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**Shorncote Quarry: excavations of a Late Prehistoric Landscape in the Upper Thames Valley, 1997 and 1998**

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Shorncote Quarry: excavations of a Late Prehistoric Landscape in the Upper Thames Valley, 1997 and 1998

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INTRODUCTION by Adam Brossler

In August and December 1997 and February 1998, in advance of gravel extraction, the Oxford Archaeological Unit (OAU) undertook excavations at Shorncote Quarry, Somerford Keynes, Gloucestershire (O.S. Nat. Grid SU 033966), on behalf of Hills Aggregates Ltd. The areas excavated were situated on the First Gravel Terrace (British Geological Survey Map 252), 200 m south-west of the South/Ashton Keynes section of the Cotswold Water Park (Fig. 1).

Archaeological and Planning Background

The areas excavated in 1997 and 1998 are adjacent to the south-east corner of Shorncote North where a series of earlier evaluations and excavations, in advance of gravel extraction, had been carried out by Gloucestershire County Archaeological Service, the Trust for Wessex Archaeology (WA) and the OAU (Fig. 1). The nearest excavation, by WA, revealed a Bronze-Age settlement consisting of 36 circular post-built structures varying in size from 4.5 to 10.0 m in diameter. A small number of other features can be associated with these structures but no occupation levels were preserved. A total of five circular gullies, which may be structures or enclosures, were also recorded. Three of these measured over 10.8 m in diameter. Thirty-four four-post structures were identified. Nine linear features and two penannular ditches were also excavated, as well as a single broad ring-ditch. Thirty-two large pits and in excess of one hundred shallow ovoid features were also recorded. The evidence suggested that the features were likely to date from the late Bronze Age (Hearne and Heaton 1994; Hearne and Adam 1999).

Earlier, in 1989 and 1990, the OAU undertook an evaluation, followed by excavation and a watching brief, to the west of this Bronze-Age settlement. On that site a late Neolithic and Bronze-Age barrow cemetery, consisting of a Beaker ring-ditch, a Beaker flat-grave inhumation, and two smaller possible ring-ditches, a multiphased penannular ring-ditch with a secondary Deverel-Rimbury cremation cemetery, and a ‘U’-shaped enclosure of probable prehistoric date were excavated. Iron-Age settlement remains and Roman agricultural features and a trackway were also discovered (Barclay et al. 1995).
Fig. 1. Plan of Shorncote Quarry with archaeological sites.
A Romano-British farmstead or settlement known from aerial photographs, and evaluated by Gloucestershire County Archaeological Service in 1988 (Parry 1988), is located to the southwest of the areas excavated in 1997 and 1998. Trackways and field ditches associated with this settlement were located by WA when it evaluated the surrounding area in 1994 (Trust for Wessex Archaeology 1994).

More broadly, a survey of the river gravels from aerial photographs revealed a number of features in the Somerford Keynes area, including settlements of up to 14 hectares, oval enclosures, ring-ditches, subrectangular enclosures, and a number of trackways related to enclosures (Leech 1977, 8–11).

The aims of the 1997 and 1998 excavations were to investigate the use of this landscape from the late Bronze Age to the end of the Romano-British period and to establish patterns of domestic and industrial activity across the excavated areas in relation to spatial patterning of settlements both locally and more widely in the Upper Thames Valley.

Excavation Methodology

Area 1b (Figs. 2 and 3) measured approximately two hectares and was machine stripped using a toothless bucket, but not cleaned, some weeks before the excavation, under the archaeological supervision of WA. To the east Area 2 (Figs. 2 and 4), measuring approximately 5.6 hectares, was machine stripped under archaeological supervision after which selected areas were cleaned. Modern agricultural exploitation of the area and the construction of sewerage works had affected the preservation of archaeology across the site, resulting in large blank areas within the two sites.

Fig. 2. Plan of areas excavated in 1997 and 1998.
After a meeting on site with the County Archaeologist it was decided that targeted areas, comprising approximately 50% of Area 1b, would be hand cleaned in order to identify discrete features relating to prehistoric activity. A sampling strategy for both areas was employed whereby 10% of linear features and a minimum of 50% of all discrete features would be excavated, with the proviso that the proportions would be increased if deposits of special importance were encountered. Features thought to be derived from natural action, such as tree-throw holes, were systematically sampled, but were not excavated as extensively as anthropogenic features (i.e. they were quarter- rather than half-sectioned). All features were excavated by hand. The system of recording used was the single context system and each cut, layer and fill was assigned an individual number from a continuous sequence (Wilkinson 1992). Each feature or deposit was planned and photographed. Environmental sampling targeted features such as waterholes which were most likely to produce well-preserved material.

Sediments and Stratigraphy

The areas under investigation were situated on deposits of First Terrace gravels, with a reddish-brown silty-clay overburden, varying from 0.2 to 1.0 m in depth. The field sloped gently down towards the south-east, where there was a probable relict water channel. The variation in the depth of the overburden suggests that the field had once sloped gently down from the north-east to the south-west.

An alluvial deposit, measuring an average of 0.20 m in depth, covered archaeological features in the lower south-east area. All features and layers were sealed beneath modern ploughsoil, measuring 0.10–0.20 m in depth, the formation of which had truncated earlier features over
most of the site. Modern drainage ditches which crossed the area from east to west can be clearly seen on aerial photographs.

As no occupation layers survived from any of the three phases of activity identified, the chronological sequence of activity across both the 1997 and 1998 excavations was determined on the basis of the analysis of material evidence.

ARCHAEOLOGICAL DESCRIPTION by Adam Brossler

Relict stream
A relict stream (215) was located on the western edge of Area 1b. It was aligned N–S, and measured 98 m in length, 2 m in width, and 1 m in depth. The sides sloped at 30o onto a concave base. The fills contained rounded alluvial sandy-gravel, limestone and peagrit.

Tree-throw holes
A total of nine tree-throw holes (294, 1279, 1290, 1392, 1394, 1396, 1398, 1400 and 1402) were excavated in Areas 1b and 2. The fills of 1396, 1398, 1400 and 1402 comprised spreads of a red-brown burnt clay, which appeared to respect the edges of the cuts. Although the shape of the cuts suggested that the features were tree-throw holes, the presence of such high frequencies of burnt clay indicates re-use. It is noteworthy that tree-throw holes 1396, 1398, 1400 and 1402 form a very rough N–S alignment. One of the tree-throw holes excavated in Area 1b also
contained lenses of burnt material and charcoal. Tree-throw holes 1279 and 1290 both contained fills with large quantities of fine and coarse gravel inclusions. Although no dating evidence was recovered from the tree-throw holes the fact that some have been truncated by structures suggests that they may have been the earliest features in the excavated areas.

**Late Bronze Age**

A total of eleven features were attributed to the late Bronze Age. They consisted of a house gully, two pits, three waterholes and five postholes.

**House gully and associated features**

House gully 305 (Fig. 5) was located near the western edge of Area 1b. The structure measured 10.70 m in internal diameter and 11 m in external diameter. The gully was 0.45 m in width and 0.25 m in depth. Its sides sloped at c. 80° onto a rounded or slightly concave base. The gully cut pit or tree-throw hole 228 and gully 208.

Three of the four sections excavated through the gully revealed two fills. The primary fills 81, 211 and 212 were friable, yellow-brown silty-gravels with 2% charcoal inclusions, although 212 did not contain charcoal. The upper fills (82, 201, 199) were darker clay-silts which contained low frequencies of gravel and charcoal inclusions. The fourth section (213) revealed only one layer of fill (222) which was similar to the upper fills in the other sections. Animal bone, 102 sherds of late Bronze-Age pottery and part of an early Iron-Age tripartite vessel were recovered from upper fill 82.

A subrectangular linear feature (208) was identified at the northern end of the ring-gully (Fig. 5). It measured 3.95 m in length, 1.40 m in width and 0.30 m in depth. The sides sloped at 35–40° onto a flat base. The cut contained one fill (207), a greyish-brown clay-silt which contained 5% gravel inclusions and 2% charcoal flecks.

**Pits and postholes**

A total of 22 pits were identified and excavated in Areas 1b and 2 (Figs. 3–4). Only two of the pits (61 and 228) were identified as being of a late Bronze/early Iron-Age date; the other 20 were dated to the Iron-Age period and are described below.

Pit 61, located at the western side of Area 1b, was oval in plan, measuring 2.70 m in length, 1.70 m in width and 0.50 m in depth. The sides sloped at 50° to a concave base. The pit contained two fills. The primary fill (66) was a friable, greyish-brown clay-silt with 25% oolitic limestone gravel inclusions and a small quantity of charcoal flecks. The secondary fill (60) was a friable, mid yellowish-brown clay-silt with 5% oolitic gravel inclusions. No finds were recovered from the fills. The pit was cut by ditch 296.

Pit 228 was located on the northern edge of the house gully (305). It was ovoid in plan, and measured 2.80 m in length, 2.40 m in width, and 0.30 m in depth. The sides sloped at 30° onto an uneven base. Fill 229 was a silty-clay, with a high frequency of gravel inclusions. The pit was cut by the house gully.

A group of five postholes (230, 232, 234, 236 and 238) were cut around the eastern side of pit 228 (Fig. 5). The postholes were all circular in plan but their dimensions varied, measuring 0.14–0.32 m in diameter and 0.04–0.15 m in depth. In profile the postholes were shallow scoops. The fills had the same consistency as 229, the fill of pit 228. The relationship between the pit and the postholes was, however, unclear.
Fig. 5. Plan and section of late Bronze-Age–early Iron-Age house gully 305.
Waterholes and timber-lined well

Three structures interpreted as waterholes were found in the western part of Area 1b around house gully 305 (Fig. 3). A timber-lined well, also dating to the late Bronze Age, was found in the southern part of Area 2 (Fig. 4).

Waterhole 132 (Fig. 6) was located to the north-west of the house gully. It was oval in plan and measured 3.60 m in length, 2.30 m in width and 2.20 m in depth. The sides sloped at 45–50°, then became vertical, before breaking onto a rounded base. A sump had been dug in the north-eastern area of the base. The waterhole was cut by pit 282 and postholes 287 and 298.

The waterhole contained thirteen fills. The primary fills were mainly gravel slumps, probably a result of the sides collapsing while the waterhole was open. Layer 277, one of the lower fills, was a fine silty-sand deposit that contained two sherds of late Bronze-Age pottery and a small quantity of burnt limestone. This was overlain by another silty-sand (276) which contained eight fragments of an adult human skull and 16 sherds of pottery of the same date. Fill 164 contained a complete profile of a late Bronze-Age vessel, animal bone, and large quantities of burnt limestone. Large amounts of burnt limestone were also noted in fill 280. The upper fills 74, 73 and 72 contained nine, five and six sherds of late Bronze-Age pottery respectively. Fills 73 and 74 produced three flint flakes of uncertain date. A number of unidentifiable fragments of animal bone were recovered from fills 72 and 74.

Waterhole 249 (Figs. 5 and 7) was located to the east of ditch 305. It was oval in plan, measured 2.40 m in length and 2.20 m in width and was excavated to a depth of 1.60 m. The sides sloped at 45° before dropping vertically.

The waterhole contained eight fills, mainly silty-loams, with high frequencies of gravel inclusions. Five of the fills (250, 251, 252, 255 and 256) contained small amounts of burnt

![Diagram of waterhole 132](image)

Fig. 6. Section through waterhole 132.
limestone and charcoal flecks. Fills 256 and 250 contained four and six sherds of late Bronze-Age pottery respectively.

Waterhole 116 (Fig. 5) was located south of ditch 305. It was oval in plan and measured 2.90 m in length, 2.60 m in width and 1.60 m in depth. The sides sloped at 45°, the southern side then becoming vertical before reaching the flat base. The primary fill (101) was a mid-grey clay with 10% gravel and 5% charcoal inclusions. It contained twelve fragments of fired clay, thought to be pieces of loomweights. The fills above were all silty-clays, with 15–40% gravel and limestone inclusions. The upper fill (98) contained one sherd of late Bronze-Age pottery and a number of fragments of animal bone.

Timber-lined well 1414 (Fig. 8) was located in the south-western part of Area 2. It contained a wooden structure (1638) consisting of 26 upright posts or stakes, arranged in a circular pattern. The cut (1414) was circular in plan, and measured 2 m in diameter and 1.10 m in depth. The sides descended vertically to a flat base.

The well contained eight fills. The primary fill (1636) was a light-grey silty-clay, which contained a small amount of sand and gravel. The fill was overlain by three pieces of wood (1415, 1416, 1417) and an organic layer (1635). A fragment of Quercus from this deposit was radio-carbon dated to 1110–1100 cal B.C. and 1077–811 cal B.C. (95% confidence NZA-10031; 2783 ± 64BP).

Fill 1634 was an organic deposit which appeared to represent the final phase of silting. Fill 1633 above was light grey-blue clay, which suggests that by this stage the feature was full of standing water and had gradually silted up. The remaining fills appeared to be either deliberate deposits or a product of alluvial action, an assumption based on the frequency of gravel inclusions.

