

## Abstract

The excavations at Spratsgate Lane produced evidence of limited Bronze-Age and extensive Middle Iron-Age activity in two areas of settlement, one enclosed and the other, to the east, apparently unenclosed. A ditch defining the enclosed settlement to the west was interrupted by two gateways. One had structural evidence for wooden posts. These gateways gave access to two areas of activity. Directly in front of the northern gate the remains of a well were recorded. Both areas of activity centred on a circular enclosure approached by a ditched trackway. These enclosures have been interpreted as evidence for house structures and associated with them were structures representing extensions and delineating possible livestock paddocks. The layout is suggestive of a small Middle Iron-Age village with evidence for field systems to the west, south and east. The environment appears to have comprised essentially open ground and areas of scrub with stands of water probably within the ditches associated with the settlement. Fresh water was also likely to have been located nearby and occasional water shortages appeared to have necessitated the digging of wells. The settlements may be part of a much wider community of Middle Iron-Age activity which extended into areas recently excavated at Cotswold Community and Shorncote Quarry to the north and east. Evidence from the excavations at all three sites indicates an economy depending on animal husbandry, predominantly cattle and sheep, and trading widely for other necessities such as salt from Droitwich, pottery from the Malvern area and perhaps grain.

# **Excavations at Spratsgate Lane, Somerford Keynes, Gloucestershire, 1995 and 1996**

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## **INTRODUCTION**

Gloucestershire County Council Archaeology Service carried out a programme of archaeological investigation between 1989 and 1996 at Spratsgate Lane, Somerford Keynes, Gloucestershire. This took the form of two seasons of evaluation, in 1989 and 1990 (Parry 1990), and two seasons of excavation, in 1995 and 1996. The application for planning permission to extract sand and gravel at Spratsgate Lane predated the introduction of Planning Policy Guidance 16 in 1990. As a consequence, although funding for the evaluation and excavations was obtained from the developer, the post-excavation work and publication of the results were funded by English Heritage through the Aggregates Levy Sustainability Fund (ALSF).

### *Geology and Topography*

Spratsgate Lane is 6 km south of Cirencester and is centred on O.S. Nat. Grid SU 02429579. The excavation area comprised two arable fields covering c.1.6 ha on the west side of the lane. The geology of the area consisted of first terrace river gravels with underlying Oxford clay of the Upper Jurassic period (British Geological Survey 1974). Positioned on the 90 m contour, the site was flat with the exception of a slight rise to the north-west outside the excavation area. Spratsgate Lane is located on the north-western side of an area designated in 1967 as the Cotswold Water Park, through which pass the river Thames, 1.2 km to the west, and the line of the former Thames and Severn canal. The Water Park has been created by quarrying of the gravels of the upper Thames Valley from the 1920s, and there are now c.110 lakes clustered around South Cerney, Ashton Keynes and Somerford Keynes in the west and Fairford and Lechlade in the east.

### *Archaeological Background*

The excavation was in an area proposed for the extraction of sand and gravel. The presence of archaeological features was indicated in an oblique aerial photograph (RCHM 1967), which showed a complex of rectilinear enclosures associated with a length of trackway, part of which had already been destroyed by gravel extraction to the south. The cropmarks (depicted on Fig. 3) suggested that the settlement had once extended over c.3.6 ha and only the northern half survived in 1989. The evaluations (Parry 1990) indicated that the cropmarks were evidence of an Iron-Age enclosure. Subsequently, in 1995 and 1996, the main area of the settlement was excavated, with the primary aim of the preservation by record of the features and deposits threatened by the gravel extraction.

### *Excavation Methodology*

The excavation was undertaken over two seasons; the south-eastern half was excavated during 1995 under the supervision of Sean Cook and the north-western half during 1996 under the supervision of the author. Because of the limited funding, the excavation was selective and targeted towards areas that were perceived

to contain the most important relationships and were likely to provide dating evidence. This strategy was more successful in 1996 than in 1995. Topsoil was stripped from the site by a mechanical excavator using a wide bladed, ditching bucket without teeth, under archaeological supervision. The site was hand-cleaned and planned prior to excavation. Investigation of archaeological levels was by hand, with cleaning, examination and recording both in plan and section. A full written, drawn and photographic record was maintained. A unique site code (Glos. 2361) was assigned to the site. Location plans based on O.S. 1:1,250 and 1:2,500 maps were prepared (Figs. 1 and 2).

