# Excavation of an Iron Age Settlement at Wilby Way, Great Doddington

*by*

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with contributions by
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## SUMMARY

*Archaeological excavation of a site in the parish of Great Doddington to the south of Wellingborough revealed part of a large Iron Age settlement site, of which approximately 4 hectares was excavated. Evidence indicates that the settlement was founded in the 6th or 5th century BC and continued in use until its abandonment in the 1st century BC. It appears to have been surrounded by a field system, and probably formed part of an extensive Iron Age landscape as evidenced by previous Iron Age discoveries in the vicinity of Wellingborough. Limited evidence for Iron Age ironworking, craftwork and ritual activity, and of localised Neolithic/Early Bronze Age activity, was also recovered.*

## INTRODUCTION

Part of an Iron Age settlement to the south of Wellingborough was excavated by Cotswold Archaeological Trust (CAT) during 1997-8 in advance of commercial and residential development. The excavation was the culmination of previous work carried out in 1979 (Windell 1981), in 1989-1990 by the Northamptonshire Archaeology Unit (NAU) and in 1996 by CAT. Much of the Iron Age settlement was unaffected by development as it is subject to a Section 106 agreement requiring preservation *in situ*. The CAT excavations were carried out on three sides of this preservation area, with the NAU excavation on the fourth.

## ACKNOWLEDGEMENTS

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## LOCATION, GEOLOGY AND TOPOGRAPHY

The Iron Age settlement lies in the parish of Great Doddington approximately 1km to the east of Wilby,

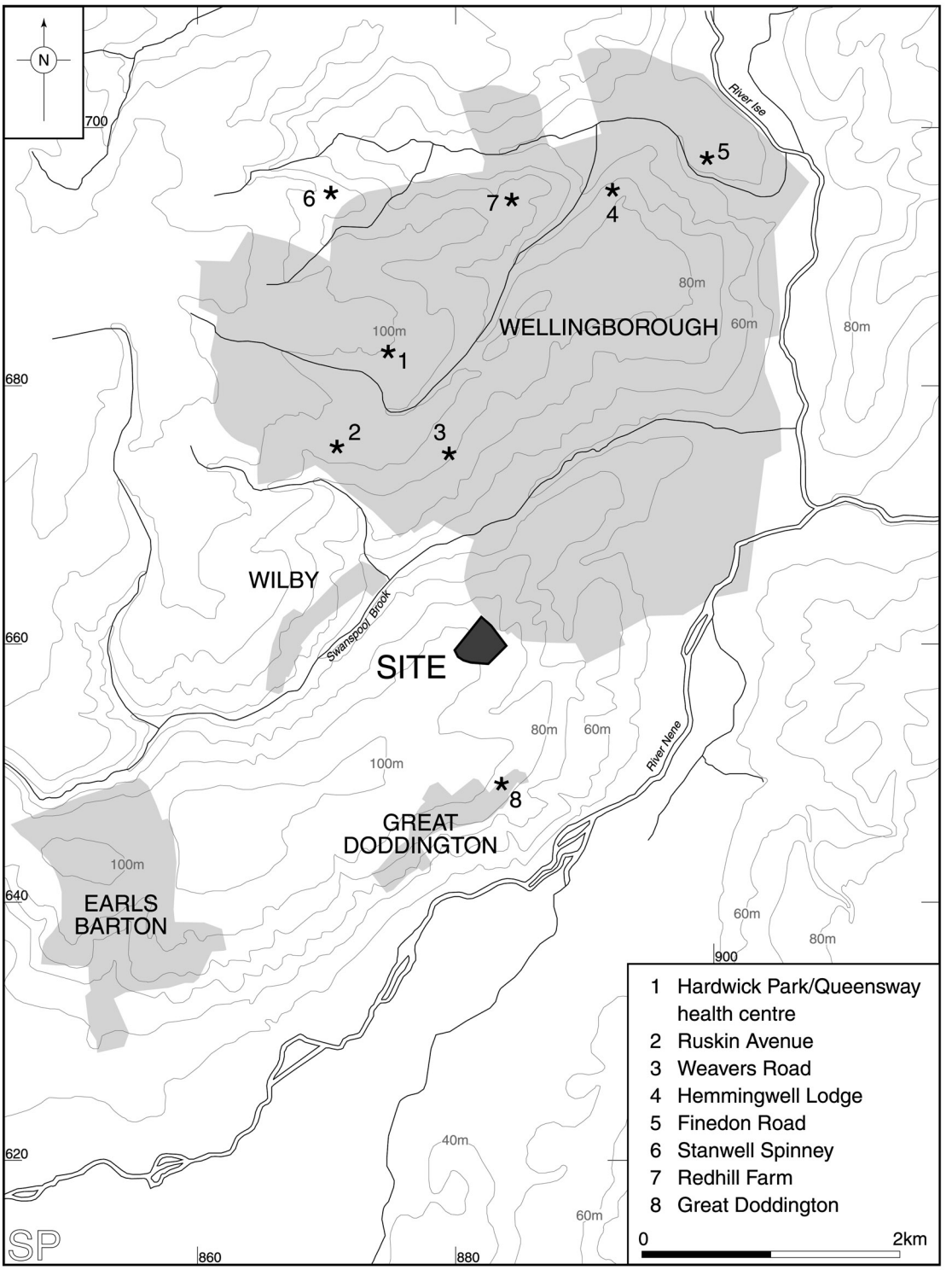



Fig 1 Site location, with other Iron Age sites in the vicinity

approximately 2km south-west of Wellingborough town centre and immediately north-east of the A45 Wilby Way roundabout, centred on NGR: SP 882660 (figs. 1 and 2). Prior to excavation the site was under agricultural set-aside and consisted of rough grassland.

The underlying solid geology of the area is Inferior Oolite of the Jurassic period, overlain by quaternary deposits of Boulder Clay and Morainic drift. In the excavations natural deposits varied between clay and sand with outcrops of limestone bedrock.

The local landscape is characterised by ridges and valleys varying between 40m and 110m OD, with the site situated on a spur at the north-eastern end of a ridge which runs through the parishes of Great Doddington and Earls Barton. This ridge rises to about 100m OD, although the settlement is situated slightly downslope at 85-92m OD. The ridge is flanked by the River Nene to the south-east, the Swanspool Brook to the north-west, and overlooks the confluence of these two watercourses with the River Ise approximately 2.8km to the north-east.

## ARCHAEOLOGICAL BACKGROUND

Despite small-scale woodland clearance during the Neolithic, much of the Nene valley floodplain appears to have remained wooded until large-scale


Fig 2 Location plan: areas of excavation, with evaluation trenches and areas of preservation

deforestation in the Late Bronze Age/Early Iron Age (Brown and Meadows 1996-7). In the Iron Age however settlement in the area underwent a marked expansion, a process which continued into the Romano-British period. For example, an extensive multi-period landscape has been investigated at Wollaston approximately 2.6km to the south-east of the site (Meadows 1995). In addition, Iron Age remains have been identified on the northern and western outskirts of Wellingborough (e.g. WSAC 1967, Harper, Foster and Johnson 1972, Harper, Foster and Jackson 1972, Foster and Harper 1972, Everson 1976, Foster, Harper and Watkins 1977, Dix and Jackson 1989 and Webster 1997). Some of these sites also have produced Roman material and the Romano-British town of Irchester lies approximately 3km to the north-east. A villa also lies approximately 2.5km to the south-west of the site (RCHME 1979).

The high archaeological potential of the site was first recognised in the 1960s when aerial photographic survey identified a substantial D-shaped ditched enclosure (fig. 3), with possible internal circular structures and further cropmarks extending to the north-east. Limited excavations in 1966/1967 yielded potsherds but were otherwise largely inconclusive (Rescue 1973, WADAS 1967 and 1971).

Further excavation was undertaken over approximately half of the D-shaped enclosure in advance of construction of the A45 in 1979. Two phases of activity were identified. The first was tentatively dated to the 3rd or 2nd centuries BC and consisted of a possible palisade trench, a small enclosure 7m in width, a shallow depression and a pit/posthole. The second phase was tentatively dated to the 2nd or 1st century BC and comprised an enclosure defended by a deep V-shaped ditch, with a possible internal bank, within which four, possibly five, roundhouses were identified along with another represented by a cropmark in the unexcavated part of the enclosure. After the abandonment of the site the ditch was backfilled in the 1st or 2nd century AD (Windell 1981).

The next major phase of archaeological work was carried out by NAU during 1989-1990 and comprised fieldwalking, evaluation and excavation of part of the site immediately north of the D-shaped enclosure. The results of this excavation are published here.

In 1996 CAT was commissioned to carry out an archaeological assessment of the site. This included desk-based assessment, geophysical survey (undertaken by GeoQuest Associates, fig. 3) and evaluation (fig. 2) which suggested that Iron Age settlement remains were more extensive than previously thought. This led to a staged programme of archaeological excavation in advance of each phase of development. In total, work on-site lasted 17 weeks commencing in April 1997 and finishing in August 1998.

## THE EXCAVATIONS

The programme of archaeological excavations carried out by CAT and NAU covered four areas, which are described as Excavation Areas 1-4 (fig. 2). Excavation Areas 1 and 4 overlapped slightly. Two excavation recording methodologies were employed by CAT in response to the differing density of archaeological deposits. In areas of dense activity a full programme of excavation was carried out. In those areas with a moderate to low density of features thought to be of lower significance, a smaller sample of features was excavated. In general all areas were mechanically stripped of topsoil and subsoil under constant archaeological supervision and all archaeological recording was carried out in accordance with standard procedures. The site archive and finds are currently (2004) stored at the CAT offices in Kemble, Gloucestershire.

## EXCAVATION RESULTS

All the archaeological features found through excavation and geophysical survey, the vast majority of which are of Iron Age date, are shown in figure 3, together with the cropmark D-shaped enclosure partially excavated by Windell (1981). The post-excavation breakdown of activity into discrete phases was based on the pottery assemblage in conjunction with stratigraphic and spatial analysis. Unfortunately the Iron Age pottery fabrics of the region are rarely diagnostic of a particular style and most forms are relatively long-lived, leading to difficulties in its use as dating evidence. Nevertheless, the Iron Age pottery was assigned to three ceramic phases (CP2, CP3 and CP4), of which CP3 overlapped both with CP2 and CP4 (see p. 36). The Iron Age was therefore sub-divided into two of the four periods described below. No Late Bronze

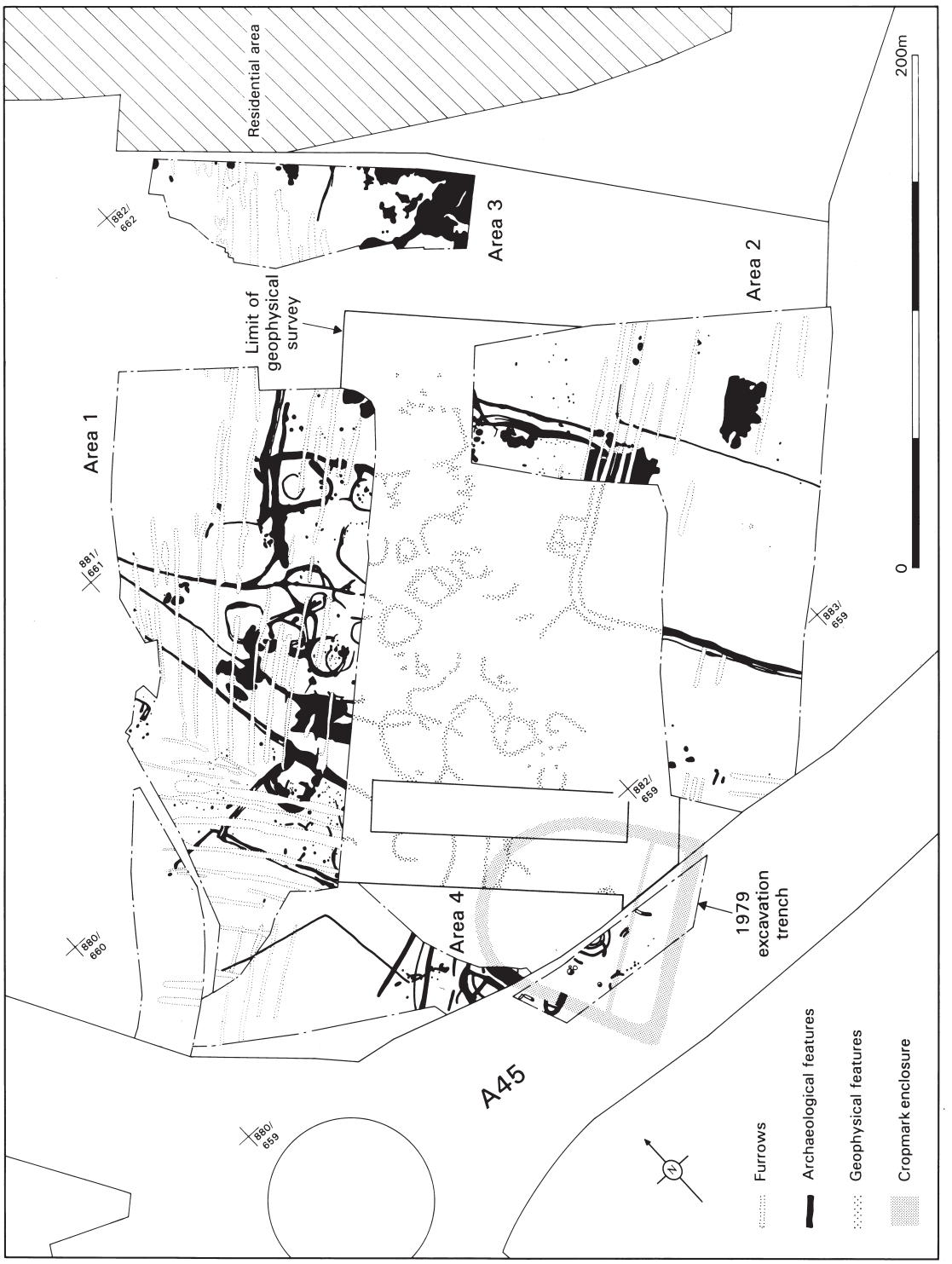



Fig 3 All-feature plan, with geophysical survey, cropmarks and 1979 excavation trench

Age/Early Iron Age pottery (CP1) or Late Iron Age pottery (CP5) was recovered from the excavations.

| | |
|---|---|
| Period 1 | Neolithic/Bronze Age |
| Period 2 | Early-Middle Iron Age (CP2 and CP2-3) |
| Period 3 | Mid-Late Iron Age (CP3 and CP3-4) |
| Period 4 | Medieval and Post-Medieval |

Several features identified from both the excavation and geophysical survey, although of Iron Age date, could not be assigned to periods 2 or 3 and are described under the heading Periods 2-3. In the following report cut features are numbered in square brackets e.g. [0000] and the fills of those features in round brackets e.g. (0000).

## PERIOD 1: THE NEOLITHIC/BRONZE AGE

### GENERAL

A single pit [4023] was identified on the north-eastern edge of Excavation Area 3 (fig. 8). The fill produced a small group of flint debitage of Neolithic/Early Bronze Age date, charcoal, including oak, and numerous fragments of hazelnut shells. The pit also contained a molluscan assemblage comprising species indicative of shaded, scrub or woodland conditions, which contrasts with the open country molluscan assemblages identified from Iron Age features.

Across the rest of the site a small residual assemblage of Neolithic/Early Bronze Age flintwork was recovered from Iron Age features and included two hammerstones and an unfinished tanged arrowhead.

### CREMATIONS

An unurned cremation burial (B1) was found just within the north-eastern edge of Excavation Area 1 (fig. 5) and another (B2) was found near the eastern corner of Excavation Area 2 (fig. 7). Further cremated bone (B3) was found redeposited in a posthole in Excavation Area 3 (fig. 8). There was no evidence of any associated features such as ring-ditches.

The cremation burials are discussed in more detail below (p. 45). Cremation burial B1 represented the remains of an adult, possibly female, aged 30-45 years. The burial had been placed in a round flat-bottomed pit [2001] 0.45m in diameter (fig. 4a). Pyre goods, in the form of a tip of a worked bone/antler pin and animal bone, were also recovered and a charcoal sample produced an Early Bronze Age radiocarbon date of 3560±70 BP (Wk 7809), corrected to 2126-1663 Cal BC (see p. 60).

Cremation burial B2 was found in a pit [5043] which measured 0.5m in diameter and 0.32m in depth (fig. 4b). Two fills of charcoal and bone (5058) and (5045), separated by a layer of sand (5052), were identified and the remains of a possible female aged over 30 years were recovered (see p. 46). Fish vertebrae were also recovered from the pyre material.

### GULLIES

Although there was no clear evidence of earlier prehistoric settlement associated with the pit or cremations, a series of pits and shallow curvilinear gullies at the north-western end of Excavation Area 2 are tentatively assigned to this period (fig. 7). One of these gullies [3369], which was 0.15m deep, may have defined a sub-rectangular area approximately 8m across with a south-west facing entrance. The other gullies formed no clear pattern and their function is unclear. No dating evidence was recovered from these features but their fills, comprising reddish-brown sand and clays, were markedly different from the grey and brown coloured fills found across the site in securely dated Iron Age features.

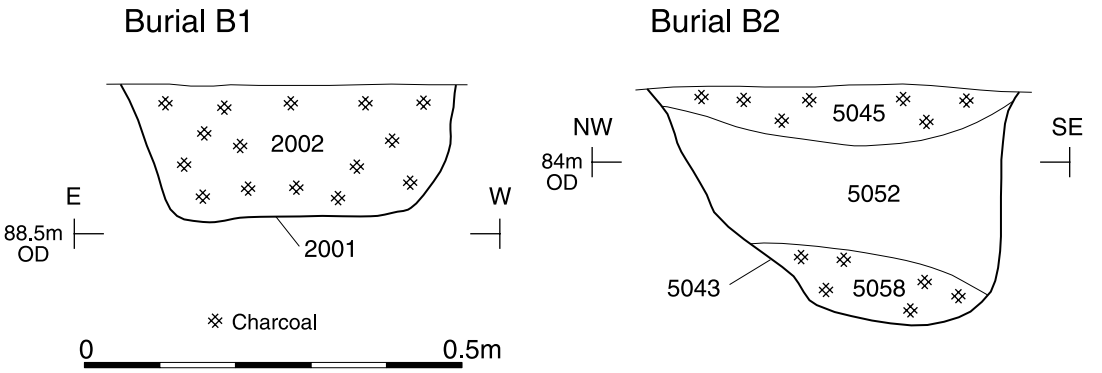



Fig 4 Sections of Cremation burial pits B1 and B2

## PERIOD 2: EARLY-MIDDLE IRON AGE

### INTRODUCTION

Several settlement features and enclosures which contained sherds of CP2 or CP2-3 pottery can be assigned to the Early–Middle Iron Age, covering a broad chronological span from the 6th–3rd centuries BC. These features clearly are not all contemporary but represent activity occurring, perhaps sporadically, over 300-400 years.

### EXCAVATION AREA 1

*TRACKWAY AND QUARRIES (FIG. 5)*

Traversing Excavation Area 1 on a north/south alignment was a possible trackway defined by ditches [1690] and [1557]. These were 12-13m apart and ran parallel for approximately 85m. At its southern end, and continuing into the preservation area, the gap between them widened as ditch [1557] curved to the south-east.

Ditch [1690] originally was 0.39m wide and 0.21m deep and had been recut at least four times, the final recut measuring 1.6m in width and 0.5m in depth. Ditch [1557] was a maximum of 0.8m wide and 0.7m deep, with one possible recut.

Ditch [1557] was cut by a large, irregular, flat-bottomed, 0.8m-deep feature [1752] which would have obstructed the trackway. This and similar features to the west [1663] and south [1564], have been interpreted as pits dug for clay extraction, possibly in several discrete episodes. All were re-used subsequently for the disposal of rubbish with, for example, a large quantity of animal bone recovered from the fills of [1564]. The fills of [1752] also yielded large quantities of pottery, animal bone (including a worked red deer fragment), a bone gouge (fig. 19.1), a small quantity of slag and a few fragments of neo-natal human lower limb bones.


Fig 5 Plan of Area 1, Early to Middle Iron Age features

*?BOUNDARY (FIG. 5)*

Approximately 35m to the west of, and roughly parallel to, the trackway was a north-west to south-east aligned ditch [1024], recut at least once, and which, at its north-western end, turned to the west before terminating. A shallow pit [1302] was located to the west of the ditch terminal.

A few features were found to the south and west of ditch [1024] but none produced substantial artefactual material and they cannot be assumed to be contemporary with the ditch.
Several structures and pits were found between ditch [1024] and the trackway. However, only two of the structures (S3 and S9) and two of the pits can be confidently assigned to this period.

*STRUCTURE 3 (FIGS. 5-6)*

Structure 3 (S3) was defined by a curvilinear flat-bottomed drip gully [1022] which had been recut once and presumably defined a roundhouse. It mostly lay outside of the excavation area and no entrance was discerned, but it had a projected diameter of approximately 10m. The fill of the drip gully produced triangular loomweight and daub. The only internal feature was a single 0.5m-deep posthole [1015] found just within the line of the drip gully.

*?STRUCTURE 9 (FIGS. 5-6)*

Three short flat-bottomed gullies [1088], [1035] and [1104], each approximately 3.5m long, 0.7m wide and 0.2m-0.4m deep, may have defined part of a roundhouse (S9) with a diameter of approximately 12m. The eastern terminal of [1088] had a 0.15m-deep posthole at its base. The relationship between S9 and S2 (see below) was not established. No internal featureswere apparent with the possible exception of vertically-sided 1.1m-deep pit [1027].

*PITS AND POSTHOLES*

Several pits were found in the immediate vicinity of the structures, but only two [1032] and [1084] produced pottery of Early-Mid Iron Age date (fig. 6). The relationship of the latter and adjacent pit [1085] with Structures 2 and 9 is uncertain. In combination, these pits could be associated with a south-west facing entrance into Structure 2 (see below) but pit [1085] also lies on the projected perimeter of Structure 9. Both pits are also part of a north-west to south-east pit alignment (periods 2-3, see p. 30). Pit [1084], which was 0.15m deep, contained an upturned cow skull and pit [1085], which was 0.17m deep, part of an adult human humerus (see p. 46).

Further pits and postholes were found to the north (fig. 5) and some appeared to be aligned north-west/south-east and others east/west. However, this interpretation may have been influenced by extensive medieval ridge and furrow truncation. Postholes [31], [38], and [131] all contained CP2 potsherds, but more than one period of activity is represented here as other features produced CP4 sherds.

*FIELD F (FIG. 5)*

To the east of the trackway was a large rectangular area (F) at least 75m x 45m across and which continued beyond the excavation area. Its size and lack of internal features suggest that this may have formed a field on the periphery of the settlement. It was defined by a 0.4m-deep boundary ditch [1771] which had been recut at least once and had an entrance in its south-eastern side. This ditch produced no clear dating evidence but was cut by the boundary ditch of Enclosure J which produced CP2 and CP2-3 wares (see below).

Internally, two parallel curvilinear gullies [2100] and [2102], 0.3m and 0.45m deep respectively, were recorded and a further gully [1842] may be associated with these features. If so these may form part of a curvilinear sub-enclosure within the south-western corner of the field. This possible sub-enclosure contained a single unexcavated pit cluster in its south-eastern corner. In addition a few small pits, including cremation B1 (see p. 46) also were found within the field.

*DITCH [1910] AND ENCLOSURE E (FIG. 5)*

Linear ditch [1910] appeared to meet the boundary ditch of Field F at the latter's southern corner. To the south-east, ditch [1910] contained a 1.4m-wide entrance which led to Enclosure B to the south-west while on its north-east side was a small spur which served to partially block the passage between the ditch and Enclosure D (see below).

Enclosure E measured approximately 14.5m x 5m and appeared to be appended onto ditch [1910]. It was defined by a 0.6m-deep ditch, most of which had been removed by a later enclosure.

*ENCLOSURE B (FIG. 5)*

Enclosure B continued beyond the excavation area where it was identified by geophysical survey. It too appeared to be appended onto linear ditch [1910] and it also had a west facing entrance. No internal features were apparent.

*ENCLOSURE D (FIG. 5)*

Unexcavated Enclosure D was defined by a curvilinear ditch with a north-eastern terminal. This boundary was then continued by a series of small pits or postholes, possibly forming a fence line. No internal features were apparent. It is assigned to this phase on the grounds of its spatial relationship to ditch [1910] and Structure 7.

*ENCLOSURES J AND N (FIG. 5)*

Enclosure J was defined by an L-shaped ditch [1870] which had been recut once and which contained a 2m-wide entrance along its north-west to south-eastern arm. It was then continued by ditch [1881] which ran beyond the limits of the excavation. At its north-western end the ditch turned to the south-west before terminating.

Enclosure N was hook-shaped and consisted of a north-east to south-west aligned 0.6m-deep ditch [1912], recut at least once, which turned to the south-east and then north before ending in terminal [1878]. It produced no clearly diagnostic pottery and is only tentatively assigned to this phase. The relationship between Enclosures J and N could not be established.

