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**Bronze-Age and Romano-British Sites South-East of Tewkesbury:
evaluations and excavations 1991-7**

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Bronze-Age and Romano-British Sites South-East of Tewkesbury: evaluations and excavations 1991–7

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Introduction

Between February 1996 and January 1997 Cotswold Archaeological Trust (CAT; now Cotswold Archaeology) excavated four areas (C–F) during the construction of the Tewkesbury eastern relief road (Figs. 1 and 2). A watching brief was also carried out on the remainder of the road and areas either side of it. The latter included areas where the ground level was to be reduced to compensate for loss of flood zone caused by construction of the road embankment, and areas allocated for residential development. Areas D and F revealed features and artefacts of Bronze-Age date, while Area C produced prehistoric artefacts only. Areas C and D also contained the remains of small Romano-British settlements. No archaeological remains were encountered in Area E.

The results of two other evaluation projects undertaken by CAT in association with proposals for residential development which both produced Bronze-Age remains are also reported here: one at Rudgeway Lane in 1993 and the other at the Gastons in 1997 (Fig. 2).

Topography and Geology

Over much of its course the new road, which links the road from Gloucester (A38) to the south with the Evesham road (A438) east of Tewkesbury, is located on the crest of a low ridge. Where it crosses the floodplains of the River Swilgate and the Tirlle Brook it was constructed on an embankment to raise it above flood levels.

The Swilgate and the Tirlle Brook are minor tributaries of the Severn, entering it at Lower Lode to the south-west of Tewkesbury town. The low-lying farmland around the town is notoriously flood prone, and both the Swilgate and the Tirlle Brook possess extensive floodplains which are regularly below water during wet seasons. The low ridge between them, however, escapes the worst of this flooding. Areas C and D lay on the ridge between the Swilgate and the Tirlle Brook, whilst Area F lay largely within the floodplain of the Tirlle Brook (Figs. 3 and 4). The ridge is one of many minor eminences situated in this part of the Severn Valley. The surface geology consists of clay belonging to the broad mass of the Lower Lias beds present on the eastern side of the Severn Valley between the limestone of the Cotswold escarpment to the east and Rhaetic rocks of the Combe Hill ridge to the west (BGS 1998). Rudgeway Lane lay 700 m south-east of Areas C, D and F, while The Gastons lay some 800 m directly west of Area C. In Areas C, F, Rudgeway Lane and The Gastons, only the Lias clay was encountered, but in Area D regular bands of mudstone beds outcropped at the surface, providing an element of natural drainage not present elsewhere.

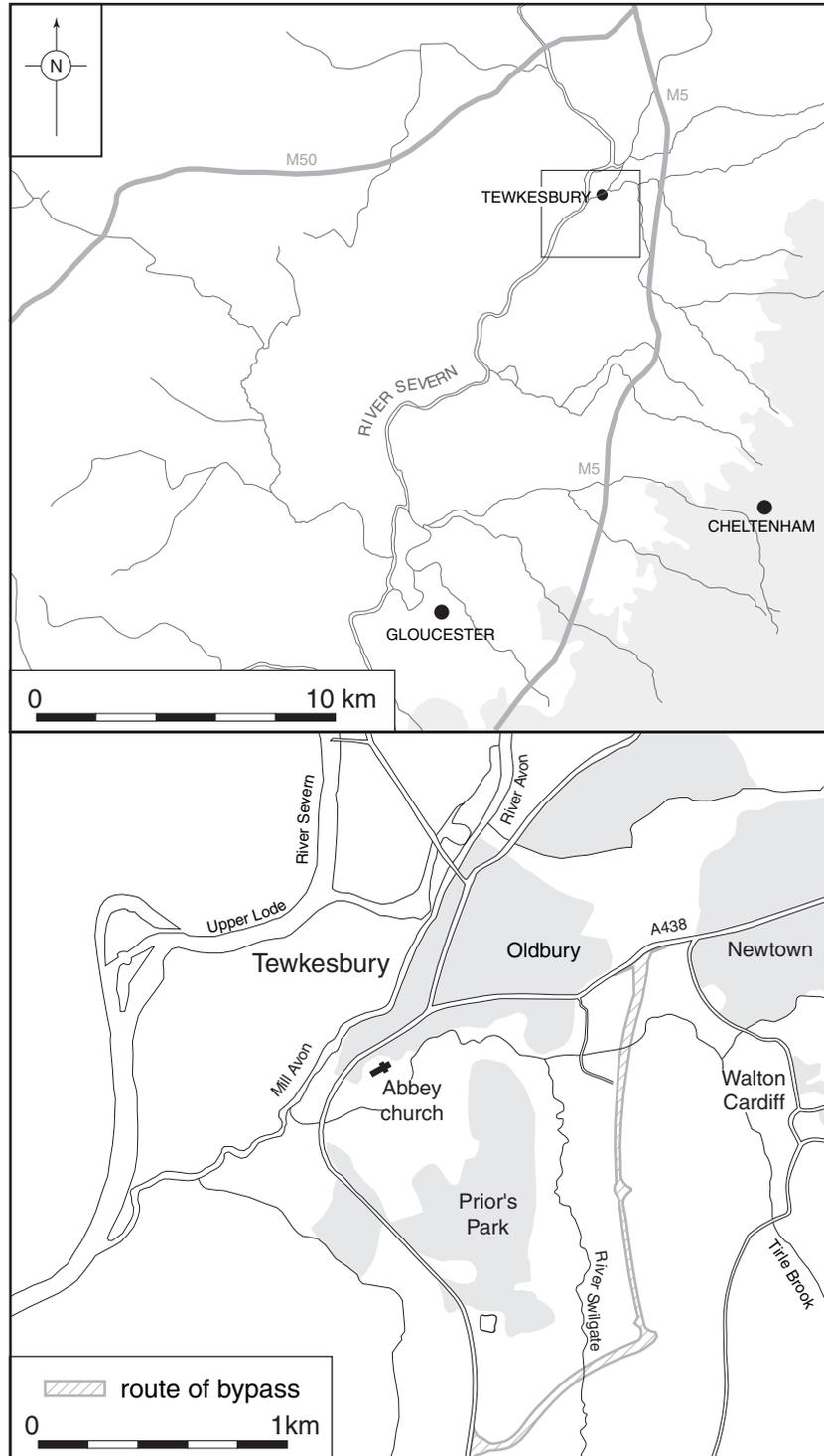


Fig. 1. Tewkesbury: general location plans.

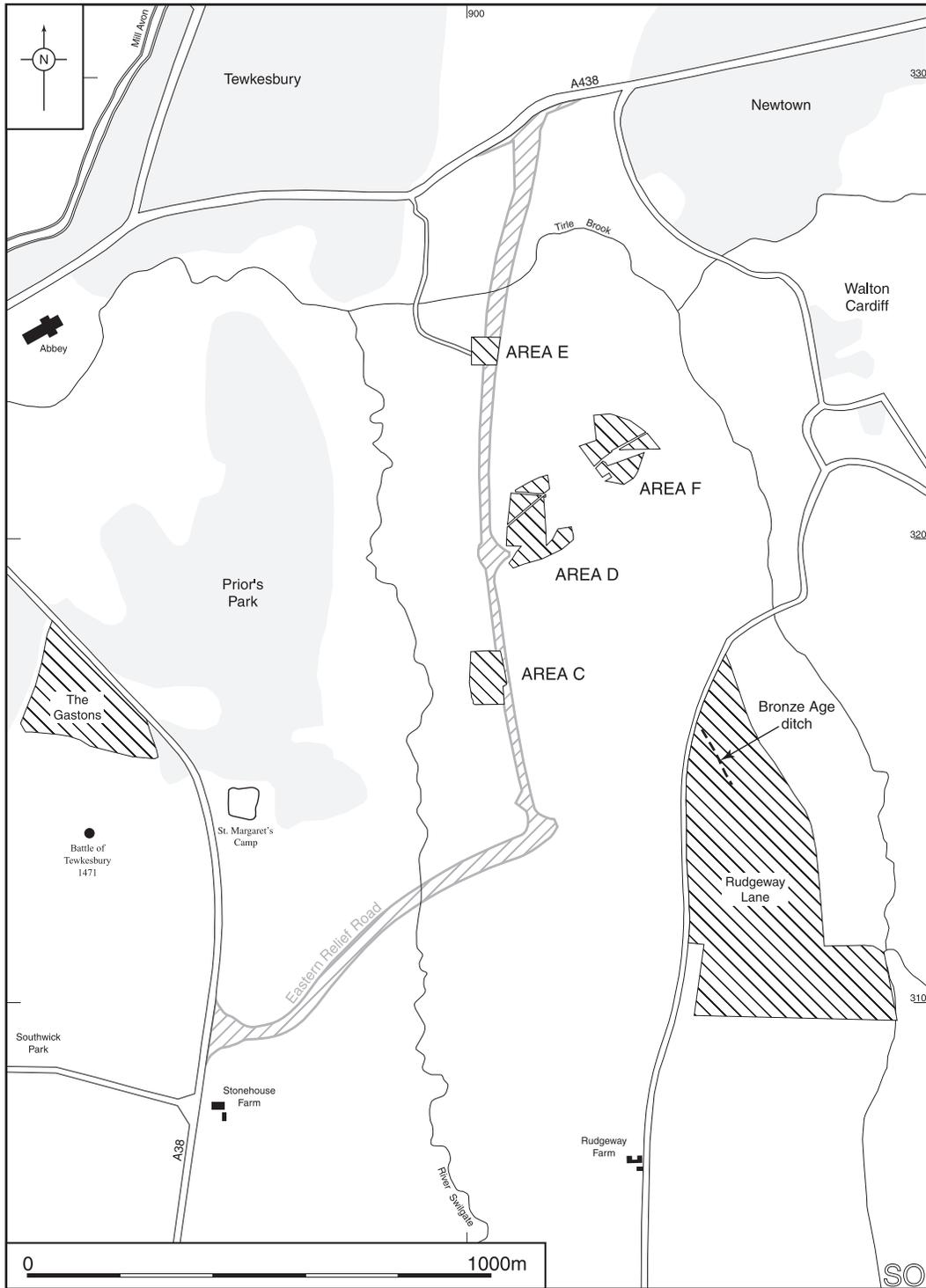


Fig. 2. Tewkesbury: location of the excavation areas.



Fig. 3. Aerial view looking west. Area F is bottom centre, with area D to the left and the River Swilgate beyond.

The Bronze-Age site and overlying Romano-British settlement in Area D were centred on O.S. Nat. Grid SO 39022320 on the eastern side of the ridge. The site sloped gently E–W from 12.0 to 13.5 m above O.D. The Bronze-Age activity in Area F lay at the northern tip of a subsidiary ridge separated from the main ridge and Area D by a damp hollow. The activity itself was centred on SO 39032323 between the 11.50 and 12.25 m contours. In Area C the prehistoric lithic assemblage and Romano-British settlement were centred on SO 39002317 on one of the peaks along the ridge, between 12 and 14 m above O.D. The evaluation at Rudgeway Lane at SO 90553152 was on relatively level ground at 15 m above O.D., while that at the Gastons, at SO 89163162, was on a south-facing slope overlooking the Southwick Brook. The latter site, at a height of 15–17 m above O.D., lay on a ridge that carries the Gloucester road into the town and in modern times has provided a flood-free area for suburban housing.

The Evaluation Projects

No prehistoric or Romano-British artefacts or sites were known from the vicinity of the new road prior to the commencement of the investigative programme. An initial desk-based archaeological appraisal of the road line and associated development area in 1991 identified several potential

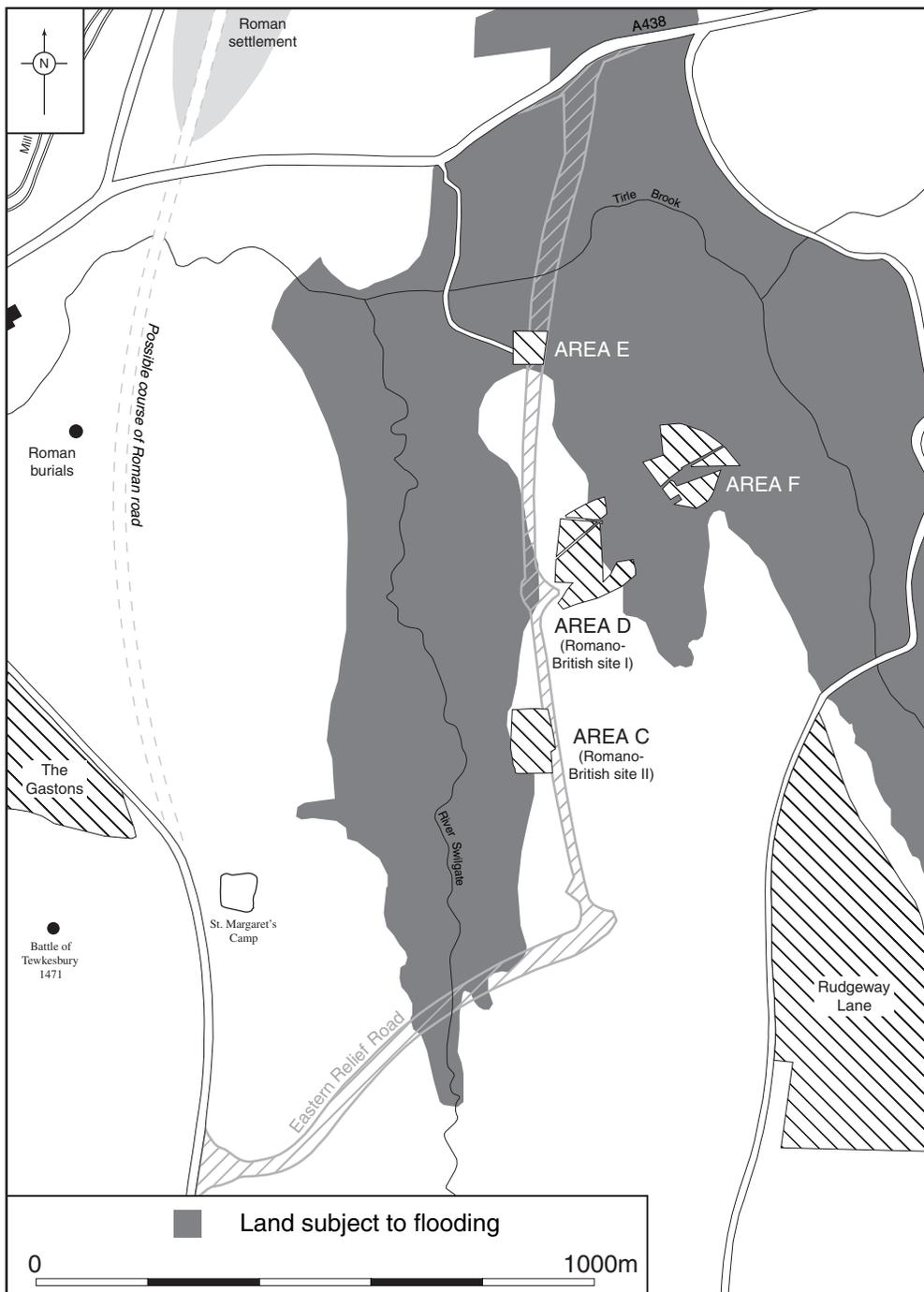


Fig. 4. Plan showing areas subject to flooding in the late 20th century. Roman topography is based on A. Hannan, 'Tewkesbury and the Earls of Gloucester: Excavations at Holm Hill, 1974–5', *Trans. B.G.A.S.* 115, fig. 38.

archaeological sites (CPM 1991). It was followed by field-walking, a metal-detecting survey, and an extensive evaluation consisting of some 50 trenches. The field-walking and evaluation established the presence of archaeological sites in four discrete areas (C–F). The evidence included high-quality Neolithic and early Bronze-Age flintwork at Area C, where Romano-British settlement discovered in the later excavations may have removed any prehistoric features accompanying the flints. At Area D, however, early to middle Bronze-Age features and artefacts were discovered, even though this site also proved to have been overlain by Romano-British occupation. In Area F a few scattered pits and postholes were associated with middle Bronze-Age casting activity (Walker 1991; 1992).

Later field-walking and evaluation of three fields to the east of Rudgeway Lane in 1993 revealed Beaker pottery and features and occasional Romano-British surface finds (Barber 1993a; 1993b). Geophysical survey and evaluation trenching were undertaken in 1997 on part of the Tewkesbury battlefield site known as the Gastons (Fig. 2), revealing middle Bronze-Age features and artefacts (Thomas 1997).

Excavation Methodology and Phasing

In the light of the results of the evaluation work for the road project a brief was set by Gloucestershire County Council Archaeology Section for the excavation of four areas prior to the road's construction. During machining it became clear that the Bronze-Age remains in Area D stretched beyond the defined limits of excavation and the area was extended to the north, south and east.

The 1991 archaeological appraisal had identified traces of ridge-and-furrow cultivation across most of the ridge between the Swilgate and the Tirlle Brook. Traces survived in the pasture north of a hedgeline which ran across Area D, and archaeological remains, although they had been truncated by this ploughing, proved to be better preserved to the north than to the south of the hedgeline. In the remaining areas modern deep ploughing had severely eroded the archaeological remains, and in many cases features survived for a depth of only a few centimetres. However, the most limiting factor in recording Sites C and D was the nature of the parent geology and overlying soils, and the reaction of these to local hydrology and prevailing weather conditions. The weathering characteristics of the Lias clay had caused archaeological features to fill rapidly with homogeneous material, blurring distinctions between the geology, feature cuts and fills. Distinctions were further diminished by the readiness of the clay to dry out and bake solidly to a uniform hue once stripped of topsoil. In many cases excavation was carried out 'blind', the presence of artefacts being the only means by which to determine the physical extent of features. These problems were compounded where features were superimposed. Very few stratigraphic relationships were discernible and the difficulties became acute in Area C where the density of features in the Romano-British settlement was greatest. Unfortunately, phasing was not greatly assisted by the artefactual evidence, particularly the pottery assemblage which was composed largely of long-lived conservative forms and beset by residuality. Thus the present account is largely devoid of detailed stratigraphic analysis and the phasing has involved a greater emphasis upon morphological determinants than would normally be the case. That many of the linear ditch alignments are partial, unconfirmed in extent, or apparently contiguous with neighbouring features presents obvious interpretation difficulties. In Area D where Bronze Age remains were overlaid by Romano-British ones, features, mostly pits, which were not independently dated by artefacts have been tentatively identified to one or other period on the basis of their fill characteristics. It was noted during excavation that there appeared to be a distinction between dated Bronze-Age or Romano-British features in terms of the colour, consistency, and inclusions of and within the fills, and this distinction has been used generally to categorise features by period. Although the limitations of such a technique are obvious, a spatial pattern has emerged from this process which appears to afford legitimacy to the exercise.

It is accepted that many alternative sequences exist to explain the development of the settlements, but the account given below is considered the most sustainable interpretation within the limitations of the evidence. More detailed accounts of site stratigraphy and feature dimensions can be found in reports of Areas C, D and F contained in the site archive.

THE EXCAVATIONS

Period 1: Neolithic/early Bronze Age

Area C

No features of definite prehistoric date were identified in Area C. However, prehistoric activity there is indicated by 16 residual flints, some of which are of Neolithic/early Bronze-Age date. They include a leaf-shaped arrowhead, a barbed and tanged arrowhead, and a plano-convex knife. All are in very fine condition and appear unused. The flints occur in a distinct cluster towards the southern end of the excavation.

Period 2: early–middle Bronze Age

Area D (Fig. 5)

Bronze-Age features and artefacts were identified in the eastern and north-eastern parts of Area D. The main feature upon which activity appeared to focus was a 'D'-shaped enclosure. It was associated with several curvilinear ditches and groups of pits. Although few of these features produced dating evidence, they have been assigned a Bronze-Age date because of their largely common fill characteristics, form and associations. Although the evidence suggests that the features are of common origin, some overlap with later Romano-British features is possible.

The 'D'-shaped enclosure

The enclosure had a maximum internal measurement of 16.6 × 11.4 m and was defined by a 0.29 m-deep ditch (3268), recut at least once and with a fill producing fragments of fired clay. It appeared to be a complete circuit without an entrance, but it was bisected by a modern hedgeline and this may mask an access point. Six pits or postholes were positioned just inside the ditch, one (3348) of which produced Bronze-Age pottery and fired clay fragments. The enclosure was divided into two unequal parts by a 0.34 m-deep linear gully (3346). The gully's fill produced fired clay fragments, possibly from a loomweight, and a rimsherd. The latter may come from a globular type urn, thus suggesting a date in the early–middle Bronze Age.

Curvilinear ditches

The relationship between the 'D'-shaped enclosure and small curvilinear ditch 3430 could not be ascertained due to the presence of a modern fence line. In addition, the relationship between 3430 and curvilinear ditch 3400 was unclear because of the identical nature of their fills, but the latter curved northwards and eastwards from a point near the northern corner of the enclosure. Ditch 3400 cut through a rectangular pit (3415) and had been recut once, although it is uncertain which is the original ditch and which the recut. They diverged slightly to the south-west where one petered out and the other terminated, although its line may have been continued by a row of five shallow flat-bottomed pits or postholes between 0.08 m and 0.18 m deep. The fill of the ditch

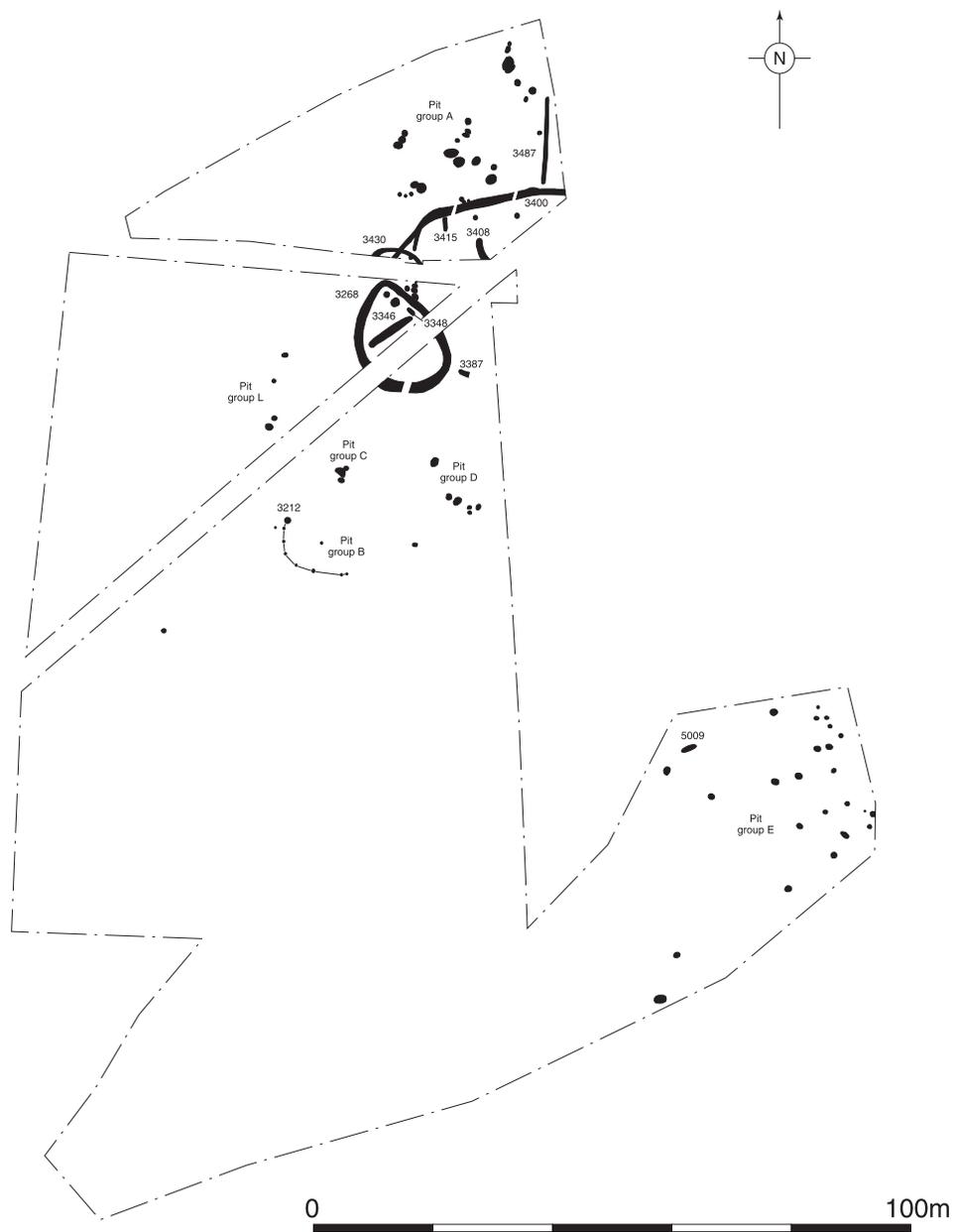


Fig. 5. Area D: early-middle Bronze-Age settlement and pits.

produced sherds of possible Bronze-Age pottery, fragments of fired clay including possible loomweight fragments, and a flint scraper. A third curvilinear ditch (3408) had a clear northern terminal but could only be traced for a length of 3.5 m. It presumably terminated a little to the south. A very short length of ditch 3387 was noted adjacent to the eastern corner of the enclosure.