## THE EXCAVATION

### *Introduction*

During the excavation the site was divided into four discreet areas (areas A–D: Fig. 2) for ease of recording. Areas A, C and D were excavated in 1995 and Area B in 1996. An enclosed settlement is represented by Areas B and C, while an apparently unenclosed settlement was present in Area D. Features or groups of features within the four areas have been given structure numbers to aid discussion and interpretation. The structures are discussed by phase where possible, but are mainly discussed by type, based on their physical characteristics. The depth of ploughsoil removed varied between 0.31 m in Area C and 0.65 m in Area B. The top of the archaeological deposits was recorded at: 89.56 m (above O.D.) in Area A; 89.82 m in Area B; 89.64 m in Area C and 89.69 m in Area D. The greater depth of ploughsoil in Area B significantly increased the survival of the archaeological deposits. The remains of ridge-and-furrow cultivation on a NE–SW alignment were recorded across the area of the excavation. Furrows 0.1–0.2 m in depth were present and had been severely truncated by modern ploughing. Both periods of cultivation had resulted in the loss of all horizontal stratigraphy. The majority of features recorded dated to the Middle Iron-Age; a small group of Bronze-Age features was identified in Area A.

### *Area A (Figs. 2 and 4)*

Area A comprised a narrow strip of land along the southern edge of the site, which was stripped of topsoil to provide an access road for the gravel extraction. Six features of Bronze-Age and Middle Iron-Age date were recorded, an oval pit, four postholes and a short curvilinear ditch.

The pit [504] (Fig. 5a) measured 2 m long, 1.1 m wide and 0.95 m deep. Two circular depressions in the base, 0.3 m and 0.55 m in diameter, were interpreted as a double post setting. The primary fill (515) was possibly the remains of packing material for the posts. The upper fills (501) and (500) represented the dumping of domestic debris which included Bronze-Age pottery, several flints and a hammerstone (Fig. 12). To the west, a semi-circle of oval postholes [516, 517, 518, 519] was recorded. Their dimensions ranged from 0.7 x 0.5 x 0.25 m to 1.1 x 0.75 x 0.35 m. They may have been the remains of a circular enclosure or structure which continued beyond the edge of the site to the south. No finds were recovered from any of the fills. The postholes were adjacent to a later curvilinear ditch [521], 3.5 m to the east and filled by a combination of domestic waste and silt dating it to the Middle Iron Age (ceramic phase 2). This ditch may provide evidence for unenclosed activity adjacent to and contemporary with the main settlement area.

### *Areas B and C- earlier features (Figs. 2 and 4)*

Four structures (S12, S15, S16, and S17) in the centre of Area B and one in the centre of Area C (S33) were aligned contrary to the main layout of these areas and may be evidence of an earlier phase of Middle Iron-

Age activity. They were stratigraphically earlier than the main structures and were assigned to ceramic phase 1. Mostly unexcavated, they could equally have represented subdivisions within the later enclosures.

S12 was a narrow curvilinear ditch [839/841/221] c.26 m long, 0.82 m wide and up to 0.4 m deep. Its northern terminal was to the north of the ditched corridor of S1 and, turning through 90° to run NE–SW, it terminated just beyond the east side of S10. S15 comprised two unexcavated pits pre-dating the southern ditch of S1. The eastern of these may also have been cut by S16. Both pits measured c.1.0 x 1.5 m and south of the western pit was an arrangement of three postholes. S16 was a curvilinear ditch [219] c.20 m long, 0.95 m wide and 0.45 m deep. The plan of this feature was not clear but it probably comprised several ditches and it appeared to be cut by S10 and S1, although the relationships were not investigated. The ditch perhaps indicates a phase of activity pre-dating S1 and S10 but post-dating S15. S17 comprised three lengths of curvilinear ditch inside and adjacent to the eastern side of S10 and could pre-date or represent subdivisions associated with this structure.