Spatial distribution

Although the pits and waterholes did not appear to form alignments, groups or clusters of pits and waterholes were identified. The waterholes investigated in Area 1b were clustered on the
western edge of the excavation. The proximity of the waterholes to the stream (215) suggests the latter had either silted up or was not open during the late Bronze Age or early Iron Age.

Iron Age

Post-built structure and house gully

A structure (1612) comprising eleven postholes was located in the interior of a house gully (1611) in the north-western corner of Area 2 (Figs. 9 and 10). Structure 1612 measured c. 8.80 m in length and c. 3.50 m in width. In plan it appeared to form a shallow "V" shape. The postholes were predominantly circular in plan, measuring 0.15–0.60 m in diameter and 0.17–0.35 m in depth (Fig. 9). Their sides sloped mostly at 80–90° onto flat or rounded bases. Posthole 1513 was oval in plan and measured 0.27 m in length, 0.20 m in width and 0.18 m in depth. Its sides sloped at 50° onto a flat base. Posthole 1315 was truncated by the house gully.

The majority of the postholes contained one fill that was a friable mid brown sandy-silt, which contained between 10 and 40% gravel. Postholes 1590 and 1592 contained a compact brown silty-clay fill. A single sherd of middle Iron-Age pottery was the only find from the ten postholes.

House gully 1611 (Figs. 10 and 11) measured c. 11 m in internal and 14 m in external diameter. It was 1.00–1.20 m wide and 0.16–0.44 m deep. The sides sloped at 45–50° onto a flat or rounded base. The gully cut a tree-throw hole, in which an area of burnt clay was found (1433; Fig. 11), and also posthole 1315 forming part of structure 1612 (Fig. 11). The gully was roughly circular and an extension (1340 and 1359) to the east was a later addition (Fig. 11).

The number of fills within the gully varied from one to four (Fig. 11). The primary fills (1267, 1272, 1314, 1324, 1350, 1353, 1360, 1432 and 1461) were predominantly loose, friable, mid to dark grey-brown clay-silts or silty-clays, which contained varying quantities of gravel and burnt limestone. Animal bone was recovered from layers 1265, 1272, 1324, 1350, 1360 and 1461. The upper fills were very similar to the primary fills, a number containing small amounts of charcoal (1–5%) and varying quantities of burnt stone. Seventeen fragments of briquetage were recovered from fill 1247 as well as a number of fragments of animal bone and two sherds of middle Iron-Age pottery. A total of 192 sherds of middle Iron-Age pottery were recovered from the fills.

Field system

An extensive field system, including continuous and segmented ditches, extended across both areas of the excavation. The stratigraphic relationships between the ditches indicated at least three phases of activity. All of the ditches were sectioned, numbered, and in some cases were given group numbers. Sections were excavated at the junctions of cuts, termini, and in undisturbed areas.

Continuous ditches

Ditch 301 (Fig. 12) was located in the south-eastern corner of Area 1b and continued in the south-western corner of Area 2, running WSW–ENE for c. 125 m. The original cut of the ditch (labelled 36 in Area 1b and 1156 in Area 2) was 2.40 m wide and 0.70 m deep. The sides sloped at c. 70° to a slightly concave base. Two recuts of the ditch were identified, 93 and 1161, both attempts either to extend the ditch or to remove natural slumping that had taken place. The ditch belongs to the earliest phase of ditches excavated on the site. It was subsequently cut by Roman ditches 1572 and 1625.
Fig. 8. Plan and section of timber-lined well 1414.
Fig. 9. Plan and sections of post-built structure 1612.
The earliest cut of the ditch in Area 1b (36) contained four fills (94, 95, 96 and 97), whilst the two sections through the cut in Area 2 (1156) identified six fills (1152, 1153, 1154, 1155, 1171 and 1172) and five fills (1281, 1282, 1283, 1284 and 1285). The fills of cut 36 were compact mid-dark brown silty-clays, which contained 10–40% gravel inclusions. The fills of 1156 were varied in composition, friable to tenacious, but predominantly pale yellow in colour. The composition varied between silty-sand and clay-silt, as did the percentage of gravel inclusions (10–40%). Primary and secondary fills 1172 and 1171 both slumped from the northern edge of the ditch. The secondary fill was a friable, dark reddish-black silty-sand, with a high frequency of gravel inclusions and iron-pan staining. The upper fill (1346) contained one sherd of middle Iron-Age pottery.

Recut 93 measured 1.10 m in width and 0.45 m in depth, and was cut along the same alignment as ditch 36. The primary fill (92) was a friable, dark brown silty-clay which contained 4% gravel inclusions; the secondary fill (37) was the same, but contained 40% gravel inclusions.

Recut 1161 was located at the northern terminus of 1156 in Area 2. It measured 8.50 m in length, 1.80 m in width and 0.60 m in depth. The sides sloped at 60° onto a slightly concave base. The cut truncated ditch 1156 and was truncated by ditch 1616.
Fig. 11. Sections of middle Iron-Age house gully 1611.
Fig. 12. Sections of segmented ditch 1616 and field boundary ditches 301, 296, 297 and 298.
Ditch 1161 contained four fills: 1157, 1158, 1159 and 1160. The primary fill (1160) was a friable, pale yellow silty-sand with a high percentage of gravel inclusions. The secondary fill (1159) was a friable, dark blackish-red silty-sand which also contained high frequencies of gravel inclusions. Both of the upper fills (1158 and 1159) were tenacious, pale grey clay-silts which contained 5% gravel.

**Segmented ditches**

The segmented ditch system comprised three ditch or pit alignments in Area 2, one oriented NE–SW (1616) and two NW–SE (1618 and 1619).

Ditch 1616 comprised seven segments (Fig. 12). It measured c. 80 m in length, with the segments varying between 21.0 and 21.00 m in length, 1.10 and 1.80 m in width, and 0.16 and 0.32 m in depth. The sides sloped at 40–45° into a rounded base. All of the cuts shared similar profiles. Segment 1258 cut ditch 1161, and segment 1248 was cut by ditch 1190.

The number of fills varied from one to four (in segment 1258). The primary fills were sandy-silts formed by slumping. The higher fills were very similar, being yellow-brown clay-silts with sandy lenses. The percentage of inclusions varied from 1 to 40, and included gravel and small amounts of burnt limestone. The secondary and upper fills (1250 and 1251) of cut 1248 both contained small quantities of charcoal.

Ditch 1618, located to the west of the centre of Area 2, measured c. 43 m in length. It comprised four segments: 1465 = 1468, 1472, 1470 = 1474 and 1259 = 1476. The dimensions of the segments varied, measuring c. 4.50–24.00 m in length, 0.95–2.00 m in width and 0.15–0.60 m in depth. The sides sloped at 20–70° onto flat or rounded bases.

The fills were predominantly mid to dark brown silty-clays; only two fills were silty-sand. The percentage of gravel inclusions varied from 20 to 40. Fills 1477 and 1487 in segment 1476 and fill 1469 in segment 1468 contained 1% charcoal. The fill (1467) of segment 1465 contained 1% charcoal and 2% burnt limestone.

Ditch 1619 comprised ten segments and measured 70 m in length. The segments measured from 2.00 to 4.50 m in length, from 0.40 to 1.00 m in width and from 0.12 to 0.34 m in depth. The sides sloped at 30–45° onto flat bases. Ditch 1614 cut segment 1442, and segment 1444 was cut by ditch 1615.

The number of fills varied from one to four (in segment 1449). The fills were predominantly compact, brown gravel-clay, with a small percentage of the fills being brown silty-loams. The percentage of inclusions was variable, ranging from 1 to 40, and features containing evidence of *in-situ* burning included charcoal and burnt limestone in 1445, the fill of segment 1444. The second (1462) and third (1463) fills of segment 1449 were both layers of burnt clay, which was red in colour and up to 0.12 m deep.

**Enclosure ditches**

Ditch 295 (Fig. 13) was located in the north-eastern corner of Area 1b. It was sub-'L'-shaped in plan, measuring c. 30 m NW–SE and 16 m NE–SW, and it was up to 4 m wide and 0.86 m deep. The sides sloped at 70° onto a slightly rounded base. The ditch was recut by ditch 216.

Two sections through the ditch identified three fills: 39, 76 and 77, and 219, 220 and 221. One primary fill (39) was a friable, dark yellowish-brown silty-gravel, and the other (221) was a compact, dark brown silty-sand with a high frequency of gravel inclusions. Of the secondary fills 76 was a tenacious, greyish-yellow-brown silty-clay, and 220 was compact, dark brown silty-gravel which contained two sherds of Romano-British pottery. Upper fill 77 was very similar to 76, and 219 was a compact, reddish-brown silty-clay, which contained 40% gravel inclusions. The fills appeared to have been deliberately dumped into the ditch.
Recut 216 (Fig. 13), which was seen in only one section, measured 2 m in width and 0.40 m in depth. The sides sloped at c. 75° onto a concave base. The fill (217) was a compact, dark brown silty-sand, with a high frequency of gravel inclusions. It appeared to have been deliberately dumped into the ditch.

Ditch 296 (Fig. 12), at the eastern side of Area 1b, was oriented NE–SW. To the north it stopped just short of ditch 295. To the south it cut through the remains of an earlier feature (87) seen only in section, having perhaps been ploughed away to the south. Feature 87 may, however, have originally formed the northern end of the eastern arm of ditch 297 (see below), implying perhaps that ditch 296 was intended to run between ditches 295 and 297. Ditch 296 measured c. 50 m in length, 2.50 m in width and 0.80 m in depth. It cut pit 61 and ditch 42.

In three sections three fills were identified, although the ditch’s southern end (89) contained only one fill (90). The primary fills (41, 64 and 84) were all friable, yellowish-brown deposits, but varied between silty-gravel and clay-silt. All contained small quantities of gravel inclusions. The secondary fills (63, 78 and 85) were all tenacious, yellowish-brown silty-clays, with small quantities of gravel inclusions. The uppermost fills (79, 62, 86) were tenacious, yellowish-brown clay-silt, with small amounts of gravel inclusions. Fill 90 was a yellowish-brown loamy-silt, which contained 20% gravel inclusions.

Ditch 297 (Fig. 12), located to the south of ditch 296, ran N–S, roughly parallel to ditch 298. Its northern end bifurcated, the later eastern arm cutting the earlier western arm which had itself been cut by feature 87. Feature 87 may, therefore have formed the original terminus of the western arm of ditch 297. Ditch 297 measured 70 m in length, a maximum of 1.20 m in width and 0.20 m in depth. The sides sloped at c. 40° onto a flat base. It was cut by ditches 298 and 299.

The ditch contained a single fill, save in section 13 where two were identified. The fill (3, 12, 13, 22, 261 and 269) varied from compact to friable and from yellowish-brown to pale grey-brown. Its composition was also variable, ranging from silty-sand to clay-silt, but the frequencies of inclusions were similar (25–35%). The primary fill (12) of cut 13 was a friable, mid-dark brown silty-clay, while the upper fill (22) was a tenacious, mid-dark brown clay-silt. Both contained many oolitic gravel inclusions.

Ditch 298 (Fig. 12) ran from the southern edge of Area 1b in a north-easterly direction to the north-west corner of Area 2. It measured c. 135 m in length, 1.20 m in width and 0.30 m in.
depth. Its sides sloped at 40–80° into a concave base. No termini were identified due to truncation by other features. The ditch cut gully 117 and ditch 297, and it was cut by ditches 299 and 1622.

The ditch contained two fills, except in one section which contained only one. The primary fill (10, 120, 162 and 263) varied from compact to soft, but was mid-dark brown in colour. The composition varied from silty-loam to sandy-silt, with moderate quantities of limestone gravel inclusions. Fill 162 contained 20% charcoal inclusions, and 120 contained animal bone. The secondary fill (15, 121 and 163) was a friable to tenacious, mid-brown deposit, varying in composition from clay-silt to silty-clay.

Ditch 304 was located near the centre of Area 1b. It was curvilinear in plan, and measured 20 m in length, 1 m in width and 0.25 m in depth. The sides sloped at 50° onto a concave base, producing a ‘V’-shaped profile. The ditch cut gully 31.

The ditch contained two fills. The primary fill (8) was a friable, greyish-yellow-brown sandy-silt, with a high percentage of gravel inclusions. The secondary fill (6) was very similar in compaction and colour, but was a clay-silt, with a low frequency of gravel inclusions. Both fills appeared to have been formed by natural silting.

Ditch Group 1621 comprised three ditches (1115, 1190 and 1192) which seem to have belonged to a field system that was later than ditch 301 and segmented ditch 1616. Ditches 1115 and 1192 appear to be parts of the same ditch, and ditch 1190 parallels 1192, together with which it may have formed an entrance way into an enclosure. Roman pottery in the fill of one of these ditches may be later intrusive finds.

Ditch 1115 was located in the south-eastern corner of Area 2 and was oriented NE–SW. It measured 105 m in length, 1.22 m in width and 0.26 m in depth. The sides sloped at 30–40° onto a rounded base. The ditch was cut by Roman ditch 1620. The three sections through the ditch all identified two fills, which were a compact, mid to dark brown clay or silty-clay. The upper fill (1135) contained six sherds of pottery of middle Iron-Age date.