Linear ditches

To the north of curvilinear ditch 3400, and approximately perpendicular to it, was linear ditch 3487, which reached a maximum depth of only 0.08 m. To the west of the enclosure a 7 m-length of ditch (not illustrated) was recorded during the evaluation in trench 29. A small amount of fragmented animal bone and burnt stone was recovered from the feature.

Pit group A

To the north of curvilinear ditch 3400 was a group of 32 pits. The function of these is uncertain, although six (3420, 3439, 3456, 3460, 3489 and 3516) contained evidence of burning in the form of blackened or reddish clay within their fills. In addition, the fills of pits 3450, 3453 and 3489 produced fragments of fired clay, while pit 3465 produced a burnt flint. A small fragment of iron in pit 3497 and single Romano-British potsherds in pits 3404 and 3439 may be intrusive. Their distance from the later Romano-British settlement makes it unlikely that they are associated with it.

Pit group B

A series of pits south-west of the enclosure appears to form an arc. The largest pit (3212) was sub-rectangular in plan, measuring $0.70 \times 0.60 \times 0.18$ m deep. It had gently sloping sides, a relatively flat base and contained two distinct fills. The primary fill consisted of a stone-free greyish-brown clay with red clay and charcoal flecking. It was sealed by an almost triangular wedge, a maximum of 0.11 m thick, consisting of charcoal, burnt clay and several pebbles, many of them burnt. An identical pit (2028) of Bronze-Age date was excavated in Area F. The remaining pits were much smaller and were spaced relatively regularly in a flattened arc.

Pit group C

To the north of pit group B was a tightly grouped linear arrangement of four small pits (3335, 3337, 3339, and 3342). All were flat-bottomed apart from 3337 which tapered to a sharp point. The secondary fill of pit 3339 was clearly burnt and contained two sheep/goat teeth. Its profile was noticeably 'V'-shaped.

Pit group D

These pits were to the east of pit group B. Many of them exhibited traces of burning.

Pit group L

An alignment of four pits lay to the west of the enclosure. All four nestled within the toe of a break of slope as if shelter from the wind was a requirement.

Pit group E

Twenty-five pits were observed in the south-eastern corner of the excavation. Several of them exhibited traces of burning. One (5009) was linear in shape, measuring $1.75 \times 0.58 \times 0.22$ m deep, and was filled with a blackened clay with fire-cracked pebbles. The date and function of these pits is uncertain although the similarity of the fills to those of the features in the northern part of the site and the presence of the fire-cracked pebbles may be indicative of a prehistoric date.

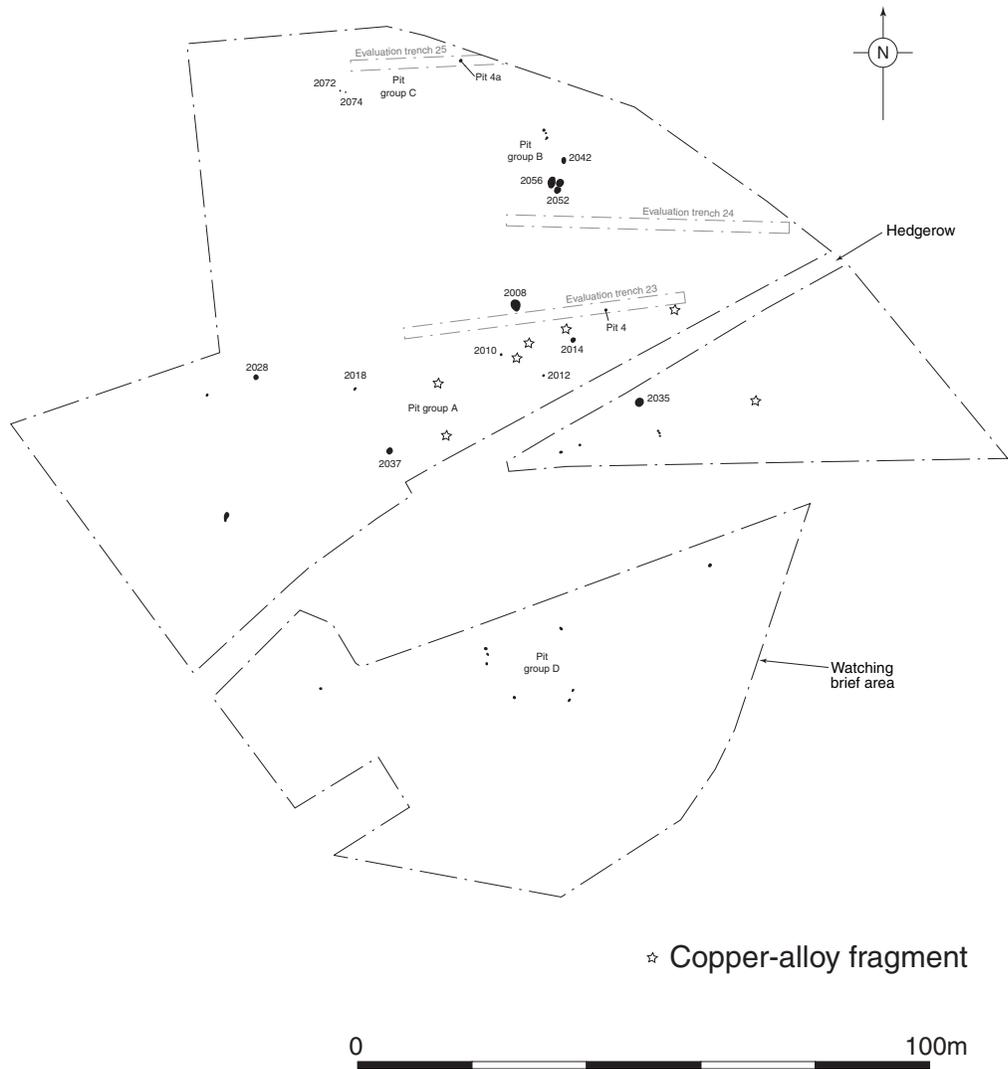
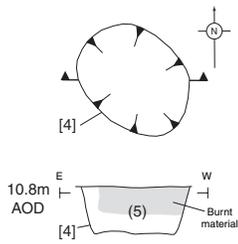


Fig. 6. Area F: middle Bronze-Age casting site.

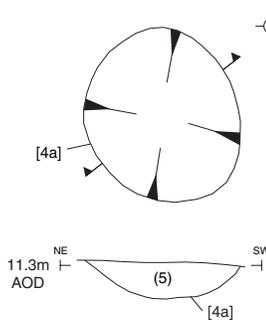
Area F (Fig. 6)

The excavation of Area F took place on both sides of a hedgerow which could not be removed. A further area to the south of the hedge was the subject of a later watching brief. It appeared that some alluvium had accumulated above archaeological features north of the hedgeline, but disturbance of the overlying layers by ridge-and-furrow cultivation tended to blur stratigraphic horizons. Several indistinct features, tentatively identified as gullies during the evaluation, proved upon further examination to be of natural origin. The area contained evidence for bronze casting and also four pit groups (A–D), some associated with stakeholes, which without exception occur in pairs.

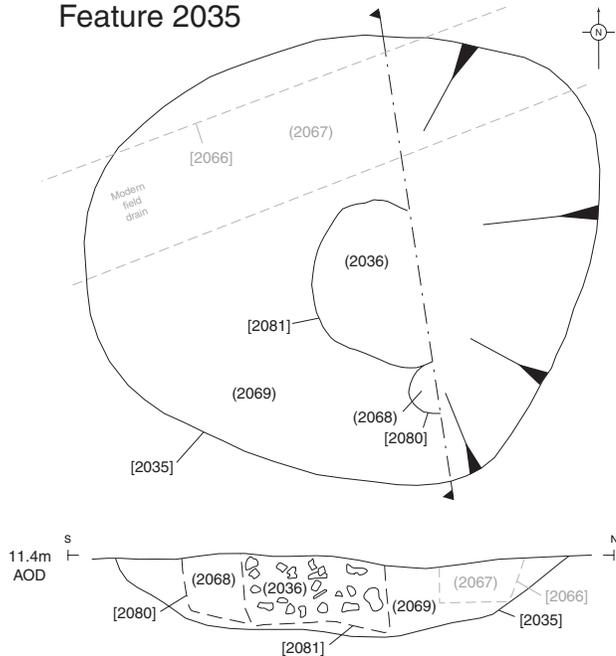
Feature 4



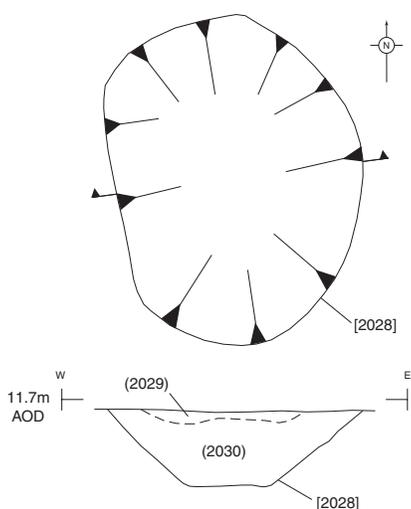
Feature 4a



Feature 2035



Feature 2028



Feature 2056

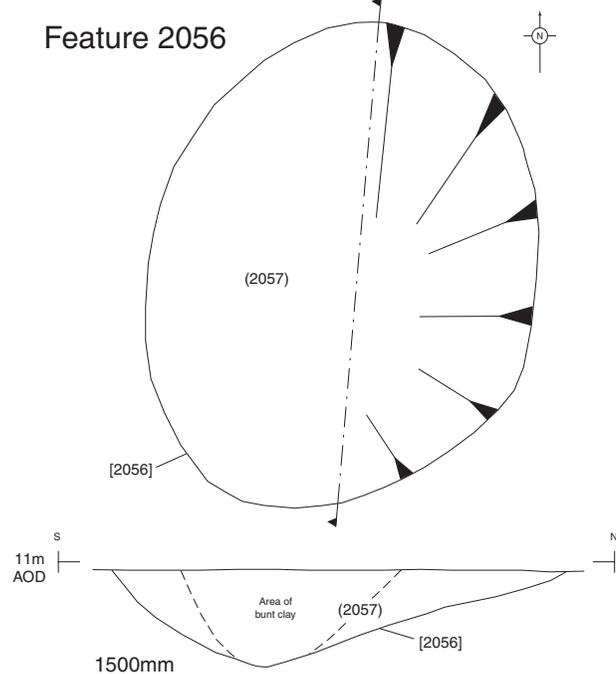


Fig. 7. Area F – Period 2: feature plans and sections (i).

Middle Bronze-Age metal working

Pit 4, found in evaluation trench 23, contained evidence for bronze casting, namely eighteen mould fragments and two bronze droplets in a fill of burnt stone and charcoal. Pit 4a in trench 25 contained a similar fill with a flint flake but no traces of mould or bronze (Fig. 7). In the excavation a single faceted large lump of fired clay was recovered from pit 2010. This pit was just 0.2 m in diameter and 0.08 m deep (Fig. 8). Other evidence for bronze casting consisted of small bronze fragments and casting debris recovered along a broad strip running E-W across the site.

Pit group A

This comprised a dispersed group of pits and stakeholes associated with bronze casting debris, spread in a broad swathe across the centre of Area F. The debris is restricted to an almost linear distribution south of pit 4 and is associated with pit 2010 and a series of other pits and stakeholes. Most of the pits in Area F contained fills of a greyish or greyish-brown clay with no finds. However, within pit group A, pits 2035 and 2028 contained markedly different fills (Fig. 7).

Pit 2035 was oval in plan, measuring $1.5 \times 1.2 \times 0.26$ m deep. It had a gently sloping profile with a flat base. The primary fill consisted of dark brown clay containing numerous small burnt pebbles and was cut by two features. The first was a small sub-circular feature (2080), 0.15 m in

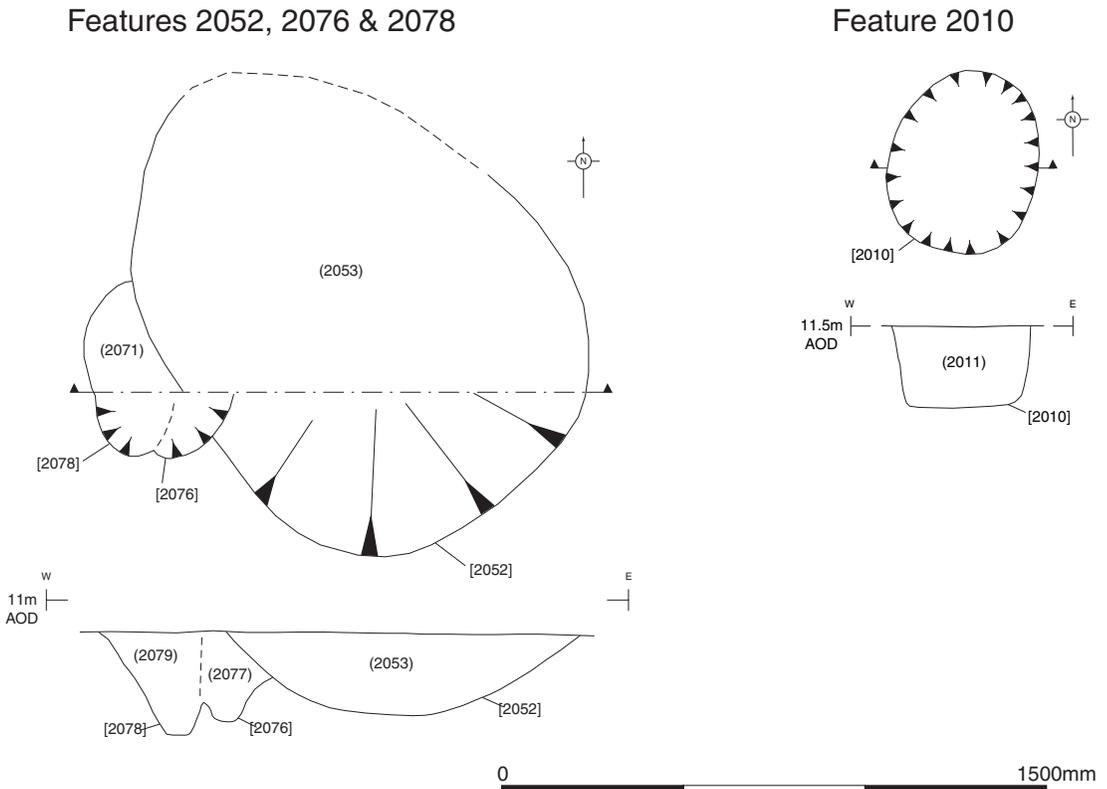


Fig. 8. Area F – Period 2: feature plans and sections (ii).

diameter and 0.18 m in depth, which contained a fill of dark brown clay. The second (2081) consisted of a small pit, 0.4 m in diameter and 0.18 m in depth, positioned near the centre of 2035 and packed with heavily burnt pebbles.

Pit 2028 was oval in plan, measuring $0.88 \times 0.70 \times 0.23$ m deep. It had gently sloping sides, a flat base and contained two distinct fills. The primary fill (2030), a charcoal flecked redeposited natural clay, was overlain by a secondary fill (2029) made up of a 0.07 m thick triangular wedge of charcoal fragments which contained numerous small fragments of burnt bone. An identical triangular wedge within a pit (3212) was noted in Area D.

Also within the pit group were two contiguous stakeholes (2018) which contained fills of clay heavily smeared with charcoal. A pair of stakeholes (2060 and 2062) was also found within a small shallow pit (2037).

Pit groups B and C

Just to the north of pit group A, these groups contained a small number of pits and stakeholes. In group B pit 2056 contained a deposit of burnt clay (Fig. 7) and the fill of pit 2052 a fired clay fragment. Pit 2052 (Fig. 8) cut through an earlier stakehole (2076), immediately adjacent to another stakehole (2078). Nearby pit 2042 produced an unworked flint from its fill. The remainder of the group produced no finds. Group C consisted of a pair of stakeholes (2072 and 2074) which lay approximately 20 m west of pit 4a found in evaluation trench 25.

Pit group D

After the cessation of the excavation of Area F a large area to the south was stripped of topsoil in an effort to gauge the extent of Bronze-Age activity. Several more pits were identified but not excavated. They appeared to be small with upper fills of greyish-brown clay. No fire-cracked pebbles, burnt clay or metalwork were found in their proximity.

Rudgeway Lane

A ditch, possibly a land boundary, was discovered running for at least 100 m in a SE–NW direction from its apparent south-eastern terminus (Fig. 2). Where sectioned the ditch was approximately 3.5 m wide and 0.9 m deep and it was infilled by clay soils containing fragmented animal bone, charcoal, burnt clay and a small assemblage of pottery which, on the evidence of a sherd of possible collared urn, may be middle Bronze Age. A narrow, near-vertically-sided recut was noted at the south-eastern end of the ditch, but was not present elsewhere. Its fill contained a residual sherd of cord-impressed Beaker pottery and several flints. A small hearth *c.* 75 m south-west of the ditch's south-eastern terminus had a pebble base and contained fragmented and burnt animal bone and sherds of pottery which might be early Bronze-Age in date.

The Gastons

Four linear ditches and two pits were discovered associated with pottery of middle Bronze-Age date. Activity appeared to be concentrated in the central part of the site where a ditch contained 33 large fragments of a middle Bronze-Age bucket urn and a few fragments of animal bone. The ditch could be traced in the neighbouring trench where it contained a flint flake. A ditch 2.2 m wide and 0.4 m deep contained fragments of fired clay and animal bone, while nearby a charcoal stained pit contained a single flint flake. Although the bucket urn is of a type frequently used in burial contexts, the arrangement of linear ditches suggests that they are surviving parts of field boundaries or perhaps an enclosure.

Period 3: Romano-British

Area D — Site I

A sequence of Romano-British enclosure and settlement was discovered in the southern half of Area D. The remains, Site I, were entirely unexpected, neither the field-walking or evaluation phases of the project having provided any hint of their presence. As a result, the original area of excavation was extended southwards and eastwards by some 50–60 m in both directions. Although desirable, it was not possible to extend the area to the west as by the time of the discovery construction of the new road had already reached the western baulk of the excavation.

Due to a lack of stratigraphic relationships and the low resolution of the dating evidence many of the Romano-British features have been grouped together as phase 1. However, several discernible stratigraphic relationships and some distinction in the dating evidence have allowed two further phases to be identified. Phase 2 is marked by a ditched trackway, whilst phase 3 is characterised by a large rectilinear enclosure.

Phase 1 (Fig. 9)

A rectilinear enclosure (A) and several linear ditches and gullies; a narrow ‘U’-shaped enclosure (B); a group of ditches (C); and a roundhouse have been grouped together in this phase. Although clearly not all contemporary, the features represent a phase of enclosure and settlement which can be assigned broadly to the 2nd century A.D.

Enclosure A and linear ditches

Traversing part of the site on a N–S alignment was a linear ditch (3357) 0.38 m deep. It petered out to the north but its line was continued by a series of truncated (0.04–0.13 m deep) postholes, which presumably formed part of a fence. Two postholes were also apparent along the western edge of the ditch. A pit (3355, not illustrated) which cut through the ditch fill to a depth of 0.08 m may have been a small hearth as its fill contained burnt clay with a high percentage of charcoal. An arm of ditch 3357 continued to the west and south to define enclosure A, some 17 m (minimum) long by 15 m wide. A few small pits within the interior of this enclosure were undated and it is unclear to which period they relate. Very little artefactual material and no conclusive dating evidence was recovered from the above features.

Immediately to the west of enclosure A were two N–S ditches (3359 and 3201). They were 0.24 m and 0.21 m deep respectively and separated by a 4-m gap, possibly for an entrance. Ditch 3359 was visible for a length of 18 m, petering out to north and south, whereas ditch 3201, which had been recut once, had a distinct northern terminal. It was butted on its western side by the terminal of ditch 3233. Between enclosure A and ditch 3201, and petering out at the same point as the northern terminal of the latter, was gully (3199) 0.11 m deep. With the exception of nine potsherds, probably of 2nd-century date, found in ditch 3359 very little artefactual material was recovered from any of the above features.

Roundhouse

To the north-east of enclosure A was a penannular gully some 8 m in diameter. The gully (3258) was 0.13 m deep and 0.5 m wide, and defined a west-facing entrance. Nine pits, some of which inter-cut, were apparent within the area defined by the gully. They were between 0.5 and 0.9 m wide and 0.08 and 0.23 m deep. A total of 46 potsherds, probably of mid–late 2nd-century date, was recovered from the gully together with 14 animal bones, two pieces of daub and a nail. The pits produced a total of 16 potsherds of similar date.