To the south, in Area C, S33 comprised two lengths of curvilinear ditch, 2.5 m and 8 m long. The shorter south-western ditch remained unexcavated. A section through the north-eastern ditch [577] failed to elucidate the function of these features but they were cut by S32. Their position within an enclosure represented by S24, S27, S28 S29 and S32 may indicate that they were associated with the function of the enclosure. These features may represent a phase of poorly defined activity of earlier Middle Iron-Age date, however its form, extent or date could not be established from the limited excavation.

#### *The enclosed settlement*

The western side of the excavated area contained an enclosed settlement. It was bounded by Structures 3, 11 and 22 on its western and southern sides and by Structures 2 and 23 to the east. The northern boundary, if present, was outside the excavated area. Two structures to the west (S20 and S21) appear to be closely related to the enclosure and are discussed in association with it. Within the enclosure two distinct activity areas are represented, each centred on a penannular ditch with a ditched approach corridor and associated paddocks, and each with its own entrance through the western boundary.

#### *Western boundary*

The western and part of the southern boundary of the enclosed settlement are represented by three lengths of ditch (S3, S11 and S22). A complex gated entrance (S19) was located between the terminals of S3 and S11 and a simpler entrance further south between S11 and S22.

S3 measured 50 m long and extended beyond the northern boundary of the excavated area. The ditch alignment was predominantly north–south but curved slightly towards the south-east at its southern terminal. Within the two excavated sections there was no evidence for recutting. The first section recorded an irregular 'V'-shaped cut, [271] (Fig. 5e), which measured 1.56 m wide and 0.64 m deep. The fill (270) suggested that in this area the ditch had filled with successive layers of silt interspersed with collapse from the sides. The second section, [862], was 1.8m long and excavated at the southern terminal. It measured 1.85 m wide and 0.6 m deep with sides at 45° to a flat base falling to the north-east. The fill (863) of this part of the ditch appeared to be a combination of silting, collapse of the sides and deposition of domestic debris, perhaps originating from traffic through the gateway (S19) south of the terminal.

S11 formed the central section of the western boundary to the south of the gateway (S19) and 5.5 m to the south of the terminal of S3. The 'L'-shaped ditch measured 51 m long. Aligned north–south at its northern extent, it turned through 90° at its mid point to run west–east before returning to a north–south

alignment for 5 m at its southern end. Two phases of ditch were recorded. Ditch [259] (Fig. 6c) was 0.46 m deep, 'V'-shaped in profile and filled by (258). The second phase, ditch [257], was also 'V'-shaped in profile, 1.5 m wide and 0.72 m deep, and on the same alignment as [259] but 0.3 m to the west. It cut the western edge of the earlier ditch and contained two fills, (256) and (255). To the south two parallel ditch phases, [203] and [251], were recorded. Ditch [203] was 0.98 m wide and 0.53 m deep, 'U'-shaped in profile with a single fill (202). Ditch [251], located 1.3 m to the north was 1.6 m wide and 0.73 m deep and 'V'-shaped in profile. It contained three fills (253), (254) and (252), a combination of silting and weathering of the sides of the open ditch. No relationship was recorded between the two ditches but it is likely that they represent the southward continuation of the same two phases recorded further north. Very few finds were present within the fills of either ditch section.