Ditch 1190 was located near the southern edge of Area 2 and was oriented NW–SE. It measured 0.65 m in width, 0.14 m in depth and 35 m in length, with a rounded terminus. The sides sloped at 60° onto a flat base. The ditch cut ditches 1616 and 301. It contained one fill (189), a friable, greenish-brown sandy-clay which contained 1% gravel.

Ditch 1192, orientated NW–SE, was located at the southern edge of Area 2. It measured c. 20 m in length, 0.50 m in width and 0.15 m in depth. The sides sloped at 45° into a rounded base. The terminus was located at the north-western end of the ditch. The only fill (1191) was a tenacious mid yellowish-brown silty-clay which contained 5% gravel and one sherd of Roman pottery.

Ditch 1499, located at the western edge of Area 2, was aligned NW–SE and curved slightly. It measured 14.20 m in length, 1.40 m in width and 0.22 m in depth and had a scooped profile and a rounded base. The ditch contained one fill and no finds. The division between the two excavated areas lay between 1499 and ditch 298, which crossed from the eastern edge of Area 1b into Area 2, so it was not possible to establish their relationship.

Ditch 1585, located in the south-western corner of Area 2, was aligned NE–SW and was linear. It measured 26 m in length, 0.90 m in width and 0.25 m in depth and had a ‘V’-shaped profile. The ditch contained one fill (586), the nature of which suggested natural silting. It was cut by Romano-British ditch 1625 and trackway 299/1617.

Ditch 1622 (Fig. 14) was N–S oriented and located at the western end of Area 2. It had a shallow ‘S’-shape plan, measuring c. 105 m in length. The ditch’s dimensions varied, the width between 0.90 and 3.30 m and the depth between 0.20 and 0.92 m. Its sides sloped at 20–55°.
Fig. 14. Sections of field boundary ditches 1622 and 1614.
onto a rounded to flat base. The ditch cut ditches 298, 301, 1585 and 1614, and was cut by Romano-British trackway 299/1617 and ditch 1625.

The number of fills in ditch 1622 varied from one to eight. The fills themselves varied from loose to tenacious or compact and from silty-clay to clay-sand. A number of the primary fills were gravel and/or sandy-gravel deposits that had slumped down the sides of the ditch. The primary fill (1332) of section 1318 contained one sherd of pottery, and the fourth layer of fill (1482) of section 1486 contained three sherds of middle Iron-Age pottery.

Ditch 1614 (Fig. 14) was oriented E–W and located in the north-western corner of Area 2. It curved slightly in plan, measuring c. 50 m in length, 2–3 m in width and up to 1.30 m in depth. The sides sloped at 40–45° onto a flat or V-shaped base. The ditch cut segmented ditch 1619 and was cut by ditch 1622.

The ditch contained between five and nine layers of fill. The primary fills (1325, 1511 and 1560) were gravel slumps. The pattern of slumping appears to be the same in all three sections. The other fills were varied, being compact–loose sandy-clays, clay-silts or gravels. The percentage of inclusions varied from 5 to 40, and a number included low frequencies of charcoal. Fills 1511, 1561 and 1563 contained 4, 27, and 13 sherds of middle Iron-Age pottery respectively; 1563 also included a fragment of daub. The fifth fill (1329) of section 1317 contained seven sherds of middle Iron-Age pottery and a flint flake. Fill 1328 contained one amorphous fragment of fired clay.

Ditch 1615, a linear ditch aligned N–S, was located in the north-western corner of Area 2. It measured 25 m in length, 3.50 m in width and 1.20 m in depth. Its sides sloped at 30° onto an uneven concave base, and its terminus was at its southern end. The ditch cut ditch 1619.

The two sections cut across ditch 1615 identified a maximum of seven layers of fill. Generally the fills varied, being friable, mid brown to blue-grey sandy-silts to clay-silts with between 1% and 40% gravel. The primary fills (1425 and 1610) were friable sandy-silt deposits with frequent gravel inclusions; 1425 contained a sherd of middle Iron-Age pottery. The second (1412), third (1411), and upper (1501) fills contained 8, 57, and 1 sherds of middle Iron-Age pottery respectively; 1411 also contained three amorphous fragments of fired clay. The fourth layer of fill (1607) contained a lens of crushed shell that slumped from the eastern side of the cut.

Ditch 1623, located in the north-western corner of Area 2 and east of 1615, was aligned N–S. It measured 65 m in length, a maximum of 3.25 m in width and 1.10 m in depth. The slope of the sides varied between 30° and 55°, and the base was flat. A terminus was located at the ditch's southern end. The ditch was cut by ditch 1617.

The three sections identified four, five and nine fills. The primary fills were all loose, light yellow sandy-gravels, which appeared to be natural slumping. The other fills, light to yellowish-brown clay-silts or silt-clays, had 1–40% gravel inclusions. A number of the fills (1305, 1306, 1307, 1428, 1429 and 1430) contained 1–3% charcoal and burnt limestone inclusions. Fills 1305, 1306, 1543 and 1544 contained 7, 5, 14 and 4 sherds of middle Iron-Age pottery respectively; primary fill 1545 contained 25 sherds of the same date.

Ditch 1540, which was probably a recut of ditch 1623, measured c. 65 m in length, 2.60 m in width and 0.75 m in depth. The sides sloped at 25–30° onto an irregular concave base. The ditch contained three fills that were all mid–dark brown silty-clays with 25–40% gravel inclusions.

Ditch 1624, located to the south of ditch 1623, was aligned NW–SE. It measured c. 18 m in length, 0.90 m in width and 0.16 m in depth. The sides sloped at 30° onto a rounded base. The fill was a compact, light brown silty-clay with small quantities of sand and gravel. The ditch was cut by ditch 1623 and by Roman trackway 1617.
Postholes and fence lines
A total of 74 postholes were identified and excavated in Areas 1b and 2. The majority formed fence lines, although eleven formed structure 1612 (see above) and a two-post structure was identified. The remaining postholes were randomly scattered throughout both areas.

A group of six postholes (Fence 1: 180, 182, 184, 186, 188 and 190) was located to the south of ditch 301 in a NE–SW alignment 5.80 m long (Fig. 3). The postholes were all circular in plan, measuring 0.20–0.26 m in diameter and 0.09–0.23 m in depth. Their sides usually sloped at 70–80° to slightly concave bases. Postholes 180 and 182 were intercutting, although no chronological relationship was established between them.

Fence 1 was mirrored by a group of five postholes (Fence 2: 122, 147, 149, 151 and 155) on the same alignment on the northern side of ditch 301. Fence 2 measured 3.20 m in length. The postholes were all circular in plan, measuring 0.16–0.32 m in diameter and 0.09–0.22 m in depth. They varied in profile from shallow scoops to vertical sided features with flat bases.

A N–S alignment of four or five postholes (Fence 3: 130, 157, 159, 166 and perhaps 147) was situated north of Fences 1 and 2. It measured 2.50 m in length. The dimensions of the postholes varied, measuring 0.20–0.38 m in diameter and 0.08–0.24 m in depth. The posthole profiles were mainly shallow scoops.

Fence line 1613 comprised 20 postholes (1198, 1200, 1202, 1204, 1206, 1208, 1210, 1212, 1214, 1216, 1218, 1220, 1222, 1224, 1226, 1228, 1230, 1232, 1234 and 1236; Fig. 15). They were aligned N–S in groups of three, fourteen and three. The full length of the fence line was c. 26 m. Another two postholes (1238 and 1240) located east of the centre of the line are assumed to relate to it. The postholes were subcircular in plan, with the exception of 1216 which was subrectangular. Their dimensions varied from 0.20 to 0.70 m in length, from 0.23 to 60.00 m in width and from 0.09 to 0.35 m in depth. Posthole 1216 measured 1 m in length, 0.38 m in width and 0.20 m in depth. The posthole profiles were very similar, most having vertical sides and flat bases. Their fills were predominantly a tenacious light brown clay-silt, with varying frequencies of gravel (5–10%). There was no evidence of deliberate spatial patterning in the distances between the posts; the gap between the northern and middle groups measured 5.75 m, and that between the middle and the southern groups 3.75 m.

Postholes 108 and 110, located to the south of ditch 300, formed a two-post structure. The postholes, which were 1.45 m apart, were circular in plan, and they measured 0.26–0.44 m in diameter and 0.24–0.26 m in depth. The sides sloped at 85–90° onto flat bases.

![Fig. 15. Sections of postholes of fence line 1613.](image)
Pits
The pits fell into three basic types (Fig. 16): circular or oval with a scoop profile (type 1; nine examples), circular or oval basin profile (i.e. straight sided with a flat base; type 2; five examples), and subrectangular with steep profiles (type 3; four examples). Only two pits did not fit into these basic types. Of the two late Bronze-Age/early Iron-Age pits one was type 1 and one type 2.

The type 1 pits (51 (Fig. 16), 224, 240, 246, 1106, 1120, 1286, 1404 and 1593) varied in size, the circular pits measuring 0.50–2.00 m in diameter and 0.16–0.46 m in depth, and the oval pits 1.10–3.00 m in length, 0.65–2.30 m in width, and 0.18–0.76 m in depth. The sides sloped at 30–50° onto a rounded base. Pit 51 cut ditch 296.

The pits contained one to seven fills, which were silty-clays or sandy-silts. Most of the fills contained varying quantities of limestone fragments and gravel. In the secondary fill (1288) of pit 1286 a burnt clay layer spanned the entire mid-section of the cut and measured 0.12 m in depth. The second and third fills (1406 and 1407) of pit 1404 contained a small amount of burnt stone; 1406 also contained c. 20% charcoal flecks. Pit 1593 contained a small burnt clay layer (1596) that may have been the remnant of a kiln or oven structure. The two fills above this deposit both contained charcoal (10–20%) and burnt limestone (5–10%). Pit 1120 contained a flint flake of uncertain date.

The type 2 pits (47, 105, 206, 1137 and 1196 (Fig. 16)) also varied in size, the circular pits measuring 1.00–1.20 m in diameter and 0.30–0.52 m in depth, and the oval pits 1–2 m in length, 0.96–1.15 m in width, and 0.65–0.82 m in depth. The sides sloped at 75–85° onto flat bases. Pit 105 cut ditch 300, and pit 206 cut type 3 pit 204.

The pits contained between one and three fills, all clay-silts with the exception of two primary fills that were silty-gravels with sand lenses. The secondary fill (1194) of pit 1196 contained moderate quantities of charcoal and ash as well as an organic residue, suggesting the pit was used a rubbish dump. The upper fill (1193) was a blue-grey clay, indicating a waterlogged deposit.

Pit 1137 (Fig. 17), a variant of type 2, was subrectangular in plan and measured 2.20 m in length and 1.80 m in width; it was excavated to 1 m in depth. The sides sloped at 80–85°. The pit contained 10 fills. The first three layers were all coarse sandy-gravels that contained 2–20% charcoal inclusions and 1–5% burnt stone. These were sealed by a number of silty-clay or clay-silt deposits which contained 1–25% charcoal and 1–5% burnt stone. The fifth fill contained seven sherds of middle Iron-Age pottery. A possible kiln (1624) cut the pit.

The type 3 pits (204, 1147, 1151 and 1170 (Fig. 16)) measured 1.00–1.60 m in length, 0.80–1.00 m in width, and 0.10–0.20 m in depth. The sides sloped at 40–90° onto flat bases. Type 1 pit 206 cut pit 204.

Of the four pits, three contained two fills and the other (1170) contained one. The uppermost fill (1146) of pit 1147 consisted of reddened clay and burnt limestone fragments. Fills 1149 (primary fill of pit 1151) and 1169 (in pit 1170) were both dumps of burnt limestone.

Pit 1187 is one of the two irregular pits from the site. It was oval in plan, and it measured 2 m in length, 1.40 m in width and 0.55 m in depth. The sides were irregular, sloping at 90° on the northern edge and at 45° on the eastern edge to a flat base. The pit contained five fills, either clay-silts or clays, with 1–15% charcoal inclusions and 5–10% burnt stone. The fourth fill (1183) was a layer of burnt clay, which measured 0.86 m in length and 0.08 m in thickness. The fills appeared to be dumps of burnt material rather than an in-situ bowl furnace.

Pit 282 was only seen in the section through waterhole 132. It too was irregular; the sides were steep and broke onto a rounded base.
Fig. 16. Sections of pit types 1–3.
Possible kiln or bowl furnace

Cut 1624 (Fig. 17) in pit 1137 was subcircular in plan, and it measured 1.29 m in length, c. 0.80 m in width and 0.42 m in depth. The sides sloped at 85° onto a rounded base. It contained five fills. The primary fill was a burnt clay deposit (1177) which appeared to have been deliberately applied as a lining up to 0.10 m thick. The feature thus formed was ‘U’-shaped in section and had the appearance of a bowl. A series of silty-loams filled the deposit, probably representing deliberate backfilling and abandonment of the feature. It cut pit 1137.

Waterholes

Because of the pottery they contained and their location, a number of the waterholes or dewponds excavated in Areas 1b and 2 were attributed to the middle Iron Age. The position of some near the field boundaries suggests that they were for animals. Since none of the field systems appears to date from the Bronze Age, the waterholes located near them are therefore assumed to date from the Iron Age.