*STRUCTURES 7 AND 8 (FIG. 5)*

Structure 7 (S7) was defined by a 0.25m-deep curvilinear drip gully with an east facing entrance. It had a projected diameter of approximately 12.5m and presumably defined a roundhouse positioned just within the entrance of Enclosure J. Two CP2 potsherds were recovered from its fill. Several pits, one of which had been recut, were observed within the interior of which one

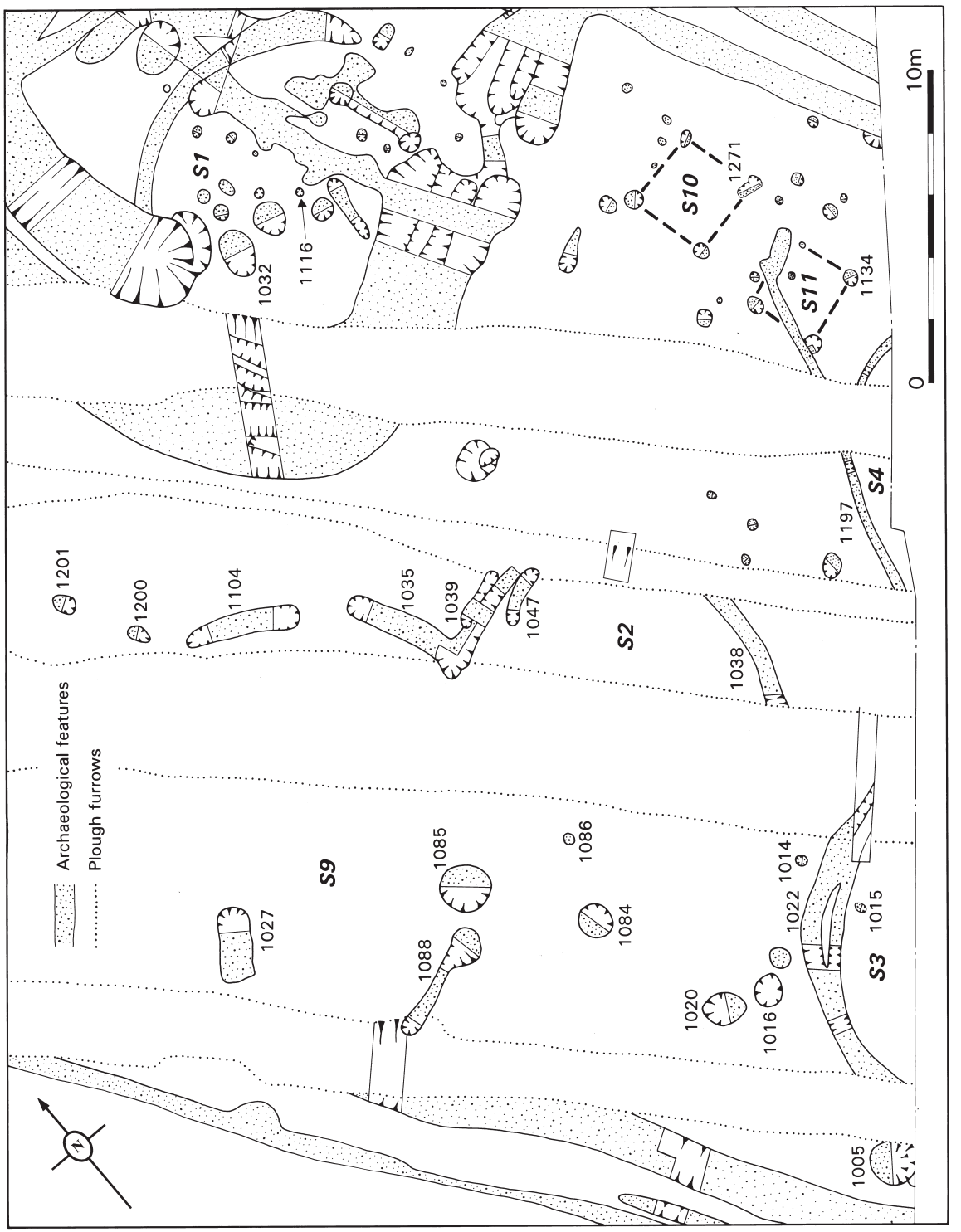



Fig 6 Deatil of Area 1, Structures S1, S2, S3, S4, S9, S10 and S11

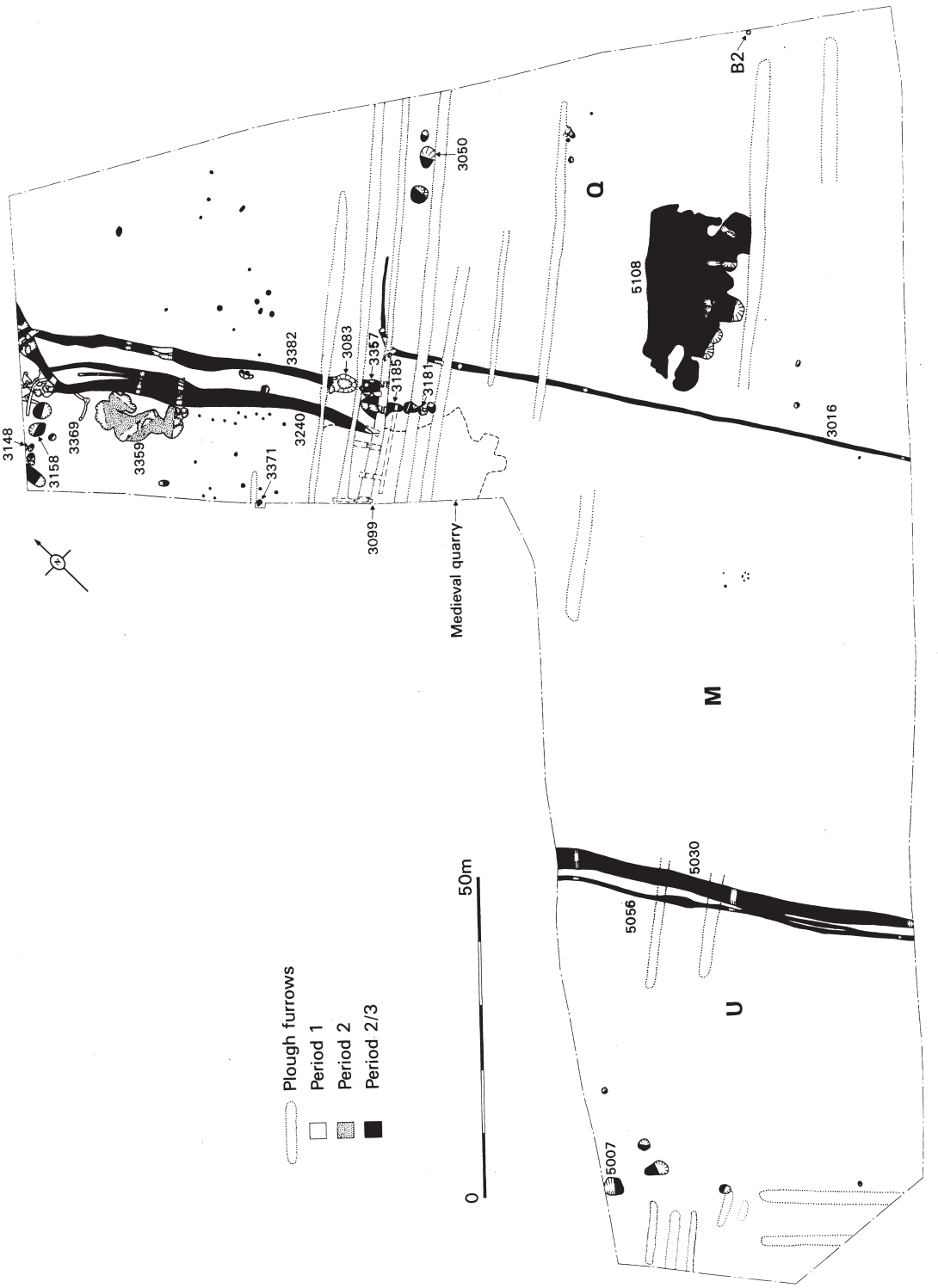



Fig 7 Plan of Area 2, all features

[1852] also produced CP2 wares. A short gully of uncertain function was also apparent on the north-western side of the structure.

Structure 8 (S8) was defined by a 0.19m-deep drip gully with an east-facing entrance. It had an internal diameter of approximately 8m but no internal features. It produced no dating evidence but presumably defined a roundhouse positioned inside either Enclosure J or N.

*PITS (FIG. 5)*

Several pits also were found within Enclosures J and N. One of these pits [1900] produced CP3-4 wares and indicated that not all of the pits are of this period. Nevertheless, two pits [1699] and [1813] produced CP2 pottery. Pit [1699] was vertically sided, 1.45m in diameter and 0.6m deep and may once have been clay-lined. Pit [1813] measured at least 8m across and was a maximum of just 0.25m deep. Originally it may have been dug for clay extraction, but the total of 126 potsherds, and 122 animal bone fragments recovered from its fill suggests that it had been backfilled with domestic rubbish. Adjacent pit [1838] was of similar dimensions, but contained little artefactual material.

### EXCAVATION AREA 2 (FIG. 7)

Very little pottery of Early-Mid Iron Age date was recovered from Excavation Area 2. However, a cluster of several mostly flat-bottomed intercutting pits [3359], which measured approximately 13.5m x 7m, was apparent. The individual pits were no more than 1m deep with one pit producing CP2 wares and another CP2-3 wares. Some also contained large quantities of burnt clay. Two produced a small quantity of slag and one of these also produced a crucible or mould fragment.

### EXCAVATION AREAS 3 AND 4

Most of the features from Excavation Areas 3 and 4 produced no diagnostic Iron Age pottery and as such are described mostly under Periods 2-3. Along the south-western edge of Area 3 however, was a possible enclosure defined by a large curvilinear ditch [4076] approximately 6.5m wide and 1.6m deep, which had been recut at least twice (fig. 8).

## PERIOD 3: MID-LATE IRON AGE

### INTRODUCTION

Several settlement features and enclosures which contained pottery of CP3-4 or CP4 date can be assigned to the Mid-Late Iron Age, the suggested date range for which is the late 3rd–1st centuries BC. As with the Early-Mid Iron Age features it is clear that not all of the features described below are contemporary but represent activity, perhaps sporadic, occurring over approximately 250 years. Evidence of settlement was found on Excavation Areas 1, 2 and 4.

### EXCAVATION AREA 1

*GULLY [1282] AND STRUCTURE 1 (FIGS. 9-10)*

Although the function of curvilinear gully [1282] is unclear (fig. 10), CP3-4 wares and a small rectangular bone plaque (fig. 19.3) were recovered from its fill, which subsequently was cut by Structure 1. Its relationship to an intercutting pit [2009] was not established.

Structure 1 (S1) was presumably a roundhouse with a projected diameter of approximately 11m and defined by a 0.22m-deep drip gully [1280] with an east facing entrance. Much of this structure had been removed by Enclosures A and K. However, an upturned adult cattle skull, the horns of which had been removed prior to deposition, had been placed upside down at the base of the surviving entrance terminal [1385]. Pit [1586] was positioned in the entrance gap in the drip gully and, along with internal pit [1045], also produced pottery of CP4 date.

Just within the entrance was a 0.5m-wide and 0.17m-deep gully [1188] with two pits [1190] and [1186] at either end. The pits differed in size with pit [1190] measuring 1m x 0.65m across and 0.37m in depth and pit [1186] measuring 0.6m x 0.58m across and 0.19m in depth. The function of the gully and pits is not known although it is possible that they were associated with a door or threshold into the roundhouse. A soil sample from [1190] produced charred cereal grains, several weed seeds and a fragment of possible roasted or partly smelted iron ore, while pit [1186] was packed with the butchered bones of two sheep

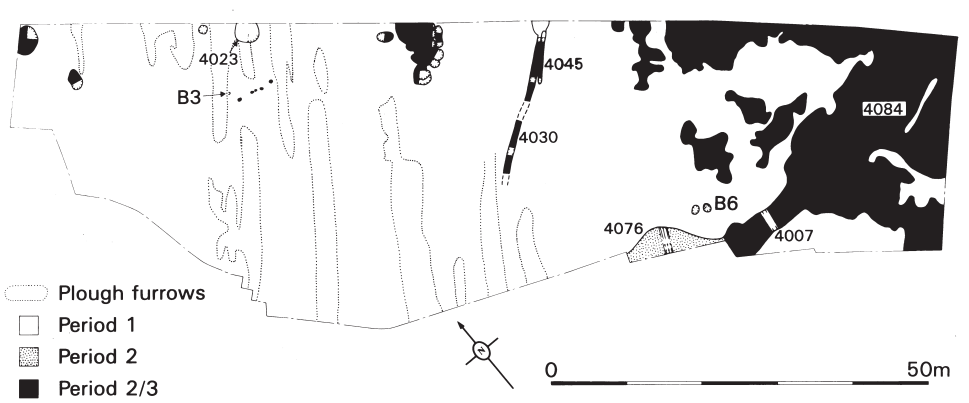



Fig 8 Plan of Area 3, all features

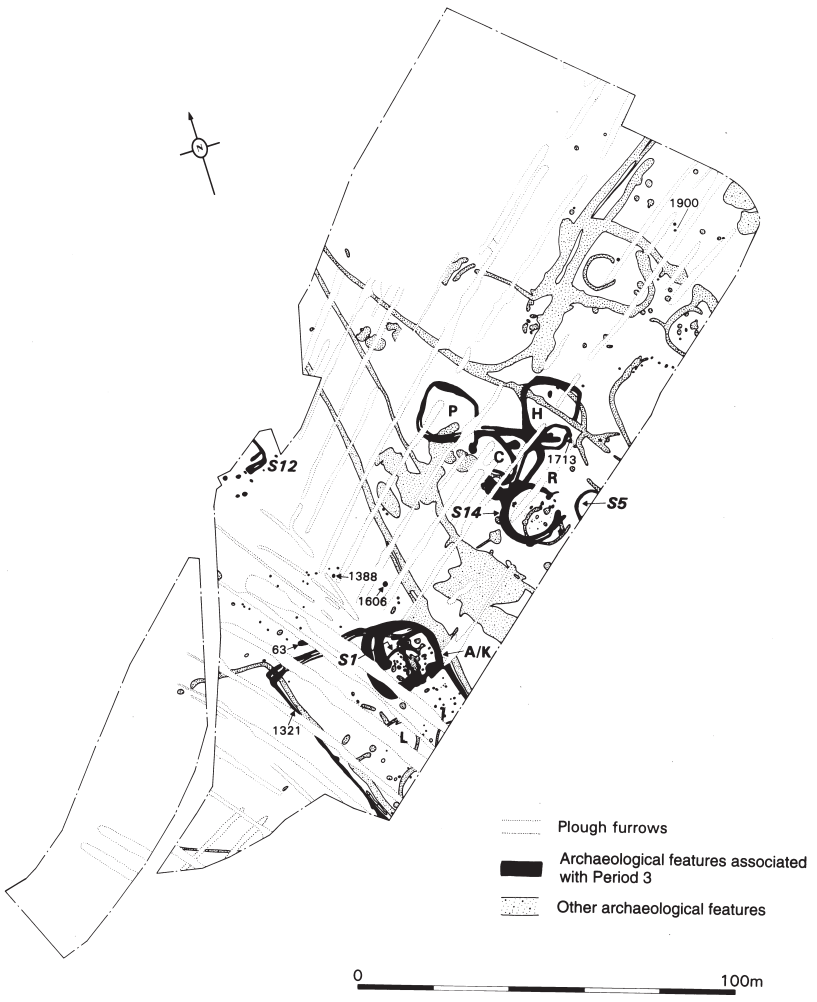



Fig 9 Plan of Area 1, Middle to Late Iron Age features

skeletons. A similar deposit to [1186] was found in pit [1116], 3.3m to the west (see p. 52).

*ENCLOSURE A (FIGS. 9-10)*

Structure 1 was replaced by Enclosure A which respected the alignment of the Period 2 trackway (although any direct relationship between the two features had been removed by a later enclosure). Internally, Enclosure A measured 17m x 13m and had a 2.2m wide southern entrance. The boundary ditch, much of which had been cut away by Enclosure K, had been repeatedly recut but all of the ditches were steep-sided and narrow, ranging in width from 0.5m-1m and in depth from 0.55m-0.8m (fig. 11). In addition, one of the ditches [1214] contained an incomplete butchered pregnant ewe skeleton. The backfilled enclosure ditches were sealed by a 0.18m-thick fill (1255) which produced 360 potsherds including 45 sherds from a cremation vessel. The relationship between Enclosure A and ditch [1325] could not be established, but the latter may have represented an internal division within the enclosure.

*ENCLOSURE K (FIGS. 9-10)*

Enclosure A was replaced by three-sided Enclosure K which was open to the south. It was defined by a steep-sided ditch [1742] which was a maximum of 1.7m deep and enclosed an area of approximately 12m x 9m (fig. 10). It had been cut on its northern side by the boundary ditch of Enclosure L. There was evidence of recutting of the ditch and a soil sample from the ditch fill contained ostracods which only inhabit aquatic environments. The current water table was found towards the bottom of the ditch but, as the enclosure was not connected to any watercourse and as ostracods cannot colonise over land, it is possible they arrived in the ditch through its deliberate filling with water from

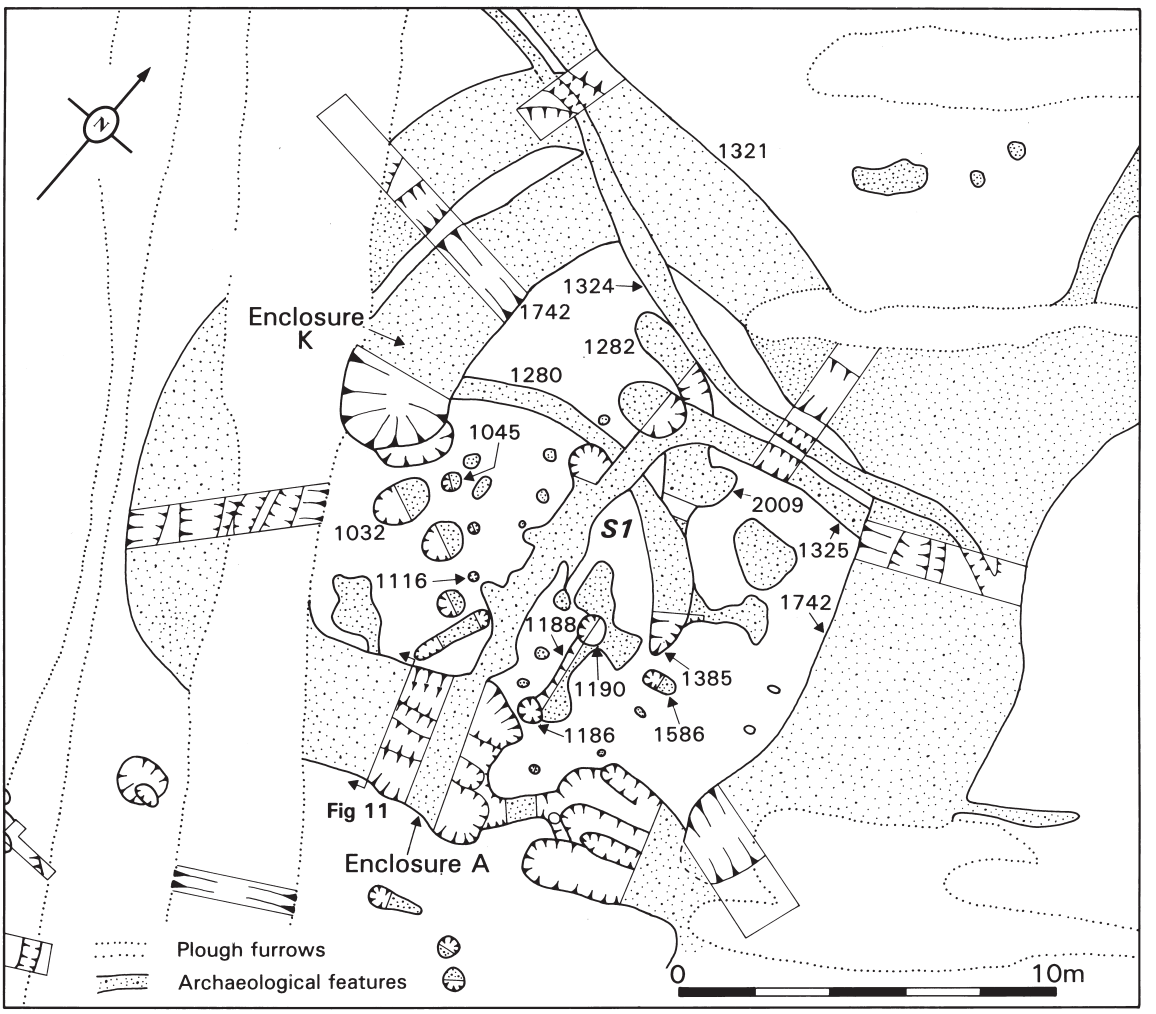



Fig 10 Detail of Area 1, Structure S1 and Enclosures A and K

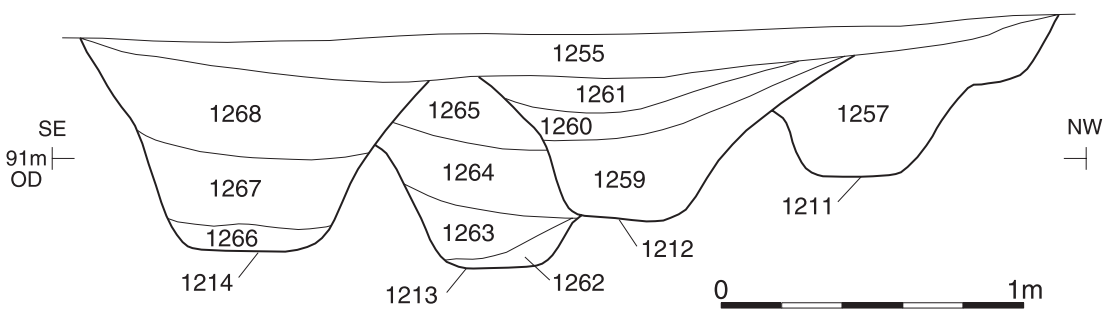



Fig 11 Section of Enclosure A boundary ditch

elsewhere. Fragments of human bone, triangular loomweight fragments and an iron Danebury Class 3 knife (fig. 19.8) were also recovered from the fills of this ditch.

*ENCLOSURE L (FIG. 9)*

Enclosure K was replaced by rectilinear Enclosure L which measured at least 38m x 36m. It was defined by a 0.47m-deep ditch [1321], which with recut [1324], cut through the backfilled ditch of Enclosure K (fig. 10). It may be of note that this enclosure also respected and was adjacent to the former trackway.

*PITS, GULLIES AND POSTHOLES NORTH-WEST OF ENCLOSURES A, K AND L (FIG. 9)*

Approximately 50m to the north of Enclosures A, K and L was a possible structure (S12) which consisted of a 0.14m-deep gully and a group of postholes and pits ranging in depth from 0.06m to 0.7m. Sherds of CP4 wares were recovered from one of these postholes. South of this possible structure were several pits of which three, [63], [1388] and [1606], contained CP4 wares. However, other pits in this area produced CP2-3 wares and may not be contemporary.

*STRUCTURE 5 (FIGS. 9 AND 12)*

Structure 5 (S5) was defined by a 0.06m-deep curvilinear drip gully [1386] which presumably demarcated a roundhouse with a projected diameter of approximately 10m. No internal features were apparent.

*STRUCTURE 14 (FIGS. 9 AND 12)*

Cutting the drip gully of Structure 6 (Period 2-3) was the 0.45m-deep boundary ditch [1459] of Structure 14 (S14). This ditch was almost circular measuring internally about 12.5m in diameter and may well have defined a further roundhouse. It had been recut several times but retained an east-facing entrance.

Internal pits and postholes were mostly concentrated in the eastern half of the structure, but it is unclear how many of these relate to earlier Structure 6. Pits [1510], [1528], [1545], [1554] and [1576] yielded potsherds of Mid-Late Iron Age date and hammerscale was found in the fill of posthole [1578]. Pit [1510] also produced a small copper alloy object (fig. 19.6), and a pig scapula with a saw mark from pit [1528] may be suggestive of boneworking. Just to the south of Structure 14 were three short gullies of uncertain function which were between 0.08m and 0.21m deep, [1583] [1679] and [1681].

*ENCLOSURE R (FIGS. 9 AND 12)*

To the north-east of Structure 14 was a 0.3m-deep curvilinear ditch [1420]. The function of this feature is unclear although it may have formed the boundary of another enclosure (R) with an open front to the east, that served as an annexe or subsidiary area to Structure 14.

*ENCLOSURE C (FIGS. 9 AND 12)*

Structure 14 had been cut through by the 0.7m-deep boundary ditch of Enclosure C [1571]. This enclosure was difficult to define but it may have been of two phases, the larger of which was approximately 16m x 12m in size with a west-facing entrance, possibly in the region of 8m wide. It was the only enclosure to have an entrance facing this way.

*ENCLOSURE H (FIG. 9)*

Period 2 ditch [1910] and the Enclosure C boundary ditch were cut by the boundary ditch of Enclosure H. This enclosure, which had a south-east facing entrance, was defined by a 1.35m-deep ditch which had been recut at least once. Internally it measured approximately 16m x 12m. Ditch terminal [1713] contained a copper alloy Swan's neck pin (fig. 19.5) which is probably an import from Continental Europe dating to between the 7th-5th centuries BC. It was found in the upper part of the ditch fill and may have been a casual loss although it is possible that it was deposited deliberately. A smithing hearth bottom and a curved iron bar were also recovered from this ditch. Two internal pits may be contemporary with the enclosure.

*ENCLOSURE P (FIG. 9)*

Cutting a posthole and the backfill of a Period 2 quarry was the boundary ditch of Enclosure P. The boundary ditch, which had been re-cut at least once, defined an area which measured approximately 15m x 16m. The entrance may have been truncated by medieval plough furrows which crossed the enclosure. No internal features were apparent. Spatially this enclosure forms a clear group with Structure 14 and Enclosures C and H.

*PITS (FIG. 9)*

A shallow scoop dug into the backfill of a Period 2 quarry produced a few CP3-4 wares, and towards the eastern edge of the excavation area pit [1900] also produced CP3-4 wares.

## EXCAVATION AREA 2 (FIG. 7)

*DITCH [3382] AND LINEAR PIT COMPLEX*

Linear ditch [3382] was aligned from north-west to south-east and was approximately 0.37m deep. It had been recut at least once, and contained postholes in its base, presumably for a fence. Although it produced sherds of Iron Age pottery it could belong in either periods 2 or 3. It has been assigned to this phase however as it was cut to the south-east by a large pit [3083] which was part of a 17m-long linear complex of Mid-Late Iron Age pits which effectively continued the alignment of the ditch.

Concentrations of horse bones were found in pits [3083] and [3185]. Pit [3083] was completely excavated and of 146 bone fragments, 61 were horse and 56 others probably horse. In pit [3185], 47 out of 73 identifiable animal bones were horse and most of the remaining 61 unidentified fragments were probably horse. This pit also produced fragments of two adult human leg bones. One had possible fine cut marks of the type associated with the removal of soft tissues (see p. 47). In addition another pit [3357] contained part of an iron woodworking file (fig. 19.7).

*DITCH [3240]*

Running parallel to ditch [3382] was ditch [3240], which curved to the north to cut the former. This ditch was a maximum of 0.68m deep and had been recut several times. Its southern end had been truncated by a medieval quarry, but it appeared to curve to the south possibly to meet ditch [3099] of Field M (see below). A line of ten undated postholes presumably formed a fence line parallel to ditches [3382] and [3240].

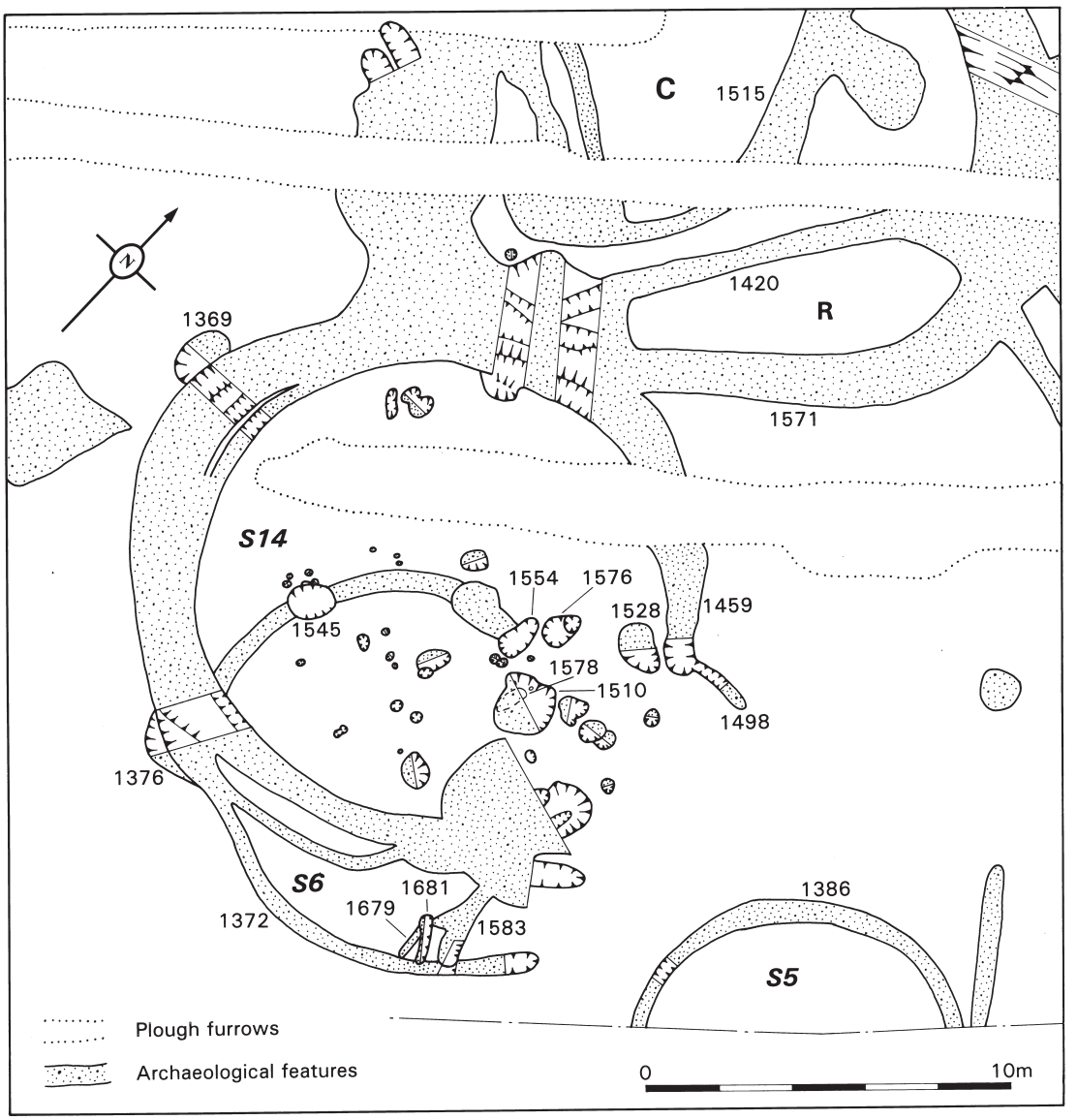



Fig 12 Detail of Area 1, Structures S5, S6 and S14 and Enclosures C and R

*FIELDS M, Q AND U*

The linear pit complex was cut by the boundary ditch of a large field (M). The north-western boundary ditch [3099] of this field had been cut by a shallow medieval quarry and lay underneath a plough furrow. However, it was up to 0.8m deep and pottery of Mid-Late Iron Age date was recovered from its fill along with a horse skull, a small quantity of slag and hearth lining, and an adult human leg fragment. Charred seed material found with the horse skull produced a radiocarbon date of 2260±60 BP (Wk 7810) corrected to 403-168 Cal BC.

