A Middle Iron Age Site at Wanlip, Leicestershire

by Matthew Beamish

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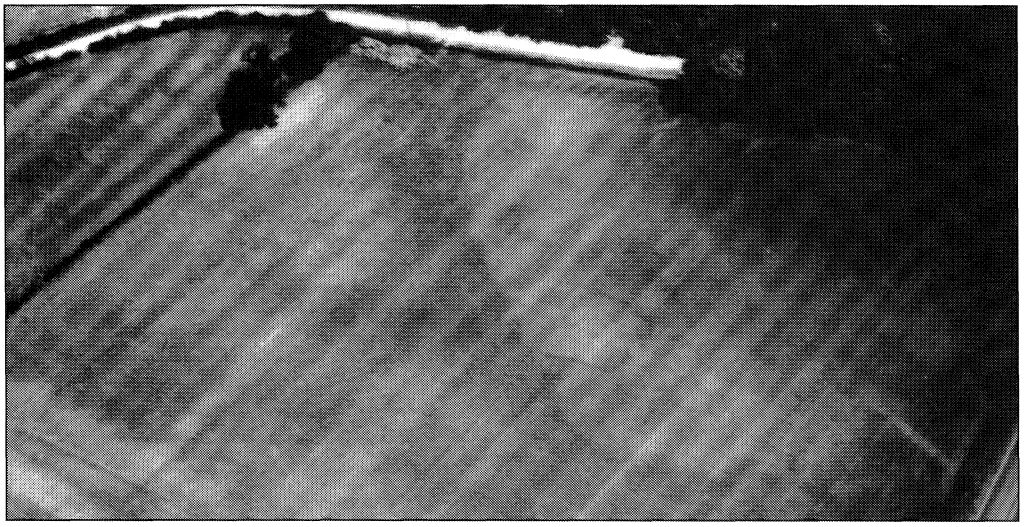
Area excavation on a river terrace in advance of road development investigated aspects of an Iron Age settlement including an enclosure, a circular structure and a burial central to a rectangular structure. The morphology of the site, the position of the burial and examples of the intentional deposition of selected artefacts is evidence of ritual activity within a domestic framework. The pottery from the site is almost exclusively Iron Age, and interpretation of a radiocarbon programme has dated the site to c. 450-350 BC. A flint assemblage indicates terrace exploitation from at least the late Neolithic period and possibly flint use in the 1st millennium BC.

Introduction

A small rectangular cropmark site threatened by road construction was excavated in 1992/3 by Leicestershire Archaeological Unit with funding from the Department of Transport through English Heritage. The site at Wanlip was located as a cropmark and is recorded on the Leicestershire Sites and Monuments Record as SMR No. 51 SE.AE; (illus. 1-2; a; Pickering and Hartley 1985, p.38). It was situated on river terrace sands and gravels *c.* 0.5 km west of the present course of the River Soar and 0.5 km north of the village of Wanlip (illus. 1-2). To the north and west the land rises towards Wanlip Hill at *c.* 75m OD. The site itself lies on a broadly flat terrace at a height of *c.* 57 m OD, while to the south and east the land slopes away gradually, at a gradient of less than 1 in 25, towards the river. It is likely that prior to colluviation, the slope would have been, at least in part, somewhat steeper.

Other sites recorded from this area of the Soar valley are flint scatters 400m to the west and south-west (illus. 2.1; 2.2) and also 800m to the north which included some Late Mesolithic/Early Neolithic material. On the plateau 750m to the north-west of the valley there is a flint scatter and possible geophysical survey evidence of Neolithic and Bronze Age activity. Roman use of the valley is also represented by pottery finds to the north-east (illus. 2.3), metalwork to the west (illus. 2.4) and evidence of a Roman Villa (illus. 2.5) 700m to the east on the far side of the Soar. Saxon activity during this period has recently been located 300m to the north-east (illus. 2.6; S.Ripper pers. comm.) while some evidence for an Anglo-Saxon cemetery was uncovered during the construction of Longslade School to the south of the site (illus. 2.7)

The recorded cropmark of the Wanlip enclosure was taken from an aerial photograph by Dr J. J.K.St. Joseph in 1959 for Cambridge University Centre for Aerial Photographs (CUCAP; Ref ZO36; illus. 1). The cropmark was published by Pickering and Hartley (1985, p.38), as a sketch plot, which shows an enclosure with both a southern and eastern entrance although the north side is less clear.



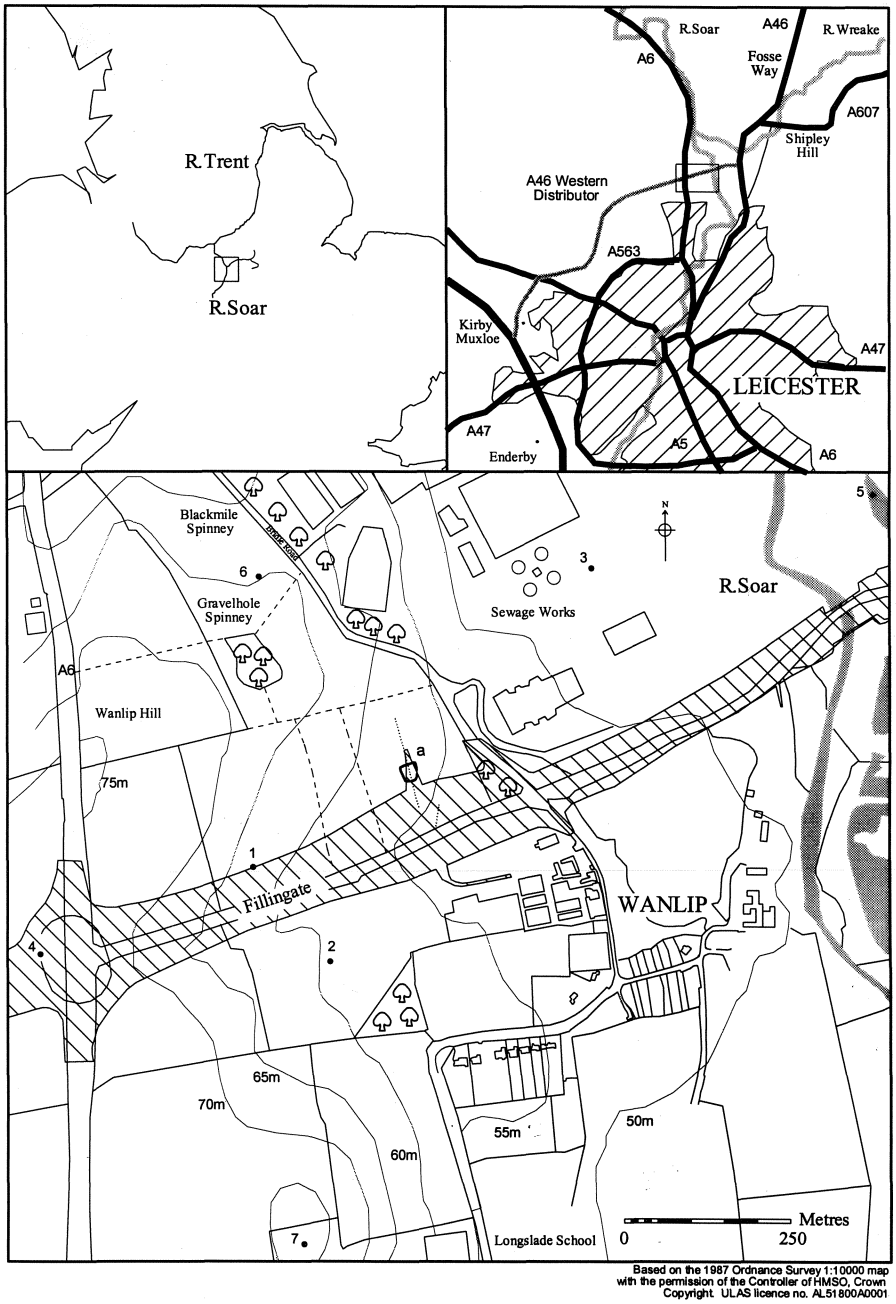
1. Cropmark of the enclosure (reproduced by courtesy of CUCAP Ref ZO36, 1959).

Detailed analysis of the cropmark revealed a number of further elements visible in relation to the enclosure including part of a circular structure to the south-east, pits to the immediate south of a southern entrance, a rectangular structure to the south-west and a small circular mark immediately outside the enclosure in the north-west quarter, with two pit type marks on its west side. The northern side of the enclosure is barely visible in the photograph. In the north-west corner, the mark thins abruptly suggesting the termination of the western enclosure ditch at its northern end. A thin curvilinear gully extends from the terminal which may be mirrored by another curvilinear gully on the corner. A slight bend is apparent at the mid point on the western enclosure ditch, opposite the eastern entrance.

Also visible are two faint linear parch-type marks, which may be interpreted as tracks. One of these becomes visible on a north-south line *c.*30m to the north of Fillingate and passes through the middle of the enclosure, through the southern entrance and is visible for some way beyond the north side of the enclosure with possible remnants of parching visible to the north. The second parch mark appears on the southern edge of the field and heads towards the north-west corner of the field for perhaps 25m. This may only result from making good the ground at a gate into the field, although the very linear nature of the mark makes this seem less likely. More general topographic features visible are the gravel terrace, colluvial deposits, and traces of ridge and furrow upslope to the west.

The site was threatened by the construction of the A46 Leicester Western By-pass which included the upgrading of the existing single lane A607 to a dual carriageway and the construction of an underpass. Following an archaeological impact assessment of the route, a programme of archaeological evaluation was instigated in July 1992 including trial trenching of the area of the cropmark to be impacted upon by the road construction.

The evaluation undertaken in July 1992 comprised a series of trial trenches within the area of the new road and underpass. These revealed evidence of Iron Age activity including the enclosure ditch with associated interior and exterior features including pits and post holes. To the east the features were apparently sealed below and within a



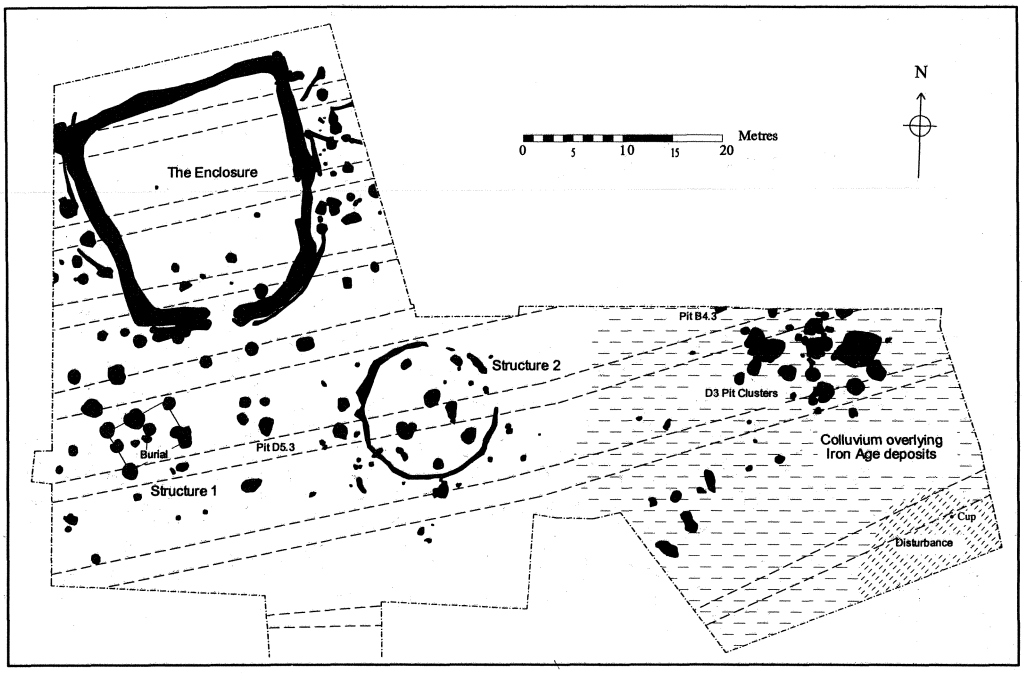
2. Location of the cropmarks (a) at Wanlip in relation to other known sites in the area. 1) and 2) Neolithic / Bronze Age flint scatters. 3) Roman pottery, 4) Roman brooch, 5) Roman villa, 6) Saxon pottery and 7) Saxon cemetery. The A46 Leicester Western By-pass is shown by diagonal line shading.

sequence of colluvial deposits to a depth of 0.8m. The presence of flint material in features below the colluvium suggested the possible survival of Neolithic and Bronze Age evidence.

In view of this a programme of excavation was agreed, funded by the Department of Transport through English Heritage, with the analysis supported directly by the Department of Transport.

The site was identified as having the potential to contribute to ongoing research including the study of Iron Age Leicester and its hinterland (Lucas 1986, p.80), the function and status of enclosure types, Iron Age buildings, the sequence and dating of colluvial deposits, the dating of Iron Age pottery including East Midlands Scored Ware (Elsdon 1992b), the possible use of flint material in Iron Age contexts (Young and O'Sullivan 1992) and prehistoric economy and land-use in the East Midlands. In view of the lack of well dated sites for the Iron Age in the East Midlands, a programme of radiocarbon dating and thermoluminescence dating was included in the analysis.

Initially the site was stripped of 0.20-0.24m of topsoil by 360° machines with ditching buckets. The site was then allowed to weather for several weeks to ensure that tops of features were not machined away inadvertently whilst trial hand-excavation of a four metre wide trench through the colluvial deposits against the northern edge of the area was undertaken. No further features were revealed following the weathering, and a further 0.20-0.30m of subsoil derived mostly from medieval ridge and furrow was then removed by machine. The trackway visible on the aerial photograph was not located and had probably been denuded by ploughing since the photograph was taken. The



3. Plan of the excavation showing the Iron Age features (solid), medieval ridge and furrow (dashed) and colluvium (hatched).

colluvium was identified as homogeneous and not worthy of further hand excavation and it too was removed by machine.

During post-excavation analysis a system of hierarchical groupings was devised to group deposits within and across features on the basis of feature morphology, feature patterning, sediment character and the relationship between deposit and the cut it was filling. The following groups are employed: A = enclosure boundary; B = structurally associated features; C = possible structural elements; D = pits; E = periglacial/ bioturbation features; F= ploughsoils/colluvium. Additionally some structural forms have been assigned structure numbers as follows: Structure 1 – a rectangular structure with cremation burial south west of the enclosure; Structure 2 – the best surviving circular structure south east of the enclosure; Structure 3 – an interpreted circular structure to west of Structure 2 and Structure 4 – an interpreted circular structure to south of Structure 2. The context numbers assigned to the stratigraphic units of the site are used here with full detailed descriptions in the archive report. An underlined number is a cut number, which describes an archaeological event, and may also be used to refer to a cut feature and its fills. Features of clear periglacial origin are omitted from this report. S prefixes denote excavated sections (illus. 11-15). The finds and archive are deposited with Leicestershire Museums Arts and Records (Acc. No. A50. 1992).

The majority of fills recorded were variations on brown silty sands and unless of interest their detail is not presented in this report. In many instances the interpretation of open as opposed to structural (mostly post-holding) pits had to be based on spatial association as very few features retained post pipes (thereby indicating the removal of the post). Further to this, few of the clearer post holes which retained post pipes had any packing stones in their fills.

Broad and shallow furrows formed from medieval and post-medieval strip fields crossed the site from west to east with the slope (illus. 3). The removal of topsoil and subsoil effectively removed the majority of the furrow fills, although the stains of furrows remained *cut* by the archaeological features. This was a consequence of the very mobile soils with clear vertical movement of material; in some instances the probable intrusion of tiny fragments of material e.g. burnt coal into primary Iron Age fills had occurred.

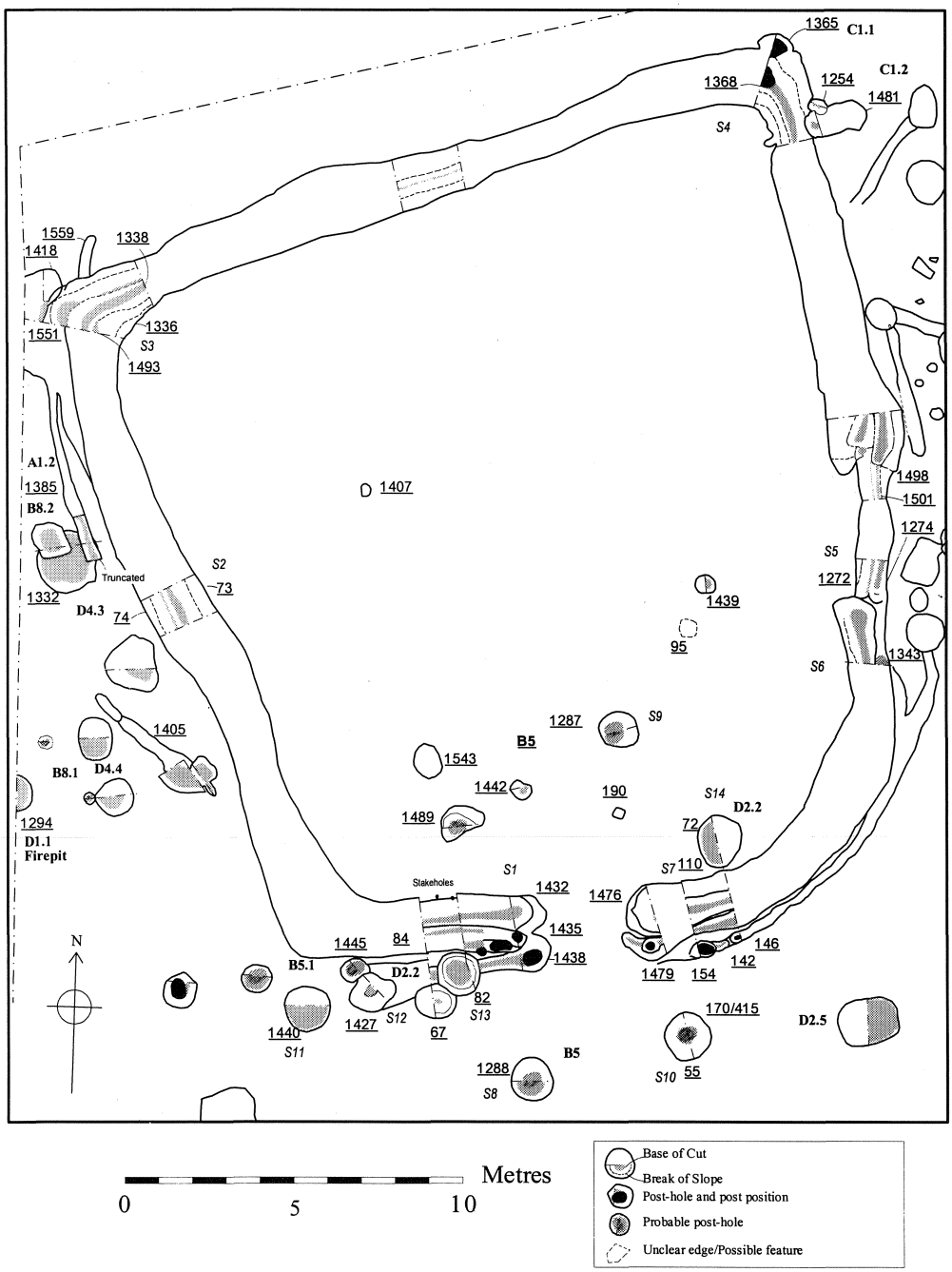
As phasing over the site has not been possible the results of the excavation are described in the following order.

1. The enclosure (Group A) and associated features .
2. Structure 1 (Group B.1), the cremation burial, and surrounding deposits.
3. Structure 2 (Group B.4) and surrounding deposits.
4. Pit groups in the east (Groups B.3, D.3) and surrounding deposits.
5. Colluvial deposits (Group F).

This is followed by a consideration of the dating evidence and a discussion of the results with particular emphasis on the evidence for the structures, enclosure, special deposition and environment and economy. Separate sections follow on the finds and environmental evidence.

The enclosure (illus. 4-11)

The small subsquare enclosure located in the north-west of the site had an internal perimeter of *c.* 72m with an internal area of *c.* 0.35 ha. The detailed stratigraphy of the enclosure allowed some phasing based upon the excavated evidence to be made with three broad phases (1-3) and sub-phases of each. Some of the sequences are projected because of the complete obliteration of earlier fills by discontinuous recutting. The first enclosure A1 appears to have been surrounded by



4. Plan of the enclosure (Group A) and associated features.

a palisade (A1.1) which was rebuilt (A1.2). The palisade was then replaced by a ditched enclosure A2 and A3, with initially a deep narrow base (A2.1) followed by piecemeal recutting in the north-west and north-east corners (A2.2/3/4/5) which was followed by a wholesale recut (A3.1) finally including the eastern entrance (A3.2). Pit groups in the south and west can be associated with some of the phases.

Phase 1/1 (illus. 5)

Gully A1.1;
Pits D4.3; D4.4 ; B6 (1530; 1419)

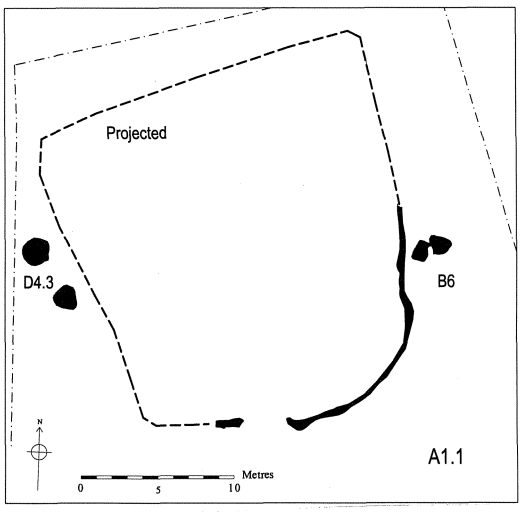
The earliest cuts for this enclosure are identifiable in nine of the sixteen sections recorded across the enclosure ditch.

These cuts are all truncated by later phases and no complete profile survived. The cuts are all narrow and relatively deep averaging 0.35m and 0.47m respectively. No profiles are notably eroded and the sides are generally steep.

The segments investigated each side of the southern entrance had evidence of terminal post settings – 1435 (S1) and 1479 whilst a deepening of the cut, 1343, possibly a post setting, was found south of the eastern entrance (illus. 4, 5 and 11. S1). This might suggest that although there was a continuous cut, it changes from a structural to a drainage function.

Although a number of the predominantly silty sand fills appeared primary to the cuts (illus. 11;143/142 (S7), 1317/1274 (S5), 1434/1435 (S1), 1478/1479, 1483/1501) few contained diagnostic features or inclusions although more secondary fills containing large gravels were recorded each side of the southern entrance (e.g. 1433/1435; illus. 11.S1).

The generally uneroded steep sides of the cuts may result from a structural rather than drainage function which when viewed with the clearer evidence of post settings might suggest that at this stage the perimeter was fenced or palisaded. Two pits (D4.3) located on the west side of the enclosure would appear to be contemporary with this phase. The northernmost pit (1332) had many stratified fills, indicating an episodic filling process, with one fill (1389) containing evidence of burning and, in its final use, deliberate backfilling. The upper fill of the pit (1313) contained a droplet of vesicular fayalite (furnace slag).



5. Enclosure Phase 1/1

At the east entrance accompanying deposits may be the shallow pit 1530 and spread 1419 representing activity preceding the entrance development (illus. 8).

Phase 1/2 (illus. 6)

Gully A1.2;
Structural groups B5.1; B8.1; B8.2;
Hearth D1.1-4;
Pits D2.2; D2.5; D4.4

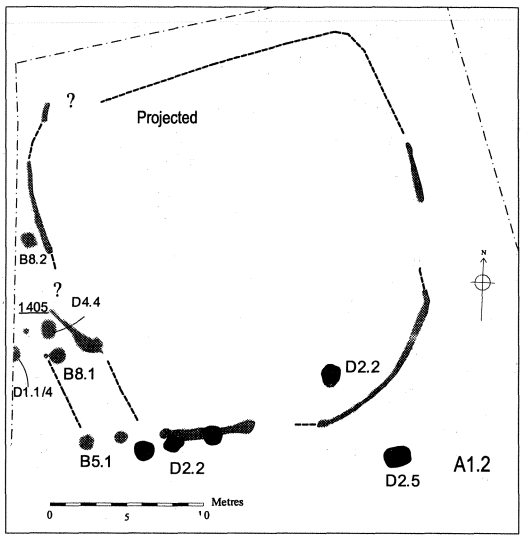
The evidence for the second phase (A1.2) is dispersed around the enclosure. As with phase A1.1, the cut is narrow and the nature of the slot appears to be structural rather than for drainage, with an average width of 0.39m and depth of 0.27m.

Entrances exist in the east, south and possibly west and north-west. At the southern entrance, there are post settings on each side 1438/S1 to west and 154/S7 to east (illus. 4, 6 and 11).

The east side of the southern entrance is truncated, and perhaps extended further east before terminating.

Where excavated in the south-east the gully is convincingly palisade-like with deeper sections linked by shallow cut lengths. The curving of the south-west quarter is still apparent. The sections of gully to the north of the east entrance and to the south of the possible west entrance were very ephemeral. The out turning section of gully 1405 of A1.2 hints at a western entrance to the enclosure while to the north the gully 1385 clearly cuts pit 1332 (D4.3). On the west side of the southern entrance the line of the enclosure may be mirrored by three similarly aligned small pits (B5.1) which are comfortably aligned with post terminal 1438 of A1.2 and can stratigraphically be associated with this phase of the enclosure.

That at the western end retained a clear post pipe and packing whilst the easternmost post hole was cut by one of a group of three aligned similar large pits (illus. 11, S12) on the west side of the southern entrance (D2.2). The easternmost (82, illus. 11, S13) was cut through the infilled A1.2 boundary but also pre-dated pit 67, which is linked to the A2.1 enclosure. Possibly these form



6. Enclosure Phase 1/2

part of a fence or a form of facade in front of the south-west side to the enclosure entrance.

The alignment of the three pits on the west side of the entrance is perhaps influenced by the earlier structure (B5.1) with which they may have been temporally close. Also grouped in D2.2 is a similar pit within the enclosure to the east of the entrance (72) which is unlikely to have been later. Although unproven, it is likely that the later ditched enclosures would have had internal banks; furthermore the untruncated edge of at least the A3.1 boundary would have left no space for such pitting.

None of the pits have post pipes or clear indications of packing material; 82 has what could be interpreted as replaced lining material against its sides whilst 1440, (illus. 11, S11), has slumped natural substrata layers on one side at its base whilst 72, (illus. 11, S14), has an even primary layer across a very flat base.

A single sub-rectangular pit (D2.5) was located further east. The pit had sharp sides to a flat base, with little evidence of slumping or edge erosion and was unlikely to have remained open for a long period; it also contained two silty fills which were virtually identical. On the basis of this evidence, these pits are not structural and their positions appear to be significant in relation to the southern entrance and possibly they performed a storage or other depositional function.

Spatially and stratigraphically associated with gully phase A1.2 to the west of the enclosure are external post holes (B8.1). A simple alignment between the two is parallel with the A1.2 gully 1405. A third post hole to the north (B8.2), containing a large granite block with other large stones, was cut through pit 1332 and may also be contemporary.

Between B8.1 post holes and the A1.2 gully were two similar, adjacent, flat based pits (D4.4) that may be associated with this activity; the northernmost had a compact layer of brown clay between sandy loam layers; the layers contained some charred grain and undecorated pottery. The solitary sandy fill of the southern pit contained some lumps of red brown clay within its filling, which possibly strengthens the link between the two pits.

To the west was a well formed but shallow pit 1294 (D1.1/4) filled with a loam containing an estimated 30% charcoal. Burnt material including calcined bone was present in the coarse fraction. This may be a cooking pit and it is grouped with three similar pits across the site (D1.1).

Phase 2.1 (illus. 7)

Ditch A2.1

Southern entrance B5

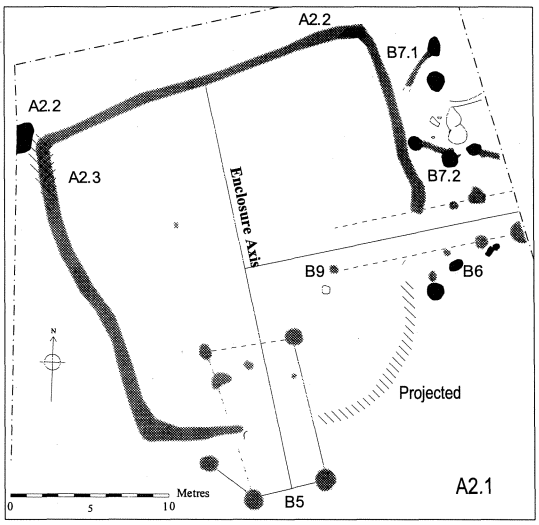
Further development of the enclosure is indicated by phase (A2.1) which is the first clearly continuous ditched enclosure with entrances in the south and east, although much of it has been obliterated by later recutting. Remnants of butt-ends just survived on the west side of the southern entrance (84), and to the north of the eastern entrance (1498).

The southern entrance is probably wider than in other phases, at around 3.5m. The ditch had a distinctively narrow rounded base which is identifiable in eight of the recorded sections; this may have been as a result of basal cleaning. Stratification of primary fills was apparent particularly in the north-west corner where primary layers consisting of redeposited natural substrata (e.g. 1516, 1457; illus. 11, S3) were pale, compacted and mottled with manganese staining.

A group of pits/post holes (B5) located around the southern enclosure entrance of which three are very similar (illus. 4, 7 and 11; 55, S10, 1287,S9, 1288 S8) are associated with this phase of enclosure redefinition on the basis of an alignment with the extrapolated ditch terminals of the enlarged entrance of this phase.

This similarity and their arrangement around the southern entrance on a line consistent with the axis of the enclosure (as defined by central points between the southern terminals and a mid-point along the northern edge) is convincing as part of an intentional layout. The aerial photograph shows the trackway running accurately between the two southern pits.

Pit 67 in the south-west quadrant is not clearly aligned but must appear at this stage or later as it was cut through the infilled pit 82. 1288 has possible evidence of post pipe/packing, whilst



7. Enclosure Phase 2.1

1287, has a deepened base in the west, and several large cobbles in the upper secondary fill. Also grouped in B5 are several other discrete features in the vicinity. 1489 had clear post packing. 1442 had a very burnt fill with 20% charcoal, but little environmental information. Abraded pottery, was noted in 63 of 67, 59 of 1287, and 1267 of 1288. None of the pottery from these discrete features was Scored Ware, although scored sherds did form part of the assemblage found in 84, a ditch butt-end on the west side of the south entrance. A fill of 55 contained a Late Bronze Age-Early Iron Age pottery form (below p.00).

Eastern entrance (illus. 8, 11)

B6.0;B7.1:B7.2;B7.3. Pit D5.5

Entrance Approach

A similar alignment to that located at the southern entrance, was found at the east entrance, B6.0. Here a number of discrete, sometimes recut, features were present which, on the basis of the alignment with the enclosural slots of that phase, appear to be associated with the development of the eastern entrance of the enclosure. They partly flank its approach and may also be associated with an entrance structure.

Contemporary with phase A1.2 of the enclosure are post holes 1235, 1446, 1522 and 1312 on the south side, and 1398 and 1502 on the north. Post holes 1502 and 1522 are very similar, both with post pipes within large shallow pits set 2m apart (illus. 8 and 11, S16). The presence of calcined bone was noted in coarse fractions following sieving in 1396 of 1502. The southern side of this arrangement is then reinforced by post holes 1187, 1529, 1239, and double post hole 1422 (unexcavated).

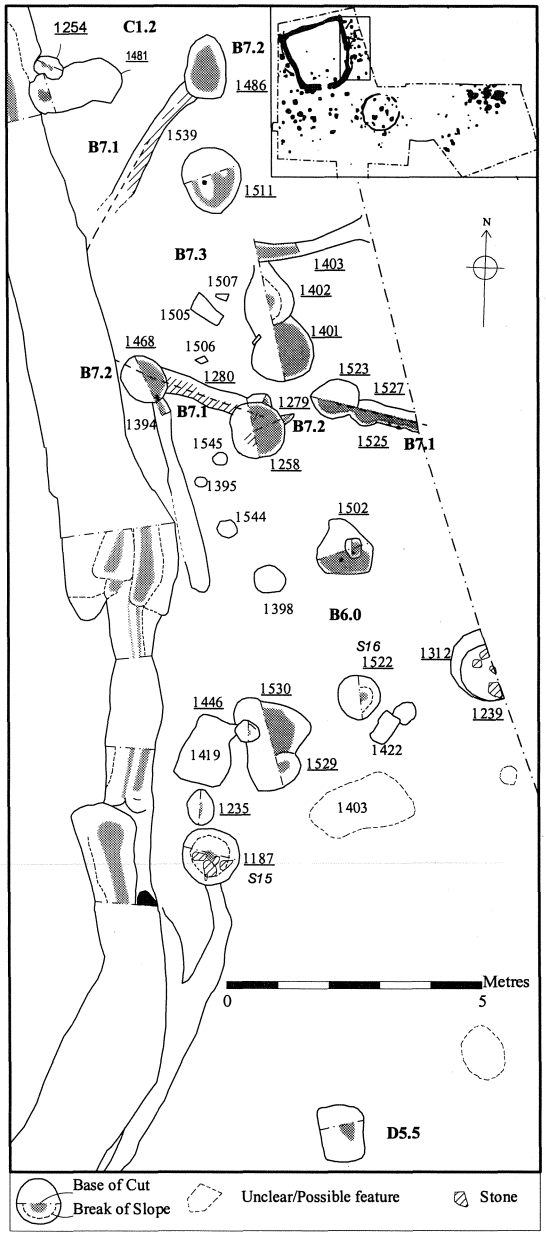
None of these features retained post pipes, although 1187 and 1239 contained similar quantities of large packing stones within their fills, those within 1187 being clustered on the southern side of the pit only (illus. 8 and 11, S15). 1187 clearly cut the A1.2 gully on the south side of the western entrance.