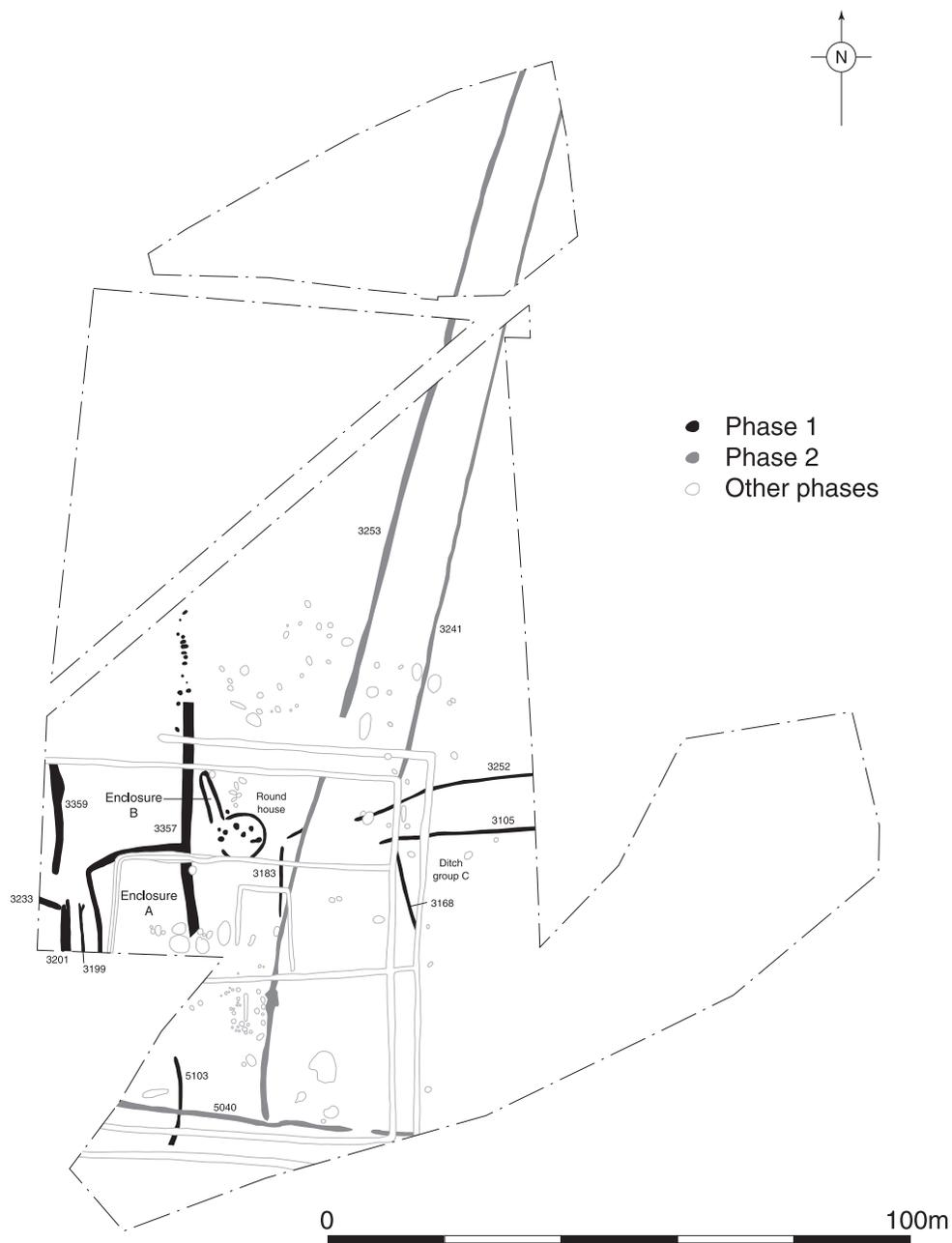


Fig. 9. Area D – Site I: Romano-British phases 1 and 2.

The gully revealed no evidence of post settings or other structural elements and is perhaps best regarded as an eaves drip gully. An effective drainage scheme would almost certainly be a necessity for any building in the area given the lack of natural drainage there.

Enclosure B

Immediately north of, and stratigraphically later than, the roundhouse was a distinctive 'U'-shaped enclosure defined by a flat-bottomed gully (3249) with a 1.45 m wide south-east-facing entrance. The gully was 0.75 m wide and the terminals were 0.31 m and 0.15 m deep. The backfill comprised domestic rubbish including animal bone, daub, vessel glass fragments, a nail, part of a loomweight, and pottery. A total of 152 sherds was recovered from the enclosure, and of particular note are a cornice-rimmed Severn Valley ware beaker, three sherds of samian, and a Dorset BB1 flat-rimmed bowl, all indicating a mid-late 2nd-century date. Sieved soil samples from both terminals also produced charred glume bases and weed seeds representative of the domestic processing of cereal grain. This artefactual group constitutes the largest and most concentrated assemblage from the site but provides no clues to the original function of the feature.

Ditch group C

To the east of enclosures A and B and the roundhouse was a group of shallow ditches. They were on two alignments broadly perpendicular to one another and shared similar dimensions, indicating they may be related. Two of the ditches 3252 and 3105 were aligned broadly E-W, converging to the west. Ditch 3252 was discontinuous — whether as a result of design or truncation is unclear — and near its western end it cut through a small group of shallow pits. Ditch 3183 struck south for a short distance from the western end of 3252 and ditch 3168 had a similar relationship to ditch 3105. Very little artefactual material was recovered from these features.

To the south-west was a curvilinear ditch (5103) 0.17 m deep. Traced for 15 m before petering out to the south, it had been cut by a single posthole. It is by no means certain that it is associated with the ditches described above.

Phase 2 (Fig. 9)

A trackway, defined by two parallel ditches (3241 and 3253) spaced *c.* 10 m apart, ran in a NE-SW direction across almost the entire excavation area. Another ditch (5040), aligned broadly E-W, lay adjacent to the terminus of ditch 3253 at the southern end of the site. All of these ditches are stratigraphically earlier than phase 3 enclosure D.

Trackway

Ditch 3253 was a maximum of 1.3 m wide and 0.33 m deep, whereas 3241 was smaller, being some 0.6 m wide and 0.2 m deep. The former extended for 111 m from the north-eastern corner of the excavation area before petering out. After a gap of 10 m it was traced for a further 63 m where it changed alignment slightly before terminating. Ditch 3241 was 121 m long and ran continuously from the north-eastern corner of the excavation to a terminal just within phase 3 enclosure D. The full length of the trackway is unknown. No trace of it was seen during the watching brief carried out in the area to the north-east, although this may be a product of the poor conditions at the time rather than the absence of the ditches. The backfill of the ditches contained relatively little artefactual material with the exception of a section cut through ditch 3253 which produced two sherds of Malvernian ware and seventy-six of Severn Valley ware broadly consistent with a later 2nd- or 3rd-century date.

At the south end of the site ditch 5040 was seen to run E-W for a distance of 57 m, including a 3-m gap for an entrance, and it clearly continued beyond both edges of the excavation. A notable

feature of the ditch is the slight deviation to the south midway along its length where it bends around the terminus of ditch 3253.

Phase 3 (Fig. 10)

The final phase of Romano-British activity in Area D on this site is represented by a large rectilinear enclosure (D) with concentric outer ditches and interior enclosures. Stratigraphically it post-dates nearly all the major features described above. Although it did not fall entirely within the excavation area, it measured *c.*75 m N–S. Its E–W dimension is uncertain.

Enclosure D

The outer concentric ditches, 3245/5093 and 3261/5049, were *c.*1.0 m wide, 0.3 m and 0.4 m deep respectively, and spaced 3.5 m apart. Ditch 3245 did not form an entire circuit, terminating some way short of the western baulk of the excavation. Ditch 5019, running E–W, apparently divides the enclosure into two equal parts as it meets outer ditch 3245 exactly at its midway point on the eastern side. However, in the middle of the enclosure it bears slightly southwards resulting in an asymmetric division. The northern half of the enclosure was further subdivided by ‘L’-shaped ditch 3181 which defined an enclosure 46 m (E–W) by 37 m (N–S). Ditch 3181 was recut by a ditch, 0.19 m deep, containing a fill noticeably darker and stonier than the silted fills of the other ditches. The enclosure defined by ditch 3181 contained a small rectangular enclosure defined on three sides by ditch 3146 with an entrance on the western side and on the south side by ditch 5019.

A total of 175 potsherds was recovered from the outer boundary ditches together with a small quantity of animal bone and daub. A further 82 sherds and 35 animal bones were recovered from internal ditch 3181, mostly from its recut, together with several large brick fragments. Ditch 3146 of the small internal enclosure yielded 50 sherds, along with 23 bone fragments, three pieces of daub, three tile fragments and parts of a *tegula*. The pottery assemblage associated with enclosure D contained 12 sherds of samian (forms Drag 37, 18/31), a significant quantity in contrast to the scarcity of the ware overall. Several Severn Valley ware tankards were also present along with white-slipped tableware. All of these vessels indicate a serving and drinking function and would be typical of a fairly modest establishment. The latest material from all these groups need not be later than the late 2nd or early 3rd century.

Undated

Numerous pits of varying dimensions were distributed across Area D (Fig. 9). Some of these form cohesive groups and are described below.

Pit group F

Immediately to the north of enclosure C were four large oval pits which varied in size from 1.60 × 0.84 m to 4.30 × 1.53 m and in depth from 0.19 to 0.46 m. Interspersed between the larger pits were several smaller pits with diameters between 0.4 and 1.0 m and similar in depth to the larger features. The pit fills contained no indications of what their function may have been, the only artefactual material being a flint scraper.

Pit group H

To the west of pit group F was a group of 21 pits. They ranged in diameter from 0.5 to 1.0 m and included a few stakeholes and some larger pits. The group covered a broadly rectangular area measuring approximately 21 × 10 m. It is possible that some of the pits represent the truncated remains of post-pits and, in conjunction with the stakeholes, might outline the floor plan of one or more rectangular structures. There was very little in the fills to indicate function, although two pits (3051 and 3104) contained heavy deposits of charcoal which might derive from hearths. Very

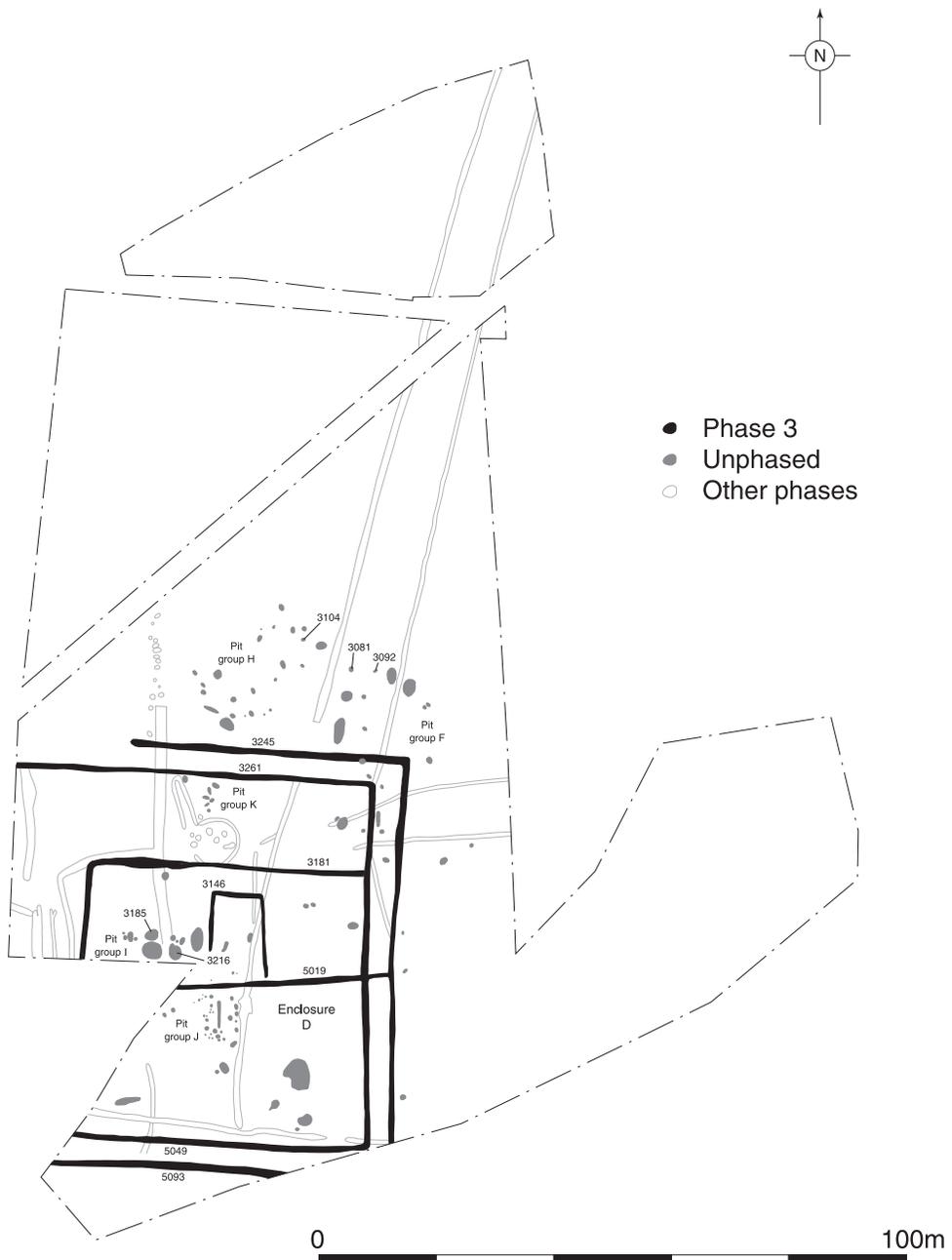


Fig. 10. Area D – Site I: Romano-British phase 3 (enclosure D) and unphased pits.

little artefactual material and no conclusive dating evidence was recovered. The lack of artefacts suggests that if the remains represent a structure then it may have had an utilitarian rather than a domestic function.

Pit group I

Numerous pits and some short linear gullies were present within enclosure D, but it is uncertain how many are contemporary with it. A group of large deep pits immediately west of the entrance to the small enclosure defined by ditch 3146 was stratigraphically later than ditch 3357 of enclosure A. These pits produced relatively little material with the exception of 3216 and 3185 which contained 50 and 19 potsherds respectively. Several large brick fragments were also recovered from the former, and the pit group in general contained a large quantity of mudstone fragments. This material breaks naturally into flat, generally rectangular blocks and may have provided convenient building material, although its use as such cannot be proven.

Pit group J

A group of much smaller pits and possible postholes/stakeholes was present immediately south of ditch 5019. Some of the pits in the group were stratigraphically later than a modern land drain, calling into question the antiquity of the remainder.

Pit group K

A short row of elongated pits or truncated postholes was seen within the northern boundary of enclosure D. No evidence was recovered to indicate function and their distribution appears too compact for a fence.

Other pits

A scatter of small pits was found south of pit group F and across enclosure D. They varied in width and diameter from 0.49×0.44 m to 1.23×0.70 m and in depth from 0.10 to 0.24 m. They are not all contemporary and there was little in their fills to identify function although pit 3081 contained possible stone packing and 16 fired clay fragments, and pit 3092 contained charcoal and burnt clay. Pit 3092 also contained a circular flat tile, possibly a lid from a large storage jar. The other pits produced just one piece of fired clay between them and no conclusive dating evidence was recovered.

Discussion of Site I

In phase 1 it appears that the settlement (Site I) comprised a roundhouse, *c.*8 m in diameter, surrounded by ditches and fences, some of which may have defined enclosures. The establishment of the trackway and associated boundary in phase 2 may represent either a re-ordering of the settlement or an overlap in activities. The trackway provides access between the settlement and the floodplain of the Tirlle Brook and may have been the route for driving grazing animals to and from pasture.

The existence of buildings in the Romano-British architectural tradition in the later phases is indicated by the presence of *tegula* and brick fragments. It is also possible that squared-off mudstone blocks found in pits within enclosure D were employed in structures. The absence in the later phases of foundation trenches for buildings suggests truncation of the features, buildings founded on sill beams, or buildings located close to, but not within, the excavated area. If the buildings were constructed largely of organic materials below a ceramic tiled roof little would be likely to have survived the later ravages of arable farming.

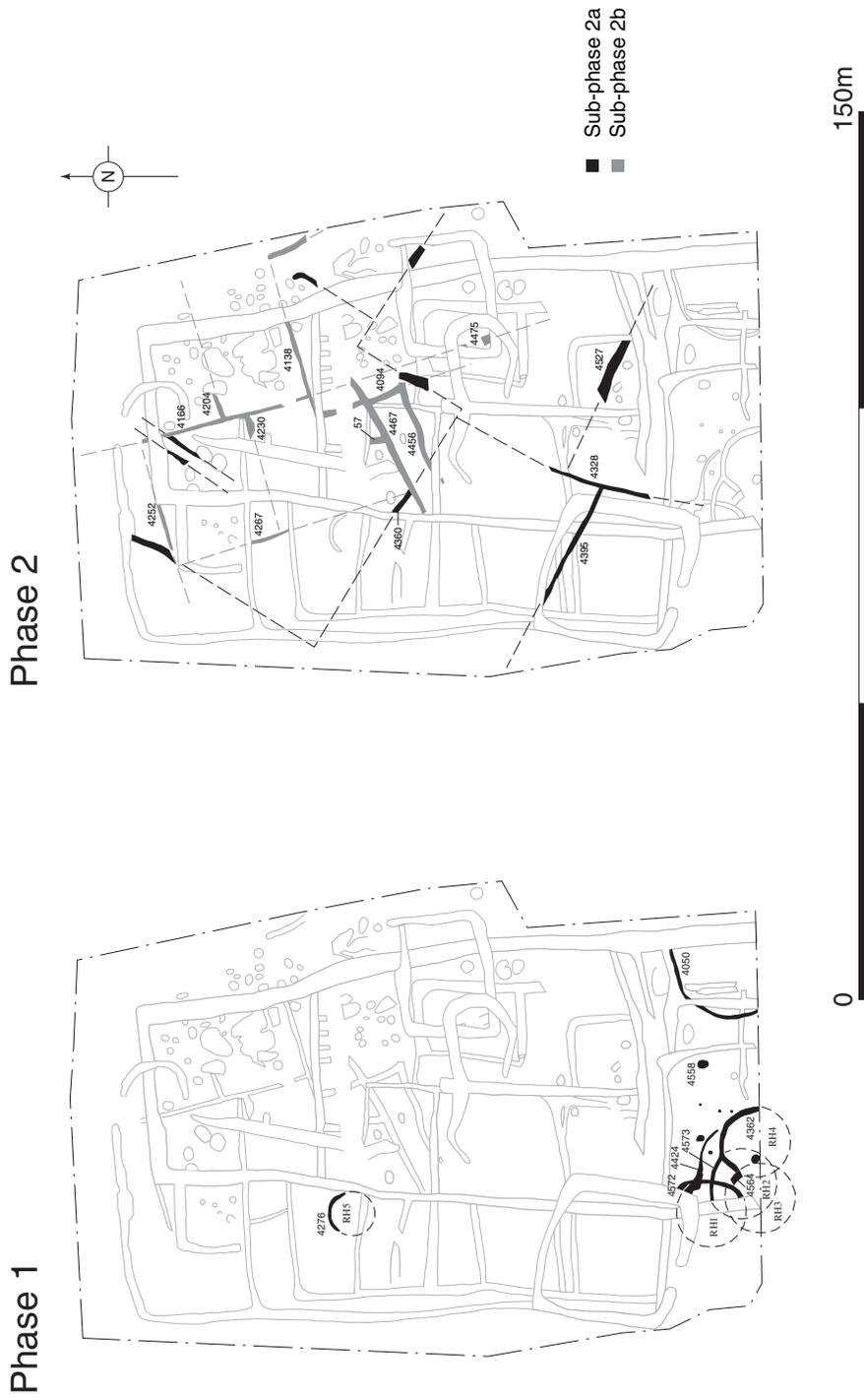


Fig. 11. Area C – Site II: phases 1 and 2.

Area C — Site II

Approximately 200 m to the SSW of the Romano-British settlement in Area D (Site I) was a complex occupation sequence of Romano-British date but with possible late Iron-Age antecedents, Site II. In the following account the site has been classified into four phases which are broadly chronological. However, specific developments within and between each phase are open to alternative interpretation. In summary, phase 1 included several curvilinear gullies, dating from the late Iron-Age/early Roman period through to the early 2nd century; some may represent the remains of roundhouses. Phase 2 consisted of two groups of rectilinear ditches defining plots or small field systems of possible 2nd-century date. Phase 3 comprised a complex sequence of enclosures encompassing an area *c.* 100 × 60 m and dating to the 2nd–3rd centuries; included within this phase is a large number of pits. Small curvilinear features are associated with phase 4, together with linear ditches and pits which can be dated to the mid 3rd–4th centuries.

With the exception of the possible roundhouses in phase 1, no building plans were detected. Although small quantities of Romano-British building materials betray the presence of structures, analysis of the distribution of these artefacts has not helped to identify their location.

Phase 1 (Fig. 11)

At the southern end of the site was a noticeable concentration of narrow curvilinear gullies, pits and postholes. Several of these gullies may be remnants of five roundhouses or similar structures, but it was not possible to establish their stratigraphic relationships. Sherds of late Iron-Age or early Roman pottery were recovered from some of the gullies while others produced assemblages which suggest an abandonment date in the early 2nd century. This suggests the focus of settlement in the late Iron-Age/early Roman period lay in the southern end of the site.

?Roundhouses

A possible roundhouse (RH1) was defined by a gully (4572), 0.33 m deep and possibly recut once. The gully contained 41 potsherds of late Iron-Age or early Roman date. The relationship between this and another possible roundhouse (RH2), the latter defined by a gully (4573) 0.17 m deep, had been removed by a modern field drain. Gully 4573 contained five sherds of 2nd-century pottery. To the south another curvilinear gully (4564) may have defined yet another roundhouse (RH3). Relationships between these gullies and another roundhouse (RH4) could not be established, but the latter was defined by gully 4362, 0.31 m deep, which yielded four 2nd-century potsherds. Approximately 60 m to the north of this group of putative roundhouses was a curvilinear gully (4276), 0.15 m deep, containing seven potsherds of 2nd-century date. It also may have defined a roundhouse (RH5).

Gullies and pits

Several other gullies and pits were noted in the vicinity of the group of putative roundhouses (RH1–4). One gully (4424) was 0.24 m deep and yielded three potsherds of late Iron-Age or early Roman date. To the east a pit (4558), 0.29 m deep, produced 11 potsherds predominantly of late Iron-Age or early Roman date, but with some intrusive post-medieval material. The relationship between the roundhouses and a 0.51 m-deep curvilinear ditch (4050) *c.* 15 m to the east is not known, nor is the function of this ditch. Twenty-five potsherds, possibly of early–mid 2nd-century date, were recovered from the ditch fill and a sieved soil sample also produced charred glume bases and weed seeds representative of domestic processing of cereal grain. A cluster of six small pits and postholes, from which 28 potsherds of 2nd-century date were recovered, was found in the immediate vicinity of the other roundhouse gullies, but it might belong to phases 2 or 3. The pottery assemblage from phase 1 included a fine whiteware bowl similar to Young (1977) W53; a



Fig. 12. Area C – Site II: sub-phases 3a and 3b, and phase 3 pits.

sherd of rusticated ware in a reduced limestone-tempered ware; and a small number of Dorset black-burnished ware sherds. Together they suggest an early 2nd-century date for the abandonment of these features.

Phase 2 (Fig. 11)

To the north of the cluster of possible roundhouses were two distinct alignments of linear ditches. Many of the ditches could be traced over only short distances and reconstruction of the rectilinear plots or small fields which they may represent relies on conjecture. They appear to illustrate a morphological development within the settlement quite distinct from the preceding period of curvilinear features and the subsequent phase of enclosures with regular N–S and E–W axes. The chronological distinction between the phase 1 features and phase 2 ditches is not clear and there may be a degree of overlap as some of the ditches also produced 2nd-century pottery. The function of the ditches is uncertain and they may represent only a remnant of their original extent. The division of the phase into two sub-phases implies no assumptions about the relative dates of the two alignments.

Sub-phase 2a

These plots were aligned NE–SW and represented by ditches 4328 and 4395, both *c.*0.70 m wide and respectively 0.18 and 0.09 m deep. Short lengths of ditches 4360, 0.82 m wide and 0.1 m deep, and 4527, 0.16 m deep, may also be part of this phase. Only a small amount of artefactual material, including some 2nd-century pottery, was recovered from these ditches. Several other short lengths of ditch also appear to conform to the general alignment and layout of these plots.

Sub-phase 2b

In the northern half of the site a series of ditches on a NW–SE alignment was apparent. The width of these ditches varied between 0.31 and 0.90 m, the depths between 0.16 and 0.90 m. Ditches 57, 4094, 4138, 4166, 4204, 4230, 4252, and 4267 form a group of rectilinear plots, each *c.*16–20 m wide. Over 200 potsherds, including 2nd-century wares, were recovered from these ditches, with over 100 sherds of early to mid 2nd-century date from ditch 4094. Shallow ditches 4456 and 4467 immediately to the south have been included due to their similar alignments and the occurrence of 2nd-century pottery, but their slightly irregular appearance makes their assignment less secure.

