain that the principal trackway in the excavated area formed a major line of access to the farmstead and that this might, indeed, have been its primary function. The trackway would have passed just south-west of the evaluated structures, which were aligned roughly at right-angles to it, but both aerial photographs and the evaluation trenches suggest that the trackway then turned to run almost exactly south-north past the farmstead. The trackway was traced up to *c* 60 m northwards beyond the farmstead but there is no evidence to indicate how much further north it ran. It is equally unclear if the farmstead predated the trackway or vice versa. Either way, the two must have been broadly contemporary.

The course of the principal trackway beyond the southern margin of the site is also unknown, but the projected alignment would have reached the river Thames in the vicinity of Hannington Bridge which, on this basis, was perhaps the site of an early crossing. Alternatively the trackway may have turned eastward just south of the site to link into a prominent east-west trackway forming part of the major cropmark complex north of the Thames at this point. This would have served to link the Kempsford Quarry site with the relatively extensive settlement near Manor Ham Barn.

The north-east/south-west trackway, joining the principal trackway some 60 m south-east of the farmstead structures, can be seen from aerial photographs to have extended at least another 150 m beyond the limits of the site, passing roughly 50 m south of features associated with the rectangular enclosure at Stubbs Farm and clearly terminating (as seen from the air) at the line of a major north-north-west/south-south-east aligned boundary ditch. This formed part of an extensive rectilinear (but not rectangular) pattern of field boundaries extending north and east of the Stubbs Farm enclosures. There is no obvious reason for the termination of the trackway at this line, but some 200 m further east there was a roughly north-south aligned palaeo-channel. While this is undated it is nevertheless likely that the ground in its vicinity was more poorly drained than that just to the west, and it may be that

the north-east/south-west trackway gave access to open pasture land in this area, in a manner strongly reminiscent of the 2nd-century trackway running down to the Thames floodplain at Farmoor – where the edge of the floodplain was demarcated by a long-lived boundary (Lambrick and Robinson 1979, 25–27). It is notable that, with the possible exception of the contemporary survival of Phase 2 ditches, there was no evidence for land divisions apart from the trackways within the excavated area.

The disruption of the Phase 3 layout by the Phase 4 east-south-east/west-north-west ditch alignments is curious and not easily explained. Understanding of this aspect of the phasing is based entirely on the relationship between feature group 4207 and the ditches of the principal trackway, although there seems little doubt that 4207 post-dated the Phase 3 trackway but was cut by the Phase 5 version of this feature. The dating evidence from 4207 itself is insufficient to elucidate the question of the relative sequence – all that can be said is that it is not inconsistent with the phasing given here, indicating a *terminus post quem* of at least the later 2nd century for the infill of this feature. The other features assigned to Phase 4 on the basis of similarity of character and alignment with 4207 both terminated close to the north-east side of the principal trackway and may be interpreted as broadly respecting its alignment. The function of these ditches is unclear. They do not form coherent property divisions and may have been related to drainage – the alignment of the features down the (very slight) slope of the site to the south-east would be consistent with this.

It is possible that this phase of activity was relatively short-lived, perhaps even initiated in response to a specific drainage crisis (although it is notable that fills of alluvial clays and silts were notably lacking from most features in the site), but there was evidence of recutting in the principal feature alignment (ditch 4207 replacing 6065), so it was presumably not merely a temporary measure. It is therefore unclear how quickly the line of the principal trackway was re-established. The part of ditch 4207 lying within the line of the trackway was presumably completely backfilled to allow continued use – the upper fills of the ditch at this point contained much higher proportions of gravel than immediately adjacent sections outside the line of the trackway. There was little or no evidence for trackway surfaces in any phase, the only possible exception being a thin spread of gravel in the line of the main trackway at the northern margin of the site which had an ambiguous relationship with the Phase 3 ditches. Any such surfaces, presumably entirely of gravel, could have been lost to post-Roman ploughing, but it is quite possible that the tracks were rarely formally surfaced away from focal areas of settlement.

The restored (Phase 5) arrangement was confined to the principal trackway, however. Its north-eastern side was reinstated on the original alignment south of the trackway junction, but the subsidiary trackway

was cut off by a continuation of this ditch, a further north-westward continuation of which formed a trackside boundary some 2.5 m further east than its predecessor. Meanwhile, the south-west side of the trackway was defined by an entirely new ditch up to 4 m further west than the Phase 3 feature. These changes resulted in a trackway defined by ditches between 16 m and 19 m apart. The north side of the subsidiary trackway was also redefined with a fairly slight ditch set back from the earlier alignment but there was no definition of its south side. It is unclear if this trackway remained in use, but it is likely that the continuation of feature 4485 across it marked the end of its useful life.