This redefinition may be contemporary with A2.1, in which case 1187 may also serve to better define its corresponding ditch butt-end which had been obliterated, in a similar manner to pit digging at the southern entrance (above B5). No such rebuilding is evident on the north side, unless this is associated with the B7.2 pits to the north which would make a tapering outwards funnel which is at variance with the entrance morphology from the rest of the site.

Four similarly sized pits cut to similar depths were located. These invariably cut the small linear features (B7.1) and are interpreted as evidence of rebuilding. 1523 retained a probable post pipe and 1258 showed some stratification including a clay lens, whilst 1468 and 1486 had single fills. 1486 was notable for containing 1.4kg of Scored Ware pottery. The pottery was all of the same fabric and form and contained some overfired sherds (below p.50). 1468 cut the A1.2 gully (1514) and must post-date it. The consistent association between B7.2 pits and B7.1 slots also suggests that the B7.1 gullies post-date the A1.2 enclosure.

Groups B7.1 and 7.2 may define part of a sub-rectangular structure consisting, in its first phase, of slots 1527, 1280 and 1539; and, in its second, pits 1486, 1468, 1258 and 1523 of which the last two might represent terminal post holes either side of the gap between 1280 and 1527, along with a much truncated post hole 1279. Possible stake impressions were found midway along 1527 on the south side. Both slots 1539 and 1280 had pebble-rich fills against their southern edges.

Within the angle defined by the groups B7.1 and B7.2 was cluster of features B7.3, including three more pits, several unexcavated post/stake holes and another length of slot B7.3. One pit 1401 contained three layers suggesting that it was an open feature, with some evidence of burning in the middle layer (1341). 1401 was cut by an irregular pit 1402 which also appeared to have remained open at some stage as it had weathered edges and a possible silting



8. Eastern enclosure entrance area.

layer. To the north of these 1511 was very shallow and irregular showing probable root disturbance. 1402 was cut by a short length of slot 1403.

Equidistant between the entrance and Structure 2 to the south was an irregular sub-square pit (D5.5) which contained small quantities of hearth slag, hearth lining and a traces of limonite iron ore (below p.84). Some possible root disturbance was noted. Although accompanied by another possible unexcavated feature, the relative isolation of the pit may be significant.

Two post holes (B9 1407;1439) were located within the interior of the enclosure and do not appear to be strongly related with each other and could be placed in any phase. 1439 may be associated with the B6 alignment. To the south-west of 1439 was a possible post hole 95.

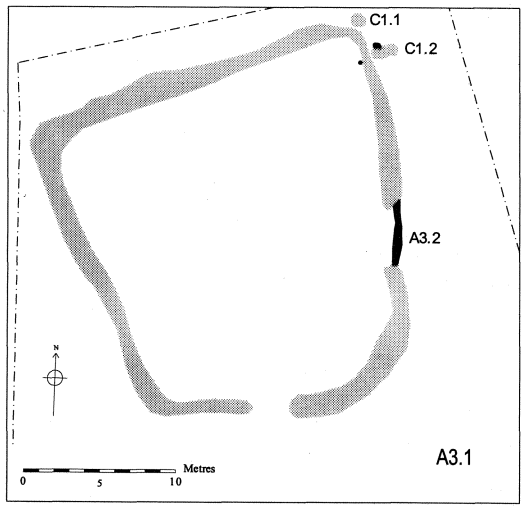
Phase A2.2; A2.3 (illus. 7,11)

Discontinuous recuts in the north-east and north-west corners of the enclosure ditch were also identified (illus. 11; A2.2 1418, 1493 S3 1368 S4), followed by A2.3 (1551 S3), another discontinuous recut of either ditch or post form, with primary filling followed by backfilling. There is further evidence of shallow recutting in the north-eastern part of the ditch (illus. 11, S4, defined by fills 1346, 1347, 1348).

Phase 3.1 (illus. 9)

Ditch A3.1
Pits/Post holes C1.1;C1.2

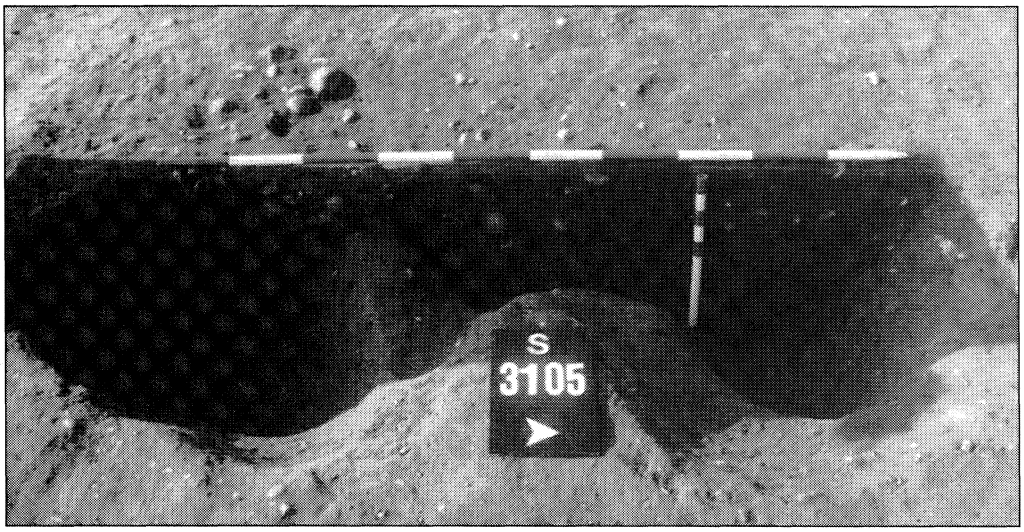
At this stage the ditch is recut in its entirety (A3.1). The ditch is broad and shallow and generally wider and shallower than its immediate predecessor although the last continuous cut in the north-east corner (1371 S4) is more a gully than a ditch. A primary fill at the southern entrance is notable for containing frequent large fire cracked pebbles (1431 S1). Secondary fills include to the west of the southern entrance a rare lens of clay which may represent winter puddling in a stabilised ditch (c.f. Evans and Limbrey 1974, p.179) to the north of which two stake holes were recorded on the inner edge of the ditch, and 1300, a concentrated area of cobbling preceding the final fill of 1336 in the north-west corner (S3) which may have been a slumped surface over a consolidated ditch.



9. Enclosure Phase 3.1

A radiocarbon date range of 763-400 cal BC (Camb.Q-3271; Table 2) and thermo-luminescence date of 855-365BC (Durham 174-11AS; Table 3) at 68% confidence was obtained from context 46 (illus. 8 and 11,S2).

This phase is followed by a cut through the eastern entrance (A3.2). There is continued activity in the north-west corner with post hole groups C1.1 and C1.2. C1.1 consisted of two small pits, on the perimeter of the enclosure; the northernmost 1365 cut an earlier deposit possibly surviving from the A1 enclosure in this corner (1366). The other 1481, cut the A3.1 ditch (1377, A3.1). C1.2 was also two similar post holes; 1370 to the west was identified in section and cut the infilled A2.1 ditch 1319; 1254 was excavated in full, and was the stratigraphically latest feature in this area. These groups are evidence of continued enclosure activity in this area following continuous ditch cutting.



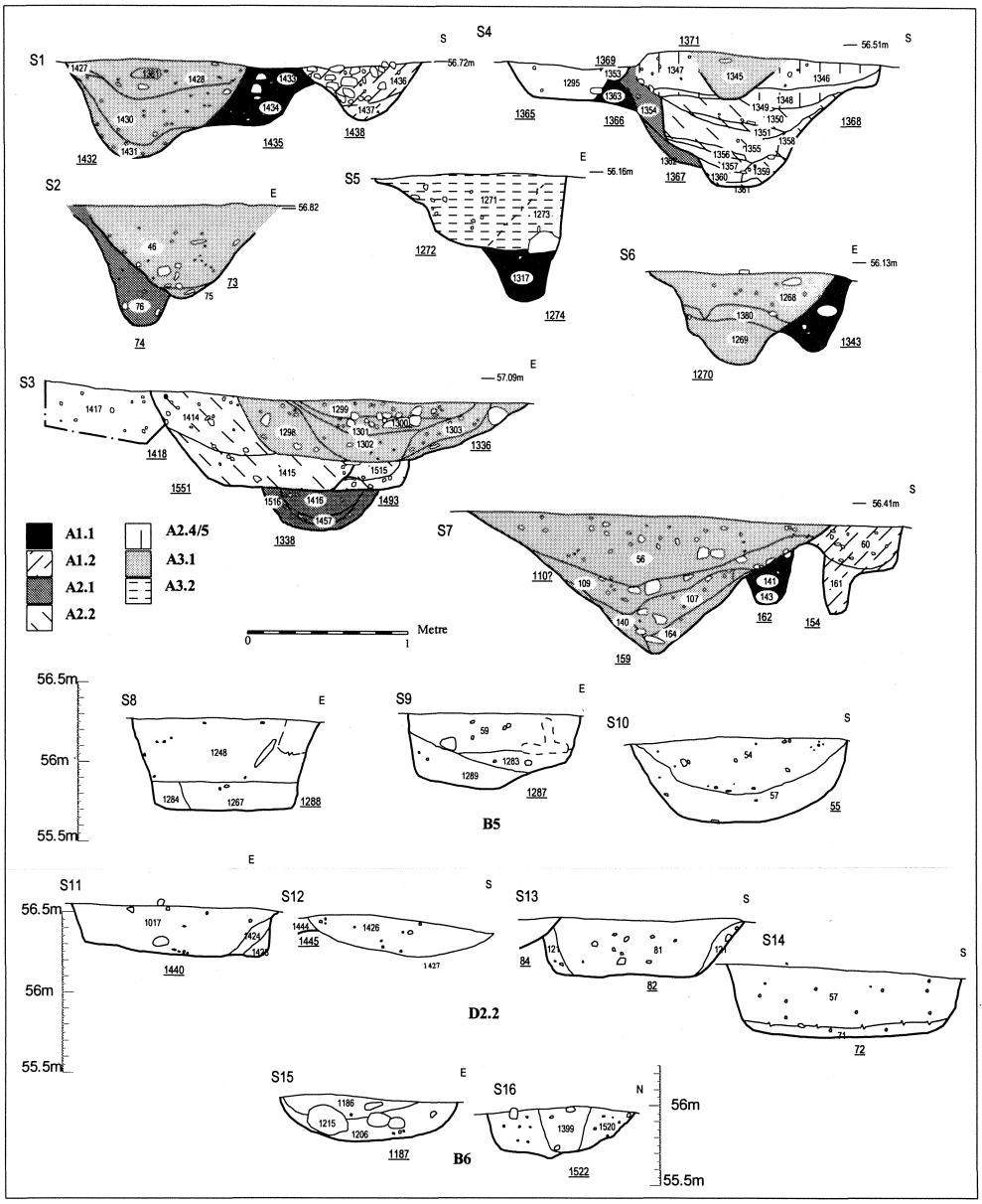
10. Section S1 from the west showing, from the left 1432 phase 1/1; 1435 phase 1/2 and *1438* phase 3.1.

Structure 1 (illus. 12)
Cremation burial *B1.0;*
?Related Features B2.6
Rectangular structure *B1.1; B1.2;*
Pit groups *D2.1; D2.3; D2.4; D5.2.*
Two-post structures *B2.0; B2.2; B2.4; B2.5.*
Hearths/Fire pits *D1.1-2; D1.1-3;*

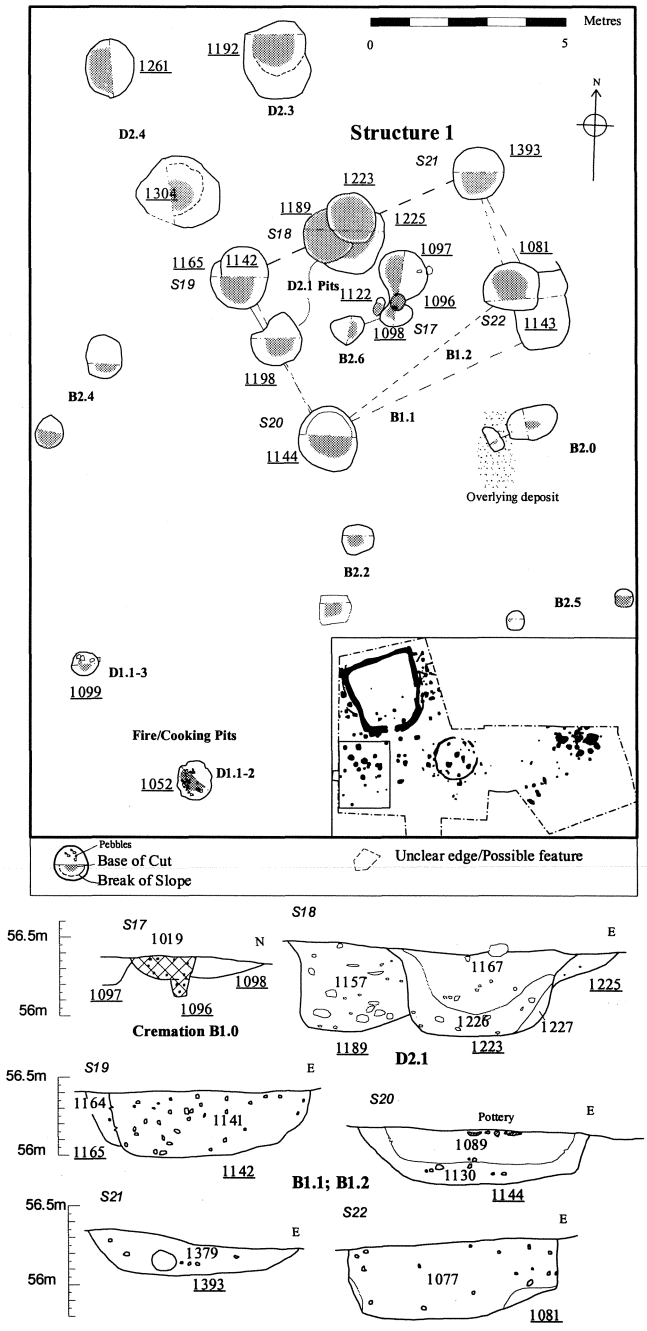
To the south-west of the enclosure were a number of large pits, four of which demarcate a rectangular area interpreted as a four-post structure of two possible phases.

The first phase (B1.1) comprised cuts 1143 and 1165 (S19) in the north-west and south-east corners which were recut in the second phase as 1081 (S22) and 1142 (S19) respectively (B1.2). Post pits 1144 (S20) and 1393 (S21) in the south-west and north-east corners did not appear to have been recut and may belong to either the original structure or its replacement (as the recutting may have been either piecemeal or wholesale with the latter causing obliteration).

The second phase structure was rectangular in form (1142, 1393, 1143 and 1144) with post centres *c.* 6.70m apart south-west to north-east and 4.70m apart north-west to south-east, a very near 3:2 ratio. The second phase post pits were similar in size, but oval to circular in plan, averaging 1.4m across. A subsquare patch of cobbles, up to 0.12m in depth, was excavated from a



11. Sections S1-S16. Enclosure and related pit and post hole sections.



12. Structure 1 showing cremation burial (1096) and surrounding features and sections S17-22.

central area of the north-eastern post pit 1393 which may be packing material (1379) (S21) while centrally at the base of the south-eastern recut post pit 1081 and not visible in section, was a 0.15m diameter deposit 0.02m thick of charcoal rich silt (1113), which may represent the base of a charred post. Pottery was concentrated centrally towards the surface of post pit 1144 (Context 1089, illus. 12, S20) with over 1.5kg recovered from this fill (below p.52). The lack of post pipes suggests that posts had been removed.

The cremation pit 1096 (illus.12, S17), was located centrally within the rectangular/ sub-rectangular area. Its base was irregular with two depressions and a clearer socket-shaped cavity on the south-west side which was filled with a concentration of calcined bone. The cremation pit was cut through a flat-based shallow pit (D5.2; 1097 S17), and similar adjacent features (1098 B2.6 and 1122) whose fills also contained a small number of fragments of unidentifiable calcined bone.

Several pits were placed at midpoints on the western and northern sides of the structure (1189; 1198; 1223; 1225). They are slightly smaller than the corner pits of the structure and more commonly have breaks of slope on their upper edges (e.g. illus. 12, S18) which may suggest they were open for a period before infilling. On the northern side, pit 1189 had been recut (1223). Pit 1198 had slightly irregular sides and shapes of fill interfaces perhaps indicating post-depositional disturbance. It contained three layers with, at the interface of the upper two layers, part of a ring of small waterworn pebbles (to 0.07m). The primary fill of the pit was interleaved with the second suggesting that their deposition is contemporary. However the sloping of the pit's edges suggest that it was open for a period before being infilled. The relationship between the corner pits (B1.1/2) and those on the sides (D2.1) of Structure 1 is unclear, but they do appear to be spatially associated.

The earlier of two virtually identical intercutting pits with vertical lower edges and slack eroded upper edges, 1189, contained one homogeneous fill, 1157, which contained abundant large pebbles (0.12m), some scorched and fire-cracked, towards its base. Over 1.8kg of pottery including Scored Ware was excavated from this feature including a near complete jar which appeared to have been placed on the base of the cut against the western edge (illus. 27.39).

1225 was a shallow cut, perhaps a *step*, only partially surviving on the southern side of 1189; it did not have a clear stratigraphic relationship with 1189, and on the basis of similar fillings, may have been contemporary with it.

Both were truncated by 1223 which was similar in size and shape to 1189 and also had near vertical lower edges and eroded upper edges. A primary layer (1227) was apparent against one side of the cut, which was sealed by a backfill (1226) with again a component of common scorched, fire-cracked pebbles and scorched red-clay (internally sooted pottery was also recovered from this layer, below p.53). The secondary fill of the pit (1167) also contained fire-cracked pebbles. Radiocarbon date ranges of 750-735 and 520-385 Cal BC with 68% confidence were obtained from 1227 (Camb. Q-3277, below p.26, Table 1).

These features may be related to the presumed special usage of Structure 1.

Further localised pit digging included 1192 (D2.3) located to the north of Structure 1. This has morphological similarities with 1189 to the south on the basis of having an eroded southern shoulder. Disturbance (possibly from burrows) was notable within its mostly homogeneous filling. A layer resting against its western edge is not easily interpreted as slippage and could represent a decayed lining.

Two similar pits (D2.4; 1261;1304) were located north-west of, and aligned with, the west side of Structure 1. These were not as large as those of D2.3 and D2.2, and had shallower and more rounded profiles. The southernmost contained multiple fills including secondary backfills of redeposited natural gravels with some fire-cracked stone, and secondary/tertiary silting. The northernmost contained one fill which itself contained possible post packing in the form of four large cobbles to 0.16m, two of which had been burnt.

Two-post structures B2.0; B2.2; B2.4; B2.5

Surrounding Structure 1 were four convincing two-post structures which are described from west to east.

B2.4: Two similarly sized and filled post holes, 2.3m apart, had solitary fillings with no indications of posts or packings. The southernmost was heavily truncated and was subsquare,

whereas the northernmost was circular.

B2.2: Located to the south-west of Structure 1. The post holes were of similar sizes, 1.9m apart; the southernmost was more sub-square than round.

B2.0: Two isolated post holes to the south of Structure 1 with post centres 1m apart. In evaluation, a linear fill was recorded over the western post hole which may have resulted from usage/ wear at the base of a frame.

B2.5: Oriented east-west with post holes 2.8m apart. The easternmost post hole was distinctly subsquare (although disturbed in the south-east by bioturbation) while its partner was more rounded with a clearly defined 0.3m diameter round post pipe on its west side. The pottery from the westernmost post hole was abraded.

Fire/Cooking pits

To the south of these were two pits with evidence of burning (D1.1 1099 and 1052). 1052 was 0.30m deep and contained a primary charcoal rich silty sand with flecks of burnt bone overlain by thin silty sand lenses and layers of pink clay. Within the clay was set a bed of reddened pebbles to 0.10m, in turn capped by more red clay. This pit may have been used as both hearth and oven, or at least cooking pit. The clay sitting over the cobble layer (which would appear a cooking surface) may be remnants of collapsed superstructure. 1099 was much more shallow and filled only with a layer of red clay in which were set a layer of large fire-cracked pebbles. The stones were fragmentary when excavated which may suggest that they were burnt *in situ*, although this fragmentation may be due to post-depositional factors.

Structure 2 (illus. 13)

Gravel filled post holes C2.2 C2.3 C2.12
Ring groove B4.1 and concentric
Post holes B4.2
Internal pits 1244 1169
Other structural groups C2.0 C2.1 C2.7
Two-post structures B2.1 B2.7 B2.3
Fire pit D1.1-1 Special Deposits pit D5.3
Other pits C2.14 D2.5 D5.4

This area is characterised by the ring-groove and concentric post holes of a roundhouse (Structure 2). The presence of intercutting features and the contrast between the various fills has enabled some interpretation of the course of events.

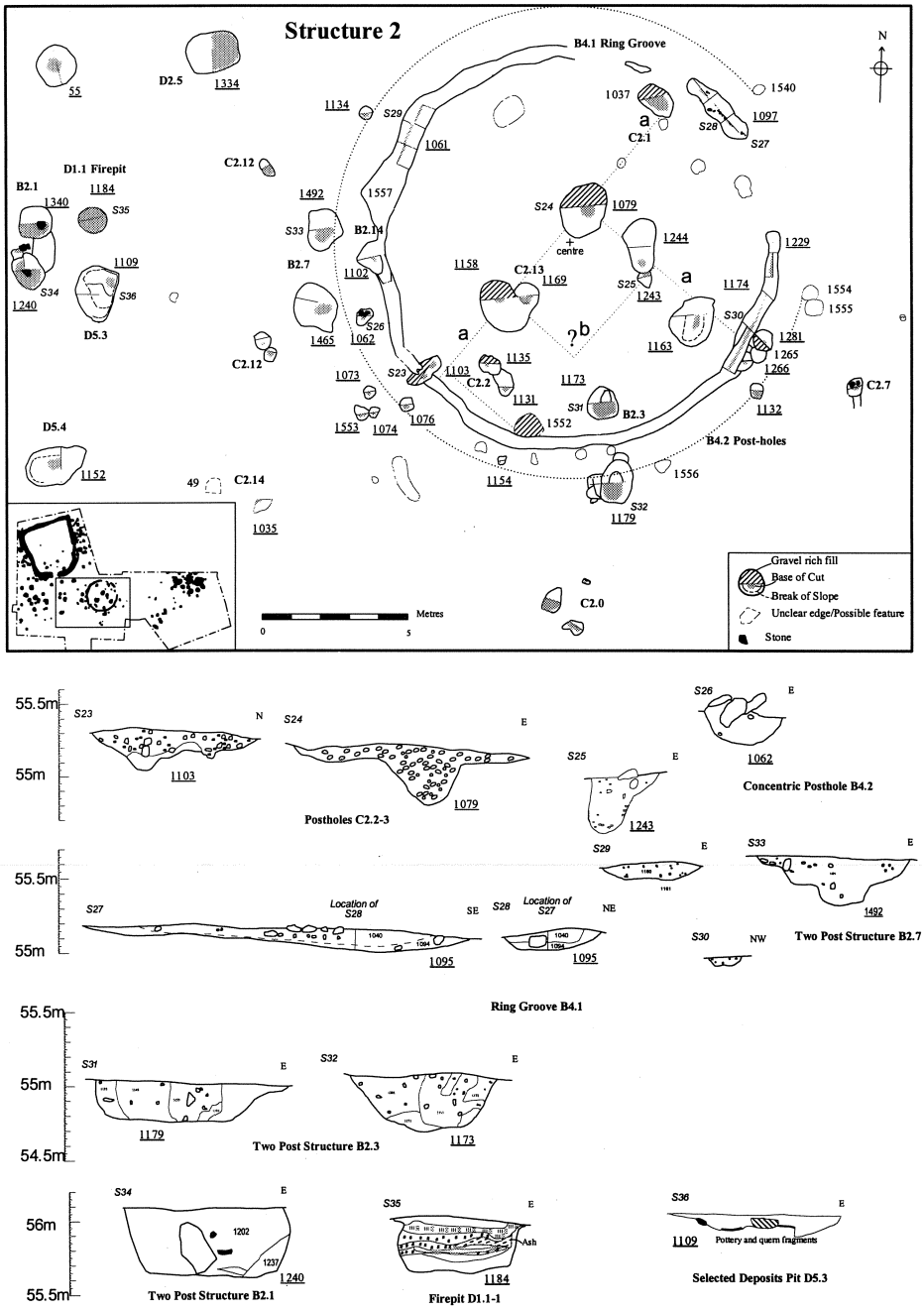
Gravel filled post holes

Among the earliest features was a cluster of partly intercutting post holes (**C2.2** 1103; 1135; 1131; 1552) located on the south-west edge of the ring-groove, and in two cases cut by it. The earliest 1131, cut by 1135, had typical silt sand fills whilst the others were notably pebble rich. 1103 S23, may have been a double post hole and clearly predated the ring groove, and 1552 (unexcavated) appeared to also predate the ring groove.

South-west of 1103 were two similar pebble filled features, 1073 and 1553. The latter was cut by a post hole 1074 which possessed a sharper profile and different fill and was similar to post holes in **C2.12.** A number of unexcavated anomalies, possibly post holes, were recorded on the outer edge of the ring-groove in the south.

Four pits within the ring groove (**C2.3** 1037; 1079;; 1281; 1243) were also filled with pebble rich backfills, with which a fifth (1158) may have been associated. 1037 was a 0.10m deep pit within the northern edge of the ring groove; 1079 S24 was a well defined post hole located just off the central unit point of the ring groove and concentric post holes (S28) with eroded upper edges and a shallow western edge possibly as a consequence of robbing. 1158 was a 0.27m deep pit containing little diagnostic evidence although a 0.10m depression against the section and several cobbles on the surface suggest a structural use. It was cut by 1169 (C2.13). 1243 S25 was a steep sided post hole of definite structural origin, and the most similar feature to 1179 in the vicinity. Just outside the ring groove in the south-east and cutting a possible unexcavated post hole was a further gravel filled post hole (1281).

A number of the above features can be aligned on a rectilinear basis (illus. 13, alignment 'a'). If their association is correct these predate Structure 2.



13. Structure 2 area and sections S22-S36.

Ring groove and concentric post holes

A ring groove (**B4.1**) and nine concentric post holes (**B4.2;** 1062, 1076, 1132, 1134, 1154, 1540 1554 or 1555 and 1556) were located which can be interpreted as a circular building *c.* 14m in diameter. The gully was truncated to the extent of becoming discontinuous; it survived to 0.11m in depth on average, and in isolated areas to 0.24m. In the segments excavated to the north of a wide break in the east side, cobbles were present in the interface above the primary fill (1094, illus. 13, S26,27) and loamy patches possibly surviving stake holes, contemporary with the structure (c.f. Reynolds 1996a), were recorded in the base of the cut which was in all recorded profiles flat or slightly convex (illus. 13, S27,28,29). A radiocarbon date with ranges of 750-700, 530-365 and 280-260 Cal BC at 68% confidence was obtained from fill 1094 (Camb. Q-3276; below p00).

The western edge of the groove was irregular where it had been cut by a shallow pit or post hole, 1102, which may have been the southern post hole of a possible pair B2.14, 2.2m apart, the northern post hole represented by a clear bulge in the groove. Five of the post holes were excavated with a post pipe showing in 1076 and stone packing in 1062 (illus. 13, S30).

Other internal features

An elongated pit 1244 cut post hole 1243. There is little diagnostic in the filling bar a small silty layer which filled a slight bowl at the southern end of the cut. A small circular pit 1169 cut 1158. Pebbles around its surface were probably packing stones although no post pipe survived.

If all the gravel filled post holes predate Structure 2, these pits may be contemporary with it. Alternatively 1169 could be associated with the gravel filled 1243 to the west which is a clear post hole, the two perhaps defining half of an internal four post arrangement for Structure 2, or possibly combining also with 1079 (illus.13, alignment 'b'). However the features are not particularly similar and the good survival of 1243 contrasts with that of 1169.

Four unexcavated possible post hole features were located within the ring-groove which may either be associated with the eastern entrance to Structure 2, and the location of a radial internal partition, or the gravel filled post holes.

Two-post structures

A number of possible two-post structures were also identifiable in this area and are described from east to west;

B2.3: A very large two-post structure was located on the southern edge of Structure 2 consisting of two similar sized post holes, 2.8m apart, averaging 1.20m across, the best preserved being 0.40m deep (illus. 13, 1173 S31 1179 S32). Both had well preserved post pipes that had the shape of halved timbers with a diameter of approximately 0.8 to 0.9m and width of 0.35m; in the northernmost (1173) it was clear that the rounded edge was facing west. 1179 to the south, cut a number of other probable post holes. A radiocarbon date of 400-250 Cal BC (Camb.Q-3275; Table 3) at 68% confidence was obtained from 1173.

This structure clearly straddles the ring groove and must be chronologically separate. The radiocarbon range is narrower than that for the ring groove (illus.13), and may suggest a later date for the two-post structure.

An earlier date might be interpreted if the two-post structure defined marked the eastern entrance to a circular structure (where the waney edges faced out as they are more resistant to rot and insect attack) of which the C2.2 post holes were also part.

B2.7: A convincing two-post structure with post holes 2.6m apart was to the west side of Structure 2. The northernmost post hole had a central post-shaped socket, and single fill while the southernmost had signs of a possible recut, or secondary filling.

B2.1: A well formed two-post structure equidistant south of the enclosure's southern entrance and west of Structure 2; it consisted of two substantial similar steep sided pits, 1.6m apart and averaging 1.04m across; the best preserved was 0.56m deep. Their fills all contained quantities of burnt material including burnt stones to *c.* 0.25-0.30m in length. A small limonite nodule and externally sooted pottery was recovered from the southern post hole for which a thermoluminescence date of 515-85BC (68% random error; Durham T174.12-13; below p.26,

Table 2) was calculated. The pottery from the southernmost post hole may have been an example of a special deposition (below p.40). Between, and cut by, these two posts was a pit, (1469; B2.09), probably of similar dimensions.

C2.12: Two post holes, one of which was recut, possibly related to a circular structure (B2.7 and B2.1 Structure 3 below). The post holes were equidistant from two-post structure B2.7. A possible post hole was found to the east of pit D5.3.

Other Post holes

C2.0: A cluster of two, possibly three post holes to the south of Structure 2. The westernmost was the clearest with a number of possible stake holes showing in its base; the remaining two features were less well defined.

C2.14 : A pit truncated by an evaluation trench (C2.14; 1035) lying at the interface of natural substratum and medieval plough soil to the south-west of Structure 2; contained within its fill (1022) was some undecorated pottery, including overfired sherds. Overfired sherds were also recovered from a layer seen only in the evaluation *c.* 1.5m to the west (49).

C2.7: A single post hole was located to the west of Structure 2, with a clear post pipe, packing stones and ephemeral extension to the south.

Pits

A fire or cooking pit (D1.1-1 1184, illus. 13, S33) was recorded to the west of Structure 2. The pit had a complex internal stratigraphy; the lower 0.30m of the feature was filled by seven thin charcoally silty sand layers capped by red clay, which was sealed by a tertiary silt. The clay capping may indicate that the pit was being used for cooking. Cereal remains and a cornflower seed were located in this feature (below p.78-79, Table 20).

To the south of the fire pit was a shallow pit with an irregular base (D5.3; 1109 S34); concentrated at its base was over 6kg of pottery (over one-fifth of the total pottery weight from the site, below p.53). Also within the fill were parts of two saddle querns and a rotary quern (below, p.62), and two worked flints. The single sandy fill included pink and purple clay with charcoal. Small pieces of burnt bone were noted predominantly beneath the largest sherds of pottery, although these were too fragmentary to allow identification. A thermoluminesence date of 220BC – AD90 (68% confidence) was obtained from pottery within 1018 (Durham 174-10AS; below p.26, Table 2).

To the south was a 0.52m deep pit D5.4, filled by a clean lower fill and slightly less clean secondary fill which contained Iron Age pottery.