The south-western side of the field was defined by ditch [5030] which was flanked by a small 0.15m-deep gully [5056], similar to gully [3016] on the north-eastern side of the field. The field contained few features apart from undated stakeholes some of which formed a sub-circular ring approximately 1m across.

To the north-east of Field M was another field (Q) bounded on its north-western side by ditch [3099] which petered out to the north-east. It contained few features apart from an undated large pit complex [5108] possibly dug for the extraction of sand. This complex had a relatively straight north-western edge which was parallel to the north-western boundary of the field, possibly

indicating that it had been dug against a feature which has not survived in the archaeological record. Further undated pits to the north also may have served as small sand quarries. Apart from cremation B2 (see p. 20) and a few small pits no other features were found in this field.

To the south-west of Field M was another large area, possibly another field (U) which contained seven shallow pits. They produced little artefactual material although pit [5007] contained a small quantity of slag. These pits were located approximately 40m to the east of the D-shaped enclosure (fig. 3).

### EXCAVATION AREA 4 (FIG. 14)

In the eastern corner of the excavation area was a short length of the western ditch [63] of Enclosure T which was part of the D-shaped enclosure partially excavated in 1979 (Windell 1981). At the top it was 6m wide and tapered to a V-shaped base at a depth of 2.7m. The width of the ditch section excavated in 1979 was 4m although the depth was identical. The difference in these widths may imply that the ditch was not all of one phase.

Two undiagnostic Iron Age potsherds were recovered from the basal fill and a further 69 sherds were found in the upper fill. These were again undiagnostic although some possible Middle Iron Age sherds were apparent. Windell however, was able to assign a 2nd or 1st century BC date to the enclosure ditch (Windell 1981).

## PERIODS 2-3: IRON AGE

### INTRODUCTION

In all four Excavation Areas there were Iron Age features which could not be assigned to periods 2 or 3 using the stratigraphic or artefactual evidence. These have been grouped together and are described below.

### EXCAVATION AREA 1

*STRUCTURE 2 (FIGS. 5-6)*

Structure 2 (S2) was defined by part of a 0.2m-deep drip gully [1038] with a projected diameter of approximately 11m. An incomplete worked bone point (fig. 19.2) was among the artefacts recovered from its fill. It was cut along its northern edge by a short linear gully [1039]. A short gully [1047] was cut just within the perimeter and a 0.08m-deep posthole [1086] was found just within the projected western boundary of the structure. No dating evidence was recovered from this structure and its relationship to Structure 9 was not established.

*STRUCTURE 4 (FIGS. 5-6)*

Structure 4 (S4) was defined by a 0.1m deep curvilinear drip gully [1197] which may have defined a further roundhouse to the east of Structure 2. It mostly lay outside of the excavation area and no internal features were apparent.

*STRUCTURES 10-11 (FIG. 6)*

Numerous postholes were apparent between Structures 2, 9 and the trackway, including two four-post structures (S10-11) lying parallel to the track. Structure 10 measured approximately 2.2m x 2m and its four postholes, three of which were stone-packed, were between 0.35m and 0.55m in depth. Structure 11 measured 1.9m x 1.6m and consisted of three 0.3m-deep posts. The north-eastern posthole was not identified, presumably having been cut away by a later gully possibly associated with Structure 4. Amongst the artefacts recovered were the tip of a highly polished bone gouge from the south-eastern posthole [1134] of Structure 11 and a possible Danebury Class 2 iron knife fragment from a re-cut of the south-eastern posthole [1271] of Structure 10.

*PITS AND POSTHOLES*

Several smaller postholes and stakeholes were apparent in close proximity to these structures. No clear structural pattern is discernible but they may represent different phases of activity in the same area.

Several undated pits and postholes were also recorded to the west of structures 10-11 (fig. 6). It is possible that pits [1005], [1020], [1200] [1201] together with [1084] and [1085] form an alignment parallel with the trackway. However, the latter two pits could be associated with Structure 2 (see above). Also of note were pit [1016], which was 0.3m deep and lined with burnt stone and contained large quantities of charcoal, and posthole [1014] which contained a horse skull.

Several features within Structure 1 and Enclosures A and K could not be phased, including pit [1116] which contained two butchered sheep skeletons (fig. 6 and see p. 51). Pits to the north of Structure 1 and north of Enclosure P also could not be phased (fig. 9).

Of those features in Enclosures J and N which could not be phased, a soil sample from pit [1897] produced charred cereal grains and several weed seeds and a piece of slag was recovered from pit [1803] (fig. 5).

*STRUCTURE 6 (FIGS. 9 AND 12)*

Structure 6 was defined by a 0.2m-deep curvilinear drip gully [1372] with a probable north-east facing entrance. It presumably defined a roundhouse with a diameter of 10m. Numerous pits and postholes were found within its interior and immediately outside the roundhouse. Two of these pits [1369] and [1376] were cut by the gully of Structure 14 (Period 3). It is unclear however whether the remaining pits are associated with Structure 6 or 14 and they are discussed above (see p. 28).

*BURIAL*

Within Enclosure J was inhumation burial B5. Deposited in a grave cut [1122] measuring 1.1m x 0.7m wide and 0.25m deep, only parts of the skull, upper axial skeleton and left humerus remained *in situ* (figs. 5 and 13). The remainder of the grave had been truncated, presumably through ploughing. The skeleton was that of an adult over 30 years old, probably female (see p. 46), and was aligned from north to south with the head to the south, resting on the right side with the skull facing east. The bone produced a radiocarbon date of 2350±80 BP (Wk 7807), corrected to 762-202 Cal BC (see p. 60). A flint scraper was also found in the grave fill.

### EXCAVATION AREA 2 (FIG. 7)

Several features in Excavation Area 2 could not be phased including pits to the south-west of period 3 ditches [3382] and

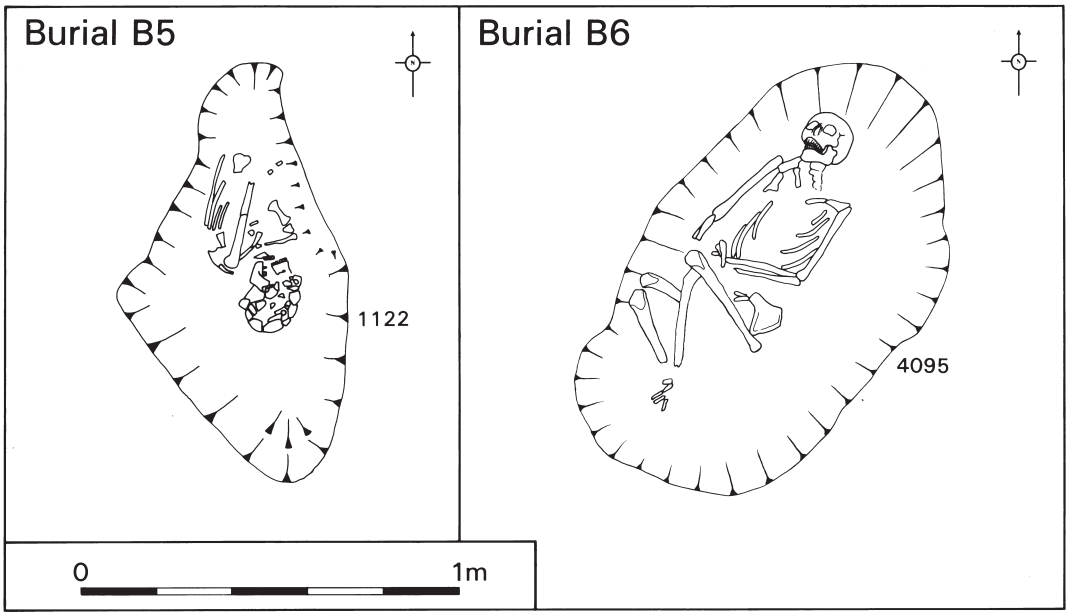



Fig 13 Plan of Burials B5 and B6

[3240]. A soil sample from one [3148] produced the highest quantity of charred cereal and weed seed remains found in the excavations. Pit [3371] contained part of an iron woodworking tool (fig. 19.10) and pit [3158] contained a small quantity of slag. To the north-east of ditch [3382] were numerous small undated pits and postholes which formed no particular pattern.

## EXCAVATION AREA 3 (FIG. 8)

Several features in Excavation Area 3 could be of either Early-Mid or Mid-Late Iron Age date. Gully [4030], partially flanked by another gully [4045], was on the same alignment as Field F ditch [1771] in Excavation Area 1, and may have been a continuation of it. To the north-west of this gully was a pit group and several individual pits and postholes. Some of the latter were on an approximate east-west alignment. Offset slightly from this alignment was a posthole which contained redeposited cremated human bone.

The relationship between period 2 ditch [4076] and an east-west aligned channel [4007], 3.3m wide and just 0.2m deep, was not established. This channel led east into a very wide depression [4084], which was a maximum of 0.8m deep. The fills of both features were identical and further patches of the same material were found to the north. It may be that this feature formed a pond which received the water run-off from the higher ground to the west, but it is unclear whether this was a natural or a man-made feature. A few sherds of Iron Age pottery were found within its fill.

Burial (B6) was found just to the north of channel [4007] in grave cut [4095]. The burial was flexed and on its right side (figs. 8 and 13) and some of the bone from the left upper limb and thorax was stained dark brown, possibly indicative of some form of organic material placed across that part of the body (see p. 46). The bone produced a radiocarbon date of 2130±70 BP (Wk 7808), corrected to Cal BC 362-AD 49.

## EXCAVATION AREA 4 (FIG. 14)

Very little diagnostic pottery was recovered from Excavation Area 4 and, with the exception of ditch [63] which is part of the D-shaped enclosure excavated in 1979 (Windell 1981), all of the Iron Age features have been assigned to periods 2-3 (fig. 14).

### *BURIAL*

A single inhumation (B4) (not illustrated), comprising the semi-articulated extended and supine remains of an adult female aged about 30-45 years, was found in a shallow pit. Only about 25% of the skeleton survived and much of the upper part may have been removed by ditch [63] and by ploughing. The remains did not lie on the base of the pit, suggesting burial as a secondary use for this pit. Sherds of Iron Age pottery were recovered from the pit fill.

### *STRUCTURE 13*

Part of a circular gully [29] with a projected diameter of approximately 9m may have formed the drainage gully of a roundhouse (S13). It had been cut by the boundary ditch [63] of the D-shaped enclosure and may have had a north-facing entrance although this could not be established with certainty. Its relationship to a concentric outer gully [34] is not known, but the latter had been recut at least three times and in its final form was markedly deeper, at 1.1m, than its predecessors. The latter

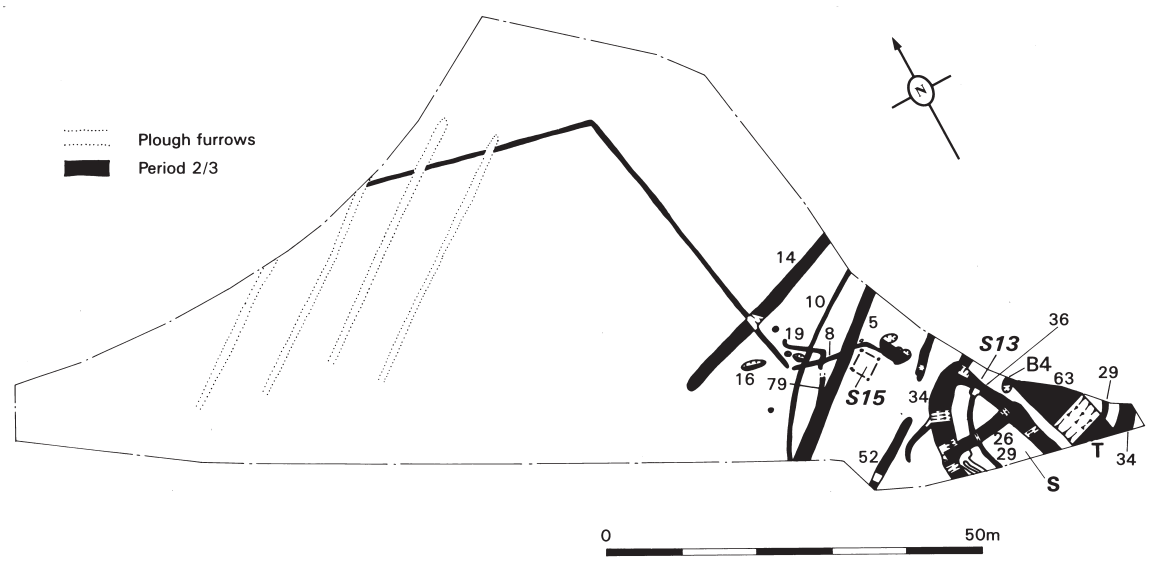



Fig 14 Plan of Area 4, all features

previously has been recognised as a cropmark. It is possible that these gullies represent different structures. Gully [36], which contained a few adult female human bone fragments, may have formed an internal division but this is far from clear. As well as Iron Age pottery two worked red deer antlers (one of which is illustrated, see fig. 19.4) were recovered from this structure.

*ENCLOSURE S*

Structure 13 was cut by the boundary ditch [26] of small north-south aligned rectilinear Enclosure S. The southern side of the enclosure lay outside of the excavation area but it defined an area at least 9m across. The ditch was up to 1m deep and probably had been recut.

A few human bone fragments from a neonate and an adult were found in the fill of this ditch along with a large Iron Age pottery assemblage with some Roman sherds.

*STRUCTURE 15*

A possible four-post structure (S15) with posts between 0.1m and 0.22m in depth was identified to the north-west of Structure 13. These defined a square with 2.4m-long sides.

*DITCHES, GULLIES AND PITS*

Also to the north-west of Structure 13 were several features including three linear ditches [52], [5] and [14] aligned approximately from north-east to south-west. Ditch [52] may have had a 4.5m-wide entrance. All produced sherds of Iron Age pottery. Several gullies were seen traversing the site, three of which [8], [10], [19] also produced sherds of Iron Age pottery. Roughly parallel to gully [10] was gully [79] which cut through ditch [5]. A few pits were also apparent.

## THE GEOPHYSICAL SURVEY (fig. 3)

Several anomalies defined by the geophysical survey were also identified in the excavation. In Excavation Area 1 the trackway, Structure 3, linear ditch [1910], Enclosure B and Enclosure J ditch [1881] were all identified in the survey. The full westerly extent of Field M was also identified along with a sub-rectangular enclosure appended onto its north-western side. The only feature identified in the geophysical survey not seen in the excavation was a curvilinear ditch within Enclosure D on Excavation Area 1.

A range of sub-circular and sub-rectangular enclosures, curvilinear/linear features and possible pits were also identified in the preservation area. Towards the north-eastern corner of the survey area a possible pit alignment, similar to that seen in Excavation Area 2, was recorded. It is not possible to assign a clear chronological period to these features, although the impression gained here is that the pattern of features is equally dense to that in Excavation Area 1.

## THE ARTEFACTUAL EVIDENCE

### THE POTTERY
by Paul Blinkhorn and Dennis Jackson

*INTRODUCTION*

The pottery assemblage comprised 4,504 sherds with a total weight of 49,114g. Minimum number of vessels (MNV) was recorded by summation of the total percentage present of each rimsherd. All the pottery was of Iron Age date with the exception of 16 sherds (50g) of Romano-British wares and 18

sherds (361g) of post-Roman material, of which one sherd was of Early/Middle Saxon date and the rest medieval or later. A full breakdown of sherd occurrence by number and weight of sherds per fabric type per context is retained in the archive, as is a description of the post-Roman material. Generally, the assemblage comprised small and slightly abraded sherds, and there was only a moderate amount of diagnostic pottery. The vessel forms and decorated sherds suggest that the site was long-lived, starting *c.* 6th/5th centuries BC and continuing until the 1st century BC.

*FABRICS*

The range of fabrics is typical of the Iron Age pottery of the region, and can be paralleled at many sites, such as Weekley (Foster and Aird 1988) and Twywell (Harding 1975).

*Fabric 1*: Coarse shell. Moderate to dense temper of angular coarse shell fragments up to 10mm, with rare quartzite, grog, flint, organic material or ironstone. 1339 sherds, 23372g. MNV = 1.40.

*Fabric 2*: Fine shell. Sparse to moderate angular shell fragments up to 5mm, although most are usually below 2mm. Other material occurs as F1. 2351 sherds, 17240g. MNV = 3.67.

*Fabric 3*: Sandy fine shell. As F2, but with moderate sub-rounded quartz up to 0.5mm, giving sherds a sandy texture. 59 sherds, 937g. MNV = 0.41.

*Fabric 4*: Grog and shell. As F2, with sparse to moderate red grog up to 2mm. Four sherds, 28g. MNV = 0.

*Fabric 5*: Pounded shell. Sparse to moderate fine shell up to 1mm. Vessels are often self-slipped, so that inclusions are only visible in section. 719 sherds, 7156g. MNV = 5.34.

*POTTERY OCCURRENCE BY FABRIC TYPE*

A much greater number and weight of vessels in Fabric 1 occurred in Excavation Area 1 and comprised a far greater proportion of the assemblage than from Excavation Areas 2-4. This suggests that large storage vessels were used mainly in this area, or at least were disposed of here after breakage. In Excavation Areas 2-4 the assemblage was highly fragmented and the mean sherd weight was lower. Consequently, it was not possible to carry out any analyses in these three areas beyond basic chronotypology although the small number of F1 sherds from Excavation Areas 2-4 is worthy of note. The poor quality of the assemblages from Excavation Areas 2-4 means that the following analyses are in the main based on the assemblage from Excavation Area 1 unless otherwise stated.

*VESSEL FORMS*

The number of vessels which survived as rim to shoulder profiles was very small. However, it was still possible to define a series of taxonomies, which form the basis of the ceramic phasing, as follows:

*Type 1:* Shouldered jars, often with girth decoration. The jar forms occur in a wide range of sizes, and with shoulders that can be sharp, rounded or slack. They usually have elongated necks which are upright, everted or concave. Where decoration occurs, it usually comprises fingertipping of the shoulder (*e.g.* fig. 15.6), but fingernail impressions (fig. 15.5) and slashing (fig. 17.31) were also noted.

*Type 2:* Long-necked jars with rounded shoulders (figs. 17.24 and 17.27), usually with an upright or everted neck and simple rim forms.

*Type 3:* Carinated and round-shouldered bowls (*e.g.* fig. 15.9). Mainly in fabric 5 with upright and everted rims and necks, and plain rim forms.

*Type 4:* Long-necked jars or bowls (fig. 16.22). Sherds from long necked vessels where the shoulder does not survive. Long necked vessels are rare in the later Iron Age period, and the ones noted here are likely to be derived from any of the above groups.

*Type 5:* Wide-mouthed jars (figs. 15.1 and 15.7). Bipartite, thick-walled vessels with globular or slack-sided profiles and with rim diameters often in excess of 250mm. The vessels rarely have any noticeable neck, and the top of the rim is often flattened and on occasion impressed with the thumb or finger.

*Type 6:* Globular or slack-sided bowls (fig. 16.15). Short, everted, upright or stubby rims which are usually undeveloped. Commonly occur in Fabric 5.

*Type 7:* Scored ware jars. Mainly restricted to individual sherds from large vessels (*e.g.* fig. 17.30).

*DECORATION*

Eight decorative styles were identified:

1) Extensive finger decoration ('Rustication'). One example (fig. 17.25)
2) Plain applied neck cordon. One example.
3) Bowls with horizontal incised lines. Two examples.
4) Fine line decoration on the vessel body. Two vessels have ornamentation on the neck (figs. 16.22 and 17.26), and vessels with zig-zag or wavy line decoration were noted from Excavation Area 4.
5) Fingertip or fingernail decoration on the girth or shoulder. Sherds from 15 different vessels.
6) Slashed decoration (*e.g.* fig. 17.31). Two examples were noted, one on the shoulder, the other on the neck.
7) Fingertip/nail impression on the top of the rim (*e.g.* fig. 15.8). Six examples.
8) Rows of stabbing on the body. One example, from a wide, lug-handled bowl (fig. 16.16).

*SCORED WARE*

The amount of scored ware from this site (1.2% by sherd count) appears very small when compared to other Iron Age sites in the region. The picture is also complicated by the presence of vessels which have been lightly wiped or brushed as these cannot always be easily differentiated from scored examples.

*CERAMIC PHASES*

Knight (unpub.) has suggested that the Late Bronze Age/Early Iron Age styles of pottery extend from the 9th to the 4th centuries BC, with the later early La Tène styles, which he dates from the 5th to 1st centuries BC, overlapping this phase. For Wilby Way the pottery is divided into five ceramic phases, each with a postulated dating scheme based on evidence (mainly radiocarbon dates) from sites elsewhere in Northamptonshire.

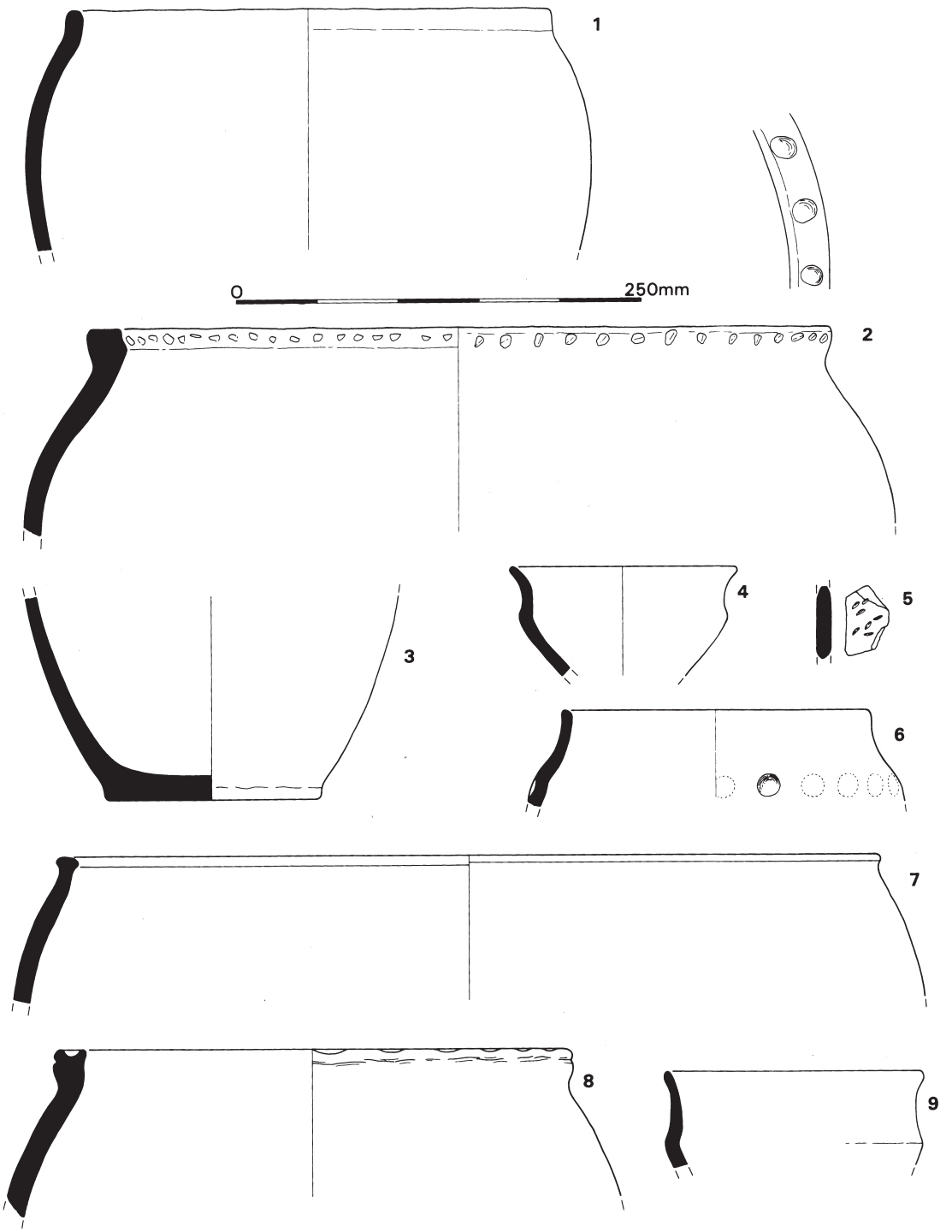



Fig 15 Pottery

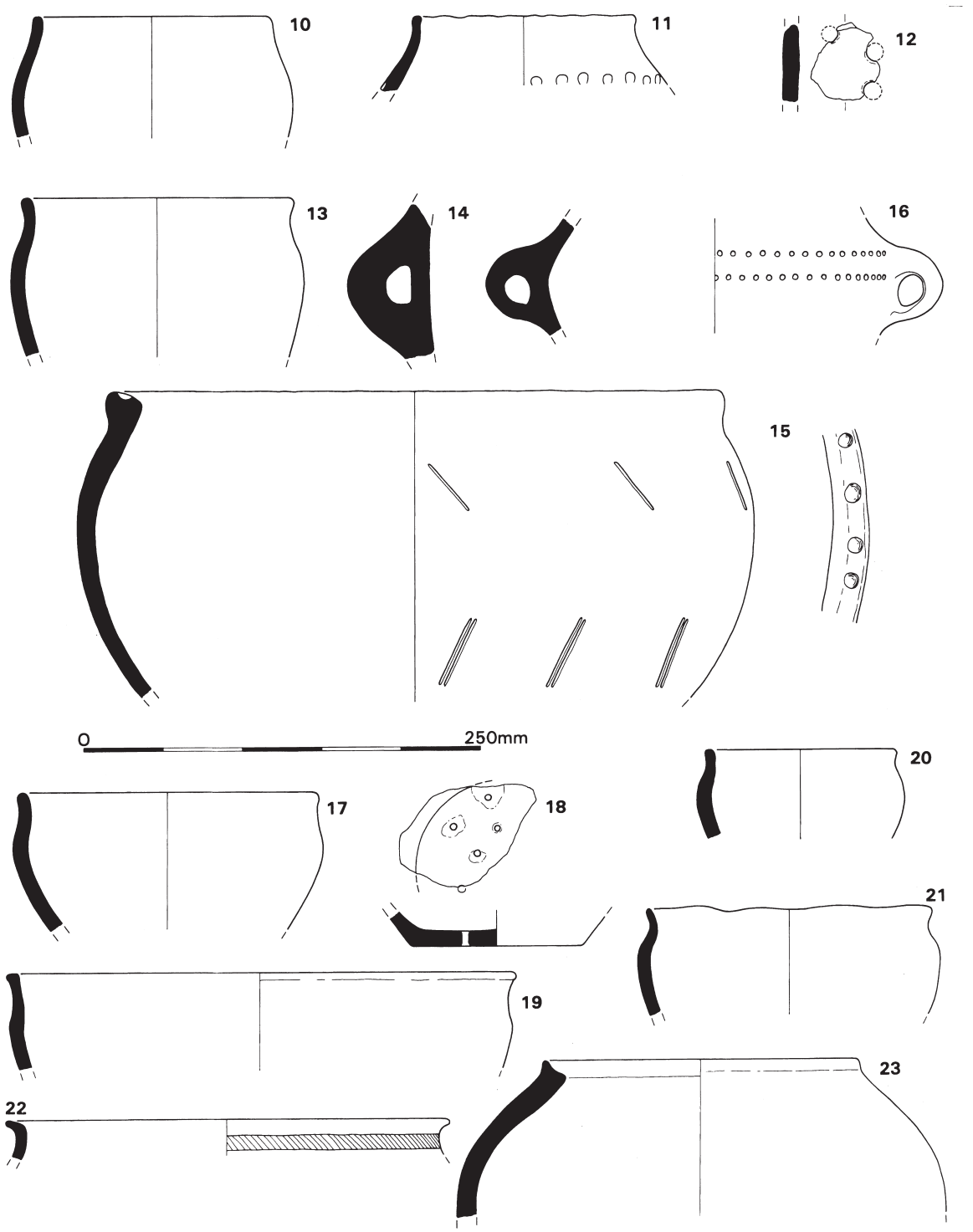



Fig 16 Pottery

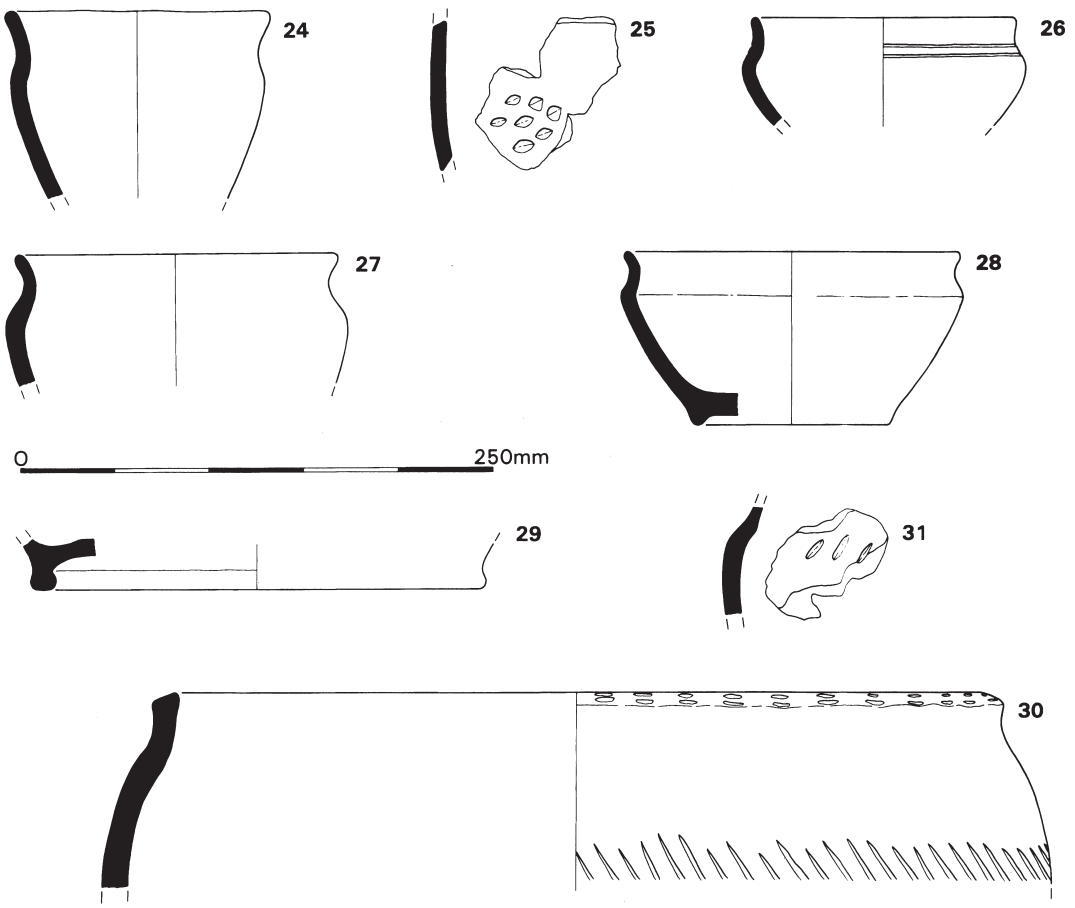



Fig 17 Pottery

*Ceramic Phase 1 (9th – 7th centuries BC)*

Many of the forms noted in Ceramic Phase 2 (below) have their origins in this phase. The only excavated site in the region of this date is at Thrapston, some 20km to the north-east but none of the decorated rim and body sherds from there can be paralleled at Wilby Way (Jackson forthcoming).