Waterhole 1163 was located to the south-east of the centre of Area 2. It was circular with a diameter of 1.50 m, and it was excavated to a depth of 0.80 m. The sides sloped at 30° before descending vertically. The waterhole contained six fills. The primary and secondary fills were both clay deposits which were sealed by a layer of sand. The fifth fill (1162) was rich in charcoal and contained 5% burnt limestone, four sherds of middle Iron-Age pottery and other domestic refuse suggesting deliberate backfilling.

Waterhole 1319, located near the western edge of Area 2, was oval in plan and measured 6 m in length, 4 m in width and 0.80 m in depth. The three fills appeared to be a result of natural silting.
Waterhole 1354 was located in the south-western corner of Area 2. It was subcircular in plan, and measured 8.80 m in length, 6.70 m in width and 0.60 m in depth. The sides sloped at 20° onto a flat base. The waterhole contained two fills, the first of which was a loose, coarse gravel with occasional bands of sand. The upper fill was a silty-clay with 2% charcoal inclusions.

Waterhole 1354 cut waterhole 1357, which measured 4.20 m in length, 2.80 m in width, and 0.65 m in depth. The sides sloped at 20° onto a slightly concave base. The gravel fill suggests that waterhole 1357 naturally silted and was later recut by 1354.

Waterhole 1381, located to the west of the centre of Area 2, was oval in plan and measured 3 m in length and 2.30 m in width; it was excavated to a depth of 0.90 m. The sides sloped at 40° before descending nearly vertically. The waterhole contained eleven fills. The first six were layers of clay-silts and sandy-gravels, indicative of natural slumping and silting. The layers that sealed these deposits contained large amounts of charcoal, burnt clay and burnt limestone. Upper fill 1391 contained one sherd of middle Iron-Age pottery and one sherd of Roman pottery. The presence of domestic refuse suggests that the function of the waterhole changed, undergoing secondary use as a rubbish pit; this was probably due to the rise and fall of the watertable.

Spatial distribution

In Area 2 a cluster of three type 3 pits (1147, 1151 and 1170), one waterhole (1163), a type 2 pit (1137), an irregular pit (1187), and a kiln/oven (1624) was identified. The presence of high frequencies of charcoal and burnt stone suggests that the area around the cluster was used for industrial purposes. The proximity of the waterhole and kiln/oven feature does not, however, necessarily imply that the features were open or in use at the same time.

Romano-British

Roman trackway and field system

The continuation of a Roman trackway ran across Areas 1b and 2 in a SW–NE direction, formed by ditches 299/1617 and 1277/1117 (Fig. 18). The trackway was segmented and each section was given a separate cut number. It measured c. 287 m in length and had an internal width of c. 6 m. The measurements of the ditches varied between 0.70 and 1.80 m in width and 0.08 and 0.40 m in depth. The sides sloped at 30°, usually onto a flat base, though two sections produced a "V"-shaped profile. The trackway cut ditches 297, 1618 and 1622.

There were gaps in ditch 299 in Area 1b, presumably to allow access to the fields. It was unclear whether a group of three field boundary ditches (1620, 1572, 1625) incorporated, or were incorporated by, the trackway. It appears, however, that ditches 300 and 1342 predated the trackway and were incorporated into it.

In most places the ditches contained only one fill; only section 1342 contained three. The fills of the Area 1b cut were soft to compact, dark grey-brown silty-clay and contained 30–40% gravel inclusions. The fills of the Area 2 cuts varied from compact to tenacious, from light to yellow-brown, and from silty-clay to silty-gravel. The percentage of gravel inclusions ranged from 2 to 40. The primary fill (1343) contained two sherds of middle Iron-Age pottery, and fill 259 one sherd of Roman pottery. Five amorphous fragments of fired clay were recovered from 1133.

Ditch 300 (Fig. 18), part of which was incorporated in the southern end of the trackway (ditch 54), measured 25 m in length and ran SE–NW. The width measured 0.30–2.10 m and the depth 0.15–0.56 m. The sides sloped at 45–60° onto a flat or rounded base. The ditch cut ditch 301,
and was itself cut by pit 105 and by a plough furrow. The three sections revealed one to three fills that varied from compact to loose, from mid to dark brown and from silty-clays to loamy-silts with 10–30% gravel inclusions. The secondary fill (35) of section 34 contained three sherds of Roman pottery. The only fill (26) of section 25 contained seven sherds of Roman pottery.

Ditch 1342, located at the northern-most edge of Area 2, was sub-'L'-shaped in plan, and it appeared to have been incorporated into trackway ditches 1117 and 1277. It measured c. 50 m in length, 1.60 m in width and 0.40 m in depth. The sides sloped at 45° onto a rounded base. It cut ditch 1623. Ditch 1342 contained three fills, the first of which appeared to be the result of rapid slumping of the natural. The second and third fills were mid yellowish-brown silty-clays.

Ditch 1620 formed a rectangular enclosure on the north-east side of Area 2, 120 m long and 80 m wide. The enclosure boundary comprised SE–NW parallel ditches connected by a SW–NE ditch (1104, 1109, 1126 and 1130). Ditch 1144 was a continuation of the SW–NE ditch, separated from it by an entrance. The width of ditch 1620 measured 0.30–0.80 m and the depth 0.10–0.45 m. The sides sloped at 50–60° onto a flat base. The ditch cut ditch 1115 and pit 1123. Ditch 1620 contained a maximum of two fills. They were friable to tenacious silty-loams, clay-silts or clays, containing small quantities of limestone or gravel inclusions. Fill 1110 of section 1111 contained 1% charcoal. The upper fill (1107) of section 1109 contained eight sherds of Roman pottery.

Ditch 1572, located in the south-west corner of Area 2, was oriented E–W and returned N–S. The N–S length measured c. 45 m, and the E–W c. 38 m. The ditch was 0.60 m wide and 0.31 m deep. It was 'V'-shaped in profile. The primary fill was a sandy-gravel, which was sealed by dark brown silty-clay. It cut ditches 301 and 1625.

Ditch 1625, also located in the south-western corner of Area 2, was a gently curving ditch oriented roughly N–S. It measured c. 50 m in length, 1.64 m in width and 0.45 m in depth. The sides sloped at 35° onto a rounded base. It contained a maximum of five fills, which appeared to be natural slumping. The ditch cut ditches 301 and 1622, and was itself cut by the trackway (299/1617) and ditch 1572.

Postholes

A group of four postholes (18, 71 (Fig. 3), 287 and 289), located at the western edge of Area 1b, was aligned N–S. Postholes 287 and 289 were cut into the fill of waterhole 132 (Fig. 6). The postholes were circular in plan, but their dimensions varied, measuring 0.40–0.74 m in diameter and 0.22–0.36 m in depth. The profiles sloped at 45–80°, but all the bases were rounded. Postholes 18 and 71 were shallow scoops, while 287 and 289 were 'V'-shaped in profile. Posthole 50, to the south, contained a sherd of Roman pottery.

FINDS AND ENVIRONMENTAL EVIDENCE

POTTERY by Kayt Brown

The excavations at Shorncliffe Quarry produced 710 sherds (6,186 gm) of pottery. With the exception of 21 badly abraded Roman sherds, the assemblage dates from the late Bronze Age to the middle Iron Age. Overall, the assemblage is in a relatively poor condition, with an average sherd weight for the assemblage of 8.7 gm. There is a clear distinction in date between the material from the two areas excavated, the Area 1b material dating to the late Bronze Age/early Iron Age and the Area 2 assemblage to the middle Iron Age.
Fig. 18. Sections through Roman trackway 299/1617 and boundary 300.
The pottery was examined microscopically (× 20) to distinguish fabrics. Each fabric was quantified by sherd count and weight by context. The pottery was recorded using the system established by the OAU for the recording of prehistoric and Roman pottery in accordance with published guidelines (PCRG 1997). Fabrics were recorded by principal inclusion and scale of coarseness. Vessel numbers were recorded by rim count. Characteristics such as decoration, firing conditions and evidence for use (such as the presence of sooting on the exterior of sherds and internal carbonised residues) were also recorded.

**Late Bronze-Age and early Iron-Age Pottery**

A total of 290 sherds (2,718 gm) of late Bronze-Age/early Iron-Age pottery was recovered from eleven contexts.

**Fabric and form**

The majority of fabrics were calcareous in nature, although the size and frequency of inclusions varied. The assemblage was dominated by a coarse, poorly-sorted shell-tempered fabric, with other fabrics containing combinations of shell and/or sand or calcareous inclusions. The fabrics are comparable to those of the prehistoric pottery recovered during earlier excavations nearby and described by Morris (1994a). In particular, her shell-tempered fabrics S2 and S3 were present (coincidentally the equivalent OAU fabrics use the same codes). The fabrics of a single sherd in a fine, sand-tempered fabric (A2) and a single sherd in a limestone and shell-tempered fabric (L12) were not recorded previously.

As in the 1992 excavations, the shell-tempered/shell-gritted fabrics constituted the majority of fabrics, forming 96.5% by weight (99.2% by sherd number) of the total late Bronze-Age/early Iron-Age assemblage. However, comparison of the two shelly fabrics (S2 and S3) with the few featured sherds that were recovered shows that there is a correlation between form and decoration and fabric. All the late Bronze-Age forms occur in the coarser shell fabric, S3. The crushed shell fabric, S2, was recovered only from fill 82 in gully 305 and occurs as plain body sherds and fingertip decorated shoulder sherds, associated with the rim of a tripartite jar (in fabric A2).

Five vessels were represented by rim sherds: two high-shouldered jars (Fig. 19, nos. 1 and 2), the complete profile of a small, wide, squat barrel-shaped vessel (Fig. 19, no. 3), a hook-rim jar (Fig. 19, no. 4) and the rim of a tripartite jar (Fig. 19, no. 6). All except the last of these occurred in shell-tempered fabrics; the tripartite rim occurs in a fine sandy fabric. A similar tripartite jar was recovered at the Lechlade *cursus* and is characteristic of the early Iron Age (Barclay forthcoming). No exact parallels are known for the squat barrel-shaped vessel. Similar vessels are present at Grimes Graves, Norfolk, although these are in middle Bronze-Age contexts (Longworth et al. 1988, fig. 24. 60-1). Decoration is restricted to finger-tip impressions along the shoulder carination of one vessel (Fig. 19, no. 5), very faint finger impressions below the rims of the two high-shouldered jars, and fingernail impressions along the rim of the tripartite vessel. The assemblage is comparable to other sites within the area such as Butler's Field, Lechlade (Barclay 1998), Roughground Farm, Lechlade (Hingley 1993), and previous excavations at Shorncliffe Quarry (Morris 1994a).

**Discussion**

Only five features produced pottery. The majority of the material was recovered from the fills of a single feature, waterhole 132. The remainder was recovered from the upper fills of house
gully 305 and waterhole 116. Given the small size of the assemblage little can be said about the distribution of the material, other than to note its concentration in the waterholes. Although a small assemblage, limited by the almost total absence of diagnostic featured sherds, the presence of shouldered and hook-rim jars suggests that this material should be attributed to the Plain Ware phase of the late Bronze Age. Hook-rim jars have been recorded in late Bronze-Age assemblages in the Oxfordshire Thames Valley such as those at Radley (Barclay 1995) and Chastleton Camp (Leeds 1931). Consequently this component of the assemblage (namely the material from the waterholes) can be regarded as contemporary with the material from the earlier excavations (Morris 1994a). The tripartite vessel and finger-tip decorated sherds from
the upper fill of the house gully (305), however, are indicative of an early Iron-Age date for this particular feature.

**Middle Iron-Age Pottery**

The 1998 excavations produced 376 sherds of middle Iron-Age pottery weighing 3,241 gm; a further five sherds (22 gm) were recovered during the processing of environmental samples. Thirty-two contexts produced middle Iron-Age pottery, of which thirty were ditch fills.

*Fabric and form*

Like the late Bronze-Age/early Iron-Age material, the pottery was predominately tempered with calcareous material, shell and/or oolitic limestone, although the size and frequency of these inclusions varied. The middle Iron-Age fabrics are generally finer than those of the late Bronze Age–early Iron Age, and are also distinct in containing a higher proportion of limestone inclusions. All the limestone is likely to derive from the local gravels. The fabrics formed three main groups: sand tempered (A3), coarse shell and sand (SA4), and limestone and shell in a slightly sandy matrix (LS3). Of these, the limestone and shell group formed 57.8% by sherd count, 60% by weight, of the assemblage. Although other assemblages in the area have produced Malvernian limestone-tempered wares, no such wares were recognised within this material.

The minimum number of vessels represented by rim count is ten, although three of these are very small and abraded. Two of the rims (from contexts 1254 in gully 1611 and 1545 in ditch 1623) are upright and have a groove along the top (Fig. 20, no. 7). The remainder are either slightly expanded, flattened rims, plain upright rims or slightly rounded out-turned rims (Fig. 20, nos. 8 and 9). A single decorated sherd, from a globular bowl, was recovered (1561 in ditch 1614). Although abraded, it displayed two horizontal burnished lines with oblique burnished lines superimposed. Beneath this band of decoration were two simple, shallow burnished line swags (Fig. 20, no. 10). This type of decoration is unusual for the Upper Thames Valley and the relatively fine sandy fabric, which includes glauconite, would indicate that this sherd is a non-local product and probably derives from a source further down the Thames Valley. Carbonised residues were observed on the interior of a number of sherds.