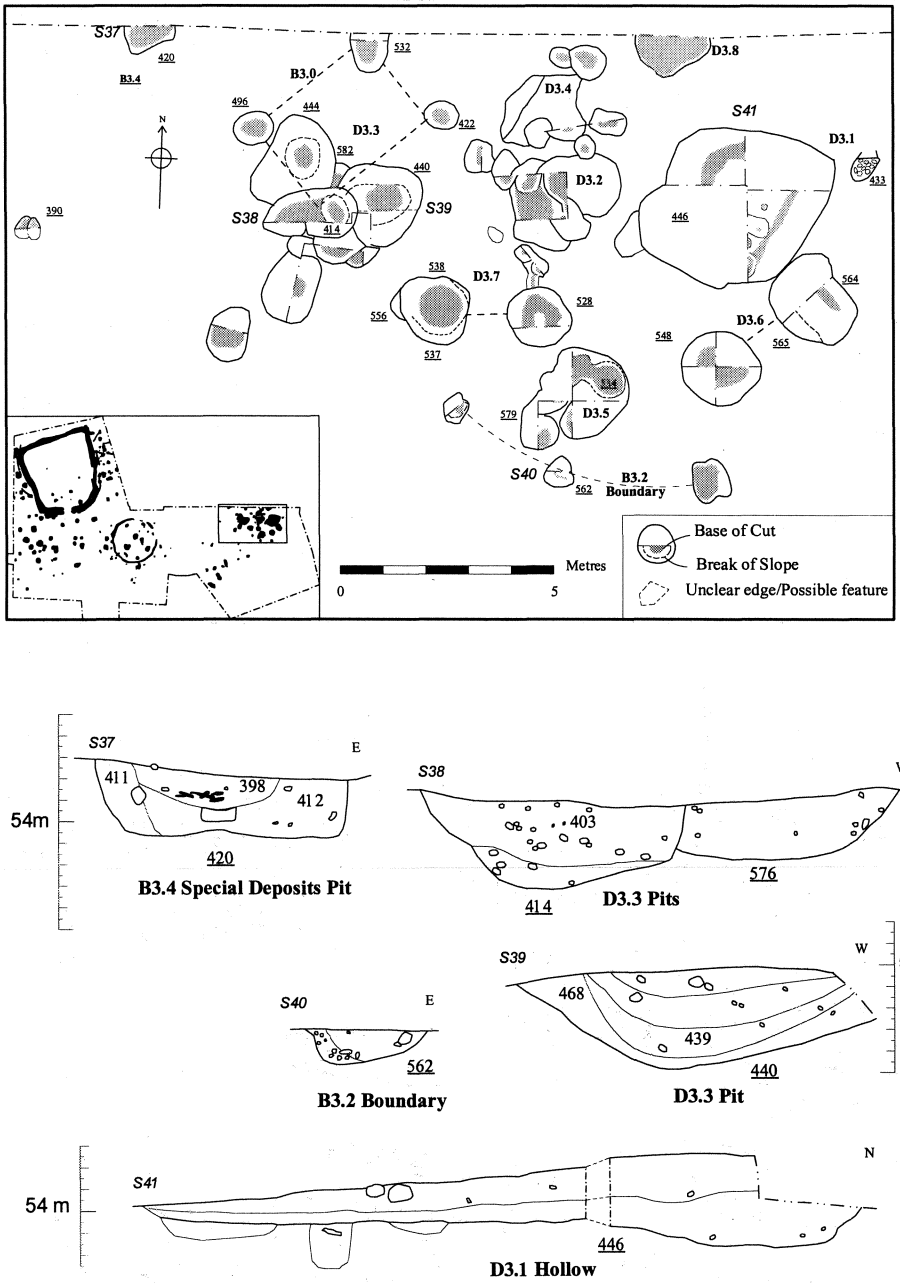
Pit groups and associated features east of Structure 2 (illus. 14)

Pit B3.4; Hollow D3.1
Pit Clusters D3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8
Boundary B3.2; Post holes B3

A pit **B3.4** (420 S37) containing another large pottery group was excavated against the northern baulk in the west of the area. The pit contained three fills, the earliest of which was a relatively clean band of sandy silt, 411, against the western edge of the feature. Against 411 was the major fill, 412, which contained cobbles and a number of boulders to 0.45 x 0.25m (illus. 22); burnt clay was noted in the coarse fractions; the stone was overlain by pottery (stacked sherd on sherd) around two sides of a subsquare, 0.14m x 0.14m, within a more charcoal rich deposit forming the upper fill 398; the open sides of the square abutted context 411.

The pit contained over 3.5kg of pottery of which a high proportion was Scored Ware (see below p.53). A thermoluminescence date of 1110-620 BC (68% random error) was obtained from sherds in 398 while a radiocarbon date of 520-395 Cal BC was obtained from charcoal in 412 (below p.26, Tables 1-2). To the south-west of the pit was a recut post hole (390) with a similar upper fill.

A series of nine intercutting pits (D3.3; 414: 440; 444, illus. 13) which varied between 0.60m to over 2m in length, and up to 0.52m in depth lay to the south-west of 420. The two largest pits



14. Pit groups B3 and D3 and Sections S37-41.

440 (S39) and 444 were notably similar in plan, and appeared spatially to respect one another but were stratigraphically separated by four others and cannot be contemporary. The majority of fills were homogeneous loams, a notable exception being the final filling of the latest pit in the series, (414 403 S38) which was rich in organic material, charcoal and burnt stone, and contained 0.53 kg of pottery. Charcoal from this layer gave a radiocarbon date range of 370-345 and 320-205 Cal BC at 68% confidence (Camb. Q-3272; below p.26, Table 1).

440 (illus. 14, S39) was atypical in containing five differentiated fills, four of which were notably even in thickness. The fifth (467 not visible in section) was a small subcircular lens, 0.54 in diameter and 0.01m thick, at the base of the pit above and partially overlain by slumped primary fill (468). It was notably rich in organic material. Fill 439 contained five pieces of flint, one of which was a transverse arrowhead (see below), and vesicular fayalite slag. A sherd of pottery with external sooting and limescale was recovered from 434 of 444 (Ext 5032). To the south were three similar irregular features, (B3.2; 521, 562, 500; illus. 14), approximately equidistant along an arc of 5m radius. Although no post pipes were evident the central feature had a gravelly fill against one edge that was probably slumped packing indicating the removal of its post (S40). Some root or burrow disturbance was evident in the westernmost pit.

To the north was a cluster of five intercutting pits or post holes (D3.5). The southernmost, 579, appeared to post-date the other features of the group, although all the fills were very similar and difficult to distinguish from one another. Only small quantities of pottery were recovered together with charred grains from 579, and a very small quantity of vesicular fuel ash slag. The cuts for these features were generally sharp and well formed, although rounded, with steep edges and flattish bases and may be post holes.

A wide sub-square hollow or shallow pit with a slightly domed base (D3.1; 446 illus. 14, S41) lay on the east side of the area. Two main fills were present, the upper with an organic content including some plant remains (see Table 21) and 44 sherds of pottery, two of which were Scored Ware. Penetrating the base were some irregular pockets which undercut the natural. The hollow and pit cluster to its west were sealed by a dark loam layer, 409, containing Iron Age pottery and fourteen pieces of worked flint. The irregularities in, and the slight doming of, the base might be interpreted as evidence of a tree throw. The upper edges of the feature were, however, subsquare in plan and similar shallow pits have been interpreted as working hollows and even clamps; over-fired sherds were recovered from this pit, and from the surface of 564/5 to the south. Adjacent to the hollow in the east was a concentrated patch of pebbles, 433.

Pit 564/5 to the south of the hollow was one of a pair (D3.6; 548; 564; illus. 14) of similar size and cut to similar depths. 564 to the north-east had been recut (565), whilst 548 had a relatively deep well formed even rounded profile filled by a thin primary interface, and an homogenous secondary loam.

To the west of the hollow were six intercutting pits (D3.2; illus.14) with generally very shallow edges, and little diagnostic material in the fills. Most of the cuts had primary layers of redeposited natural with silty sand secondary loams filling most of the feature. The later cuts were larger than the earlier ones.

On the southern edge of this group were two intercutting post holes and two large pits (D3.7, illus. 14), the westernmost of which was recut (556), and contained a small quantity of pottery along with a very small quantity of cereal remains. 528 to the east had a slightly convex base and showed root or burrow disturbance.

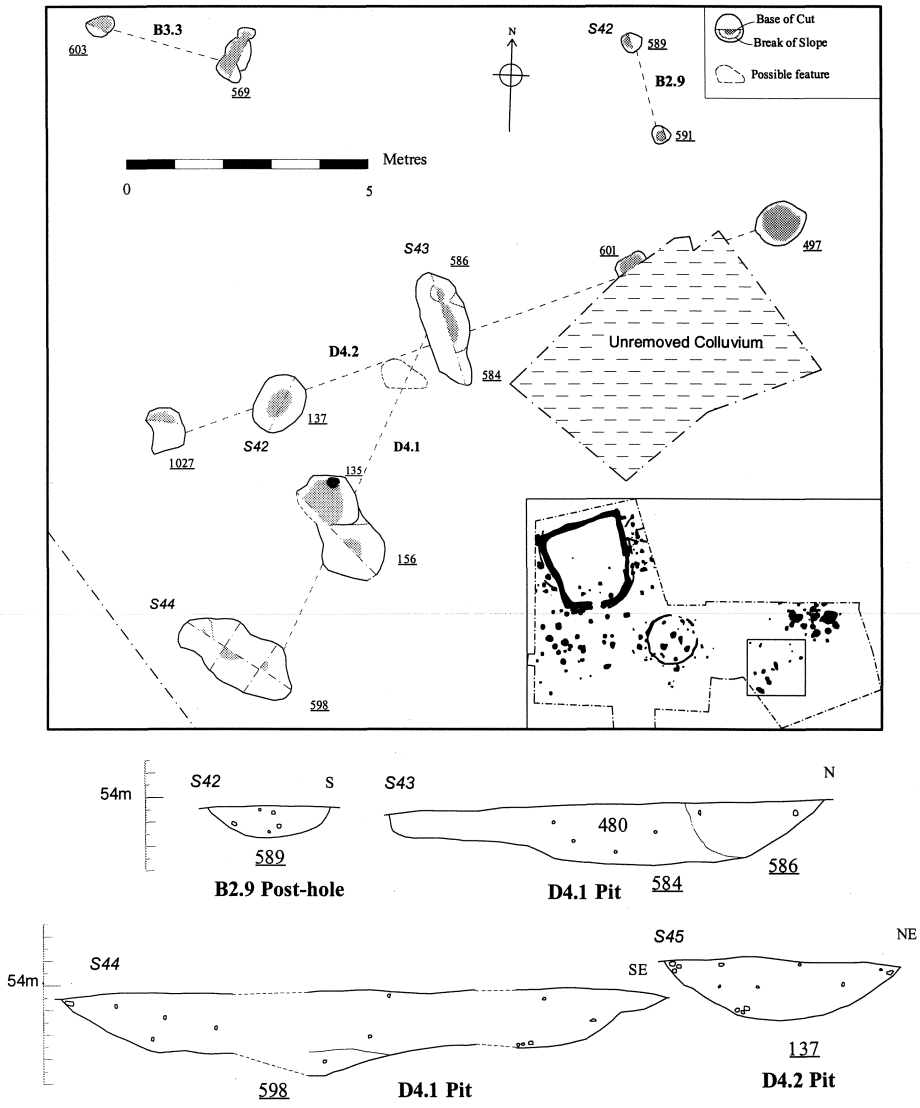
To the north-west of the hollow was a group of seven intercutting features with shallow profiles and solitary loam fills containing no diagnostic information (D3.4). North of the hollow and against the baulk was a flat based recut pit (D3.8; illus.14) which contained some charred cereal grains and a small quantity of pottery.

A group of three similar features, probably post holes (B3 496; 532; 422; illus. 14), was located around D3.3. With the addition of a fourth feature either 582 or 414 of D3.3 these may be interpreted as a four-post structure. 582 had the most similar fill but was slightly out of position whereas 414 was in a better position but its dissimilar organic filling content (D3.3 403 above) makes association less convincing.

Boundary and associated features south-east of structure 2 (illus. 15)

Two-posts structure B2.9 Post holes B3.3
Pit groups D4.1 D4.2

A well formed two-post structure (B2.9) with post holes (589 S42; 591) 2m apart was located east of Structure 2. A similar structure seven metres to the west included a twice recut post hole with a clear post pipe (569) adjacent to another post hole (603 B3.3).



15. Boundary and associated features south east of structure 2. Sections S42-S45.

A group of aligned elongated pits all with pale leached fills (D4.1 584 S43; 598 S44), was located to the south. The central and northern pits showed evidence of recutting. The earlier fill of the northern pit (584, 480) contained Iron Age pottery 0.10m above its base in addition to charred cereal grains and seeds (Table 21).

Four circular pits of similar size and depth were also present to the north (D4.2 137 S45;1027;601;497). All these had simple dished profiles (although the eastern was slightly more angular) and single fills. A relatively higher quantity of charred plant remains were recovered including legumes. Pottery was found in 497 and 601, the former with Scored Ware.

The colluvial soils (Group F)

The areas east of Structure 2 had been buried by up to 0.80m of colluvial deposit. In view of the potential for sealed deposits within and below the colluvium, a four metre wide trench was hand-excavated through the deposit against and parallel with the northern baulk, in order to characterise it (above p.00).

The colluvium consisted of similar silty sandy soils with more clayey linear bands that may be evidence of puddling in the furrows of the medieval field system. The ridge and furrow was partly post-dated by a number of small pits or post holes which might have accompanied discontinuous gravel surfaces interpreted as remnants of a farm or foot track which once crossed the field (see illus. 1). As the colluvial deposits were spit recorded, edges of furrows remained on similar lines in plans 0.53m apart vertically, indicating either that the furrows post-dated the colluvium and possessed near vertical sides or that the furrows accumulated together with, and as a consequence of, the medieval field system.

Some 1,355 artefacts were recovered from the colluvium including 738 pieces of worked flint, one small hand-made cup of Late Bronze Age/Early Iron Age cup (illus. 29.62), 243 sherds of Iron Age pottery, 29 sherds of Roman and 138 sherds medieval/post-medieval pottery. The finds were recovered in three broad groups, those deposited by colluviation and therefore redeposited from upslope, those derived from underlying spreads and the upper layers of some features, and a disturbed group (illus. 3).

Some layers were possible remnants of prehistoric soils cut by some of the archaeological features; however as the extent of reworking by medieval ploughing and the degree of differential truncation were not established their extent remains unclear. The disturbed group included the cup and post-medieval pottery and metalwork concentrated in the south-east of the excavations and clearly redeposited. Their redeposition may have resulted of the laying of a sewer pipe to the east of the excavations.

Dating

(with Roy Switsur and Sarah M Barnett)

Dating within the Iron Age in the East Midlands is lacking and diagnostic material was absent from this excavation. The flint material from the site suggested some late Neolithic/Early Bronze Age activity in the area while some may be of late Bronze Age or even Iron Age date (below p.63). A few late Bronze Age pottery forms were also present (below p.48) suggesting some activity during this period. However dating of the enclosure and related features is difficult with the lack of diagnostic artefacts and a pottery tradition with its origins in the 4th century BC and continuing until the 1st century AD (Elsdon 1992b, p.89). In view of this, while acknowledging the problems of calibration and residuality, it was decided to undertake a programme of radiocarbon and thermoluminescence dating.

Radiocarbon dating was successfully used on seven samples from the site. In total twelve sherds were treated using thermoluminescence. Five luminescence dates were obtained in a feasibility study and five higher precision dates in the subsequent dating programme. Control was offered by the combined use of the techniques on one single context (a fill of enclosure ditch 73) and two stratigraphically

related contexts (two fills of Pit 420 including a possible special deposit below p.42). The first impression of the radiocarbon dates is one of a broad spread of dates spanning 800BC to 170BC (95% probability). The irregularities in the calibration curve give a range 760BC to 200BC for an individual context, with three 20 to 30 year breaks (illus. 16). However, analysis of the dates in the light of the interpreted length of the site's occupation may provide a more meaningful picture. The spatial consistency of the site is striking. Although there are clear pockets of dense stratigraphy, with the persistent recutting of some features, the organisation of the site would appear to have remained broadly unaltered throughout its occupation.

In the absence of firm dates or chronological ranges from the pottery or other finds from the site (other than from the wide date range of East Midlands Scored Ware) an occupation span of *c.* 100 years may be postulated. All seven of the radiocarbon samples may be interpreted as being within a single hundred year span between 450BC and 350BC at 95% probabilities; six of the seven still combine within this range at tighter 68% probabilities, the exception being the cremation burial (Q-3274; Table 1). All the dates may be contemporary within a single decade, 410 – 400BC if the probabilities are mixed. Only one radiocarbon date crosses the 450 – 350 BC range completely, the mixed oak, hawthorn, ash and blackthorn charcoal from a primary fill of the ring groove of Structure 2, although interestingly the wide span of the 95% ranges is broken by 25 years after 345 BC.

Two particular dates may serve to structure and perhaps focus interpretation of the series. The first date is from fast grown oak charcoal from the cremation burial which ranges 790-755, 700-530 (68%) and 800-470, 445-410BC (95%). The spatial placing of the burial, on the basis of the general site symmetry, would appear to be contemporary with the enclosure, Structure 1 and Structure 2. It is also likely that the submitted sample of oak charcoal was derived from pyre material and therefore contemporary with the cremation, and the burial.

The second date is from the two-post structure B2.3, which straddled the ring groove of Structure 2. This date spans 400-355, 295-250 BC (68%) and 400-345, 320-200BC (95%). Clearly preceding or post dating Structure 2 (and on tentative stratigraphic grounds the latter), this structure may be part of another circular structure, Structure 4, and would be also consistent with the spatial organisation of the site. The sample material of oak charcoal was derived from the post pipe of the southern post hole and may have incorporated material derived from the post itself, floor levels contemporary with the use of the structure, possibly introduced to fill and consolidate the void left by the rotting post (cf Reynolds 1996a, p.23), or disuse of the structure. The two dates if at all contemporary can only combine between 410 and 400 BC.

The pottery from the site includes a large proportion of East Midlands Scored Ware which it has been argued appears in the fourth century BC, not being common or widespread until the mid third century (Elsdon 1992b, p.89). The dating of the site would perhaps suggest an earlier start for Scored Ware in the region.

Lab ref	*Group*	*Cut /Context*	*Material*	*date (bc)*	*uncer-tainty +/-*	*calibrated (cal.BC)*	*date range*
						68% *probability*	95% *probability*
Q-3271	A3.1	73 46	Charcoal	465	55	755-695 535-400 610-400	765-675 665-620
Q-3272	D3.3	414 403	Charcoal (oak, hazel, poplar)	260	50	370-345 320-205	395-170
Q-3273	B3.4	420 412	Charcoal (oak, ash, maple hawthorn, blackthorn)	420	45	520-425 420-395	760-685 655-635 550-385
Q-3274	B1.0	1096/ 1019	Charcoal (oak)	555	60	790-755 700-530	800-470 445-410
Q-3275	B2.2	1111 1173	Charcoal (oak)	320	45	400-355 295-250	400-345 320-200
Q-3276	B4.1	1095 1093	Charcoal (oak, ash, hawthorn, blackthorn)	385	70	750-720 530-365 280-260	760-680 660-630 600-345 320-200
Q-3277	D2.1	1223 1227	Charcoal (hazel, hawthorn)	405	55	750-735 520-385	760-680 660-630 600-360 285-260

Table 1: Radiocarbon dates. R Switsur, Radiocarbon Department, University of Cambridge

Thermoluminescence dating was undertaken by the Luminescence Laboratory of the University of Durham. Five dates were obtained in the feasibility study and five from the subsequent dating programme (Table 2).

Group/ Context	Sample	TL Single Date	Random Error +/—	Range (B.C.)	Overall Error +/—	Range (B.C.)
B3.4 C398	174-9 AS	865BC	245	1110-620	305	1170-560
D5.3 C1018	174-10 AS	65BC	155	220-90AD	205	270-140AD
A3.1 C46	174-11 AS	625BC	230	855-395	285	910-340
B2.1 C1202	174-12 AS	300BC	215	515-85	280	580-20
B2.1 C1202	174-13 AS	365BC	125	490-240	200	565-165

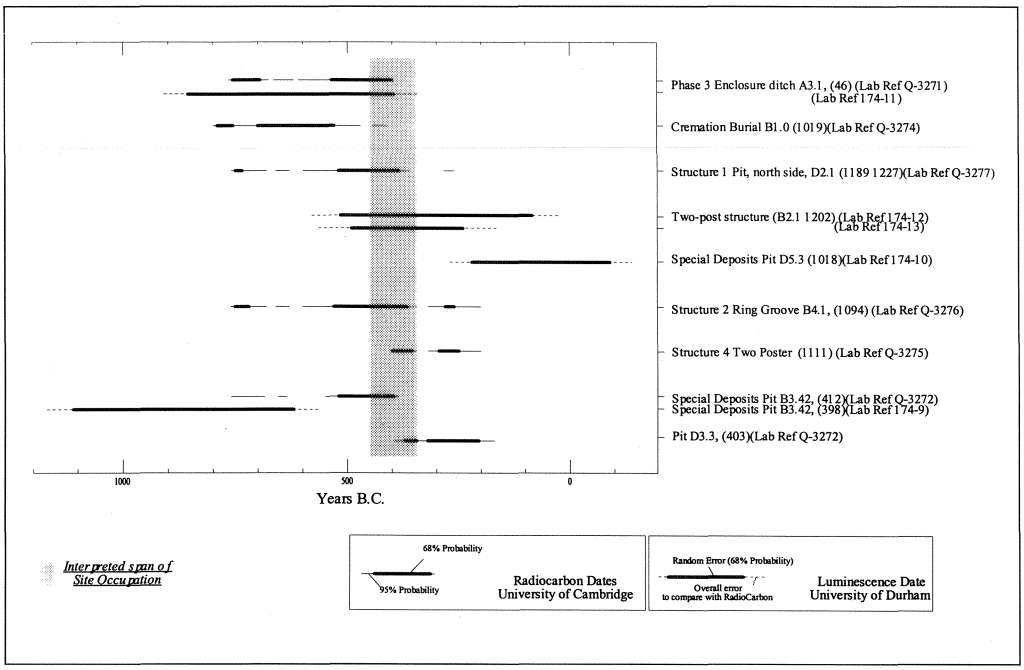
Table 2: Thermoluminescence Dates; University of Durham

Two associated error terms are given in years at 68% level of confidence. The first is to be used when comparing TL dates from one individual site. The second is an overall error and is to be used when comparing the dates with calibrated radiocarbon dates. At overall error the higher precision dates span a maximum of 610, and minimum of 400 years; at random error, the dates span 460 maximum and 250 minimum. As a series, the higher precision dates span 1170BC to 140AD. Three of the five spans (from the last enclosure ditch, and two dates from a two post structure south of the enclosure) are

consistent with the interpretation of the site's *c.* 100 year span on the basis of the radiocarbon dating. In one of the two instances of technique combination there is correlation within the one hundred year span (the enclosure ditch) whilst the second correlates earlier in the seventh century, although this is a context with a possible special deposit (below p.00).

The date span for pottery from Pit 420, 398, has a very early start in the Middle or Late Bronze Age, but the large span of the dates brings it more believably into the Early Iron Age. Whether it is conceivable that some pottery would survive for two centuries after manufacture prior to deposition is open to question; however it may be relevant that the pottery is part of a special deposit (see below p.54) perhaps incorporated because it was considered important. The selection of pottery may have weighed in favour of the 'old' or 'residual'. Less consistent is the late date of material from Pit 1109 1018, which has a start date in the third century BC. This can only be explained by lengthening the entire chronology of the site, or by an anomalous date.

The programme of radiocarbon and thermoluminescence dating, therefore, while acknowledging the problems over calibration, has enabled an interpretation of the date of the site. Without this programme, in view of the lack of diagnostic material from the site, interpretation of the date during which the site was used could not have been attempted except in the crudest terms. The main use of the enclosure and associated features appears to have taken place during the fifth and fourth centuries BC and helps the further refinement of Iron Age pottery in the region (see below p.54).



16. Radiocarbon and thermoluminescence date ranges.

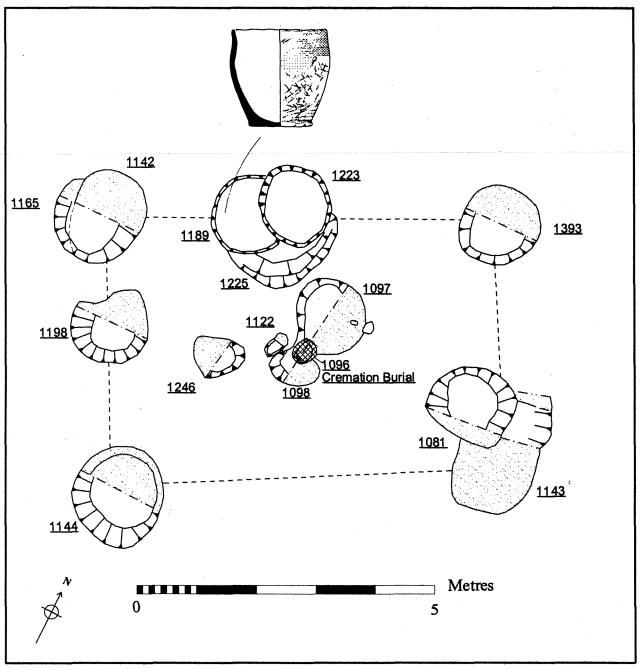
Discussion

The excavation has revealed an Iron Age enclosure with associated structural and funerary activity. The strengths of the data from the excavation are in the evidence for structural reconstruction, enclosure sequence and the evidence for special deposition. These will be discussed together with the more ephemeral economic and environmental evidence, in the context of the research aims of the project (above p.4).

Structures

The presence of sixteen structures including rectangular forms may be compared with other East Midlands sites including Normanton le Heath, Leicestershire (Thorpe *et al* 1994) and Wollaston, Nottinghamshire (Knight 1984, p.155). Contrasting structural techniques were apparent. Structure 2 included a ring-groove formed by adjoining straight lengths with a concentric ring of post holes offering roof rafter support. This combination of techniques is unusual in the region (cf. Knight 1984, p.126). Remnants of post and slot foundations were recorded to the north of the eastern enclosure entrance (above p.11; illus. 8; B7.1), whilst the enclosure entrance utilised a post and slot palisade technique in phase A1.1 (above p.7; illus. 4 and 5). All other structures appear to have been post-built.

Structure 1 (illus. 12;17)
If the interpretation and associations are correct Structure 1, a rectangular post-built structure with a centrally placed cremation, represents a unique combination for the Middle Iron Age. The size of the structure, at 6.7m by 4.7m exceeds all other post-built



17. Plan of Structure 1 in relation to special deposit pit 1189 including pottery vessel (illus. 27.39).

parallels, the closest being a 5m by 5m example from Normanton le Heath, Leicestershire (Thorpe *et al* 1994, p.24) while other examples have been found at Park Brow, Sussex, (4.3m by 2.7m; Wolseley *et al* 1927) and Ivinghoe Beacon, Bucks, (3.8m by 3.8m; Cotton and Frere 1968). In the East Midlands, a regular rectangular four-post structure, 2.5m by 3.2m, was recorded at Fengate (Pryor 1984 p.105 fig 83) and two subsquare examples were located at Rainsborough Camp, Northamptonshire (Avery *et al* 1968, p.218), one 3.4m by 3.4m, the other 2.6m by 2.8m, both structures encompassing shallow hollows. A number of four-post structures, the largest spanning 3.6 by 2.4m, have been recorded at Weekley Hall Wood, Northamptonshire (Jackson and Dix 1986, p.74) whilst more locally, a four-post structure of 3m by 3m was recorded at Kirby Muxloe, Leicestershire (Cooper L forthcoming a). The trapezoid plan shape of Structure 1 is similar to the smaller five post Granary A recorded at Tollard Royal (Wainwright 1968, p.114) where the fifth post, midway down the longest side, is echoed possibly by non-structural pits at Wanlip. Comparison in size, if not form, is possible with a group of small Iron Age rectangular buildings less than 10m long, with length to width ratio around 2:1, and floor areas between 15 and 30 sq.m (Rodwell 1978, p.30) although Structure 1 with an internal area of 31.5 sq.m is slightly larger. Little else is comparable with only one structure (from Park Street, St.Albans, Hertfordshire) having internal features in the form of two hearths (Rodwell 1978, p.30). The four-post structures at Little Waltham, Essex had deeper post holes on one side which led to the hypothesis of a mono-pitch roof (Drury 1978a, p.124), as opposed to a multi-pitch roof as suggested by earlier work (Stanford 1970). In contrast post hole base levels in Structure 1 are slightly deeper on the south side.

The function of the non-structural (D2.1) pits is difficult to assess, although they appear to be associated with Structure 1. The following interpretations can be suggested.

1. The pits relate to the rectangular structure, and are contemporary in some form with its usage.
2. The structure may have been roofed, but not necessarily walled so they would not necessarily have caused an obstruction to open pit storage or otherwise, along the wall line.
3. The pits may have performed extra-structural tasks or they were being used for the storage or deposition of certain commodities.
4. The near complete pottery vessel at the base of a pit and perhaps also a pottery group from the surface of an infilled post pit suggests special deposition (below p.54), perhaps offerings connected with the burial and associated funerary practices (cf Hill 1995).

The association of some four-post structures with funerary rites has been previously identified (Ellison & Drewett 1972, p190) but not with a cremation burial. Interpretations of four-post structures have been discussed by a number of authors (Ellison and Drewett 1971, Gent 1983, Knight 1984, p.154) and have included, depending on the presumed presence or absence of a roof, raised granaries, storehouses, watch towers, fighting platforms, drying racks, animal pens, shrines, and burial platforms.

There are no examples of similar date associated with such a large rectangular form in Britain. However, parallels for cremation burials of Late Iron Age date within square or rectangular structures are rare but not unknown, for example Grave 20566 at Westhampnett, Sussex (Fitzpatrick 1997, p.40) where an urned cremation lay centrally within a post formed square that itself was within a square ditched enclosure. Iron Age

burials from Leicestershire and Rutland include an inhumation pit burial from Rushey Mead, Leicester (Pollard 1993, p.154-155), two disarticulated skeletons beneath a shallow bank at Breedon on the Hill (Wacher 1978, p.4), part of a human infant skeleton from an enclosure ditch at Tixover (Beamish 1992b) and disarticulated bones from an enclosure ditch at Mountsorrel (Beamish 1995, p.117). A Late Iron Age burial was also located at Blackfriars, Leicester (Clay and Mellor 1985, p.18) and two unurned cremation burials, were located to the west of a Late Iron Age enclosure at Enderby (Ripper and Beamish 1997, p.113). A similar example, although clearly of early Roman date, was found at Rough Ground Farm, Gloucestershire, where an urned cremation was buried within a square enclosure *c.* 6m across (Allen *et al* 1993, p.52).

The definition of what and is and what is not ritual and how it may or may not be represented archaeologically with specific reference to the Iron Age of Southern England has recently been the subject of detailed study (Hill 1995, p.95). From this it is suggested that the appearance of *shrines* and the partitioning of ritual from daily life and practice and the start of a sacred:profane dichotomy is probably a Late Iron Age phenomenon (Hill 1995, p.124). The central cremation burial, and associated selected deposits (below p.00) are evidence of ritual practice and the possibility of Structure 1 being the focus of a ritual function without having the exclusive and dedicated function of a *shrine* is feasible

Structure 2

Special care is needed in interpreting plough-damaged sites as the evidence is incomplete, with lesser structural elements being under-represented (Guilbert 1981, p.30). However, number of points can be considered in the interpretation of Structure 2.

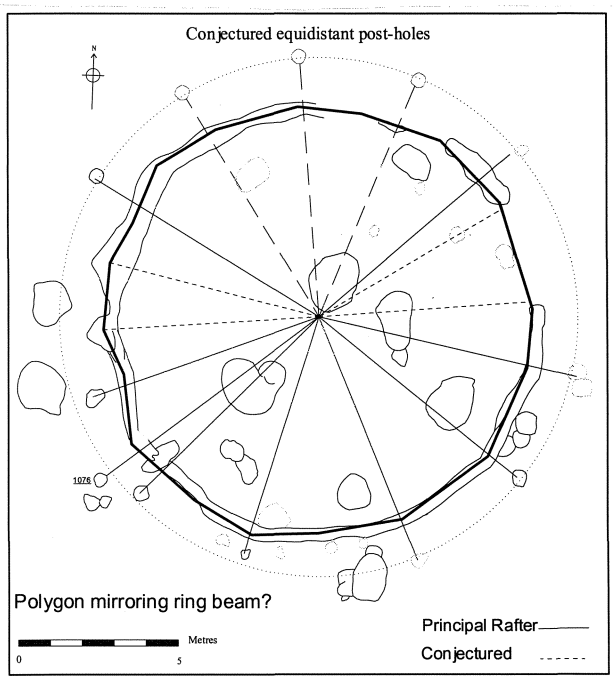
1. The ring groove is polygonal in plan shape, with a broadly flat based profile, and is likely to have served a structural rather than a drainage purpose.
2. The outer ring of post holes and the ring groove are concentric and can be assumed to be contemporary. If the groove was a bedding trench for the outer wall of the structure, it enclosed an internal area of some 130 sq.m.
3. None of the internal features are clearly structurally or constructionally related and on the basis of the stratigraphic evidence available may well predate Structure 2.
4. The large two-post structure on the south side of the ring groove is evidence of temporally-separate constructions in the same space, which combined with the plough-damage necessitates special care in interpretation as the evidence may be incomplete, with the underrepresentation of lesser structural elements (Guilbert 1981 p.30).

Reconstruction

To establish the reason for the polygonal shape of the ring groove, two hypotheses were tested:

1. That the ring groove, and therefore the outer wall, were last in the constructional sequence and that the shape was dictated by a ring beam underneath which the outer wall was placed.
2. That preformed hurdles of a single size were used in the outer wall and the shape reflected this.

The first hypothesis implies that the outer wall was built up to meet the ring beam, and that at least during construction it was not load bearing. The subsequent downward transfer of roof weight would be best achieved by the wall being consistently in line with the ring beam, rather than (if circular) meeting it in two major places (cf Drury 1978b p.54).



18. Possible rafter positions for Structure 2.

If construction followed an order of rafters, ring beam and outer wall, some correlation between the rafter positions (as evidenced by the outer ring of post holes) and the nodal points of the ring beam, as mirrored in the ring groove, might be expected.

Concentric circles were best-fitted to the ring groove and post holes; where post holes were absent in the north because of truncation, they were reconstructed on an equidistant basis along the circumference of the circle. The positions of rafters were projected from the centre, to the concentric post holes.

Eight rafters are represented by recorded post holes of which six are on the southern and better preserved side; of these six, four fall within 0.25m of the nearest node, and five within 0.35m (if the opposing entrance is accepted and nodal points exist on each side of the entrance); the sixth crossed the polygon at 1.35m from its nearest node; if nearby substitute post hole 1076 were used instead of 1073 the distance falls to a consistent 0.35m placing all six rafters within 0.35 of the nearest nodal point. On the northern side the two recorded post holes fall within 0.50m of nodes (again if an extra node is permitted by the west entrance); two of the three projected rafters fall between 0.16m and 0.28m of the ring groove nodes and the third aligns with the end of a shallow remnant of the groove.