*Ceramic Phase 2 (6th – 4th/3rd centuries BC)*

Diagnostic pottery of this period, specifically carinated bowls or jars with finger impression on the shoulder (*e.g.* fig. 15.6), occurred in many areas of the site, suggesting widespread activity. The largest assemblages of pottery of this period in the area are from Gretton (Jackson and Knight 1985) and Brafield (unpub.). At Gretton, over 2,700 sherds of Early Iron Age pottery were associated with radiocarbon dates centred on the mid 5th and early 3rd centuries BC. This suggests little change in style during this period. An iron ring-headed pin was also noted, which supports the 5th century BC dating.

The pottery decorated on the neck or body with fine grooved or scratched lines (Knight 1984) can be paralleled with Chinnor-Wandlebury style material (Cunliffe 1991, A.11), which is dated to the 5th – 3rd centuries BC. The wide shouldered bowl (fig. 17.26) is unusual in Northamptonshire, and did not occur at Gretton. Similar bowls are known from Fengate (Hawkes and Fell 1943) and are common at Darmsden, Suffolk (Cunliffe 1968). These parallels suggest that the Wilby Way vessel may be early, although a similar vessel from Brackmills, Northampton (Chapman, 2000-1), was found in the same feature as a human burial dated by radiocarbon to the early 4th century BC. Vessel forms 1-4 and six of the eight decorative techniques (above) can be dated to this phase.

*Ceramic Phase 3 (late 4th – 3rd centuries BC)*

This is a transitional phase which coincides with the end of the use of sharp shouldered or carinated vessels, the so-called Angular Horizon. Bipartite jars and vessels with shorter necks become more common although some earlier forms persist. The

transition is most obvious in stratified assemblages such as those from the later deposits at Gretton, or the earlier material from Twywell (Harding 1975). An assemblage from Harringworth in the north of the county may date to this phase (Jackson 1981). The range of pottery from this phase at the site is poor.

*Ceramic Phase 4 (late 3rd – 1st centuries BC)*

Pottery of this phase is very common in the Northamptonshire region, and there are large assemblages from Weekley (Jackson and Dix 1986) and Hunsbury hillfort (unpub.). Pottery decorated in the La Tène style is common at both sites and has been found at many others in the region. The lack of material decorated in this style at Wilby Way, coupled with the presence of generally longer rim forms, suggests that the assemblage dates mainly to the earlier part of this phase.

*Ceramic Phase 5 (early 1st century AD)*

There is no Late Iron Age ('Belgic') pottery of this date from Wilby Way, apart from a small quantity in the area of the D-shaped enclosure excavated in 1979 (Windell 1981).

*VESSEL SIZE ANALYSIS*

The data in Table 1 shows that there is a definite change in pottery use at Wilby Way during the latest phase of occupation. All fabric types show little change in their representation during the period CP2-CP3/4, but during CP4 there is a significant increase in the weight of fabric 1 sherds as a proportion of the phase assemblage. This fabric, the coarsest of the shelly wares, tended to be used for the manufacture of large ?storage vessels, suggesting a significant increase in the use of large vessels during the final phase of occupation. The fact that Fabrics 2 and 5 do not show a significant decrease in terms of the proportion of the number of sherds present, but do decrease sharply as a proportion of the weight, adds further support to this. This is because if less pottery of this type was in use at the site, the number of sherds would decrease as well as the weight. The mean sherd weights of fabrics 2 and 5 show little change throughout the occupation of the site (Table 2). This is confirmed by the analysis of rim diameters which shows a significant increase in vessel size during the final phase, particularly in the case of fabric 1 vessels, but also in fabric 5.

The data in Table 2 shows that not only does the proportion of fabric 1 (by weight) increase during CP4, but the mean sherd weight of the fabric also increases significantly. This reinforces the fact that the vessels in this fabric were generally larger than in preceding phases because, as a rule, bigger vessels will break into heavier sherds. The sharp increase in the mean sherd weight of fabric 5 during CP3 and 3/4 is almost certainly a statistical anomaly caused by the small assemblage size.

*RIM ANALYSIS*

Previous work (Woodward and Blinkhorn 1997) has indicated that there are good grounds to suspect that the rim diameters of Iron Age jars closely correlate with the capacity of the complete vessel. The larger the original vessel, the larger the rim diameter. On this basis, the rim diameters of the pottery from Area 1 were collated at 20mm intervals, to allow for the inherent asymmetrical nature of handmade pottery. The results are shown in fig. 18.

Perhaps the most striking result is the spread of the rim diameters for the shell-tempered fabrics 1 and 2. The data for fabric 1, the coarse shell ware (fig. 18.1/2), indicates that this was used primarily for large storage vessels, whereas the finer fabric 2 has a much wider size range, but with the majority of vessels at the smaller end of the scale (fig. 18.3). This is illustrated by the mean rim diameter of the two fabric types: that of fabric 1 is 289.1mm, whereas that of fabric 2 is 202.3mm. Testing these values using Students *t*-test gives a value of $t = 6.69$ (2df, $0.05>p>0.02$), which indicates that the difference between the two groups is highly significant. It would therefore seem that the potters supplying the site produced clay mixes in which the size of the inclusions was broadly related to the size of the pot to be produced. This phenomenon has been noted in previous work (Foster and Aird 1988, 73), although no data was produced to support the claim.

When the two fabric groups are combined, along with the small number of fabric 3 (shell and sand-tempered) rims from the site, the resulting plot (fig 18.1) clearly shows two size-ranges of pot were favoured; a smaller vessel, with the commonest rim diameter being in the 121-160mm range, and a larger vessel, with the commonest rim diameter in the 241-260mm range. Other peaks occur at 281-300 and 341-360mm, although they are not as clear as the other two, and may simply be a result of the vagaries of sampling. Overall, the data compares very closely with those

Table 1: Pottery occurrence by number and weight of sherds per ceramic phase, expressed as a percentage of the phase assemblage

| Ceramic Phases | Fabric 1 | | Fabric 2 | | Fabric 3 | | Fabric 5 | | Phase Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *No.* | *Wt.* | *No.* | *Wt.* | *No.* | *Wt.* | *No.* | *Wt.* | *No.* | *Wt.* |
| 2 & 2/3 | 53.3 | 50.9 | 28.1 | 31.0 | 2.8 | 3.1 | 15.8 | 15.0 | 683 | 8211 |
| 3 & 3/4 | 41.3 | 48.3 | 45.0 | 31.1 | 2.8 | 3.5 | 11.0 | 17.1 | 327 | 5390 |
| 4 | 50.1 | 72.9 | 36.2 | 19.5 | 3.0 | 2.4 | 10.2 | 5.1 | 608 | 13,369 |
| Total | 144.7 | 172.1 | 109.3 | 81.6 | 8.6 | 9 | 37 | 37.2 | 1618 | 26,970 |

Table 2: Mean sherd weight per fabric type per phase

| Ceramic Phases | Fabric 1 | Fabric 2 | Fabric 3 | Fabric 5 |
|---|---|---|---|---|
| 2 & 2/3 | 11.5 | 13.3 | 13.2 | 11.4 |
| 3 & 3/4 | 19.3 | 11.4 | 21.2 | 25.6 |
| 4 | 31.6 | 11.9 | 18.4 | 11.0 |

Fig 18.1: Fabric 1, All periods (MNV = 1.17)

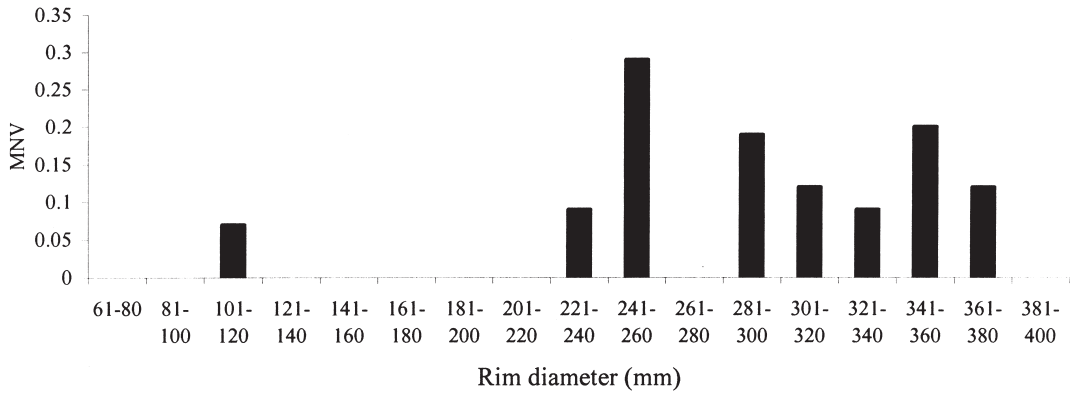



Fig 18.2: Fabric 2, All periods (MNV = 3.06)

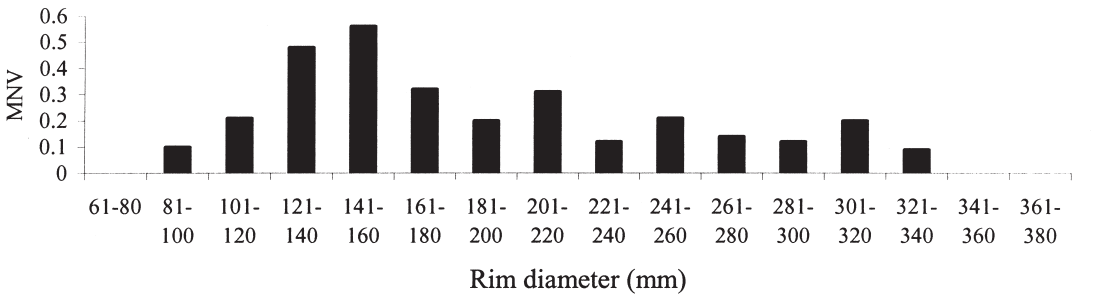
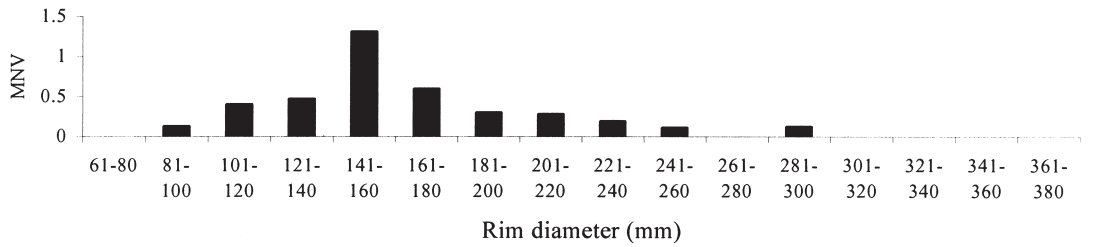



Fig 18.3: Fabric 5, All periods (MNV = 3.91)




from other sites in the region (cf. Woodward and Blinkhorn 1997, table 3), which suggested the commonest rim diameter modes are 141-160mm and 261-280mm. A third, smaller peak was noted at 401-420mm, but no vessels of such a size occurred at Wilby Way.

The fine fabric 5 vessels produced a different pattern. The mean rim diameter (179.8mm) was considerably smaller than that of the other types, with the standard deviation (46.6mm) showing a much more restricted size range than those of fabric 1 and fabric 2 rims (70.6mm and 63.3mm respectively). The bar graph in fig. 18.4 illustrates this. Vessels in the 141-160mm range were the commonest (over 30% of the assemblage), with a gradual tail-off in occurrence as diameter increased. This is also reminiscent of the data from other sites in the region (Woodward

Fig 18.4: Fabrics 1 and 2, Phases 2 and 2/3

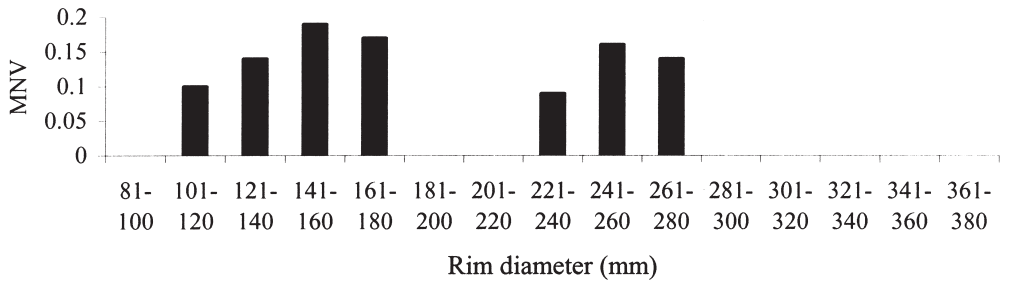



Fig 18.5: Fabrics 1 and 2, Phases 3 and 3/4

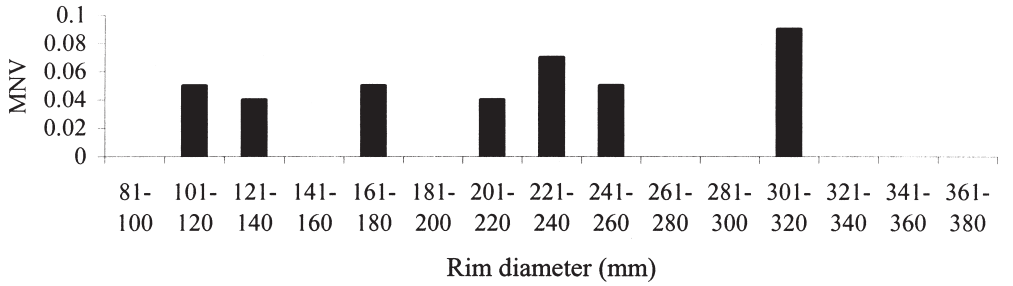
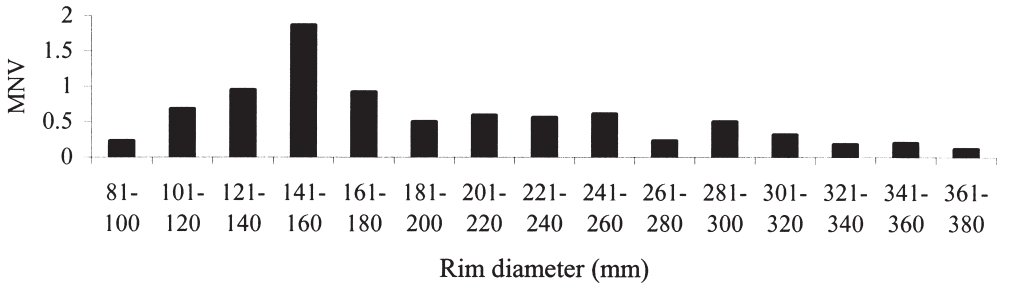



Fig 18.6: Fabrics 1 and 2, Phase 4




and Blinkhorn 1997, table 3), with the commonest rim diameter being towards the lower end of the size range, and a gradual fall-off in occurrence with size, and the possibility of secondary peaks.

When the data is collated by ceramic phase, a slightly different picture emerges, and suggests changes in pottery use (in terms of vessel size) during the occupation of the site. Due to the small assemblage size it was necessary to combine the data for fabrics 1 and 2, and also to amalgamate each phase with its following transitional phase. Amalgamation of the two coarser shelly fabrics is not unreasonable: as noted earlier, it seems very likely that the potters used coarser clay for larger vessels, suggesting the differences in the two fabric types to be technologically functional rather than cultural or use-specific.

Fig 18.7: Fabric 5, Phases 2 and 2/3

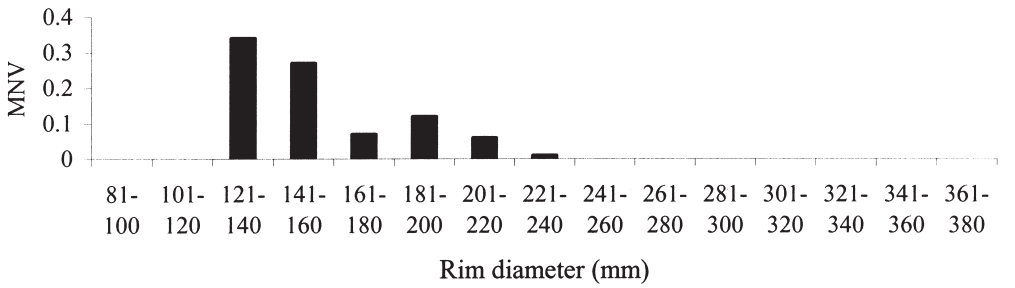



Fig. 18.8: Fabric 5 Phases 3 and3/4

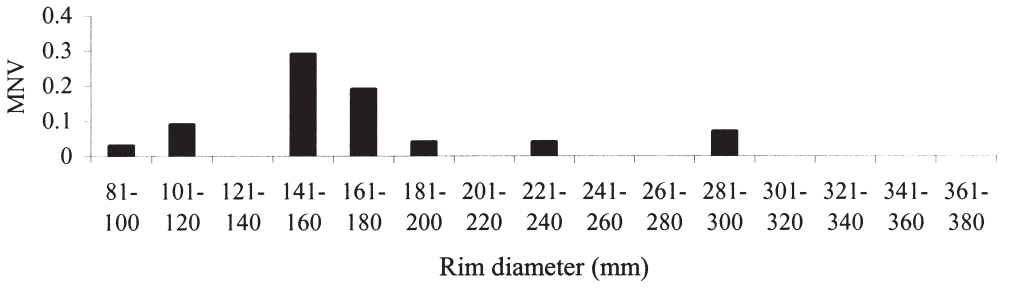
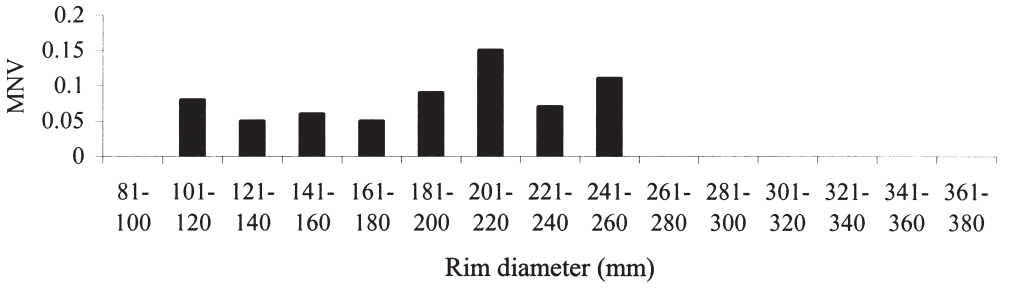



Fig 18.9: Fabric 5, Phase 4




During CP2 and CP2/3, the shelly fabrics are clearly divided into two size ranges, centred on 160mm and 240 mm (fig. 18.5). During CP3 and CP3/4 the picture is less clear (fig. 18.6), probably due to the small amount of pottery, but by CP4 there has been a shift, with vessels in the lower size range, around 160mm clearly favoured over the larger vessels, with just a suggestion of a secondary peak around 260mm (fig. 18.7).

Vessels in the fine fabric 5 also show a change over time. During CP2 and CP2/3 the lower end of the size range is favoured, *c.* 140mm, with little suggestion of a secondary larger peak (fig. 18.8), the CP3 and CP3/4 material shows similar traits (fig. 18.9), but by CP4, the picture has changed completely, with larger vessels, over 200mm, far more common (fig. 18.10).

However, the data in Table 3 suggests that in the case of fabrics 1 and 2, this impression may be a false one. Despite the preponderance of smaller vessels, the mean rim diameter actually

Table 3: Mean rim diameters by fabric and phase

| Fabric | Ceramic Phase | Mean Diameter (mm) | Standard Deviation | No. of Rims |
|---|---|---|---|---|
| 1 & 2 | 2 & 2/3 | 199.3 | 58.50 | 14 |
| 1 & 2 | 3 & 3/4 | 195.9 | 63.65 | 17 |
| 1 & 2 | 4 | 230.5 | 83.10 | 19 |
| 5 | 2 & 2/3 | 183 | 44.26 | 20 |
| 5 | 3 & 3/4 | 179 | 56.26 | 10 |
| 5 | 4 | 203 | 64.48 | 11 |

shows a significant increase during CP4, presumably because a much wider range of vessel sizes was in use. Vessels with a rim diameter of greater than 280mm are extremely rare before the latest phase and this is reflected by the standard deviation. This is considerably larger during CP4 than in the earlier phases, confirming the impression of an increased size range of pottery.

Fabric 5 shows the same general trends. The mean rim diameter and the standard deviation are greater during the latest phase, although the size range of the vessels is not that much broader. This implies that the same basic range of vessel sizes were in use, although larger vessels were more favoured in the latest phase.

Statistical analysis of the data confirms these findings. In the case of fabrics 1 and 2, comparison of the data for CP3 and CP3/4 with that for CP4 using Students *t*-test gives a value of –12.07 (34df, $p$>99.9), which can be broadly said to mean that it is over 99.9% certain that the two groups are different. A similar picture emerges from comparison of the data from the same phases for fabric 5: $t$ = -7.06 (19 df, $p$>99.9). The small assemblage size for CP3 and CP3/4 could be a distorting factor, but comparison between the fabric 5 data for the earliest phase and that for CP4 gives a similar result ($t$ = -7.49, 29df, $p$> 99.9). Thus, at Wilby Way, it would appear that during the latest Iron Age phase, larger sizes of pottery vessels were more frequently utilised than during the earlier periods.

## *CONCLUSIONS*

These results have implications for the nature of activity at the site. In the case of the coarser shell fabrics, F1 and F2, this may be a reflection of an increase in food storage at the site. As noted earlier, there is strong evidence to suggest that the Iron Age potters of the region produced vessels in which the size and density of the inclusions reflected the size of the pot. It may be, to stretch the data a little, that the later period at Wilby Way saw the establishment of some sort of communal granary facility. The finer fabric 5 vessels also see a similar increase in mean size during the later phases, although such vessels generally have a narrower size range than the coarser pottery. The reasons for this increase are perhaps less clear, but could signify a change in eating or food-serving patterns such as a change from individual eating vessels to communal serving containers, or even to communal eating vessels. If Wilby Way did function as a 'central place' for the area then this change in pottery use may be an indicator of a changed social pattern at the site during CP4, suggesting that this is when the site increased in importance.

This pattern is somewhat unusual at sites in the region, and was not noted in the large assemblage of CP4 pottery at Weekley, for example (Foster and Aird 1988). The assemblage from Hunsbury hillfort however, (unpub. archive in Northampton Museum), which was largely occupied during the 2nd/1st centuries BC, also contained a large proportion of large vessels. At Hunsbury, 32 out of the 150 rimsherds (21.3%) had a rim diameter greater than 300mm, with some as large as 500mm. This would further suggest that Wilby Way, like Hunsbury, may have functioned as a 'central place' for its locality.

## *DEPOSITIONAL STRUCTURE*

There are some grounds to suspect a structured refuse deposition policy at the site but, as noted earlier, the relatively small assemblages do not allow this to be suggested with great confidence. It is worthy of note, however, that rimsherds appear very scarce at this site, particularly in Fabric 1, although it may be that deposits with a high proportion of rimsherds may be located in unexcavated areas.

Another characteristic worthy of note is the relatively large amount of pottery which was present in some of the enclosure ditches. Enclosure A produced 6.55kg of Fabric 1 and 2.22kg of Fabric 2; Structure 14 produced 2.88kg of Fabric 1, and Enclosure K produced 1.98kg of Fabric 1. This accounts for around 50% of the F1 pottery from the site. Other fabric types were present, but not in these quantities.

This may mean that the Enclosures A, and K and Structure 14 were areas of the site where large vessels were most often broken, and hence where they were stored. Very few sherds of F5 were found in these features, which suggests that in the main such vessels were used elsewhere. If these vessels, with their fine fabric and relatively small size, were specialist eating or serving vessels, it could be inferred that Enclosures A, K and Structure 14 were specialist storage areas, although it should be noted that there were no significant concentrations of F5 from anywhere at this site.

### *Catalogue*

15.1 Rimsherd from a very large jar. Soft, dark grey fabric with variegated grey and pale brown surfaces. Thick band of sooting around the shoulder. Context (1255), fabric 1.

15.2 Rimsherd from a very large jar. Dark grey fabric with orange surfaces. Context (1255), fabric 1.

15.3 Cremation urn. Dark grey fabric with variegated orange and reddish-brown outer surface. Context (1132), fabric 1.

15.4 Rimsherd from carinated jar/bowl. Dark grey fabric, surfaces becoming orange towards the rim. Context (1028) and (1029), fabric 5.