**Discussion**

The nature of the fabrics and the featured sherds within the ceramic assemblage indicate a middle Iron-Age date; this conclusion is partly based on negative evidence, such as the lack of finger-tip decoration and angular forms which make up part of the late Bronze-Age/early Iron-Age assemblage. The middle Iron-Age assemblage also differs from that of the preceding period in its comparative lack of the coarse shell-tempered fabrics that dominate the earlier period. Although relatively small assemblages, each with few featured sherds, the pottery from the 1997 and 1998 excavations displays some development in tradition from the late Bronze Age/early Iron Age to the middle Iron Age. This pattern of development, in which coarse shell tempering decreases in favour of a combination of fossil shell with oolitic limestone and a use of sand tempering, is becoming well established within the Upper Thames and Cotswold region (Lambrick 1984, 174). It can be seen for example at Farmoor (Lambrick and Robinson 1979), Gravelly Guy (Lambrick et al. in preparation), and Watkins Farm in Oxfordshire (T. G. Allen 1990), Claydon Pike near Lechlade, and Thornhill Farm near Fairford (Jennings and Muir in preparation), and more recently at Preston Enclosure and Ermin Farm near Cirencester (Timby 1999).
Fig. 20. Middle Iron-Age pottery.

Catalogue of illustrated pottery

Late Bronze-Age and early Iron-Age pottery (Fig. 19).


_Middle Iron-Age pottery_ (Fig. 20).

10. Shoulder sherd decorated with oblique burnished lines superimposed over two horizontal burnished lines, with two simple burnished swags below. Fabric AS2: the only example of this fabric, which contains moderate amounts of ?glaucosite and occasional shell. Context 1561, ditch 1614.

**Fired Clay and Briquetage** by Kayt Brown

The excavations produced a total of 59 fragments of fired clay, weighing 330 gm (Table 1). The assemblage was sorted by fabric and type and quantified by number of fragments and weight by context. The majority of this material occurred in a range of sandy fabrics, occasionally with small amounts of shell or flint. A distinctive oxidized fabric, with rare to sparse linear vesicles in a sandy clay matrix, was identified as Droitwich briquetage.

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<td>12</td>
<td>96</td>
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The majority of the material was abraded and could only be described as amorphous fragments. Fill 101 in waterhole 116, however, produced twelve fragments of possible loomweights which displayed at least one, sometimes two smoothed surfaces. The presence of loomweight fragments is indicative of textile production on the site.

Seventeen fragments of briquetage recovered from fill 1247 of the middle Iron-Age house gully 1611 can be dated through association with pottery from the same context. Briquetage is the ceramic material used in the drying and transport of salt and, although no rims were recovered, all the fragments displayed the characteristic of this material (Morris in preparation). The presence of Droitwich briquetage on sites in the Upper Thames Valley and Cotswolds, often seen as an indicator of some form of trade or exchange (Morris 1994b), has been recorded on a number of sites within the region, such as Salmonsbury, Lechlade and Uley Bury (Morris archive reports 1981–2, cited in Saville 1984, 157) and also at Highgate House (Barclay 1999, 421) and Thornhill Farm (Jennings and Muir in preparation).
TILE by Leigh Allen

A total of 564 gm of Roman tile in two distinct forms and two fabrics was recovered from three contexts at Shornecite Quarry.

Three fragments weighing a total of 288 gm were recovered from context 1107 in Roman ditch 1620. The largest was from the flange of a tegula. The height of the flange is 45 mm. The tile's thickness is not measurable as it has broken across the groove at the base of the flange which runs the length of the tile. Tegulae were used with curved imbrices in roof construction. The fabric of the fragment is red-orange, soft and soapy with a small amount of fine mica and white grog inclusions. A small quantity of this fabric was recovered from excavations at the nearby site of Somerford Keynes Neigh Bridge (L. Allen pers.comm.) and from excavations along the route of the Swindon–Gloucester road (L. Allen 1999).

The other fragments from context 1107 are both plain flat tiles. Neither has any distinguishing marks. Together they weigh 134 gm. They have thicknesses of 18 mm and 23 mm. Both fragments are of a light pink-orange, soft, sandy matrix with fine quartz, iron and grog inclusions. The clay is badly mixed in places. This fabric type was present at excavations at Claydon Pike near Lechlade (L. Allen forthcoming) and at sites along the route of the Swindon–Gloucester road (L. Allen 1999).

Two fragments of plain flat tile were recovered from contexts 1264 in ditch 1617 and 1276 in ditch 1277. Weighing a total of 142 gm, they are 18 mm and 22 mm thick respectively and are of the same fabric as the plain tiles from context 1107. Both fragments are fairly thin and are unlikely to have been floor or pilae tiles. They are probably fragments from tubuli which were used to spread heat from the hypocaust into a space behind the walls of a room.

FLINT by Philippa Bradley

The excavations produced five pieces of worked flint from four contexts: 73, 74, 1118 and 1329 (Table 2).

<table>
<thead>
<tr>
<th>Feature</th>
<th>Context</th>
<th>Pieces</th>
<th>Typology</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterhole</td>
<td>132</td>
<td>73</td>
<td>Flake</td>
<td>Broken, re-deposited, prob. residual</td>
</tr>
<tr>
<td>Waterhole</td>
<td>132</td>
<td>74</td>
<td>Core Rejuvenated Flake</td>
<td></td>
</tr>
<tr>
<td>Waterhole</td>
<td>132</td>
<td>74</td>
<td>Flake</td>
<td>Broken, soft-hammer struck</td>
</tr>
<tr>
<td>Pit 120</td>
<td>1118</td>
<td>1</td>
<td>Flake</td>
<td>Broken, soft-hammer struck</td>
</tr>
<tr>
<td>Ditch 1614</td>
<td>1329</td>
<td>1</td>
<td>Flake</td>
<td>Hard-hammer struck</td>
</tr>
</tbody>
</table>

HUMAN BONE by Angela Boyle

A small quantity of human bone was recovered from one of the primary fills (276) of a large feature (132) which has been interpreted as a waterhole. There were eight conjoining fragments of human skull vault (parietal) and one wormian bone. The skull is adult and the thickness of the vault suggests that it may be male. The pottery from the pit suggests a late Bronze-Age/early Iron-Age date.

Parallels for the deposition of skulls or fragments of skulls are known from a number of late Bronze-Age and Iron-Age settlements (Brück 1995, 269–72), commonly in pits, ditches and
waterholes. Examples include a fragment of worked human skull from the fill of a late Bronze-Age waterhole at Reading Business Park (Boyle, Brown and Early 1996; Brossler and Early in preparation) and a skull from a posthole relating to a probable roundhouse from Cresswell Field, Yarnton, Oxfordshire (Boyle in preparation a). Human cranial fragments were recovered during excavations at Wallingford in 1951 from a dark occupation soil or midden. Abundant late Bronze-Age pottery, animal bone, flint flakes and burnt pebbles as well as bronze metalwork were found in the midden with the human bones. A date in the 8th century B.C. is suggested for the site. The presence of human cranial fragments suggests the disposal or perhaps display of human remains at or near the site (Thomas et al. 1986, 195).

A recent survey of later Bronze-Age burial practices defined a number of categories of deposition of human remains (Brück 1995). The material from the waterhole at Shorncliff falls into Brück’s category A: unburnt bone on settlement sites, of which she identified 37 examples. The bones most commonly found were skull fragments, usually of adults with a slight predominance of males. Brück argues (1995, 245) that many of the examples of human remains from later Bronze-Age sites do not represent the residues of ‘normal’ mortuary rituals but may instead result from other ritual practices or from refuse disposal activities. Many archaeologists now accept that there is a considerable degree of cultural continuity between the later Bronze Age and the early Iron Age, so it is perhaps not surprising that the same practice has been identified in this period (Wilson 1981, 128; Walker 1984, 442; Wait 1985, 88: summarised in Hill 1995, 13).

**WATERLOGGED WOOD** by Nicholas Mitchell

Structure 1638 consisted of 29 pieces of wood, of which 26 were driven in as uprights around well cut 1414. The structure was roughly circular and measured 1.30 × 1.50 m across. The uprights consistently leaned outwards from their bases at approximately 20° from vertical. Three horizontal pieces of wood lay parallel to each other near the base of the feature.

**Method**

All 29 pieces of wood were lifted and retained for analysis. They were cleaned and fully recorded. The oak pieces were identified with the naked eye. The non-oak timbers were sampled for species and subsequently identified with the aid of a transmitted-light microscope.

**Preservation**

All the pieces were fully waterlogged. Fourteen are in a fair condition, but the remainder are in a poor condition and some retain no evidence of tooling. None of the upright timbers survives to its original height, having rotted consistently to the level of the present watertable, 0.70 m below the machined level. The stakes vary in length according to the depth they were driven; most (17 timbers) are between 200 and 500 mm in length, and the longest stake, 419, survives to 725 mm. They average 110 mm in breadth and 60 mm in width, although they range from 70-150 to 50-70 mm.

**The structure**

There is no evidence of joints or fixings to suggest that the stakes were held in place or strengthened by horizontal bracing or capping timbers. It must therefore be presumed that the structure was a simple series of stakes driven approximately edge to edge to retain the sides of the feature. To that end the wood was converted to make thick planking which could be quickly axed to a point. The stakes were created by splitting, fourteen tangentially and five radially, six were
halved, and one was probably roundwood. The preference for tangential splitting stems largely from the species used for the stakes, sixteen of which are ash (*Fraxinus excelsior*) and ten oak (*Quercus* sp.)—both ring-porous species—and perhaps from the unavailability of larger trees from which to make broad, radial planks. The stakes were fashioned with a minimum of effort, leaving the bark edge intact in most instances. In every case only the two thinnest sides were axed to a point. The points range between 200 and 300 mm in length. Five of the ten oak stakes, 1646–7 and 1649–51, clustered together at the north–west side of the structure, perhaps as a consequence of several posts having been created from a single tree.

Three pieces of wood, 1415 (220 × 130 × 60 mm), 1416 (400 × 90 × 65 mm), and 1417 (350 × 30 × 10 mm), were found lying horizontally and parallel to each other towards the bottom of the well. It is unlikely that they form a constructed base to the structure as they are willow/poplar (*Salix/Populus*), blackthorn (*Prunus spinosa*) and oak (*Quercus* sp.), and they have the appearance of broken branches rather than of timbers shaped for use. They are within the secondary fill (1635), and silting had already taken place before they were deposited. It is probable that they are branches from nearby trees, either naturally deposited or deliberately thrown down to provide a temporary firm footing for cleaning or repairing the structure.

A dense growth of roots, some up to 12 mm across, had embedded itself onto one side of many of the stakes and gave the appearance of thick bark. These stems were examined under a microscope to confirm that they were not the remnants of wattle.

Structure 1638 is of very simple construction, made quickly and with a minimum of woodworking. Ash and oak trees were probably selected as appropriate for splitting into upright planks; both are also likely to have been growing in the vicinity. The structure’s function, to retain the sides of the probable well/water-hole, was performed without apparent collapse.

**BURNT STONE** by Adam Brossler and Mark Gocher

Burnt stone weighing 75.17 kg was recovered from 56 contexts. Of these contexts 16 were from the pits and waterholes that clustered around the late Bronze-Age house gully. Burnt stone was also recovered from the fills of the middle Iron-Age house gully.

Burnt stones are common on prehistoric sites, and are generally assumed to be potboilers. All the stone was oolitic limestone which appears to have been imported from gravel terraces in the Cotswolds to the north and east of the excavated areas.

**ANIMAL BONE** by Bethan Charles

*Introduction and quantification*

A total of 1,047 fragments of bone were hand collected, the majority from ditch fills. Seventy-eight fragments were from contexts which could be reliably attributed to the late Bronze Age, 401 were from reliable middle Iron-Age contexts and 8 from reliable Romano-British contexts. A further 435 fragments were roughly dated to the late Bronze or Iron Age and 41 fragments to the Romano-British period (Table 3). It is probable that most of the roughly-phased late Bronze-Age or Iron-Age bone actually dates from the middle Iron Age. Eighty-four bone fragments, of which 10 were identified, could not be assigned to any period and have been omitted from the report.
Table 3. Animal bone: fragments by period.

<table>
<thead>
<tr>
<th>Period</th>
<th>Cattle</th>
<th>Sheep</th>
<th>Horse</th>
<th>Red Deer</th>
<th>Pig</th>
<th>Unidentified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late Bronze Age</td>
<td>9</td>
<td>-</td>
<td>1</td>
<td>2</td>
<td>-</td>
<td>66</td>
</tr>
<tr>
<td>Middle Iron Age</td>
<td>37</td>
<td>16</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>339</td>
</tr>
<tr>
<td>Late Bronze Age to Iron Age</td>
<td>21</td>
<td>6</td>
<td>1</td>
<td>-</td>
<td>4</td>
<td>403</td>
</tr>
</tbody>
</table>

None of the fragments from the certain Romano-British contexts could be identified, and the only identifiable piece from a possible Romano-British context was a fragment of red deer antler. The Romano-British bones cannot, therefore, be considered in the analyses discussed below.