The uncertainty about the date of the Phase 5 trackway and other features is unfortunate since it makes it difficult to correlate the use of the trackway with the occupation sequence in the farmstead to the north-west and the Stubbs Farm rectangular enclosure to the north-east. The most significant evidence consisted of a small group of sherds from context 6028, filling a component of the primary Phase 4 feature (6065) replaced by ditch 4207. These include an example of Oxfordshire type O43. This is dated AD 240–300 by Young (1977, 196), but on the basis of a single example, and evidence from the pottery production site at Lower Farm, Nuneham Courtenay (Booth *et al.* 1993, 194) and from Alchester (Evans 2001, 320) strongly suggests that this type was in production in the later 2nd century AD. Feature 6065 could therefore have been infilled and recut by 4207 as early as the end of the 2nd century, with the consequence that the Phase 5 trackway *could* have been restored at a relatively early stage in the 3rd century, at a time when both settlements may still have been occupied. An alternative view is that the interruption of the main north-west/south-east trackway in Phase 4 may have been related directly to the events which led to the cessation of settlement activity, perhaps at some time in the first half of the 3rd century, and that reinstatement of the trackway took place a little later. Either way it is clear that activity in both settlement sites was at a minimal level, at best, after the middle of the 3rd century. As a consequence of this, very little domestic refuse was available to find its way into the latest trackway ditches. It is assumed that these continued to define access through the fields up to the end of the Roman period, but there is no direct proof of this.

There is little clear evidence for the character of landscape exploitation before the establishment of the Roman farmstead in the early 2nd century AD. The Phase 1 boundaries were mostly very slight, but indicate subdivision of part of the site into small enclosures or paddocks. Environmental remains recovered at the south-east end of the site from the principal Phase 2 feature 4115 indicate wet conditions with some pasture, probably in an open landscape. The Phase 3 main trackway ditch, sampled at the (opposite) north-western end of the site, probably held permanent, perhaps slowly-moving, water, indicating that these ditches per-

formed a very tangible drainage function as well as defining boundaries and access routes. It is unclear if these conditions prevailed through the Roman period, but the apparent lack of well-preserved waterlogged material from later ditch fills may indicate that there was some improvement in drainage of the area in the 3rd and 4th centuries, a suggestion that may be supported by the molluscan evidence, though the primary fills of Phase 5 features did still contain fairly significant numbers of wetland species. The snails also demonstrate spatial variation in environmental conditions, with high levels of freshwater species most clearly present in early Roman features in the south-eastern (slightly lower lying) part of the site. The minor variation in elevation between the two ends of the site was probably just enough to make a significant difference in determining the viability of certain types of land use. Most of the molluscan assemblages incorporate indicators of open grassland, however, and there can be little doubt that this was the prevailing character of the landscape. The selection of particular wood species for individual cremations may indicate a cultural preference but might also suggest the occurrence of localised stands of relatively unmixed tree types, perhaps in hedge lines, though it is important to note the positive evidence of the coleoptera for the lack of a hedge adjacent to the Phase 3 trackway ditch.

Generally damp conditions would not have been particularly conducive to arable agriculture. An absence of charred plant remains is consistent with an emphasis on pastoralism, though it may also reflect the relative distance of the excavated areas from the likely focus of crop-processing activity in or near the farmstead buildings. Material suggestive of such activity was recovered from the vicinity of these buildings in the 1997 evaluation. The relatively small samples were dominated by spelt wheat, but barley was also present as a secondary crop (OAU 1998, 14). It is likely that the agricultural regime of the farmstead was mixed, but the evidence from the 2000–2001 excavation suggests that pastoralism may have been more important in the less well-drained areas east and south of the farmstead itself, while it can be suggested that arable concentrated on the slightly higher ground to the west and north.

The animal bone assemblage was unfortunately small, reflecting the position of the excavated areas away from locations of butchery, consumption and primary refuse disposal. It is therefore difficult to determine how far it was representative of general patterns of animal exploitation across a wider area. The assemblage presumably incorporated a small refuse component but may have consisted largely of 'non-standard' animal remains including complete animal burials, either representing mortality in the fields (for example the neonatal lamb burial in feature 5023) or special circumstances, such as might be implied by horse burial 5018 associated with a human cremation, or the partly articulated horse skeleton 6385 from ditch group 4371. A relatively high concentration of horse bones in addition to the

two articulated animals was noted at the northern end of the site, but it is unclear if this is sufficient to indicate an unusual emphasis on horses in the Kempsford settlement as a whole. Relatively high representations of horse bones have been noted at some other sites in the Cotswold Water Park area, particularly at Somerford Keynes, however.

The 1997 evaluation involved relatively little intrusion into the structures north-west of the area examined recently. Detailed characterisation of this area is thus not possible. The term farmstead has been used on the basis that the economic emphasis of the site was agricultural. At least two buildings were present, one with linear stone foundations and another employing stone post bases. The plan of neither is complete and their structural forms cannot be determined. The presence of box flue tile and probable 'bricks' indicates that one of these buildings had at least one heated room – it is possible that the site included a modest bath suite. There is otherwise no clear structural or artefactual evidence that would justify the use of the term villa to describe this settlement. The nearby Stubbs Farm enclosure was also probably used for domestic settlement on the basis of the associated finds assemblages, but there was even less structural evidence here and the enclosure ditches formed the most significant element of the site plan. It is unclear if the farmstead buildings were enclosed in the same way as the Stubbs Farm site.