The correlation between rafter positions and ring groove nodes is close and supports the theory that the groove mirrors a ring beam and that principal rafters are joined to it at its nodes, as found at Little Waltham, Essex (cf. Drury 1978b, p.54). This compares

with the evidence from Pimperne, where it was suggested that the rafters crossed the mid-points of the probable tie beam of the inner ring (Harding *et al* 1993, p.31).

It follows that the rafters were first erected, ring beam added, and walls built up from beneath. Based on this possible reconstructions can be suggested (illus. 18).

To test the second hypothesis, that preformed regular hurdles were used to form the outer wall, the regularity of the ring groove was investigated for any patterning in the lengths of the polygon sides. If regular hurdles had been used, the length of polygon sides would show some consistency, and either be the same length, or twice or three times the length of preformed hurdles.

The side lengths of the polygon were plotted, with the clearest lengths emboldened (illus. 19). The pattern displays some clustering at between 2.0 and 2.16m and between 2.6m and 2.7m amidst considerable variability. Most importantly, only one of the five most clear segments concords with this analysis.

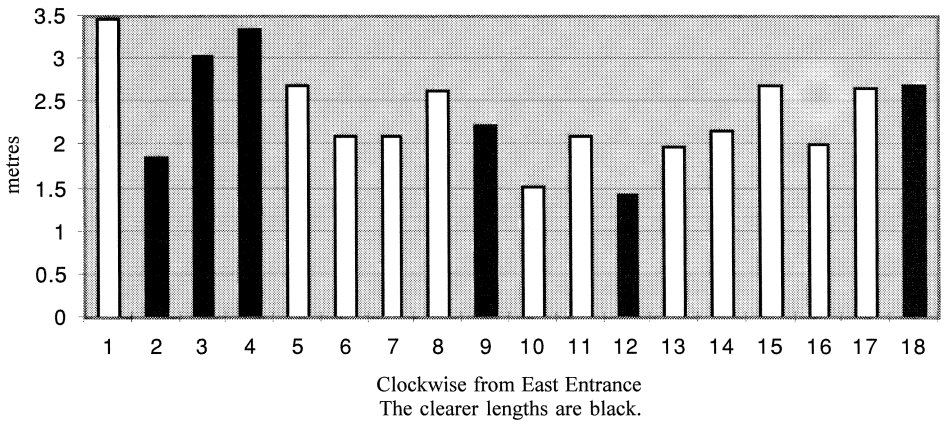
The first hypothesis to explain the polygonal shape is favoured here.

Some further detail relating to the function of the outer ring of post holes is possible. Reynolds has established that on the basis of practical (what is waterproof) and economic (the minimal surface area), 45° is the preferred angle for rafters (Reynolds 1982, p.180). On the basis of the 1m gap between rafter end and wall, and the rafter coming directly from the ground, a roof pitch of 45° would have meant a wall of 1m only which appears somewhat low if the entrance was integral to the construction; with an increased pitch of 55° the wall could rise to 1.5m. Alternatively this problem could be overcome by using stub verticals to support the eaves as interpreted by Jobey for West Brandon (Jobey 1962, p.13) or by the use of naturally crooked timbers so that rafters were bedded as upright and close to the outer wall as possible as found used for a shepherd's hut(Close-Brooks and Gibson 1966, p.350). In either instance, the restriction on the height of the outer wall is lifted, and it could exceed 1.5m. The stratigraphic evidence from the Wanlip post holes is not conclusive although the angle of packing stones in post hole 1062 (albeit without convincing post pipe and therefore demonstrably *in-situ*) suggests that the rafter end was set directly into the ground.

Reynolds has found in the deconstruction of the Pimperne house that the posts had rotted away in their holes so completely as to leave the base of the unrotted post above ground, but held laterally by a lip of packed material around the top edge of the post hole; the structure had not suffered despite strong winds in 1987 and 1989/1990. Therefore the inner ring of posts with an arrangement where the external wall was the main load-bearing structure could leave a more ephemeral trace, and on a heavily ploughed site, none at all.

Orientation

The eastern entrance is approximately 67° from north and the possible western at 86° from north. Work by Oswald (1997) has demonstrated that roundhouse entrances are oriented predominantly to the east, and specifically to the direction of sunrises at the equinoxes and mid-winter. The eastern entrance of structure 2 is centred between midsummer and equinox sunrises (based on Oswald), with the (truncated) wall slots masking both sunrises by a metre. The possible western entrance is centred on the autumn equinox sunset. The putative Structure 3 is also consistent with this orientation (illus. 18). It appears that the correct direction from which to enter an Iron Age house or settlement may have been linked to the cosmological principles embodied in the architecture and use of settlement space (Hill 1993, p.6).



19. Length of Structure 2 polygon segments clockwise from East entrance

Internal Features

The gravel-filled post holes may be a constructional rather than structural element of Structure 2 or belong to an earlier building. The slightly off-centre post hole might also be considered as a repair to add support to a sagging roof, as suggested for a similar phenomenon at Brigstock, Northamptonshire (Knight 1984, p.133). At Twywell, Northamptonshire, hut 5 had an off-centre stone-packed post hole similar to that from Wanlip (Jackson 1975, fig 14) as had hut 1, its central stone-packed hole slightly to the west of centre (Jackson 1975, p.53 fig 16). Within Leicestershire and Rutland most excavated round-houses have been on clay subsoils where drainage requires deep encircling ditches which are often accompanied by outer wall post holes as at Enderby (Clay 1992); of those not excavated on clay are two post built houses on Northampton Sand ironstone at Ridlington, Rutland (Beamish 1997a, p.100) and a single house on gravels at Castle Donington (J.Coward pers. comm.) all of which differ from Structure 2.

Parallels

The closest parallel for Structure 2 is from West Brandon, Co. Durham (Jobey 1962, p.16), which is of similar design although rock-cut and of larger size of over 16m or internal area of 200 sq.m. Two phases of house were excavated, the second phase having a curvilinear wall trench encircling post holes. Extra support was present at the doorway in the form of internal posts and internal support provided by an inner concentric ring

and four-post structure (Jobey 1962 p.13). Double cut post holes are present on the western side, diametrically opposite the eastern entrance, hinting at a western entrance similar to that at Pimperne, Dorset (Reynolds 1979, p.96). At Wakerley, Northamptonshire, the ring-groove of hut 2 has a more polygonal than curvilinear appearance (Jackson and Ambrose 1978, p.99). At Aldwincle, Northamptonshire, stake and post holes were bedded in one curvilinear trench and it was suggested that the exterior wall was built with 132 uprights; the outer ring contained 24 posts (Jackson 1977). Other similar examples of bedding the outer wall deeply to give vertical stability are suggested for buildings at Little Waltham, of 137 to 150 sq.m (Drury 1978a, p.23), where timber profiles were preserved showing how they had been used to form 'a virtually solid timber wall' (Drury 1978a, p.51). Harding (1974 p.41) saw the structural gully or 'ring groove' as a characteristic of northern developments, perhaps as a response to solid geological substrata, whilst recognising that it might also be deduced for some Thames Valley sites; the Wanlip example joins others from Wakerley (Jackson and Ambrose 1978), Draughton (Frere 1961, p.21-3, fig 5), Haddenham, Cambridgeshire (Evans and Hodder 1987, p.191), and Little Waltham, Essex (Drury 1978, p.23) to reflect perhaps an Eastern counties distribution north to south.

Structures 3-4

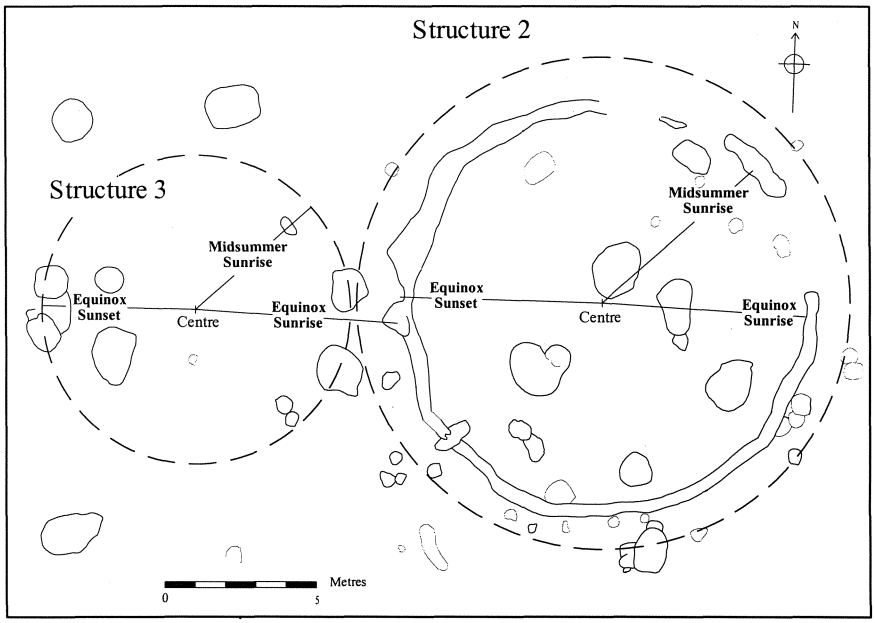
An interpretation of the two-post structures (B2.1 and B2.7) to the west of Structure 2 is that they form opposing entrances to another circular structure (Structure 3). This would conveniently house a special deposits pit (below p.40) and accompanying hearth although the proximity of the hearth to the entrance may be difficult to reconcile. Experimental work has indicated that a fire within a roundhouse would need to be protected from sudden gusts of wind by some sort of screen or wind break to prevent setting the roof alight (Reynolds 1982).

If Structure 2 and Structure 3 were contemporary, the form would not be dissimilar to adjacent round houses at Aldwincle, although there was no evidence that the latter were in use at the same time (Jackson 1977, p.17). The stratigraphic evidence of four roundhouses excavated at Enderby, Leicestershire (Meek 1997) suggested that the structures were in pairs, only one of which was in use at any one time. Furthermore the differing characteristics of each contemporary pair led to the suggestion that one of each may have been for habitation, with its smaller counterpart perhaps used for food preparation or animal shelter (Clay 1992; Meek 1997, p.4). In this instance the houses are not arranged back to back, but with some distance between each other.

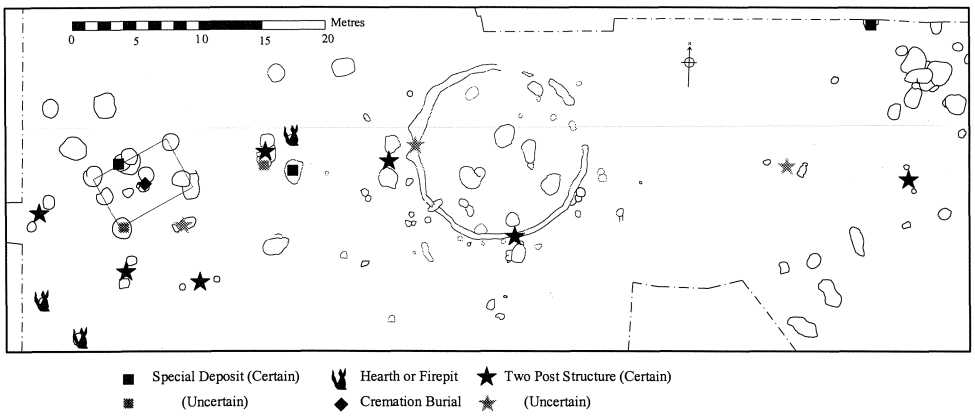
The large two-post structure (B2.3; illus.13) pre- or post-dating Structure 2, with the spatial and dating evidence perhaps pointing to the latter, may have formed door posts to another round house, Structure 4, most probably facing east. The preservation of undisturbed halved trunk post pipes to 0.90m diameter indicates that the holes were possibly infilled as the post bases rotted below a sound structure as part of routine maintenance (Reynolds 1996a, p.23). Despite the size of the posts, no large packing stones were found.

Two-post structures

The two-post structures on this site (B2) are of interest in their number and variety. They have variously been interpreted as drying-frames, upright looms and hut remnants (Knight 1984, p.159; Ellison & Drewett 1971). All the examples fall within a west to east band across the site (illus. 20). The number of examples has enabled comparison of the pairings and their alignments in an attempt to elucidate their functions (illus. 21).

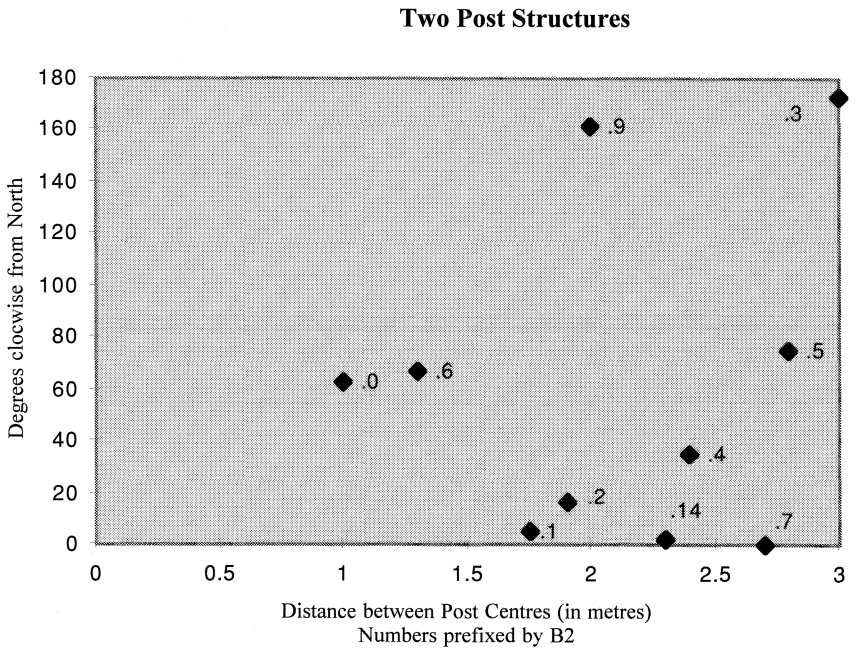


20. Entrance orientation of Structures 2 and 3 following Oswald (1997).



21. Distribution of Two-post structures in relation to Structures 1 and 2, firepits and special deposits.

There is no clear range of spans as found at Little Waltham (Drury 1978a, p.27) where four clusters could be identified between two and four metres, which were interpreted as evidence of structures with particular functions rather than for one particular function of varying scale. With the Wanlip examples there are problems in the range of the spans as there is no clear unused span between 1.75m and 2.4m. The clearest ranges are shown in

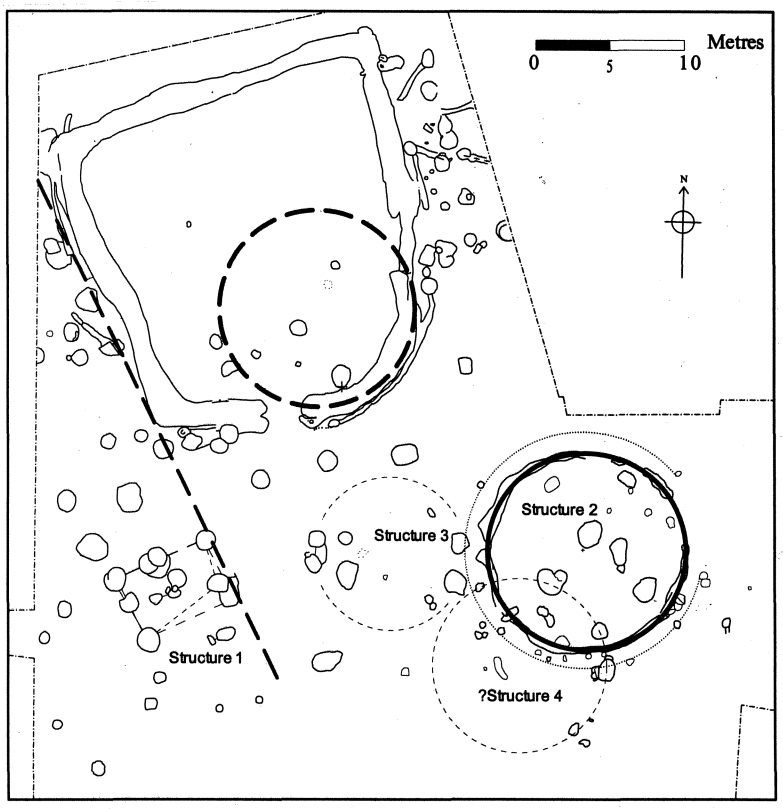


22. Two-post structures; orientation and distance between posts.

the alignments where no two-post structures were built between 75° and 161° from north. There is no clear correlation between size and alignment although no size range displays an alignment variation greater than around 60°.

At Little Waltham, two-post structures appeared to be concentrated towards the edge of the settlement (Drury 1978a, p.26). Other groups of two-post structures have been recorded at Aldwincle, (Jackson 1977, p.19 fig 8) Twywell 1, (Jackson 1975, figs. 12-13) and Weekly Hall Wood, Northamptonshire (Jackson and Dix 1986, p.74 fig. 3). Possible two-post structures were recorded on the Late Iron Site at Tixover, Rutland, away from the probable settlement focus (Beamish 1992b).

The B3.2 group to the south-east of the site (above p.20) perhaps forms a semi-circular boundary or wind-break to the pits and activities to the north, and although corresponding with Knight's group 1a (1984, p.146) of semi-circular structures, it is unlikely to have been roofed. Similar semi-circular structures have been noted at Tixover, Rutland (Beamish 1992b), formed by an irregular bedding trench with evidence of post settings, and Enderby, Leicestershire (Clay 1992, p.19). If a wind-break perhaps a northerly or easterly aspect might be expected.



23. Apparent symmetry evident between the Phase 3.1 enclosure ditch and Structure 2.

The enclosure

The full forms of the early enclosure phases (A1.1-2) are not clear from the surviving evidence, other than having curving south-west quarters, with terminals at each end. The entrances of the A1.1 boundary are slightly inturned on the east side of the southernmost, and south side of the easternmost (c.f. enclosure Ba, Twywell, Jackson 1975 fig. 4). The small portion of the early cut running through the eastern entrance suggests that the palisade or gully continued northwards on a straighter alignment. The inference is that it continued on the same line as the later cuts, but has been obliterated.

The evident curving of the enclosure in the south-east corner (in all phases) and the resulting asymmetrical shape may be explained as follows:

1. The enclosure was either established at the same time or after a circular structure in its south-eastern quarter of which no earthfast deposits survive, so fossilising the curve. The area of circular structures to the south-west, of which Structure 2 is the surviving *foci*, may have been a successive development.

2. Alternatively the curving portion of the enclosure mirrors Structure 2 and was constructed to display a degree of symmetry which is perhaps also evident in other areas of the site (illus. 23).
3. A more prosaic but functional explanation might be found in the greater ease of driving live-stock around a curve as opposed to a corner. The position of the curve between the two entrances might support this explanation.

Most discussion of small square enclosures has focused on the square barrow as found in East Yorkshire as part of the so-called Arras Culture. Similar sized enclosures have been interpreted as possible square barrows (Whimster 1981 p.339), and it is now clear that the square barrow tradition was not exclusive to that region (e.g. Mucking where Iron Age cremations are found centrally within very small square enclosures of around four metres long; Going 1993, p.19). The nearest excavated examples of this type of small enclosure are at Aston upon Trent, Derbyshire, (May 1970), and Maxey, Cambridgeshire, (Pryor and French 1985, p.73-77, fig 44). The enclosures at Aston and Maxey are smaller than that at Wanlip (0.1 ha), and had no entrances. Although no funerary remains were found at either site, the context of both is one of a ritual/funerary complex originating in the Neolithic/earlier Bronze Age. At Maxey a cursus and henge are nearby, and at Aston the prehistoric ritual landscape is similar with cursus, possible henge, and ring ditches in the vicinity.

The Wanlip example, however, shows no evidence of a funerary connection and may not have had any exclusive function but based on the form of the enclosure, and its entrances and the lack of internal features, a stock management function is favoured here.

With few internal, but many clear extra-enclosural features, the enclosure has affinities morphologically with Knight's Group 3 (1984, p.169) although with an internal area of 0.35 ha it is larger (Knights range is 0.006 to 0.13 ha). Other similar enclosures have been examined at Gamston, Nottinghamshire (Knight 1992, p.28) and Twywell, Northamptonshire (Jackson 1975). Enclosure Ba at Twywell (Jackson 1975, fig 4) is morphologically comparable if more trapezoidal and slightly smaller (0.32 ha) with a partly inturned entrance on one side and activity at southern entrance including a four-post structure which might have been contemporary with other stratigraphically separate structures. More local but unexcavated examples of small square enclosures are known from aerial photographs at Bottesford (Pickering & Hartley 1985, p.42 12.1, 12.4), Ashwell (Pickering & Hartley 1985, p.60 21.4,21.8), Misterton (Pickering & Hartley 1985, p.58 20.3), and Lockington-Hemington (Pickering & Hartley 1985, p.36 9.1). Entrances can be seen in the examples from Ashwell, and Bottesford.

A number of attributes makes comparison with Gamston and Twywell of interest:

1. Both Wanlip and Gamston are situated on first river terrace gravels and both have small enclosures.
2. Gamston Enclosure 1 is of similar size but more rectangular and more geometric although its spatial organisation is less comparable, being clearly multiphase with many changes in site organisation.
3. At Gamston although many discrete internal features were recorded few could be directly associated with it.
4. The butt ends of the ditches on each side of the eastern (and only) entrance cut a probable palisade trench (Knight 1992, p.28) and the plan of the Gamston east entrance is very similar to the corresponding entrance at Wanlip.

5. The lack of convincing occupation evidence within the Gamston enclosure favoured a specialised function such as corralling or safe storage (Knight 1993, p.83). At Twywell, Northamptonshire, the location of pits outside the enclosures was used as evidence for the corralling of stock (Jackson 1975, p.66).

A palisaded phase of enclosure stratigraphically predating a ditched phase as found at Wanlip has parallels at Twywell (Jackson 1975, p.36), Milton Keynes 3 (Knight 1984, p.199, fig 61) and possibly at Gamston (Knight 1992, p.28). This may result from piecemeal changes (Knight 1984, p.200) although this seems rather a prosaic explanation for boundaries that may well have had ritual significance (Hingley 1990, p.100), or may reflect a broad trend in choice of boundary form in the mid to late first millennium BC (Cunliffe 1974, p.155-6).

At Wanlip the development of the enclosure, as indicated by the recutting of ditches and restyling of boundary and its entrances, betrays a complexity not seen elsewhere on site. At Gamston, enclosure ditch recutting was thought to be a necessary localised routine maintenance of rapidly silting ditches because of the loose terrace gravel substrata (Knight 1992, p.28). The time taken for a ditch cut through gravels to stabilise is not yet resolved and will depend upon a number of variables. Experimental models, in particular that at Wareham, Dorset (Evans & Limbrey 1974, p.170; Bell *et al,* 1996, p.236) have shown that ditches would not continue to fill substantially after the primary episodes and that the effectiveness of a ditch as a boundary would not be significantly changed after the primary erosion episodes following construction. At Wareham after 31 years the bank and ditch have not stabilised and parent material faces are still exposed (Bell *et al* 1996, p.236). Five years after construction, less than 0.05m of sediments had been laid in the centre of the ditch and approximately 0.50m had been recorded against the ditch sides; a further 22 years on, the ditch profile was widening and becoming increasingly undercut; the sediment depths were 0.30m in the middle and 0.65m at the sides – an increase of only 0.15m at the edges (Bell *et al* 1996, p.234). The recutting of what appear to be backfilled rather than naturally silted ditches may therefore considered to be more significant than simply constant maintenance. Reynolds, following consideration of several experimental earthwork enclosures, concludes that the original scale of ditch adopted on a prehistoric settlement was in full knowledge and expectation of consequent erosion, with the final revegetated and stabilised state still a perfectly adequate barrier or fence requiring only the minimum of maintenance (1996b, p.227).

Recent work on later prehistoric (settlement) boundaries has placed greater emphasis on their importance, suggesting they gained ritual significance despite having a more strictly functional origin (Hingley 1990, p.100-2; Thomas 1997). Hingley's discussion relates to settlement boundaries in particular, but it seems reasonable that any form of site partition, within or outside a settlement must be related to spatial organisation and implicitly to the control over relations and behaviour on the site.

Whatever functions the enclosure fulfilled, the use of some form of moveable barrier to block the entrance to keep stock in, or predators out is likely. The first phase terminal post holes may have been for gate posts or the strengthened terminals of palisades. The pits at the southern entrance may also form a gateway with internal and external arrangements in boundary A2.1, if the functional interpretation is correct. The positioning of the southernmost pair clearly suggests a gateway or entrance type structure.

In the absence of direct stratigraphic remains of what was probably a surface feature since lost, there are limits to possible interpretations of the trackway interpreted from

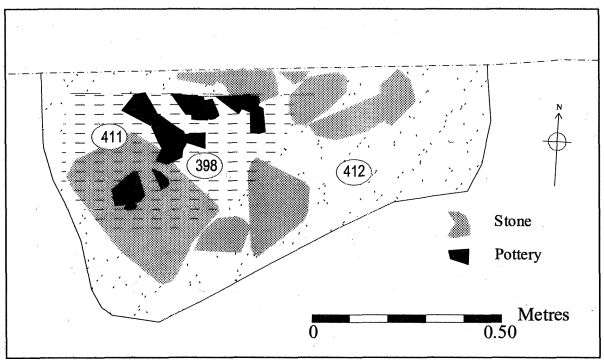
the aerial photograph (illus.1). It appears to bisect the enclosure north-south, entering accurately through the southern entrance pits and ditches, suggesting a degree of contemporaneity. However as it must also pass over a two-post structure (B2.1), a hearth/cooking pit (D1.1-1), and a pit with special deposits (D5.3), the track must either precede or post-date this aspect of the site's occupation. The track also appears to pass over the northern ditch, although this is not definite. A cobble layer recorded in the north-west corner of the enclosure at the surface of the last phase (and probably slightly slumped) might be connected, but relative dating must remain uncertain. It may indicate a post-Iron Age use of the enclosure, which may still have been visible as an earthwork feature.

Although strictly with reference to settlement enclosures, Hingley refers to two instances where enclosure ditches have been apparently intentionally built over; it is argued that the redefinition of a boundary by recutting, strengthening, abandoning, allowing to silt naturally or erasing by filling with rubbish are acts that reinforce, redefine or contradict the initial statement which was made when the boundary was created (Hingley 1990, p.99).

Special deposition and other activities

Five groups of material can be interpreted as examples of 'structured deposition', defined as deliberate deposits of material culture rather than casual discard (Hill 1993). In one case (Group D5.3) four quern fragments, along with quantities of burnt bone were associated with the pottery, while for the remainder the concentrations of pottery are the only type of find, although large stones are included with one (B4.3). Hill (1993) has suggested that all components of these types of deposits were 'offerings/sacrifices – symbols of an undifferentiated world of domestic and agricultural', with all elements treated in similar ways. The five groups (B1.2, B2.1, B3.4, D2.1 and D5.3) are situated on a east-west alignment to the south of the southern enclosure entrance. Four of these (B1.2, B2.1, D2.1 and D5.3) are from, or situated in the immediate area of Structure 1 the four post cremation structure, B1.0-2 which may add further weight to the argument for ritual associations.

The range of vessel types generally consists of groups of small, medium and large vessels. Parallels for this juxtaposition include pottery from Wasperton and Broom,



24. Composite plan of pit 398 (B3.4) showing pottery (solid) and underlying stone.

Warwickshire where a vessel set, interpreted as belonging to communal feasting activities was located (Woodward forthcoming). Comparable 'vessel sets' in examples of structured deposition have also been found in the late Bronze Age assemblages at Burghfield, Berkshire (Bradley *et al* 1980)

The juxtaposition of a hearth, pit and two-post structure, the latter two with possible special deposits (B3.4, D5.3) is of interest. The features all contained evidence of burning and appear contemporary. The shallowness of the pit in which the pot and saddle querns were placed and buried may suggest that the pit was dug specifically for their deposition (illus.13, S36 and 24). Examination of the contexts of querns has indicated that they may be placed as part of a ritual or special deposit (Buckley 1991). The recurrent location of complete quern stone, both saddle (hand) and beehive (rotary), in useable state in various contexts and particularly the bottom of Iron Age pits has been questioned as evidence of casual disposal (Buckley 1991, p.1). In a Late Bronze Age context, the discovery of four saddle querns at Flag Fen beneath timbers dated in association with Deverel Rimbury pottery has suggested that these items were treated as of importance (Buckley 1991, p.3). The plant remains evidence from pit B3.4 would appear to indicate food preparation. The association of a demonstrably special deposit of pottery with relatively rich charred plant remains is of interest, and it is possible that this indicates a recurrent pattern of association between food preparation, pottery and also stone (Hill 1995, p.97). The pottery appeared to have been placed around a sub-square object, possible a post or a box, since decayed.

Four pits with evidence of *in situ* burning were excavated, three of which were found around the edges of the excavated area while the fourth was south of the enclosure. These features indicate surface and below ground burning and in the absence of industrial residues are interpreted as serving a domestic or cooking function. In at least one instance, a surface hearth appears to have replaced an earlier cooking pit. These may represent all that has survived of free-standing structures or of structures set in relatively shallow foundations, or mark the position of outdoor cooking areas. Some external hearths may have been employed for the parching of grain preparatory to threshing or firing pottery (Knight 1984, p.164). Two contained plant remains including cornflower (below p.77) while the presence of some overfired sherds found on site may be evidence of the latter.

Three groups of pits on broad alignments or in clusters were excavated in the eastern area of the site. Most of these features contained inorganic fills with little settlement debris. These features may relate to craft/industrial activities or perhaps boundary systems on the periphery of the site. Evidence of pit alignments to date, has generally confined them to areas between settlements (Knight 1984, p.100). Small scale iron working on the site is suggested from slag recovered from three pits located to the south of the enclosure (D3.3; D4.3; D5.5 below p.84) although no metalwork was recovered from the site. The possibility of continued use of flint material in the Iron Age on the site is discussed below (p.71).

There was no evidence from the plant remains to indicate storage in pits raising doubts for their being used for dry storage (below p.77). However as there was no evidence of waterlogging as was found at, for example, Farmoor, Oxfordshire (Lambrick and Robinson 1979, p.137), the use of pits for the storage of some materials even if it was not grain is feasible.

Economy and environment

The quantity and character of charred plant remains from the site was insufficient to indicate any more than domestic activity and consumption of a variety of cereals with some evidence for legumes and gathered foods. Whilst there was little evidence to suggest where the cereals were grown a number of the weeds still grow locally (p.77). The lack of cereal remains, despite wide scale sampling of features, may suggest that there was little of these commodities on the site to enter the archaeological record, or that there was some form of control over their deposition.

No evidence for the species of stock at Wanlip survived because of the acidic soils, and any or all of cow, sheep, or horse may have been tended, although there is little evidence for the consumption or breeding of horses in the British Iron Age. Although the interpretation of bone assemblages is fraught with difficulty given sample sizes, differential deposition, preservation and recovery (Maltby 1996, p.20), there is some evidence for probable chronological and regional differences in animal exploitation patterns in the British Iron Age; evidence from the Thames and Nene Valleys has been tentatively interpreted as indicating a preference for cattle farming on the first river terraces and flood-plains, whilst sheep were more predominant on the second terraces because of the drier conditions (Maltby 1996, p.20). Cattle, sheep/goat and pig were all represented in the Late Iron Age assemblage from the terrace edge site at Enderby (Gouldwell 1992, p.62) although the sample size was too small to allow firm ratio estimates for cattle against sheep.

The absence of a bone assemblage precludes some analysis, but in the context of an economy in which pastoralism would have featured in some way, a topographic location set just above the wash-lands of the Soar, the enclosure's form, the lack of internal features, the provision of gateways, and perhaps evidence of a droveway to the east and trackway to the south (whether earlier or later) the enclosure appears to have been for stock control and management (see above p.39).

Pollen analyses are few for the area; however an open deforested landscape with spectra dominated by grasses and herbs indicative of open pastoral land use has been suggested for Later Iron Age/Roman deposits at Kirby Muxloe, Leicestershire (Brown forthcoming). At Croft, Leicestershire, biological evidence suggests the clearance of Alder from the flood plain probably to provide pasture in the Late Bronze Age, and an open landscape with increased grassland and some cereal cultivation in the Iron Age (Roseff *et al* forthcoming). Evidence from ditch systems at Tixover, Rutland dated to the Late Iron Age suggests that the ditches were in a relatively clear environment with grassland suggested nearby (Monckton forthcoming b). There is no evidence for hay-cutting in the Iron Age, and grazing land probably served as pasture rather than meadow, with management revolving around stocking levels and the necessity of keeping stock off low lying ground destroyed by winter trampling (Jones 1996, p.29-30).

Other evidence from the East Midlands includes that from the fen edge enclosure at Tattershall Thorpe, Lincolnshire where a later Iron Age landscape of mainly open grassland with some woodland or scrub, and limited areas of cultivation can be interpreted. The enclosure was interpreted as a place where stock, which had been grazing freely on the meadows in summer were rounded up for reclaim by owners, some slaughtered for hides and meat, and some exchanged, the stock subsequently disbanding up the valleys with their keepers. After the winter, the herds would recongregate at the site and perhaps be branded prior to being released

again on to the meadows (Chowne *et al* 1986, p.184). In the Tame Valley at Fisherwick, Staffordshire, the late Iron Age evidence is of a fully agricultural and cleared landscape with river terrace settlements surrounded by ditched and hedged pasture with some cultivation, and beyond this rough grazing and a secondary wood resource (Bell 1996, p.7).