Phase 3 (Figs. 12–14)

Subsequent development of the site focused on a realignment to a N–S axis creating a coaxial pattern of contiguous rectilinear enclosures of varying size. The most prominent element of the phase is the large rectangular enclosure aligned N–S and defined by ditch 4033. The eastern, western and northern boundaries are relatively constant through the phase, apart from some evidence of recutting. It is unlikely that an enclosure of this size and irregular shape was a single creation. Its morphology together with a few discernable stratigraphic relationships suggests an organic growth, probably redefining existing boundaries while extending them to incorporate new areas. Although the pottery recovered from the settlement can generally be dated to the 2nd or 2nd–3rd centuries, the high rate of residuality hinders stratigraphic analysis of developments. Despite this, it seems that the development of the settlement was reasonably regular with extensions to the original design being added as required, sometimes replicating earlier elements. The development model offered below, however, is tentative.

It is suggested that a central rectangular enclosure (C) was extended northwards and southwards by the addition of enclosures (A, D and E), the whole group being bound together by recut ditch



Fig. 13. Area C – Site II: sub-phases 3c and 3d.

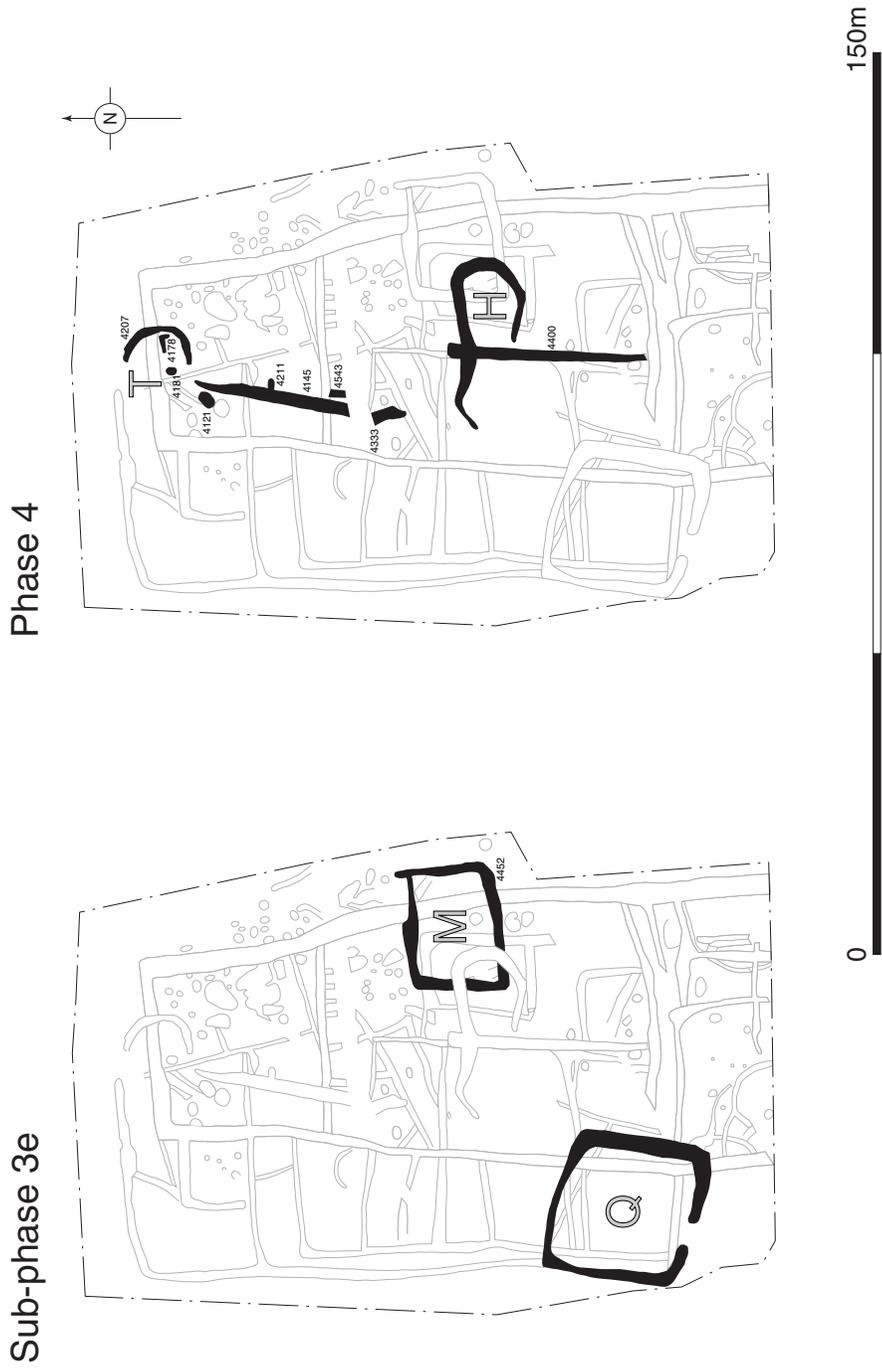


Fig. 14. Area C – Site II: sub-phase 3e and phase 4.

4033 (sub-phase 3b). An extension (O) was then added to the west, perhaps at the same time as the interior of C was subdivided (sub-phase 3c). The western extension was replaced by a larger version (P) sharing a similar design (sub-phase 3d). Minor modifications were made and a small well-defined enclosure (Q) was added in the south-west corner. Another enclosure (M) on the eastern side was perhaps also laid out at this time (sub-phase 3e). The overall impression gained is of a number of relatively rapid changes from the early-mid 2nd through to the early-mid 4th century.

Sub-phase 3a: Enclosure C (Fig. 12)

The western and eastern ditches of the elongated enclosure formed by ditch 4033 are irregular in alignment, but they bend directly opposite one another immediately north of a ditch (4512) aligned E-W. Another bend occurs in the western ditch, just south of another ditch (4048) aligned E-W. These kinks may be the result of adding new enclosures of slightly different size or alignment to an existing enclosure. As all subsequent developments appear to focus on enclosure C, this may be the central core and therefore the earliest element of the design.

Enclosure C is defined to north and south by ditches 4512 and 4048 respectively, the ditches on the eastern and western sides presumably underlying recut ditch 4033. They defined an enclosure some 57×41 m in size. A total of 14 potsherds of 2nd-3rd-century date was recovered from ditch 4512, and another 23, including some 2nd-century material, from ditch 4048, with a few intrusive post-medieval wares. Ditch 4048 was cut by 4033, one of the very few stratigraphic relationships discernible in this sub-phase.

Sub-phase 3b: Enclosure A (Fig. 12)

Subsequently an area immediately north of enclosure C was enclosed. There is a concentration of pits in this area, but how these relate to the enclosure is unclear. This extension (A), measuring approximately 25 m square, was defined by a ditch which was up to 0.6 m deep and from which 109 potsherds, including a few of 2nd-3rd-century date, were recovered. Ninety-seven of these sherds, including wares dated to *c.*240-300, were found in the uppermost 0.12 m (4040) of the ditch fill on the eastern side, along with a possible storage jar lid. This suggests that the ditch, although silted up, was still a visible feature in this sub-phase.

At least 25 pits were found within enclosure A, as well as a large spread of intercutting pits and some pits which may be associated with later enclosure T (phase 4). The pits were generally shallow, measuring between 0.05 and 0.33 m in depth, and between them they produced a total of 416 potsherds. Eighteen of the pits contained potsherds of 2nd-century date and one (4233) sherds of 2nd-3rd-century date. However, the pits within the enclosure are not necessarily all of this date as pit 4211 (phase 4), which produced the largest ceramic assemblage (89 sherds), contained late 3rd-4th-century wares. Pit 4121 (phase 4) contained a circular tile fragment, possibly part of a large storage jar, found elsewhere on the site in 3rd-4th-century contexts.

Sub-phase 3b: Enclosures D and E

Extensions to enclosure C were also added to the south, with broadly the same E-W dimension. They (D and E) were separated from enclosure C by ditches 4056 and 4046 and possibly also 4566, which may have defined a track. Enclosures D and E were defined to the east and west by recut ditch 4033 and were divided by N-S ditch 4331. Both continued beyond the southern edge of the excavation area. The E-W dimensions were *c.*17 m for enclosure D and 25 m for enclosure E. The depths of the ditches were between 0.35 and 0.40 m. Enclosure D may have been sub-divided by a N-S ditch (4613), 0.4 m deep. Further activity and sub-division within both enclosures may be represented by two N-S ditches (4636 and 4638), 0.21 m deep, which may be associated with

an E–W ditch (4628), 0.22 m deep, that terminated within enclosure E. Together these ditches may have formed two sides of a further enclosure.

A total of 132 potsherds was recovered from the boundary ditches of enclosures D and E. The pottery was generally of 2nd-century date although ditch 4613 contained wares which can be dated to the 2nd–3rd centuries. Three pits were also found within the enclosures and produced a small amount of artefactual material including 2nd-century potsherds from pit 4598.

Sub-phase 3c: Enclosure C, subdivision and western extension (Fig. 13)

Several alterations to enclosure C and an extension to the west appear to have been conceived as a collection of contiguous, regular plots or small enclosures. Their maintenance is evident from occasional recutting.

Rectangular enclosure G, which measured approximately 17.5 m (E–W) by 10.0 m (N–S), was defined by a narrow ditch, 0.25 m deep, which produced a small amount of artefactual material including sherds of 2nd-century pottery. It is possible that this enclosure was joined to enclosure F to the east by gully 4438, 0.12 m deep. This small ditch produced a few sherds of 2nd–3rd-century pottery. Three shallow pits were observed within enclosure G. Two (4170 and 4380) produced three sherds of 2nd-century pottery between them. Enclosure F measured approximately 19 × 14 m and was defined by ditches which were between 0.41 and 0.5 m deep. A total of 46 potsherds was recovered from the boundary ditches, the latest of which was 2nd–3rd century in date.

Two enclosures (J and K) may have been separated by ditch 4445, 0.22 m deep, their eastern boundary having been removed by sub-phase 3d ditch 4400. The north-eastern corner of enclosure K had been recut as ditch 4510. The relationship between this ditch and ditch 4389 to the south had been removed by a modern field drain. A total of 72 potsherds was recovered from the enclosure ditches, including 2nd-century wares. A single pit (4426) was found in the north-east corner of enclosure K and another just to the east of ditch 4389; they are not necessarily contemporary with the enclosure. Pit 4426 produced 17 potsherds including 2nd-century wares.

To the east of enclosure K was a further enclosure (I) measuring c.10.5 × 10.0 m. Its relationships to ditch 4400 (sub-phase 3d) on its western side and ditch 4048 (sub-phase 3a) to the south could not be established. Three pits containing a small amount of artefactual material were found within the enclosure. One of them (4376) contained a few 2nd-century sherds. Another pit (4517) just to the north of the enclosure also produced sherds of 2nd-century pottery.

A line of square and rectangular enclosures (O) ran along the west side of enclosure C. These were defined to the north by ditch 4274, to the south by ditch 4347 and to the west by ditch 4315. Several divisions in the form of E–W ditches were apparent. Three of these ditches were continuations of the ditches defining enclosures G, J and K, suggesting that they may have been laid out as part of a unified design. A total of 86 potsherds, generally of 2nd-century date, was recovered from these ditches.

Sub-phase 3d: Enclosure C, replacement and northern and western extensions (Fig. 13)

Enclosures O were replaced by a range of slightly larger enclosures (P) defined to the north and west by ditch 4293, 0.62 m deep. Three internal dividing ditches were apparent, as was a small enclosure (R) defined by a 0.4 m-deep ditch, with a small entrance in its south-west corner. A total of 120 potsherds, the latest of 2nd–3rd-century date, was recovered from these ditches. Ditch 4250 produced four coins with a small chronological span, the latest issue being of A.D. 323–4. Unless the coins have been redeposited, it is likely that the ditch was filled shortly after this date. In addition five pits within enclosure R produced 15 potsherds of a similar date. It is evident that ditch 4400 in enclosure C must have been part of this remodelling, as it continued in use in phase 4 when it was recut.

Sub-phase 3c: Enclosures Q and M (Fig. 14)

In the south-west corner of the site, cutting the southern end of enclosures P and O and slightly offset from previous alignments, was square enclosure Q. Measuring 20×20 m internally, with an entrance in its southern side, the boundary ditch was a maximum of 1 m deep and showed evidence of having been recut. It produced a total of 59 potsherds, including wares of 2nd-century date. On the eastern edge of the site, enclosure M also appears to largely disregard previous layouts. It measured $c.17.0 \times 13.5$ m and was defined by ditches which varied in depth from 0.15 to 0.31 m. The stratigraphic relationship between enclosure ditch 4452 and ditch 4033 could not be established. The northern arm of the enclosure contained an opening apparently closed subsequently by a 0.35 m-deep ditch. A total of 234 potsherds, including 2nd-century wares, was recovered from the boundary ditches of the enclosure.

Phase 3: Pits (Fig. 12)

The clustering of pits in the north-eastern quarter of the site is noticeable, but as most of the 102 recorded pits provided either 2nd-century pottery or no datable finds at all they cannot be readily incorporated into a model of development.

Phase 4 (Fig. 14)

Limited artefactual evidence was recovered to suggest that the site continued to be occupied during the latter half of the 3rd and the 4th centuries. However, the nature of this occupation and its relationship to the earlier activity was not clear. Two possible curvilinear enclosures, two linear ditches and a few other features can be assigned to this phase, although their function is not known.

Irregular curvilinear ditch H was approximately 28.8 m long and bounded an area 8.5 m wide at its eastern end. Its ditch was a maximum of 0.46 m deep and two postholes cut the ditch fill on its northern side. A total of 479 potsherds was recovered from the ditch including forms dated to $c.240$ – 300 . To the north was semi-circular feature T defined by a curvilinear ditch (4207) up to 0.5 m deep. A total of 289 potsherds was recovered from the ditch, together with a possible storage jar lid. Forms present include an Oxfordshire whiteware mortarium Young (1077) type M22 dated $c.240$ – 400 and a Dorset BB1 conical flanged bowl which dates to after the mid 3rd century. Four pits were enclosed by feature T; one (4181) produced pottery of the same date as the ditch. However, it is possible that the remainder of these features were associated with the widely scattered pit group lying largely within earlier enclosure A, particularly as pit 4178 contained 2nd-century potsherds.

One of the N–S linear ditches from the phase 3 remodelling of enclosure C was recut by 4400. It is not clear how this relates to ditch H, though it would be logical to assume that it precedes it. A total of 123 potsherds was recovered from this ditch, including 3rd–4th-century wares. A NE–SW linear ditch (4145) was also dug at this time. It produced 255 potsherds, including Oxfordshire whiteware mortarium Young (1977) type M22, an Oxfordshire colour-coated beaker, Dorset BB1, and Severn Valley types commensurate with a late 3rd- or 4th-century date, and a possible lid from a large storage jar. Two more possible lids were found in feature 4333 immediately to the south. An adjacent pit (4211) yielded 89 potsherds including late 3rd–4th-century wares, and pit 4121 contained another possible storage jar lid. A short linear feature (4543) also produced sherds of 3rd-century pottery.

Discussion of Site II

In the early stages of occupation, habitation may have focused on an area south of the excavation boundary and taken the form of roundhouses, perhaps accompanied by small enclosures or fields. That traces of the field boundaries were recorded only within the excavation area does not preclude their existence elsewhere. Conditions were far from ideal during the watching brief conducted around the site.

The reordering that takes place in phase 3 is a significant development mirrored at Site I, but the forces or motivation behind the changes are unclear. However, all the developments at Site II are a variation on the regular form of settlement laid out at the start of phase 3. The need for drainage on the site is clear, and therefore it might have been expected that ditches on the western side would have had outlets onto the slope leading down to the floodplain. That this is not the case indicates perhaps that the ditches were as much boundary markers as drains, although truncation makes it difficult to judge if any of these features were ever substantial enough to retain domesticated stock or deter wild animals from entering productive areas. It is difficult to be precise about the activities that might have taken place in these enclosures, with the exception of the pit concentration in and around enclosure A. Following the demise of the possible roundhouses the absence of buildings is puzzling unless, as has been suggested for Site I, structures were built without foundations or were located beyond the boundaries of the excavated area. That structures may have existed in the vicinity is shown by the occurrence of brick, stone, and roofing materials of tile and stone. The last in combination might suggest repair or replacement of a building or perhaps the presence of more than one structure.

THE FINDS

Periods 1-2: Neolithic and Bronze Age

FLINT by Martin Tingle

The assemblage is composed of 40 pieces weighing a total of 294 gm (Table 1). As a whole, the assemblage reveals little evidence of flint working. There is only a single core fragment, weighing 14 gm, and more tertiary flakes (10) than primary and secondary flakes combined (4 and 5). This, together with the relatively high proportion of retouched tools to flint waste, may indicate that tools were being brought into the area either in the form of flake blanks or as finished pieces. The datable artefacts range from the early Neolithic (leaf arrowhead) to the early Bronze Age (plano-convex knife and barbed and tanged arrowhead).

Table 1. The flint assemblage.

Find	Number	Mean weight (gm)
Primary Flakes	4	5.75
Secondary Flakes	5	4.40
Tertiary Flakes	10	3.50
Broken Flake	1	2.00
Burnt Flint	3	3.30
Core Fragment	1	14.00
Scrapers	9	7.80
Leaf Arrowhead	1	1.00
Tanged Arrowhead	1	2.00
Plano-Convex Knife	1	57.00
Retouched	3	9.30
Awl	1	5.00

Almost all the items were either unstratified (20 pieces) or redeposited in later contexts (20 pieces). Three pieces derived from Period 2 features in Area D. They comprised a piece of burnt flint from pit 3465, a retouched flake from pit 3439 and a worn scraper from ditch 3400.

Perhaps the most notable piece was a large and very finely made plano-convex knife recovered from a Romano-British ditch in Area C (Fig. 15, no. 1). Measuring 102×37 mm (maximum) and weighing 57 gm, it was made from a piece of gravel flint with a striking reddy-orange colouring and it featured fine ripple flaking along the right edge. It was in pristine condition with little evidence, in terms of edge damage, of ever having been used. Edmonds (1995, 145, 159) observes that such pieces are often found with male burials and frequently associated with collared urns. The preferred use of orange gravel flint for particularly fine retouched tools has been noted elsewhere in southern England (Tingle 1991, 34).

There are also two arrowheads from unstratified contexts: a small but well made leaf arrowhead (Fig. 15, no. 2; Green Type 4A, B, 1980, 72) and a barbed and tanged, Sutton a, b type (Fig. 15, no. 3; Green 1980, 122). The latter type has been noted to occur 'with particular frequency in the graves of Beaker archers' (Green 1980, 138).

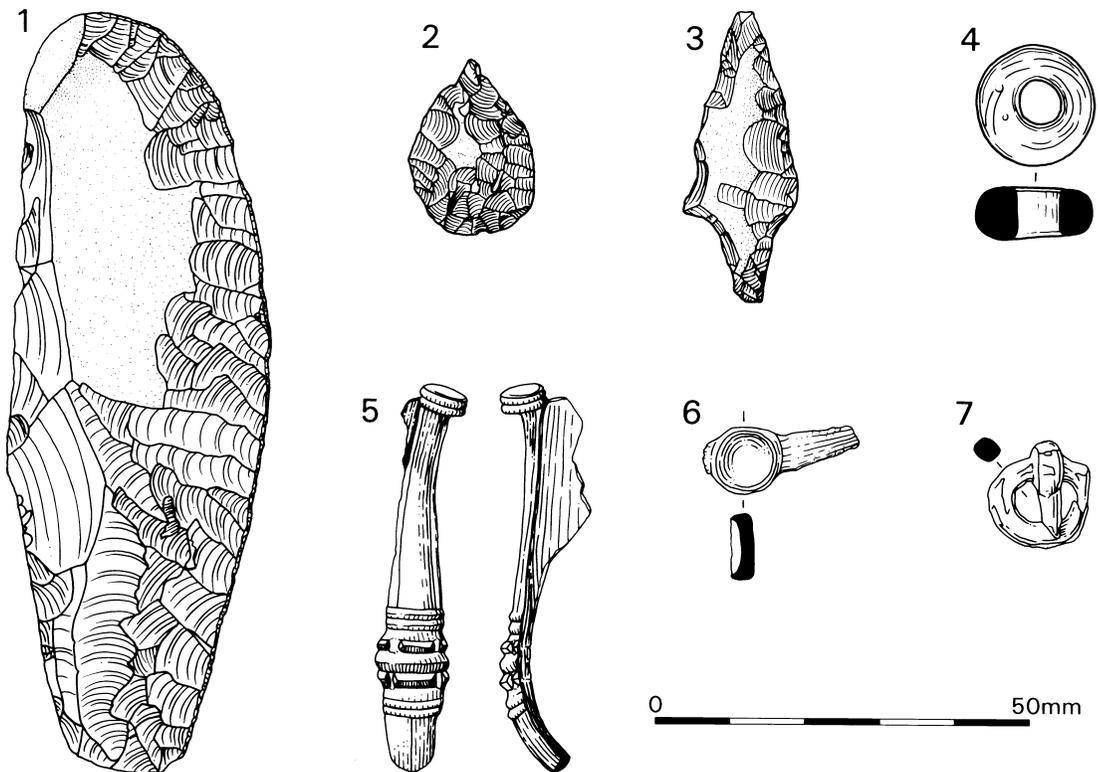


Fig. 15. Prehistoric and Romano-British finds.

Catalogue of illustrated worked flint (Fig. 15, nos. 1–3)

1. Plano-convex knife. SF 151. Area C, context 4520, ditch 4563 (Romano-British).
2. Leaf-shaped arrowhead. SF 105. Area C, context 4002, unstratified.
3. Barbed and tanged arrowhead. SF 152. Area C, context 4519, unstratified.

PREHISTORIC POTTERY by Jane Timby

Early prehistoric wares were discovered from three distinct locations, namely Area D, Rudgeway Lane and the Gastons. Much of this material was in an extremely friable state. Approximately 131 sherds/crumbs were identified dating to the ?late Neolithic, Beaker and middle Bronze-Age periods and representing a minimum of 12 vessels. Featured sherds were limited to five rims, two basesherds, one carinated sherd and one decorated sherd.

Fabrics

Nine fabrics (P1–9) were distinguished. Some suggest the exploitation of local resources, namely the Malvernian clays to the west (P5, P6) and the Jurassic outcrops to the south, north and east (P7, P8).

Grog-tempered

P1: very smooth, soapy ware with an oxidised orange exterior and brownish-black interior surface. The finely micaceous paste contains a sparse scatter of round to sub-angular grog up to 5 mm in size and rare iron. Form: worn bodysherd (Fig. 16, no. 1) from a Beaker decorated with horizontal lines of twisted cord impression above twisted-cord diagonals.

Date: Beaker.

Comment: single sherd associated with a sherd of Malvernian fabric P3 from Rudgeway Lane, context 405, ditch 411.

P2: orange-brown ware, fairly soft with a smooth, slightly soapy feel. The paste contains a sparse to common frequency of sub-angular to rounded buff and orange-coloured grog. At $\times 20$ magnification occasional sub-angular quartz, fine red-orange iron and occasional fine voids with calcareous linings are visible.

Form: single unfeatured bodysherd.

Date: ?early Bronze Age

Comment: single small sherd found with urn (P5) at the Gastons, context 1104, ditch 1103.

P3: reddish-brown ware with a black core. The sandy matrix contains rare grog/clay pellets, iron and a scatter of fine, ill-sorted quartz sand.