15.5 Bodysherd with fingernail impressions. Dark grey fabric with reddish brown surfaces. Context (29), fabric 2.

15.6 Rimsherd with fingertipped shoulder. Dark grey fabric with browner surfaces. Unstratified, fabric 5.
15.7 Rimsherd from very large vessel. Dark grey fabric with brown surfaces. Context (1046), fabric 2.
15.8 Thumbed rimsherd from very large vessel. Dark grey fabric with variegated orange and brown surfaces. Context (1255), fabric 1.
15.9 Rimsherd from carinated jar. Black fabric with browner surfaces. Outer surface lightly burnished. Context (1044), fabric 2.
15.10 Rim and shoulder from a jar. Black fabric, outer surface heavily abraded. Context (1033), fabric 5.
15.11 Rimsherd from vessel with fingertipped shoulder. Black fabric with browner outer surfaces. Patches of thick black residue on inner surface. Context (1055), fabric 5.
15.12 Basepad sherd with multiple pre-firing piercing. Black fabric with pale brown inner surface. Context (1055), fabric 5.
15.13 Rimsherd from jar. Black fabric with smoothed, dark reddish-brown surfaces. Context (1357), fabric 5.
15.14 Lug handle. Black fabric with smoothed, dark reddish-brown surfaces. Context (1357), fabric 5.
15.15 Rim and shoulder from very large scored ware jar. Dark grey fabric with orange and brown variegated surfaces. Context (1458), fabric 1.
15.16 Lug handle, two rows of stabbing on body. Black fabric with smoothed, dark reddish-brown surfaces. Context (1509), fabric 5.
15.17 Rimsherd from jar. Black fabric with smoothed, dark reddish-brown surfaces. Context (1417), fabric 5.
15.18 Basesherd with multiple pre-firing piercing. Black fabric with smoothed, brown outer surface. Context (1532), fabric 5.
15.19 Rimsherd. Black fabric with variegated dark brown and dark grey surface. Context (1556), fabric 5.
15.20 Rimsherd. Uniform black fabric. Context (1585), fabric 2.
15.21 Rimsherd from jar. Uniform black fabric with smoothed surfaces. Context (1490), fabric 5.
15.22 Rimsherd from jar with incised decoration. Black fabric with smoothed, reddish-brown outer surface. Context (1569), fabric 5.
15.23 Rimsherd from large jar. Black fabric with variegated orange and buff surfaces. Context (1743), fabric 3.
15.24 Rimsherd from jar. Black fabric with light brown surfaces. Outer surface 'wet hand' finished. Context (1816), fabric 2.
15.25 Rusticated bodysherd. Grey fabric with slightly browner surfaces. Context (1887), fabric 1.
15.26 ?Bowl rim with incised decoration. Uniform black fabric. Context (1700), fabric 5
15.27 Rimsherd of jar with fingertipped shoulders. Dark grey fabric with reddish-brown surfaces. Context (1811), fabric 2.
15.28 Full profile of carinated jar. Dark grey fabric with brown surfaces. Context (1811), fabric 5.
15.29 Large footring base fragment. Black fabric with light brown surfaces. Context (1580), fabric 2.
15.30 Rimsherd from large scored ware vessel. Dark grey fabric with reddish-brown surfaces. Context (1746), fabric 1.
15.31 Sherd from vessel with slashed shoulder. Dark grey fabric with brown patchy surface. Context (1578), fabric 2.

## THE FIRED CLAY
by Jane Timby

A small group of approximately 368 pieces (5kg) of fired clay of various sizes was recovered. The material was associated with 94 Iron Age contexts and appears to reflect a general background scatter rather than significant concentrations. Much of the material was in a very friable condition and many pieces were small and abraded precluding further identification with regard to possible form or function. At least six broad fabric groups could be distinguished, details of which are kept with the site archive.

Fragments from the Structure 3 drip gully and the Enclosure K boundary ditch appear to be from well-broken triangular perforated loom-weights. A number of other pieces had one flattish surface or stick impressions suggestive of structural material, but these are very fragmentary and, apart from some pieces from the Structure 3 drip gully, showed no specific patterning. None of the fired clay fragments are in a highly vitrified state such as might be expected of hearth or furnace material.

## WORKED BONE OBJECTS
by Emma Harrison (bone identification by Mark Maltby)

Five worked bone objects were recovered from Excavation Area 1, namely a pin, two gouges, a point and a rectangular plaque, together with a piece of worked red deer antler. Two worked red deer antler fragments were also found on Excavation Area 4.

The pin, which was found with cremation B1, is a relatively common pyre goods type, particularly in the Bronze Age. Gouges and needles are commonly found on Iron Age sites and, although Northamptonshire sites are often not rich in such small finds, gouges have been recovered from Gretton (Jackson and Knight 1985) and Weekley (Jackson and Dix 1986). While most gouges have a point at one end of the bone shaft and are either unworked or pierced at the other, one example from Wilby Way has points at both ends. The plaque is unusual as, while similar examples are found on Iron Age sites in Dorset such as Maiden Castle (Laws 1991), they appear to be little known elsewhere.

*Catalogue*

1. Gouge made from the polished shaft of a sheep/goat tibia. The proximal end is complete, while the tip of the distal end is missing. Length 97mm. Context (1819), quarry [1752], period 2 (fig. 19.1).
2. Incomplete bone point made from the shaft of a sheep/goat metatarsal. Length 61mm. Context (1067), gully [1038], Structure 2, period 2-3 (fig. 19.2).
3. Rectangular plaque with polished face and edges and incised diagonal cross. Probably made from the lateral part of a rib from a large mammal such as cattle or horse. 28mm long x 20mm wide. Context (1479), gully [1282], period 3 (fig. 19.3).
4. Polished ring fragment of red deer antler, triangular cross-section. Internal surface of ring shows worn grooves. Diameter *c*. 48mm, ring thickness 19mm. Context (35), gully [36], Structure 13, period 2-3 (fig. 19.4).
5. Red deer antler fragment with one end cut and polished; surface also slightly polished. Length 89mm. Context (35), gully [36], Structure 13, period 2-3. Not illustrated.

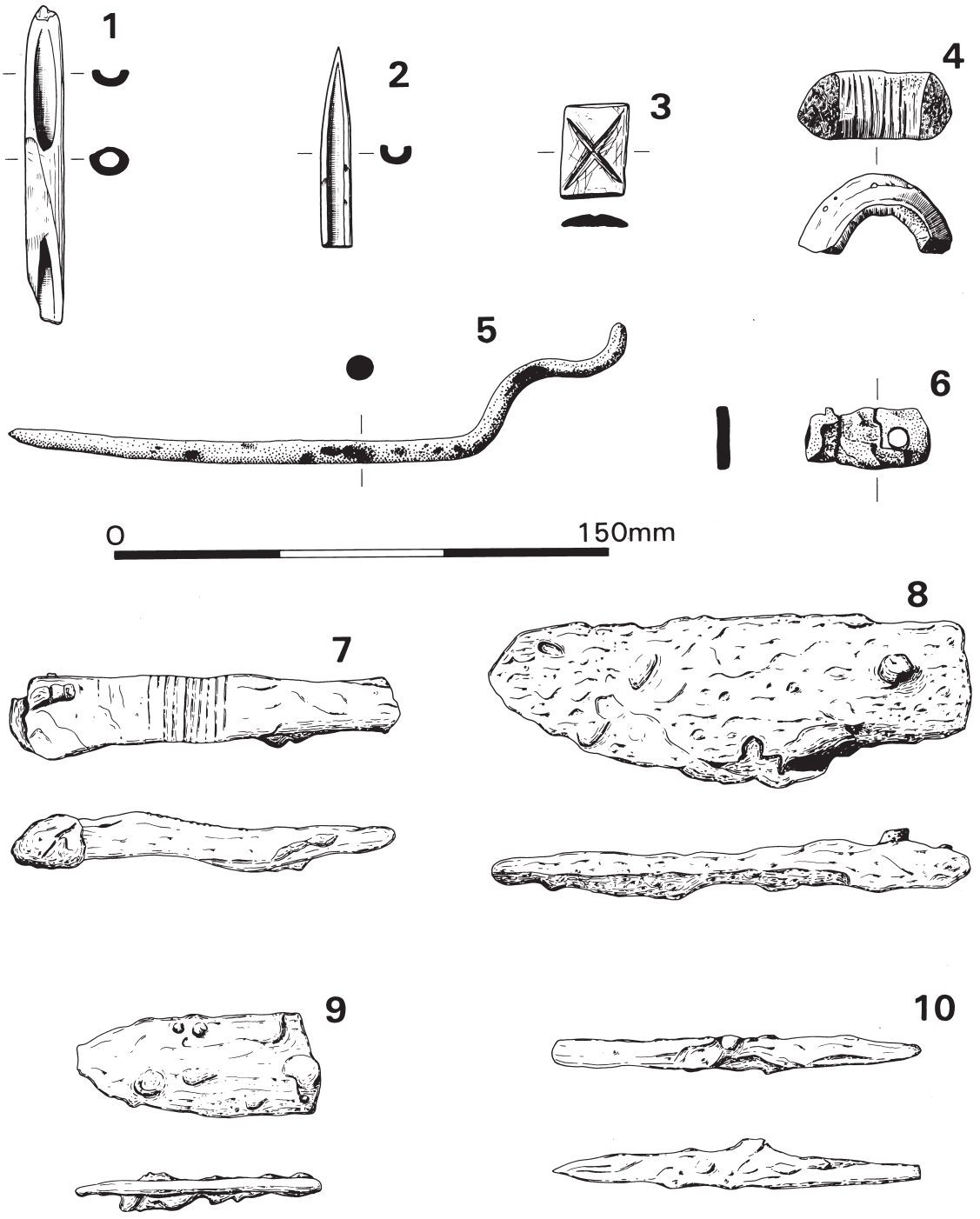



Fig 19 Worked bone and metal artefacts

6. Red deer antler fragment, slightly polished. Length 86mm. Context (1729), quarry [1752], period 2. Not illustrated.
7. Tip of burnt worked bone/antler pin. Length 13mm. Context (2002), cremation B1, period 1. Not illustrated.
8. Highly polished gouge tip, probably made from a long bone of a sheep-sized mammal. Length 29mm. Context (1076), posthole [1134], Structure 11, period 2-3. Not illustrated.

## THE SADDLE QUERN
by Fiona Roe

A single unstratified saddle quern was recovered from Excavation Area 1. It is made from a slab of sandstone measuring 29cm x 22.5cm, with a depth of 6.9cm. A loose block of stone seems to have been utilised without modification to the base or sides. The grinding surface is flat in appearance, though in fact slightly convex, with characteristic wear to a polished surface in places round the edges.

The stone is of a local material, consisting of a hard, pinkish-brown quartz sandstone, rust stained to orange-brown on the unworn surfaces. It is non-calcareous, with well-sorted quartz grains, small amounts of mica and cream coloured feldspar. Sandstones of this variety occur amongst the ironstones of the Jurassic Northampton Sand (Hollingworth and Taylor 1946), and are found in particular between Northampton and Wellingborough (Taylor 1949, Plate II).

## THE WORKED FLINT
by Graeme Walker

Eighty-nine pieces in the following categories were recovered from the excavation:

| | |
|---|---|
| ?core fragments | 6 |
| flakes | 48 |
| broken flakes | 6 |
| burnt worked flint | 2 |
| retouch flakes | 4 |
| scrapers | 2 |
| arrowhead | 1 |
| ?awl | 1 |
| hammerstone | 2 |
| burnt flint | 3 |
| ?natural | 14 |

The majority of the assemblage is undiagnostic and varies both in quality of raw material and workmanship. It is mostly scrappily made, but it is unclear whether this is a cultural trait (i.e. Iron Age pebble-bashing, as most of the material comes from Iron Age contexts such as a scraper found with inhumation B5) or a technological result of the restrictions imposed upon production by the availability of suitable flint in an earlier period.

The assemblage predominantly comprises small flakes, mostly secondary and tertiary, although a few larger pieces are present. Overall, the assemblage lacks homogeneity and thus probably represents several episodes of working at varying periods. There is a slight spatial variation regarding a small group of better quality struck flint (both raw material and technology), which is largely restricted to the eastern side of the site. In Excavation Area 1 two flakes from Enclosure J ditch [1881], one displaying retouch, were struck from notably better quality brown flint. In Excavation Area 2 pits [3050] and [3181] also produced better quality flintwork. The latter pit yielded an unfinished tanged arrowhead of Late Neolithic/Early Bronze Age date. In Excavation Area 3 there is a good debitage group from pit [4023] and good material from gully [4030], and ditch [4076]. The latter contained two hammerstones which were nearly identical in size and weight. Overall the group appears to be in better condition than other material and appears broadly homogeneous in style of manufacture. Although not strictly diagnostic, a Neolithic/Early Bronze Age date would be acceptable.

## THE METALWORK
by Jane Bircher

Although small, this assemblage is significant for the relatively high proportion of recognisable Iron Age tools found on a settlement site. This is indicative of a self-supporting rural community engaged in a wide range of activities, such as farming and woodworking. The deposition of the Swan's neck pin (no. 1) in a Mid-Late Iron Age ditch terminal may be deliberate and signify its survival as an heirloom (Hill 1995, in particular 80-83). There are no other items of personal adornment. Most of the nails found in the excavations came from medieval contexts and none can be dated typologically. A full catalogue of the ironwork exists in archive.

*CATALOGUE*

*Copper alloy*

1. Swan's neck pin. Approximately 10 are known from Britain, mainly in the south and rarely in stratified deposits (Cunliffe 1991). For a discussion of the Swan's neck pin and associated types see Gingell 1992, 106. Imported from continental Europe in the 7th-5th centuries BC the type seems to have continued in use for some time. Complete but slightly distorted. Length 92mm, maximum thickness 3mm. Context (1714), ditch [1713], Enclosure H, period 3 (fig. 19.5).
   Two conjoining fragments forming the terminal of a small incomplete object such as a fitting. Made from sheet metal and pierced by a single hole. No Iron Age parallels have been found in the literature. Restored extant length 19mm, width 8.5mm. Context (1511), pit [1510], Structure 6 or 14, period 2-3 (fig. 19.6).

*Iron knives*

3. Knife of Danebury Class 3 (knives with flat tangs to which handle plates of wood or bone were attached by rivets cf. Sellwood 1984). The triangular blade originally had an upturned tip (now broken). The integral short rectangular hafting-plate has one hole at the terminal with a rivet *in situ*. This belongs to a well known Iron Age type with examples from Danebury (Cunliffe and Poole 1991, 341-2), Maiden Castle (Wheeler 1943, 272) and Gussage All Saints (Wainwright 1979, 105). Probably of Mid-Late Iron Age date (3rd-1st centuries BC). Length 73mm, maximum width of blade 26mm, maximum thickness 4mm. Context (1399), ditch [1395/1742], Enclosure K, period 3 (fig. 19.8).

4. Knife fragment, possibly of Danebury Class 2 (Sellwood 1984, 349-51). Only the tip of a double-edged blade of elliptical section is extant. Length 19mm, maximum width 11mm. Context 1272, posthole [1271], Structure 10, period 2-3. Not illustrated.
5. Knife fragment, possibly of Danebury Class 2 (see above). Only the upper part of a double-edged blade of elliptical section and slightly asymmetrical form is extant. As this blade came from a plough furrow the identification cannot be certain. Length 37mm, max. width 16mm. Context (1693), furrow [1692], period 4 (fig. 19.9).

*Iron Tools*

6. File fragment. Only the lower part of the blade and part of the damaged off-set tang survive. Both blade and tang are of tapering quadrangular section. The file-cuts are on one face only and spaced approximately 13 per 10mm length. The file-cuts are invisible above the off-set, suggesting heavy use. Files are well known from Iron Age sites (see Sellwood 1984 for a useful discussion). A similar file with an off-set tang can be found in the Durden collection from Hod Hill (Brailsford 1962, 14). Length 54mm, section 10mm x 6mm x 6mm. Context 3356, pit [3357], period 3 (fig. 19.7).
7. Tool manufactured from a small rod. This belongs to a group of tools with a variety of shapes and functions which were probably used for woodworking (for discussion and examples see Sellwood 1984, 354-7). They all have a pointed end for insertion into a wooden handle. This example is made from a rod of square section with one end bevelled to form a chisel-like terminal and the other hammered to a round section and tapering to a (broken) point. Length 56mm, maximum section 4mm x 3.5mm. Context (3406), pit [3371], period 2-3 (fig. 19.10).

### THE IRON SLAG
by Lynne Keys

A small amount of iron slag (299g) was recovered from the excavations. The slag was visually examined and categorised on the basis of morphology, density, vesicularity and colour. Each category of slag within each context was weighed and the smithing hearth bottoms were individually weighed and measured. Full details are retained in the archive.

One fragment of possible roasted or partly smelted ore was found in the fill of period 3 posthole [1190] in Structure 1. A fragment of crucible or mould and a piece of slag, probably generated by smithing, were also recovered from period 2 pit [3011]. Most of the slag was broken and abraded and could not be positively assigned to either the smelting or smithing process. However, some of the undiagnostic slag resembles pieces of broken smithing hearth bottoms. Overall the assemblage is indicative of limited and sporadic smithing.

A very tiny quantity of hammerscale and some spheres resembling fuel ash slag came from the fill of period 2-3 posthole [1578] in Structure 6/14. Hammerscale is highly diagnostic of smithing activity, often remaining in the area around the anvil and near the hearth. The boundary ditch of period 3 Enclosure H produced a fragment of a smithing hearth bottom and a curved piece of iron bar which was probably originally flat. The bar is of a type smiths would have acquired to use in the production of iron knives, tools or fittings. The small amount of slag and its random distribution gives no grounds for assuming ferrous metalworking was taking place on the site for any length of time in any period.

### THE GLASS BEAD
by Emma Harrison

A single unstratified blue glass bead, flattened at one end of the circular hole, was recovered from Excavation Area 1. It was 9mm in diameter with a 4mm diameter hole. An apparently similar bead, of a type common in the Iron Age and Roman periods, has been recovered from Mingies Ditch, Oxfordshire (Henderson 1993).

## THE BIOLOGICAL EVIDENCE

### THE HUMAN BONE
by Jacqueline McKinley

*INTRODUCTION*

Two unurned cremation burials (B1 and B2) and three inhumation burials (B4-B6) were found during excavation. Further cremated bone was recovered from a posthole (B3) and more human bone fragments were found in the fills of pits, ditches and a clay quarry (Table 4). A full description exists in the site archive.

*METHODS*

Analysis of the cremated remains followed the writer's standard procedure to assess the degree of bone fragmentation and potential deliberate bias in the skeletal elements collected for burial (McKinley 1994). Age (cremated and unburnt remains) was assessed from the stage of ossification/epiphyseal bone fusion (McMinn and Hutchings 1985), the length of long bones (Bass 1987), and the pattern and extent of degenerative changes in the skeleton (Brothwell 1972, Brooks 1955, Bass 1987). Sex was ascertained from the sexually dimorphic traits of the skeleton (Bass 1987). Stature was estimated where possible (Trotter and Gleser 1957) together with the platymeric and platycnemic indices (Bass 1987).

*CONDITION, INDICES AND PATHOLOGY*

Only parts of the skull, upper axial skeleton and left humerus of B5 remained *in situ* and skeleton B4 was clearly truncated above the waist and between the thigh and ankle. The bone from both burials was in good condition, in contrast with that from flexed inhumation burial B6 which was slightly degraded, the trabecular bone particularly being poorly preserved. Some of the bone from the left upper limb and thorax from the latter is stained dark brown, possibly indicative of some form of organic material across that area of the body.

The condition of the redeposited bone is more variable, most being slightly root marked and worn, suggesting exposure prior to reburial or several deposition episodes. Some redeposited bone from the Enclosure K boundary ditch and clay quarry [1752] is unworn and some from pit [3185] unworn but root marked.

The cremated bone is in good condition, with the exception of that from B3 which has a worn and chalky appearance, and from

Table 4: Summary of human bone

| Context | Feature | Area | Type | Cremated bone wt. | Pathology | % bone recovered | Age & | Sex |
|---|---|---|---|---|---|---|---|---|
| (25) | Ditch [26] | 4 | Redeposited | | | | Neonate Adult | |
| (35) | Gully [36] | 4 | Redeposited | | | | Adult | Female |
| (1140) | Grave [1122] | 1 | Inhumation burial (B5) | | amtl; hypoplasia; pd; abcess; caries; calculus; hypercementosis; op – C1-2, rib, acetabulum, r.scapula, r.m.clavicle; mv – gap-toothed, non-fusion thoracic spinal process | *c.* 30% | Adult >30 yr. | Probable female |
| (1123) | Grave [1122] | 1 | Redeposited | | | | Adult >30 yr. | |
| (4097) | Grave [4095] | 3 | Inhumation burial (B6) | | Calculus; pd; cribra orbitalia; pnb - ?right ulna, tibiae & fibulae; mv – shovelling | *c.* 60% | Adult *c*. 25-35 yr. | Male |
| (97) | Grave [98] | 4 | Inhumation burial (B4) | | op – acetabulae, l.auricular surface, T10-11 bsm, L3-S1 bsm; spondylosis – L4; exo – olecranon, calcanea, d.fibulae; sbc; ddd – L4-5; pitting – l.acetabulum; mv – dual calcaneal facets | *c.* 29% | Adult *c.* 30-45 yr. | Female |
| (2002) | Pit [2001] | 1 | Unurned cremation & redeposited pyre debris (B1) | 1154.7g | op – C1 | | Adult *c*. 30-45 yr. | Possible female |
| (5044-7) (5051-4) (5055) (5058-60) | Pit [5043] | 2 | ?unurned cremation &/ or redeposited pyre debris (B2) | 403.3g | oa – bi-lateral tempero-mandibular; op - C2 | | Adult >30 yr. | Possible female |
| (4026-9) | Posthole [4025] | 3 | redeposited cremation/ pyre debris (B3) | 50g | | | Adult | |
| (1056) | Pit [1085] | 1 | Redeposited | | | | Adult | Possible female |
| (3137) | Pit [3185] | 2 | Redeposited | | | | Adult | |
| (3209) | Pit [3185] | 2 | Redeposited | | | | Adult | |
| (1824) | Clay quarry [1752] | 1 | Redeposited | | pnb – femur & tibiae | | Neonate | |
| (1662) | Enclosure K ditch [1633/ 1742] | 1 | Redeposited | | | | Adult | |
| (3228) | Enclosure M ditch [3099] | 2 | Redeposited | | | | Adult | |

KEY: cb wt. - total weight cremated bone; r - redeposited; inh. - inhumation; r.p.d. – redeposited pyre debris; un. – unurned; c. burial – cremation burial; % rec. - percentage skeleton recovered (unburnt) skeletal elements (s - skull, a - axial, u - upper limb, l - lower limb); C – cervical; T – thoracic; L – lumbar; S – sacral; bsm - body surface margins; oa - osteoarthritis; op - osteophytes; exo – exostoses; pd - periodontal disease; pnb - periosteal new bone; ddd - degenerative disc disease; sbc – solitary bone cyst; mv - morphological variation; r./l. – right/left; m./d. – medial/distal

which no trabecular bone was recovered (McKinley 1997a). The variation is probably due to the relatively substantial quantities of charcoal within burials B1 and B2 ameliorating the detrimental effects of the soil matrix. Little charcoal or bone (50g), was recovered from B3, and all was in the upper 0.1m of the fill.

A right tibia from pit [3185] has three groups of small linear marks on the proximal anterior-medial side of the shaft, inferior and lateral to the tuberosity. There are between two and six marks in each group, maximum 7.3mm long, all angled superior-lateral to inferior-medial in the area of the *gracilis* and *sartorius* muscle attachments. These may represent fine cut marks of the type associated with removal of soft tissues ('filleting', i.e. defleshing) which are characteristically 'very superficial, rarely deep…' (Binford 1981). However, the slightly worn and root marked bone surface also shows other, accidental/incidental marks and it cannot conclusively be stated that the marks are deliberate. Stature was estimated for only one individual, namely adult female B4 at 1.64m (5′ 4¾″) and a full description of the pathology exists in archive.

Parts of two permanent dentitions and a redeposited tooth were present for examination amongst the inhumed bone; 2/57 teeth had been lost *ante mortem*, both from the female dentition (2/28), carious lesions were noted in 5/59 teeth and apical abscesses in 4/57 socket positions, both in the female dentition (5/27 and 4/29). The carious lesions were all in aproximal locations and all the abscesses were associated with either carious teeth or *ante mortem* tooth loss. All the anterior teeth from 1140 were heavily worn across the occlusal surface, which, together with light wear in some of the molars, probably reflects an attempt to counteract the pain of using carious teeth. Alveolar resorption due to periodontal disease was seen in both dentitions, as were calculus deposits which were moderate-heavy in the female (1140) and moderate in the male (4097). The condition of the female teeth suggests a relatively low-protein diet of predominantly soft foods. Several faint lines of dental hypoplasia (Hillson 1979) were noted in tooth enamel from the female dentition, with excess cementum formation (hypercementosis) around the roots of the left mandibular M2 (Hillson 1986, 164).

Cribotic c*ribra orbitalia* (Robledo *et al.* 1995) was noted in both orbits from burial 4097 (2/4 orbits). The condition is believed to be connected with childhood iron deficiency anaemia and may be associated with dietary intake (*ibid.*). Periosteal new bone was noted in several bones from inhumation burial 4097 (adult male) and the redeposited neonatal bones (1824). The multiple bone involvement in both cases suggests the lesions were the product of a secondary infective process (Roberts and Manchester 1997, 127) spread through the blood stream from foci elsewhere in the body.

In spondylolysis there is separation of the inferior articular processes and the spine from the rest of the vertebra (Adams 1986), usually occurring in the fifth, or more rarely – as in this case (130) - the fourth lumbar vertebra. The condition is believed to result from injury or stress fracture in the immature individual (Adams 1986).

Osteoarthritis (Rogers *et al.* 1987, Rogers and Waldron 1995) was noted in both temporo-mandibular joints of the adult female from cremation burial 5044-5060 [4043]. Lesions indicative of degenerative disc disease (Rogers and Waldron 1995) were noted in only two (1.1%) of the 18 vertebrae from the inhumation burials, both from the lumbar region of one of the adult females (130). The distribution of other destructive lesions (including pitting) and new bone formation (osteophytes) associated with joints is shown in summary in Table 4. Such lesions are often difficult to classify, but some may represent the early stages of osteoarthritis. The apparent low rates of the various joint diseases may be largely the result of the relatively low recovery of joint surfaces and consequently negates any discussion of the significance of rates and distribution of lesions.

The causative factors of exostoses (bony growths at tendon and ligament insertions) may include advancing age, traumatic stress, or various diseases (Rogers and Waldron 1994, 24-25). It is not always possible to be conclusive with respect to the aetiology of particular lesions. Solitary bone cysts occasionally occur in adult carpal bones (Adams 1986), most frequently the scaphoid or lunate; lesions were noted in two carpals from 130 (2/10 carpals).

*DEMOGRAPHIC DATA*

A total of eight, possibly twelve individuals, was represented by the human remains. Three mature adults (>30 yr.), two females and one male, were identified from the inhumation burials. Three adults, including two females >30 yr. were identified from the cremation burials and associated deposits.

The redeposited, unburnt bone represented the remains of a minimum of two individuals, one neonate and an adult. However, since bones from a disturbed burial are unlikely to have been dispersed over a large area it is likely that a minimum of two neonates is represented, one from Excavation Area 1 and another from Excavation Area 4. A minimum of four adults is also likely, one from Excavation Area 1, two from Excavation Area 2 and one from Excavation Area 4.

*PYRE TECHNOLOGY AND RITUALS*

The vast majority of the cremated bone was a buff/white colour indicative of a high degree of oxidation (Holden *et al.* 1995a and b). Odd bone fragments from cremation burials B1 and B2 were slightly blue and/or grey but this very limited variation is of little significance, and the cremation process appears to have been very efficient.

The quantities of bone recovered from the three cremation-related deposits covered a wide range (50-1154.7g) but they all displayed different characteristics which may be responsible for the wide variation. Burial B1 contained a substantial quantity of bone, representing *c*.70% of the expected weight of bone from an adult cremation (McKinley 1993) and falling in the upper range of bone weights from archaeological burials (McKinley 1997b). Most of the bone (92%) was in a concentration in the centre of the pit, the rest being dispersed amongst the charcoal-rich backfill representing pyre debris deposited over the burial (McKinley 1997b).

The two other deposits are somewhat more enigmatic. The total weight of bone from B2 represented, at maximum, 40% (more in the region of 25%) of the expected weight of bone from an adult cremation. Approximately 52% of the bone was found in the upper 0.08m of the fill (5045), *c.* 3% in the central 0.2m band (5052) and *c*. 45% in the lower 0.07m of the pit (5058). This represents two relatively thin, dense concentrations of bone and charcoal (pyre debris) separated by a thick deposit of clean silty sand (the rare inclusions had probably filtered in from above/?below), giving the appearance of two totally separate cremation-related deposits (fig. 4). Although there were no direct joins between bone fragments from the upper and lower deposits, neither were there any duplications of skeletal elements and no

conclusive evidence to suggest the bone from the two layers was from different individuals. If the deposits, both comprising a mix of cremated bone and charcoal suggestive of redeposited pyre debris rather than cremation burial, were from the same cremation, why were they separated by the sandy layer? There are instances of pyre debris being redeposited under or over burials, sometimes separated by a third matrix/context, but these generally comprise a relatively clean concentration of cremated bone (the burial) and a mix of cremated bone and charcoal (redeposited pyre debris; McKinley 1997b). If from two separate cremations, do the deposits represent small, uncharacteristic burials (each with *c*. 10-20% of the bone from the cremation and mixed with pyre debris) or was this feature used for the formalised redeposition of pyre debris from successive pyres (McKinley 1997b)? The horizontal distribution of the bone within each layer was not even, the bone being concentrated in the south and east quadrants respectively in the upper layer (82%), the east and south quadrants in the central layer (84%), and the north and south quadrants in the lower layer (72%).