More recent work in the Upper Thames Valley suggests a stratified land-use system, with grassland on the floodplain, open arable on the gravel terraces, woodland and grassland on the clay and more open land on the surrounding limestone and sandstone (Bell 1996, p.7). At Farmoor, Oxfordshire, excavations of well preserved Iron Age remains situated on the flood plain led to the interpretation that use and settlement of the flood plain was seasonal (Lambrick and Robinson 1979). The Farmoor evidence suggested a predominantly pastoral environment near to the flooded farmsteads and a predominant concern of cattle dairy farming was suggested for the inhabitants; the plant remains showed usage but not production of grain, and there was no evidence for arable land (Lambrick and Robinson 1979, p.134). On the basis of what appeared to be unoccupied nearby gravel terraces, a specialised economy maximising use of summer grazing within a society at least partly transient was suggested (Lambrick and Robinson 1979 p.134). Work on the plant remains from an Iron Age settlement at Thorpe Thewles, Cleveland, suggested that the site was a small self sufficient farming community within an open, agricultural landscape (van der Veen 1992), that produced its own crops and did not fall within the dichotomy producer/consumer model postulated for some Thames Valley sites (Jones 1985).

The development of land divisions throughout the Iron Age in parts of Northamptonshire has been seen as the development of a pastoral landscape regulated and formalised by construction, use and maintenance of territorial markers such as pit groups and earlier ceremonial monuments (Taylor 1996, p.235).

The site at Wanlip, therefore, is likely to have been part of cleared and utilised landscape, possibly as part of a structured and stratified society and landscape, or as a more independent and localised unit. Because of the difficulties in dating Scored Ware Iron Age sites, (a difficulty that the Wanlip dating programme has ironically exacerbated rather than resolved) the relative chronological positions of other Iron Age sites in the local landscape must for the present remain in doubt. Little evidence exists for a relationship between the Wanlip site and Leicester some 7km to the south. The Wanlip evidence is all pre Late Iron Age and, as the clearer evidence from Leicester is of a developing Late Iron Age settlement, such a relationship may not have existed. Nonetheless, some of the other sites with Iron Age material in the locality may have coexisted with the Wanlip settlement: these include a large rectilinear cropmark 1 km to the south-west and a hill top settlement overlooking the River Wreake near its confluence with the Soar at Shipley Hill, Ratcliffe on the Wreake (Beamish 1992a). Other small subsquare cropmarks have been recorded to the north west at Rothley and Iron Age activity was recorded in a low lying position at Cossington to the north (Beamish 1997b). The excavations at Kirby Muxloe (Cooper forthcoming a), Enderby (Meek 1997) and Hamilton (S Foreman pers. comm.) will all broaden and deepen our understanding of Iron Age developments within the valley of the Soar and its tributaries.

Conclusion

The excavated site at Wanlip was dictated by the limits of development and the extent of settlement has not been established to the north-east, an area since damaged by sewer construction. However, the excavations have revealed some detail about the lives of people living on the gravel terrace in the years around 400 B.C.

The settlement in which they lived was well organised and there was an awareness of their position in their world as they built their structures, apparently with reference to cosmological events and in this way the inhabitants of the Soar Valley were similar to those in different parts of the country. Some evidence was found of the ritual that probably formed an integral part of daily existence, including the burial of a young adult within a rectangular structure.

The available evidence indicates that the people provided themselves with what they needed from their immediate locality – most of the pottery and quernstones are all made from materials found in or near the valley. Their pottery includes the earliest dated examples of East Midlands Scored ware, a tradition that was to continue for a further 400 years. The people knew of iron technology and may have reworked iron on the site, but no evidence of metal work was found. The site may have seen the continued use of flint into the Iron Age, although the presence of residual material precludes conclusive evidence.

The inhabitants would have been farmers and although we cannot be definite about the relative importance of any particular agricultural activity, they were concerned with the tending of livestock. Their small enclosure was probably used predominantly for managing herds which either entered from a drove route to the south or from the flood plain to the east. The plant foods eaten included grain, legumes and gathered resources, although it is not possible to be clear about the extent of grain cultivation near to the site. Given the proposed economy of the site, cattle or sheep may have formed an important part of their diet. By analogy with other similar sites, the site would have existed in an increasingly open environment with woodland on the valley sides removed to make way for agriculture; the flood plain may have been included at this stage in the first millennium and have been cleared of the dense woodland that covered it, in order to increase the rich grazing potential of the valley bottom in the summer months.

The prehistoric pottery

Patrick Marsden

Quantity

A total of 2,338 sherds (31,660g) of prehistoric pottery was recovered and consists of late Bronze Age to early Iron Age, and middle Iron Age material (Table 3). The pottery was examined and recorded using the current guidelines for the analysis of later prehistoric pottery (Prehistoric Ceramics Research Group 1992).

	No	Weight (g)
Late Bronze Age – Early Iron Age	3	225
Middle Iron Age	2, 335	31, 435
TOTAL	2, 338	31, 660

Table 3: Prehistoric pottery totals (sherd number and weight (g) by period)

Nature and Condition of the Assemblage

As shown in Table 3 most of the pottery from the site is of middle Iron Age date, with the exception of three vessels which may be late Bronze Age to early Iron Age. The mean sherd weight for the middle Iron Age pottery is reasonably large at 13.5g. The condition of the sherds is generally good, with surface treatment and evidence of use well-preserved. Several associated pottery groups contain large quantities of vessels. In general the quality of the assemblage is very good with several total or part profiles and many rim sherds reconstructable. On this basis form identification and dating can be conducted with some confidence.

Fabrics

Sherds were examined using a x10 power binocular microscope, and assigned to one of the following five fabric groups according to the most frequent or obvious inclusion present, and to a fabric type within each group. Within these groups they were also allocated a fabric type. A limited thin-section programme was undertaken on which the fabric descriptions below are partly based. The most common fabric type is Q2 (47.9% by weight). The number and weight of sherds by fabric type is presented in Table 4.

Fabric Descriptions

Acid Igneous Rocks (Local)

All the following fabrics contain acid igneous rock, probably Mountsorrel Granite/ Granodiorites, found within 5km of Wanlip.

Q2 Sparse to very common (7-30%) angular-rounded quartz (0.125-1.0mm), well-moderately sorted. In addition, there is sparse-moderate mica flakes (up to 0.1mm); rare-moderate red/brown clay pellets (0.1-5.0mm); rare-sparse (1-7%) angular-sub-rounded acid igneous rocks (0.1-3.0mm) ; and variable quantities of quartz silt.

RQ1 Sparse to very common (5-30%) poorly sorted sub-angular acid igneous rocks (0.3-5.0mm). Also rare-moderate quartz (0.2-0.5mm) and moderate quartz silt; sparse chert (up to 0.4mm); sparse mica flakes (up to 0.1mm); and rare clay pellets (0.1-1.0mm).

RP Mainly sparse-moderate (3-15%) rounded well-sorted acid igneous rock (1.0mm) and moderate (10-15%) rounded moderately sorted often red/brown clay pellets (0.5-1.5mm). Other inclusions include sparse-moderate quartz (up to 0.2mm); sparse-moderate sandstone and white mica flakes (up to 0.1mm).

Quartz Sand Temper (Local)

This fabric contains quartz sand as the dominant inclusion.

Q1 Mainly moderate-very common (10-30%) well-moderately sorted rounded quartz (0.125-1.0mm) and sparse-moderate (3-10%) angular quartz (up to 0.2mm). Also moderate quartz silt; sparse-moderate mica (up to 0.1mm); and rare clay pellets (0.1-0.5mm).

Shell-Tempered Group (?Non-Local)

S1 Mainly moderate-very common (15-30%) well-poorly sorted sub-rounded fossil marine shell (0.1-8.0mm). Also rare amounts of mica (0.02mm); quartz (0.4mm); and mostly red/brown clay pellets (0.1-0.5mm).

S Fabric undiagnostic beyond shell as dominant inclusion.

Organic-Tempered

V Mainly moderate (10-15%) well sorted linear carbonised plant remains, chaff ? (up to 0.4mm). Also sparse to moderate angular quartz (up to 0.2mm); sparse-moderate rounded quartz (up to 0.4mm); and sparse quartz silt.

Indeterminate Voids

D Fabric with indeterminate voids as dominant inclusion.

Fabrics	Sherd number	Sherd Weight(g)	% by Weight
Acid Igneous Rock Group			
Q2	1,249	15,153	47.9
RP	237	4,009	12.7
RQ1	521	6,883	21.7
Quartz Sand Group			
Q1	252	5,075	16.0
Shell Tempered Group			
S1	21	95	0.3
S	6	59	0.2
Organic Tempered Group			
V	36	273	0.9
Indeterminate Voids Group			
D	16	113	0.3
TOTAL	2,338	31,660	100.0

Table 4: Fabric proportions by sherd number, weight (g) and weight (%)

The pottery assemblage is dominated by fabrics made from clays and inclusions available in the local vicinity, within 5 km of Wanlip, primarily including Mountsorrel Granites/Granodiorites (82.3%). Q1 is also likely to be local in origin (16.0%). The remaining fabrics are of uncertain local/non-local origin (1.7%).

Forms and Decoration

A total of seventeen rim and three base types was defined as described below. Some of these combined rim and broader vessel shape characteristics (Rs 1-11), others (R12-17) are undiagnostic beyond a basic rim type. The fragmentary nature of some of the rims and bases prevented their assignment to anything other than the general type R or B.

List of Form Types

R1 – Jar with ovoid profile and inturned plain rim (illus. 27. 38, illus. 28. 60).
R2 – Bowl/jar with inturned plain rim (illus. 25. 13, illus. 28. 53).
R3 – Jar, small-medium (</=180mm rim diameter), barrel-shaped profile with neck and everted/upright rim (illus. 25. 4 and 7).
R4 – Jar, large (>180mm rim diameter), barrel-shaped profile with neck and everted/upright rim, often expanded/flat (illus. 25. 1-2, 5 and 10).
R5 – Jar, large (240mm diameter), tall, round shouldered profile, necked, everted rim (illus. 26, 24).
R6 – Jar, with round shouldered profile and everted rim (illus. 25. 3).
R7 – Jar with shoulder carination and slightly everted rim (illus. 29. 69).
R8 – Bowl, round body, rim with rounded lip (illus. 27. 43).

R9 – Bowl/cup rim from slightly shouldered/carinated bowl, or lid (illus. 25. 6).
R10 – Cup, plain inturned rim; miniature vessel (illus. 28.61, 29.62).
R11 – Jars/beaker, small (90mm diameter) with slightly everted rims; straight bodied profile (illus. 25. 9).
R12 – Misc. plain rounded rims (not illustrated).
R13 – Misc. plain flat rims, ? from hemispherical bowls (illus. 27. 35).
R14 – Misc. expanded and flattened rims (not illustrated).
R15 – Misc. indented rims (not illustrated).
R16 – Misc. rims with rounded lips (not illustrated).
R17 – Misc. angular 'square' rims (illus. 28. 47).

B1 – Flat base, heavily pinched out at the circumference (illus. 26. 24 and illus.29. 66)
B2 – Flat base, base angle *c.*90 degrees and/or slightly pinched out with flaring body above (illus. 26. 19 and illus. 27. 41)
B3 – Flat base, no pinching around the circumference and smooth transition to angle of body (illus. 25. 10 and 12)
B – Undiagnostic bases.

Form	EVE	Number of Examples	Form	EVE	Number of Examples
R1	0.77	3	R10	0.45	2
R2	-	2	R11	0.27	1
R3	1.42	24	R12	-	1
R4	0.78	18	R13	-	9
R5	0.23	1	R14	-	2
R6	0.23	2	R15	-	1
R7	0.07	1	R16	-	2
R8	0.18	1	R17	-	1
R9	-	1			

Table 5: EVE Totals for Rim Forms

Decoration

Scoring

This was most common type of decoration (36.6 % pottery). The following main types were identified using D. Knight and S. Elsdon's type series (unpublished).

CO – Regular combing
SC – Single tool, random irregular pattern
SCR – Scratch, finely incised, single tool
BRL – Light brushing, bunch of twigs or fibres, light, closely spaced
BR/SC – Brushed and scored over with single tool
BR – Brushed with bunch of twigs, heavy

SC and BRL are the most common types, followed by SCR, and small quantities of CO, BR/SC and BR. BR is commonly vertical, but sometimes is accompanied by horizontal and diagonal scoring, especially SC and SCR. BRL is mostly vertical and the only type of scoring, but also sometimes horizontal and diagonal, and/or with deeper vertical BR and diagonal SC. A common form associated with BRL vertical scoring is R4, this sometimes with diagonal

tooled lines on top of the rim. SC and SCR both separately and combined are usually irregular and diagonal.

Table 11 correlates decoration to forms. The plain inturned forms (R1 and R2) show little in the way of scoring. Rs 3 and 4, the most common forms, with their everted/upright rims are mainly plain and approximately half decorated respectively. The combination of tooled DL on the rim and scoring on the body is mainly present on R4 vessels. Only a small proportion of the Q1 pottery is scored. It is possible that this suggests that the fabric represents the use of clay from another source and perhaps a different local pottery tradition to the more often scored pottery containing acid igneous rocks.

Stamped

A single sherd displaying two circular stamps was found in unstratified levels (see illus. 29. 63). There is a Late Bronze Age – Early Iron Age parallel for this type of decoration at Billingborough (Chowne 1988) and a late Iron Age example at Old Sleaford (Elsdon unpublished), both in Lincolnshire. Dating is therefore uncertain.

Finger nail decoration

Examples of finger nail impressions are found on two vessels, cup R10 (illus. 29. 62) and the carinated vessel (illus. 27. 36). This decoration is Late Bronze Age to Early Iron Age in date (see below).

Burnished

This decoration consists of lines. One vessel, form R11, displays faint diagonal burnished lines (illus. 25. 14).

Tooled or Slashed

Only one vessel displays stabbed decoration (illus. 25, 1). This consists of stabbed impressions in finger impressions on top of the rim. Diagonal lines are common amongst this technique on the rim and on the vessel body. A jar (see illus.29. 69) bears slashed diagonal impressions. This vessel is Late Bronze Age – Early Iron Age in date from the shouldered vessel form and presence of this decoration on both the rim and shoulder. Diagonal tooling on the top of the rim is also present on R4 vessels (illus. 25. 5 and 26. 20). An R13 vessel has a single tooled line creating a groove around the top of the rim.

Note also illus. 29. 64 R4 rim possibly with applied decoration.

Dating of Forms and Decorations

There are three vessels, all in fabric Q2, which are similar in form and decoration to examples dated elsewhere to the late Bronze Age-early Iron Age (Knight 1984; Bradley *et al* 1980: Barrett 1980). These are the shouldered jar with tooled or slashed decoration on both the shoulder and rim (illus. 29. 69), the complete minature jar or cup (illus. 29. 62), and the shouldered jar sherd with finger-nail impressions (illus. 27. 36). The first two of these while unstratified were recovered from broadly the same eastern part of the site, whilst the latter was found in a feature forming part of the enclosure southern entrance and may therefore be residual. Nevertheless, these three vessels indicate that occupation in the area occurred at some time during the Late Bronze Age to Early Iron Age period. This small collection belongs to Knight's Group 1 Midlands Assemblage dating mainly from the later 9th to *c.* 5th centuries BC (Knight 1984, pp. 39-41).

The remainder of the pottery in this assemblage, however, belongs to Knight's Group 2 characterised by the first occurrences of scored decoration, and a variety of vessel forms including ovoid jars (R1), barrel-shaped, necked jars (R3; R4), and round-shouldered jars (R5; R6). Interesting varieties of decoration also found at this time include slashed, tooled marks on

the rim which give the appearance of a rope-like effect (illus. 25. 2, 5) and stabbed impressions on the top of the rim (illus. 25. 1). The majority of the assemblage is similar to pottery from generally later sites, Normanton-le-Heath (Elsdon 1994), Enderby (Elsdon 1992a), Shipley Hill (unpublished), Breedon-on-the Hill (Kenyon 1950), Empingham (although this may be earlier) (Cooper N. forthcoming), and Weekley (Jackson and Dix 1987) in Northamptonshire. The Wanlip group can be dated to the 5th to 1st centuries BC on this basis. The date range for scoring has been proposed from the 4th century BC to the 1st century AD, although rarer before the 3rd century BC (Elsdon 1992b, pp. 88-90). Interpretation of the radiocarbon and thermoluminescence dating from the site suggests that the Wanlip pottery is from the beginning of this date span, or slightly earlier, approximately 450-350 BC (see above pp.24-27). Therefore the Wanlip assemblage could indicate that scored decoration and the forms represented were being produced from the 5th century BC.

Contexts Selected for Radiocarbon Dating

Six of the seven contexts selected for radiocarbon dating contained pottery, the exception being the cremation fill (context 1019) and five of these were from key groups. Table 6 lists the groups.

Group	**Context and radiocarbon date ranges (68% probability)**	**Pottery present in context**
A3.1*	46 : 755-695; 535-400 BC	Yes
B1.0*	1019 : 790-755; 700-530 BC	No
B2.2	1111 : 400-350; 295-250 BC	Yes
B3.4*	412 : 520-425; 420-395 BC	Yes
B4.1	1094 :750-720; 530-365; 280-260 BC	Yes
D2.1*	1227 : 750-735; 520-385 BC	Yes
D3.3*	403 : 370-345; 320-205 BC	Yes

* = key groups

Table 6: Groups and contexts selected for radiocarbon dating

Surface treatment

The table below shows the correlation of the various surface treatments found on pottery at the site to forms. Burnishing is by far the most common form of surface treatment. A single R1 vessel (illus. 28. 60) shows three types of surface treatment, indicating a considerable degree of effort being made in its manufacture. An R3 vessel (illus. 27. 34) shows two types of surface treatment. The R2 vessels (illus. 25. 13 and illus. 28. 53) are burnished inside and outside, which is consistent with their small size and fine nature, one of them (illus. 28. 53) being in Q1 fabric. These vessels are likely to be bowls. Of the R3 and R4 form type 26.6% display surface treatment and show all types present at the site except knife-trimming. Less of the R3-R4s are burnished compared to R1 and R2 forms, perhaps due to the more common use of scored decoration on these forms. 20.2% of the rims at the site show surface treatment, indicating it is quite rare to find it added to vessels.

	Burnishing	Burnishing, Wiping and Knife-Trimming	Burnishing and Twig Brushing	Knife-Trimming	Wiping	Slipped
R1	-	1	-	-	-	-
R2	2	-	-	-	-	-
R3	2	-	1	-	3	1
R3/4	-	-	-	-	-	-
R4	2	-	-	-	2	-
R5	-	-	-	1	-	-
R6	-	-	-	-	1	-
R7	-	-	-	-	-	-
R8	-	-	-	-	-	-
R9	-	-	-	-	-	-
R10	-	-	-	-	-	-
R11	-	-	-	-	-	-
R12	-	-	-	-	-	-
R13	1	-	-	-	-	-
R14	-	-	-	-	-	-
R15	-	-	-	-	-	-
R16	-	-	-	-	-	-
R17	-	-	-	-	-	-
Undiag.	61	-	-	-	5	-
TOTAL	68	1	1	1	11	1

Table 7: Cross-correlation of rim forms to surface treatments

Method of manufacture

All the pots seem to have been shaped by hand, and are coil or slab built. Sometimes they show finger and finger nail impressions on top of the rim or in the neck/shoulder area, where the vessel has been shaped by the potter. The colour variations over the surfaces of individual vessels suggest firing in a bonfire. This varies considerably, often on the surface of individual vessels (black, grey, brown and red) and does not appear to relate to fabric type. In addition, two vessels in fabric Q2 displayed evidence of contact with different materials during manufacture. Organic impressions on the underside of a base may indicate that this vessel had been placed on grass or similar organic matter before being fired. Angular quartz sand or acid igneous rock is also stuck on the bottom of another base, possibly implying these are inclusions waiting to be added as temper which have become accidentally attached to the bottom of this vessel. These particles could be intended to prevent the pot sticking to the ground surface prior or during firing.

Vessels of each fabric are hard, except for S1, S, and V, which are generally soft (see Peacock 1977, 30). It should be noted that a total of 66 apparently overfired sherds are present in vessels in local fabrics (Q2 and RQ1). In appearance these are usually grey or display grey and orange patches. They are characteristically very hard. Some of the sherds have cracks radiating from points on internal and external surfaces. The overfiring occurs on forms R3, R6, B1, and B2, and on scored vessels (SC, SCR, BRL). As far as spatial distribution is concerned there is some material from the enclosure boundaries A1.1-A3.2, contexts 1336, 1377, 1405, 1432, 1479, 1551, the enclosure east entrance C6.0, post hole 1187 (1186), a possible structure to the north of the east entrance, B7.2 pit 1486 (1485); overfired sherds were also present to the south-west of Structure 1 in two small adjacent deposits 1022, 1035 (C2.14) and 49 (C2.15) and in the east, small numbers of sherds in a D3.3 pit 414 (403), D3.1 hollow 446 (430) (see Table 8). D3.6 pit 564, 471, and D5.3 pit adjacent to fire pit 1184 produced more significant quantities of overfired pottery, from a single vessel in each case. The vessel from pit D3.6 is highly overfired with cracked

surfaces and may be a waster. The pit which produced it is in an area of possible crafts or industry and is adjacent to hollow D3.1 (above), which may relate to pottery production. Alternatively the possible waster could also be from a bonfire kiln outside the area of excavation to the north. The vessel from D5.3 (illus. 28.59) is either overfired or has been hardened through use as a cooking pot (which is well supported by the spatial associations) and would have been useable in either case. Generally at least some of the overfired pottery from the site may relate to bonfire activity in or adjacent to area of excavation. It is also possible that the other crafts or industrial activities have led to the condition of the pottery, which may have been subjected to high temperatures after deposition.

Group	Number of overfired sherds	Total number of sherds in group	% of overfired sherds in group
A1.1-A3.2	7	313	2.2
B6.0	1		
B7.2	3		
D3.1	2		
D3.3	1	105	1.0
D3.6	18		
D5.3	14	147	9.5
C2.15	* 7		
Unstratified and Post-Prehistoric	13		
TOTAL	66		

* 2 sherds probably burnt post-depositionally

Table 8: Frequency of overfired sherds by group

Capacities and uses of vessels

Table 9 presents the sizes of selected forms at Wanlip. The capacity calculation established by Woodward (1997) for Iron Age vessels from Dorset and Somerset has been utilised here to provide an indication of size. R1, R4, R5, R7 and R8 are the largest forms. R4 is a larger version of R3, this possibly suggesting a grading of similar forms, with R5 and R6 variations of these. R11 vessels are jars/beakers perhaps for drinking and/or ritual purposes.

Form	**Range of rim diameters(mm)**	**Average rim diameter (mm)**	**Height (mm)**	**Range of capacities(cc)**	**Average capacity (cc)**
R1	205-255	230	>350	5, 840-8, 340	7, 090
R2	-	-	-	-	-
R3	105-165	143	145	840-3, 840	2, 740
R4	180-300	246	-	4, 590-10, 590	7, 890
R5	240	240	310	7, 590	7, 590
R6	175	175	-	4, 340	4, 340
R7	250	250	-	8, 090?	8, 090?
R8	285	285	-	9, 840?	9, 840?
R9	-	-	-	-	-
R10	55-65	60	65	?	?
R11	90	90	-	90	90

Table 9 : Rim form diameters, heights, and capacities. (Capacities based on formula – capacity or volume in litres = radius of vessel rim in centimetres minus 4.41; Woodward 1997).

In terms of evidence of use, sooting is present on vessels in fabrics RQ1, Q2 and Q1. A scored vessel in Q2 with sooting on its inner surface shows that a cooking function is not necessarily exclusive to plain vessels. As far as forms are concerned, evidence of use occurs on three main forms (R1, R3 and R4). This information is shown in Table 10 below, all but one of the vessels (an R4 rim in Group D3.3, 444, 434) being from the key ceramic groups (illus. 26. 17; illus. 26. 30, illus. 27. 39 and illus. 28. 60). Limescale is present on the inside of the large R1 vessel, which displays two mending holes (illus. 28. 60), this perhaps suggesting its use as a large boiling pot. The nearly complete vessel (illus. 27. 39) has a burnt residue on the inside approximately along the line of maximum girth and abrasion on the inside of the base and lower half of the outside of the body. The residue and abrasion on the inside may indicate use as a cooking pot. Three R4 vessels have sooting on the outside, suggesting use for cooking purposes. Two of these are illustrated (illus. 26. 17 and illus. 26. 30). These deposits would suggest the use of smaller (R3) and larger (R1 and R4) vessels as cooking pots. Perhaps the unsooted vessels are storage jars. The lack of sooting on the small number of bowls and cups may confirm their use as 'tablewares', drinking containers and possibly temporary storage. Internal abrasion is also present on the inside of a B2 base (Group B2.2, 1078), which may be the result of grinding, stirring or scraping.

Form	Evidence of use Residue	Sooting	Limescale	Abrasion	TOTAL
R1	-	-	1	-	1
R3	1	-	-	1	2
R4	-	3	-	-	3
TOTAL	1	3	1	1	6

Table 10: Frequency of evidence of use by form

Spatial variation

Key groups

Given the lack of vertical stratigraphy with associated pottery, seven ceramic groups were thought worthy of more detailed analysis on the basis of containing at least 25 sherds or 250g of pottery, together with the presence of reasonable quantities of diagnostic sherds. The pottery from these groups is illustrated in illus. 25-29 and shown in Tables 11 and 12.

A1.1-A3.2 313 sherds, weighing 3265g (illus. 25. 1-7).
These groups are fills of the enclosure boundaries. A total of 24% of the enclosure was excavated. The vessel range includes mainly barrel-shaped jars (R3 and R4), but also a round-shouldered jar (R6) and a bowl/cup or lid (R9). Amongst these there is a very poorly made vessel with stabbed impressions on its rim (illus. 25. 1). There is a high proportion of scored pottery (63.2%). Groups A2.1 and A3.1 produced the largest amounts of pottery (36.8 and 35.7% respectively). Sections of the ditch containing large fragments of vessels include on the western side 73 (illus. 25. 4) and in the north-eastern corner 1319 (illus. 25. 2). Pottery , however, seems to be generally of a low average sherd size and evenly distributed across the enclosure. There is no apparent clustering around the entrances although there may be more than two of these. Group A3.1 produced a radiocarbon date range of 755-695 and 535-400 Cal BC at 68% probability (Tables 1 and 6).

B1.2 231 sherds, weighing 2200g (illus. 25. 8-14).
This pottery is from the four post structure (B1.1-2 Structure 4), which was excavated in half sections. The range of vessels consists of mainly barrel-shaped jars (R3 and R4), together with a round-shouldered jar (R6), a small bowl/jar (R2) and jar/beaker (R11). Considering the size of the sample the rarer forms on the site are well represented by three vessels (R2, R6 and R11), perhaps showing an association with cremation rituals. The proportion of scored wares is low (12.4%). The cremation fill itself (B1.0) produced a radiocarbon date ranges of 760-680, 530-365 and 280-260 Cal BC at 68% probability (see Table 1 and 6).

B2.1 51 sherds, weighing 721g (illus. 26. 15-18).
This is a two post structure south of the southern entrance to the enclosure. Half and three quarters of these two features were excavated. Virtually all of the pottery was from 1240 context 1202. The vessel range is limited to barrel-shaped jars (R3 and R4). The sooting on the jar (illus. 26. 17) has been discussed elsewhere (above p.52). It should be noted that two of the vessels from the group were in the 'organic-tempered' Fabric V, which is rare to the site (illus. 26. 16 and 18). The proportion of scored pottery is again low (12.2%)

B3.4 230 sherds, weighing 3596g (illus. 26. 22-32).
The pottery is from a pit which was only partly excavated as it extended beyond the area of excavation, and was overlain by 0.90m of colluvium. Some of the pottery appeared, during excavation, to have been packed around a square object since rotted. This may have resulted in the substantial areas of abrasion on one jar (illus. 26. 24). Pottery is not particularly suited to a packing function due to its easily breakable nature. The vessels consist of barrel-shaped jars (R3 and R4), and nearly all of a round-shouldered jar (R5). Most of the pottery is scored, although this figure is biased by the large amount of the vessel shown in illus.26. 24. All but one of the types of scoring (see above p.47) found at the site are represented. See above for discussion of vessel (illus. 26. 30) with external sooting. Context 412 in Group B3.4 produced radiocarbon date ranges of 52-425 and 420-395 Cal BC at 68% probability, see Table 1).

D2.1 65 sherds, weighing 2544g (illus. 27. 39-45).
This group was recovered from the pits associated with the four post structure (B1.1-2). Two of the pits (1189 and 1223) were fully excavated and one half-excavated (1198). Cut 1225 was a shallow cut possibly contemporary with 1189. The backfill of 1189, 1157 produced most of the pottery (illus. 27. 39-43). The near complete R3 vessel (illus. 27. 39) was notable for being placed upright close to the cut at the bottom of the pit, before backfilling. The contents of the vessel were removed by the conservator and sieved but no environmental evidence or other finds were identified, the lack of these hindering the interpretation of the group as a whole. The burnt residue on the inside of the jar and the abrasion are discussed elsewhere (see p.52). Parts of several other vessels were represented including two larger barrel-shaped jars (R4) and the only example of the site of bowl R8. The large size of many of the sherds is noteworthy (average 39.1g). The amount of scored pottery is close to the average for the site as a whole. Group D2.1 provided radiocarbon date ranges of 750-735 and 520-385 (see Tables 1 and 6).

D3.3 73 sherds, weighing 513g (illus. 28. 48-54).
This pottery is from the backfill of pit 414 in the east of the site. The range of forms include the small (R2) bowl/jar (illus. 28. 53) and two barrel-shaped jars (R3) (illus. 28. 49 and 54). The scored sherd (illus. 28. 51) is one of the overfired vessels discussed above (pp.50-51). Group D3.3 provided radiocarbon date ranges of 370-345 and 320-205 Cal BC (see Tables 1 and 6).

D5.3 147 sherds, weighing 6214g (illus. 28. 55-61).
This discrete pit was adjacent and probably contemporary with hearth 1184. The fill was fully excavated and contained flecks of charcoal and some burnt bone, which unfortunately disintegrated on sieving. More significantly there were large amounts of pottery, notably fragments of most of a large jar broken before deposition, and large pieces of stone, including saddle querns. These finds appeared during excavation to have been deposited soon after the pit was dug and were concentrated together near the bottom of the fill.

The vessels include the large ovoid jar (R1) (67.1% of the pottery), a round shouldered jar and a cup (R10). Decorated pottery includes a heavily scored vessel (illus. 28. 56). The large jar in Fabric Q1 has mending holes and its limescale may indicate use for cooking purposes (see above p.52). The latter is particularly likely given the association with the hearth and round house. The cup form (R10) is rare on the site, the only other example being the Late Bronze Age-Early Iron Age vessel (illus. 29. 62), and not commonly found on Iron Age sites in Leicestershire. A base (illus. 28. 59) displays overfiring which may have resulted from usage (see above pp.50-51).

The collective pottery and finds evidence point toward this feature being of considerable importance and ritual associations may be suggested. The two different types of finds in one feature would point towards these being highly valued by the individuals responsible for their burial.

Discussion

It appears that most of the key ceramic groups are likely to be examples of 'structured deposition'; deliberate deposits of material culture rather than casual discard. Such deposits have been discussed elsewhere (Hill 1993). In one case (Group D5.3) other finds are associated with the pottery, four quern fragments, along with quantities of burnt bone. In most cases, however, the concentrations of pottery are the sole type of find. Hill (1993) has suggested that all components of these types of deposits were 'offerings/sacrifices – symbols of an undifferentiated world of domestic and agricultural', with all elements treated in similar ways.

The range of vessel types represented by each of the five assemblages (B1.2, B2.1, B3.4, D2.1 and D5.3) is significant. Generally, small, medium and large vessels are present. Parallels for this include pottery from the late Bronze Age activity at the site at Broom, Warwickshire. Here Pit 817/E501 produced a large assemblage of pottery including a vessel set, perhaps associated with 'communal feasting and/or drinking' (Woodward forthcoming). Of a similar date, Pit 1918 at Wasperton, Warwickshire included a similar range of vessels. Comparable 'vessel sets' in examples of structured deposition have been found in the late Bronze Age assemblages at Aldermaston Wharf (Bradley *et al* 1980, F106, p. 241) and Knights Farm (Bradley *et al.,* F181, p. 269), Burghfield, Berkshire (A. Woodward pers. comm.).

Two of the key groups are probably not examples of structured deposition. One is the enclosure ditch fills (A1.1-A3.2), which contained few significant concentrations of pottery, although some vessels (e.g. illus. 25. 1, 2 and 4) appeared as though they could have been deliberate depositions. However, large pottery fragments were also found in enclosure ditch fills in the Phase 3 at Enderby (Elsdon 1992, 48-50) and in Phase 4 at Normanton le Heath (Elsdon 1994, pp. 42-44). It may be that at all three sites the pottery in these fills is at least partly the result of sporadic dumping over a number of years. In addition, D3.3 had the lowest average sherd size and no reasonable sized vessel profiles.

The majority, if not all, of the assemblage is locally made pottery comparable in form and decoration to material found at other mid-late Iron Age sites in the region. The Wanlip assemblage appears to date from around the time of, or slightly earlier than, the normal starting date for the use of scored wares in the region. The date of the site suggested by radiocarbon dating is *c.* 450-350 BC, yet 36.6% of the pottery is scored, a proportion more compatible with a mid-late Iron Age date.

Of significance are five of the key groups discussed above. These imply the carefully positioned ritual deposition of pottery south of the enclosure. This seems to have been associated with religious/ritual practices. Such deposits are rare in the region, although pits at Breedon-on-the Hill (Kenyon 1950) and Twywell in Northamptonshire (Harding 1975) produced large amounts of vessels and may be comparable. F95 in Area I at Kirby Muxloe could also represent ritual deposition (see Harvey forthcoming). They are part of a tradition with origins in the later Bronze Age which continued into the middle Iron Age at Wanlip.