Form: very small, simple rim fragment from Rudgeway Lane, context 406, ditch 404.

Date: possibly Beaker.

Comment: associated with fabric P4.

P4: red-brown exterior with a dark brown interior and dark grey core. The paste contains a moderate to sparse frequency of ill-sorted rounded quartz, rare iron, grog/clay pellets up to 2 mm and occasional organic voids and rare, sub-angular, red-brown argillaceous inclusions. Rare small gastropods might suggest a clay source derived from a stream or river bank.

Form: represented by four extremely fragmentary sherds from Rudgeway Lane, context 406, ditch 404 and context 706, hearth 704. Only one shows a full wall thickness of 9 mm.

Malvernian rock-tempered

P5: a hard, black or dark brown ware with a hackly fracture. The very coarse fabric contains a common frequency of angular fragments of Malvernian rock including quartz, feldspar, biotite and hornblende up to 10 mm in size giving a rough surface feel.

Form: thirty-four sherds (Fig. 16, no. 2) from a plain bucket-shaped urn with a slightly projecting internal lip. The upper wall is pierced by a tapering hole made before firing. Pre-firing holes have been noted on

a number of vessels elsewhere, for example Bray, Berkshire (Cleal 1995, fig. 18. P8-9, who cites further examples from Sunbury, Middlesex and Acton). From the Gastons, context 1104, ditch 1103.

Form: two joining baseshersds and 23 small sherds/crumbs from a coarse Malvernian rock-tempered vessel. One bodysherd shows a slight thickening suggestive of a collar. Probably from a small collared urn. From Rudgeway Lane, context 305, ditch 304.

Form: vessel (Fig. 16, no. 3) with a slightly finer crushed temper. Orientation uncertain. A complex slightly flanged rim with small spaced depressions, probably too small for finger depressions, on both the inner and outer rim edges. From Rudgeway Lane, context 408, ditch 404.

P6: dark greyish-brown surfaces with a dark reddish-brown core. The very friable fabric contains a sparse scatter of relatively fine fragments of angular Malvernian rock with crushed inclusions of quartz, feldspar, biotite and hornblende visible. The larger fragments reach up to 2 mm but are mainly finer. The fabric has a slight waxy feel.

Form: small rim fragment (Fig. 16, no. 4) with a slightly concave bevelled inner surface accompanied by five bodysherds. Area D context 3347, gully 3346. Three joining bodysherds in a similar fabric, dark reddish-brown in colour were recovered from Area D, context 3171, pit 3170. Wall thickness 12 mm.

Comment: associated with fabrics P5 and P6.

Shell and/or limestone-tempered

P7: a dark orange ware with a grey core and a soapy feel. The paste contains sparse coarse fossil shell up to 8 mm in size and occasional voids. A scatter of dark orange clay pellets is also present.

Form: small rimsherd (Fig. 16, no. 5) accompanied by 22 fragmentary bodysherds. A simple square-topped vessel with thick walls. Probably a plain bucket-shaped urn. From Area D, context 3351, ditch 3362. A further 33 unfeathered bodysherds from a thick-walled vessel (up to 14 mm) were recovered from context 3347, gully 3346 which may be from the same or a similar vessel.

Comment: associated with sherds in fabric P4 and P6.

P8: moderately hard, slightly sandy textured clay containing sparse coarse fossil shell fragments (up to 2 mm) and a common frequency of a very fine calcareous mix comprising limestone, discrete ooliths, crushed fossil shell and calcitic fragments. Smooth, soapy feel.

Form: unfeathered bodysherds with a red-brown exterior and dark grey core. Wall thickness 7 mm. From Area D, context 3347, gully 3346 and context 3407, ditch 3400.

Comment: associated with fabrics P4 and P5.

Quartzite-tempered

P9: an orange-brown ware with a reduced black interior surface and inner core. The sherd has a rough feel and a hackly fracture. The paste contains a sparse frequency of white angular quartzite up to 5 mm in size, rare angular voids and fine rounded, dark brown or black pellets, probably iron.

Form: small, relatively thin-walled (8 mm) bodysherd (Fig. 16, no. 6) with a slight angle suggestive of a collar. Probably from a small collared urn. From Area D, context 3228, posthole 3227.

Distribution

Area D

Approximately 64 sherds of fabrics P6-9 were recovered and are provisionally regarded as middle Bronze-Age in date. They include two rimsherds. One of these (Fig. 16, no. 4) shows a thick-walled vessel, perhaps a globular-type urn with a slightly bevelled internal face, in Malvernian rock-tempered fabric P6. Sherds in fabric P7 are extremely thick-walled (16 mm) and undifferentiated with a simple vertical rim suggestive of an urn (Fig. 16, no. 5). The sherd in P9 (Fig. 16, no. 6) has a very slight wall moulding which might suggest a collared urn. Quartzite-tempered ware, although rare, has been noted in Oxfordshire at Didcot, from a collared urn or cordoned vessel

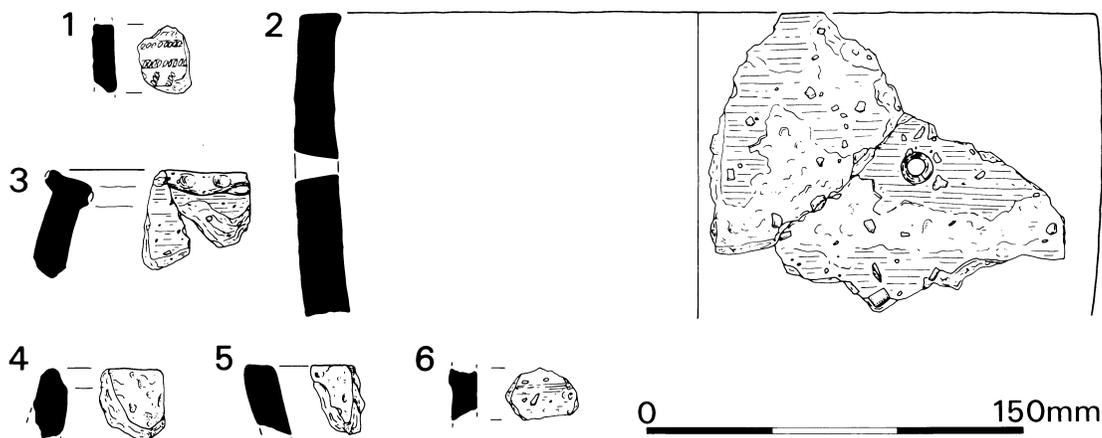


Fig. 16. Bronze-Age pottery.

of Deverel Rimbury type (Timby 1992), Abingdon (Shand 1985) and the Cassington–Eynsham area (A. Barclay pers. comm.). The pottery from Didcot and Abingdon was associated with rectilinear enclosure ditches of middle Bronze-Age date.

Most of the pottery was associated with the ‘D’-shaped enclosure. Sherds in fabric P6–8 were found in association with gully 3346 suggesting they are contemporary. Most of the sherds in fabric P7 are likely to belong to a single vessel. Further sherds from the same or a similar vessel came from the fill (3351) of ditch 3362, whilst three more sherds of P8 came from the fill (3407) of curvilinear ditch 3400. A redeposited sherd of P6 also came from the fill (3171) of Roman pit 3070 and the single sherd in fabric P9 was redeposited in the fill (3228) of Roman posthole 3227.

Rudgeway Lane

Prehistoric pottery was found in three trenches. The secondary fill of a ditch produced a rimsherd in Malvernian ware P5 (Fig. 16, no. 3). The rim is difficult to parallel and whilst it shows some typological affinities with Bronze-Age material from Bevan’s Quarry round barrow, Temple Guiting, the fabrics are quite different (O’Neil 1967, fig. 3). Alternatively, it could be late Neolithic in date as a sherd of decorated Beaker (fabric P1; Fig. 16, no. 1) was recovered from the fill of a recut of the same ditch, along with a fragment of Malvernian ware (fabric P5). Dating on single sherds must be regarded as unreliable and all these sherds may be redeposited. Other mixed temper sherds (P3, P4), possibly of early Bronze-Age date, were recovered from the fill of another section of the ditch and a spread of fire-reddened pebbles associated with a hearth. The final fill of another ditch section produced two joining baseshersds in fabric P5 and several bodysherds. One of the latter is from just below the rim of what appears to be a small urn. With this group were three sherds of slightly finer Malvernian rock-tempered ware. Although the assemblage is very small, the rim (Fig. 16, no. 3) along with the possible collared urn may provisionally suggest a middle Bronze-Age date.

The Gastons

The Gastons produced a single deposit of early prehistoric pottery from the fill of ditch 1104. This comprised *c.*33 sherds from a single urn (Fig. 16, no. 2) accompanied by a single small sherd of fabric P2. The plain bucket-shaped urn, characteristic of the Deverel Rimbury culture in the Wessex region, was frequently used as a cremation vessel in the middle Bronze-Age period.

Discussion

Although fragmentary the prehistoric material from these excavations is a valuable addition to the corpus from the area, as, although a very small group, its range of material is quite diverse. The specific association of fabrics P1–5 with Rudgeway Lane and the Gastons and of fabrics P6–9 with Area D should be noted. Whether this is due to chronology or different areas of activity can only be surmised at present. Comparable material is insufficient to refine either the chronology of Bronze-Age ceramics in this region, or to consider whether there is a difference between, for example, funerary and domestic contexts. The presence of Beaker from Rudgeway Lane might indicate a slightly earlier focus of activity there. Fabrics P3 and P4 which are both soft and contain grog would not be out of place in a Beaker assemblage. The vessel rims appear to include at least two, possibly three, elements typical of a middle Bronze-Age date, namely bucket-shaped vessels, globular urns and possibly collared urns, and suggests activity of this date at all three sites. The character of the features would suggest that the pottery from Area D is the product of a small domestic settlement. The numerous sherds of a single urn from the Gastons and their slightly better state of preservation might indicate a funerary vessel.

The exploitation of Malvernian clays is well documented from the Iron-Age and Roman periods (Peacock 1967; 1968), but little is known about their earlier use. Deposits were definitely being used earlier as evidenced by the recovery of Malvernian rock-tempered sherds, comparable with fabric P5, associated with middle-late Bronze-Age metalwork at Much Marcle, Herefordshire (Darvill pers. comm.), and with a later Bronze-Age burnt mound at Sandy Lane, Charlton Kings (Timby 2001).

BRONZE CASTING DEBRIS by Sue Bridgford

In Area F a surface scatter of four copper-alloy droplets, each with maximum dimensions of *c.*10 mm, and an uneven narrow tapered piece of copper alloy, 27 mm in length with a triangular cross-section, were found within a linear zone *c.*50 m long. It is possible that the latter item may have come from the lower end of a casting jet (Needham 1989, 69, fig. 16(87)), but it is rather narrow and is not typical of the feeders used for socketed implements. Such a piece may have been produced in the casting of a small item, such as a pin or a rivet. Alternatively, it may be the remains of a miscast loop such as that for a basal-looped spearhead. The end of such a loop could easily have failed adequately to meet the blade or socket during casting, or the loop could have broken off during removal of the mould or finishing.

A number of tiny fragments and one larger piece (maximum dimension 15 mm) of fired clay incorporating copper corrosion products were also found within the linear zone.

BIVALVE MOULD AND ASSOCIATED MATERIAL by Stuart Needham

Introduction

An assemblage of metal-working debris comprising eighteen pieces of clay refractories and two droplets of copper alloy was recovered from pit 4 in Area F. The pit fill also contained charcoal and stone, both burnt and unburnt, and it seems likely that they also relate to the metal-working activity (although they have not been seen by the author).

Clay Moulds (Fig. 17)

The refractories can all be identified as parts of moulds. In overall morphology they closely match Bronze-Age bivalve moulds, with or without core. Condition is variable; most are abraded resulting in the loss of subtle critical surface features. In particular this has often led to the loss of definition of the contact face junction and the detailed profile of the contact faces. Thus it has not been possible to distinguish clearly in this assemblage between the contact profiles of the first- and second-made valves of a mould unit.

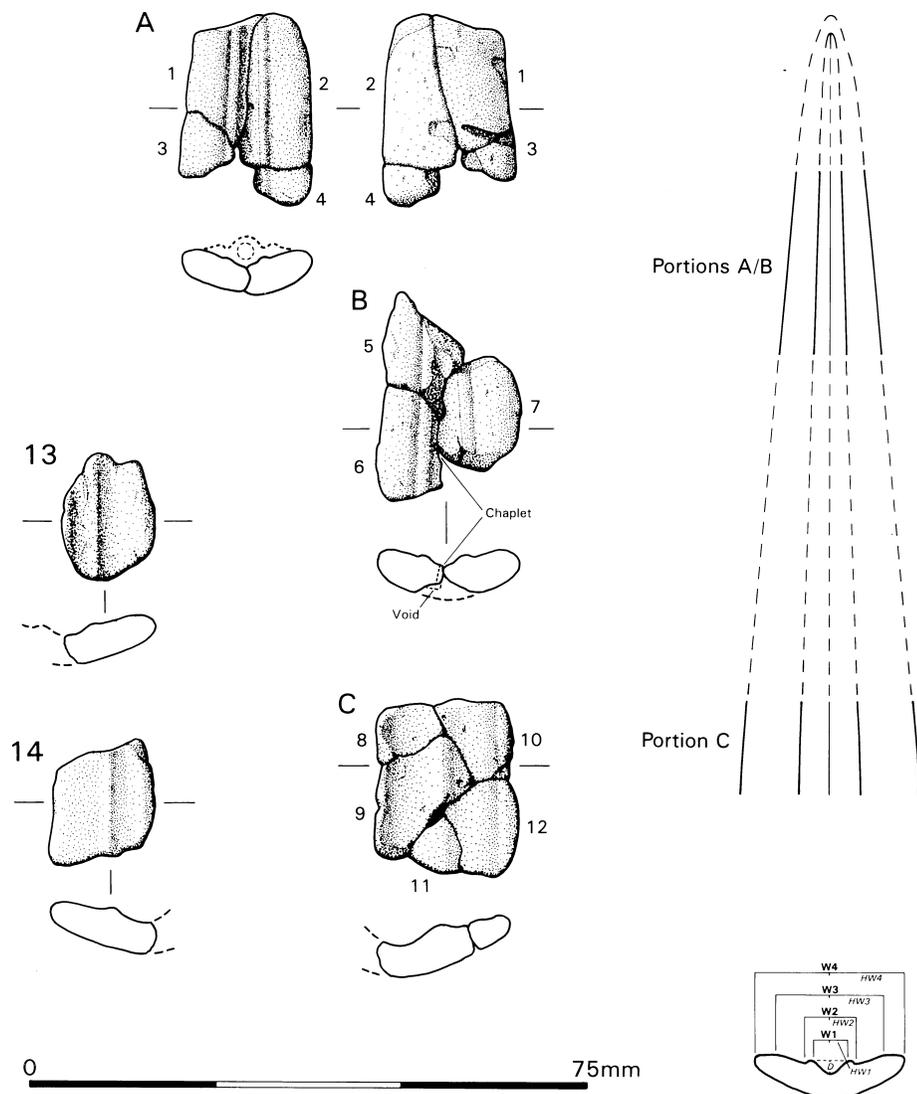


Fig. 17. Fragments of Bronze-Age spear mould.

All the fragments have a similar fine fabric with abundant sand and free of grits. Small clay pellets, some iron rich, are occasional. The moulds are well-fired but extremely friable because of the sand content. Colour is predominantly mid to pale grey but most change rapidly to a pale orange/buff close to their outer surfaces. Despite the abruptness of this change, it is not associated directly with an interface between different clay bodies which on some fragments occurs within either the grey or the pale orange part. In these cases the outer clay body, which survives relatively thinly, is almost certainly outer wrap. Its fabric, however, appears to be similar to that of the inner valves.

The 18 fragments were searched for joins. A number were found, reducing the count to nine apparently discrete pieces: three 'portions' (A, B, C, incorporating four, three and five fragments respectively) and six detached fragments. Some joins appear to be due to modern damage.

Two portions of valve (A and B) carry diagonally aligned binding impressions/voids across their backs. The impressions feature longitudinal grooves and only appear from under the outer wrap towards the sides of the fragments. Portion B also shows a longitudinal void running along the fracture of fragment 6 to terminate in fragment 5. The void retains longitudinally aligned fibrous traces; it almost certainly held a splint of woody material, which would support a long valve whilst it dried.

All of the mould pieces with diagnostic matrix features can be identified with the casting of channel-bladed spearheads. This general class basically spans the Middle Bronze Age, *c.* 1500–1150 B.C. on current dating. All the fragments appear to be for the blade, none representing the socket or the expected loops at the blade base. The blade channels (formed by upstanding mouldings on the mould) are narrow, perhaps 4–5 mm at their widest low on the blade. The midrib seems to have been cast with sub-lozengic section, neither wholly rounded nor crisp and angular. The maximum blade width that may be reconstructed (from portion C) is about 46 mm. On the evidence available it is not possible to determine whether the spearhead being cast was of the leaf-shaped or straight-based variety. A similar problem was found studying the comparable spearhead mould fragments at Grimes Graves, Norfolk, although a slight preference was given there for the later straight-based type (Needham 1991).

All of the mould fragments from Tewkesbury could easily be accommodated in a single mould. The only likely overlap in terms of the cast object is that between the bottom of portion A and the top of portion B, based on the width of the blade and midrib (Table 2). At the point of overlap

Table 2. Widths (in mm) of key features on channel-bladed mould fragments (see Fig. 17).
Figures in parentheses indicate possible loss or poor definition.

Full widths		W1	W2	W3	W4	D
Portion A	Top	5.0	9.3	(18.0)	(30.0)	2.5
	Bottom	7.5	12.0	24.0	35.0	3.3
Portion B	Top	7.0	12.0	21.0	(34.0)	2.5
	Bottom	8.5	13.0	24.0	36.5	3.5
Half-widths		HW1	HW2	HW3	HW4	D
Portion C	Middle	8.0	12.5	23.0	(28.5)	(4.5)
Fragment 13	Middle	4.5	7.0	14.0	21.0	(2.0)
Fragment 14		6.8	9.5	18.0	23.5	3.7



Fig. 18. Fragment of spear mould with chaplet *in situ* (scale 5:1). Copyright British Museum.

these portions can in fact be seated together as complementary valves. This seems the most economic reconstruction, but even if a single mould is represented only a small part of it has been recovered.

Too small a proportion of the mould or moulds is extant to allow reconstruction of blade size with any confidence, but extrapolation suggests a relatively long blade, at least 280 mm long. Such spearheads are furnished with long sockets formed by carefully setting a long clay core between the inner mould valves. On long castings and those with thin walls accurate positioning of the core is critical. To ensure it would not be dislodged by the force of the molten metal on casting, a chaplet might be used, usually made of copper-alloy like the object to be cast. Chaplets are small pins or wedges set between core and valve to maintain the width of the matrix cavity. They might be embedded in the valve to resist movement and then later ground away from the surface of the casting which had flowed and fused around it. Little evidence for chaplets has been reported for Bronze-Age metalwork, despite the frequency of long socketed castings. This is presumably because of their consistent removal from the surfaces of successful castings. The presence of a small copper-alloy pin, almost certainly a chaplet, visible in the broken section of mould fragment 6, is thus of some note (Fig. 18). The pin is a flat strip some 5.5 mm long and 0.6 mm thick and it tapers from 1.9 to 1.0 mm away from the matrix. It must have sheared away from the casting when the mould was being broken off. A second chaplet may be indicated by a small patch of verdigris on an inner corner of fragment 4. Chaplets of two forms have been identified on some Wilburton type metalwork (Northover 1982, 94), whilst the channel-bladed spearhead in the Ambleside hoard, Cumbria, had evidently been cast with organic chaplets in place (Craddock in Needham 1982, 12–13).

Copper-Alloy Droplets

Two pieces of copper alloy were recovered from the pit alongside the mould fragments. Both are tiny and presumably waste droplets. One is ovoid, 4.5 mm long, while the other is lumpier and 6.7 mm long.

Period 3: Romano-British

ROMANO-BRITISH POTTERY by Jane Timby

Sites I (Area D) and II (Area C) yielded approximately 7,085 sherds of mostly Romano-British pottery weighing 69.45 kg (Tables 3 and 4). To this can be added a small group of 22 sherds from the Gastons and about 60 sherds from Rudgeway Lane. The assemblage was sorted into fabric types and quantified by sherd count, weight, and estimated vessel equivalent (eve) for each excavated context. The considerable number of small fragments (less than 10 mm²) present was counted and weighed but not sorted into fabric types. The quality of the material is very variable with some fairly large, unabraded pieces, but also a large number of more fragmented sherds giving a low overall sherd weight of just 9 gm. The ground conditions were not particularly conducive to the preservation of the pottery, and in many cases sherds had lost their surfaces making identification difficult.

Late Iron-Age/Early Roman Pottery

Site II produced a small collection of 196 sherds from native handmade vessels. Three fabrics were dominant, namely grog-tempered wares (GROG), Malvernian rock-tempered wares (MALREA) and Malvernian limestone-tempered wares (MALL1–2), accompanied by a small number of other types. The Malvernian limestone fabrics were current from the later 1st century B.C. and the grog-

Table 3. Romano-British pottery from Site I (Area D).

* = less than 1%

	Fabric	Description	Number	%	Weight (gm)	%	Eve	%
<i>Prehistoric</i>								
	PREH		79	7	438	4	0	0
<i>Roman</i>								
Import	SAM	Samian	22	2	180	2	26	4
Regional	BATAM	DR 20 amphora	1	*	4	*	0	0
	DORBB1	Dorset black-burnished	147	14	1,705	17	100	16
	OXFWH	Oxfordshire whiteware	1	*	4	*	0	0
	MORT	Unclassified mortaria	1	*	146	1.5	0	0
Local	SVWOX2	Severn Valley ware	732	69	7,231	72	471	74
	MALREA1	Malvernian Group A	6	*	29	*	0	0
	MALREA2	Malvernian Roman	21	2	93	1	0	0
	GREY	Miscellaneous sandy grey	20	2	148	1.5	38	6
<i>Post-Medieval</i>								
	PM	Post-medieval wares	17	1.5	123	1	0	0
Total			1,047	100	10,101	100	635	100

tempered wares from the early 1st century A.D. All three fabrics continue to occur well into the early Roman period, especially on rural sites. The Malvernian rock-tempered tradition originated in the Iron Age but continued well into the Roman period.

Description of fabrics (GL = Gloucester City Archaeological Unit type fabric reference number)

MALREA1: Malvernian rock-tempered ware (GL TF18). (Peacock 1968, group A)

Form: tubby straight-sided jars with a burnished finish (Fig. 20, no. 28) and bowls (Fig. 19, no. 4).

Date: middle Iron Age-Roman.

Comment: Site II produced 99 sherds, some of which are probably of Roman date.

MALL1: Malvernian limestone-tempered (GL TF33). (Peacock 1968 group B1).

Form: handmade jars with everted rims and a burnished finish.

Date: middle-late Iron Age/early Roman.

MALL2: Malvernian limestone-tempered ware (GL TF216) (Spencer 1983).

Form: large storage jars with hammer-head rims.

Date: 1st century B.C.-A.D.

GROG: grog-tempered ware (GL TF2A-C).

Form: handmade and wheelmade everted rim jars (Fig. 19, no. 9).

Date: 1st century A.D.

Table 4. Romano-British pottery from Site II (Area C).