The southernmost section of the western boundary was represented by S22. A 4 m gap between the southern terminal of S11 and the northern terminal of S22 provided an entrance into the southern part of the enclosed settlement. No postholes or other features were identified at this entrance in contrast to the northern entrance. The 'L'-shaped ditch was 60 m long and aligned north-south at its northern terminal. At its mid point it turned through 90° to run east-west for c.30 m, continuing beyond the edge of the excavation. Two sections were excavated. Ditch [18] (Fig. 7b) was 0.92 m deep and 1.93 m wide and 'V'-shaped in profile. Five fills were recorded, the lowest two (16) and (17) the result of weathering of the open ditch and the others (13), (14) and (15) the result of gradual silting. Within the section to the south, ditch [8] was 0.9 m deep and 2.06 m wide, 'V'-shaped in profile with a small shallow 'U'-shaped slot 0.22 m wide at the base. Fills (6) and (7) were the result of weathering of the ditch sides, while the uppermost fill (5) represented gradual silting. It is likely that S22 terminated to the immediate south of the excavated area as the area stripped for the access road (Area A) contained no evidence for the continuation of this feature. However, the stripped area could have coincided with a further gateway between S22 and S23, the eastern boundary of the settlement.

#### *Eastern boundary*

The eastern boundary of the enclosed settlement was delineated by S2 and S23. S2 comprised a linear ditch, [770/756], aligned NW-SE and in excess of 35 m long, 0.2-0.5 m wide and 0.11 m deep. At its southern extent it terminated c.5 m to the north-east of S1 corresponding to a widening in the ditch forming S1. The alignments of S2 and S3, part of the western boundary, suggest that they may have joined north of the edge of the excavation, perhaps forming a continuous northern boundary to the settlement. 5.5 m to the east and parallel to S2 was a further linear ditch, S23. This ditch [787] comprised two phases and was 114 m long, 1.1 m wide and 0.3 m deep, these dimensions varying along its length. A break in the ditch, 12.5 m from its northern end, was the result of its truncation by a plough furrow. An intervening north-facing corridor entrance was present between S2 and S23. The alignment of this boundary can be seen on aerial photographs continuing for c.260 m to the south of the excavated area (Fig. 3).

#### *Gateways*

Two gaps in the western boundary of the settlement have been interpreted as gateways, each serving a separate area of the enclosed settlement. In the 6 m gap between the southern terminal of S3 and the northern terminal of S11, an arrangement of postholes (S19) formed the remains of a complex gateway which may have controlled both human and animal traffic in and out of the settlement area to the east. No evidence for similar structures was found between the terminals of S11 and S22.

Gateway S19 comprised 10 postholes forming one, or possibly two, main constructional phases, but probably with other modifications through time. The main elements were two large postholes, [705] and [836/837] (Fig. 6d). [705], on the northern side, was 2.3 m long, 0.8 m wide and 0.32 m deep. It was oval in plan with straight sides and a flat base, and a single fill (701) which contained c.120, predominantly flat, fragments of limestone packed into its southern side. Fragments of burnt limestone were recorded towards the base of the packing along with fragments of charcoal but there appeared to be no evidence of this material being burnt *in situ*. The stone packing had retained some of its original structure but the majority of it had been disturbed, perhaps when the post was removed or fell.

The constructional elements of the corresponding posthole [836/837] to the south were much clearer and two phases were apparent. The earlier cut [837] measured 1.3 m north–south and 0.92 m east–west at its upper edge and 0.43 m deep with a 0.64 m diameter base. The sides of the posthole on the north and west were vertical, but more gradual slopes were observed elsewhere. The cut was slightly deeper at its northern end, and noticeably more circular on its northern side where the post pipe (818/819) was located. Within the fill (700) vertically placed stone packing was recorded. The horizontal stones beneath the area where the base of the post would have rested were heavily burnt, but not *in situ*. Posthole [837] was cut on its south side by posthole [836], also aligned north–south. Oval in plan, [836] measured 1.3 m north–south and 1.12 m east–west and was 0.34 m deep. The cut had gently sloping sides and a rounded base. Packing evident within the fill (835) and around the post pipe [830] comprised vertically set limestone and tightly packed sand and gravel. Posthole [836] may represent the installation of a secondary support for the gate structure or a replacement of the original post [837] to widen the entrance. The similarity in the structural information retrieved from this posthole sequence [836/837] and from [705] on the northern side of the gate, albeit disturbed, indicates that the two were of similar construction and may have been adapted for a similar reason, to give additional support to, or widen, the gate structure. The provision of at least two, and possibly four, main posts on either side of the entrance suggests that a double gate marked the entrance. A small posthole, [721] 0.4 m in diameter and 0.14 m in depth, was located centrally between the main posts. Its location suggests that the post was an integral part of the gate structure, perhaps as a central support for a horizontal cross beam or as a central post in a double gated structure.