Group	Forms Represented	Decoration Represented	% Scored
A1.1-A3.2	R3 R4 R6 R9 R13 R15 B1	Scored (BRL) + Tooled (DL) ; Scored (CO/SC ; BRL/SCR ; CO/SC, BRL ; SC/SCR ; SCR, BRL, SC ; BRL ; BR ; CO ; and SCR) ; and Stabbed (HO)	63.2
B1.2	R2 R3 R4 R6 R11 R13 B1 B3	Scored (BR ; SCR ; BR/SC ; CO ; SC ; BRL ; SCR/BRL) ; and Burnish (BL)	12.4
B2.1	R3 R4 B1	Scored (SC ; BRL)	12.2
B3.4	R3 R4 R5 B1	Scored (SCR ; BRL ; BRL/BR ; BR/SC ; BR+SCR ; ; SC+SCR ; BRL+SC ; BRL+SCR ; SC ; SCR +BR?)	65.3??
D2.1	R3 R4 R8 R16 B1 B2	Scored (SC ; BR ; BRL ; BR+SCR ; CO ; SCR)	38.7
D3.3	R2 R3 B1	Scored (SC ; SC+SCR ; BR ; BRL ; BRL/SC)	32.2
D5.3	R1 R3 R10 B1 B2	Scored (SCR ; BR+SCR ; CO)	27.3

Table 11: Key ceramic groups, form and decoration represented and percentage of Scored Ware pottery.

Group	Fabric % by Weight								Sherd No.	Weight (g)	Average Sherd Weight (g)
	Q2	RP	RQ1	Q1	S1	S	V	D			
A1.1-3.2	54.6	9.6	28.1	8.0	1.0	-	0.6	0.3	313	3 265	10.4
B1.2	81.7	3.4	11.4	1.0	1.4	0.9	0.2	-	231	2 200	9.5
B2.1	68.9	-	3.9	2.4	-	3.9	20.9	-	51	721	14.1
B3.4	18.6	56.0	24.4	1.0	-	-	-	-	230	3 596	15.6
D2.1	55.9	-	42.9	1.0	-	-	0.2	-	60	2 532	42.2
D3.3	51.3	10.9	29.4	6.5	-	-	1.9	-	73	513	7.0
D5.3	32.8	-	-	67.2	-	-	-	-	147	6 214	42.3

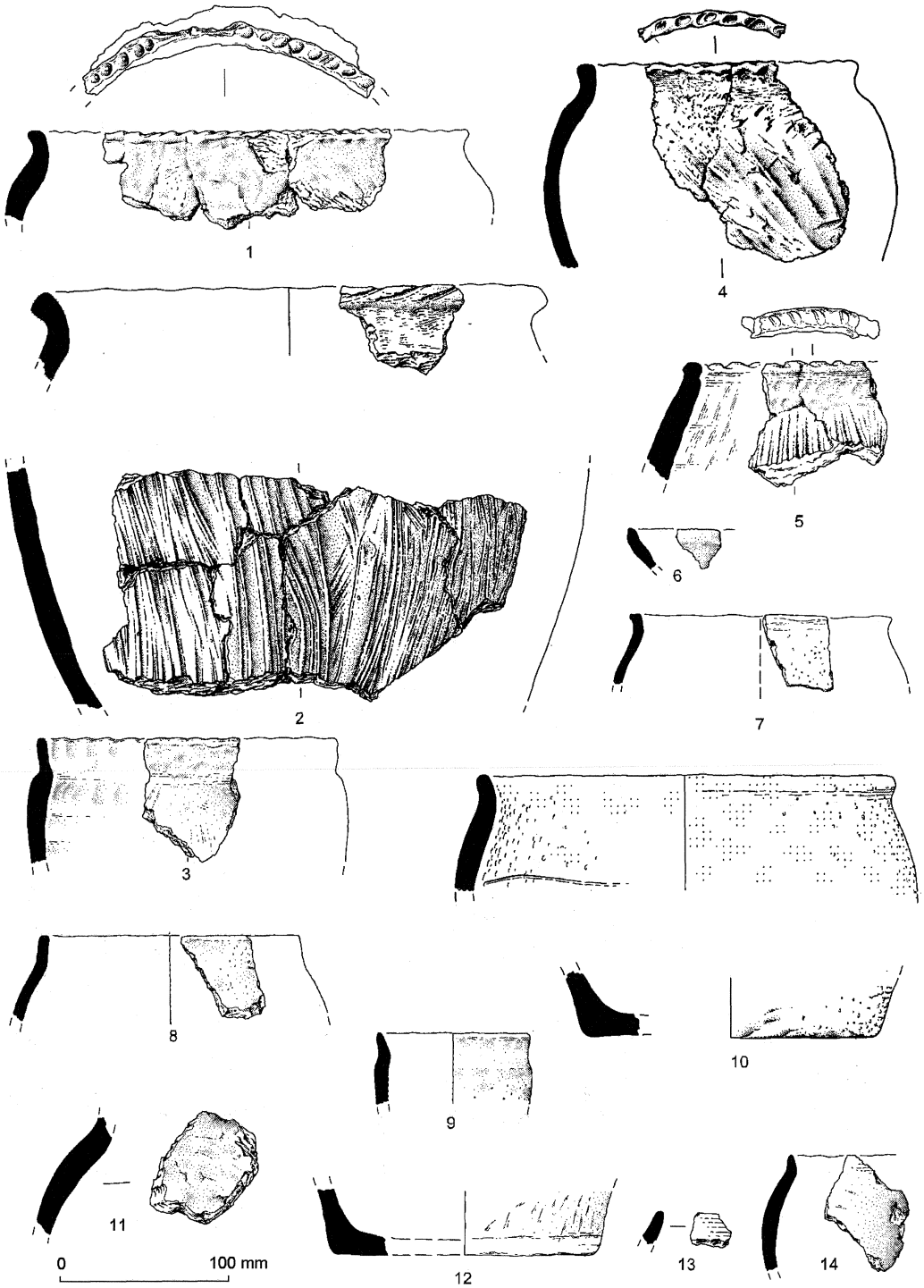
Table 12: Key ceramic groups, fabric proportions and pottery totals

Form	R1	R2	R3	R3/4	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R	B1	B2	B3	B	TOTAL
Fabrics																								
Q2	1	1	12	-	10	-	2	1	-	1	2	1	1	4	2	-	-	-	8	8	5	6	6	71
RQ1	-	-	9	1	5	-	-	-	1	-	-	-	-	3	-	1	2	1	3	10	-	-	6	42
RP	1	-		-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	1	10
Q1	1	1	2	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	2	8
V	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	5
D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
S1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
TOTAL	3	2	24	1	17	1	2	1	1	1	2	1	1	9	2	1	2	1	11	25	6	7	16	138

Table 13: Form (number of occurrences) by fabric type

The illustrated pottery

Illus. No.	Group	Description
illus.25		
1	A2.1	Rim, RP; R4, 21% of 260mm, finger and finger nail impressions on top of rim with some stabbed holes, thumb impressions on outside of neck/shoulder, 107, Cut No. 159, Ext No. 5676.
2	A2.1	Rim, Q2, R4, 8% of 300mm, Tooled DL on rim and vertical scoring (BRL) on body, 1310, Cut No. 1319, Ext. No. 5632.
3	A2.3	Rim; Bowl/jar; Q2, R6, 11% of 175mm; finger impressions in neck/shoulder area, overfired, mainly on inside, 1415, Cut No. 1551, Ext No. 5293.
4	A3.1	Rim, bowl/jar, RQ1, R3, 14% of 165mm, scored ?, finger and finger nail impressions on top of rim; diagonal finger wiping on outside of body, internal abrasion, 46, Cut No. 73; Ext. No. 5722.



25. Prehistoric pottery 1-14. Scale 1:4

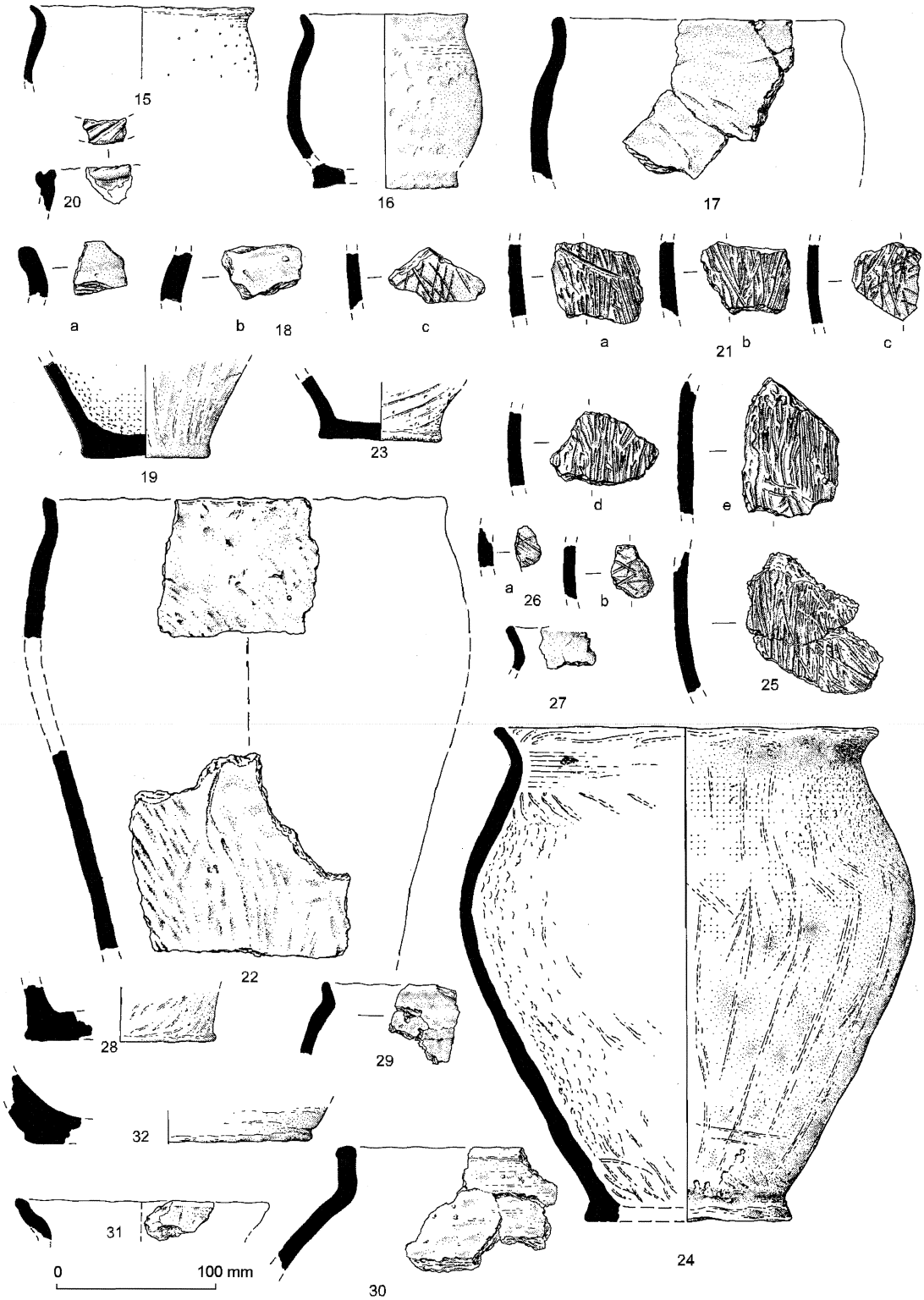
5	A3.1	Rim; Q2, R4, Heavy scoring (BR) on body and tooling on rim (DL), 1299, Cut No. 1336; Ext. No. 5230.
6	A3.1	Rim, Q2, R9, 1381, Cut No. 1432, Ext. No. 5276.
7	A3.1	Rim, Q2, R3, 8% of 155mm, 46, Cut No. 73, Ext. No. 5723.
8	B1.2	Rim, RQ1, R3, 3% of 155mm, 1130, Cut No. 1144, Ext. No. 5147.
9	B1.2	Rim; Small jar/beaker; Q2, R11, 20% of 90mm, 48, Cut No. 1144, Ext. No. 5772.
10	B1.2	Rim, Q2, R4, 21% of 250mm, Base, B3, 35% of 170mm; very abraded, 1089, Cut.No. 1144 , Ext. No. 5617.
11	B1.2	Shoulder from round-shouldered vessel (R6), Q2, horizontal finger wiping on outside, 1089, Cut. No. 1144, Ext. No. 5621
12	B1.2	Base, Q2, B3, 14% of 150mm, scored (SCR), highly fired, 1141, Cut No.1142, Ext. No. 5157.
13	B1.2	Rim, Q2, R2, burnished inside and out, 1141, Cut. No. 1142, Ext. No. 5159.
14	B1.2	Rim, Q2, R3, burnished lines on outside, internal and external abrasion, 48, Cut No. 1144, Ext. No. 5728.

illus.26

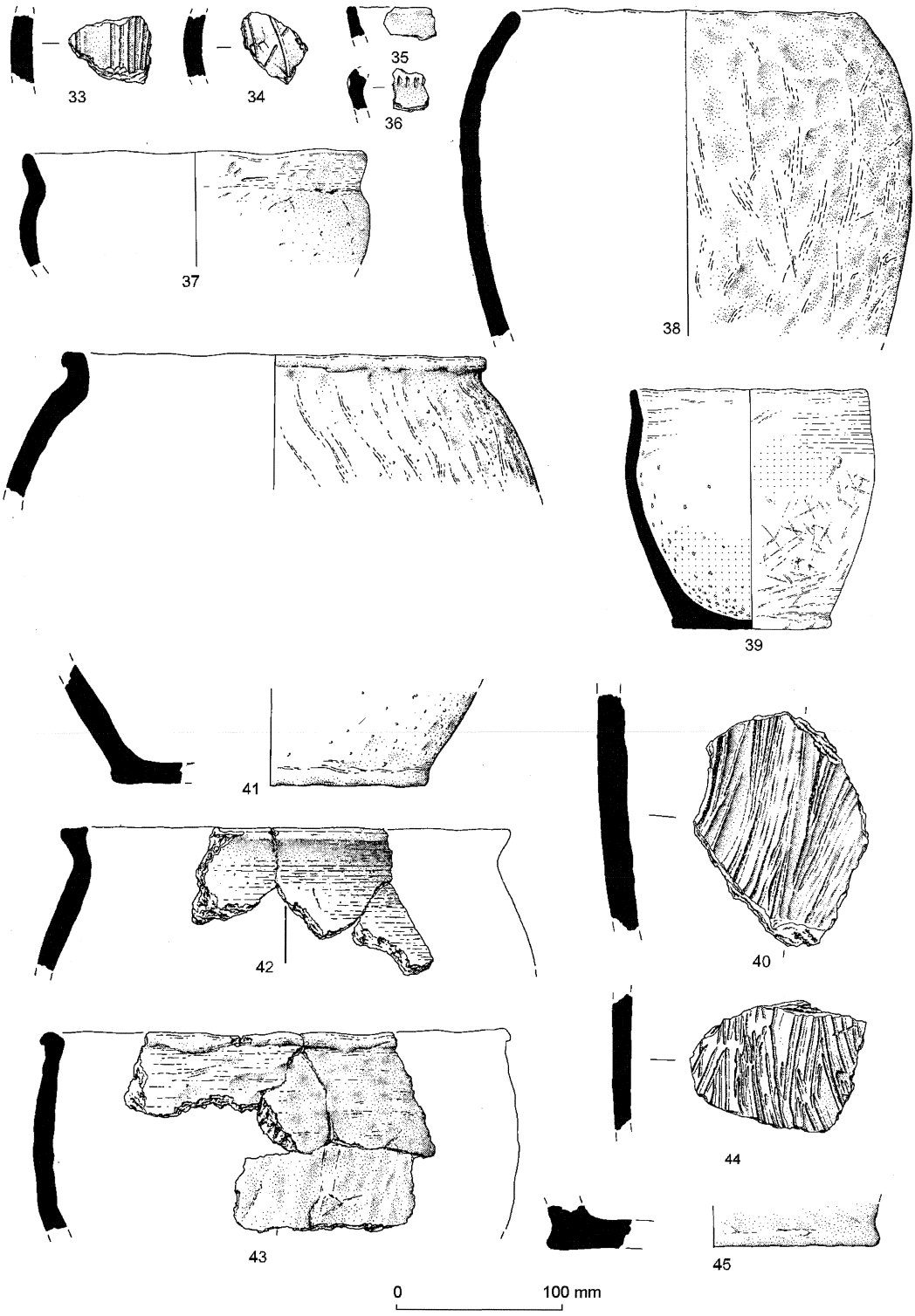
15	B2.1	Rim; Q2, R3, 14% of 140mm, abraded on outside, 1202, Cut No. 1240 Ext. No. 5184.
16	B2.1	Rim, V, R3, 11% of 105mm, base, B1, 8% of 90mm, 1202, Cut No. 1240, Ext. No. 5185.
17	B2.1	Rim, Q2, R4, 11% of 180mm, external sooting, 1202, Cut No. 1240, Ext. No. 5183.
18	B2.1	Rim, V, R4, diagonal scored lines (SC), 1202, Cut No. 1240, Ext. No. 5186.
19	B2.2	Base, Q2, B2, 97% of 80mm, external vertical wiping above base, abrasion on inside (use wear?) 1012, Cut. No. 1078, Ext. No. 5607.
20	B3.3	Rim, RQ1, R3/R4, diagonal tooled lines on top of rim; 413, Cut No. 417, Ext. No. 5366.
21	B3.3	Decorated (scored vertical BR and horizontal/diagonal SC), RQ1, 413, Cut No. 417, Ext. No. 5364.
22	B3.4	Rim, RQ1, R4; 11% of 250mm, wiping on inside and outside of the vessel, 412 and 398, Cut No. 420, Ext No. 5594.
23	B3.4	Base, RP, B1, 97% of 80mm; Vertical scoring (BRL), 412, Cut No. 420, Ext. No. 5602.
24	B3.4	Whole Jar profile, RP, R5, 23% of 240mm, B1, 17% of 125mm, *c.*310mm height; shallow and deep scoring (BRL/BR) on outside and inside of rim; knife-trimming on inside; abrasion on outside; 412 and 398, Cut No. 420, Ext. No. 5593.
25	B3.4	Scored, Q2, vertical BR and diagonal SC, 412 and 398, Cut No. 420, Ext. No. 5597.
26	B3.4	Scored, Q1, diagonal SCR and SC, 412, Cut No. 420, Ext. No. 5416.
27	B3.4	Rim, Q2, R3, 412, Cut No. 420, Ext. No. 5418.
28	B3.4	Base, Q2, B1, 8.3% of 120mm, abraded, 412, Cut No. 420, Ext. No. 5603.
29	B3.4	Rim, Q2, R3, 7% of 185mm, burnish on inside and outside, 398, Cut No. 420, Ext. No. 5596.
30	B3.4	Rim, Q2, R4, external sooting, 398, Cut No. 420, Ext. No. 5595.
31	B3.4	Rim, Q2, R3, 6% of 160mm, 398, Cut. No. 420, Ext No. 5396.
32	B3.4	Base, RQ1, B1, 8% of 180mm, 398, Cut No. 420, Ext. No. 5634.

illus.27

33	B4.1	Scored (CO/BR), Q2, 1040, Cut No. 1095, Ext No. 5132.
34	B4.1	Scored (SC), RQ1, 1040, Cut No. 1095, Ext. No. 5131.
35	B4.1	Rim, Q2, R13, 1160 sample no. 409.1, Cut No.1161, Ext. No. 5501.
36	B5.0	Line of finger nail decoration, Q2, 54, Cut No. 55, Ext. No. 5774.



26. Prehistoric pottery 15-32. Scale 1:4.

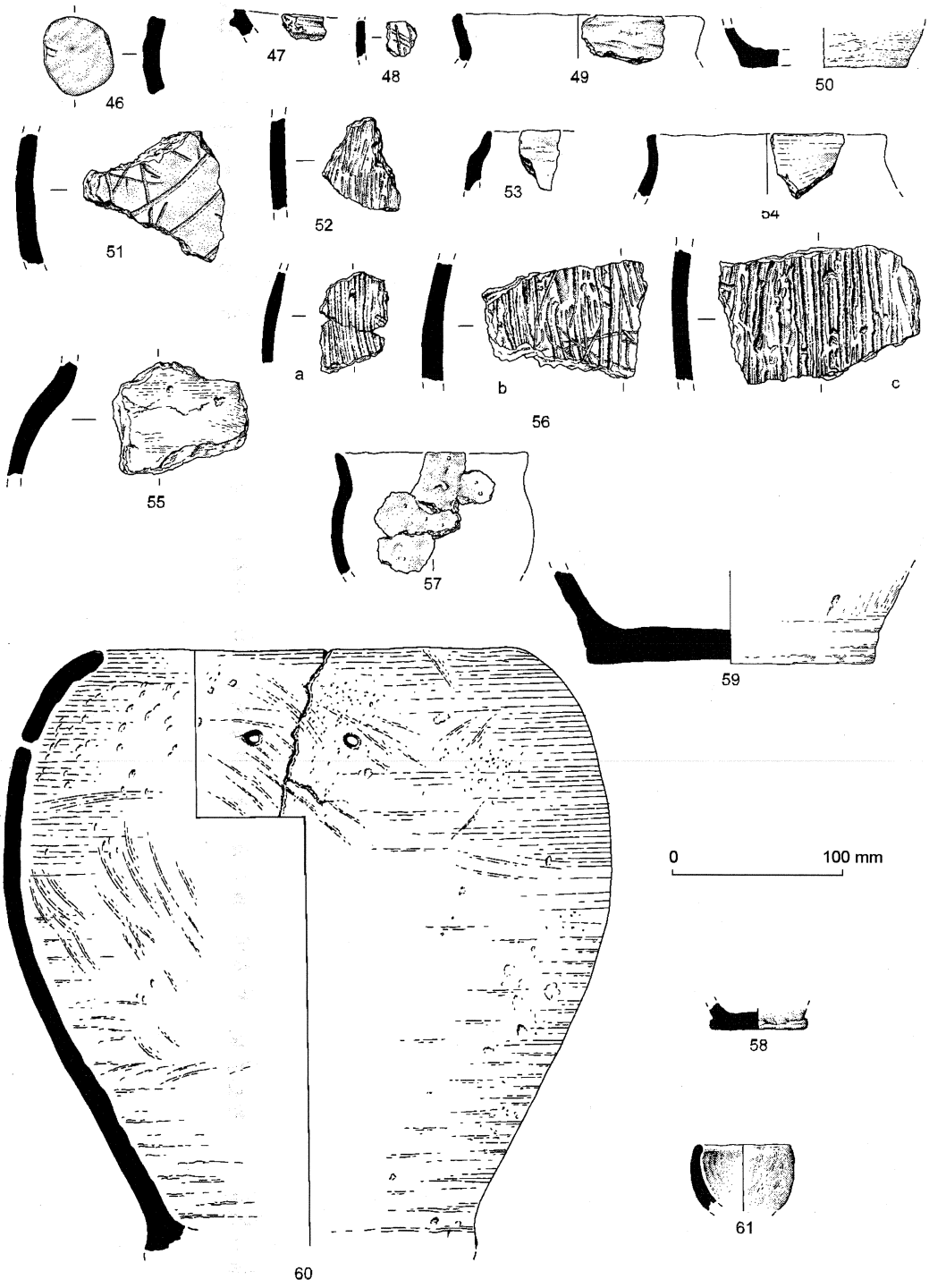


27. Prehistoric pottery 33-45. Scale 1:4.

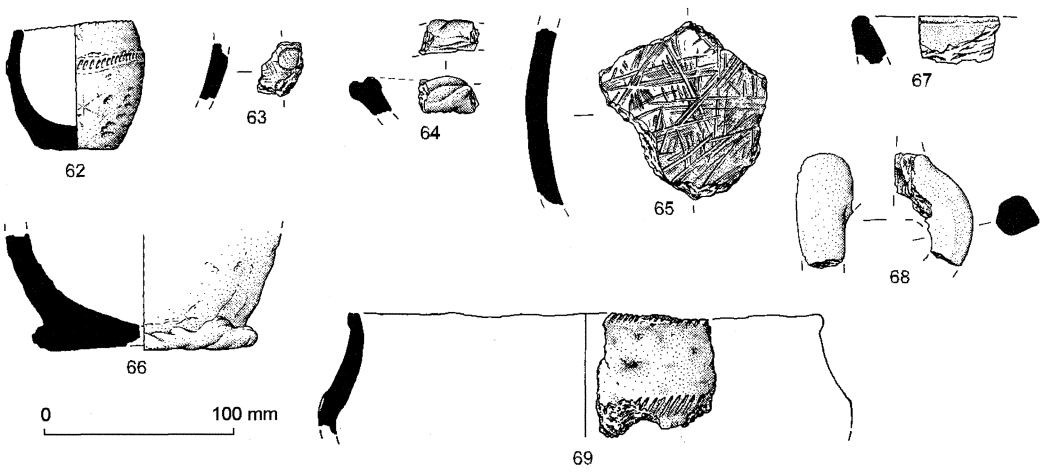
37 B5.1 Rim, RQ1, R4, 16% of 205mm, 1306, Cut No. 1315, Ext. No. 5243.
38 B7.2 Rim, RP, R1, 27% of 205mm, decorated (BRL); 3 sherds overfired, 1485, Cut No. 1486, Ext. No. 5630.
39 D2.1 Almost complete jar, RQ1, R3, 31% of 140mm; B1 100% of 95mm, vessel height 145mm; areas of burnishing on outside and inside of vessel, twig brushing on outside near base; abrasion on inside (base area) and outside especially on and below area of maximum girth; burnt residue on inside approximately on line of maximum girth, 1157, Cut No. 1189; Ext. No. 5629.
40 D2.1 Scored vessel (br), Q2; 1157, Cut No. 1189, Ext. No. 5625.
41 D2.1 Rim, Q2, R4, 7% of 245mm; B2, 8% of 250mm; lightly scored (BRL) body; burnished on outside and underside of base, 1157, Cut No. 1189, Ext. No. 5628.
42 D2.1 Rim, Q2, R4, 11% of 275mm, burnished on outside and inside, 1157, Cut. No. 1189, Ext. No 5627.
43 D2.1 Bowl with beaded rim, RQ1, R8, 18% of 285mm, 1157, Cut. No. 1189, Ext. No. 5626.
44 D2.1 Scored (BR -vertical and horizontal), Q2, 1227, Cut No. 1223, Ext. No. 5196.
45 D2.1 Base, Q2, B2, 17% of 195mm, 1167, Cut No. 1223, Ext. No. 5164.

illus.28
46 D2.2 Vessel sherd re-worked into disc, Q2, finger wiped and abraded on outside, 71, Cut No. 72; Ext No. 5665.
47 D3.1 Angular rim, RQ1, R17, 430, Cut No. 446, Ext. No. 5369.
48 D3.3 Scored (Diagonal SC+SCR), Q2, 403, Cut No. 414, Ext. No. 5018.
49 D3.3 Rim, Q2, R3, 9% of 150mm, wiped on outer surface, 403, Cut No. 414, Ext. No. 5025.
50 D3.3 Base, Q2, B1, 20% of 100mm, wiped underneath, 403, Cut No. 414, Ext No. 5024.
51 D3.3 Scored (SC) sherd, RQ1, overfired vessel, 403, Cut No. 414, Ext. No. 5371.
52 D3.3 Scored (BR) vessel, RQ1, 403, Cut No.414, Ext No. 5021.
53 D3.3 Rim, Q1, R2, burnished inside and outside, 403, Cut No. 414, Ext. No. 5749.
54 D3.3 Rim, Q1, R3, 10% of 140mm, burnished inside and outside, 403, Cut No. 414, Ext. No. 5750.
55 D5.3 Shoulder and part of neck from round-shouldered jar, Q2, 1018, Cut No. 1109; Ext. No. 5612.
56 D5.3 Scored vessel (BR+SCR); very sandy Q2; knife-trimming and wiping on internal surface, 1018, Cut No. 1109, Ext No. 5610.
57 D5.3 Rim; Q2; R3; 7% of 115mm; wiping on internal surface, 1018, Cut No. 1109, Ext. No. 5609.
58 D5.3 Base; Q2; B1, 14% of 60mm; 1018, Cut No. 1109, Ext. No. 5615.
59 D5.3 Base, sandy Q2, B2, 47% of 170mm, scoring (SCR) on outside and burnished on internal surface, overfired, 1018, Cut No. 1109, Ext No. 5608.
60 D5.3 Jar, Q1, R1, 50% of 255mm; Height >350mm; burnishing on inside and outside, wiping and knife-trimming on inside; limescale present on inside of vessel and two mending holes; 1018, Cut No. 1109, Ext. No. 5616.
61 D5.3 Cup, Q2, Rim, R10, 17% of 55mm, abraded on outside, 1018 sample 384, Cut No. 1109, Ext. No. 5469.

illus.29
62 F2.1 Nearly complete cup with finger nail decoration on rim and around girth of vessel, Q2, R10, 28% of 65mm; B3, 100% of 40mm; Vessel Height 65mm, finger impressions above base, 1, Ext No. 251.
63 F2.1 Stamped circles, RQ1, burnished surface, 1, unstratified, Ext. No. 5689.



28. prehistoric pottery 46-61. Scale 1:4.



29. Prehistoric pottery 62-69. Scale 1:4.

64	F2.1	Rim with ?applied decoration, RQ1, R4, 43, unstratified, Ext. No. 5719.
65	F2.1	Scoring (BR and BRL), Q2, highly fired, especially on internal surface and margin, 26, unstratified, Ext. No. 5756.
66	F2.1	Base, Q2, B1, 31% of 117mm, unstratified, 69, Cut No. , Ext. No. 5664.
67	F2.1	Rim, RQ1, R4, 1014, internally abraded, unstratified, Ext No. 5345.
68	F2.1	Handle, Q2, 1, unstratified, Ext. No. 296.
69	F2.2	Rim, jar with carination and beaded rim, R7, 7% of 250mm; tooled or slashed lines on rim and shoulder, 475, unstratified, Ext. No. 5631.

The illustrated querns

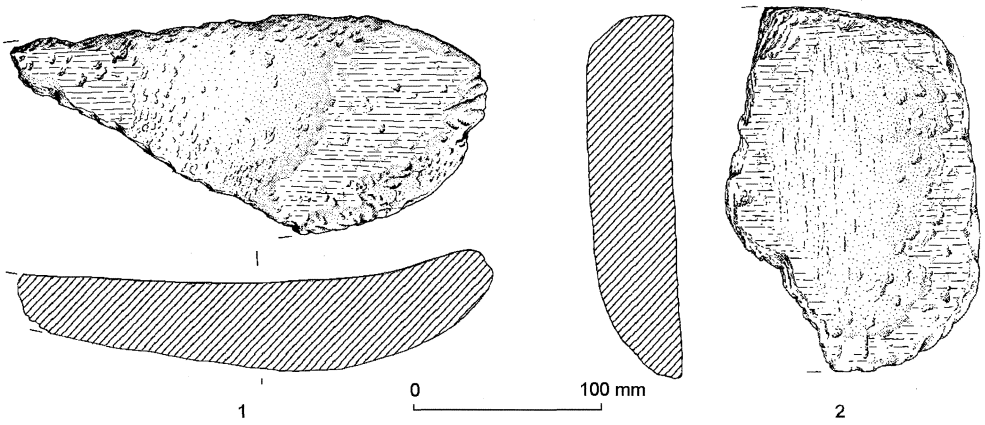
illus. 30	**Group**	**Description**
1	D5.3	Saddle quern, volcanic agglomerate local to Charnwood Forest, 1018, Cut No. 1109, Ext. No. 4000
2	D5.3	Saddle quern possibly re-used as saddle quern rubber, volcanic agglomerate local to Charnwood Forest, 1018, Cut No. 1109, Ext. No. 4001

The Querns

Patrick Marsden

1 Saddle quern. Volcanic agglomerate local to Charnwood Forest. Incomplete. 1018, Cut No. 1109, Ext. No. 4000 (illus. 30. 1)
2 Saddle quern/saddle quern rubber. Volcanic agglomerate local to Charnwood Forest. Incomplete. 1018, Cut No. 1109, Ext. No. 4001 (illus. 30. 2)
3 Rotary quern fragment. Local red sandstone (R. Clements pers. comm.). 1018, Cut No. 1109, Ext. No. 4002. Not illustrated.
4 Rotary quern fragment. Probably carboniferous sandstone (*ibid.*) from north-west Leicestershire. 1018, Cut No. 1109, Ext. No. 4003. Not illustrated.

The incomplete saddle quern and saddle quern / saddle quern rubber consist of the same rock, volcanic agglomerate local to Charnwood Forest (G. Weightman pers. comm.). They both show wear compatible with grinding (see illus. 30. 1-2). One is a



30. The querns 1-2. Scale 1:4

small saddle quern (illus. 30, 1, Ext. No. 4000). The other is much larger and its wear marks may show signs of re-use as a saddle quern rubber (illus. 30. 2, Ext. No. 4001). Saddle querns have been found at various Iron Age sites in Britain despite being gradually replaced by rotary querns during this period. In Leicestershire excavations at Breedon on the Hill recovered several saddle querns (Wacher 1964 and 1977). Two rotary quern fragments, both of sandstone but from different sources, were also present.

The Wanlip group consists of fragments of four querns from three different geological sources deliberately placed in a single pit. Together with the pottery discussed above this forms part of a special deposit. Other examples of querns used as special deposits in an Iron Age context are known from other sites including Danebury (Brown 1984) and Gussage All Saints (Buckley 1979, Buckley 1991).

The Lithics

Lynden Cooper and Jodie Humphrey

Introduction

The excavations produced 1,168 pieces of worked flint material of which 430 (36.8%) were recovered from excavated Iron Age features and 738 (63.2%) were from later or unstratified deposits.