* = less than 1%

	Fabric	Description	Number	%	Weight (gm)	%	Eye	%	
<i>Roman Import</i>	SAM	Samian	90	1.5	685	1	66	1.75	
	BATAM	Dr 20 amphora	7	*	433	*	0	0	
	GALAM	Gauloise IV	1	*	36	*	0	0	
	AMP	Unclassified amphora	1	*	3	*	0	0	
Native	MALLI	Malvernian limestone-tempered	19	*	57	*	3	*	
	MALL2	Malvernian limestone-tempered	34	*	182	*	3	*	
	FLINT	Flint-tempered	1	*	2	*	0	0	
	SHELL	Shell-tempered	15	*	56	*	0	0	
	LIME	Limestone-tempered	24	*	109	*	18	0.5	
	FE	Ironstone-tempered	1	*	11	*	0	0	
	GROG	Grog-tempered	3	*	53	*	10	0.25	
	Regional	DORBB1	Dorset black-burnished	901	14.5	5,870	10	632	15.5
		OXFRS	Oxfordshire colour-coated	23	*	91	*	15	0.5
		OXFWH	Oxfordshire whiteware	18	*	101	*	50	1.5
OXFWM		Oxfordshire whiteware mortaria	19	*	704	1	82	2	
SOWCC		South-west colour-coated	1	*	3	*	0	0	
SOWOX		South-west white-slipped	24	*	92	*	11	0.25	
MAHWH		Mancetter-Hartshill mort	1	*	60	*	12	0.25	
MICGW		Micaceous greyware	7	*	25	*	0	0	
SAVGT		Savernake ware	1	*	10	*	0	0	
Local		SVWOX	Severn Valley ware	3,102	51	33,920	57	2,131	52.5
	SVWEA3	Charcoal-tempered SVW	9	*	84	*	5	*	
	MALREA1	Malvernian Group A ware	99	1.5	885	1.5	150	3.5	
Unclassified	MALREA2	Malvernian Roman ware	1,049	17	12,728	21.5	778	19	
		Fragments	414	7	1,332	2	0	0	
	MORT	Unclassified mortaria	3	*	26	*	0	0	
	OXID	Miscellaneous oxidised ware	7	*	74	*	65	1.5	
	GREY	Miscellaneous sandy greyware	69	1	743	1	41	1	
<i>Medieval</i>	OTHER		9	*	73	*	0	0	
	MED	Medieval wares	4	*	6	*	0	0	
<i>Post-Medieval</i>	PM	Post-medieval wares	82	1	901	1.5	5	*	
Total			6,038	100	59,355	100	4,077	100	

FL: flint-tempered ware.

Fabric: single sherd of black ware with a reddish-brown core containing a sparse to moderate frequency of angular calcined flint up to 2 mm in size. Sparse grains of red-brown iron are also visible in the fine sandy matrix.

Forms: no featured sherds.

Date: ?late Iron Age.

FE: ironstone-tempered ware.

Fabric: single sherd.

Date: ?late Iron Age.

SHELL: coarse shelly ware.

Fabric: brown or brownish-orange exterior with a reduced black, brown or dark grey interior surface. The paste contains a sparse frequency of coarse fossil shell fragments up to 6–8 mm in size, and variable quantities of finer limestone and fossiliferous fragments.

Date: Iron Age.

LIME: Jurassic limestone-tempered ware.

Fabric: black reduced ware containing a scatter of fossil shell/limestone up to 1 mm in size.

Forms: simple undifferentiated rim jars with vertical walls.

Date: Iron Age.

Discussion

Nearly all the sherds of the above fabrics occurred in ditches or pits redeposited alongside material of later date. The presence of these later Iron-Age/early Roman wares points to an earlier focus of activity at Site II.

Roman Pottery

The Romano-British assemblage from Sites I and II, although quite large, was extremely conservative in terms of its composition. By count 55% of the wares comprised products of the Severn Valley industry, 17% Malvernian wares and 15% Dorset black-burnished ware.

Description of fabrics (GL = Gloucester City Archaeological Unit type fabric reference number)

Imported wares

SAMIAN: a total of 112 sherds from Sites I and II, mainly Central Gaulish types dating to the 2nd century.

Forms: plain wares include examples of Drag types 18/31, 31, 31R, 33, 35/6 and a mortaria. A small number of decorated bowls (Drag 30, 37) were also present. Only one incomplete potter's stamp [..IOXX..] was recovered. A further incomplete example BII[..] came from the Rudgeway Lane evaluation.

BATAM: Baetican amphora (Dressel 20) (Peacock and Williams 1986, class 25).

Forms: globular bodied olive-oil amphora originating from Baetica, Southern Spain.

Comment: represented by eight sherds from Sites I and II.

GALAM: Gallic amphora (Peacock and Williams 1986, class 27).

Forms: a single bodysherd from Site II, ditch 4167.

Regional wares

DORBB1: Dorset black-burnished ware (Williams 1977).

A well-represented fabric accounting for some 14% of the total assemblage.

Forms: based on the estimated vessel equivalence (eve) jars (Fig. 20, no. 43) account for 68% of the DORBB1 assemblage, flat-rimmed dishes for 10%, plain-rimmed dishes (Fig. 20, no. 30) 14.5%, grooved rim dishes (Fig. 20, no. 31) 3% and conical flanged bowls (Fig. 20, no. 38) 4.5%. The range indicates a strong mid 2nd–late 3rd/early 4th-century presence, the low proportion of conical flanged bowls suggesting a relatively limited 4th-century repertoire.

Comment: active curation of some of the vessels is demonstrated by two repairs, a jar with a lead strip rivet and another with a lead plug, both from Site II, ditch 4094.

Oxfordshire industries

OXFRS: Oxfordshire colour-coated ware.

Very few sherds belonging to the later phase of the Oxfordshire industry are present.

Forms: include a bowl (Young 1977, type C45) and a beaker.

Comment: no colour-coated mortaria are present.

OXFWH: Oxfordshire whiteware.

Several sherds of whiteware are present.

Forms: include a bowl copying Dr 29 or 30 (Young 1977 type W53) and a small flagon (ibid type W15).

Whiteware mortaria (OXFWM) include examples of Young 1977 types M17, M19 (Fig. 19, no.10) and M22.

SOWOX: South-west Oxfordshire/Wiltshire sandy ware and colour-coated ware (SOWCC) (GL TF15/15A, 12D).

Comment: a small number of sherds are present belonging to this industry active in the later 2nd to 3rd centuries.

MAHWH: Mancetter-Hartshill whiteware mortaria.

Comment: single example from Site II, ditch 4046 (Fig. 19, no. 21).

MICGW: micaceous greyware.

Forms: a very small number of bodysherds were recovered from Site II.

Date: late 2nd to 4th centuries.

Comment: featured sherds include a small dish in a sandy variant of the fabric (Fig. 20, no. 23). This ware appears to be more common on sites south of Gloucester.

SAVGT: Savernake grog-tempered ware (Annable 1962).

Comment: a single sherd from Site II.

Local Wares

SVWOX: Severn Valley ware (GL TF11B) (Webster 1976).

Standard Severn Valley wares in mainly oxidised fabrics with lesser amounts of grey wares dominated the assemblage. Many of the pieces contained fine fragments of Malvernian rock suggesting a source from the immediate locality. Several kilns have been documented from the Malvern area (Peacock 1967), to which can be added a recently excavated complex at Newland Hopfields (Evans *et al.* 2000).

Forms: dominated by wide-mouthed jars with flaring or triangular rims (Fig. 19, no. 6; Fig. 20, no. 34). Other vessels include narrow-necked jars (Fig. 20, nos. 26, 27 and 40), tankards (Fig. 19, no. 11; Fig. 20, nos. 29, 41 and 46), beakers (Fig. 19, no. 8), colanders (Fig. 19, no. 2), platters (Fig. 19, no. 1), jugs, bowls (Fig. 19, nos. 3 and 7; Fig. 20, nos. 25 and 45) and dishes. Using measurable rims only (eve) jars account for 59% of the SVWOX assemblage, bowls/dishes 9%, tankards 29% and beakers, platters, colanders and jugs collectively less than 3%.

SVWEA3: charcoal-tempered Severn Valley ware variant (GL TF17).

MALREA2: Malvernian rock-tempered ware.

A common ware accounting for 10.5% of the total assemblage. The fabric is quite diverse ranging from black with a red core, to grey to orange-brown. The quantity and texture of the rock inclusions are also quite variable ranging from quite fine to coarse.

Forms: vessels are both handmade and wheelmade and most commonly occur as large storage jars (Fig. 19, no. 5; Fig. 20, nos. 24, 36 and 43) or everted or flared rim jars (Fig. 20, nos. 35 and 47). Other forms include knobbed lids (Fig. 19, no. 20), flat-rimmed bowls and straight-sided dishes.

Unclassified wares

OXID: miscellaneous oxidised wares.

Forms: include a collared rim flagon (Fig. 20, no. 42).

GREY: miscellaneous grey sandy wares.

Distribution

Site I produced an assemblage of some 1,047 sherds (10.10 kg), of which 91% date to the Romano-British period (Table 3). The sherds came from a range of features with the larger groups coming from the ditches. Very few of the pits produced pottery and generally only a few sherds. Jars dominate, the form accounting for 60.5% of the assemblage (Table 5). Tankards and bowls account for 15% each based on eve and all other forms for 2% or less.

Site II produced the largest collection of Romano-British wares, some 5,952 sherds (58.45 kg) (Table 4). Approximately 19% (by weight) came from features associated with phases 1 and 2, with 36% from the phase 3 enclosure ditches which broadly span the 2nd to 3rd centuries. A further 14% were recovered from pits and 31% from surface collections prior to machining of the site.

Table 5. Percentage of forms (expressed as % eve) from Sites I and II.

* = less than 1%

	Site I	Site II									
		Period 1	Period 3	Enc. B,C	Enc. H	Enc. D,E	Enc. F,G,I, J,K,O	Enc. P,R	Enc. M,N,Q	Enc. T	Pits
Jar	60.5	53	74	67	44	17	74	65	63	36	62
Bowl/dish	15	26.5	19.5	19	20	48	10	16	26	9	14
Platter	*	0	0	0	0	0	0	0	0	0	0
Cup	*	0	0	0	0	0	0	0	0	0	0
Beaker	1.5	6	0	0	9.5	0	0	0	1	0	1
Tankard	15	14.5	0	11	19	35	14	19	10	33	17
Colander	*	0	5	0	0	0	0	0	0	0	0
Lid	2	0	1.5	1	0	0	2	0	0	0	5
Mortarium	2	0	0	2	7.5	0	0	0	0	22	1
Flagon	2	0	0	0	0	0	*	0	0	0	0
Total	100	100	100	100	100						
Total Eve	635	34	207	544	159	52	385	165	309	121	547

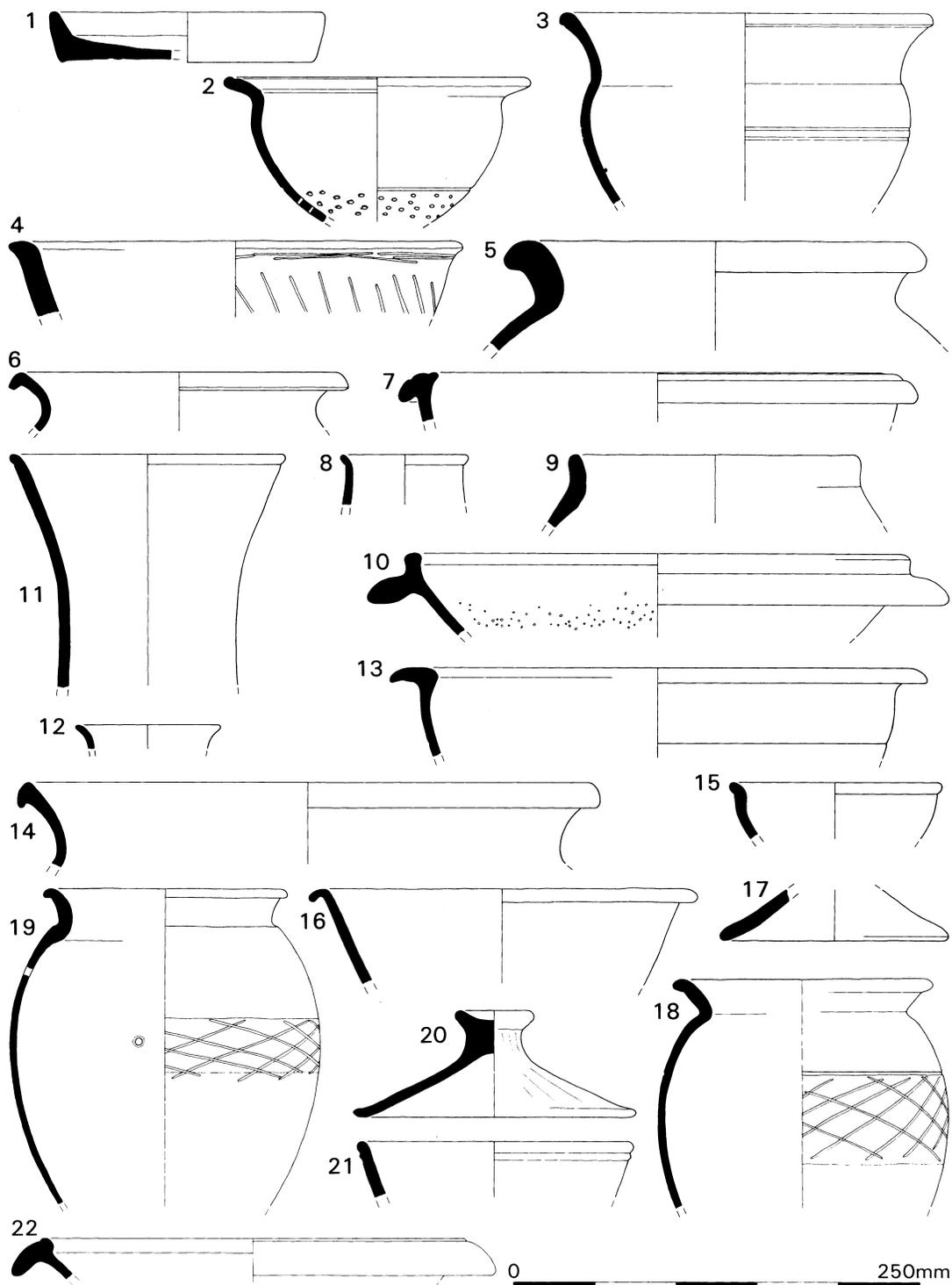


Fig. 19. Romano-British pottery.

Discussion

The pottery from Sites I and II indicates that activity in both cases predominantly dates to the 2nd and 3rd centuries, although a small amount of material from Site II indicates earlier activity. Ceramic evidence for 4th-century activity is sparse, with products of the late colour-coated industries relatively rare. Some from phases 3 and 4 at Site II could date to this period, however; the small collection of coins points to occupation through the first quarter of the 4th century at least. The overall assemblage is very conservative and the difficulty in dating stems both from the lack of development in styles and the degraded nature of much of the material, suggesting the dumping of non-primary refuse in many of the negative features.

The assemblage is dominated by products of the Severn Valley industry and the little known Malvernian industry, the excavations yielding perhaps one of the largest groups of pottery belonging to this latter industry. Malvernian products are limited to wheelmade everted rim jars, flat-rimmed bowls, large handmade storage jars and lids. The industry appears very conservative and the distribution of products is very localised, with a few sherds noted in late Roman assemblages from Gloucester but never in any quantity. A significantly larger number of wares has come from Bishop's Cleeve nearer to the source area, and they appear in modest quantities on sites in Herefordshire and Worcestershire. No examples are known to the author from sites south of Gloucester. Wheelthrown Malvernian pottery was dated to the 3rd to 4th centuries at Beckford and is recorded from similarly dated deposits at Droitwich (Rees 1992; Hurst 1992, 137). The presence of Malvernian wares, other than Group A (MALVREA1) examples, from Site II contexts alongside typical Severn Valley and Dorset black-burnished forms of mid-late 2nd-century date might indicate a later 2nd-century origin for the industry and Tewkesbury's inclusion within its immediate market area.

The pottery assemblage from previous excavations in the centre of Tewkesbury, although perhaps showing slightly more diversity than the assemblages from Sites I and II, was very much dominated by local products from the Severn Valley industry and Malvernian gritted wares (MacRobert 1993, 63). The proportions are very close with 61% Severn Valley ware by weight from Sites I and II compared to 63.5% from the town, and 20% Malvernian wares from Sites I and II compared with 15% from the town.

Dorset black-burnished ware is the main regional import, accounting for 11% of the pottery from Sites I and II and 15% from the town. However, a significant difference between Sites I and II and the town is the considerably larger quantity of samian present within the town assemblage. The low proportion of decorated wares from the town is taken to suggest a not particularly wealthy settlement (Wild 1993, 49). By this standard Sites I and II appear very rural with little wealth or desire for the type of ceramic repertoire associated with Roman cooking, drinking and serving habits, namely fine tablewares, flagons, oil and wine amphorae and mortaria.

Catalogue of illustrated sherds (Figs. 19 and 20)

Site II

1. Shallow dish, SVWOX2. Context 4569, gully 4564. Phase 1.
2. Colander, SVWOX2. Context 4363, gully 4362. Phase 1.
3. Flared rim, round-bodied bowl, SVWOX2. Context 4095, ditch 4094. Phase 2.
4. Handmade bowl, MALREA1. Horizontally burnished around rim, vertically on body with superimposed faint spaced diagonal burnished lines. Context 4095, ditch 4094. Phase 2.
5. Handmade Malvernian storage jar, MALREA2. Context 4434, ditch 4433. Enclosure H.
6. Wide-mouthed, hooked rim jar, SVWOX2. Context 4434, ditch 4433. Enclosure H.
7. Segmental rim, hemispherical bowl, SVWOX2. Context 4434, ditch 4433. Enclosure H.
8. Beaker, SVWOX2. Context 4434, ditch 4433. Enclosure H.

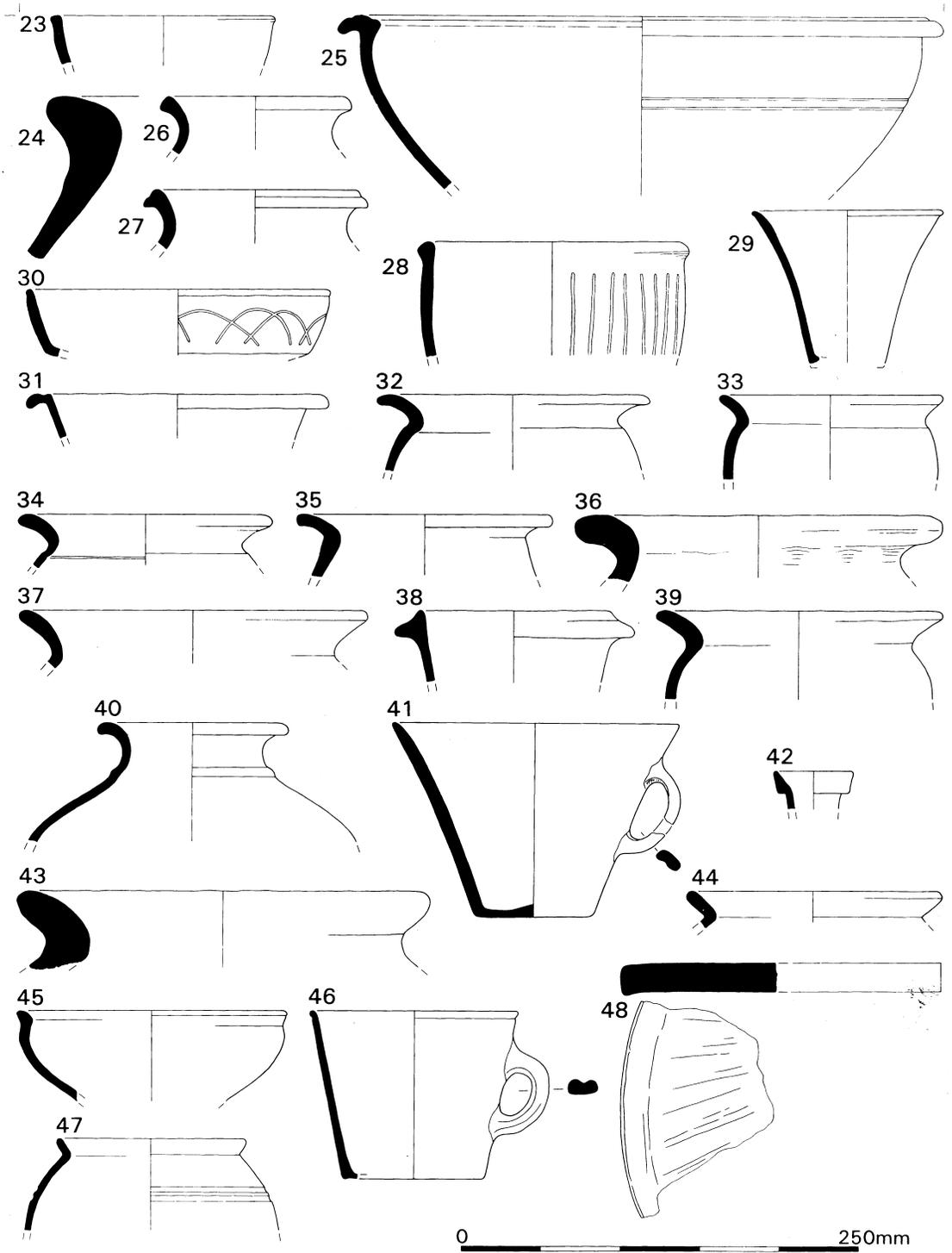


Fig. 20. Romano-British pottery.

9. Handmade grog-tempered jar, GROG. Context 4434, ditch 4433. Enclosure H.
 10. Oxfordshire whiteware mortarium (Young 1977, type M19, A.D. 240–300), OXFWHM. Slightly burnt. Context 4434, ditch 4433. Enclosure H.
 11. Tankard, SVWOX2. Context 4430, ditch 4429. Enclosure H.
 12. Hemispherical bowl, SVWOX2. Context 4430, ditch 4429. Enclosure H.
 13. Flanged hemispherical bowl, SVWOX2. Context 4430, ditch 4429. Enclosure H.
 14. Hooked rim, wide-mouthed jar (Webster 1976, type 25), SVWOX2. Context 4430, ditch 4429. Enclosure H.
 15. Small dish, SVWOX2. Context 4430, ditch 4429. Enclosure H.
 16. Dropped rim bowl, MALREA2. Context 4430, ditch 4429. Enclosure H.
 17. Black lid, MALREA2. Context 4430, ditch 4429. Enclosure H.
 18. Jar, DORBB1. The complete interior surface has a calcareous lining. Context 4430, ditch 4429. Enclosure H.
 19. Fragmented DORBB1 jar with three drilled holes for repair. Context 4430, ditch 4429. Enclosure H.
 20. Handmade lid, greyware MALREA2. Context 4459, posthole 4458. Enclosure H.
 21. Bowl with cordon immediately below the rim, slightly micaceous reduced Severn Valley ware, SVWRE. Context 4615, ditch 4613. Enclosure D.
 22. Mancetter-Hartshill mortarium, MAHWH. Context 4047, ditch 4046.
 23. Small bowl, brown, slightly micaceous sandy ware with a grey core, MICGW. Context 4615, ditch 4613. Enclosure D.
 24. Large diameter, handmade storage jar, MALREA2. Context 4070, ditch 4071.
 25. Segmental rim, hemispherical bowl, SVWOX2. Context 4070, ditch 4071.
 26. Jar, SVWOX2. Context 4070, ditch 4071. Enclosure L.
 27. Bifid rim jar, SVWOX1. Context 4070, ditch 4071. Enclosure L.
 28. Straight-sided jar, MALREA1. Decorated with spaced vertical burnished lines. Context 4407, ditch 4406. Enclosure M.
 29. Tankard, SVWOX2. Context 4245, ditch 4145.
 30. Straight-sided dish with slightly beaded rim and intersecting arc decoration, DORBB1. Context 4245, ditch 4145.
 31. Grooved rim dish, DORBB1. Context 4245, ditch 4145.
 32. Jar, DORBB1. Context 4245, ditch 4145.
 33. Wheelmade everted rim, fine greyware jar, GREY with sparse Malvernian limestone inclusions. Context 4245, ditch 4145.
 34. Everted rim jar, SVWOX1 with Malvernian rock inclusions. Context 4245, ditch 4145.
 35. Rim from a wheelmade Malvernian jar, MALREA2. Context 4231, ditch 4230. Phase 1.
 36. Handmade storage jar, MALREA2. Context 4212, pit 4211. Enclosure A.
 37. Wheelmade everted rim jar, MALREA2. Context 4212, pit 4211. Enclosure A.
 38. Small flanged conical bowl, DORBB1. Context 4212, pit 4211. Enclosure A.
 39. Jar, DORBB1. Context 4212, pit 4211. Enclosure A.
 40. Narrow-necked, cordoned jar, SVWOX2. Context 4212, pit 4211. Enclosure A.
 41. Handled tankard, SVWOX2. Context 4212, pit 4211. Enclosure A.
 42. Collared flagon, dark orange, very fine sandy ware, OXID. Context 4020, unstratified.
 43. Handmade storage jar, MALREA2. Context 4039, unstratified.
- Site I
44. Everted rim, fine grey sandy ware jar, MICGW. Context 5020, ditch 5019. Phase 3.
 45. Bowl, SVWOX2. Context 5020, ditch 5019. Phase 3.
 46. Tankard, SVWOX2. Context 5020, ditch 5019. Phase 3.
 47. Fine greyware, everted rim beaker, GREY. Context 5064, pit 5063.