The cremated bone (B3) from posthole [4025] was confined to the upper 0.1m of the 0.32m deep cut and some may have been lost due to truncation. Very little bone or charcoal was recovered and it was possibly accidentally/incidentally incorporated following disturbance from elsewhere. Bone fragments from each skeletal area (skull, axial, upper and lower limb) were present in each of the deposits, with the exception of axial skeletal elements from burial B3. There was no apparent deliberate selection of particular skeletal elements in any of the deposits.

Fragments of pyre goods were recovered from two of the deposits. Cremation burial B1 contained the tip of a worked bone/antler pin, and two fragments of fish vertebrae (trout-size) were recovered from the upper layer in B2. Worked bone pins represent a relatively common pyre goods type, particularly in the Bronze Age. The inclusion of animal offerings on the pyre occurred in all periods in which the rite was practised from the Bronze Age onwards, but the recovery of fish bones is comparatively rare, possibly due to their relative fragility (Bond 1994).

### *DISCUSSION*

The burials appear to represent a disparate scatter of interments between which no connection can be made. The disarticulated neonatal bones recovered from quarry pit [1752] suggest the remains of a disturbed burial, probably from within the immediate vicinity. The potential for truncation of burials by later features was clearly demonstrated by the condition of skeleton B5 in grave [1122], and the redeposited bone from the grave fill. The bone from the various pits and ditches probably originated from disturbed burials. The redeposited bone comprises fragments of femur (3), tibia (1) and humerus (1). These are robust and compact bones which survive well and the worn condition of most suggests that the dry bone was probably subject to some surface exposure prior to reburial. One deposit from pit [3185] may be viewed as potentially unusual given the presence of possible cut marks on the bone and its association with large quantities of horse bones. However, the various fills of the pit appear to represent accumulations, not the deliberate (single) backfill consistent with 'special' pit deposits as discussed by Cunliffe (1992). The presence of pyre debris in the cremation burials indicates that the pyre sites were probably within the immediate vicinity, and that a range of rites and rituals attendant on the mortuary practice of cremation were being undertaken in the area, albeit on a small scale.

## THE ANIMAL BONE
by Mark Maltby

### *METHODOLOGY*

All of the animal bones were recorded individually onto a database, which forms part of the site archive. Where appropriate, the following information was recorded on each fragment: context; feature; phase; species; anatomy; part of bone present; proportion of bone present; gnawing damage; surface condition; fusion data; tooth ageing data; butchery marks; metrical data; other comments. Where necessary, identifications were confirmed by reference to the comparative skeleton collection housed in the School of Conservation Sciences, Bournemouth University. Counts of fragments (NISP) included any identified limb bone shaft fragments, dorsal ends of ribs and vertebral bodies. Minimum numbers calculations were derived from the most common zone of a bone, taking size into account. Whole bone equivalent calculations were made by the summation of the surviving proportion (0.10; 0.25; 0.50; 0.75; 1.0) of selected bones (mandible; scapula; humerus; radius; femur; tibia; metapodials). Tooth eruption and wear descriptions for cattle, sheep/goat and pig followed the method of Grant (1982). These were divided into nine stages (A-I) to enable direct comparisons with other Iron Age samples (Hambleton 1999). Measurements are those recommended by von den Driesch (1976) with a few additions. Withers height calculations were derived from formulae recommended by von den Driesch and Boessneck (1974). Bones from sieved samples were counted separately from those recovered by normal excavation and only specimens identified to species were recorded in detail.

### *CATTLE*

Cattle bones were found commonly in all periods and areas (Table 5) and provided 40% of the identified mammal specimens. They were consistently represented in all samples from Areas 1 and 4 (36-41%) and some of the small samples from Areas 2 and 3 produced much higher percentages of cattle of between 64% and 73% (Table 6).

It should be noted that the fragments (NISP) method of counting favours the representation of large mammals such as cattle. Two other methods of quantification employed both produced lower percentages of cattle. Calculations of minimum number of individuals showed that cattle represented only 22% of the mammals overall (Table 7) and 31% employing the Whole Bone Equivalent method (Table 8). Both methods of calculation confirmed that cattle were significantly better represented in Areas 2 and 3 than in Areas 1 and 4. Even though sheep would appear to have been more commonly eaten, beef would have been the main component of the meat diet, if carcass weights are taken into account.

Whether there were chronological changes in the importance of cattle as a provider of meat is more difficult to determine because of the relatively small sample sizes and the variations in species representation encountered in different areas. In comparison with sheep/goat and pig, the percentage of cattle was slightly greater in the Period 2 deposits than in Period 3 features in Area 1 (Tables 6-8) but this need not mean there was significant diachronic change. The higher percentages of cattle in Areas 2 and 3 may indicate that more cattle were butchered and their bones deposited in peripheral areas than in areas close to the centre of habitation. The scavenging activities of dogs and

Table 5 Animal bone fragments (NISP)

| Area | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|---|
| Period | 2 | 2 | 2 | 3 | 3 | 2-3 | 2-3 | 2-3 | 2-3 |
| Cattle | 252 | 22 | 56 | 244 | 92 | 21 | 42 | 5 | 119 |
| Sheep/goat | 260 | 6 | 9 | 526* | 21 | 188** | 12 | 7 | 172 |
| Pig | 98 | 1 | 2 | 64 | 3 | 9 | 6 | 2 | 33 |
| Horse | 15 | 1 | 11 | 30 | 141 | 2 | 6 | 3 | 6 |
| Dog | 6 | | | 9 | 2 | | | | 6 |
| Red Deer | 1 | | | 2 | | | | | 4 |
| Hare | | | | | | | | | 1 |
| Duck | | | | | | | | | 1 |
| S-T Vole | 1 | | | 3 | | | | | |
| Rook/Crow | 1 | | | | | | | | |
| Total ID | 634 | 30 | 78 | 878 | 259 | 220 | 67 | 17 | 342 |
| ULM | 359 | 11 | 55 | 256 | 217 | 24 | 78 | 50 | 213 |
| USM | 380 | 4 | 12 | 296 | 8 | 33 | 14 | 13 | 339 |
| UM | 42 | 2 | | 38 | 5 | 3 | 3 | 1 | 56 |
| UB | | | | | 1 | | | | |
| Total U | 781 | 17 | 67 | 590 | 231 | 60 | 95 | 64 | 608 |
| Grand Total | 1415 | 47 | 145 | 1468 | 490 | 280 | 162 | 81 | 950 |
| Gnawed | 170 | 11 | 25 | 198 | 61 | 12 | 23 | | 60 |
| Eroded | 110 | 3 | 8 | 76 | 49 | 25 | 16 | 13 | 24 |
| Loose Teeth | 97 | 4 | 8 | 100 | 44 | 9 | 11 | 4 | 59 |
| Burnt | 26 | 1 | 1 | 18 | 18 | | 6 | | 15 |

ULM unidentified large mammal
USM unidentified medium sized mammal
UM unidentified mammal
UB unidentified bird
S-T vole short tailed vole
* sheep/goat total includes 206 bones from burials in Area 1
** sheep/goat total includes 169 bones from burials in Area 1
NISP number of individual specimens
Totals of gnawed and eroded fragments based on identified fragments only
Counts exclude bones in sieved samples

the slightly poorer preservation of bones in these areas would increase the bias towards large animals such as cattle and horse. This phenomenon has been noted on other Iron Age sites (Maltby 1985; Wilson 1996).

The relative abundance of cattle, sheep/goat and pig fragments (Table 6) falls within the range of other sites in the Midlands (Hambleton 1999) and is similar to assemblages from Wakerley (Jones 1978), Hardingstone (Gilmore 1969) and the Late Iron Age assemblage from Weekley (Whatrup and Jones 1988). However, the significantly higher percentages of cattle in Areas 2 and 3 demonstrate how varied contemporary assemblages can be within different areas of a settlement complex.

No large groups of associated bones of cattle were recovered. Anatomical representation was uneven mainly due to the differential survival and fragmentation of different skeletal elements. For example, vertebrae, carpals, tarsals and phalanges were poorly represented. Large elements that easily fragment, such as the mandible and scapula were well represented, as were most of the major limb bones. There were no concentrations of groups of the same elements indicative of large scale processing of cattle carcasses.

Butchery marks were observed on 45 cattle bones, details of which are stored in the archive. In 33 cases these consisted of fine incisions made with knives. These types of marks have been found commonly on Iron Age cattle bones (Wilson 1978; Maltby 1989) and were the result of both segmentation and filleting of the carcasses. In ten cases, however, a heavier implement such as a cleaver was used. The locations of these marks, for example on the back of the mandible, around the hip joint, on the blade of the scapula and on the lateral parts of vertebrae, suggest that cleavers were sometimes used to segment the carcass. A few examples of chopped bones were found in all periods. In two cases a serrated blade had been used, a type of butchery more commonly associated with Romanized sites. One of these was on a humerus from Enclosure H. The other was found on the inner surface of a cattle mandible from Structure 5. The jaw had

Table 6: Relative Abundance of Mammalian Species (NISP)

| Area | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 | 4 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Period | 2 | 2 | 2 | 3 | 3 | 2-3 | 2-3 | 2-3 | 2-3 | |
| % Cattle | 40 | 73 | 72 | 36 | 36 | 41 | 64 | 29 | 35 | 40 |
| % Sheep | 41 | 20 | 12 | 48 | 8 | 37 | 18 | 41 | 50 | 39 |
| % Pig | 16 | 3 | 3 | 10 | 1 | 18 | 9 | 12 | 10 | 10 |
| % Horse | 2 | 3 | 14 | 4 | 54 | 4 | 9 | 18 | 2 | 10 |
| % Dog | 1 | | | 1 | 0.8 | | | | 2 | 1 |
| % Red Deer | 0.2 | | | 0.3 | | | | | 1 | 0.3 |
| % Hare | | | | | | | | | 0.3 | 0.1 |
| Total ID | 631 | 30 | 78 | 669 | 259 | 51 | 66 | 17 | 341 | 2142 |
| C/C+H (%) | 94 | 96 | 84 | 89 | 39 | 91 | 88 | 63 | 95 | 80 |
| S/S+P (%) | 73 | 86 | 82 | 83 | 88 | 68 | 67 | 78 | 84 | 79 |
| C/C+S+P (%) | 41 | 76 | 84 | 39 | 79 | 43 | 70 | 36 | 37 | 45 |
| ULM/USM+USM (%) | 49 | 73 | 82 | 46 | 96 | 42 | 85 | 79 | 39 | 53 |

NISP number of specimens (fragments)
C/C+H (%) percentage cattle of total cattle and horse fragments
S/S+P (%) percentage sheep/goat of total sheep/goat and pig fragments
C/C+S+P (%) percentage cattle of total cattle, sheep/goat and pig fragments
ULM/USM+USM (%) percentage large mammal of unidentified large mammal and sheep sized fragments
Counts exclude sheep/goat skeletons, rodent bones and bones from sieved samples.

Table 7: Relative Abundance of Mammalian Species (MNI)

| Area | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 | 4 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| Period | 2 | 2 | 2 | 3 | 3 | 2-3 | 2-3 | 2-3 | 2-3 | |
| Cattle | 7 | 2 | 3 | 6 | 3 | 2 | 3 | 1 | 2 | 29 |
| Sheep/goat | 16 | 1 | 3 | 25 | 4 | 2 | 2 | 1 | 9 | 63 |
| Pig | 5 | 1 | 1 | 4 | 1 | 1 | 2 | 1 | 2 | 18 |
| Horse | 1 | 1 | 2 | 2 | 5 | 1 | 1 | 1 | 1 | 15 |
| Dog | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 5 |
| Red Deer | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 3 |
| Hare | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Total MNI | 31 | 5 | 9 | 40 | 14 | 6 | 8 | 4 | 17 | 134 |
| % MNI | | | | | | | | | | |
| % Cattle | 23 | | | 15 | 21 | | | | 12 | 22 |
| %Sheep/goat | 52 | | | 63 | 29 | | | | 53 | 47 |
| % Pig | 16 | | | 10 | 7 | | | | 12 | 13 |
| % Horse | 3 | | | 5 | 36 | | | | 6 | 11 |
| % Dog | 3 | | | 5 | 7 | | | | 6 | 4 |
| % Red Deer | 3 | | | 3 | 0 | | | | 6 | 2 |
| % Hare | 0 | | | 0 | 0 | | | | 6 | 0.8 |

MNI minimum number of individuals
Counts exclude sheep/goat skeletons, rodent bones and bones from sieved samples

been partially severed beneath the cheek teeth by a saw, for what purpose is not clear.

Estimates of the mortality rates of cattle were handicapped by the fragmentation of the bones. However, 24 mandibles provided sufficient toothwear evidence to be assigned to a wear stage (Hambleton 1999). Sixteen (67%) of the mandibles belonged to adult animals (stages G-I). The other seven were from immature animals of various ages under 36 months. The percentage of adult animals (surviving beyond stage F) is one of the highest for cattle from comparable Iron Age sites (Hambleton 1999). The less reliable epiphysial fusion data nevertheless produced similar results in that about 57% of the surviving epiphyses had fused and belonged to adult cattle, probably over four years of age.

Neither ageing method produced evidence for the presence

Table 8: Relative Abundance of mammalian Species (WBE)

| Area | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 | 4 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Period | 2 | 2 | 2 | 3 | 3 | 2-3 | 2-3 | 2-3 | 2-3 | |
| Cattle | 30.75 | 3.85 | 9.10 | 30.55 | 17.00 | 2.65 | 6.45 | 0.55 | 9.45 | 110.35 |
| Sheep/goat | 50.10 | 1.75 | 2.55 | 79.30 | 7.15 | 3.85 | 1.30 | 0.85 | 33.35 | 180.20 |
| Pig | 14.75 | 0.50 | 0.75 | 10.05 | 1.00 | 1.35 | 2.10 | 0.35 | 3.15 | 34.00 |
| Horse | 0.80 | 0.10 | 1.25 | 3.40 | 11.95 | 0.00 | 0.85 | 1.25 | 0.10 | 19.70 |
| Dog | 3.25 | 0.00 | 0.00 | 2.00 | 0.75 | 0.00 | 0.00 | 0.00 | 1.10 | 7.10 |
| Red Deer | 0.00 | 0.00 | 0.00 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.10 |
| Total WBE | 99.65 | 6.20 | 13.65 | 125.4 | 37.85 | 7.85 | 10.70 | 3.00 | 47.15 | 351.45 |
| % WBE | | | | | | | | | | |
| % Cattle | 31 | 62 | 67 | 24 | 45 | 34 | 60 | 18 | 20 | 31 |
| % Sheep/goat | 50 | 28 | 19 | 63 | 19 | 49 | 12 | 28 | 71 | 51 |
| % Pig | 15 | 8 | 5 | 8 | 3 | 17 | 20 | 12 | 7 | 10 |
| % Horse | 1 | 2 | 9 | 3 | 32 | 0 | 8 | 42 | 0 | 6 |
| % Dog | 3 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 |

WBE whole bone equivalents of the following bones: mandible, scapula, humerus, radius, femur, tibia, metacarpal, metatarsal
Counts exclude sheep/goat skeletons, rodent bones and bones from sieved samples

of many neonatal and juvenile animals. Only seven very porous bones belonging to neonatal animals were recorded, representing less than 1% of the total cattle sample. A further 30 (4%) were less porous but clearly belonged to juvenile animals of less than six months old. With the exception of one or two sites, notably Danebury (Grant 1984b), and to a lesser extent, Ashville (Wilson 1978), such a low representation of very young cattle is typical of Iron Age sites (Hambleton 1999).

If the mortality data accurately reflects cattle exploitation at the settlement, the high percentage of adult cattle would suggest they were commonly utilised for secondary products such as milk and traction. Given the relatively small percentage of young cattle, the latter explanation would appear more likely. However, the samples are small and preservation conditions were far from ideal. Consequently such an interpretation must remain tentative. The samples are too small to make realistic diachronic comparisons and the interpretation assumes that exchange of cattle to and from the settlement had no significant effect on mortality profiles.

Measurements were taken on over 70 cattle bones. Full details of these are stored in the archive. However, only four limb bones were complete enough to enable the greatest length to be taken and withers heights to be estimated. A cattle metacarpal and three metatarsals gave estimates of between 1.10m and 1.13m. These fall within the upper range of British Iron Age cattle sizes. The small coefficient of variations for most measurements indicates that there was relatively little variation in cattle size. Unfortunately, there were too few measurable bones to carry out comparisons of cattle size in different periods.

*SHEEP/GOAT*

Sheep burials were found in Structure 1, Enclosure A and pit [1116]. The descriptions of these burials are given below followed by a general discussion of the sheep/goat bones. In Structure 1 an assemblage of 158 bones in pit [1186] was dominated by the substantial remains of two sheep skeletons. The older of the pair was represented by at least 75 bones. About half the skull survived and the shape of the horn core suggested that the animal was a male. All the larger limb bones were recovered, although some survived incomplete. Some small bones were missing but most of the vertebrae survived, at least in part. A combination of preservation and retrieval biases would account for these missing elements.

Abundant evidence of butchery was found on this skeleton. A cervical and lumbar vertebra had both been chopped through transversely where the spine had been segmented. Four thoracic vertebrae had been chopped along their lateral border where the rib cage had been removed. Two rib heads and the sternum bore corresponding marks. The sacrum displayed similar marks. On the limbs, the right astragalus bore knife cuts on its anterior surface near the distal end, made during disarticulation of the hind foot. The posterior surface of the left mandibular ramus bore a knife cut made when it was separated from the cranium.

Examination of the teeth revealed that the deciduous teeth were in heavy wear. The first mandibular molars were in full wear (Grant 1982, stage g) but the second molars were in an early stage of wear (Grant 1982, stage d) and the third molars had not erupted. The proximal ends of all the phalanges had fused as had the distal epiphysis of the tibia. The distal metacarpals had just fused but the distal metatarsals were unfused. These results suggest that this skeleton probably belonged to a sheep that died between about 18 and 22 months of age (Silver 1969; Hambleton 1999).

The length of the metacarpals indicated the sheep had a withers height of about 63cm (von den Driesch and Boessneck 1974). Breadth measurements also indicated that this was quite a large animal by Iron Age standards and this supports the premise that the skeleton belonged to a male.

The second skeleton in pit [1186] belonged to a younger lamb, from which 43 bones were recovered. This survived in a more fragmentary condition. Fragments of only about a quarter of the skull were recovered, although enough survived to indicate that the animal had horns. Both mandibles survived largely intact but the shoulder and hip joints were poorly preserved. Most of the major limb bones were represented, but many of the small bones of the ankle and feet were missing. Only fragments of eleven of the vertebrae and three of the ribs were represented. Both astragali bore knife cuts on their anterior surface where the hind

feet had been removed, perhaps with the skin. No other butchery marks were noted.

The deciduous premolars were in wear and the first molar was in fairly early wear (Grant 1982, stage e). The second molar had not erupted. This would place the skeleton at approximately 10-12 months of age (Hambleton 1999). Of the early fusing epiphyses, those of the scapula, distal humerus and proximal radius had fused but the proximal first and second phalanges were unfused. The fusion data would support the premise that the sheep died towards the end of its first year.

Enclosure A produced the largest sample from the Period 3 deposits, consisting of 531 fragments, mostly from the ditch sections. Altogether, sheep/goat bones (201) were the most commonly identified, although this number was inflated by the recovery of 85 bones from a sheep skeleton in ditch [1214]. Not all of the bones from this skeleton were present although the absent parts of the anatomy could be accounted for mainly by their greater susceptibility to destruction and it is significant that at least three of the surviving bones had been gnawed. The sacrum, a cervical, a lumbar and two thoracic vertebrae all bore evidence of chop marks that had removed the lateral parts of the bone. This implies that the flanks of the sheep had been separated from the vertebral column, although five ribs were present. There was further evidence that the carcass had been at least partly segmented. Knife cuts were located on the anterior surface of the proximal end of the right metatarsal where the feet or perhaps just the skin were detached. A rib head had been chopped through its articular surface, showing it had been separated from the vertebral column and a lumbar vertebra had been chopped through along its length towards the lateral side of its body where the flanks had been removed.

All the limb bone and vertebral epiphyses were fused. All the permanent teeth were in wear and the first molar was in heavy wear (Grant 1982, stage k). The ageing evidence suggests that the sheep was probably over five years of age. The morphology of the pelvis suggested that the sheep was female.

In addition 27 bones belonged to two foetal lambs. These were mainly represented by limb bones but five ribs were also found. It is probable that these foetal skeletons belonged to the adult sheep. If so, the ewe died whilst heavily pregnant with twins. This did not preclude the partial butchery of her carcass.

Sheep/goat bones were found in most excavated sections of the enclosure ditch. They were also the best represented species (40) in the uppermost layer (1255) from where 26 sheep/goat bones included three cervical vertebrae from one adult animal. It is possible that the assemblage includes the fragmentary remains of other partial skeletons deposited in the area of Enclosure A. However, several different sheep were represented.

Pit [1116] contained the bones of two further butchered sheep skeletons. It is not clear whether the bones of the skeletons were clearly separated or mixed together. The first skeleton consisted of at least 87 bones. In addition, most of the 17 ribs that could not be assigned to a specific skeleton probably belonged to this sheep. All parts of the animal were represented. The skull was fragmentary and about half of it survived. It was horned and the morphology of the horn core bases (and of the pelvis) indicated that the animal was female. All but one of the major limb bones were recovered. The exception was the left humerus. Some of the more fragile elements, such as the scapula blade and the distal ulna did not survive. Some of the smaller bones were also missing, for example the right patella, the hyoids, several of the carpals and smaller tarsals and two of the phalanges.

Butchery marks were found on several bones. A knife cut ran across the base of the occipital, where the head had been detached from the neck. The left metacarpal bore a horizontal knife cut on the anterior surface of the proximal end, where the foot had been disarticulated. Both cuboids also had knife cuts on their anterior surface, where the hind feet had been detached. Both femora had been broken across the middle of the shaft. The distal half of the right femur bore horizontal knife cuts just below the break. The right tibia had an oblique knife cut on the anterior surface near to where the bone had been broken at the proximal end. Although nearly all the vertebrae were recovered, only one bore clear evidence of butchery. A thoracic vertebra bore a transverse knife cut across the ventral side of its body. These butchery marks and breakages indicate that the carcass had been divided and at least partly filleted prior to disposal. No evidence of gnawing was found on any of the bones.

Tooth eruption data indicated that the deciduous premolars were still in place, the first molars were in moderate wear (Grant 1982, stage f), but the second molars were only in an early stage of wear (Grant 1982, stage c). This suggests that the most likely age of death for this specimen would be early in its second year. The epiphysial fusion evidence supported this premise. The early fusing epiphyses (acetabulum; distal humerus; proximal radius; glenoid) had all fused, indicating an age of over 10 months (Silver 1969). The distal metapodials and tibia were all unfused, which indicates the sheep was under 18-24 months old. The second phalanges had all fused but the first phalanges were just fusing. The latter typically fuse early in the second year, although there is a lot of variability in the ages of epiphysial fusion in domestic mammals.

The second sheep skeleton was represented by at least 59 bones. This was less well preserved. Only the front part of the skull survived. Bones from the right side were less well preserved than those from the left. For example, the right ulna, patella, calcaneus and cuboid were missing and the right scapula, mandible, pelvis, tibia and metatarsal were incomplete. This implies that the carcass may have lain on its left side, leaving the right side more susceptible to post-mortem disturbance. Only three of the eight first phalanges, two of the second and none of the third phalanges were recovered.

Tooth eruption evidence indicated that only the deciduous premolars were fully erupted and in wear. The first molars were just erupting through the bone. This suggests that the carcass belonged to a lamb not much older than three months of age. None of the limb bone epiphyses had fused.

Despite its small size, there is evidence that the carcass had been butchered. A transverse knife cut across the anterior of the distal end of the astragalus indicated that the foot had been disarticulated, possibly with the skin attached. Two of the lumbar vertebrae bore marks that indicated that the flanks of the animal had been removed from the vertebral column. Several other vertebrae also displayed butchery marks.

The sheep burials described above are concentrated in the area around Structure 1 and Enclosure A and this is probably significant. The fact that all of them showed evidence for butchery does not rule out ritual deposition, particularly in the case of the two pairs of burials in the pits. The only other substantial group of bones came from a foetal lamb skeleton in a pit in Enclosure J.

It is possible to argue that the sheep in both sets of double burials were about 12 months apart in age and could conceivably have been killed at the same time of year. Assuming spring lambing, the sheep in pit [1116] could have been killed in the

summer and those in pit [1186] in the winter. Although all four sheep bore evidence of some carcass processing, their remains were subsequently deliberately deposited in pits perhaps specifically dug for their burial. This sets them apart from most other butchered animals, whose carcasses were usually much more fragmented and often made accessible to dogs.

The presence of ritual depositions of animal carcasses on British Iron Age sites has now been discussed by a large number of authors (e.g. Grant 1984a; Wait 1985; Cunliffe 1992, Green 1992; Hill 1995). Wilson (1996) has rightly raised the issue of the difficulty of interpreting some of these depositions. It could be argued that some of the partial skeletons may simply represent butchery waste. However, in this case, the remains were carefully retrieved after the carcasses had at least been partially disarticulated and possibly filleted and placed at the bottom of the pits, which seems to go beyond the limits of casual rubbish disposal. Butchery and ritual need not be mutually exclusive practices. The slaughter of animals and the eating of their flesh are commonly associated with ceremonial activities. Partial skeletons displaying butchery marks are not uncommon in Iron Age contexts. Examples can be cited from Danebury (Grant 1984b and 1991), Winnall Down (Maltby 1985) and Owslebury (Maltby nd1). Parallels for the burials of fairly complete, yet partially butchered sheep skeletons can be cited from beneath several buildings in the suburbs of Roman Winchester (Maltby nd2).

Evidence for the segmentation of domestic mammal carcasses in relation to human burial ritual can also be found in some graves of Iron Age date in different parts of Britain. Joints of meat were, for example, associated with some Durotrigian inhumations (Whimster 1981) and pig and domestic fowl bones have been found in a number of Late Iron Age cremation cemeteries in South East England (e.g. Davis 1989; Fitzpatrick 1994). Portions of pig and sheep carcasses were found with some Arras inhumation burials in Yorkshire (Legge 1991). These all bear testament to the butchery and segmentation of domestic animal carcasses during ritual activities. It is worth noting that the left humerus of a sheep was a common deposition in Arras graves (Legge 1991). Is it more than a coincidence that the best preserved of the sheep skeletons in this group at Wilby Way did not have a left humerus? Had this bone (and its flesh) been deliberately removed and deposited elsewhere? Of course, it is difficult to be certain. All the sheep skeletons in these pits were incomplete and taphonomic processes can account for most of the missing or incomplete bones. Nevertheless, given what is known about Iron Age ritual practices, we should not dismiss other explanations.

Generally speaking, although the high degree of fragmentation and poor survival of the articular surfaces handicapped the specific identification of sheep or goat, it was possible to determine that at least 70 of the sheep/goat bones belonged to sheep compared with only three of goat. These totals exclude bones from the sheep burials described above. It can be assumed that the vast majority of the undiagnostic fragments also belonged to sheep.

Two of the three goat bones included the horn core, one of which had evidence of being detached from the skull with a cleaver presumably as a prelude to hornworking. The only identified postcranial bone of a goat consisted of a metacarpal recovered from Structure 5.

Even excluding the burials, sheep were the most common species represented by fragment counts in Area 1 and 4, contributing between 37% and 50% of the identified mammal fragments (Table 5). They were much less well represented in Areas 2 and 3. MNI and WBE calculations produced higher percentages of sheep/goat and these may provide a more accurate indication of the relative abundance of the species (Tables 7-8). Given the poorer preservation of sheep/goat bones in general, even these figures should be regarded as a minimum. Sheep was the species most commonly eaten by the inhabitants of the site. Relatively more sheep/goat bones were found in areas close to domestic structures than in peripheral areas. It does appear, however, that the effects of differential preservation was much more marked in the anatomical representation of sheep/goat than of cattle. The burials provide a fairly even distribution of elements, but even here a few of the smaller bones, particularly from the feet, were absent. It is possible that they were removed with the skins but differential preservation and recovery are probably more likely factors. Similarly, by no means all the vertebrae and ribs were represented. In this case the observed butchery of the vertebral columns complicates the picture as some bones may have been removed or broken into undiagnostic fragments.