In addition to the hand-collected bone 43 fragments of bone were retrieved through sieving in a >10 mm mesh. Thirty-nine of these fragments derived from late Bronze-Age and middle Iron-Age contexts.

**Condition of the bone**

The majority of the assemblage was highly fragmentary and in a very poor condition. Only 15% of the fragments were identifiable. Many of the bones had eroded badly and displayed signs of chemical etching. Cattle bones were identified most frequently, almost certainly due to the poor preservation of smaller, more fragile bones of other species.

Although a high proportion of the bones was badly damaged, butchery marks could be seen on five bones roughly dated to the late Bronze or Iron Age. Five burnt bones were also assigned to this broad phase, and one to the Romano-British period. A couple of bones which could not be attributed to a specific period had suffered from carnivore damage.

**Methodology**

Estimates of age were based on epiphyseal fusion alone using Silver's (1969) tables. This provided only a rough estimate of age since it was not possible to compare the data with that from tooth eruption and wear; there was a lack of complete mandibles in the collection. The data from both the accurately and roughly phased bones were used due to the small number of relevant elements.

Poor preservation precluded the assessment of age and sex of all but the cattle bones. For the same reason it was impossible to undertake metric analysis. It was also not possible to separate sheep and goat bones. All caprine bones are therefore listed as sheep bones.

**Species representation**

Cattle dominate the assemblage in all periods (Table 3). The very small quantity of identifiable late Bronze-Age bone came from context 164, one of the middle fills of waterhole 132. Those bones are all from larger species and consisted mainly of long bone and pelvis fragments, as well as teeth and calcanea.

It is, therefore, likely that cattle are over-represented in the assemblage. Sheep may in fact have been kept in equal or greater numbers during the middle Iron Age. Pig bone is more porous and fragile than that of both sheep and cattle, and the small number of pig bones, consisting mainly of teeth and a few long bone fragments, probably does not reflect the true number of pigs that were kept or consumed. The under-representation of pigs may be exaggerated by the fact that pigs were generally culled when young as they were kept for their meat and fat as well as for their skin. Consequently many of the pig bones may have been from immature animals, and would have been less likely to survive than those of older animals. The
majority of skeletal elements identified were long bone fragments and ribs. Teeth, vertebrae and feet bones were also present.

Nearly all of the horse bones in the collection date from the middle Iron Age. A small number of deer are represented in both periods, indicating that the inhabitants supplemented their diet by hunting.

As the assemblages were so small only the cattle bones provided enough comparative elements from one phase to enable a study of the age of the animals on the site. Table 4 shows the rate of epiphyseal fusion of the cattle bones from late Bronze-Age/Iron-Age contexts. This includes the left and right humeri from a calf less than 12–18 months of age from context 1506 (fill of ditch 1623). Other animals were older, at least two being 3.5 to 4 years of age or older. However, the number of elements were too few to enable any conclusions as to the possible functions of the animals at the site.

Pathology

Probably due to the condition of most of the bone, very few pathological changes were observed. A metatarsal from context 1428, ditch 1623, displayed some thickening of the cortical bone. This may have been an inflammatory response around the mid section of the shaft attributed to bruising around the area developing into an ossified haematoma. It is possible that this was caused by the hobbling of the animal (Baker and Brothwell 1980).

Sieved bone

Only 39 phased fragments of bone were retrieved through sieving (Table 5). Sixteen fragments, including one sheep tooth fragment, were from late Bronze-Age deposits. Twenty-three fragments were found in middle Iron-Age deposits and included three teeth from sheep and one from a pig. Very little can be ascertained from the sieved material other than the presence of these animals.

Table 4. Epiphyseal fusion in late Bronze-Age/Iron-Age cattle bones.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Fused</th>
<th>Unfused</th>
</tr>
</thead>
<tbody>
<tr>
<td>12–18 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humerus distal</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Radius proximal</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>2–2.5 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metacarpal distal</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Tibia distal</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2.5–3 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metatarsal distal</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3.5 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Femur proximal</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3.5–4 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humerus proximal</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Radius distal</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Femur distal</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Tibia proximal</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Table 5. Sieved animal bone.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Context</th>
<th>Sheep</th>
<th>Pig</th>
<th>Unidentified</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Late Bronze Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waterhole 132</td>
<td>74</td>
<td>1</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>House gully 305</td>
<td>82</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Waterhole 132</td>
<td>164</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>-</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td><strong>Middle Iron Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House gully 1611</td>
<td>1254</td>
<td>3</td>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>1</td>
<td></td>
<td>19</td>
</tr>
</tbody>
</table>

Discussion
Because of the small number of identifiable fragments, most of which were retrieved from one context, very little information can be ascertained about the Bronze Age. There is no doubt that the poor preservation of the smaller bones makes the assemblage unrepresentative. It nevertheless appears to be typical of domestic refuse and is similar to the assemblage found by WA in its excavations of the late Bronze-Age settlement to the north-west (Allen and Montague 1994).

Cattle and sheep dominate the middle Iron-Age collection. It is, however, possible that sheep were a more dominant species since, like the pigs, they are almost certainly under-represented due to the poor preservation of bone on site.

There were only a few Iron-Age horse bones from the site. It is possible that the horses were used for traction or carriage as well as for riding and providing status to their owner. However, due to the small number of fragments retrieved, there is no evidence as to which purposes they were put.

The Iron-Age bones appear to be typical of domestic refuse. Given the bones’ poor preservation, the assemblage appears similar in species frequency to other, similar Iron-Age sites in the area in Oxfordshire, e.g. Farmoor (Wilson 1979), Mingies Ditch, Hardwick-with-Yelford (Wilson 1993), and Old Shifford Farm, Standlake (Lange 1996). However, very little additional information can be ascertained from the assemblage.

WATERLOGGED MACROSCOPIC PLANT AND INSECT REMAINS by Mark Robinson

Waterlogged organic sediment was sampled from the late Bronze-Age timber-lined well (1414). The well, which was revetted with wooden stakes, extended 1.20 m below the surface of the gravel terrace and was about 1 m wide at the bottom.

Methods and results
Sample 38 from context 1635 was investigated in detail. Radio-carbon analysis of an oak fragment from the context gave a calibrated date range of 1110–1100 and 1077–811 cal B.C. The sample consisted of highly organic clay loam with compacted layers of decayed deciduous tree leaves, some of which resembled *Acer campestre* L. (field maple), and some decayed wood. The deposit had experienced much root penetration and some of the woody material represented shrub and tree roots. Waterlogged seeds and insect remains, however, had survived in an identifiable state.
Table 6. Waterlogged macroscopic plant remains (seeds unless otherwise stated).

<table>
<thead>
<tr>
<th>Species</th>
<th>Common Name</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bryophyta indet. (stem with leaves)</td>
<td>moss</td>
<td>+</td>
</tr>
<tr>
<td><em>Stellaria holostea</em> L.</td>
<td>adder's meat</td>
<td>1</td>
</tr>
<tr>
<td><em>Moehringia trinervia</em> (L.) Clairv.</td>
<td>sandwort</td>
<td>3</td>
</tr>
<tr>
<td><em>Acer campestre</em> L.</td>
<td>field maple</td>
<td>4</td>
</tr>
<tr>
<td><em>Crataegus</em> cf. <em>monogyna</em> Jaq.</td>
<td>hawthorn</td>
<td>1</td>
</tr>
<tr>
<td><em>Prunus spinosa</em> L.</td>
<td>sloe</td>
<td>1</td>
</tr>
<tr>
<td><em>Crataegus/Prunus</em> tp. (thorn)</td>
<td>hawthorn / sloe tp.</td>
<td>1</td>
</tr>
<tr>
<td><em>Torilis</em> sp.</td>
<td>hedge parsley</td>
<td>1</td>
</tr>
<tr>
<td><em>Alnus glutinosa</em> (L.) Gaert.</td>
<td>alder</td>
<td>4</td>
</tr>
<tr>
<td><em>Alnus glutinosa</em> (L.) Gaert. (male catkin)</td>
<td>alder</td>
<td>1</td>
</tr>
<tr>
<td><em>Fraxinus excelsior</em> L.</td>
<td>ash</td>
<td>2</td>
</tr>
<tr>
<td><em>Stachys cf. sylvestra</em> L.</td>
<td>hedge woundwort</td>
<td>2</td>
</tr>
<tr>
<td><em>Galeopsis tetralix</em> agg.</td>
<td>hemp nettle</td>
<td>2</td>
</tr>
<tr>
<td>deciduous leaf fragments including possible <em>Acer campestre</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bud scales</td>
<td></td>
<td>17</td>
</tr>
</tbody>
</table>

+= present

Part, 0.5 kg, of the sample was broken up and washed onto a 0.2 mm mesh to recover organic remains. The sieve contents were sorted, the macroscopic plant remains identified and the results listed (cf. Table 6). The nomenclature follows Clapham *et al.* (1987). The equivalent of another 3 kg of the sample, which had been washed onto a 0.25 mm mesh, was subjected to paraffin flotation to recover insect remains. The flot was washed in detergent, sorted, and the insects identified listed (cf. Tables 7 and 8). The nomenclature of Coleoptera follows Kloet and Hincks (1977). The insect results have been displayed by species groups in Fig. 21 after Robinson (1991, 279–82). The total number of individuals shown in Fig. 21 is 97; not all of the terrestrial Coleoptera have been classified into groups.

**Interpretation**

The organic sample appears to have belonged to a period when the well was disused and dead leaves were accumulating in it. Remains of aquatic and marginal plants were absent but small water beetles from the genus *Hydreaea* evidently lived in it. The remains of terrestrial plants and insects all seem to have entered the deposit through natural agencies from the surrounding landscape. The macroscopic plant remains were all of scrub or woodland species. The absence of any seeds from herbaceous plants requiring high levels of illumination suggested that the well was fully shaded by trees or shrubs. The deposit was unusual in that seeds were sparse and leaf remains abundant, but this was probably a reflection of the situation of the well. Some leaf fragments resembled *Acer campestre* (field maple) and the presence of this tree was confirmed by the occurrence of its seeds (samarae). *Fraxinus excelsior* (ash) and *Alnus glutinosa* (alder) were also represented by their seeds, although *A. glutinosa* is such a prolific producer of seeds that the four seeds discovered imply only a small presence of this tree. Thorn scrub in the form of *Crataegus* cf. *monogyna* (hawthorn) and *Prunus spinosa* (sloe) was also present. The remaining seeds were from plants of woodland floor and edge habitats, for example *Stellaria holostea* (adders' meat), *Moehringia trinervia* (sandwort) and *Stachys* cf. *sylvestra* (hedge woundwort).
Table 7. Coleoptera.