To the west and outside the main gateway, features, [754], [772] and [767], were associated with the entrance to the settlement although it is unclear how they related to the main gate structure. Two further postholes, [773] and [774] on the southern side of the gateway adjacent to S11, did not appear to be part of the symmetrical layout of the gateway. They may have been part of an additional structure or a smaller gateway, to the south of the main gate, controlling access to the paddocks south of S1. To accommodate this entrance the gap between the terminal of S11 and posthole [836/837] was wider than the corresponding arrangement on the northern side of the gateway between the terminal of S3 and [705]. It is probable that the arrangement of post settings recorded represents both gates into the main settlement area and the provision of a stock control system, allowing the separation and selection of groups of animals for different purposes. Similar systems have been observed at Fengate, Peterborough (Pryor 1998) and Penycod, Llangynog (Murphy 1983).

#### *Penannular Ditches*

Each of the two areas comprising the enclosed settlement centred on a penannular ditch linked by a ditched corridor to a gateway. In Area B this is represented by S8, S9 and S1, with the adjoining structures S5, S6 and S7 to the north. Within Area C the definition is less clear but the central feature is represented by S27, S24, S25, S26 and possibly S29. These ditches had been recut on several occasions with minor changes

and additions being made but the main layout remained essentially the same during both the ceramic phases identified.

## *Area B*

### *Structures 8 and 9*

S8 was the earlier of two penannular ditches enclosed by S1. Its location and orientation suggest it may have been the original focus for the settlement in this area. The later ditch, S9, although slightly larger, was concentric with S8 and enclosed the same area with its entrance in the same location. S8 measured 10.5 m through its north–south axis and 9.5 m east–west. A gap 3.5 m wide on the south-western side has been interpreted as an entrance; as it aligns with the later corridor formed by S1. No evidence for structures was found within the enclosed area with the exception of a large unexcavated posthole on the southern side of the entrance.

The ditch which formed S8, [235]/[881] (Fig. 6b), was 0.65 m wide, 0.24–0.5 m deep and ‘U’-shaped in profile. It had been backfilled with clay, (280)/(878), which contained pockets of ash and charcoal and lenses of gravel towards the base. The pottery recovered placed the ditch in ceramic phase 1. It is possible that this material represents the remains of the floor surface from the later S9. No structural elements were identified within the ditch but this may be due to the very limited lengths that were excavated. Where the penannular ditch changed direction to form the entrance to the enclosure different alignments of the ditch were recorded on the western and eastern sides.

The continuation of the ditch forming the western side of the entrance turned to the south-west before terminating. This alignment was continued by a short length of ditch, [877] also dating to ceramic phase 1, which was 0.66 m wide, 0.10 m deep and ‘U’-shaped in profile. The fill, (875), comprised very compacted yellowish brown silty clay containing a small posthole, [874]. The clay has been interpreted as packing for a possible line of posts within the ditch, perhaps forming a palisade at the entrance to S8 on its northern side. Only a short length of this ditch survived but it may represent the earliest phase of the ditched corridor from S8 to gate S19. The eastern side of the entrance appeared to be no more than a continuation of the penannular ditch forming S8 to the south and west before being cut by both S9 and S1.

It is probable that S8 and the area it enclosed represent the site of a roundhouse. Due to the limited excavation no structural evidence was found but the finds assemblage suggests a domestic use for this area (Morris below). It is entirely possible that S8 may relate to the earliest group of Middle Iron-Age structures identified (S12, S15, S16, S17).

S9 comprised a penannular ditch [872], enclosing the area of S8, measuring 14 m north–south and 13.5 m east–west with a 5 m wide entrance in the same position as the entrance to S8. On the western side of the entrance, the ditch turned to run NE–SW forming the western side of a ditched corridor. On the eastern side the ditch was continuous forming the eastern side of the ditched corridor which was truncated by S1 c.7 m to the south.