The material was analysed in order to address two research aims:

1. Settlement and land use in the area during the Neolithic – Bronze Age
2. The use of flint material in the Iron Age

The assemblage was examined as two separate groups. Preliminary analysis of the stratified material was undertaken by J.H. which aimed to assess the use of flint during the Iron Age. The material has also been used in more recent work into the use of flint working in the Later Bronze Age and Iron Age (Humphrey and Young forthcoming) and some of this analysis is included here. The unstratified material was examined by L.C. who also scanned the stratified material to ensure consistency between the two

workers and to provide an overview. By separating the assemblage in this way the two groups can be compared with each other and can hopefully answer questions as to the nature of the material and the presence of residual material.

Raw material

The majority of the worked flint was of a translucent brown flint which graded to dark brown and grey. Colour was not recorded systematically due to the considerable variation within any one nodule. The cortex was mostly thin and smooth and orange-brown in colour, resembling nodules that can be recovered from local glacial till deposits, particularly the boulder clay. Recent excavations at an adjacent site provided an opportunity to assess the underlying gravels for flint suitable for knapping. Flint was extremely sparse and where recovered was not of the quality or type represented in the study assemblage. The latter was a darker, translucent flint which, typically, appeared to be of a better quality, lacking inclusions and demonstrating good conchoidal fracture. The larger pieces showed that the centre of the nodule could grade quickly into a translucent grey flint and sometimes into a grey cherty material. The rejection of this cherty flint by the knapper is reflected by many cores which had been worked around the cherty centre of the parent material and then discarded. The high incidence of retouched pieces and flakes retaining original cortex may also be a further indication of nodules only having good quality flint towards their periphery, though the small size of the parent material is obviously another factor. Other material commonly used was similar to the latter but had a slightly pitted, off white cortex with iron stained flecks and mottled recorticated scars with some evidence of water rolling. The material may derive from a terrace gravel or glacial till source. This material could yield fairly good quality grey brown translucent flint, but often contained large cherty inclusions. Finally, there was a small proportion of other flint including grey-white material of inferior quality and reddish-brown translucent material of good quality.

The stratified assemblage

Jodie Humphrey

The excavated material consists of 430 pieces of worked flint from stratified contexts of which 80% was analysed in detail, the rest with brief description. Some 231 pieces were retrieved by hand excavation (54%) with the remainder collected from bulk wet sieving of soil samples. The retouched material consisted of 59 pieces that had been modified either as an implement or as miscellaneous retouch.

All of the material was in a fresh condition apart from two burnt pieces and four that were slightly recorticated. The cortical state of the material shows a virtual absence of primary flakes (five pieces), possibly due to the smaller size of the parent material, which may also explain the fairly even level of secondary to tertiary material (204:221). The majority of tertiary material is small debitage mostly resulting from wet sieved samples.

The general breakdown of the material shows that the majority consists of unmodified flakes and debitage (illus. 31). Any complete flakes under 20mm for both length and breadth were considered debitage, many of which were less than 10mm. The proportion of formal tools is extremely low (6.5%) and limited mainly to scraping, cutting and awl type functions. However, a significant but small number of complete and broken flakes had miscellaneous retouch, therefore making it difficult to determine their purpose. The bulk wet sieved material made up 46% of the assemblage and mostly comprised small chips.

Technology

Analysis of the bulbs of percussion suggests that direct percussion using a hard hammer was applied generally during knapping. The length-breadth ratios of complete flakes and diagnostic implements show that the majority are short, squat (less than 1.6:1) flakes. Only six reached blade proportions (2:1 and parallel sides) and of these bladelets were the most common, perhaps indicative of the size of the raw material. However, shape, thickness, bulb size and the presence of multiple incipient cones on many pieces suggesting several attempts at removal for many of the flakes, implies that the technique used was not of a high standard.

The high proportion of debitage, including many extremely small complete flakes, may also be a sign that many attempts had been made to remove flakes but that the wrong angle had been used. Although most of these were recovered via the wet sieved samples, they cannot be ignored. The flaking angle was either oblique, vertical or well into the platform of the core. If the angle in which the core is struck is 90° or higher then the size, shape, incipient cones and debitage from crushing and minute flakes can be caused, and is considered a sign of poor technology (Whittaker 1996, p. 95). In view of this, other factors generally indicative of poor technology were assessed.

The hinge/step fracture of the flakes (also caused by the wrong flaking angle or existing hinge step fractures on the core; Whittaker 1996, 108), was significant enough to be noticed in the assemblage. Of the complete flakes and diagnostic implements 19.5% had hinge/step fractures, as did 10% of the broken flakes and implements. Bulbar scars were represented on 16% of material where bulbs were still present, and the presence of cortical butts was very high on complete material, making up 44%. Where the butt was present on broken material 13% had cortex.

All of these factors suggest a diminished technology, but whether this was due to lack of knowledge, or a lack of interest in the style of the finished product is uncertain. The amount of cortical butts may suggest a lack of technique, but may also have been intentional to reduce the amount of modification needed to create a comfortable handling implement. The width and thickness of the butts was measured, but the only observation made showed that the larger sized flakes did appear to have wide, thick butts in comparison to the smaller flakes. This may be a coincidence of knapping, but may also have been the required shape for the manufacture of scrapers, which are the most significant diagnostic implements in the assemblage. This may suggest that requirements for shape were preconceived before knapping began.

Only six cores were found in the assemblage of which four were distinctively recognisable. Only one had been used for flake manufacture and later for bladelets (ext. no. 1241), and was also the only core to show signs of a prepared platform. All of the cores were small, possibly either due to having been exhausted or the small size of the raw material. The rest of the cores were used for flakes only and appear to have been struck randomly.

Retouched pieces

The 59 retouched pieces made up 13.3% of the stratified material but 30 of these could only be classified as miscellaneous. Whether they were meant as tools, retouched for easier handling or unfinished pieces was indiscernible. However, it was noted that in all of the retouch examined, there were only very small removals from the very edges of the flakes.

In the case of the 29 formal implements (illus. 31) much of the retouch appears to have been made to make the tool easier to handle, with only a small amount of modification made for the function of the implement. Style seemed to be of little importance which could be seen predominantly in the cutting flakes, and the points and spurred pieces probably used as awls. Twenty-three of the diagnostic implements were secondary and it was noted that the cortex had been left intact where it was held most comfortably in the hand.

Implement type	**Cortical state**	**Number**
Microlith	Tertiary	1
Arrowhead	Tertiary	1
Cutting flake	Secondary	5
Cutting flake	Tertiary	1
Pierces	Secondary	7
Scrapers	Tertiary	2
Scrapers	Secondary	9
Serrated blade	Secondary	1
Serrated flake	Secondary	1
Spurred tool	Tertiary	1

Table 14: Number and cortical state of diagnostic implements in the stratified material

Four of the eleven scrapers (illus. 31.7, 10, 11 and 15), were of a very dark brown flint in contrast to the lighter brown for the majority of the material. Five were complete, one was burnt, fairly round in shape, and retouched to form an edge scraper (ext. no.1650, not illustrated). Another of the complete scrapers can be defined as a hollow scraper (ext. no. 922, not illustrated) and another as a long scraper (illus. 31.8). The remainder were a broken variety of side, end and disc scrapers. The angle of retouch between them ranged from 33°-66°, perhaps with the earlier pieces having the lower angles. Nine of them were cortical, and it has already been suggested that this was left intact deliberately.

Two serrated pieces (illus. 31.4 and 5) were recovered, one on a blade which had been produced with more control than most of the material. The piercers and spurred tools from this assemblage are again poorly made as described above. The cutting flakes had very little modification and seemed mainly for the purpose of holding the sharp flake rather than improving the function.

Material concordance by feature type

To address the problem of residuality the quantity of flint and Iron Age pottery was plotted against individual features and feature type to attempt to assess differences in deposition. The three main groups pit, post hole and ditch show that the deposition of flint to pottery was less than 1:3 and that the majority was recovered from pits. Two of the pits B3.4 and D5.3 which contained special deposits included the largest quantities of pottery (324 and 147 sherds respectively), although the relative quantity of flint was very low (three pieces in B3.4 and one in D5.3). The firepit, D1.1, did not contain many artefacts, but the ratio between pottery and flint was virtually equal. The pottery was mostly dated to the middle Iron Age with the exception of a complete vessel and two sherds which date to the late Bronze Age/early Iron Age (above p.48). There was no other material present that may indicate residuality for these contexts and therefore the fill of the contexts are considered to be middle Iron Age in date.

The unstratified assemblage Lynden Cooper

The unstratified group comprises any lithic material not recovered from Iron Age features. It was retrieved from the ploughsoil, spoil heap, the hand excavation of post-Iron Age deposits (colluvium and plough furrows) and during hand cleaning of the archaeological horizon. Many of the pieces display some edge damage resulting from machine recovery or ploughing, though the ratio of complete to broken flakes is high (*c.* 5:1). There is undoubtedly a bias towards larger pieces compared to the stratified material mainly due to differences in recovery methods. The stratified material was subject to both hand excavation and an extensive wet sieving programme resulting in an assemblage with many small pieces.

Type	No.	% of unstratified material
Complete flakes	251	34.0
Broken flakes	41	5.6
Flake core	46	6.2
Chip	53	7.2
Chunk	74	10.0
Struck fragment	24	3.3
Complete blade	17	2.3
Broken blade	15	2.0
Flake with dorsal blade scar	4	0.5
Blade core	17	2.3
Burnt fragment	4	0.5
Implements/retouched (flake)	179	24.3
Implements/retouched (blade)	12	1.6
Platform preparation flake	1	0.2
	738	100.0

Table 15: General breakdown of the unstratified flint assemblage

A breakdown of the assemblage is given below which should allow a general consideration of the debitage pattern (Table 15). It also contrasts the products of flake and blade technology following the preliminary methods of lithics analyses used locally (e.g. Clay 1996), to provide a broad chronological division between Mesolithic/Early Neolithic and Late Neolithic/Bronze Age (and Iron Age?). Further detail of the debitage pattern, in terms of cortex amount is also provided (Table 16).

	Primary	Secondary	Tertiary
Blades	-	12	5
Broken blades	-	8	7
Flakes	8	182	61
Broken flakes	3	22	16

Table 16: Presence of cortex on dorsal face of unmodified blade and flakes

Technology

Blade production, use and discard in the excavated area is evident from the recovery of cores, a platform rejuvenation flake (core tablet), unmodified blades and those with retouch. Blades are simply regarded as any flake with a length:breadth of 2:1 (Bordes 1961, p.6; Inizan *et al.* 1992, p.76). The blades and blade scars on cores are nearly all of a small size and may be best termed bladelets (less than 12mm wide, following Tixier 1974). There is little evidence for platform preparation by facetting (one possible blade butt), though platform edge abrasion and dorsal spur trimming can be seen on many cores and blades. The blades mostly have narrow, linear butts with diffuse bulbs. The blade cores are generally of a small size and multi-platformed. The technological attributes are all typical of later Mesolithic technology (Holgate 1988c, pp.54-7). Such a date is supported typologically by a single rod microlith from the stratified assemblage and an unfinished(?) microlith from the unstratified material. The proportion of all pieces displaying a blade technology in the unstratified group is rather low at 8.8%, though it would seem to indicate a significant component. The low figure may be an under representation reflecting the recovery bias against such small pieces. This can be seen by the core:flake ratios for blade and flake technology: including broken examples to increase the sample size the ratios for flakes and blades are *c.* 1:6 and 1:2 respectively.

The majority of the assemblage attests to a simple flake technology with few signs of controlled flaking from the core. The cores show no sign of platform preparation though this may be because they were exhausted; the majority of cores were very small. The cores were mostly quite irregular with many multi-platformed and keeled forms. The use of a hard hammer predominated and butts were mostly plain, but a proportion indicated core preparation. From a sub-sample of 138 complete flakes some 110 (89.7%) were plain, nineteen (13.8%) had cortical butts, six (4.3%) were facetted and three (2.2%) were dihedral.

Implements and retouched pieces

Implement type	No.	% of total implements (unstratified)
Points	71	37.2
Scrapers	49	25.7
Concave scrapers	9	4.7
Knife	1	0.6
Notched pieces	15	7.9
Cutting flakes	9	4.7
Arrowheads	1	0.5
Arrowhead blank?	1	0.5
Spurred pieces	7	3.7
Miscellaneous retouch (flake)	20	10.5
Miscellaneous retouch (blade)	8	4.2
Total	191	100.2

Table 17: Breakdown of implements and retouched pieces

Points

This category includes all pieces which show evidence for the pointed ends having been utilised (as piercers, awls and borers). The group is very divergent in form and quality of flint used. Confirmation of use was seen for 18% of points, evident from crushed or worn, rounded ends (at x10 mag.). A proportion (17%) showed additional retouch possibly indicating a composite tool, but more likely to be a measure to aid the handling and use of the piece (illus.32. 26). Some 8% showed evidence for more than one utilised point, with one piece having three such features.

Scrapers

Type	Frequency
Short End	7
Long End	2
Extended End	5
Long Double End	1
Broken End Scrapers	2
Side	3
Thumbnail	4
Pointed	3
Scraper with prepared base	1
End of Bladelet	1
Unclassified	20
Total	49

Table 18: Scrapers

Most of the types listed above are those used conventionally. Pointed scrapers refer to pieces that have distinct pointed ends that would appear to have been used, although it is accepted that they overlap with the category of 'end scraper' (Saville 1981) and even the 'point' category. The unclassified scrapers include those with scraper like retouch on thermal pieces, chunks, irregular flakes or as fragmentary pieces.

The two broken end scrapers each have a snap fracture which may have occurred from pressure during use. These can be compared with similar examples amongst the stratified assemblage (illus 31. 9 and 15). The thickness of the pieces might suggest that such damage could only have occurred if the pieces had been hafted. An additional extended end scraper may have snapped though this was obscured by inverse retouch, which itself would have facilitated hafting or handling. Two other scrapers (side and extended end) also showed evidence for additional concave retouch, perhaps indicating a composite tool but more likely to have facilitated handling.

The scrapers are variable in terms of type, raw material and technical ability. In terms of dating only the four thumbnail scrapers can be regarded as diagnostic (illus. 32. 23 and 24). Each of these is well made and displays the distinctive shallow invasive retouch conventionally regarded as Early Bronze Age date. The various end scrapers are well made and are consistent with a general Neolithic/Early Bronze Age date. One of the extended end scrapers (illus. 32. 22) is a flat, symmetrical piece made from a very dark, good quality flint. It compares well with scrapers recovered from a late Neolithic pit at Eye Kettleby (Cooper forthcoming b) and the stratified disc scraper (illus.31.7) in terms of raw material and technology. The unclassified pieces include miscellaneous forms with examples of denticulated and angular, straight edge retouch and the use of irregular flakes and thermally fractured pieces. Such characteristics would perhaps suggest a later Bronze Age date (Humble, forthcoming) or possibly later, into the 1st millennium BC.

Concave scrapers

Pieces in this category are those with concave retouch displaying a scraper like edge. There is perhaps some overlap with notched pieces where the notch is broad. Concave scrapers were made on a wide variety of flake forms, all displaying a rather crude technology.

Spurred pieces

Seven pieces have short spurs extending from scraper like edges (illus. 32.27). Some exhibit wear on the adjacent straight or concave edges, and thus resemble hollow scrapers, though the deliberate and sometimes careful preparation of the spur suggest that it may have been a working end of the piece. Spurred pieces have been suggested as chronological indicators for the later Bronze Age (Humble, forthcoming) though they have been noted in Late Neolithic and Early Bronze Age contexts e.g. Windmill Hill (Smith 1965, p. 105) and Belle Tout (Bradley 1970, p.355).

Notched pieces

This implement class includes pieces with notching represented by more than one removal for the notch. Pieces with notches formed by a single removal were considered suspect and not included in the category in view of the evident plough damage on much of the unstratified assemblage. It is quite plausible that several of the pieces within this class could also result from the plough.

Cutting flakes

Flakes that exhibit a sharp, straight or curved edge and are capable of being held have been regarded as potential cutting flakes by others (Ford 1987; Saville 1981). The term is used here when there is additional evidence for edge use, usually in the form of rounded edges. The attribution is further supported by three examples with opposed retouching that could allow handling during use.

Arrowheads

An oblique arrowhead with a broken tip, probably impact damage, and slight damage to a projecting barb would appear to be of Green's Type d (1980, p.102); illus. 32. 18.

A possible unfinished arrowhead was formed from a relatively thick Levallois-type flake. This had invasive removals on much of its ventral surface and a few removals along one side on the dorsal face. The piece may have been abandoned due to a large, irregular removal which had removed its base leaving a deep, irregular fracture that could not be corrected (illus. 32.19).

Knife

A small scale-flaked knife with long to invasive, semi-abrupt to shallow removals along one edge and its distal end (illus. 32. 20). The opposing edge is quite irregular formed by a long inverse removal from the proximal end which has received short, abrupt retouch. The knife can be compared with examples from the Beaker assemblage at Windmill Hill (Smith 1965, fig. 50, F174).

Miscellaneous retouch

A general group ranging from fragmented pieces with regular retouch to complete flakes with irregular or regular removals that do not fit into the above formal categories. An attempt has been made to remove any pieces from this category where the removals probably derived from post-depositional damage.

Discussion

Technological and typological analysis of the unstratified material has indicated a mixed assemblage with characteristic material from the later Mesolithic, the late Neolithic/early Bronze Age and the later prehistoric period. However, due to the palimpsest effect it has proved difficult to disentangle these different periods and assess their relative contributions. The earliest material is indicated by a bladelet technology included a backed bladelet (unfinished microlith?), all typical of the later Mesolithic. The late Neolithic/ early Bronze Age period is well represented by diagnostic tools including the four thumb-

nail scrapers, the knife and oblique arrowhead. At least fifteen of the remaining scrapers (end types and the prepared base example) can also be regarded as Neolithic/early Bronze Age. Much of the undiagnostic retouched material and the flake debitage is also consistent with the latter date. A proportion of the material probably resulted from later prehistoric flint working, but this could have been from the middle Bronze Age onwards.

One of the research aims for the Wanlip project was to assess the possibility of the use of flint material during the Iron Age (Young and O'Sullivan 1992, Humphrey 1996, Humphrey and Young, forthcoming). Two suggestions can be put forward for the stratified assemblage;

1. That the material is residual dating from pre-Iron Age contexts.
2. That the material belongs to a mixed assemblage including Late Neolithic/Early Bronze Age material but with some contemporary with the site.

It is not entirely clear which one of the above applies to this assemblage, but the material has found its way into the pits and ditches along with Middle Iron Age pottery either as residual or contemporary. The majority of the knapping technology used resulted in poor quality flakes, showing a lack of control either as a consequence from a decline in the technology, or a lack of interest in the finished style of an implement.

All of the pieces that had been modified for use were perfectly functional implements despite their undiagnostic appearance. The poor quality raw material would add to the difficulty in producing a reasonable standard of material, but the virtual absence of any preparation for knapping adds to the picture the high level of random striking and lack of control involved. However, despite this the material *does not* show a level of opportunistic knapping. The retouch for the reduced 'tool kit' is worked with preconceived ideas about the function of the implement and how it will be held. The restricted nature of the 'tool kit' does suggest that flint was knapped for certain tasks, maybe where metal was in limited supply or not practical for the task at hand.

If flint was still being worked in the later prehistoric period should it be assumed that the technology had completely declined? Could it be that the symbolic associations linked to worked flint in earlier prehistory had been transposed into metal production, leaving a lack of interest and care taken in flint technology. Either way the resulting flint artefacts from this period appear to show the same technological criteria. It is a common view in present archaeology that artefacts have a practical and symbolic function (Hodder 1991, Shanks and Tilley 1987), but as the symbolic and social uses of flint declined and metal gradually became widespread the use of worked flint slowly became more embedded into the domestic sphere (Edmonds 1995). Needham (pers.comm.) suggests that metal production was not widespread in the Bronze – Iron Age transition, which may have resulted in the use of flint in the later prehistoric periods.

Several Late Bronze Age and Iron Age sites have produced similar patterns in terms of limited but similar implements and a lack of control in the working of the flint. These include Lofts Farm, Essex (Holgate 1988a, pp.276-7, London Road, Thetford, Norfolk (Gardiner 1993, pp.456-58), Broads Green, Essex (Holgate 1988a, p.12), St. Ives, Cambridgeshire (Pollard 1996, pp.108-109) and Birchanger, Essex (Austin 1994, p.43).

In all of these Late Bronze Age and Iron Age sites a pattern is beginning to emerge for the production and use of simple scraping, cutting and piercing implements, produced by a crude form of technology. Whether this technology is from a decline in skills or from a lack of concern for style and a move away from social symbolic functions is not yet known. However, it does seem clear that the use of flint in later prehistoric contexts can now be suggested.

However, an alternative interpretation can also be presented for the stratified assemblage. The proposition that the material may be contemporary with the site rests on two notions;

the low proportion of residual material and the poor technology employed in the knapping process. The lack of diagnostic tool types in the stratified group need not be an indicator of low residuality. Although the proportion of diagnostic, formal tools is low this is also typical of many lithic assemblages. In the Neolithic/Bronze Age assemblage at Eye Kettleby, Leicestershire, only 10% of retouched forms could be considered chronologically diagnostic and these formed only 1.4% of the total assemblage (Cooper forthcoming b). The suggested predominance of 'squat' flakes, is less obvious if flakes less than 20mm long are removed from the assemblage (following Saville, 1980) which would result in the majority of pieces having length:breadth ratios of more than 1:1, a size range perhaps more typical of pre-Bronze Age technology. The Wanlip assemblage is comparable to middle Bronze Age groups from Grimes Graves, Norfolk (Herne 1991 p.47). Another factor which should be considered is the high proportion (54%) of broken flakes amongst the stratified group which could be interpreted as the result of a long term time lag between discard and eventual deposition in the Iron Age contexts?

That much of the material does display a crude technology cannot be denied but such criteria as broad butts, lack of platform preparation, common hinge terminations, hard hammer usage and more obtuse flaking angles are typical by the middle Bronze Age (Fasham and Ross 1978; Drewett 1982; Herne 1991; Humble forthcoming). Furthermore, in a domestic context such traits are well established by the late Neolithic (Holgate 1988c, pp.60-1 and p.127). Holgate has highlighted the dichotomy in this period between crude technology using local, poor quality flint in the domestic sphere and fine workmanship using good quality resources for 'prestige' goods. This can perhaps be seen locally in a flint assemblage from a pit containing late Neolithic Grooved Ware at Eye Kettleby (Cooper forthcoming b). Two types of flint are represented: a dark brown translucent flint reserved for transverse arrowheads and fine, symmetrical scrapers and a poorer quality, lighter brown flint used for other scrapers and miscellaneous retouched pieces. A late Neolithic (or early Bronze Age) pit at Syston has also produced a flint assemblage with an obvious dichotomy in terms of raw material and technology (Cooper forthcoming c).

Analysis of the Wanlip lithic assemblage, therefore, has made some contribution to the study of settlement and land use during the Neolithic and Bronze Age. The assemblage has shown evidence for activity on or close to the site including primary knapping, tool production and tool discard. The majority of formal tools are scrapers and points (piercers etc) which may indicate activities related to processing of hides. The proximity of other lithic surface scatters with diagnostic late Neolithic/early Bronze Age material suggests small, adjacent foci for activity in the area. The two nearest scatters are located at a similar topographic position to the Wanlip site, around the 60m contour. There appears to be some later Mesolithic activity in the area evident from the bladelet material from the site and the adjacent scatters. However, there is an impression that the early Neolithic is absent or not identified. The identification of probable later Bronze Age pottery and flint at the site suggests that the specific area was a focus for activity for a considerable time.

The question of Iron Age flint usage at Wanlip has not been resolved, but it certainly remains a possibility. Future research on this topic should prioritise sites with stratified sequences, especially those where residuality can be shown to be minimal, or those which provide convincing spatial or contextual patterning. Such patterning might comprise associated lithic and other cultural material restricted to contexts showing identifiable acts of deposition within features (rather than the wholesale treatment of a single feature as the unit of analysis). Another example of convincing spatial patterning would be lithics delimited by structural features e.g. the material found within the area of the buildings at Black Patch (Drewett 1982). To demonstrate such patterning would require the 3-dimensional recording of finds from features and deposits.

Catalogue of illustrated material

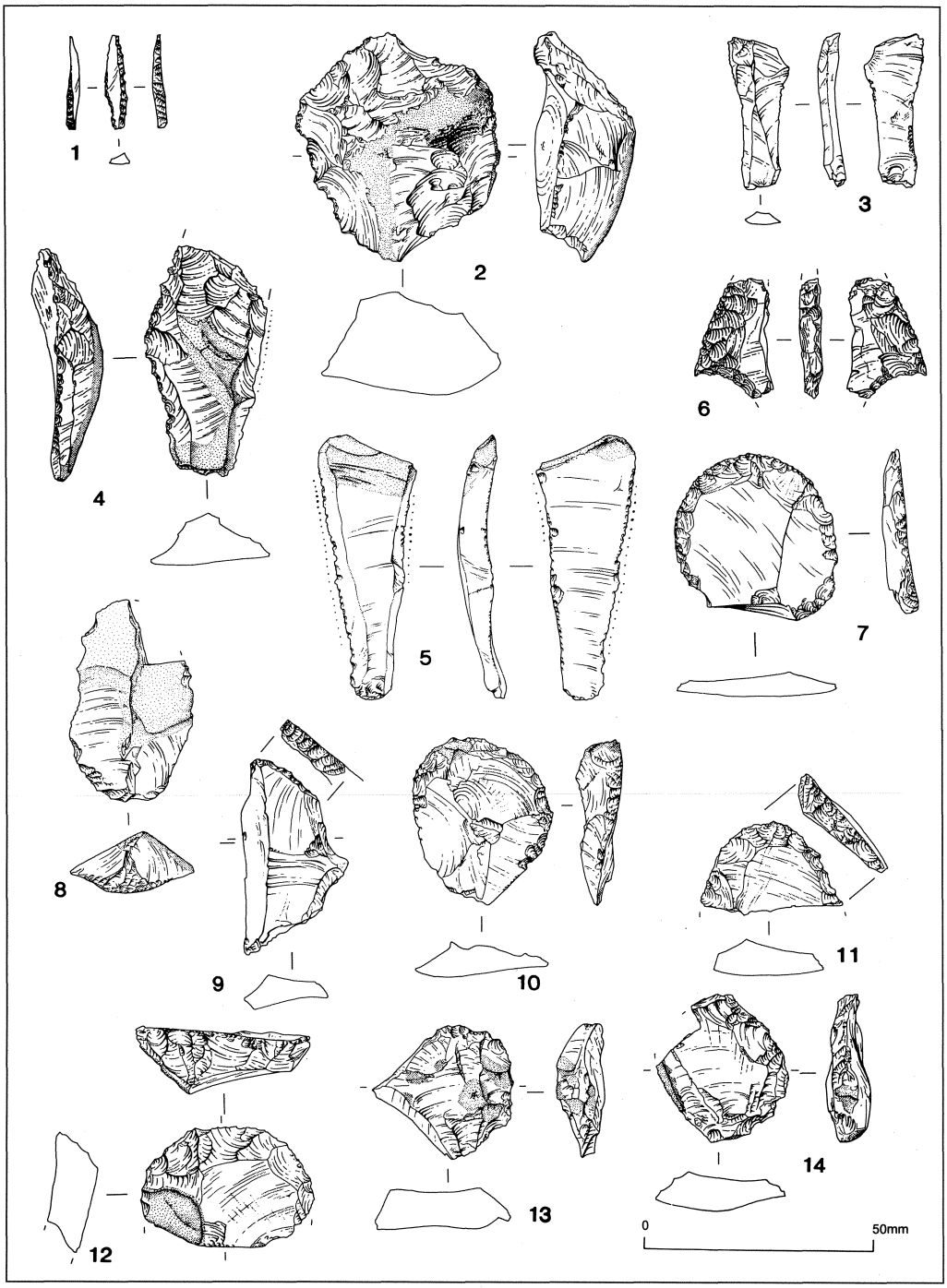
	Ext.	Context	Description
Stratified			
1	1790	1379	rod microlith
2	1241	1004	flake and bladelet core with prepared platform
3	46	64	blade, broken
4	953	1082	serrated flake
5	955	1200	serrated blade with gloss
6	918	439	oblique arrowhead fragment
7	945	1441	disc scraper
8	1032	1017	scraper
9	1958	64	end scraper
10	948	1022	scraper
11	1195	1248	scraper
12	1116	1016	scraper
13	1751	1268	side scraper
14	949	432	scraper
15	1039	1298	end scraper
16	998	1333	point with additional retouch, probably to facilitate handling
Unstratified			
17	1113	1017	blade fragment with utilised edge
18	958	487	oblique arrowhead
19	979	1025	unfinished arrowhead?
20	1337	1	knife
21	1990	1	scraper
22	930	1	double end scraper
23	1145	1	thumbnail scraper
24	324		thumbnail scraper
25	286		point with two points and additional retouch, probably to facilitate handling
26	393		point with scraper-like edge at the base, probably to facilitate handling
27	1460	1	spurred piece

The cremation burial

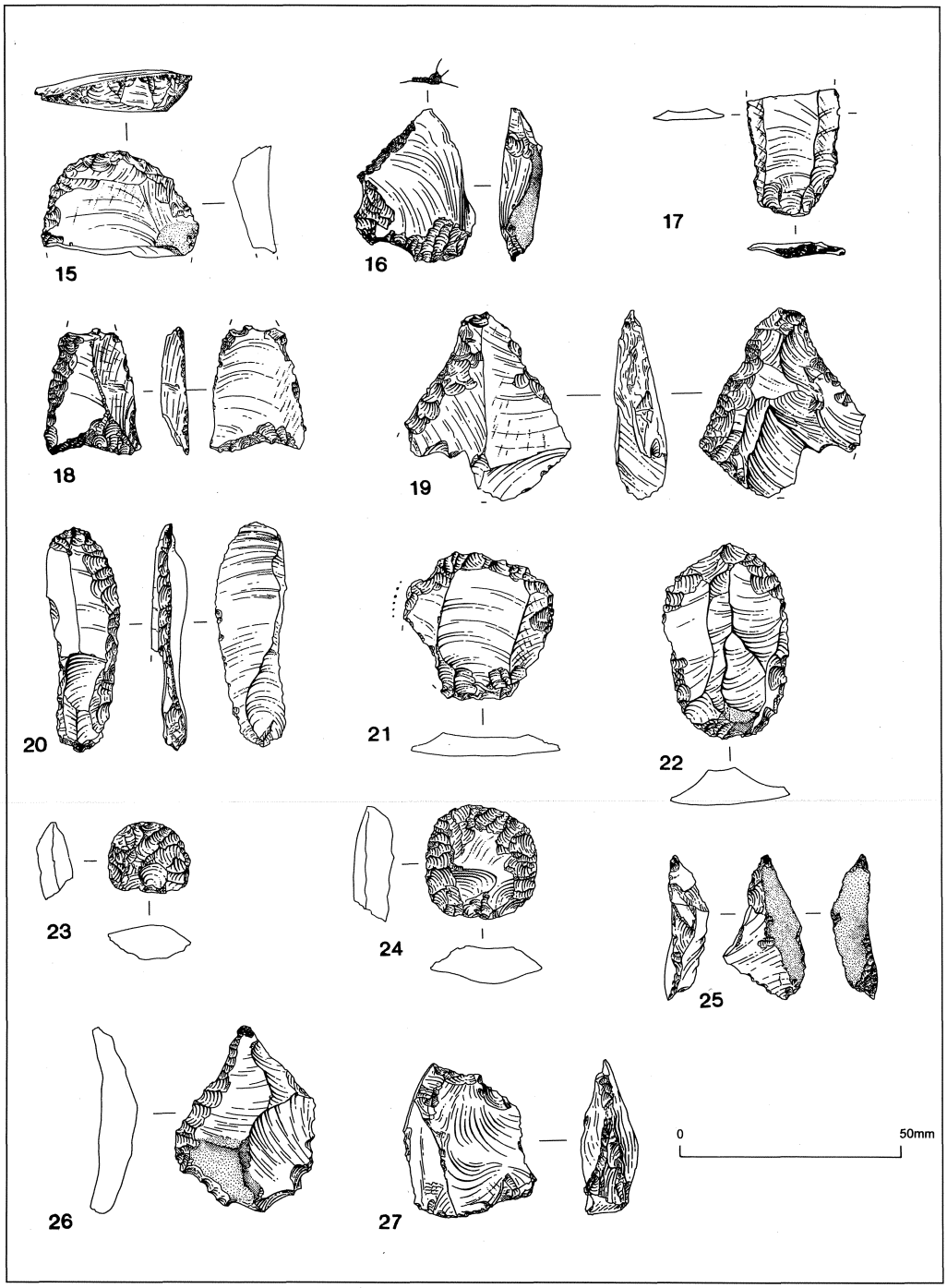
Ian L. Baxter

The cremation in B4.1 1096 (1019; above p.00) seems to be the truncated burial of the remains of a young adult individual of indeterminate sex. The average size of the fragments (estimated in mm) is 15mm for the coarse (>4mm) fraction and 4mm for the fine (>2mm) fraction and approximately 10mm overall. The largest fragment is 62mm long. All the bone is white in colour (calcined) with brown staining from the soil. It is generally hard with some fissuring and its colour suggests cremation at a relatively high temperature comparable to modern crematoria, i.e. *c.* 900 degrees Celsius (Wells 1960).

Overall weight of the remains is 318g, which represents approximately 20% of the weight of a complete cremation (Evans 1963). Most of the fragmentation of these remains seems to have occurred before deposition or in the ground before excavation. Gejvall (1963, p. 381) has suggested that prehistoric cremations were subjected to mechanical breaking-up, either to get them into the burial container or to make them easier to handle.