<table>
<thead>
<tr>
<th>Species/Genus</th>
<th>Minimum Number of Individuals</th>
<th>Species/Genus</th>
<th>Minimum Number of Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carabus granulatus L.</td>
<td>1</td>
<td>Staphylinus sp.</td>
<td>1</td>
</tr>
<tr>
<td>Carabus sp. (not granulatus)</td>
<td>1</td>
<td>Tachinus sp.</td>
<td>3</td>
</tr>
<tr>
<td>Notiophilus sp.</td>
<td>1</td>
<td>Aleocharinae indet.</td>
<td>3</td>
</tr>
<tr>
<td>Dyschirius globosus (Hbst.)</td>
<td>1</td>
<td>Pselaphidae indet.</td>
<td>1</td>
</tr>
<tr>
<td>Clivina collaris (Hbst.) or fosor (L.)</td>
<td>1</td>
<td>Geotrupes sp.</td>
<td>1</td>
</tr>
<tr>
<td>Patribius atrorufus (Ström)</td>
<td>1</td>
<td>Aphodius cf. equestris (Pz.)</td>
<td>1</td>
</tr>
<tr>
<td>Trechus obtusus Er. or quadristriatus (Schr.)</td>
<td>1</td>
<td>Aphodius cf. sphecelatus (Pz.)</td>
<td>1</td>
</tr>
<tr>
<td>T. secalis (Pz.)</td>
<td>2</td>
<td>Aphodius sp.</td>
<td>1</td>
</tr>
<tr>
<td>Bembidion guttula (F.)</td>
<td>1</td>
<td>Phylopertha horticola (L.)</td>
<td>1</td>
</tr>
<tr>
<td>Pterostichus melanarius (Ill.)</td>
<td>1</td>
<td>cf. Cyphon sp.</td>
<td>3</td>
</tr>
<tr>
<td>P. strenuus (Pz.)</td>
<td>1</td>
<td>Fleutiauxellus quadripustulatus (F.)</td>
<td>2</td>
</tr>
<tr>
<td>P. cupreus (L.) or versicolor (Sturm)</td>
<td>1</td>
<td>Melanotus erythrops (Gnl.)</td>
<td>1</td>
</tr>
<tr>
<td>Abax paralelepipedus (P. &amp; M.)</td>
<td>1</td>
<td>Athous haemorrhoidalis (F.)</td>
<td>1</td>
</tr>
<tr>
<td>Agonum sp.</td>
<td>1</td>
<td>A. hirtus (Hbst.)</td>
<td>1</td>
</tr>
<tr>
<td>Dromius sp.</td>
<td>1</td>
<td>Agriotes sp.</td>
<td>1</td>
</tr>
<tr>
<td>Hydroopus sp.</td>
<td>1</td>
<td>Cantharis sp.</td>
<td>1</td>
</tr>
<tr>
<td>Agabus bipustulatus (L.)</td>
<td>2</td>
<td>Epiraea sp.</td>
<td>2</td>
</tr>
<tr>
<td>Cerion sp.</td>
<td>2</td>
<td>Rhizophagus sp.</td>
<td>1</td>
</tr>
<tr>
<td>Megasternum obscurum (Marsh.)</td>
<td>8</td>
<td>Atomaria sp.</td>
<td>2</td>
</tr>
<tr>
<td>Hister bissextriatus (F.)</td>
<td>1</td>
<td>Cerylon bisternoides (F.)</td>
<td>1</td>
</tr>
<tr>
<td>Hydraena testacea Curt.</td>
<td>2</td>
<td>Stephostethus angusticolis (Gyl.)</td>
<td>1</td>
</tr>
<tr>
<td>Hydraena sp. (not testacea)</td>
<td>15</td>
<td>Latridius minutus gp.</td>
<td>2</td>
</tr>
<tr>
<td>Agathidium sp.</td>
<td>1</td>
<td>Chrysolina polita (L.)</td>
<td>1</td>
</tr>
<tr>
<td>Choileva or Carops sp.</td>
<td>1</td>
<td>Phylloreta viitula Redt.</td>
<td>1</td>
</tr>
<tr>
<td>Silpha atrata L.</td>
<td>1</td>
<td>Longiarsus spp.</td>
<td>3</td>
</tr>
<tr>
<td>Scydmaenidae indet.</td>
<td>2</td>
<td>Phyllobius or Polydrusus sp.</td>
<td>1</td>
</tr>
<tr>
<td>Micrepeptus sp.</td>
<td>2</td>
<td>Barypeptes cf. araneiformis (Schr.)</td>
<td>2</td>
</tr>
<tr>
<td>Anthobium sp.</td>
<td>2</td>
<td>Sciaphilus asperatus (Bons.)</td>
<td>1</td>
</tr>
<tr>
<td>Omalium sp.</td>
<td>1</td>
<td>Barynotus sp.</td>
<td>1</td>
</tr>
<tr>
<td>Anotylus sculpturatus gp.</td>
<td>2</td>
<td>Sitona sp.</td>
<td>1</td>
</tr>
<tr>
<td>Stenus spp.</td>
<td>3</td>
<td>Acalles tarsatus Boh.</td>
<td>2</td>
</tr>
<tr>
<td>Lathrobius sp.</td>
<td>1</td>
<td>Rhyhocaenus sp.</td>
<td>1</td>
</tr>
<tr>
<td>Gyrobyphus sp.</td>
<td>1</td>
<td>Scoyius intricatus (Ratz.)</td>
<td>1</td>
</tr>
<tr>
<td>Philonthus spp.</td>
<td>4</td>
<td>Leperisimus varius (F.)</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>68</td>
<td>Total</td>
<td>49</td>
</tr>
</tbody>
</table>

Table 8. Other insects.

<table>
<thead>
<tr>
<th>Species/Genus</th>
<th>Minimum Number of Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forficula auricularia L.</td>
<td>1</td>
</tr>
<tr>
<td>Sebirus sp.</td>
<td>1</td>
</tr>
<tr>
<td>Pentatoma rufipes (L.)</td>
<td>1</td>
</tr>
<tr>
<td>Anthocorinae indet.</td>
<td>1</td>
</tr>
<tr>
<td>Stenamma sp. (worker)</td>
<td>1</td>
</tr>
<tr>
<td>Hymenoptera indet. (not Formicidae)</td>
<td>4</td>
</tr>
</tbody>
</table>
SHORNCOTE QUARRY EXCAVATIONS 1997 AND 1998

Percentage of Terrestrial Coleoptera

Fig. 21. Insect species from sample 38, context 1635, expressed as a percentage of the total terrestrial Coleoptera (aquatics excluded).

The insects also gave strong evidence for the occurrence of woodland. Tree-dependent Coleoptera (Fig. 21, Species Group 4) comprised 8% of the terrestrial Coleoptera. This perhaps implies that around half the catchment was tree-covered. The bark beetle *Leperinus varius* confirmed the occurrence of *Fraxinus excelsior* (ash), while bark beetle *Scolytus intricatus* is mostly associated with *Quercus* sp. (oak). Beetles present from a variety of woodland habitats included *Melanotus erythropus*, which occurs in very rotten wood, *Abax parallelepipeds*, a predatory woodland ground beetle, and *Sciaphillus asperatus*, a weevil which feeds on woodland herbs especially *Primula vulgaris* (primrose).

Insects tend to derive from a much larger catchment than macroscopic plant remains and by no means all the Coleoptera were woodland species. Chafer and elaterid beetles which feed on the roots of grassland plants (Fig. 21, Species Group 11), such as *Phyllopertha horticola*, comprised 4% of the terrestrial Coleoptera. Some grazing by domestic animals was likely to have occurred in the vicinity of the site because dung beetles from the genera *Geotrupes* and *Aphodius* comprised another 4% of the terrestrial Coleoptera. The insects, however, did not give any indication of the proximity of human settlement. The beetles of foul organic material and dung (Species Group 7), such as *Megasternum obscurum*, were probably living in decaying vegetation next to the well and in the droppings of domestic animals rather than in middens. Synanthropic species, such as woodworm beetles which infest structural timbers, were absent.

The flora and insect fauna were certainly not those of ancient woodland nor even mature secondary woodland. They were probably more characteristic of a landscape where areas of grassland were being invaded by scrub and some of the scrub had been displaced by trees. *Acer campestre* (field maple) is not a pioneer species in the invasion of grassland and is present in scrub only during the later seral stages (Jones 1944–5, 241–3). However, it is possible that clearance related to the construction and use of the well was not complete and some *A. campestre* remained on the site, perhaps along boundaries, and was able to regenerate following abandonment.
Discussion
The macroscopic plant and insect remains presented a picture that was very different from the open landscape of much of the Upper Thames gravels during the Late Bronze and Iron Ages. It is unlikely that the well (1414) was earlier than the late Bronze Age because the water table was probably lower before that period (Robinson 1992). A relict glacial palaeochannel about 6.5 km downstream at Latton, Wiltshire, gave evidence of a rising water table at the start of the first millennium B.C.; it resulted in the formation of organic sediments which supported fen woodland (M. Robinson and R. Scaife unpublished). Clearance of alder woodland at Mingies Ditch, on the floodplain of the River Windrush, occurred in the late Bronze Age, but mixed scrub, which included field maple, survived there into the middle Iron Age (Allen and Robinson 1993, 14–15, 113–15). It is possible that permanent clearance of the Thames floodplain above Cricklade was, as on the floodplains of the tributary streams, later than the clearance of the main floodplain downstream.

CHARRED PLANT REMAINS AND WOOD CHARCOAL by Ruth Pelling
Twenty samples were taken from ditches, pits and postholes in the first phase of excavation, and a further seven from ditches, a house gully and a possible kiln in the second phase. The samples were processed using a bulk water separation technique. Flots were collected onto a 500 μm mesh and allowed to dry before being scanned under a binocular microscope at ×10 to ×25 magnification. The volume of deposit processed for each sample was 20 or 40 litres.

Results and discussion
Area 1B: charred remains were restricted to flecks of charcoal of indeterminate species and a single seed of a wild Vicia/Lathyrus sp. (vetch/tare) in sample 9 (context 101, waterhole 116).

Table 9. Charred plant remains (Area 2).

<table>
<thead>
<tr>
<th>Sample</th>
<th>18</th>
<th>29</th>
<th>32</th>
<th>33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context</td>
<td>1430</td>
<td>1175</td>
<td>1266</td>
<td>1254</td>
</tr>
<tr>
<td>Feature</td>
<td>Ditch</td>
<td>Pit</td>
<td>House gully</td>
<td>House gully</td>
</tr>
<tr>
<td>Volume (litres)</td>
<td>1623</td>
<td>1137</td>
<td>1611</td>
<td>1611</td>
</tr>
<tr>
<td>40</td>
<td>40</td>
<td>40</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

Charred seeds and chaff

| Cerealia indet. | Indeterminate grain | - | - | - | + |
| Triticum spelta/dioecium | Spelt/emmer wheat glume base | + | - | + | + |
| Corylus avellana | Hazel nut shell fragments | + | - | - | - |
| Medicago/Trifolium sp. | Medick/clover | - | - | - | + |
| Rumex sp. | Docks | - | - | - | + |
| Bromus subsect. Eubromus | Brome grass | - | - | - | + |
| Gramineae | Grass, small seeded | - | + | - | - |

charcoal

| Quercus sp. | Oak | - | - | - | + |
| cf. Pomoideae | Hawthorn, apple, pear etc. | - | + | - | + |

+ = 0–10 items

Area 2: occasional charred seeds and chaff were present in four samples (Table 9). Cereal remains consisted of an indeterminate grain and occasional glume bases of Triticum spelta/dioecium (spelt/emmer wheat). Weed species present include Rumex sp. (dock), Medicago/Trifolium sp. (medick/
clover), *Bromus* subsect *Eubromus* (brome grass) and indeterminate Gramineae (grass). The cereal and weed species are all in keeping with a prehistoric date. Charcoal flecks were occasionally present, of which *Quercus* sp. (oak) and cf. Pomoideae (hawthorn, apple, pear etc.) were recognised (Table 9).

**MOLLUSC SAMPLES** by Mark Robinson

Sequences of samples from two Iron-Age ditches (1614 and 36) were floated in order to recover and assess mollusc shells. Shells of the stagnant water aquatic *Anisus leucostoma* were abundant in the samples from context 1511, the lower fill of ditch 1614, but few shells were recovered from its upper fills. Context 1347, the lower fill of ditch 36, likewise contained shells of *A. leucostoma* and a few shells of another stagnant water aquatic species, *Lymnaea peregra*. Context 1346, the upper fill of ditch 36, contained shells of terrestrial molluscs of dry open habitats (including *Vallonia excentrica* and *Pupilla muscorum*), taxa which occur more generally in terrestrial habitats (including *Coellicopa* sp. and *Trichia hispida* gp.) and two molluscs of marshy places (*Lymnaea truncatula* and *Succinea* or *Oxyloma* sp.).

The results showed that both ditches at least seasonally contained stagnant water. The terrestrial molluscs from the upper fill of ditch 36 indicated open, relatively dry conditions on the site while the species of marshy habitats probably reflected conditions in the ditch itself.

**DISCUSSION** by Adam Brossler

Modern exploitation of the site has resulted in heavy truncation over the excavated areas, destroying any complete image of the Bronze-Age and Iron-Age landscape.

**Late Bronze Age/early Iron Age**

The excavations in Area 1b identified a number of pits, waterholes and a house gully dating to the late Bronze Age. These features probably formed the south-eastern end of the late Bronze-Age settlement excavated by WA to the north-west (Hearne and Adam 1999).

The only structure of this period identified during the excavation was the house gully which enclosed an area measuring 10.70 m in diameter. A rim of a tripartite vessel possibly represents an intrusive find as it appears to be the only evidence for early Iron-Age activity found in both this and the adjoining excavations. There was no evidence for an entranceway, but this may have been a result of later truncation as the gully does not appear to be complete. The fact that no postholes were found within the structure suggests that the ditch may have been a foundation trench, rather than a drainage channel. Five possible post-built roundhouses were identified in the 1992 excavation, of which one was of gully construction (Hearne and Heaton 1994). A similar structure was excavated at Eight Acre Field, Radley. It measured 9.50 m in internal diameter and no associated posthole features were found within its internal area. It contained late Bronze-Age pottery within its fill, but was thought to be of late Bronze-Age/early Iron-Age date because of the dating of the associated features (Mudd 1995, 24–5).

A number of large pits were found. These were similar to the features found in the 1992 excavations and described as 'large pits', and to the features at the western end of Area 1b interpreted as waterholes. The large pits of the 1992 excavations were cut to below the level of the watertable, four of them having 'sumps' at their bases. The waterholes excavated in 1997 in Area 1b also have possible 'sumps' cut into their bases. Waterholes are common on late Bronze-Age sites, many of them sharing similar traits. When the waterholes went out of use silting took
place and the waterholes were subsequently re-used as rubbish pits. This sequence of use and re-use is paralleled in features found in the 1992 excavations (Hearne and Heaton 1994) and at other sites such as Eight Acre Field, Radley (Mudd 1995, 21–66), and Reading Business Park (Brossler and Early in preparation). Pryor (1995, 96–109) suggests that artefactual evidence found in pits and ditches reflects their abandonment, and therefore does not provide a true indication of their date. This idea is supported by the pattern of fills noted in the waterholes in which there is a low frequency of artefactual evidence, if any, relating to their original function.