The posthole structure located at the north-western margin of the excavated area was presumably related to the farmstead to the north, but it seems to have been associated with the Phase 5 trackway ditch and may therefore have post-dated the use of the farmstead, particularly if the suggestion (above) that the Phase 4 ditches reflected the demise of the settlement sites is accepted. The size of the structure and the absence of internal features suggest that it was not roofed. It may have formed a substantial stockaded enclosure for animals. Such a structure might well have been required in the area in the later Roman period as there is no reason to suppose that agricultural use of the site ceased at this time just because there was no immediately adjacent settlement.

Some settlement in the general vicinity is implied, however, by the continued use of the trackway junction area for burials. This activity continued a tradition of use of the fields and land-unit margins for burial, which may have been established as early as Phase 1, in the early Roman period, but might equally have commenced a little later. The cremations tentatively assigned to Phase 1 were of Roman character insofar as they included nails indicative of coffins/boxes and (in one case) shoes. One also had a fragment of a box flue tile in the backfill of the pit. If not intrusive, this is likely to have derived from the farmstead site and suggests a 2nd-century or later date (ie presumably Phase 3 onwards) for the burial, although on spatial grounds (ie relationship to the

Phase 1 enclosure system) an earlier date has been (tentatively) suggested.

Overall the burials on the site either clustered within small enclosures or occurred within or near boundary ditches. Five burials were very near to the main trackway. These patterns are commonly found associated with small rural settlements and villas (Esmonde Cleary 2000), but their interpretation is not necessarily straightforward (cf Pearce 1999, 157–8). Some burials occurred within activity areas demarcated by the field boundaries, suggesting that the disposal of the dead was integrated with other land-uses and activities rather than set apart in a separate domain (Esmonde Cleary 2000, 132). Others, however, such as those within the triangular enclosure at the trackway junction, may have been in land specially set aside. Such use of physical boundaries may have been a way to prevent the powerful dead from inflicting harm on the living. Nevertheless, the location of burials close to the trackway may have been chosen to 'maintain them in the mental map of the inhabitants and passers-by' (Esmonde Cleary 2000, 137). This implies, of course, that a grave marker or a small mound was present to allow the grave to be identified. The lasting significance of an area specially set aside for burials may have encouraged its periodic reuse for this purpose at a time when there was apparently no contemporary settlement in the near vicinity.

The chronology of many of the burials is problematic because of a general absence of grave goods or stratigraphic associations. Uncertainty over the cremations has already been mentioned. The attribution of inhumation 4618 to Phase 3, while based on impeccable spatial logic, may also be questioned as the overwhelming bulk of evidence from the Upper Thames region suggests that the adoption of inhumation as the principal burial rite in rural contexts did not take place before the 4th century (cf Booth 2001, 36). In contrast, the date for the adoption of inhumation at Cirencester may have been earlier (eg Mcwhirr *et al.* 1982, 207), but the detailed evidence from sites such as the Bath Gate cemetery is somewhat confused and parts at least are unlikely to have been established until 'considerably later than AD 270' (Rigby 1982, 113). A late Roman date, at a time when use of the trackway was at a low level, may thus be appropriate for Kempsford burial 4618.

Understanding the relationship of the farmstead to the Stubbs Farm enclosure is crucially important to the overall interpretation of this local landscape. The period of occupation of the two sites seems to have been almost exactly contemporary. Was one site dependent upon the other or did they represent contrasting, independent approaches to the requirements of farming the Thames margins? Both sites appear to have been integrated into a single landscape defined in the early 2nd century by a coherent, but not completely rigid, set of track and field

boundaries. The boundary system may have extended well beyond the land farmed from these two sites. Radical reorganisation of the landscape in the early 2nd century AD is indicated nearby at sites such as Thornhill Farm (Jennings *et al.* 2004) and Claydon Pike and further afield at Somerford Keynes (Miles *et al.* forthcoming). Occupation at this last site, and nearer to hand at Whelford Bowmoor (Miles *et al.* forthcoming), was notably concentrated in the middle part of the Roman period, as at Kempford. More widespread disruption of the rural settlement pattern of the Upper Thames Valley in the early 2nd century is now a well-recognised phenomenon, though not yet readily interpreted (Henig and Booth 2000, 106–110).

A further phase of disruption of settlement patterns, assignable as yet only generally to the 3rd century AD, appears to be more localised, as indicated above. As such it may be interpreted in terms of more local factors. One possibility might be consolidation of small land holdings (whether in individual ownerships or tenancies) into a single large estate. An environmentally determined change seems less likely, as this appears to have been the time when conditions conducive to settlement (in terms of drainage, which seems always to have been a major consideration at this site) were close to their optimum.

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