The contrast between anatomical representation in the burials and the rest of the sheep/goat assemblage is a graphic one. The sample is biased towards the denser bones, particularly the tibia, metatarsal, mandible and radius. Loose teeth provided 18% of the sheep/goat assemblage excluding the burials. In comparison identifiable vertebrae fragments were almost absent. Most of the cervical vertebrae may have come from another heavily disturbed burial from Enclosure A. Small bones of the foot were poorly represented and the more fragile major bones, such as the scapula and femur were also only moderately abundant. Even the most common bones were usually partially destroyed. For example, of the 160 tibiae fragments not associated with burials only five proximal and 17 distal ends survived. All the other major limb bones were also only usually represented by shaft fragments. The less dense ends of the bone are more susceptible to destruction, particularly by canid scavenging. The highest MNI estimates for sheep/goat (Table 7) were all obtained from the distal part of the shaft of the tibia, the densest region of that bone.

The butchery of the sheep burials has already been described in detail and these probably give the best indication of how most sheep carcasses were processed. Butchery marks were also observed on 12 other sheep/goat bones. The low incidence of observations can be largely explained by the non-survival of articular ends of the bone, where much of the butchery to segment the carcasses would have taken place. In every case the marks consisted of fine incisions made with knives and all had parallels on other British Iron Age sites.

A total of 54 sheep/goat mandibles had sufficient evidence of tooth eruption and wear to be placed into one of nine stages. Based on this evidence, the majority of the sheep represented were slaughtered immature for their meat, with only 30% surviving to an age of over three years (stage E). The peak mortality period appears to have been at stage D (28%). These would be animals that died in their second year. Although no neonatal mortalities were represented by mandibles (stage A), over a quarter of the sheep represented died before 12 months of age, mainly in the latter half of that period (stages B-C). High percentages of first year mortalities have been found on some, but by no means all Iron Age sites (Hambleton 1999), and although substantial, the percentage of first year mortalities was lower at Wilby Way than in many samples from southern England. Hambleton (1999) has suggested that flocks with comparatively low first year

mortalities may have been raised primarily for meat particularly in areas where arable production was less intensive. The lack of very old sheep (stages H-I) is typical of all Iron Age samples (Hambleton 1999). However about 22% of the sheep represented were over four years of age. These would have included breeding stock but animals of this age would also have provided several fleeces of wool.

Although epiphysial fusion data were recorded the reliability of this ageing technique must be questioned in samples such as this. There is probably a bias towards the denser fused epiphyses of older animals and this is probably why the fusion evidence suggested that a higher percentage (82%) of sheep survived their first year (the approximate latest age of fusion of the early fusion group) compared with 74% from the mandible data. There were significant differences between the percentages of fused bones within the later fusing group, with substantially more fused distal tibiae than fused distal metapodials. This again may be a factor of differential preservation but it could also indicate that the peak of slaughter took place in the period between the fusing of the distal tibia (about 18 months) and the distal metatarsal (up to 28 months). This would correspond with the peaks in the mandible data at stages D and E.

Apart from the foetal lambs, only four very porous sheep/goat bones were retrieved together with a further 27 porous bones from juvenile mortalities. The lack of neonatal sheep mortalities is probably the result mainly of poor survival rather than evidence for the absence of breeding of sheep by the inhabitants.

Measurements were taken on 77 sheep/goat bones, of which 31 were from the burials. The comparatively large size of the older of the two sheep in pit [1186] has already been noted. This animal had a withers height of about 0.63m. Measurements of lengths of other sheep limb bones gave estimates of 0.56m, 0.57m, 0.59m and 0.6m. These sizes are typical of the small type of sheep found throughout Iron Age Britain (Maltby 1996). The slender dimensions of most of the sheep represented are also reflected by breadth and depth measurements. It is significant that no hornless sheep were identified and at least four of the sheep in the burials possessed horns and three other fragments of skulls with horns were found elsewhere. This adds to the evidence that hornless sheep were probably not introduced into Britain prior to the Late Iron Age or Romano-British period (Maltby 1994).

*PIG*

Pig bones were comparatively poorly represented in all deposits. In samples from Areas 1 and 4, they provided 10-18% of the identified mammal fragments and as in the case of sheep/goat they were very poorly represented in Areas 2-3 (Table 6). The reasons for this intra-site variation may be the same as those discussed above for sheep/goat. There is some evidence that relatively more pigs were present in the Early-Middle Iron Age deposits in Area 1 (Tables 6-8), but the small sample sizes may make these results unreliable. Pigs have been generally less well represented than sheep/goat and cattle on British Iron Age sites and the results from this site are typical of other Midland samples (Hambleton 1999).

Analysis of the types of bones represented showed that pig skeletons had suffered almost as badly as sheep/goat from differential destruction due to canid scavenging and erosion. Loose teeth were well represented as were dense bones such as the mandible and tibia, while vertebrae and small bones from the limb extremities were very rarely identified. Scapulae were, however, quite well represented, despite being fairly fragile bone. Most limb bones consisted of shaft fragments. For example, only six distal ends of pig tibiae were recorded out of 31 specimens and none of the late fusing proximal ends survived.

Butchery marks were recorded on 13 pig bones. Ten of these consisted of fine incisions, including three located on the medial aspect of the distal ends of humeri and two on the lateral aspects of peripheral metapodials. Superficial chop marks were recorded on a mandible and the dorsal end of a rib. The types and location of most of the butchery marks were identical to those found on sheep bones and this indicates that carcass processing for the two species was similar. The most unusual butchery mark was found on the lateral spine of a scapula in pit [1528] (Structure 6/14) and consisted of a saw mark that ran along the length of the spine removing the protuberance. This may have been the result of filleting but the use of a saw may indicate that boneworking was being practised.

None of the 14 pig mandibles with tooth eruption evidence belonged to adult animals and only six (43%) belonged to pigs that survived beyond eruption stage C, suggesting that most of the pigs represented by these mandibles died in their first year. High rates of immature slaughter are typical of pig exploitation patterns in all periods, as the pig is primarily exploited for its meat. There is some variation in the relative numbers of first year killings on Iron Age sites although most sample sizes are too small for rigorous analysis. Wilby Way produced a higher percentage of first year mortalities than most comparable samples (Hambleton 1999).

Epiphysial fusion evidence was too limited to shed further light on pig mortality rates. Neonatal mortalities were represented by three very porous bones, including one mandible at eruption stage A. Eight other pig bones were described as porous and belonged to animals probably under six months of age. Measurements were taken on only 13 pig bones and teeth. The lengths of five third molars all fell within the range for domestic pigs as opposed to wild boar (Mayer *et al*. 1998).

*HORSE*

The linear group of pits to the south of ditch [3382] in Excavation Area 2 produced an assemblage in which horse bones were exceptionally well represented. From all of these pits, 321 fragments were recovered by hand, of which horse provided 118 of the 190 identified bones. Pits [3083] and [3185] produced particularly high numbers of horse.

Pit [3083] cut through the south-eastern end of ditch [3382]. Out of 146 fragments, recovered mainly from its topmost fill, 61 were identified as horse and most of the 56 rib, vertebrae and longbone fragments categorised as unidentified large mammal probably also belonged to horse. Such a bias towards one species is usually indicative of the burial of complete carcasses. However, in this case there is no clear evidence that any of the bones were deposited in articulation. Although most of the horse bones probably did belong to the same few individuals, at least three horses were represented by scapulae and mandibles and at least two by the atlas, axis and ulna. One of the mandibles belonged to an old male horse with very worn incisors; a younger animal was represented by unworn permanent teeth. However, most of the bones were fragmentary and at least 11 had been damaged by dogs. Slight charring of the teeth was noted on one maxilla, but no butchery marks were observed on any of the horse bones.

The second main concentration of horse bones was found in pit [3185], where horse provided 47 of the 73 identified bones. All but one of the 61 unidentified fragments were categorised

as large mammal and most of these were fragments of rib and vertebrae that probably belonged to horse. Although it is again probable that most of the bones belonged to one or two animals, no associated bones were recorded. At least three horses were represented by the atlas and two by metatarsals. No butchery marks were observed but much of the material was fragmentary. Some of the bones had been gnawed and several were slightly charred, indicating secondary deposition.

The horse assemblage included a complete skull of a sub-adult male in ditch [3099] of Field M. This area appears at some stage to have been the focus of the disposal of the bones of several horses, whose remains became incorporated in a number of deposits in this zone, although not before the skeletons had been subjected to heavy disturbance, fragmentation and some scavenging and burning.

Generally horse bones were poorly represented in deposits of all periods in Areas 1 and 4, providing only 2-4% of the identified mammal fragments (Table 6). Comparably small percentages of horse for these deposits were obtained from MNI and WBE calculations (Tables 7-8). All methods of quantification produced a small increase in horse representation in the Period 3 deposits from Area 1. Horse bones were remarkably well represented in the Period 3 deposits from Area 2, from where they contributed 54% of the identified mammal fragments (Table 6) and 36% of the minimum number of individuals (Table 7). As discussed above, most of the horse bones were concentrated in one part of Area 2. Although at least five horses were represented in this area and most of the bones were broken, no butchery marks were found on any of the bones. Although there were discrepancies in anatomical representation, these were not as marked as for cattle. For example, relatively more horse vertebrae and ribs were recovered and more were probably represented in the unidentified large mammal ribs and vertebrae fragments. This could imply that a number of horse skeletons were deposited in this area. These were subsequently severely disturbed and possibly redeposited within several features in this zone.

Horse, as well as cattle bones were also better represented in Area 3 than in Area 1 (Tables 6-8), supporting the idea that bones of large mammals were more often processed and deposited in peripheral areas of occupation. The relative abundance of horse bones from Areas 1 and 4 area is typical of Iron Age sites in southern England, where horses usually provide between 3% and 15% of the identified mammal assemblage (Moore-Colyer 1994). Parallels for the concentration of horse bones in Area 2 are more difficult to find. The four horse skeletons buried at the entrance of Blewburton hillfort are perhaps the closest example. However, these were clearly discrete depositions, which had not been disturbed (Harding 1972; Moore-Colyer 1994) and differ from the more dispersed distribution of horse bones at Wilby Way. It is possible that the horse bones were originally deposited as part of some sort of ritual event, perhaps associated with burial, foundation or propitiation ceremonies. However, their fragmentary nature and their dispersal have made interpretation problematic, although the unusual concentration must argue against casual deposition.

Although horse bones were found in all periods, there is little clear evidence that horses were exploited for meat by humans. Only one of the 168 horse bones (excluding teeth) bore definite evidence of butchery. A radius from Enclosure K bore knife cuts on the anterior and lateral aspects of the shaft near the proximal end where the bone had been disarticulated from the humerus. This is a very low percentage (0.6%) of butchery observations compared with cattle (6%) and although most of the horse bones were fragmented, they were not quite as fragmented as cattle. These observations are typical of Iron Age assemblages, for although there is evidence that horse carcasses were sometimes butchered, the exploitation of their carcasses appears to have been less intensive than for cattle (Maltby 1996).

Nearly all of the horses represented were adult animals. The teeth of one of the animals from Area 2 had very worn incisors of a senile horse and crown height measurements of the premolars of another mandible (Levine 1982) suggested it belonged to an animal of about 12-13 years old. Premolars of another mandible belonged to a younger horse of about six years of age while an upper molar suggested the presence of a horse of about seven years of age. An unworn incisor and an unfused proximal end of a femur indicated the presence of at least one slightly younger horse but no neonatal or juvenile horses were represented. This is again typical of British Iron Age assemblages (Moore-Colyer 1994; Maltby 1996), when horses were kept primarily for purposes such as beasts of burden.

Fragmentation restricted the number of measured horse bones to 24. A complete metacarpal produced an estimated withers height of 1.35m, towards the upper end of the range for Iron Age horses.

### *OTHER SPECIES*

The main evidence for dogs lay not in the discovery of their bones but in the abundant evidence for gnawing in assemblages of all periods (Table 5). Dogs were certainly kept by the inhabitants and one very porous bone of a neonatal mortality supports this. However, only 23 dog bones were identified. None of these formed articulated groups and dog represented no more than 2% of the identified mammalian species in any assemblage group (Table 6). A tibia bearing knife cuts on the anterior of its shaft from Enclosure K shows that dog carcasses were occasionally processed for their skins and possibly their meat.

All but two of the seven red deer fragments consisted of antler, of which three showed signs of being worked. Four of the antler fragments came from Excavation Area 4. No evidence for roe deer was found. Hare was represented by only one bone, no bones of domestic fowl were recovered and the only bird species identified were mallard and rook/crow.

Despite sieving of selected deposits no fish bones were recovered from Iron Age deposits, although two fish vertebrae fragments were found in the pyre debris from cremation B2. Only small numbers of small mammal and amphibian bones were retrieved. Generally, there was little evidence of exploitation of wild animals for meat.

### *CONCLUSIONS*

Despite its relatively small size, the assemblage from Wilby Way has produced some interesting evidence concerning the exploitation of, and attitudes to, animals in the Iron Age. Different areas of excavation produced significantly different assemblages showing that processing and disposal of animal carcasses was not necessarily a casual or random exercise. In particular, the butchered sheep burials in Excavation Area 1 and the concentration of horse bones in Excavation Area 2 are significant discoveries. The inhabitants appear to have relied mainly on cattle and sheep and, to a lesser extent, pig for their meat, but intra-site variability and the small sample sizes prevent any clear patterns of chronological changes in animal exploitation to be elucidated. In addition to meat, secondary products were also

of some value, particularly in the cases of cattle and horse. Both species appear to have been commonly kept alive until adulthood, arguably mainly for their use as working animals.

In many respects the assemblage from Wilby Way has attributes typical of most Iron Age samples from England. Although there was an unusual accumulation of horse bones in one area, the relative representation of cattle, sheep/goat and pig has similarities to several other sites in the Midlands and southern England (Hambleton 1999). The absence of domestic fowl is typical of most Iron Age assemblages (Maltby 1997). Fish and wild mammal bones are also poorly represented in most Iron Age assemblages (Maltby 1996). Mortality patterns of the domestic species have similarities with several other contemporary assemblages from different parts of the country (Hambleton 1999) and the greater reliance on knives rather than cleavers as the main butchery tools is also typical (Wilson 1978; Maltby 1989). Evidence for deposition of substantial parts of animal carcasses is also common (Green 1992). Rather unusually, such evidence at this site is restricted to sheep (and perhaps to horse), whilst no substantial groups of associated bones of cattle, dogs or pigs were recovered. Metrical data indicated that the domestic species were nearly all of the typical small size of stock represented elsewhere in Iron Age England. There was no evidence for hornless types of sheep nor small dogs, which appear to have been introduced in some areas in the Late Iron Age or early Romano-British period.

## THE ENVIRONMENTAL SAMPLES
by Chris Stevens

### *INTRODUCTION*

A total of 62 bulk environmental samples were taken from the CAT excavations. Most contained relatively few biological remains but 12 contained enough material to warrant further seed and molluscan analysis. One of these samples came from Late Neolithic/Early Bronze Age pit [4023] (period 1) and the remainder from Iron Age contexts (periods 2-3). The identified seeds, mollusc shells and other material are presented in Table 9, following the nomenclature of Stace (1991) and Kerney and Cameron (1979) for the plant and molluscan material respectively.

### *LATE NEOLITHIC/EARLY BRONZE AGE*

The deposit from Late Neolithic/Early Bronze Age pit [4023] contained numerous fragments of wood charcoal, some of which could be identified as oak, *Quercus* sp., and numerous fragments of hazelnut shell, *Corylus avellana.* The latter was present only in this sample. In addition this was the only sample which failed to produce any identifiable cereal remains. High proportions of mollusc shells were also recovered. These were mainly associated with shaded, scrub or woodland conditions, for example*, Carychium tridentatum, Discus rotundatus*, *Oxychilus laminata*, *Aegopinella pura*, and *A. nitidula.*

Table 9: Environmental material

| Period | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2-3 | 3 | 3 | 3 | 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Feature Type | pit | gully | pit | pit | ditch | pit | pit | pit | pit | p/hole | pit | ditch |
| Context number | (4033) | (1055) | (1028) | (1701) | (4092) | (3147) | (3010) | (1895) | (1607) | (1579) | (1191) | (3101) |
| Feature cut | [4023] | [1088] | [1027] | [1699] | [4076] | [3148] | [3011] | [1897] | [1606] | [1578] | [1190] | [3099] |
| Volume (litres) | 20L | 10L | 10L | 15L | 20L | 10L | 10L | 25L | 15L | 10L | 15L | 30L |
| **Cereals** | | | | | | | | | | | | |
| *Hordeum* sp. (grains undiff.) | - | - | cf.4 | 3 | - | 3 | | 5 | 1 | - | 2 | 1 |
| *Triticum* sp. (grain) | - | - | - | 2 | - | 11 | 2 | 6 | 8 | 2 | 3 | |
| *Triticum diccocum* (grain) | - | - | cf.3 | - | - | - | | - | - | - | - | |
| *Triticum diccocum* (glume bases) | - | - | - | - | - | - | 2 | - | - | 1 | - | |
| *Triticum diccocum/spelta* (grain) | - | 1 | 11 | 2 | - | 21 | | 8 | 1 | 1 | 1 | |
| *Triticum diccocum/spelta* (glume bases) | - | - | 2 | 2 | 2 | 97 | | 11 | 2 | 5 | 17 | 26 |
| *Triticum diccocum/spelta* (spikelet forks) | - | - | - | - | - | 4 | | - | - | 1 | - | 5 |
| *Triticum diccocum/spelta* (glume grots) | - | - | - | - | - | 30 | | - | - | - | - | |
| *Triticum spelta* (glume bases) | - | - | - | - | - | 22 | | 2 | 2 | 1 | 8 | 2 |
| *Triticum spelta* (spikelet forks) | - | - | - | - | - | 18 | | - | - | - | 1 | 1 |
| *Triticum aestivum sensu lato* (grain) | - | - | - | - | - | 1 | | - | - | - | - | |
| Cereals undiff. (grains) | - | - | 5 | 3 | - | 5 | | 25 | 4 | 2 | 7 | 1 |
| Cereals undiff. (culm nodes) | - | - | - | - | - | 8 | | - | - | 1 | - | |
| Cereals undiff. (basal culm nodes) | - | - | - | - | - | 4 | | - | - | - | - | |
| Cereals undiff. (awns) | - | - | - | - | - | 20 | | - | - | - | - | |
| *Parenchyma* fragments | - | 1 | - | - | - | - | | - | - | - | - | |

Table 9 (cont): Environmental material

| Period | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2-3 | 3 | 3 | 3 | 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Feature Type | pit | gully | pit | pit | ditch | pit | pit | pit | pit | p/hole | pit | ditch |
| Context number | (4033) | (1055) | (1028) | (1701) | (4092) | (3147) | (3010) | (1895) | (1607) | (1579) | (1191) | (3101) |
| Feature cut | [4023] | [1088] | [1027] | [1699] | [4076] | [3148] | [3011] | [1897] | [1606] | [1578] | [1190] | [3099] |
| Volume (litres) | 20L | 10L | 10L | 15L | 20L | 10L | 10L | 25L | 15L | 10L | 15L | 30L |
| **Species Name** | | | | | | | | | | | | |
| *Papaver rhoeas/dubium* | - | - | 2 | - | - | - | | - | - | - | - | |
| *Quercus* sp. (charcoal fragments) | + | + | - | - | - | - | | + | + | - | - | |
| *Corylus avellana* (nut fragments) | 100+ | - | - | - | - | - | | - | - | - | - | |
| *Chenopodiaceae* (undiff.) | - | - | - | - | - | - | | 1 | - | - | - | 1 |
| *Chenopodium* sp. | - | - | 3 | - | - | - | | - | - | - | - | 4 |
| *Chenopodium album* | - | - | - | 1 | - | 1 | | 4 | - | 2 | - | 2 |
| *Atriplex patula/prostrata* | - | - | - | - | - | 2 | | - | - | 3 | 2 | |
| *Montia fontana* ssp. *chondrosperma* | - | - | - | - | - | 1 | | - | - | - | 2 | 2 |
| *Persicaria maculosa* | - | - | - | - | - | - | | - | - | - | - | |
| *Fallopia convolvulus* | - | - | 2 | - | - | - | | 1 | - | - | - | |
| *Polygonum aviculare* | - | - | 1 | - | - | - | | - | - | - | - | 1 |
| *Rumex* sp. | - | - | - | - | - | 2 | | - | - | - | - | 3 |
| *Rumex crispus* | - | - | - | - | - | - | 1 | - | - | 2 | 1 | 1 |
| *Rumex* cf. *Conglomeratus /obtusifolius/sanguineus* | - | - | - | - | - | - | | 1 | - | - | - | 1 |
| *Potentilla* sp. | - | - | - | - | - | 1 | | - | - | - | - | 1 |
| *Brassica* sp. | | | | | | | | | | | | 1 |
| *Crataegus monogyna* (thorns) | | | | | | | | | | | | 2 |
| *Potentilla* sp. | | | | | | | | | | | | 1 |
| *Vicia* sp. | - | - | 1 | - | - | 4 | | 1 | - | - | 1 | 1 |
| *Vicia tetrasperma* | - | - | - | - | cf.1 | 2 | | 1 | - | 2 | cf.1 | 3 |
| *Medicago lupulina* | - | - | 2 | - | - | - | | - | - | 1 | - | |
| *Trifolium* sp. | - | - | - | 1 | - | 1 | | - | - | - | - | |
| *Trifolium repens/arvense/ dubium/campestre/ glomerata* | - | - | - | - | - | - | | - | - | - | 2 | |
| *Cuscuta epithymum* | - | - | - | - | - | - | | - | - | 1 | - | |
| *Lithospermum arvense* | - | - | - | - | - | 1 | | - | - | - | - | |
| *Stachys* sp. | - | - | cf.1 | - | - | - | | - | - | - | - | |
| *Plantago major* | - | - | 1 | - | - | - | | - | - | - | - | |
| *Plantago lanceolata* | - | - | - | - | - | 3 | | - | - | - | - | 1 |
| *Odontites vernus* | - | - | - | - | - | 1 | | - | - | - | - | |
| *Galium* sp. | - | - | - | - | - | - | | 1 | - | - | 1 | |
| *Galium aparine* | - | - | - | 2 | - | 2 | 1 | 3 | - | - | - | 1 |
| *Valerianella dentata* | - | - | - | - | - | 1 | | - | - | - | - | |
| *Tripleurosperum inodorum* | - | - | 11 | - | - | 22 | | - | - | 1 | 1 | 1 |
| *Monocot* stems | - | - | 1 | - | - | 1 | | - | - | - | - | |
| *Eleocharis palustris/ uniglumis* | - | - | 1 | - | - | - | | - | - | - | - | |
| *Carex* sp. flat (< 2.5mm) | - | - | - | - | - | - | | 1 | - | - | - | |
| Poaceae indet. medium (2mm-4mm) | - | - | - | - | - | 9 | | - | - | - | - | |

Table 9 (cont): Environmental material

| Period | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2-3 | 3 | 3 | 3 | 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Feature Type | pit | gully | pit | pit | ditch | pit | pit | pit | pit | p/hole | pit | ditch |
| Context number | (4033) | (1055) | (1028) | (1701) | (4092) | (3147) | (3010) | (1895) | (1607) | (1579) | (1191) | (3101) |
| Feature cut | [4023] | [1088] | [1027] | [1699] | [4076] | [3148] | [3011] | [1897] | [1606] | [1578] | [1190] | [3099] |
| Volume (litres) | 20L | 10L | 10L | 15L | 20L | 10L | 10L | 25L | 15L | 10L | 15L | 30L |
| Poaceae indet. small (<2mm) | - | - | - | - | - | - | | 1 | - | - | - | |
| Poaceae roots indet. | - | - | - | - | - | 1 | | - | - | - | - | |
| *Festuca/Lolium* | - | - | - | - | - | 1 | | 1 | - | - | 1 | 2 |
| *Lolium perenne* | - | - | - | - | - | 7 | | - | - | - | - | 1 |
| *Poa* sp./*Aleopercurus* sp./ Phleum sp. | - | - | - | - | - | 5 | | - | - | - | - | |
| *Poa* sp./*Phleum* sp. | - | - | 4 | - | - | - | | - | - | 2 | 1 | 1 |
| *Arrhenatherum elatius* var. *bulbosum* (basal culm node) | - | - | - | - | - | cf.1 | | - | - | - | - | |
| *Avena* sp. (grains) | - | 1 | 1 | - | - | 10 | 1 | 3 | cf.1 | 1 | - | 1 |
| *Avena* sp. (awns) | - | - | - | - | - | 8 | | - | - | 1 | - | 1 |
| *Avena* sp./*Bromus* sp./*Lolium* sp. | - | - | - | - | - | 8 | | - | - | - | - | |
| Deschampsia/ *Poa* sp. | - | - | 1 | - | - | - | | - | - | - | - | |
| *Agrostis* sp. | - | - | - | - | - | - | | - | - | - | 1 | |
| *Phleum* sp. | - | - | - | - | - | - | | - | - | 5 | - | |
| *Bromus* sp. | - | - | 2 | - | - | 17 | | 1 | - | - | 8 | 2 |
| *Bromus* sp./*Avena* sp. | - | - | - | - | - | 2 | | - | - | - | - | 1 |
| *Anisantha sterilis* | - | - | - | - | - | 1 | | - | - | - | - | |
| *Hordeum murinum* | - | - | cf.1 | - | - | - | | - | - | - | - | |
| *Hordeum* sp./*Avena* sp. | - | - | 1 | - | - | - | | - | - | - | - | |
| Seed indet. <2.5mm | - | - | - | - | - | 4 | | 1 | - | - | 1 | 6 |
| Seed indet. >2.5mm | - | - | - | 2 | - | - | | - | - | - | - | 1 |
| **Snails** | | | | | | | | | | | | |
| *Carychium* cf. *tridentatum* (Risso) | 60 | - | - | - | - | - | | - | - | - | 2 | |
| *Cochlicopa lubrica/ lubricella* (Müller/Porro) | 3 | - | - | - | - | - | | - | - | - | - | |
| *Vertigo pygmaea* (Draparnaud) | - | - | - | 2 | - | 2 | | - | 3 | 1 | 7 | |
| *Discus rotundatus* (Müller) | 142 | - | - | - | 1 | - | | - | - | - | 2 | |
| *Pupilla muscorum* (Linné) | 5 | - | - | - | - | - | | - | - | - | 3 | 4 |
| *Vallonia pulchella/ excentrica* (Müller/Sterki) | 2 | 1 | - | 18 | - | 2 | 6 | 1 | 1 | - | 27 | 12 |
| *Vitrea crystallina* agg.(Müller) | 5 | - | - | - | - | - | | - | - | - | 4 | |
| *Aegopinella pura* (Alder) | 74 | - | - | - | - | - | | - | - | - | 3 | |
| *Aegopinella nitidula* (Draparnaud) | cf.9 | - | - | - | - | - | | - | - | - | - | |
| *Oxychilus alliarius* (Miller) | cf.1 | - | - | 1 | - | - | | - | - | - | - | |
| *Cochlodina laminata* (Montagu) | cf.2 | - | - | - | - | - | | - | - | - | cf.1 | |
| *Hellicella itala* (Linné) | 19 | 1 | - | 2 | 1 | - | | - | 3 | 1 | 17 | 2 |
| *Trichia hispida* (Linné) | 2 | - | - | - | - | - | | - | - | - | - | |
| *Cepaea/Helix aspersa* | - | - | - | - | - | - | | - | - | - | 1 | 1 |

*IRON AGE*

The Iron Age samples all produced evidence of cereal grains, chaff and weed seeds. The ditches, however, contained much less material, with only two or three items in each sample. The cereal remains were most frequently of hulled wheats, with both emmer, *Triticum dicoccum*, and spelt, *Triticum spelta,* present, the latter being better represented. Grains of barley, *Hordeum* sp. were also present although all were very poorly preserved. Only one grain of free-threshing wheat, *Triticum aestivum sensu lato,* was recovered and came from pit [3147] in Excavation Area 2, which also contained the highest quantity of cereal and weed seed remains.

Seeds of typical arable weeds were also recovered. These consisted of poppy (*Papaver* sp.), fat-hen (*Chenopodium album)*, orache (*Atriplex* sp.), redshank, (*Persicaria maculosa)*, black bindweed (*Fallopia convolvulus)*, knotgrass, (*Polygonum aviculare)*, curled-leaved dock (*Rumex crispus)*, corn gromwell (*Lithospermum arvense),* scentless mayweed *(Tripleurospermum inodorum),* narrow fruited corn salad (*Valerianella dentata)*, cleavers (*Galium aparine),* brome grass (*Bromus* sp.) and possibly wild oats (*Avena* sp.). Also found were seeds often associated with grasslands which are commonplace in Iron Age assemblages, for example, ribwort plantain (*Plantago lanceolata)*, cats tails*, (Phleum* sp.) and clover (*Trifolium* sp.). Seeds of two wetland species were also recovered, namely blinks, (*Montia fontana* subsp. *chondrosperma)* and spikerush (*Eleocharis* sp.).