CERAMIC CIRCULAR TILES by Jane Timby

Several fragments of apparently circular flat tile in a Malvernian rock-tempered fabric were recovered from one stratified context in Site I and four in Site II. In Site II they generally appear in features which date to the 3rd or 4th century. Other unstratified fragments were also recovered from Site II.

With a diameter of around 400 mm and a thickness of 18 mm, the upper surfaces are roughly hand smoothed (Fig. 20, no. 48). None of the fragments shows any evidence of adhering mortar which might suggest an architectural use. The fabric greatly resembles that used for large coarseware storage jars and it is possible that the circular tiles were used as lids for these jars. Such tiles have not been recognised from other Roman sites in the region and they may have served a specialised function.

Illustrated piece (Fig. 20, no. 48)

Fragment of a flat circular tile, grey Malvernian rock-tempered fabric. Roughly smoothed on the upper surface. Site II, context 4231, ditch 4230.

SPINDLEWHORLS by Emma Harrison

Two unstratified Romano-British spindlewhorls were recovered from the excavations. Site I produced a perforated ceramic disc roughly shaped from a Dorset black-burnished ware basesherd and Site II produced a well-shaped example manufactured from a sherd of Severn Valley ware.

CERAMIC BUILDING MATERIALS by Jane Timby and Emma Harrison

In all 259 brick and tile fragments weighing 17 kg were recovered from Romano-British Sites I and II, 245 fragments from the latter. Almost half of the fragments (128 pieces, 5,779 gm) were in a coarse Malvernian rock-tempered fabric which had also been used for *tegulae* and *imbrices* and circular flat tiles, possibly storage jar lids (see above).

The majority of the fragments were small and unidentifiable. However, on Site II a *tegula* fragment was recovered from the fill of enclosure M ditch 4452 along with four fragments of unstratified *imbrex*. On Site I *tegulae* fragments were also recovered from phase 3 enclosure ditch 3146. Several large brick fragments were also found in phase 3 enclosure D ditch 3181 and pit 3216. A full catalogue of the brick and tile exists in the archive.

GLASS OBJECTS by Denise Allen

Six fragments of glass and one bead were recovered from Romano-British contexts. Enclosure B in Site I produced fragments from two blue-green prismatic bottles of 1st–2nd-century type (cf. Price and Cottam 1998, 194–202, figs. 89–91). Site II produced two bottle fragments and two neck fragments, one including a handle, from bottles, jugs or flasks. All are of 1st- or 2nd-century date. A glass bead (Fig. 15, no. 4) could be of any date from the 1st century B.C. onwards.

Illustrated piece (Fig. 15, no. 4)

Annular bead of blue-green glass, late 1st century B.C./1st century A.D. +. Site II, context 4430, ditch 4429. SF 145.

SHALE by Emma Harrison

A broken bead of annular form was recovered from Site II. It has an outer diameter of 19 mm and a circular cross-section.

STONE OBJECTS by Emma Harrison

Two broken whetstones were recovered from Site II. One, manufactured from Coal Measures Sandstone, was from context 3019; the other, manufactured from possibly Old Red Sandstone, was from ditch 4251. Both are likely to have been obtained from the Forest of Dean.

Four fragments of Pennant Sandstone roof tile found at Site II are also likely to have been imported from the Forest of Dean. Two forms of tile were present, diamond shaped and rectangular. Several large fragments of scorched slabs derived from Lower Lias mudstone beds were noted from Site II. These could have been hearth, oven bases or paving stones.

COINS by Peter Guest

Four coins of 4th-century date were recovered from the fill of the sub-phase 3d ditch 4250 at Site II. These are significant because, alongside a small quantity of pottery, they provide the only evidence for occupation of the site into the second quarter of the 4th century or later. Two other coins are illegible.

Catalogue of coins

The entries are arranged as follows: obverse, reverse, mint mark, date range, small find number, context number. Reference to RIC = Mattingley *et al.* 1923–67.

1. Obv. illegible, Rev. illegible, ?modern. SF 142, context 4474.
2. Obv. Constantine II Caesar, Rev. CAESARVM NOSTRORVM — VOT / X, mint mark //PLON cres, A.D. 323–24. RIC 292. SF 170, context 4251.
3. Obv. House of Constantine, Rev. DN CONSTANTINI MAX AVG — VOT / [], mint mark //[. . .], A.D. 318–24. SF 171, context 4251.
4. Obv. illegible, Rev. illegible, mint mark //[], late 3rd–4th century A.D. SF 173, context 4251.
5. Obv. Constantine II Caesar, Rev. BEAT TRANQVILLITAS, mint mark P/A//PLON, A.D. 321. RIC 216. SF 180, context 4251.
6. Obv. illegible, Rev. illegible, ?modern. SF 200, unstratified.

COPPER-ALLOY OBJECTS by Jane Bircher

Thirteen objects of copper alloy were recovered from the excavations. Two from Site II are probably of post-medieval or modern date.

From Site I, a small rim fragment from a copper-alloy bowl was recovered from an unstratified context and a stud with a circular head came from ditch 3154 of phase 3 enclosure D. From Site II several items of personal adornment were recovered. A fragment of trumpet brooch (Fig. 15, no. 5) from an unstratified context can be dated to c.A.D. 65–150 (cf. Webster 1995, 83–6, fig. 26). A fragment of finger ring (Fig. 15, no. 6) was recovered from phase 4 ditch 4207 and can be dated to the late 2nd or 3rd century. Its setting, which is missing, may have been an intaglio or cabochon glass (cf. Uley 1993, fig. 132, no. 7) or enamel of one or more colours (cf. Nor'Nour: Butcher 1967). A fragment of an implement such as a *ligula* or nail cleaner, a possible buckle fragment, a possible brooch pin and a loop of fine wire perhaps from an earring pendant (cf. Allason-Jones 1989) or possibly a steelyard (cf. Painter and Shanks 1984) were also recovered.

Other domestic items included a possible mount or binding formed by two fragments of sheet curved to form a 'C'-shaped section and flattened at the terminals. The concave face was filled with ?lead alloy. An offcut of thin sheet may be an incomplete diamond-shaped clip of the type commonly found on Roman sites (cf. Dalton Parlours: Cool 1990, fig. 72, nos. 51–7).

Illustrated pieces (Fig. 15, nos. 5 and 6)

5. Copper-alloy trumpet brooch fragment. Head, pin, and part of the catchplate missing. The extant portion of the upper bow is of triangular section. It is divided from the lower bow by a double ridge on either side of a stylised acanthus motif, all moulded on the front face only. The acanthus moulding comprises three parallel transverse ridges. The central ridge is slightly broader and flatter than the outer two, each of which has two deeply cut notches to suggest petals or leaves. The lower bow has marginal grooves and a flat profile (unlike the triangular section more common of this type). The prominent foot knob protrudes below the catchplate and is formed of a thick disc with two transverse grooves around the edge. This brooch can be dated to c.A.D. 65–150. Extant length 50 mm. Context 4499. SF 149.
6. Copper-alloy finger ring fragment of which about one third of the distorted hoop and the bezel (setting missing) survive. The hoop of flattened 'D'-shaped section expands towards the bezel and has a raised and slightly widened definition on the shoulder. The bezel is raised and circular. This type of ring is widespread and can contain a variety of settings. Late 2nd or 3rd century A.D. Length 21 mm, internal diameter of bezel 8 mm, height of bezel 3 mm. Context 4208, ditch 4207. SF 129.

LEAD OBJECTS by Jane Bircher

Four lead objects were recovered from Site II. They comprise a repair plug for a black burnished ware jar, two splashes of molten lead and a small cylindrical weight pierced longitudinally. The last may be Roman or later in date.

IRON OBJECTS by Jane Bircher and Emma Harrison

Items of personal adornment are represented by fragments of two bow brooches that can be dated between c.50 B.C. and c.70 A.D. Both were residual finds in later contexts. Also included in this group is an unstratified small buckle or brooch made from an oval loop of round section with a short tongue/pin formed by wrapping a tapering bar of square section around the loop (Fig. 15, no. 7). Similar objects from Roman contexts have been described as brooches or buckles (cf. Brancaster: Hinchcliffe and Sparey Green 1985, no. 84, p. 53, fig. 35; Great Dunmow: Wickenden 1988, no. 67, p. 59, fig. 45) or buckles (cf. Lullingstone: Meates 1987, no. 292, p. 107, fig. 47). Small iron buckles are common Saxon cemetery finds (cf. Butler's Field, Lechlade: Boyle *et al.* 1998, grave 81/4, nos. 7 and 8, p. 91, fig. 5.68) although this example would be exceptionally small. Small annular iron buckles can also be medieval (Egan and Pritchard 1991, no. 292. P. 107, fig. 47).

Household items are represented by a few artefacts. A barbed spring padlock bolt with two spines and two springs, now incomplete, may be Roman (Manning 1985, fig. 25) or perhaps medieval (Biddle 1990, figs. 310 and 315). Two knife blade fragments are probably of Roman type (Manning 1985, 108–19). A pintle of Manning's type 1b (*ibid.* 126); a fragment of strap hinge of Roman type (*ibid.* 58 R8 shows a close parallel), and a joiner's dog were also recovered. Tools are better represented. Fragments of the shafts and blades of two small pruning hooks of Manning's type 1 (*ibid.* fig. 14) and a possible spade sheath of Manning's type 2 (*ibid.* fig. 11) were found. Punches, awls, gouges or chisels may be represented by five fragments of rods and bars, but some of these could be large nail fragments. A heavy tapering strip with a right-angled bend forming a hook at the narrow end may be the heel of a hipposandal of Manning's type 1 (*ibid.* fig. 16). All of the above material was recovered from Site II, with the exception of the possible hipposandal which was an unstratified find from Area F.

Approximately 150 hobnails were recovered from 11 features at Site II. The majority occurred in small groups of less than ten, but three larger groups from shoe soles were found in ditches 4145, 4241, and 4333.

A total of 220 structural nails and nail fragments was retrieved from the site, but the poor, often fragmentary, condition of many of them made identification of particular types impossible. A number had shanks of square section, often in association with a flat round head, suggestive of Manning's (1985) type 1b.

Illustrated piece (Fig. 15, no. 7)

Buckle or brooch. Small oval loop of round section with a short tongue/pin formed by wrapping a tapering bar of square section around the loop. Height 14 mm, width 15 mm. Context 4002. SF 159.

METAL-WORKING DEBRIS by Lynne Keys

A small quantity of iron slag was recovered from Site I (62 gm) and a larger quantity from Site II (1,869 gm). Almost all of it was the product of secondary iron smithing and the small amount present indicates there was no prolonged or focused activity in any period. The small assemblages were scattered across both sites in pits or ditches and the material is quite abraded, indicating deposition in secondary contexts. Even usually robust hearth bottoms are represented mostly by fragments. The evidence is consistent with occasional iron smithing carried out for short periods.

THE ECONOMIC AND ENVIRONMENTAL EVIDENCE

FAUNAL REMAINS by Ellen Hambleton

A small assemblage (*c.* 2,150 fragments) of faunal remains was produced, with bone recovered from contexts of Bronze-Age to post-medieval date, although the majority of faunal material came from Romano-British deposits. Preservation was not of a high standard and a high percentage of fragments (65%) remains unidentified to species. This bone report is restricted to those bones identified to species. Twenty-three fragments are of Bronze-Age date. A further 637 fragments derived from Romano-British contexts at Sites I and II.

All bones and teeth, where possible, were identified to skeletal element and species using reference material from the comparative skeletal collection housed in the School of Conservation Sciences, Bournemouth University, and were recorded onto a database which is available in the site archive. Measurements were taken for the large mammals following von den Driesch (1976), Legge and Rowley-Conwy (1988) and Boessneck (1969), and withers height calculations were made using formulae given by von den Driesch and Boessneck (1974). In the case of cattle, sheep/goat and pig, wear was recorded for the mandibular cheek teeth using the tooth wear stages defined by Grant (1975) and assigned to nine broad mandibular wear stages (A–I) (Hambleton 1999).

Very few complete bones were recovered, but the numbers of fragments recorded for each species (NISP count) are given in Tables 6 and 7. The identified sample was dominated by domestic species (in order of abundance: sheep/goat, cattle, pig, horse, dog and domestic fowl), with a single hare tibia providing the only evidence for wild species. Four of the ovicaprid bones were positively identified as sheep on the basis of morphological characteristics (Prummel and Frisch 1986) and metrical analysis (Boessneck 1969). No bones were positively identified as goat and it is likely that all or nearly all the ovicaprid remains are those of sheep.

Period 2: early–middle Bronze Age

A small sample, 23 identified bone and tooth fragments, was recovered from five Bronze-Age contexts (four pits and a ditch) in Site D. Evidence for butchery was limited to a single sheep/goat cervical vertebra from the fill of gully 3346: it had been split down the midline. The small sample size limits analysis to general observations of relative abundance of species for the Bronze-Age faunal material and any results should be treated with caution. Cattle are likely to have been the main source of meat in the diet as the Bronze-Age NISP counts (Table 6) show cattle as the most abundant species with fewer sheep and very few pig and horse.

Period 3: Romano-British

A total of 637 identified fragments was recovered from 181 Romano-British contexts at Sites I and II. The samples are too small to investigate in detail possible chronological variation between the different Romano-British phases or spatial variation between the two sites. Samples from all Romano-British phases on both sides are treated as a single group.

The Romano-British NISP counts (Table 7) show sheep to be slightly more abundant than cattle with a low occurrence of pig and horse. The relative abundance of dog in the NISP count is probably artificially high as 24 of the 28 recorded dog fragments belong to a single animal (the partial skeleton of a dog from ditch 4576) at Site II. The only other associated groups of bones observed were a cow radius and ulna belonging to the same animal from ditch 4094. While the

Table 6. Bronze-Age animal bone and tooth fragments (NISP).

Species	NISP count	%
Sheep/goat	8	34.8
Cow	13	56.5
Pig	1	4.3
Horse	1	4.3
Total	23	

Table 7. Romano-British animal bone and tooth fragments (NISP).

* includes 24 fragments of partial dog skeleton from context 4576

Species	NISP count	%
Sheep/goat	301	47.3
Cow	222	34.9
Pig	46	7.2
Horse	38	6.0
Dog*	28	4.4
Hare	1	0.2
Fowl	1	0.2
Total	637	

Table 8. Romano-British Minimum Number of Individuals (MNI) and Whole Bone Equivalents (WBE) counts (excluding axial skeleton).

*includes 24 fragments of partial dog skeleton from context 4576

Species	MNI	%	WBE	%
Sheep/goat	14	53.8	73.25	44.5
Cow	5	19.2	53.50	32.5
Pig	2	7.7	13.75	8.3
Horse	2	7.7	10.50	6.4
Dog*	1	3.8	12.75	7.7
Hare	1	3.8	0.50	0.3
Fowl	1	3.8	0.50	0.3
Total	26		164.75	

Whole Bone Equivalents (WBE) show similar values of relative species abundance as the NISP count, the Minimum Number of Individuals (MNI) count suggests a much greater abundance of sheep/goat relative to cattle (Table 8). In fragmented assemblages smaller species often tend to be under-represented in NISP counts, but the relative size of cattle means that beef would have been a greater component of the meat diet than lamb or pork. There is no butchery evidence to suggest that horses or dogs were eaten and the presence of adult horses suggests that they were kept for uses other than as a source of meat.

Higher numbers of sheep than cattle and a low percentage of pig remains is a pattern observed on other native Romano-British rural settlements, in contrast to urban settlements of this period which tend to exhibit higher proportions of cattle and pig (Maltby 1998). There is a tendency for cattle bones to be better represented than those of sheep/goat in ditch rather than pit deposits on Iron-Age and Romano-British rural settlements (Maltby 1994). Given that the majority of faunal remains recovered during the Tewkesbury excavations reported here come from ditches it is possible that sheep may even be slightly under-represented in relation to cattle in this assemblage. The relative proportions of cattle, sheep and pig in the Romano-British assemblage are not atypical of those seen in Iron-Age assemblages from the region (Hambleton 1999) and may reflect a continuation of farming practices at Tewkesbury from the Iron Age into the Romano-British period. As on other native Romano-British sites in the region, there is a very low incidence of domestic fowl bones (Maltby 1998) and a marked absence of deer, fish and other wild species in the assemblage.

The sample was of a size sufficient only to allow a general impression of the age profile of different species. In sheep, the data indicate that a large proportion of the assemblage consists of adolescent and adult individuals with only a very small proportion being killed in the first year. The death of very young animals is shown by five small porous neonatal/infant bones from different contexts. This information suggests that while adolescents and young adults were exploited for meat an older population was maintained for secondary products. The available ageing information for cattle is limited but confirms this, with older individuals being used as breeding stock and as a source of milk or traction power. No infant or neonatal calf bones were observed among the cattle bone assemblage. The pig assemblage suggests an absence of mature individuals and an emphasis on younger individuals, presumably for meat. One fragment of foetal pig bone was recorded. The presence of foetal pig and neonatal sheep may indicate that stock was reared at Tewkesbury.

Table 9. Romano-British charred plant remains.

Feature		4050	3015	3015
Soil Sample number		<411>	<118>	<119>
Volume (litres)		30	30	30
<i>Hordeum</i> sp. (grains undiff.)	Barley grain	2	–	–
<i>Triticum</i> sp. (grain)	Wheat grain	2	2	10
<i>Triticum dicoccum/spelta</i> (grain)	Spelt/emmer wheat grain	4	–	–
<i>Triticum dicoccum/spelta</i> (glume bases)	Spelt/emmer wheat glume bases	20	46	1
<i>Triticum spelta</i> (glume bases)	Spelt wheat glume base	1	–	–
Cereals undiff. (grains)		5	–	–
<i>Corylus avellana</i>	Hazelnut fragments	–	1	–
<i>Chenopodiaceae</i> (undiff.)	Goosefoots	–	–	1
<i>Chenopodium polyspermum</i>	Many-seeded goosefoot	12	–	–
<i>Chenopodium album</i>	Fat hen	41	–	1
<i>Atriplex</i> sp.	Orache	127	3	–
<i>Fallopia convolvulus</i>	Black bindweed	1	–	–
<i>Polygonum aviculare</i>	Knot grass	1	–	–
<i>Rumex</i> sp.	Dock	7	–	–
<i>Rumex acetosella</i> group	Sheep's sorrel	–	–	1
<i>Rumex crispus</i>	Curled-leaved dock	7	–	–
<i>Rumex</i> cf.	Docks	6	2	–
<i>Anagallis</i> sp.	Pimpernel	–	–	1
<i>Potentilla</i> sp.	Tormentil	3	1	–
<i>Vicia/Lathyrus</i> sp.	Vetch/tare/wild pea	1	–	–
<i>Lathyrus</i> sp.	Wild/grass peas	1	–	–
<i>Medicago lupulina</i>	Black medick	–	1	–
<i>Medicago/Trifolium</i> sp.	Medick/clover	3	1	–
<i>Trifolium</i> sp.	Clover	8	–	1
<i>Apiaceae</i> (undiff.)		1	–	–
<i>Torilis</i> sp.	Hedge parsley	–	1	–
<i>Plantago lanceolata</i> L.	Ribwort plantain	–	1	–
<i>Plantago lanceolata/media</i>	Plantain	1	–	–
<i>Odontites vernus</i>	Red bartsia	–	1	–
<i>Galium aparine</i>	Cleavers	1	–	–
<i>Valerianella dentata</i>	Narrow fruited cornsalad	1	–	–
<i>Eleocharis uniglumis/palustris</i>	Spikerush	1	1	–
<i>Carex</i> sp.	Sedge	1	–	–
POACEAE mid (2mm–4mm)	Medium sized grass seed	–	–	1
POACEAE small (<2mm)(undiff.)	Small grass seeds	–	1	–
POACEAE culm node	Grass stem culm node	–	2	–
<i>Lolium perenne</i>	Perennial rye grass	94	4	–
<i>Poa</i> sp.	Meadow grass	4	–	–
<i>Poa</i> sp./ <i>Phleum</i> sp.	Meadow grass/cat's tail	2	–	1
<i>Avena</i> sp. (grains)	Oats	6	–	–
<i>Avena</i> sp. (awns)	Oat awns	10	–	–
<i>Avena</i> sp. (florete indet.)	Oat florete	2	–	–
<i>Avena</i> sp./ <i>Bromus</i> sp.	Oats/brome grass	1	–	–
<i>Phleum</i> sp.	Cat's tail	43	4	2
<i>Bromus</i> cf. <i>secalinus/bordeaceus</i>	Brome grass	–	1	–
Seed indet. <2.5mm	Unidentified seeds	1	1	–

Only a small number of bones survived in a measurable condition. Measurements and withers height estimates appear to fall within the size range seen in other Romano-British assemblages (e.g. Maltby 1979; 1987; 1998). Greatest length measurements of two astragali provided estimated withers heights for sheep/goat of 0.56 and 0.59 m. For cattle, greatest length measurement of two metatarsals gave estimated withers heights of 1.16 and 1.17 m.

Evidence for butchery was limited to seven fragments (1% of the identified assemblage). Of three sheep/goat bones, a radius and astragalus from the same context (4397) bore knife marks and a lumbar vertebra had been split midline. Cattle butchery evidence includes knife cuts on a calcaneum and pelvis, axial and mediolateral chops through the distal end of a humerus and sawing across the middle of the shaft of a femur. The low proportion of bones bearing butchery marks and the presence of knife cuts are indicative of 'traditional' methods of butchery on rural Romano-British sites, while the chopped humerus is more typical of the style of butchery observed in urban sites of this period (Maltby 1989). The sawn femur suggests bone working. The small sample size, however, limits the reliability of conclusions that may be drawn concerning the butchery techniques in use at Tewkesbury.

In conclusion, the assemblage exhibits a narrow range of species and is dominated by domestic mammals, predominantly sheep/goat and cattle with small amounts of pig, horse and dog. The limited ageing evidence suggests that in addition to sub-adult sheep/goat and cattle exploited for meat, older animals were also maintained, probably for other uses. As such, it appears to be reasonably typical of native/non-villa rural assemblages and there is no evidence to suggest any high economic or social status.