31. The lithic material – stratified group. 1-14. Scale 2:3.



32. The lithic material – stratified finds 15-16 and unstratified group.17-27. Scale 2:3

The plant remains

Angela Monckton

Introduction

Charred plant remains including cereals and weed seeds are preserved in most soil types at occupation sites of most periods and can give evidence of diet and agriculture in the past. However there is little archaeobotanical evidence from prehistoric sites in the region (Moffett 1992), particularly before the Late Iron Age. Hence it was considered important to bulk sample at this site to attempt to recover charred plant remains. This Middle Iron Age occupation site was selected for extensive sampling because the sandy soils gave the opportunity for easier recovery of these remains than the clay soils of other sites in the county, and the presence of a layer of colluvium over part of the site was thought to have sealed the remains from damage and contamination. It was also considered a priority to recover charred plant remains because little bone or shell was preserved so plant remains alone had the potential to provide some evidence for the environment or economy of the site.

Methods

Samples were taken from all areas of the site and from features above and below the colluvium. As plant remains had been found to be in a low concentration at other occupation sites in the county, large volumes of samples were processed. All well defined archaeological contexts were sampled. The samples ranged from 5 to 150 litres in size and were processed by wet sieving in a York tank with a 0.5mm mesh and flotation into a 0.5mm sieve. Samples from a total of 282 contexts (from 24 context groups) were processed amounting to 5157 litres (6.7 tonnes). Residues were air dried and the fraction over 4mm sorted for all finds. The fine fraction of the residue, 0.5 – 4mm, was scanned by eye and then sorted if burnt bone was present and considered for reflotation if charred material was still present. The flotation fractions (flots) were all scanned and then sorted if plant remains were present using a x10 stereo microscope.

During scanning the flots the numbers of each type of plant remains was estimated and unusual species noted. The samples were then grouped in line with the context groups from the site and totals tabulated to show the distribution of plant remains on the site (Table 19). Groups with over 70 charred items seen during the assessment (Table 19) were Groups B2, B3, D1, D2, D3 and D4. The most productive contexts from these were recorded together with other representative or interesting samples, the plant remains were identified as far as possible, listed and counted (Table 20). The remains recorded are seeds in the broad sense unless stated and the names follow Stace (1991). Uncharred seeds were found in many of the samples. The fine residues were refloated if charred material was present in them and this was also done to recover charcoal for radiocarbon dating. This improved recovery in some but not all cases, probably from samples collected in wet weather. Any additional material was added to the selected samples in Table 20, hence the results from scanning are an underestimate in some cases (Table 19).

The types of remains found ie grains, chaff, seeds and other items can give evidence about crop processing (Hillman 1981). In order to examine this the following ratios were calculated treating wheat and barley separately and assuming all the wheat to be glume wheat; wheat glumes to wheat grains, barley rachis to barley grains, and weed seeds to total grains (van der Veen 1992). The indeterminate cereal grains were divided between wheat and barley according to the proportions of identified grains. Samples with few remains were not used because the proportions could be distorted by even small numbers of residual remains.

Group	Contexts Sampled	Total Litres	% Contexts + Cereal Grains	Gr	Gfr *	Cf	Se	Nut	Approx Total items	Description
A1	12	179	25%	3 x	1 x	-	2 x	-	10	Fenced enclosure
A2	15	203	40%	6 +	2 +	-	3 x	1 x	30	Ditched enclosure
A3	21	566	33%	7 +	2 x	-	3 x	1 x	30	Ditched enclosure
B1	8	122	25%	2 x	x	1 x	1 x	1 x	15	Structure 1
B2	20	348	65%	13 ++	1 ++	1 x	5 +	1 x	90	Two-post Structures
B3.4	13	222	62%	8 +++	1 ++	4 ++	8 +++	1 x	380	Special Deposits Pit 420 and spatially associated pits
B4	10	238	30%	3 x	2 x	-	3 x	1 x	20	Structure 2
B5	12	192	33%	4 x	2 x	-	3 x	-	15	Emclosure South Entrance
B6	9	125	33%	3 x	1 x	-	3 x	1 x	15	Enclosure East Entrance
B7	7	165	43%	3 x	x	-	2 x	-	15	Elements north of east entrance
B8	1	9	0	-	1 x	-	1 x	-	5	Elements at west side
C1	1	9	100%	1 x	x	-	1 x	-	5	Postholes at Enclosure North-west
C2	21	251	38%	8 +	3 +	1 x	5 x	1 x	40	Various posthole groups in vicinity of Structure 2
D1	20	283	35%	7 ++	1 ++	2 x	7 +++	1 x	290	Fire Pits/Hearths
D2	21	358	33%	7 +	4++	-	9	- +	75	Large Pits
D3	31	824	65%	20 ++	2 ++	3 x	8 +	1 x	150	Pit cluster
D4	15	405	67%	10 +++	3 ++	5 +	9 ++	2 x	225	Aligned pits
D5	4	53	0	-	-	-	-	-	0	Shallow Pits to South of Enclosure

Key: Gr = cereal grain; G fr = grain fragments; Cf = chaff; Se = seeds; Nut = nut
* Number of additional contexts with cereal grain fragments but no whole cereal grains.
Abundance: -, none; x, up to 9 items; +, 10 -29 items; ++, 30 – 69 items; +++, over 70 items

Table 19: Number of contexts with plant remains and abundance in all samples by context groups A-D.

Results

Evidence for cereals was found including the chaff of the glume wheats, spelt (*Triticum spelta*) and emmer (*Triticum dicoccum*), with spelt the most numerous. The glume wheats have the grain firmly held in the chaff and require additional processing to dehusk the grain before use, this leaves the chaff (glumes) and weed seeds as a waste product which if burnt may be preserved as charred remains. There were also some short broad wheat grains of free threshing-type identified as bread wheat type (*Triticum* cf *aestivum*) although spelt can produce short grains which may appear similar on charring. This type of grain occurs sporadically with the glume wheats at other Iron Age sites (Greig 1991). Barley (*Hordeum vulgare*) was also found including a hulled variety with the presence of 6-row barley being confirmed by a rachis fragment from 420. Oat grains (*Avena sp*) were also found although this could not be confirmed as cultivated oat and may be a wild form growing as a weed of the other cereals. Some of the grains identified as cereal or grass may also be oats. The abundant large grasses including brome grass (*Bromus hordeaceus* or *secalinus*) may have been a weed of the cereals although it has been suggested that it may have been used with the grain as part of the crop (Jones 1988).

Other crops include pea or bean from 1232 (1258, B7.2), 478 (537, D3.7), and 1219 (1312, B6.0) and leguminous seeds of around 4mm in size identified as *Vicia/Pisum/Lathyrus* may include peas. Other food plants are represented by hazel nutshell (*Corylus avellana*) and a sloe stone (*Prunus spinosa*) and these were probably gathered from woodland margins, scrubland vegetation

or hedgerows although there is insufficient evidence here to suggest which.

Plants of arable or disturbed ground form the largest group of plants found. Plants of disturbed ground include fat-hen type (*Chenopodium* sp), chickweed (*Stellaria media* type) and docks (*Rumex* sp) often found as weeds of gardens and settlements as well as of spring sown crops such as barley or legumes. Leguminous weeds such as vetches (*Vicia/Lathyrus*) are present probably as weeds of the crops. Other arable weeds include scentless mayweed (*Tripleurospermum inodorum*) and cleavers (*Galium aparine*) both of which are widespread but grow in the vicinity of the site today. In addition cornflower (*Centaurea cyanus*) was found, which is extinct in the wild in this country today, and was a cornfield weed of sandy soils. The find of cornflower here is unexpected in a context of this date as it is usually found in later assemblages.

A few grass land plants include ribwort plantain (*Plantago lanceolata*) and cat's-tail grass (*Phleum type*) together with possibly clover type (*Lotus, Medicago, Melilotus* or *Trifolium*) and cinquefoil (*Potentilla* sp) which cannot be identified further. These plants are all grassland plants so the presence of this type of vegetation is suggested although all may have been weeds of fields or field margins. This material may however, have been brought to the settlement as fodder for animals.

The enclosure ditches, entrances and postholes, Groups A1, A2, A3, and 20, produced very few plant remains. Context 46 of A3.1 produced only seven items from a 29 litre sample despite refloating the residue to recover charcoal for radiocarbon dating. These remains probably represent redeposited or residual domestic rubbish. The cremation structure, Group B1, produced similar results with samples from 1081 having only a few barley grains and a barley rachis (chaff) fragment.

Of the samples from Group B2, the two-post structures, six produced less than ten items of plant remains. The most productive contexts had a few cereal grains with weeds of arable or disturbed ground. This may also represent redeposited domestic rubbish in the fill of the post holes because the remains are at low concentrations. Remains are too few to suggest the function of the features.

Pit 420 with associated special deposits (see above p.40; B3.4) was the most productive from the site. Three contexts of 420 had plant remains present (Table 20), most abundant in context 412 dated by charcoal to 520-395 cal. BC at 63% probability. These samples were dominated by cereal grains with a little chaff and weed seeds showing the use of glume wheat and barley on the site. The fewer remains from context 411 included 6-row barley rachis which confirmed the presence of this cereal on the site.

Few remains were found from Structure 1 round house B4.1-2, enclosure southern entrance B5.0, eastern entrance B6.0, possible structure to the north of the eastern entrance B7.1-2 or features at the enclosure western entrance B8.1-2. This is not surprising as only subsoil features remained due to truncation of the site by later activity. The samples from 1258 B7.2, however, contained a larger legume identified as either bean or pea showing the use of legumes as food on the site. This occurred in two other contexts and some of the legumes identified as (*Vicia/Pisum/Lathyrus*), although smaller, may also have been peas.

Firepits of Group D1 were more productive, both those recorded (Table 21) had chaff, seeds and cereal grains present also showing the use of cereals. Cornflower was found in 1184 context 1231, a well sealed primary context. Free-threshing wheat of bread wheat type was identified from a grain from this feature together with barley and abundant large grass seeds including brome grass.

Pits of Group D2 generally had few remains present. The most productive feature was 1223 which had cereals including bread wheat type grains from context 1227 (see radiocarbon date) and a cornflower seed from context 1167, the upper layer of this feature. 1198 which had 27 items in 106 litres of samples, these included cereal grains with a few seeds of plants of arable or disturbed ground with a tuber of onion couch grass (*Arrhenatherum elatius*). There was no evidence from the plant remains to confirm or deny that these were grain storage structures. However, considering the water percolation through the sand and gravel this would be a most unlikely site for grain storage pits. Post-built storage structures for cereals would be more likely but would leave little evidence of their function, particularly if truncated.

The working hollows and pit clusters of Group D3 also had a low concentration of remains.

Group	**A3**	**B2**	**B2**	**B3**	**B3**	**B3**	**B7**	**D1**	**D1**	**D1**	**D2**	**D2**	**D3**	**D3**	**D4**	**D4**	
Subgroup	**1**	**3**	**1**	**4**	**4**	**4**	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**3**	**1**	**2**	
Cut	**73**	**1173**	**1240**	**420**	**420**	**420**	**1258**	**1184**	**1184**	**1294**	**1198**	**1223**	**446**	**414**	**584**	**497**	
Contexts	46	1111	1202	412	398	411	1232 /1247	1220	1222 /1231	1293	1199	1227 /1167	430	403	480	489	
CHAFF																	
Triticum dicoccum Schubl glume	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	Emmer
Triticum spelta L. glume	-	1	-	4	1	-	-	-	-	2	-	1/-	-	4	-	-	Spelt
Triticum cf spelta glume	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	1	Spelt
Triticum dicoccum/spelta glume	1	-	-	23	2	2	-	1	-	6	-	3/-	-	1	-	-	Emmer/Spelt
Triticum dicoccum/spelta s.fork	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	Emmer/Spelt
Hordeum vulgare L. 6-row rachis	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	Barley
Hordeum vulgare L. rachis	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	Barley
Cereal rachis indet	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	Cereal
GRAINS																	
Triticum sp	-	4	1	9	10	1	-	7	-	7	6	4/-	-	-	19	1	Wheat
Triticum sp tail-grain	-	-	1	1	-	-	-	-	-	1	-	3/-	-	-	-	-	Wheat
Triticum cf aestivum	-	1	-	1	-	1	1/-	2	-/1	1	-	2/-	-	-	-	-	Bread Wheat type
Triticum cf dicoccum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	Emmer
Hordeum tail-grain	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	-	Barley
Hordeum vulgare L.	-	1	1	12	7	2	-	2	-/1	-	-	-	1	1	-	-	Barley
Hordeum vulgare L. hulled	-	1	-	5	3	-	-	-	-	-	-	-	-	-	1	-	Hulled Barley
Hordeum sp hulled, twisted	-	-	-	2	1	1	-	-	-	1	-	-	-	-	-	-	Hulled Barley
Avena sp.	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	-	Oat
Cereal	1	4	5	67	41	10	2/3	15	5/6	31	13	13/1	4	7	32	11	Cereal
Cereal/Poaceae	-	2	2	16	7	3	-/1	6	-	10	1	2/-	1	3	-	8	Cereal/Grass
OTHER PLANTS																	
Corylus avellana L.	-	-	-	-	-	2	-	1	-	-	-	-	-	5	-	-	Hazel nut shell
Chenopodium sp	2	-	-	11	5	1	-	4	3/1	1	-	-	-	4	-	1	Goosefoots
Montia sp	-	-	-	1	-	-	-	-	-	1	-	-	-	1	-	-	Blinks
Stellaria media type	-	-	-	-	-	-	-	-	1/-	1	-	-	-	-	-	1	Chickweed
Persicaria maculosa/lapathifolium	-	-	-	1	-	-	-	1	-	1	-	-	-	-	-	-	Persicaria
Polygonum aviculare L.	-	1	-	-	-	-	-	1	-	2	-	-	-	-	-	-	Knotgrass
Fallopia convolvulus (L.) A. Love	-	-	-	-	1	-	-	-	6/-	-	-	-	-	-	-	-	Black-bindweed
Rumex sp	-	1	-	-	1	-	-	2	2/2	1	-	3/-	-	-	-	-	Docks
Brassica rapa/nigra	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	Wild Turnip/Mustard
Brassicaceae small	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	Cabbage family
Potentilla sp	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	Cinquefoil
Prunus spinosa L.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	Sloe
Crataegus/Prunus thorn	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	Haw/Black thorn

Group	**A3**	**B2**	**B2**	**B3**	**B3**	**B3**	**B7**	**D1**	**D1**	**D1**	**D2**	**D2**	**D3**	**D3**	**D4**	**D4**	
Subgroup	**1**	**3**	**1**	**4**	**4**	**4**	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**3**	**1**	**2**	
Cut	**73**	**1173**	**1240**	**420**	**420**	**420**	**1258**	**1184**	**1184**	**1294**	**1198**	**1223**	**446**	**414**	**584**	**497**	
Contexts	**46**	**1111**	**1202**	**412**	**398**	**411**	**1232 /1247**	**1220**	**1222 /1231**	**1293**	**1199**	**1227 /1167**	**430**	**403**	**480**	**489**	
Lotus/Trifolium	-	-	-	-	1	1	-	-	6/2	-	-	-	-	-	-	-	Lotus/Clover
Vicia/Lathyrus	-	4	1	6	2	-	1/1	3	3/-	3	1	-	1	1	2	1	Vetch/Vetchling
Vicia/Pisum/Lathyrus	-	2	-	-	-	-	3/1	1	-	fr	1	fr/-	-	-	1	1	Vetches/Peas
Vicia/Pisum	-	-	-	-	-	-	1/-	-	1/-	-	-	-	-	-	-	-	Bean/Pea
Medicago/Melilotus/Trifolium	-	-	1	15	2	2	-	1	1/2	4	1	1/-	-	2	1	1	Clover type
Plantago lanceolata L.	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	Ribwort Plantain
Veronica polita/agrestis	-	1	-	-	-	-	-	-	-	-	-	1/-	-	-	-	-	Speedwell
Galium aparine L.	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	Cleavers
Centaurea cyanus L.	-	-	-	-	-	-	-	-	-/1	-	-	-/1	-	-	-	-	Cornflower
Tripleurospermum inodorum (L). Schultz-Bip	-	-	-	1	2	1	-	-	1/-	-	-	1/-	-	-	-	-	Scentless-mayweed
Cyperaceae	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	Reeds
Carex sp	-	-	-	2	-	-	-	3	-/1	-	-	-	-	-	-	1	Sedge
Arrhenatherum elatius L. tuber	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-	1	Onion- couch grass
Bromus hordeaceus/secalinus	-	1	-	8	2	1	-	16	1/1	32	-	4/1	1	3	-	-	Brome-grass
cf Phleum sp	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	Cat's-tails grass
cf Danthonia decumbens (L.) D.C.	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	Heath-grass
Poaceae small	1	-	-	4	1	-	-	-	1/1	4	-	-	-	2	-	-	Grass
Poaceae medium	-	-	-	4	-	-	-	6	5/-	-	-	2/-	-	-	-	-	Grass
Poaceae large	-	4	1	18	9	3	1/2	37	1/2	18	2	7/-	-	5	2	6	Grass
INDET seeds	-	2	-	4	-	-	-	-	1/33	3	1	-	-	1	1	-	Indet
Fragments large, charred	+	+	+	+	-	+	-	+	-	+	+	+	+	+	+	+	Fragments
Tree/Shrub buds	1	-	-	1	-	1	-	-	-	1	-	1/-	-	-	-	1	Buds
Culm fragment, small	-	-	-	2	1	-	-	-	1/-	1	-	-	-	-	3	16	Grass stem
Culm node large	-	-	-	-	-	-	-	-	-	-	-	1/-	-	1	-	-	Cereal stem
Tuber fragment	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tuber
Stem fragments	-	+	-	+	+	-	-	+	-	+	+	+	-	+	+	+	Stem
Dung?	-	-	-	-	-	-	-	-	-	fr	-	-	-	-	-	-	Dung?
TOTAL	**6**	**32**	**13**	**230**	**104**	**34**	**9/7**	**113**	**45/24**	**138**	**27**	**48/3**	**11**	**42**	**69**	**52**	**items**
Sample volume (litres)	9	64	20	41	29	17	20/9	14	8/25	56	106	12/14	40	139	74	55	litres
Flot volume (mls)	29	76	75	194	60	15	50/40	70	20/22	125	52	10/33	87	119	49	195	mls.

Key: + = present. Remains are seeds in the broad sense unless described otherwise. 1/– = items first context ; –/1 = second context; glume + glume base.

Table 20: Charred plant remains.

Contexts 430 and 403 were typical and included a few cereal grains, a few glumes with seeds of plants of arable and disturbed ground. Hazel nut shell and a sloe stone represented other food waste.

Pits of D4 were most productive from groups D4.1 and D4.2. Cereal grains were more abundant and formed 84% of the remains in context 480. Although the group of remains is rather small it suggests the use of cleaned grain which was burnt, perhaps accidentally or because it was spoiled. Other groups produced a very low concentration of remains (Table 19).

Discussion

Considering the proportions of wheat remains in the samples (Table 21) the low numbers of glumes to wheat grains indicated that the samples represented cleaned cereal product (van der Veen 1992). The ears of the glume wheats break into segments called spikelets on first threshing and are thought to have been stored as spikelets with the grain still held firmly in the chaff. The spikelets could then have been processed in small amounts as required. This would involve parching and pounding the spikelets to free the grain and fine sieving to remove the chaff and small weed seeds (Hillman 1981). There is insufficient chaff here to suggest that this is the dehusking waste from the fine sieving. The remains probably represent processed grain with the exception of the wheat in 412. This has about the same number of glumes and wheat grains as are found in the spikelets which consist of two glumes and usually contain two grains. This may therefore represent a small number of spikelets of wheat, perhaps the remains of stored cereal product, burnt because it was spoiled or burnt accidentally during small scale processing for consumption, then the burnt waste deposited in the pit. The very small amount of barley chaff in the samples (Table 21) indicates that the barley was also cleaned grain, perhaps mixed with the wheat during use or disposal.

When the proportions of weed seeds to grains are considered, the samples from 398, 412 and 480 have more grains than seeds probably representing cleaned cereal product (van der Veen 1992), this adds to the evidence that these samples contain cleaned cereal product, mainly barley in 412. This fairly small amount of cereal could have been spillage burnt during food preparation. Two of the samples from the firepits 1184 1220 and 1293 1293 have more weeds than grains suggesting that this represents final hand sorting waste. Even after dehusking and fine sieving some seeds, particularly the larger seeds, remain to be removed before consumption. These samples may represent this sorting waste including a few spoiled or accidentally burnt grains disposed of during food preparation. However, differential preservation can occur because grains survive burning better than chaff (Boardman and Jones 1990) so this may also have contained other cereal cleaning waste. The evidence from the samples taken together suggests that processed cereals are present indicating the domestic use of cereals and food preparation on the site.

Group. Cut. Context	**Wheat Glumes:Grains**	**Barley Rachis:Grains**	**All Cereal Weeds:Grains**
B3.4. 420.398	4 : 30 (0.13)	0 : 30	28 : 60 (0.46)
B3.4. 420.412	40 : 33 (1.20)	1 : 66 (0.2)	77 : 99 (0.7)
D4.1. 584.480	0 : 51	0 : 3	8 : 54 (0.15)
D1.1. 1294. 1293	9 : 34 (0.26)	0 : 8	73 : 42 (1.7)
D1.1. 1184. 1220	1 : 21 (0.01)	0 : 5	72: 26 (2.76)

Table 21: Ratios of types of plant remains.

Of the 284 contexts sampled, 112 were found to contain cereal grains and considering the distribution of plant remains by feature type (Table 19), the pit group B3.4, pit cluster D3 and aligned pits D4 and two-poster structures B2 had cereal grains in over 60% of contexts sampled showing a concentration of remains in pits (Table 19). With the exception of the hearths of D1 which appear to contain *in situ* waste, and some of the richer samples from pit 420 and possibly pit 584 which may represent deposits of charred waste, most of the remains from the site are at a low concentration and appear to represent part of the general scatter of domestic waste. Very little chaff was found on the site, chaff being present in below 10% of the contexts sampled, possibly because the glume wheat was dehusked outside the site or because the chaff was used or disposed of by means other than burning. For example the waste may have been composted. Because glume wheats may be stored or transported in spikelet form with the chaff present, waste chaff and seeds are found on both consumer and producer sites (Hillman 1981). Grains, weed seeds and small amounts of chaff were found here showing only the cleaning and consumption of the cereals on the site.

Comparing the remains with those from other settlements, those which have been identified as producing a surplus of grain such as Ashville, Oxfordshire (Jones 1995) or being self sufficient in grain such as Thorpe Thewles, Cleveland (van der Veen 1987) are typified by samples with abundant remains; the former with many samples dominated by grains and the latter by samples with grain rarely over 40%. Despite extensive sampling abundant remains were not found here, although this could be due to preservation or other factors. Sites which have been described as pastoral consumer sites such as Claydon Pike near Lechlade (Jones 1985) have been found to have a low concentration of charred remains with samples dominated by weeds or chaff with additional evidence from waterlogged remains to assist in interpretation of the environment as pastoral. In the absence of other evidence from this site the charred plant remains compare in being at a low concentration and two of the analysed samples from hearths of D1 were dominated by weeds. However, neither seeds nor chaff are generally abundant and there were too few samples with sufficient remains to allow detailed comparison. The other samples analysed (Table 21) suggest only the consumption of cereals on the site but some samples of this type can occur on any settlement site where grain is consumed.

The weeds present could all grow on the soils found in the vicinity of the site suggesting that the cereals could have been grown nearby. Scentless mayweed is intolerant of waterlogging (Kay 1972), as is wheat itself, suggesting cultivation of land on the valley sides. Cleavers is an autumn germinating weed suggesting that the cereal was autumn sown and wheat was the most numerous cereal found and is usually considered to be an autumn sown crop. Cornflower is an unusual find at this date. It is often associated with the free-threshing cereals, particularly rye in the medieval period. Here there are a few grains of bread wheat type possibly representing a free threshing cereal although this is unlikely to be a crop in its own right as only occasional grains are present. Although cornflower is known from pollen records from the Early Post Glacial period, it appears to have died out when Britain became forested and is absent from pollen records of the prehistoric period (Greig 1989). Occasional records of cornflower seeds are known from a few Roman sites (Greig 1989) such as Tiddington but it is rare or absent before the late Iron Age (Jones 1988). Here it occurs in two Middle Iron Age contexts, one 1231 which is a relatively well sealed primary context from a firepit 1184, the other 1187 which is the back fill of a pit 1223, which was dated by radiocarbon from the primary context as not later than 260 BC (see above p.24). The date was obtained from a small amount of hazel and hawthorn charcoal. Bearing in mind that the

cornflower seed is from a layer later than the dated layer and this, like most samples from the site, had intrusive roots and seeds the find must be treated with caution. However, as even small charcoal fragments gave an early date, and the well preserved charred seeds such as these would be unlikely to survive much movement, it is considered possible that the cornflower seeds are contemporary with the features.

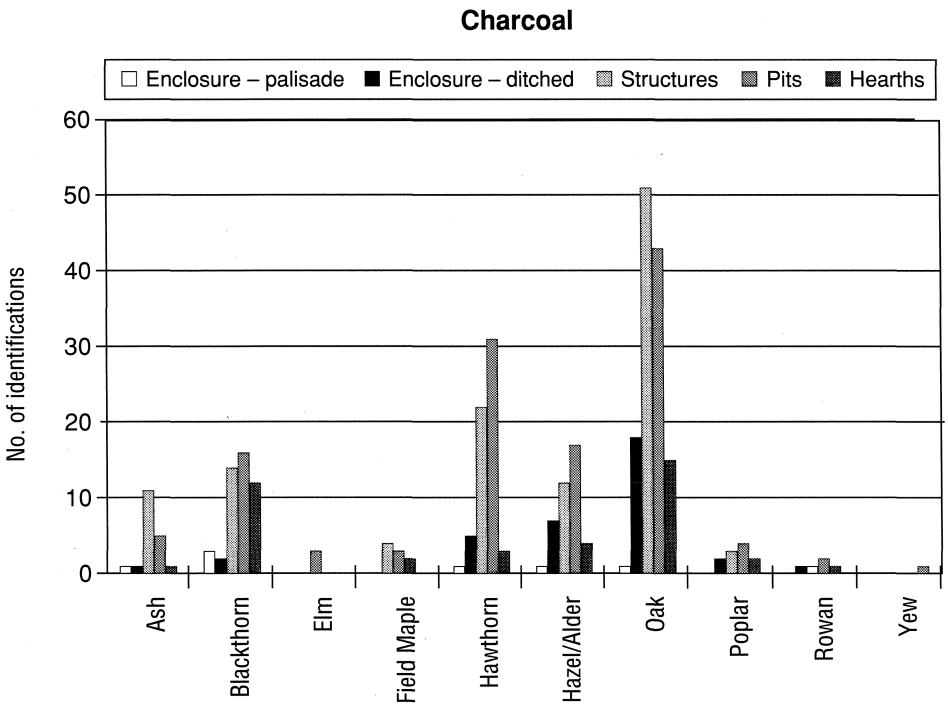
Radiocarbon dates obtained from charcoal from some of the same contexts as the recorded plant remains are of the Middle Iron Age. All the dates fall between 755 and 205 cal. BC at 68% probability and provide evidence for the use of these cereals at this date. The earliest date for spelt wheat from the county is of the Bronze Age from Lockington where a pit, near to a round barrow, produced charcoal dated to 1385 +/-80 cal. BC and also contained spelt chaff (Monckton forthcoming). The spelt here was found with some emmer and occasional bread wheat type grains and although there are too few remains to suggest the proportions, spelt is the most numerous of the wheat remains. There are few sites of this date for comparison but similar cereals were found in Late Iron Age contexts at Gamston, Nottinghamshire (Moffett 1992). The low concentration of remains is typical of prehistoric sites in the region including Middle Iron Age contexts at Park Farm, Barford, Warwickshire (Moffett 1994) and at Kirby Muxloe, Leicestershire (Cooper forthcoming), also at the Late Iron Age sites at Gamston (Moffett 1992), Enderby (Monckton 1992) and Normanton le Heath, Leicestershire (Monckton 1994). Cereal remains however, are present when samples are examined and despite the small numbers of remains, are likely to have been cultivated by some of these settlements if only on a small scale. Information from more sites in the region is therefore needed to give a picture of the farming economy in the prehistoric period.

Conclusions

The generally low concentration of remains on the site was confirmed by extensive sampling although a few productive samples were also present. Where remains were more abundant in samples some charred material was found to stay in the residue in some cases. Reflotation of some of these improved recovery, however, this was thought to apply only to samples collected in wet weather because recovery was generally good from the sandy soils. Where remains were sparse recovery was not improved by reflotation of the residues. Sampling a large number of contexts was less helpful in recovering more remains than bulk sampling contexts of good potential, however it was shown that pit contexts were more productive than others on the site.

Spelt with emmer and occasional bread wheat type grains were found with spelt being most common. Hulled barley was found and evidence for 6-row barley was confirmed from rachis material. Other food plants included peas or beans with hazel nut and sloe being additional gathered foods. Seeds of arable weeds and a few grassland plants were found. Some of the plant remains were dated to the Middle Iron Age by charcoal found in the same deposits.

Charred plant remains from the majority of contexts were thought to be redeposited domestic rubbish from the settlement with the exception of those from the hearths of D1, pit 420 of B3.4 and possibly pit 584 of D4. These showed the domestic use of the cereals, waste from food preparation including chaff and weed seeds being burnt together with a few cereal grains and other waste. There was little evidence to suggest where the cereals were grown but a number of the weeds still grow nearby and this is possibly the case for the cereals found here. The plant remains show domestic activity and consumption of a variety of cereals, with some evidence for legumes and gathered food.



Charcoal by species and feature types

The charcoal

identified by Graham Morgan

Identifications were made on material from sieved samples and on spot samples collected during fieldwork. 326 fragments of identifiable charcoal were present in samples from 279 contexts from 106 cut features.

Most of the charcoal was in small fragments and estimates of wood sizes was not always possible. The fragments were derived from wood mainly larger than 30mm in diameter and possibly much larger. Some of the oak samples appeared to be either slow grown or sapwood from mature trees. The identification of some of the smaller non-oak species should be regarded as tentative. Details of ring counts, diameter and age estimations are available in the archive.

Ash	*Fraxinus excelsior*	19	5.8%
Blackthorn	*Prunus spinosa*	48	14.7%
Elm	*Ulmus sp.*	3	0.9%
Field Maple	*Acer campestre*	9	2.8%
Hawthorn type	*Crataegus sp.*	61	18.7%
Hazel/Alder	*Corylus avellana/ Alnus sp.*	40	12.3%
Oak	*Quercus sp*	128	39.3%
Poplar/ Willow	*Populus sp./ Salix sp.*	12	3.7%
Rowan type	*Sorbus sp.*	5	1.5%
Yew	*Taxus baccata*	1	0.3%
		326	

Table 22: Species identifications from all samples

In view of the fragment sizes it should be noted that alder and hazel may not be distinguished and poplar and willow cannot be distinguished from their wood structures.

Oak is the most common species present with the other species suggesting general cover or hedge row species and general scrub cover. Some of the larger slow grown oak samples may represent sapwood.

The broad ratio of species identified shows some consistency between the broad feature types. Perhaps of note is the increased appearance of oak charcoal in structural features, and the more even spread of blackthorn across groups with the exception of enclosure ditch fills. There appears to be an increased proportion of ash in structural features too. Although the number of identifications from palisade groups is small, ash and blackthorn are relatively abundant in comparison to the later ditched enclosure. This may indicate that the characteristics of ash (i.e. long straight lengths) were favoured for structures and fences and that blackthorn was also used in the palisaded enclosure.

Young blackthorn is well represented with a gradual fall-off from one to five year old specimens to eleven to fifteen year old ones. Oak charcoal is evidence of use of a variety of ages and sizes of wood.

Twenty five fragments of coal were identified from stratified deposits, including par-burnt pieces from primary enclosure ditch fills. The presence of coal in primary enclosure contexts perhaps gives weight to the usage or perhaps non-intrusive origin of the material, although it is quite feasible that some of it may have been introduced by unrecognised bioturbation of the deposits.

Industrial residues Identified by Graham Morgan

A small quantity of slag was recovered from 25 recorded contexts, fifteen of which were of Iron Age date. The features containing more than 1 gram of material can be interpreted as open pits at the time of deposition (Table 23). The presence of iron ore may be a natural occurrence but is associated with hearth slag and therefore could be connected with extraction. However the collection appears broadly to represent iron working rather than extraction, the lack of obvious tap slag and even appreciable quantities of iron working slag being notable. Of the remainder, eight items were less than 1g in weight and were distributed over a range of deposits and cannot be seen as either *in-situ* or indicative of process.

As far as can be interpreted of the sites morphology the pits are sited away from clearer structures. Feature 1197 was located to the immediate south-east of the enclosure adjacent to another possible pit (unexcavated) in a relatively isolated location. The pit showed some evidence of root disturbance. Pit 440 was well formed with atypical laminated fillings and formed part of the palimpsest in the east of the excavations where activity areas are suspected. Pit 1332 was located to the west of the enclosure, and was part of an intercutting group.

Group	Cut No.	Cont -ext No.	Sample No.	Hearth Slag (g)	Furnace Slag (g)	Fuel Ash Slag (g)	Furnace Lining (g)	Limonite nodules (g)	Desc.
D3.3 Open pit	440	435	398	-	-	-	-	156 (with sand)	Secondary fill
			400.2	-	1	-	-	-	Secondary fill
D4.3 Open pit	1332	1313	479.1	-	-	1	-	-	Secondary pit fill
			-	-	14	-	-	-	
D5.5 Open pit	1197	1016	-	-	-	-	89	-	Pit back-fill
			-	-	-	-	-	7	
			-	46	-	-	-	-	

Table 23: Industrial residues by context. Weight in grams.

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