An oblique section across the ditch on the eastern side of the entrance, [236] (Fig. 6b), recorded it as 0.34 m deep, 0.52 m wide and ‘U’-shaped in profile. On the western side of the entrance, the penannular length of the ditch [872] was 0.90 m wide and 0.30 m deep. A deeper channel was evident, 0.4m wide, against its outer edge formed by the clay fill (869) and small amounts of burnt debris were present. The profile suggests that it could have supported a row of posts packed with clay. However, where this changed direction to form the western side of the approach corridor it narrowed to 0.55 m wide and 0.36 m deep with no continuation of the possible post packing.

On the north-western side of S9 a small unexcavated pit was recorded. A similar, although larger, pit, [868], was positioned to the north of the western side of the entrance. It was rectangular in plan, 4 m long, 1.05 m wide and 0.38 m deep, and the slides sloped down at 45° to a flat base. The primary fill (867) contained very few finds which may have derived from S8 or S9. The second fill (848) contained almost entirely burnt waste, ash and 6.86 kg of pottery, but no whole vessels. There was no evidence to suggest that any of the material was burnt *in situ*, and therefore it is unlikely that this feature represents the remains of a kiln or oven in this location, however the material could represent the dumped remains of one. Fill (848) and those above it, (846) and (845), which probably originated from the dumping of domestic waste, were assigned to ceramic phase 1. It is unclear whether this feature related to the use of S9 or post dated it, as there was some indication that the final fills of this pit also filled the cut for S9, suggesting this structure had gone out of use by this time.

Given their similarity in plan it is probable that S9 represents a second phase of S8; additionally the line of the approach corridor and the position of the entrance appear to have remained consistent through both phases of the structure. S9 is considered to represent the position of a wall or enclosing ditch to a roundhouse, superseding and enlarging the earlier one, S8. It is not known whether the short surviving lengths of the ditched corridor associated with this early phase were originally more extensive.

### *Structure 1*

S1 was a penannular ditch enclosing the area of S8 and S9 and cutting the ditched corridors extending from these. At least one ditch phase of S1 was continuous with the ditch which formed a further penannular enclosure, S5 to the north. Radiating south-westwards from the main enclosure formed by S1 were two ditches forming a corridor or trackway from the penannular ditch to the northern gateway in the western boundary ditch. These parallel ditch alignments were spaced 4 m apart; the northern ditch measured c.25 m long and the southern c.35 m long.

The external diameter of the penannular length of S1 was 21.5 m across its north-south axis and 21 m through its east-west axis. Internally it measured 17 by 18 m. The width of the ditch varied considerably, some much wider areas suggesting the presence of multiple phases. Two sections across the ditch in its south-eastern quarter, [238] and [240] (Fig. 5d), recorded a single phase, 2.10 m wide, between 0.65 and 0.7 m deep, with sides sloping at 45° to a rounded base. Cut [238] contained three fills, (284), (283) and (282). Ditch [240] contained a single fill, (239). The ceramic phasing from these sections suggest this ditch was in use during both of the phases identified.

Where the northern side of S1 coincided with S5 a box section revealed a sequence of ditch recuts and realignments. The earliest ditch recorded, [888], formed the northern side of S1 and was 1.75 m wide. Its fill comprised gravel through which was cut the terminal of a later ditch [821], also S1, which was 1.8 m wide and in excess of 0.5 m deep. A ditch terminal in this position suggests that the northern and eastern sides of S1 may not always have been continuous in this location, and the earlier ditch [888] was backfilled to allow access to the paddock to the north from the area formerly enclosed by S1. Ditch terminus [821] was cut by ditch [851], which extended north and south to form the eastern sides of both S1 and S5. The ditch was up to 2 m wide at its upper surviving edge, 0.54 m deep and 'V'-shaped in profile. It contained five fills. The primary fill (884) contained significant amounts of charcoal, burnt limestone, pottery and animal bone, sealed by a layer (880) of slumped gravel. The fills above these, (879), (834) and (820), included quantities of domestic debris. The uppermost fills, (820) and (834), extended beyond the edges of cut [851] and also



formed the upper fills of the earlier ditch alignments, suggesting that slumping of the earlier fills left an uneven ground surface into which the later fills spread.