A noteworthy feature is the presence of human bone in the fill of waterhole 132, parallels for which can be found at Reading Business Park (Boyle in preparation b). The presence of the bone in the waterhole may be indicative of structured deposition. The concept of structured deposition has been the subject of much debate (Wilson 1981; Wait 1985; Bradley 1990; Hill 1995; Brück 1995), although it has mainly been applied to the interpretation of Iron-Age features. Wait (1985, 151) outlined five features that could be used to identify ‘non-rubbish deposits’. These included animals or parts of animals exploited in an abnormal manner, and evidence of care or ceremony in the placement of remains, e.g. the positioning of skulls to face skywards. It is argued (Hill 1995, 95–101) that structured deposits arise when artefacts, such as human and animal bone, are deliberately placed, perhaps during rituals. Brück (1995, 245–77) suggests that human bones were deliberately placed in situations where concepts of liminality, identity, continuity, and renewal needed to be highlighted, e.g. in relation to the ownership of land. An example of possible structured deposition can be seen at Eight Acre Field, Radley, where a tripartite bowl with an inverted cattle skull was found in the upper fill of a waterhole (Mudd 1995, 30). There is, however, little evidence to suggest structured deposition in waterhole 132. The presence of domestic rubbish in the form of pottery and animal bone suggests that the role of the feature had changed from a waterhole to that of a rubbish pit. The human bone found in the waterholes at Shorncote and Reading Business Park does not necessarily indicate a deliberately placed deposit of ritual significance, although it does suggest a change in the ideology concerning the treatment of the dead.

The location of the waterholes in relation to the house gully in Area 1b is of some importance. The waterholes cluster around the external area of the gully but do not appear to be part of a deliberate alignment. Elsewhere, waterholes seem to be located on the periphery of domestic settlements. This pattern can be seen on a number of sites such as Eight Acre Field, Radley (Mudd 1995), and Reading Business Park (Brossler and Early in preparation). If the assumed spatial relationships between waterholes and structures is correct, it suggests that the Area 1b excavation represents the south-eastern or eastern edge of the late Bronze-Age settlement which was excavated in 1995–6 (Hearne and Adam 1999).

The two pits that are located to the north and south-west of the house gully are thought to belong to the same period as the waterholes and gully. A group of five postholes was located around the rim of pit 228, in a manner similar to the postholes in the edge of a cut seen in the 1992 excavation, but there are no similarities in the pits’ profiles. No domestic refuse was noted in either of the Area 1b pit fills. The lack of finds in the pits is paralleled at Aldermaston Wharf, Berkshire, where it is argued that a gradual clearance of refuse from the main settlement to the periphery occurred (Bradley et al. 1980, 249).

The presence of the timber-lined well, located approximately 300 m to the east of the settlement, suggests that the landscape may have been deliberately divided into zones of activity. The environmental evidence suggests that the area was probably scrub, which may indicate that it was used for keeping animals such as pigs.

Although little evidence for industry was recovered from the late Bronze-Age features, there was evidence for a range of industries similar to those taking place in the parts of settlement excavated
by WA. The presence of loomweight fragments in the fill of a waterhole provides further evidence for the textile industry which was noted in 1992 (Hearde and Heaton 1994, 52).

Middle Iron Age

Little evidence was recovered to suggest an extensive middle Iron-Age settlement. A post-built structure cut by a house gully was, however, identified, suggesting two phases of activity. It is unclear if the activity was domestic in both phases. A number of pits were excavated, but only one produced dating evidence. The fact that the only dated pit is part of a pit cluster, the fills of which share similar industrial inclusions, suggests that the pits and the waterhole in the southwestern corner of Area 2 are of the same date.

The presence of the house gully suggests that the site may have been a small agricultural holding. The internal diameter of the feature measured 11 m. Varying frequencies of animal bone, briquetage, burnt limestone, charcoal, and pottery of a middle Iron-Age date were recovered from the fills of the gully ditch, all of which suggest that the structure served as a domestic homestead.

Parallels for the house gully can be found at sites such as Ashville Trading Estate, Oxfordshire (Parrington 1978, 11–15), Larkwhistle Farm, Berkshire (Hardy and Cropper 1999), and Easton Lane, Hampshire (Fasham et al. 1989, 58–67); the last was dated to the early/middle Iron Age. The structure at Ashville had an internal diameter of c. 13 m, and was the last of three intercutting structures. No evidence for postholes relating to the external structure was noted in the ditches. The structure at Larkwhistle had an internal diameter of c. 9.50 m, and consisted of two opposing gullies. No evidence for post/stakehole structures was found in the gullies, which were assumed to be drainage channels or 'eaves drips'. The structures at Easton Lane were gully and post-built, although only one post ring was identified within the gullies. In this case the gullies have been interpreted as foundation trenches. The Easton Lane settlement consisted of 19 post-built and circular structures, with associated pits and boundary ditches.

Penannular gullies around structures are a common element of Iron-Age sites in the Upper Thames Valley. There are a number of interpretations of the gullies. One is that they are drainage gullies, dug to keep the foundations of the building dry, or foundation trenches (Allen, Miles and Palmer 1984, 91). They have also been interpreted as animal pens (Lambrick and Robinson 1979, 135) and as annexes for working areas and storage or as subsidiary buildings (Allen, Miles and Palmer 1984, 91). The two-house unit recognised at several sites represents deliberate structuring of space, one house being used for food storage, preparation and craft activities, and the other for food consumption. This model was clearly recognised at Winnall Down in Hampshire (Parker-Pearson 1996, 117–33) and was also noted on the late Bronze-Age settlement excavated at Shorncliffe in 1992 (Hearde and Heaton 1994, 49).

The function of the 'V'-shaped internal posthole structure within the gully is unclear. Also the chronological relationship between the two features cannot be established with certainty, although the gully appears to truncate the posthole structure. It has been assumed that the features represent two phases of activity, although the structure may represent an internal division within the house gully. No similar structures appear to have been excavated. A number of ring-gully structures with internal features can be found at sites in Oxfordshire such as Mingies Ditch, where the structures contained pits, postholes and hearths (Allen and Robinson 1993), as well as Ashville (Parrington 1978) and Mount Farm (Lambrick and Robinson 1979), but none of these structures are comparable to the 'V'-shaped structure at Shorncliffe.

The features that dominated the landscape of the 1997 and 1998 excavations were ditches, over half of which were securely dated to the middle Iron Age. The intercutting relationships of these
ditches indicate approximately three phases of activity within the middle Iron Age, suggesting an almost constantly changing landscape. The earliest boundary ditch phase is represented by 301 on an alignment apparently not shared by any other ditches. The segmented ditches appear to represent a second phase of possible field-system activity. The two main groups, located at the northern and southern edges of the excavations, appear to form a rough right-angle. Again, there do not appear to be any other ditches that relate to this system. The third phase is represented by the ditches located in the north-western and south-western corners of Area 2.

The location of the surrounding waterholes or dewponds and field boundary systems lends support to the theory that the house gully was a small farmstead particularly involved in animal husbandry. The large dewponds located on the western side of Area 2 suggest a deliberate spatial division of the landscape, with pastoral land to the west and human occupation extending to the northern part of Area 2. The waterhole located west of the centre of Area 2 may have functioned as the human water source. The emphasis on animal husbandry is apparent in the animal bone assemblage, where cattle and sheep appear to be the dominant species. This evidence, together with the spatial patterning of features, suggests a continuing pastoral use of the landscape in the middle Iron Age. The notion that undefended Iron-Age settlements are predominantly pastoral is reflected in Cunliffe's model which suggests that storage is a feature of early defended sites. He argues that centralised storage at hillforts gave rise to a formalised mechanism for redistribution (Gent 1983, 252). Examples of Iron-Age pastoral activity can also be found at sites such as Farmoor (Lambrick and Robinson 1979, 134) and at Easton Lane where the evidence suggests an emphasis on pastoral activity as opposed to arable agriculture (Fasham et al. 1989).

As discussed above, the cluster pits and the waterhole found in the south-western corner of Area 2 are assumed to be of Iron-Age date and are probably of an industrial nature, representing the industrial zone of the settlement. Although no metal-working debris was recovered it is possible that the feature with the burnt clay lining functioned as a bowl furnace. The lining may have been intended to facilitate the removal of the bloom. Tylecote has described examples of Iron-Age bowl furnaces (1992, 47–61).

Three pits belonging to pit type 3 contained quantities of burnt clay and burnt limestone, and the fill of an irregular pit also contained large amounts of burnt material. This type of fill was also found in the waterhole that had been cut by the possible bowl furnace. The waterhole contained burnt limestone and a high frequency of charcoal in its upper fills. Given the presence of large quantities of burnt material in the fills, it can be suggested that the pits were specifically dug to facilitate the dumping of furnace debris.

The presence of briquetage, used in the process of salt production (Woodiwiss 1992, 5), is notable. Briquetage has been used as an indicator of the distribution of Droitwich salt within the region (Morris 1985, 336–52). Its presence at Shorcote shows that the site had trade links with Droitwich, the nearest large-scale salt production area.

**Romano-British**

Romano-British activity was indicated by a trackway and a number of field boundaries. The trackway led from the farmstead situated to the south-west of Areas 1b and 2 across both excavations. The lack of environmental material, however, precludes anything but a very partial understanding of the Roman landscape.

The Romano-British farmstead consisted of a series of small enclosures which were surrounded by a network of larger field boundaries or paddocks (Parry 1988), some of which can be seen in both Areas 1b and 2. The presence of a corndrier on the farmstead indicates that both pastoral and arable agriculture were practised. The establishment of other settlements on
the First Terrace gravels has led to the suggestion that these sites exploited discrete environmental niches, probably to fulfill specialised roles such as stock breeding in the local and regional economy. An example of this can be found at Claydon Pike near Lechlade (Parry 1988).

Settlements that consist of only one compound are not common in the south of England; most non-villa settlements tend to comprise two or more compounds (Hingley 1989, 75–94). A compound usually contains a small group of buildings that are interpreted as a family farm. In a number of cases these were defined by an enclosure boundary. Evidence suggests that the compounds contained a range of buildings, from one to five dwellings, as well as agricultural and storage buildings and, in some cases, bathhouses and gatehouses (ibid. 55).

Excavations at Pingewood, Berkshire (Johnston 1985), produced results similar to those at Shorncliffe. The site at Pingewood consisted of a trackway with enclosures alongside. It was argued that the enclosures were intended to prevent over-intensive grazing. The fact that the environment was predominantly grassland supports the assumption that the area was devoted to specialised pastoral activity (Bowden 1985, 46–7). Miles argued that the area around South Cerney appeared to be a complex Romano-British landscape, which was served by a number of trackways. At Claydon Pike a trackway connected four settlements ranged over 3 km (Miles 1984, 193–5).

Roman field systems are commonly found on the First Terrace gravels and normally consist of small rectangular enclosures adjacent to a droveway. At Farmoor the droveway had a number of gateways or openings to allow access to small fields, some of which contained waterholes that varied from rough dewponds to lined wells (Lambbrick and Robinson 1979, 139). A similar pattern of openings can be seen in Areas 1b and 2, although it is unclear if the waterholes or dewponds date to the middle Iron Age or Romano-British period. The recut of the waterhole in the south-western corner of Area 2 may represent the continued use of the area for pasture during the Iron Age and Roman period. Other trackways have been identified at Shorncliffe. One, identified by cropmarks, was detected in the 1990 excavations, and was traced to a point where it joined a group of enclosures forming part of the Romano-British settlement identified by Parry (Barclay et al. 1995, 29).

The proximity of the town of Cirencester and the settlement at Somerford Keynes, combined with the structured network of trackways, suggests that trade played a role in the agricultural exploitation of the First Terrace gravels. The trackways would have had an integral role in a pastoral economy, and would have also linked the small farmsteads that have been noted in the area. The presence of trade networks between Shorncliffe and other areas prior to the Romano-British period is indicated by the occurrence of briquetage in Area 2. It seems likely that the intensive agriculture taking place may have supplied meat to Cirencester, for both consumption and trade.

Settlement and landscape in the Upper Thames Valley

Recent work in the Upper Thames Valley has discredited the theory, put forward by Barrett and Bradley, that the area was a ‘cultural backwater’ during the Bronze Age (1980, 247–65). The evidence in fact indicates a virtually uninterrupted use of the landscape from the late Neolithic to the Romano-British period. Excavations around Lechlade, for example, indicate that the landscape underwent continual use throughout those periods. Prehistoric and later activity was identified at the sites of Butlers Field (Boyle et al. 1998), Gassons Road (King 1998, 269–81), Memorial Hall (Thomas and Holbrook 1995) and Roughground Farm (Allen et al. 1993). A further 24 sites that display evidence of multi-period activity have been identified in the Oxfordshire area (Barclay et al. 1996, 1–21; Miles 1997, 1–21).
The study of the Thames Valley provides insights into factors that shaped the changing landscape. The analysis of settlement patterns casts new light on the actual function of settlement, not just in terms of land use but also the micro-environment that it created. Examples of such changes can be seen in the attitude towards water in the late Bronze Age and subsequent periods. During the late Bronze Age large waterhole features appear to mark the edge of settlement. Changes in the use of these features becomes apparent as the height of the watertable increases, and waterholes began to be used as rubbish pits. By the Iron Age they no longer appear to mark the edge of settlement, but appear to be more randomly spaced.

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