The Iron Age samples generally contained far fewer molluscan shells than the early prehistoric sample from pit [4023]. In general they consisted more of open country species associated with grasslands, for example *Vallonia* sp. and *Hellicella itala*. Some species more characteristic of shaded conditions were found although generally in fewer numbers. Of the samples examined only those from pit [1190] and ditch [1699] in Excavation Area 1 contained any significant quantity of remains, with *Vallonia* sp. being most frequent in both.

*DISCUSSION*

There is evidence to suggest that during the earliest infilling of Late Neolithic/Early Bronze Age pit [4023] the immediate surrounding vegetation was predominantly at least wooded scrub, if not woodland itself. How local such a phenomenon was is uncertain although Robinson and Wilson (1987) suggest that during at least the Late Neolithic, Northamptonshire was perhaps even more forested than the upper Thames. However, molluscan analysis by Evans (1974) from a barrow at Warren Farm, Milton Keynes, suggests an open tall dank grassland from high values of *Vallonia costata/excentica* and *Carychium tidentatum*.

The high presence of hazelnut and absence of cereal remains might also suggest a more wooded environment during this period. Such assemblages are known from Late Neolithic/Early Bronze Age samples, although there may be some local variations within such patterning (Moffett *et al.* 1989). From a single pit fill, however, it is difficult to be certain how local such influences may be. The deposition of the hazelnut shells is almost certainly from the burial of the burnt hearth material, in which the waste from the consumption of hazelnuts became incorporated.

The cultivation of hulled wheats, especially spelt, during the Iron Age is well attested for the south Midlands area along with the cultivation of 6-row hulled barley (Robinson and Wilson 1987). Many of the wild species are characteristic of, although not exclusive to, drier, often slightly calcareous soils, for example corn gromwell (*Lithospermum arvense),* black medick (*Medicago lupilina)*, ribwort plantain (*Plantago lanceolata)*, red bartsia (*Odontites vernus)*, narrow fruited corn salad (*Valerianella dentata)*, and brome grass (*Bromus* sp.). Other species, such as blinks (*Montia fontanum* subsp. c*hondrospermum)* and spikerush, are more characteristic of wetter areas, possibly adjacent to streams or rivers, with blinks often being more characteristic of the cultivation of the wetter areas of circum-neutral to slightly acidic river gravel terraces.

The presence of clover seeds indicates harvesting low down on the culm, whilst the presence of basal culm nodes, both of cereals, and possibly false-oat grass (*Arrhenatherum elatius)*, indicates some uprooting during harvesting. The seeds appear to have come from crop processing and as with at least two other sites studied in the area, namely Broom Hill, Bedfordshire (Stevens 1996b) and Pennylands, Milton Keynes, North Buckinghamshire (Jones 1984a), seem to be dominated by small weed seeds. This would indicate that the crop was stored in a relatively unprocessed state, requiring a minimal amount of time and labour after harvesting. The richer assemblages are generally dominated by glume bases and so indicate the taking of the crop from storage, and the separation of the smaller weed seeds by fine sieving, the glume bases by pounding and sieving, and the large weed seeds by hand sorting (Hillman 1981, Stevens 1996a). The waste from these activities was probably then thrown onto the hearth and subsequently found its way into the features via deliberate deposition of material, infilling via midden material or possibly through the scattering of the hearth itself. The ditches do not seem to have received such material (at least from this source) on a regular basis and the richest sample by far was from pit [3148] on Excavation Area 2. As such material can be associated with domestic hearth and midden material, it implies at least some intensive domestic settlement in this area. A fairly rich assemblage was also derived from ditch [3099] and although it is possible that such midden material was deliberately placed with the horse skull, it confirms fairly high levels of domestic activity in this area or the dumping of midden waste.

In comparing the weed assemblages to Pennylands and Bierton (Jones 1984a) which lie approximately 13 miles and 30 miles to the south respectively, and Broom Hill which is about 25 miles to the south-east, there are some noticeable differences in the weed flora. Stitchwort (*Stellaria media)* is relatively common at these three sites, but absent at Wilby Way, while scentless mayweed (*Tripleurospermum inodorum)*, which is relatively common at Wilby Way, is rare or absent at the other sites. However, Brome grass (*Bromus* sp.) and cleavers (*Galium aparine)* are both relatively frequent on all sites. Such variations in assemblages, probably caused by variations in local soils, have been noted from the Thames Valley and may suggest that all of these settlements were involved in small scale local cultivation, with little or no redistribution of spikelets between settlements.

In addition, Wilby Way also appears to be only practising a limited amount of processing after harvesting and prior to storage, much as seen for the westward, Upper Thames sites, for example Groundwell West (Stevens forthcoming) and for sites around Cambridge. This lies in clear contrast to other larger sites, such as Ashville and Mount Farm in the eastern Thames (Jones 1978, 1984b) where crops were processed much further, *en masse*, during this period (Stevens 1996a). It also stands in contrast to the site at Bierton, Milton Keynes to the south where such mass processing patterns were also seen for Late Iron Age samples.

Table 10: Details of radiocarbon dates

| Radiocarbon date ref. | Uncalibrated | Calibrated date range (calendar years BC) (68% probability) | Calibrated date range (calendar years) 95% probability |
|---|---|---|---|
| Wk 7807 (B5) | 2350 +/- 80 BP | 479 BC - 262 BC | 762 BC - 202 BC |
| Wk 7808 (B6) | 2130 +- 70 BP | 347 BC - 47 BC | 362 BC - AD 49 |
| Wk 7809 (B1) | 3560 +- 70 BP | 2009 BC - 1744 BC | 2126 BC - 1663 BC |
| Wk 7810 [3099] | 2260 +/- 60 BP | 391 BC - 205 BC | 403 BC - 168 BC |

Variation in post-harvest processing is most likely to be affected by the social organisation of labour at a time in the agricultural year when labour would be in high demand. At Wilby Way such organisation and the harvesting of crops would appear limited to a family level, with crops harvested and stored either unprocessed or in a relatively unprocessed state. Overall the evidence suggests that at Wilby Way farming was carried out locally on a subsistence level.

### THE RADIOCARBON DATES

Samples of human bone from inhumations B5 and B6, charcoal from cremation B1 and charred plant material found in association with the horse skull in the western boundary ditch [3099] of Field M, were submitted to the University of Waikato for radiocarbon dating. The uncalibrated radiocarbon dates have been calculated after Stuiver and Polach 1977. The dates have been calibrated using CALIB rev3.0 (Stuiver and Reimer 1993) (Table 10).

## DISCUSSION

### NATURE AND QUALITY OF THE EVIDENCE

The evidence from the site is limited by the fact that only part of it was excavated, with the core area being subject to a Section 106 agreement requiring preservation *in situ*. It was assumed that this protected core area enclosed the main focus of Iron Age activity, however in light of the excavation results this assumption is now far from secure. The absence of excavation of within this the core area, coupled with a ploughing regime that has resulted in the loss of the Iron Age ground surface and the truncation of negative features, inevitably limits current understanding of the site. Nevertheless, it is possible to draw tentative conclusions regarding the nature, function and status of the site.

### LANDSCAPE AND ENVIRONMENT

The settlement at Wilby Way is just one of a number of Iron Age sites known locally in an area that appears to have been intensively settled in the later prehistoric period. The focus of this settlement was the River Nene, which offered a highly productive and diverse floodplain environment for agricultural communities with rich pasture for grazing and fertile soils. Such an environment would have been increasingly attractive in accommodating the growing population of the Mid to Late Iron Age. It is against this background that the Neolithic/Early Bronze Age activity and Iron Age settlement at Wilby Way, overlooking the Nene floodplain, must be viewed.

Environmental work at various sites in the Nene Valley, including the investigation of a palaeochannel at Turnells Mill Lane, Wellingborough (to the north-east of the site), has suggested that, apart from small-scale and generally temporary clearances, much of the floodplain remained wooded until the Mid-Late Bronze Age, with large-scale deforestation beginning in the Late Bronze Age/Early Iron Age and continuing into the Roman period. On the floodplain, an open grassland sub-divided into fields appears to have been established by the Middle Iron Age (Brown and Meadows 1996-7). Preliminary research at Wollaston (approximately 2.5km to the south-east of Wilby Way) has indicated that the wooded valley bottom was cleared during the Bronze Age and subsequently maintained as open grassland which was divided into blocks of land in the Early Iron Age. These blocks were maintained throughout the Iron Age with associated settlements engaged in mixed arable and pastoral farming (Meadows 1995, 41-4).

### THE EARLIER PREHISTORIC PERIOD

The only features which can be assigned an earlier prehistoric date were pit [4023] in Excavation Area 3 (which produced Neolithic/Early Bronze Age flintwork) and cremation B1 in Excavation Area 1 (which produced an Early Bronze Age radiocarbon date). The molluscan assemblage from pit [4023] comprised shade-loving species suggesting that

woodland clearance in the immediate vicinity had not yet taken place.

Evidence for earlier prehistoric activity was otherwise confined to a small quantity of residual flintwork, mostly found in the eastern part of the site. In Excavation Area 2, a series of gullies and pits with distinctly different fills to the securely dated Iron Age features also were recorded, but these produced no artefactual or other dateable evidence. The nature of earlier prehistoric activity at Wilby Way is unclear but a small settlement may have existed within the wooded landscape. Such a settlement possibly practised a forest-farming economy and burial in the form of scattered cremations.

## THE IRON AGE SETTLEMENT

### *FOUNDATION AND SIZE*

Evidence from the excavation suggests that the Iron Age settlement at Wilby Way was established around the 6th-5th centuries BC on a spur at the north-eastern end of a pronounced ridge. This type of location is common for Iron Age sites in Northamptonshire. Such sites permitted the exploitation of a range of soil types and resources, and commanded an extensive view in at least one direction (Dix and Jackson 1989, 158). In the case of Wilby Way, although not located on the highest point of the ridge, the site would have had a commanding aspect to the north and east overlooking the confluence of the Rivers Nene and Swanspool Brook with the River Ise, approximately 2.8km to the north-east.

Evidence of medieval and post-medieval ploughing indicates that the settlement was founded on agriculturally viable land. A further inducement to settlement may have been the presence of small streams approximately 200m to the north-east and 200m to the south of the settlement.

Although its size at any one time is unclear, the remains of the settlement cover approximately 10 hectares, and are characterised by both enclosed and unenclosed elements. The extensive remains of another Iron Age settlement, covering approximately 16 hectares, have been identified recently in the west of the county at Crick (BUFAU 1998).

### *SETTLEMENT EVOLUTION*

The limitations of the excavation mean that it is not possible to fully understand the evolution of the settlement, a problem exacerbated by the difficulties in dating the Iron Age ceramics of the region. When separated into the two chronological periods (p. 20) a pattern does emerge, however it is unclear to what extent the various structures and enclosures within each period were contemporary. So, although the Iron Age remains appear to represent a large and relatively stable arrangement, the settlement may have been small, with frequent shifts.

Features of Early-Middle Iron Age date are apparent throughout Excavation Area 1 and appear to represent structures and enclosures of a population engaged in the usual agricultural and craft activities expected on such a settlement. In Excavation Area 2, pit complex [3359] produced evidence of possible industrial activity in the form of slag, burnt clay and a crucible or mould fragment. Elements of this settlement extended at least as far as ditch [4076] in Excavation Area 3. The presence of field (F), on the northern periphery of the settlement, suggests that the settlement was relatively permanent, but for a period potentially representing 300-400 years relatively few structural elements appear to have survived.

Evidence of Mid-Late Iron Age activity was more widespread. In Excavation Area 1, settlement appears to have been focused on two distinct areas. One area consisted of Structure 1 and Enclosures A, K and L, and the other of Structures 5, 6, and 14 and Enclosures C, H and P. However, as so much of the settlement remains unexcavated the reasons for this are far from clear. There is also evidence of activity in Excavation Area 2 during this period in the form of boundary ditches, fields and pits, and settlement also expanded into the area covered by Excavation Area 4. The presence of large storage jars may suggest that the settlement had become a communal focus and acted as a ‘central place’ with increased importance within the region.

Most of 71 potsherds recovered from excavation of the D-shaped enclosure ditch in Excavation Area 4 were undiagnostic and therefore of limited use as dating evidence. However, pottery recovered from the ditch section excavated in 1979 was considered to be of 2nd-1st century BC date, with the ditch finally backfilled in the 1st or 2nd century AD (Windell 1981, 68). Although the relationship between the open settlement and the D-shaped enclosure was not established during excavation, the 1979 pottery assemblage suggests that the D-shaped enclosure may have been one of the last elements of the settlement complex to have been constructed.

*CIRCULAR STRUCTURES*

Evidence for circular structures at Wilby Way comprised 10 drip gullies (Structures 1-8 and 13-14), and a possible curved arrangement of short gullies (Structure 9). All may have defined roundhouses of which little other structural trace remained. Only Structure 1 had evidence of a doorway defined by a gully and two pits, the fills of which are discussed below (p. 64). Pieces of daub with stick impressions indicative of wattle and daub walling were found in the drainage gully of Structure 3 and presumably the other roundhouses were of the same construction.

All of the circular gullies defined areas ranging from 8m–12.5m in diameter (Table 11). Where entrances could be discerned (Structures 1, 6, 7, 8 and 14), all faced east or north-east, the only possible exception being Structure 13 in Excavation Area 4, which may have had a north-facing entrance. The great majority of Iron Age roundhouses have east-facing entrances and the reasons behind this orientation, whether climatic or symbolic, have been discussed elsewhere (Oswald 1997). A further four roundhouses were recorded inside the D-shaped enclosure in 1979. These ranged from 8m-14m in diameter, although no clear entrances could be discerned (Windell 1981, 66-67).

Few definite internal features were found in the structures, making it difficult to recognise any specialisation. Evidence of metalworking was apparent in Structures 1 and 6 or 14, loomweights were found in Structure 3, and sherds of large storage jars were found in quantity in Structure 14.

Table 11: Roundhouse details

| Structure no. | Period | Diameter | Entrance orientation |
|---|---|---|---|
| 1 | 3 | 11m | East facing |
| 2 | 2-3 | 11m | - |
| 3 | 2 | 10m | - |
| 4 | 2-3 | - | - |
| 5 | 3 | 10m | - |
| 6 | 2-3 | 10m | North-east facing |
| 7 | 2 | 12.5m | East facing |
| 8 | 2 | 8m | East facing |
| 9 | 2 | 12m | - |
| 13 | 2 | 9m | ?north facing |
| 14 | 3 | 12.5m | East facing |

*ENCLOSURES*

The ground plans of 14 enclosures were identified in the excavation (Table 12) and another may be represented by ditch [4076] in Excavation Area 3. The largest was Enclosure T, the D-shaped enclosure which with its broad, deep ditch appears to have had a defensive function. Enclosures J and L were the next largest and the former may have contained structural and other features. The function of Enclosure L, which succeeded an area of intense activity (especially in its north-eastern corner), is uncertain. The remainder of the enclosures were relatively small and, in terms the size, relatively consistent. There is little evidence to indicate their

Table 12: Enclosure details

| Enclosure | Period | Ditch depth (max) | Dimensions | Entrance Orientation |
|---|---|---|---|---|
| A | 3 | 0.8m | 17m x 13m | South-east facing |
| B | 2 | - | 12m x 9m (min) | West and north-east facing |
| C | 3 | 0.7m | 16m x 12m (max) | West facing |
| D | 2 | - | 22m x 11m (min) | - |
| E | 2 | 0.6m | 14.5m x 5m | - |
| H | 3 | 1.35m | 16m x 12m | South-east facing |
| J | 2 | 0.5m | 41m x 33m (min) | North-east and north-west facing |
| K | 3 | 1.7m | 12m x 9m | South-east facing |
| L | 3 | 0.47m | 38m x 36m (min) | - |
| N | 2 | 0.6m | 24m x 15m | North-east facing |
| P | 3 | 0.55m | 15m x 16m | - |
| R | 3 | 0.3m | 16m x 9m | South-east facing |
| S | 2-3 | 1m | 9m x 6m (min) | - |
| T | 3 | 2.7m | 68m x 65m | - |

function, but they may have defined working areas or animal pens. Enclosure R may have formed an annexe or working area associated with Structure 14.

Sherds of large storage vessels were found in the ditch fills of Enclosures A and K and a Swan's neck pin and a possible currency bar were recovered from the ditch of Enclosure H. Other than Enclosure T, Enclosures K and H, along with the possible enclosure defined by ditch [4076], had the deepest ditches. Enclosures A, K, R and H all had south-east-facing entrances. However, there was some variation in the orientation of enclosure entrances: Enclosure C's was west-facing, and Enclosures B and J had two each.

*PITS*

Relatively few pits were found and most were relatively shallow, although they had been truncated by later ploughing. This is in direct contrast to the Iron Age site at Twywell, approximately 14km to the north-west of Wilby Way, where 180 pits were identified (Jackson 1975). It is possible that pit complexes exist within the unexcavated part of the site, and a few possible storage pits are discussed below. Domestic rubbish in the form of pottery and animal bone was found in many of the pits although rubbish disposal was not necessarily their original purpose. The clay quarries, for example, all served as rubbish repositories once their primary function was obsolete.

*THE AGRICULTURAL ECONOMY*

All of the samples taken from Iron Age contexts produced evidence of crop production. Hulled wheats (spelt and emmer) were the most frequent of the cereal grains with just one grain of free-threshing wheat. Barley was also represented. Many of the arable weed seeds are characteristic of drier, slightly calcareous soils and the overall impression is that arable farming was carried out locally on a subsistence level, presumably on fields surrounding the settlement, for example fields F, M, Q and U. However, arable weed seeds characteristic of wetter areas were also found, probably deriving from the vicinity of local streams, the possible pond in Excavation Area 3 or from the Nene floodplain.

That crop processing was carried out on the site is evident from the small quantities of processing debris (weed seeds and chaff) recovered from the samples. Although the crop appeared to have been stored in a relatively unprocessed state after harvesting, possibly because time and labour may have been scarce at that time of year, only a few possible storage pits and three 4-poster structures were identified (S10, S11 and S15). Such structures may have acted as storage sheds for grain and other materials (Reynolds 1995, 187-8).

More communal grain storage facilities may exist within the unexcavated part of the site. Further possible evidence for storage has come from the ceramic analysis where large storage jars were noted in quantity from Enclosures A, G and K, although such jars were not necessarily used for the storage of foodstuffs.

It is clear from the animal bones that the inhabitants of the site relied mainly on cattle and sheep and to a lesser extent pig for their meat. Most of the sheep were killed for meat in their first three years while both cattle and horse tended to have been kept alive until adulthood, possibly for use as working animals and, in the case of cattle, for milk. Adult sheep were also kept for wool. The possible pond in Excavation Area 3 may have been an important resource for the over-wintering of stock. In many respects the assemblage has attributes typical of most Iron Age sites from England, although the deposition of horse bone in Excavation Area 2 is unusual (see below).

*INDUSTRIAL ACTIVITY*

The small amount of randomly distributed slag recovered from the excavations gives no grounds for assuming ironworking on the site for any great length of time. In Excavation Area 1 slag was widely scattered over the site. However, the hammerscale from a posthole associated with Structure 6 or 14 is a good indicator that smithing was carried out within or in proximity to one of these structures. Part of a smithing hearth bottom was also recovered from the boundary ditch of Enclosure H along with a possible currency bar. This may again hint at ironworking in the vicinity of this enclosure although the currency bar may have been a special/ritual deposit (see below). In Excavation Area 2, slag was mostly found in the area to the north-west of ditches [3240] and [3099]. The large amount of burnt clay in the pit complex here, along with a small quantity of slag and a crucible/mould fragment, suggests the deposition of industrially related material. The small quantity of this material does not allow for any meaningful spatial analysis, but it is possible that iron smithing

was carried out at least on a very small scale on the south-eastern periphery of the settlement. Smithing activity on the periphery of Iron Age sites has been noted elsewhere (Hingley 1997, 12-13).

*CRAFT PRODUCTION*

Evidence for craft production was scarce. Loomweight fragments were recovered from Structure 3 and Enclosure K, a bone point was recovered from Structure 2, and bone gouges from Structure 12 and clay quarry [1752]. Knife fragments, although not necessarily craft-related, were found in Structure 12 and Enclosure K, and iron woodworking tools were found in pits [3357] and [3371]. There is too little of this material to suggest any specialist working areas although the two woodworking tools were found in close proximity in Excavation Area 2.

*RITUAL*

Evidence for inhumation burial was confined to three widely separated inhumations and redeposited human bone in pits and ditches. Two of the inhumations were in purpose-dug graves, whilst the burial in Excavation Area 4 had been placed in a partially filled pit.

The worn condition of much of the redeposited human bone suggests some surface exposure prior to reburial and one bone from pit [3185] had possible defleshing marks. This may indicate that the redeposited bone had been returned to the site from excarnation platforms and deliberately buried as a special deposit, however it may equally have originated from disturbed burials.

Evidence for cremation burial was confined to the Bronze Age cremations and pyre debris discussed above, although sherds of an Iron Age cremation vessel were recovered from the uppermost fill of the boundary ditches of Enclosure A. However, no bone survived with these sherds and the vessel clearly had been disturbed and redeposited in the top of the infilled boundary ditches. No direct association between the enclosure and funerary activity could be made.

The deliberate placement of animal remains in pits and ditches was also apparent, particularly in the area of Structure 1 and Enclosures A and K. In Structure 1, charred grain and iron ore were found in one entrance pit and two butchered sheep burials in the other. In addition, a cow skull had been placed upside down in the bottom of the surviving entrance terminal. No other circular structure had similar deposits, suggesting that this roundhouse had a special or different function to the others. The relationship between the roundhouse and pit [1116], which lay within it, was not established but this pit also contained a pair of butchered sheep burials. The butchered remains of a heavily pregnant ewe were also found in one of the boundary ditches of Enclosure A. This enclosure was replaced by three-sided Enclosure K, which was positioned in virtually the same place and had similar internal dimensions. The presence of ostracod valves suggests that its deep ditches may have been deliberately filled with water. There was no clear evidence from the ditch profile of any recuts and a process of gradual subsequent backfilling would seem likely. Again the function of Enclosure K is uncertain, although the recovery of sherds of large storage jars from the ditch fills and a human bone from one of the terminals suggests a continuing significance for the sequence of structures in this location.

A horse skull was found in ditch [3099] of Field M, along with a small deposit of charred grain. This area, including pits [3083] and [3185], appears to have been the focus for the disposal of horses. A further horse skull was found in pit [408], in an evaluation trench immediately north-west of Excavation Area 2 and another fragmentary horse skull was found in posthole [1014] in Excavation Area 1, where in addition pit [1084] produced a fairly complete although fragmentary cow skull.

Artefacts which may have been deliberately buried include the Swan's neck pin and possible currency bar found in the boundary ditch of Enclosure H, and the broken knife fragments in the uppermost fill of the boundary ditch of Enclosure K and one of the postholes in Structure 10. One of the postholes of Structure 11 also produced a tip of a bone gouge. A broken iron file was found in pit [3357]. It has been noted elsewhere that iron tools may have been seen in Iron Age society to possess their own cycle of life and death and their deliberate deposition when broken is reflective of the end of that life cycle (Hingley 1997, 14-15).

The deposition of slag is of note as there is a possibility of this material being a powerful material in ritual practices (Hingley 1997, 15). In this respect the deposition of possible roasted or smelted ore in one of the possible threshold pits of Structure 1, together with charred cereal grains, is a case in point although it may merely indicate the presence of ironworking nearby.

*SOCIETY*

In the Late Iron Age this part of Northamptonshire lay close to the border of the tribes of the Corieltauvi and the Catuvellauni and Trinovantes (Cunliffe 1991, 160). Such a position is likely to have played an important role in the trading relations between these tribes. The geographical position of the site overlooks the confluence of the Rivers Nene and Ise, but there is nothing in the artefactual record to suggest that the inhabitants were of high status or were involved in an active trading community. The only items of personal adornment were a glass bead and the Swan's neck pin, although high-status artefacts were of value and therefore less likely to be lost or discarded. The Mid-Late Iron Age pottery assemblage may be seen as evidence that the site acted as a communal granary for its locality at this time, but there is no other corroborating evidence to confirm this.

A change in the status of the settlement (and therefore of its inhabitants) in the Mid-Late Iron Age may be represented by the construction of the D-shaped enclosure. Several enclosures of this date with similar dimensions and a deep ditch have been recognised in the county and reflect a trend towards smaller defended settlements at this time. Possible reasons for the construction of these enclosures include their reflection of the local standing or other importance of the occupants combined with the protection of economic interests or the fear of external attack. Although most of these enclosures appear to date to the Late Iron Age, an origin in the 2nd century BC or earlier has been suggested for the enclosure at Stanwell Spinney approximately 3.5km to the north (Dix and Jackson 1989, 166). A similarly early origin for the D-shaped enclosure is possible.

*THE SITE IN CONTEXT*

It is difficult to compare the settlement at Wilby Way with others in the county because of the lack of recognition and excavation of similar large long-lived sites. However, the structural elements are probably most similar to the large settlement at Crick (BUFAU 1998), although any direct comparisons with this valley bottom site, which covered about 16 hectares, must await publication of its report. In addition the excavation has shed little more light on the nature and function of the D-shaped enclosure excavated in 1979 (Windell 1981).

At least seven other Iron Age sites are known locally, mostly recorded under rescue conditions during the modern expansion of Wellingborough on the western and northern outskirts of the town (fig. 1). The largest lies in the Hardwick Park area (Site 1) where numerous Late Iron Age and early Roman features were identified (Foster *et al*. 1977) and an Iron Age enclosure with ditches and pits was identified just to the west at the Queensway Health centre (Everson 1976; Foard 1977). This appears to represent part of a settlement with possible Middle Iron Age origins but which continued into the Late Iron Age and early Roman periods.

A southern continuation of this settlement may be represented at Ruskin Avenue Junior School (Site 2) where Iron Age, Roman and later pottery was recovered (WSAC 1967, 20). Further prehistoric sherds were found in the vicinity of Ruskin Avenue and Queensway to the east of the school (Fox 1969, 6). Iron Age and Roman features were also found near Weavers Road (Site 3: Harper *et al*. 1972; Foster and Harper 1975).

On the north-eastern outskirts of the town a possible trackway, roundhouse and pits of Iron Age date, were identified at Hemmingwell Lodge (Site 4: Harper *et al*. 1972; Foster 1973). Further pottery of the same date was recovered from Iron Age ditches and pits recorded at Finedon Road Industrial Estate (Site 5: Foster and Harper 1972; Harper 1975). Another Late Iron Age enclosure was excavated at Stanwell Spinney (Site 6: Dix and Jackson 1989) and Iron Age and Roman potsherds were recovered to the west of this site (Botterill 1972). The enclosure had a defensive function, possibly associated with a sacred site. An Iron Age and Roman square enclosure was also excavated on the northern outskirts of the town at Redhill Farm (Site 7: Webster 1997, 27). It should also be noted that Iron Age pottery was recorded just to the south-east of the village of Great Doddington and more was found in conjunction with Roman material at the north-eastern end of the village (Site 8: RCHME 1979, 37-8).

The information from most of the above sites is to limited too allow interpretation of their function, with the exception of the excavated enclosure at Stanwell Spinney. However, the general picture provided by these sites is of a developing Iron Age landscape of which the Wilby Way settlement was a part. This landscape presumably contained several agricultural settlements and field systems, perhaps similar to the later prehistoric landscape identified at Wollaston

(Meadows 1995). The extent to which the site at Wilby Way interacted with these other settlements remains a topic for further archaeological research into the Iron Age exploitation of the area.

### THE LATE IRON AGE/ROMAN PERIOD

No Late Iron Age or Belgic (CP5) pottery was recovered from the excavations, although it is possible that features of this date lie within the unexcavated portion of the site. However, sherds of 1st or 2nd century AD date were recovered from the fill of the single section cut through the D-shaped enclosure ditch by Windell (1981) and Roman sherds were recovered from Structure 13.

The occurrence of these potsherds indicates that the area around the D-shaped enclosure was being utilised in some way in the early Roman period. It is possible that this is associated with a Roman villa situated approximately 2.5km to the south-west (RCHME 1979, 38). It is also possible that Roman features lie within the unexcavated portion of the site. However, the indications are that the site was abandoned towards the end of the Iron Age and that it was not settled in the 1st century AD prior to the Roman Conquest. This decline in the fortunes of the settlement may be associated with the construction of hillforts throughout Late Iron Age Britain and other small defended enclosures common in Northamptonshire.

### MEDIEVAL AND POST-MEDIEVAL HISTORY

There was no clear evidence of settlement on the site after the end of the Iron Age. Evidence for medieval and post-medieval activity was confined to quarrying and ploughing.

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