Across the northern side of the S1 approach corridor, four sections were excavated. These are described here from east to west. A section excavated at the junction of S1 and S9 established the presence of two ditch phases. The earlier ditch [247] formed the southern side of S1 and cut S9. It was 0.67 m deep and its base was 0.35 m wide. The fill (246) comprised sand and gravel which had collapsed from the sides of the ditch. Entirely removing the western side of [247] but on the same alignment was ditch [245]. This was 1.9 m wide and 0.55 m deep, with sides sloping at 45° to a wide 1.1 m flat base, and it contained two fills, silting (244) and (243). Immediately to the west of this section the ditch split into two lengths, rejoining 3.5 m to the south-west and forming an island in the natural gravels, probably as the result of different alignments during different phases.

The second and third sections excavated to the south-west both recorded a single phase. Cut [215] was 1.2m wide and 0.6 m deep with two fills, (226) and (227). Ditch [823] (Fig. 5c) was 1.2 m wide and 0.6 m deep and filled by a combination of silting and collapse of its sides (822).

The final section across the northern side of the ditch alignment revealed two phases of S1 adjacent to S19. The earlier cut, [761] (Fig. 5b), measured 1.08 m wide and 0.74 m deep and was filled by (760) and continued the alignment of [823] to the northeast. The second phase ditch, [759], was a discrete additional length of ditch, which cut but continued the line of the earlier ditch towards S19. Also aligned east–west, ditch [759] measured 8 m long, 0.98 m wide and 0.55 m deep. It was 'U'-shaped in profile and filled by (758), a combination of domestic debris and material eroded from the sides of the ditch. The stratigraphic relationships established here are reinforced by the ceramic phases, with the later ditch clearly placed within the second phase.

The southern side of the S1 ditched corridor varied in width along its length and four sections were excavated in which three constructional phases were identified. The sections are described from east to west. At the junction of S1 and S10, the earliest ditch alignment of S1, [824], measured 0.55 m wide and 0.33 m deep and was filled by (814). The line of this ditch was cut by S10 on its south-eastern edge indicating that the enclosure formed by S10 was set out later than S1. An additional length of ditch, [768], was cut to enhance the line of S1 after S10 had been formed, possibly to reinforce the boundary in this location. This addition measured 12 m long, 1 m wide and 0.36 m deep.

Three possible phases of S1 were recorded in the second excavated section to the south-west. Cut [217] recorded two ditch phases which may have been the continuation of ditches [824] and [768]. A section through an additional length of ditch to the south, [213], was considered to be an earlier alignment of the south-eastern ditch of S1. It measured 7 m long, 0.88 m wide and 0.51 m deep and was filled with collapsed gravel (212).

The final section through S1 was excavated at the junction of the main east–west alignment of S1 and a length of adjoining ditch [849] aligned north–south. The east–west cut, [843], measured 0.6 m wide and 0.3 m deep whilst [849] measured 0.89 m wide and 0.53 m deep. Fills (844) and (842), which comprised predominantly domestic waste, were common to both cuts. It is possible that the north–south spur was a subdivision within S10.

Across the line of the approach corridor formed by S1, were two structures, 13 and 14. S13 comprised a narrow gully, (833) aligned NW–SE, it was 4 m long, 0.4 m wide and 0.14 m deep and was cut at both ends by S1. S14 was similarly aligned across the corridor of S1, cut to the north by S8 and to the south by S1. The gully, [883], was 5.5 m long, 0.2 m wide and 0.2 m deep, and centrally placed along its

length was a posthole/pit (unexcavated) c.1 m in diameter. Features S13 and S14 may have been inserted to facilitate drainage across the entrance corridor of S1 or the erection of barriers across the approach to the enclosure at the end of S1. Despite being cut by the final phases of S1 it is possible that they were contemporary with earlier phases.