CHARRED PLANT REMAINS by Chris Stevens

A total of 100 bulk environmental samples were taken from negative features from Romano-British Sites I and II. Only seven samples produced charred cereal grains and weed seeds, and of these only three were of sufficient size to warrant further analysis. Two came from Site I, from the terminals 3015 of phase 1 'U'-shaped enclosure B, and one came from Site II, from the fill of phase 1 enclosure ditch 4050. The charred material is presented in Table 9 following the nomenclature of Stace (1991).

Results

Although grains were sparse, both ditches 3015 and 4050 produced ample evidence in the form of glume bases for hulled wheat emmer/spelt (*Triticum dicoccum/spelta*). Generally the standard of preservation was very poor and only the sample from 4050 produced an identifiable glume fragment of spelt wheat (*Triticum spelta*). Barley (*Hordeum* sp.) also was only identified in this sample although its absence from ditch 3015 is probably of little significance given the low number of grains.

Most of the seeds of wild species are probably representative of arable weeds. Over half of the seeds present in ditch 4050 were of the Chenopodiaceae, mainly either orache (*Atriplex* sp.) or fat hen (*Chenopodium album*) with fewer seeds of many-seeded goosefoot (*Chenopodium polyspermum*). Such species are commonly associated with nitrogen-rich arable soils. Ditch 4050 also produced other arable weed seeds, for example black bindweed (*Fallopia convolvulus*), knot grass (*Polygonum aviculare*), curled leaved dock (*Rumex crispus*), vetch/tare (*Vicia/Lathyrus*), clover (*Trifolium* sp.), cleavers (*Galium aparine*), narrow fruited cornsalad (*Valerianella dentata*), oats (*Avena* sp.) and brome grass (*Bromus secalinus/hordeaceus*). In addition seeds of species characteristic of grasslands/arable land were recovered, namely perennial rye grass (*Lolium perenne*), annual meadow grass (*Poa* sp.) and cat's tail (*Phleum* sp.). Species characteristic of wetlands, such as spikerush (*Eleocharis palustris/uniglumis*) and perhaps sedge (*Carex* sp.), were also identified.

The samples from both ditches were similar although those from ditch 3015 contained fewer seeds of wild species and seeds of the Chenopodiaceae were generally less well represented. In addition, a few seeds of species not present in the sample from 4050 were also recovered. They included hedge parsley (*Torilis* sp.), probable scarlet pimpernel (*Anagallis arvensis*) and sheep's sorrel (*Rumex acetosella*) as well as a fragment of hazelnut shell (*Corylus avellana*).

Discussion

In both ditches the number of glume bases exceeded the number of grains. As hulled wheats were most probably stored within their spikelets (van der Veen 1992), the samples most probably represent the processing of cereals throughout the year as they were taken from storage (Stevens 2003).

The assemblages themselves represent domestic activities centred on the processing of grain. At the very least these activities consisted of fine sieving and hand sorting of weed seeds, pounding of grain to release it from the glumes and further sieving and winnowing to remove the light chaff from the spikelet (see Hillman 1981). The chaff appears to have fallen onto the hearth, either deliberately as part of its disposal or accidentally through the sweeping into the fire of waste spilt during processing.

The assemblages also indicate the crops under cultivation and the methods used in the growing and harvesting of them. The large numbers of seeds of the Chenopodiaceae are indicative of high levels of nitrogen within the soil. The species is also indicative of spring-sown crops. While few of the species are highly distinctive of any particular soil type, sheep's sorrel is generally indicative of lighter often neutral to acidic soils, while black medick (*Medicago Lupulina*) is more indicative of drier, often calcareous soils. Only a single seed of spikerush from ditch 4050 and a further seed from ditch 3015 point to the cultivation of wetter soils. The high presence of rye grass in ditch 4050 suggests the cultivation of formerly grazed grassland; the generally large numbers of perennials seem indicative of the low levels of disturbance associated with the use of ards for tilling the soil. The recovery of clover seeds may indicate harvesting very low on the stem. However, it is possible that such species may be included in the assemblage through some accidental uprooting when harvesting with sickles. The samples seem to indicate low levels of processing prior to storage.

The crop husbandry evidence from both ditches 4050 and 3015 is very similar, although it is possible that the smaller numbers of seeds of the Chenopodiaceae from the latter may be indicative of either an increase in autumn sowing and/or the depletion of nitrogen within the soil.

MOLLUSCA by Keith Wilkinson

Thirty-six samples from a variety of contexts from both Romano-British sites were examined and mollusc shells were found in limited numbers in the majority of them. All the assemblages except that from enclosure Q ditch 4484 of Site II, phase 3e, are dominated by open country terrestrial species such as *Vallonia* sp., *Pupilla muscorum* and *Vertigo pygmaea*. Environments are therefore likely to have been open throughout the period.

In ditch 4484 the freshwater assemblage is dominated by large bivalves, *Bithynia* sp. and *Valvata piscinalis*. This combination indicates that deposition occurred in a large moving body of water such as a river. There can be little doubt that these remains were deposited in the ditch as a result of flooding by the nearby River Swilgate. It is notable that none of the other samples contained similar riverine species. It would appear that flood levels, although locally high, never rose above the lower lying parts of the excavation site.

DISCUSSION

NEOLITHIC AND BRONZE AGE by Timothy Darvill, incorporating comments and text supplied by Sue Bridgford and Graeme Walker for Area F.

Period 1: Neolithic/early Bronze Age

The presence of Neolithic and early Bronze-Age worked flints on the slightly raised ground of Area C is typical of the evidence from the central and lower Severn Valley. Traditionally such evidence is taken to suggest periodic small-scale settlement or exploitation of the valley floor, perhaps linked to more intensive occupation of the higher ground to the east. Such a view accords with palaeoenvironmental evidence from sites investigated around Tewkesbury suggesting that prior to *c.*900 B.C. the lower Severn Valley was heavily wooded (Brown and Barber 1985, 93; Brown 1983). However, the increasing number of small but concentrated groups of flintwork, including those reported here, suggests that the traditional view should be challenged and that accounts of settlement extent, character, and density at least for the later Neolithic onwards should be revised. Activity of the later third and early second millennia B.C. has been found on all the raised gravel areas so far examined in the Tewkesbury area. At the Cinema site there was a pit containing late Neolithic Peterborough-style pottery and, very significantly, fragments of a copper-alloy awl. The pit was cut by a grave tentatively dated to the early second millennium B.C. (Hannan 1993, 29–32). At Holm Castle, flint and a pit containing pottery with beaker affinities came to light in 1974–5 (Hannan 1976, 11). More recent work at Rudgeway Lane reported here revealed beaker pottery and features (Barber 1993a; 1993b). Such a concentration in the vicinity of the confluence of the rivers Severn and Avon is perhaps not too surprising, the wider significance of the accumulating evidence being more apparent when it is set alongside similarly dated evidence from valley floor sites east of the Severn to the south at Saintbridge, Gloucester (Darvill and Timby 1986); Barnwood (Clifford 1964); Frampton on Severn (O’Neil and Grinsell 1960, 114); Frocester (Darvill 2000b); and Cam (Smith 1968).

Period 2: early–middle Bronze Age

Activity broadly dated to the early second millennium B.C. set the scene for the rather more extensive settlement and landuse in the later second millennium B.C. There is evidence for a ‘D’-shaped enclosure associated with curvilinear ditches and groups of pits in Area D, a metal-working spread in Area F, a hearth and possible ditches at Rudgeway Lane, and further ditches and pits at the Gastons. Not all of these are demonstrably contemporary, but taken as a group they represent the most extensive sample of middle Bronze-Age activity from the lower Severn Valley. Moreover, they must all be set within an environment where woodland remained the dominant vegetation cover and rivers were relatively free-flowing in fairly deep channels unencumbered by the high levels of sedimentation that affected later regimes (Brown and Barber 1985). This is especially significant in light of the fact that part of Area D and all of Area F today lie on floodplain; prior to accelerated sedimentation in the first millennium B.C. as a result of deforestation (see below) both areas would probably have been free of inundation except in very exceptional circumstances.

The Area D enclosure and associated features provide an important addition to the range of middle Bronze-Age structures known from the region. In the Severn Valley most middle Bronze-Age settlement is known as sections through linear ditches with tantalizing traces of possible structures as at Hucclecote (Darvill 1987, 112–13) and burnt mounds at Frocester (Darvill 2000a,

193–210) and Sandy Lane, Cheltenham (Leah and Young 2001). Even less is known from the Cotswold uplands to the east (Darvill 1987, 112). The arrangement of the 'D'-shaped enclosure and connecting ditches is, however, highly reminiscent of sites further afield, especially those on chalk downs such as Plumpton Plain, Sussex (Holleyman and Curwen 1935), and Shearplace Hill, Dorset (Rahtz and ApSimon 1962). Burgess (1980, 204) comments on the widespread occurrence of such enclosures and notes the existence of slight regional variations such as the presence or absence of ditches. The finds at Tewkesbury serve to extend the known distribution northwards, although whether the economies and subsistence patterns reflected in the evidence from the downland sites are repeated is a matter for further research. The apparent predominance of cattle remains from contexts in Area D may suggest woodland-based subsistence. What is perhaps unusual in the Severn Valley is the apparent absence of cemeteries in the vicinity of settlements (cf. Bradley 1981).

It is a strong possibility that the occupation represented at Area D is contemporary with the evidence of metal working in Area F. Dating is scarce, but the mould fragments recovered suggest the manufacture of channel-bladed spearheads sometime in the period 1500–1050 B.C., broadly the Knighton Heath phase defined by Burgess (1980, 131). This would be entirely appropriate to the pottery recorded from Area D. The physical separation of the settlement area from the metal-working area is interesting and may be interpreted either in purely practical terms or in patterns of behaviour linked to ideological and symbolic systems determining the social use of space. Either way, it is important to recognize that the Severn Valley was an important early focus of metalwork production in the British Isles, perhaps because of relatively easy access to ore sources in central and west Wales (Darvill 1983, fig. 78). The late Neolithic associations of a copper-alloy awl in a pit found in the centre of Tewkesbury have already been noted, and to these can be added the stone mould from the Walleybourne (Thomas 1972) to the north and the metal-working tools from Westbury-on-Trym (Britton 1963, 316) to the south. Metal working of the later second millennium B.C. is also represented by the finds of mould fragments for casting a socketed spearhead at Sandy Lane, Cheltenham (Leah and Young 2001).

The Tewkesbury evidence suggests a relatively short phase of activity, perhaps just one event, focused on casting copper objects, including weapons. Rowlands (1976, 167) suggests that such work, rather specialized in its way, could be in the hands of itinerant smiths. Such practices might explain the small-scale nature of the activity and its peripheral location relative to the settlement. In practical terms the requirements for casting bronze are relatively straightforward: moulds, raw material, fuel, crucibles, a forced-air furnace, some means of pouring the hot metal from the crucible into the mould, and support for the mould during pouring and cooling.

The 18 mould fragments from Area F were of fired clay and were found within a single pit. Other kinds of mould may also have been used, for example stone or bronze types that would not be discarded after use, or sand and clay moulds supported by a wooden frame that would have been discarded leaving little or no archaeological trace. No crucibles were recovered from Area D, although an unstratified fragment recovered on the western side is entirely in keeping with remains found at other casting sites of middle and late Bronze-Age date. This is perhaps unsurprising when it is considered crucibles were in some cases re-used several times (Needham 1980, 188). Nothing can be said about the sources of metal used at Tewkesbury, nor about the fuel used, although the latter was presumably prepared charcoal.

Forced-air furnaces are not necessarily large or complicated structures, but the high temperatures required do normally produce very hard baked clay of the kind found in pits 2010 and 2052. Support for the mould during filling is easily achieved by inserting it into a pit with the feeder uppermost. Long moulds such as those for swords need to be filled at an angle (Northover 1988, 131) while shorter moulds may be filled whilst vertical. The requirement of a central socket in

the spear would favour a vertical position for its mould. Heating the support pit would also assist in pouring, but too slow a cooling may be detrimental to the physical properties of the metal (*ibid.* 131–2). The characteristics of oval pit 2035 (Fig. 7) suggest its use as a casting pit, with the smaller sub-circular element being the mould support and the larger pit being the floor of the melting furnace, while the heavily burnt pebbles formed the lining and/or support for the crucible during melting. Similar features have been found within the complex of furnaces and ‘working hollows’ dating to the later Bronze Age within the Breiddin, Powys (Musson 1991, 57–60).

Many of the pits, postholes and stakeholes within Area F could be related to a variety of structures associated with the metal working, including shelters, windbreaks, storage places, and structures associated with ceremony and ritual accompanying the act of metal working. In relation to ritual activity, there is no immediately obvious metallurgical interpretation for pit 2028 with its ‘triangular’ secondary fill of charcoal and burnt bone, or for its equivalent, pit 3081, in Area D. The wide dispersal of debris from the casting process across the central part of Area F is entirely typical of metal-working sites, an inevitable result of the procedures involved. The preservation of most of the debris may be purely fortuitous, but there is some evidence that the deposition, particularly of mould fragments, may not have been entirely accidental. The positioning of the sword moulds in ditch terminals at Springfield Lyons is a particularly compelling example (Needham 1987).

A number of sites in southern England have produced metal-working debris from single pits, for example Dainton, Wiltshire (Needham 1980), and Norton Fitzwarren, Somerset (Needham 1989), or from middens, as at Grimes Graves, Norfolk (Needham 1991). Late Bronze-Age sites have provided more evidence of intensive metal working within one area, as at Rathgall, County Wicklow, with its cobbled areas and numerous hearths (Raftery 1971); the Breiddin hillfort, Powys, with its numerous furnaces and working hollows (Musson 1991); and Thwing, East Riding of Yorkshire (forthcoming publication). The moulds from Grimes Graves appear similar in date to those from Area F at Tewkesbury, but the former site is multi-period and much disturbed.

The absence of later Bronze-Age and Iron-Age activity at Tewkesbury is notable and hard to explain given the re-use of the site in the first millennium A.D. and the frequent use of gravel spreads elsewhere in the Severn Valley. Two possibilities may be advanced. One is that the area became susceptible to regular flooding and was thus less desirable for settlement. Certainly this is a strong possibility as the environmental records for the area show the removal of woodland cover in the period from c.920 B.C. to 400 B.C. (Brown and Barber 1985, 93) coupled with abundant and widespread evidence for increased alluviation in both the Severn Valley (Brown 1983) and the Avon Valley (Shotton 1978) starting c.800 B.C. Higher rainfall and a general climatic deterioration in the early first millennium B.C. (Lamb 1981) may also have contributed to higher river levels and an increased incidence of flooding. Perhaps closely tied to this is the second possibility, social changes that included more pronounced territoriality and greater attention to defence. This is very clearly seen in the development of boundary earthworks and defended enclosures along the Cotswold escarpment, and in a very marked change in settlement distribution and residence patterns in the region (Darvill 1987, 125–33).

ROMANO-BRITISH by Neil Holbrook

Period 3: Romano-British

The discovery of two humble Romano-British farmsteads on a low ridge of poorly drained clay in a landscape that that must have been subjected to regular winter flooding is a welcome addition to our understanding of the Romano-British settlement pattern of the lower Severn Valley. From current knowledge the preference of late prehistoric and Romano-British settlement for the spreads

of fan gravels and wind blown sands, as opposed to the cold damp soils of the lias clays, is readily apparent. For instance, a recent discussion of the Romano-British landscape around Frocester has stressed the importance of gravel subsoil as a determining factor in settlement and agriculture (Price 2000, 241–2). Moving northwards from Frocester the villa and nearby settlement at Eastington occupied another gravel spread (Fowler and Walthew 1971, 57–60) and the well-drained sands and gravels around Cheltenham and Bishop's Cleeve were likewise favoured. Parry (1999) has recently summarised the evidence for late prehistoric and Romano-British activity around Bishop's Cleeve, and although the Cheltenham area, by virtue of its development, is less well understood, traces of Romano-British agriculture have recently come to light (Coleman and Watts 2001; Catchpole 2002). The Roman settlement beneath the Oldbury area of Tewkesbury occupied most of an island of sand and gravel at a height of *c.*16 m above O.D. where it was largely protected from flooding (Hannan 1993).

Settlement on the clays of the valley floor is less well known, in part because of the difficulties in detecting such sites. The subsoil is not susceptible to the formation of cropmarks, and as this report demonstrates, field-walking can fail to detect even quite substantial sites. Geophysics and field evaluation provide the best techniques available at the moment, although their cost currently prevents extensive application other than on potential development sites. Building work to the east of Gloucester over the last couple of decades has led to the discovery of a number of Romano-British settlements, predominately on the lias clay (sites listed in Rawes 1984, 25; for more recent work see Hurst 1999, 130, to which can be added the recently discovered settlements in Hucclecote: Thomas *et al.* 2003; and in Brockworth at Pineholt: Jones 2002). The density and complexity of settlement near Gloucester was undoubtedly influenced by the proximity of the *colonia*. Further north in the Vale such evidence is harder to come by. Salvage work in advance of the construction of the M5 motorway revealed a settlement at Tredington Rise, Stoke Orchard, covering *c.*8 ha. Although no structures were actually recognised, building debris indicated their presence. Finds from the site ranged from the 1st to the 4th century, and the excavators concluded that 'farming was probably the main economic activity with perhaps sheep-grazing and weaving of particular significance' (Rawes 1971, 26–34).

Turning to the more immediate vicinity of the sites reported upon here, the Roman settlement beneath the Oldbury district of Tewkesbury covered an area of perhaps 10–12 ha (Hannan 1993, 43–5) near the point where the Roman road from Gloucester to Worcester crossed the Avon (Fig. 4; Margary 1967, route 180; Hannan 1997, 222–3). The function of the settlement is unclear. It may have developed as a roadside settlement such as occurred over much of lowland Britain (Todd 1976, 115) although Hannan (1993, 43–5) preferred to interpret it as either a large rural settlement or a series of farmsteads. Finds of brick mortar, painted plaster and roofing tiles indicate one or more high-status buildings (perhaps even a *mansio*?) in the vicinity. To the south two other Romano-British sites are known. Both occupied low gravel-topped hills and surface finds suggest villa-type structures. At Tewkesbury Park Roman roofing tile and brick tesserae were associated with 2nd- to 3rd-century pottery (Rawes 1973), while at Southwick Park finds, including brick tesserae and 2nd- to 4th-century pottery, suggest a settlement covering *c.*1 ha (Marshall 1976). These two sites lay *c.*1.5–2.0 km south-west of those discussed here, on the opposite side of the River Swilgate and Roman road.

The overwhelming environmental factor that affected Sites I and II was their location on the edge of the floodplain. They occupied a low ridge, presumably just above the normal winter water level. That Site II was subject to at least occasional flooding is shown by the molluscs from one of the lower lying ditches, although there was nothing to suggest that the higher parts of the site were regularly under water. Indeed the absence of alluvium sealing the archaeological features on Sites I and II is conclusive evidence that this did not occur. At both sites the presence of roofing

tile alludes to the presence of structures in the Roman tradition, although building plans could not be recovered (unless pit group H at Site I is so interpreted). A similar situation occurred at Brockworth (Rawes 1981, 51) and the conclusion must be that the structures were built of timber or cob that has left little trace. The suitability for habitation of both Sites I and II is reinforced by the re-use in the Romano-British period of sites previously utilised in the Bronze Age. It must be more than coincidence that both these sites were re-occupied a whole millennium after their initial selection. The attraction of the margins of the floodplain for communities was that such locations were agriculturally highly productive and ecologically diverse, providing excellent seasonal grazing and water for cattle. The alluvial soils can also be very fertile if sufficiently well drained (Brown 1997, 104, 282–3). The ecological and agricultural dynamics of settlements in this type of location in the Thames valley through the prehistoric and Roman periods are now well understood (Lambrick 1992; Robinson 1992), although to date they are little known in the Severn valley. To the east of Gloucester there was a string of Romano-British agricultural settlements along the margins of the Horsbere, Twyer and Sudbrook brooks, and at Brockworth there is seeming evidence for partial flooding in the later 2nd century (Rawes 1984, fig. 1; Rawes 1981, 53, 74).

Occupation of Site I dates to the period of the 2nd–early 3rd century, the phase 3 rectilinear enclosure replacing earlier enclosures and tracks associated with at least one roundhouse. Comparison might be drawn once again with Brockworth where two late 1st-century A.D. roundhouses were enclosed within rectilinear ditched enclosures in the early 2nd century. The full dimensions of the outer enclosure at Brockworth were not recovered, but it measured 76 m NE–SW (Rawes 1981), almost exactly comparable with the 75 m N–S dimension at Site I.

Site II was occupied longer than Site I, some manner of activity continuing into the second quarter of the 4th century at least. It also started earlier, a small collection of pottery being attributable to the period from the late 1st century B.C. to the early 1st century A.D. The pottery evidence is not sufficient to determine if occupation commenced before, or after, the Roman conquest, and there is no requirement to believe that that event was of immediate local significance. Morphologically the settlement consisted of a series of coaxially aligned, contiguous, rectilinear ditched enclosures, much altered and sub-divided over the course of 300 years or so. Some of the enclosures doubtless served as paddocks or facilitated other agricultural practices. Others must have contained structures, although evidence was sparse, and the range of finds is consistent with domestic occupation. Site II invites comparison with similar settlements in the Upper Thames valley, and doubtless elsewhere, where such enclosure groups were frequently associated with trackways. Excavated examples are known from Appleford, Oxfordshire, dating to the period from the 2nd to late 4th century (Hinchcliffe and Thomas 1980, 62–9) and Roughground Farm, Lechlade, where the northern enclosure group dates to approximately the same period and formed but one element in a wider landscape associated with a villa (Allen *et al.* 1993, 101–3). Cropmarks provide numerous other examples (e.g. Frere and St Joseph 1983, 205–6 with a photograph of a site at Kelmscott, Oxfordshire) and at the seemingly similar site of Gravelly Guy, Stanton Harcourt, an early Roman linear arrangement of roughly rectangular enclosures, some with domestic components and others more likely to be paddocks, separated arable fields from open grazing (Henig and Booth 2000, 98). At Site II it is conceivable that the enclosures separated seasonally flooded grazing lands to the west from arable fields on the slightly higher land to the east.

The paddocks and trackways apparent at Sites I and II suggest a mixed farming economy, the seasonally inundated floodplains being utilised for summer grazing. The meagre animal bone assemblage points to the dominance of sheep/goat and cattle, some younger stock being killed for meat while a good proportion of older animals was kept for products such as milk and for a source of power. The plant remains demonstrate that the processing of grain took place at both Sites I and II, and the abundance of perennial rye grass in a phase 1 ditch at Site II is suggestive of the

cultivation of formerly grazed grasslands. Some of the plant species are characteristic of lighter drier soils and may therefore indicate that grain was brought in for processing from elsewhere. The fact that most of the ridge between the Tirl Brook and River Swilgate was formerly covered in ridge-and-furrow indicates the suitability of the area for arable in the medieval and later periods, and there is little reason to doubt that similar conditions prevailed in Roman times.

Finally it is worth speculating on the inter-relationships or otherwise of the two settlements. Both sites appear to be farmsteads with little pretension, and they may have been either owner-occupied family farms or else tenant holdings within larger estates administered from elsewhere, such as the Oldbury settlement or even the Tewkesbury Park or Southwick Park villas. Where similar sites occur in the Upper Thames valley, they can frequently be seen, thanks largely to aerial photography, as components in a extensive, articulated, agricultural landscape. Although aerial photography may not yield the same results in this part of the Severn valley, future fieldwork may provide a similar context for Sites I and II.

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