### *Structures 5, 6 and 7*

Adjoining the north-western side of S1 was a curving ditch S5 enclosing an area with an external diameter of 16.5 m and an internal diameter of 13 m. The southern end of the ditch terminated 3 m west of S1. Two phases of the ditch were recorded, the earlier being [265] (Fig. 6a). Only the north-eastern side of this survived and the fill (264) was probably the result of slumping of the sides of the ditch. The recut [263] was 'V'-shaped in profile, 2 m wide at its upper edge, and 1.25 m deep. The primary fill (268) was considered to be collapse from the sides of the cut after it was newly dug. The upper fills, (267) and (266), continued along the length of the ditch. The box section excavated at the junction of S5 and S1 recorded three ditch phases, the latest of which [821] formed both S1 and S5, indicating they were at least in part contemporary.

S6 comprised a sub-circular arrangement of 10 postholes and a short length of curvilinear gully [769], enclosed by the line of S5 and the north-western side of S1. The majority of the postholes were oval in plan and their dimensions ranged between 0.65 x 0.47 m and 1.6 x 0.93 m. The elongated shape of the postholes suggests that originally they may have been part of a continuous circular gully, which had been truncated with only the deepest portions of the gully remaining, presumably in the locations where posts were set. The depth of the postholes varied from just 0.01 to 0.30 m, the shallowest being little more than staining in the natural sands and gravels, perhaps caused by the rotting of the wooden posts. More intense staining was observed in postholes [797] and [769]. It is possible that rather than to support posts, the settings were used to level a wall plate upon which a wall could have been constructed. As such the posts would not have necessarily extended to any great depth. Two postholes, [749/723] and [799], had been recut, indicating more than one phase in at least parts of the structure. The later cut of [749], [723], showed signs of burning and may relate to the abandonment of the building.

To assess the size and nature of S6 the approximate centre of each posthole was determined and measurements were taken on this basis. The diameter of the structure was 4.05 m north–south and 4.3 m east–west. The northern two thirds of the structure formed a near perfect semi-circle, comprising 8 of the postholes, the average distance between them being 0.98 m. Postholes [764], [723] and [753] were aligned east–west, with an average distance between centres of 1.26 m and were separated from the semi circle to the north by gaps of 1.7 m to the west and 1.82 m to the east. It is possible that one or both gaps were entrances, although additional postholes could have been removed by truncation. Neither gap was opposite the entrance between the southern terminal of S5 and the north-western side of S1.

Three additional postholes were recorded but remained unexcavated. One was to the south-east of posthole [764] and the others were located to the south-east of the gap between postholes [753] and [799]. These may have formed an entrance or porch on the south-eastern side of the structure, but the function of this would rely on the ditches of S1 and S5 either being absent or backfilled in this location to allow access into the enclosure from this direction. The spatial relationship of S5 and S6 suggests that they were contemporary and represented a circular post-built structure inside a small enclosure.

The features inside S6 comprised four postholes (S7) representing a rectangular structure positioned to the east of its centre. The postholes were between 0.17 and 0.4 m in diameter and typically 0.17 m deep. No finds were recovered from their fills. The structure measured c.0.8 m north–south and 2.6 m east–west. S7 itself contained no internal features and it may have formed a supporting structure for the roof of S6.

The areas enclosed by penannular ditches S1 and S5 are interpreted as the sites of roundhouses formed by S8, S9 and S6 and the focus of the northern part of the settlement. The function of S1 was probably delineation and drainage, the curvilinear ditched corridor funnelling human and/or animal traffic from the gate (S19) in the west. No breaks in its line were observed, suggesting there was no movement of traffic north–south across its line. There was however some evidence to suggest that barriers (S13 and S14) could be erected across its line. It is likely that the ditched corridor was enhanced by both banks and hedges, as the narrowness of the ditches may not have been sufficient to prevent stock escaping (Pryor 1988).

#### *Paddocks/small enclosures*

To the north of the focus of the settlement in Area B the main enclosure formed by S2 and S3 was devoid of features with the exception of S4 which extended northwards beyond the excavated area. It comprised 4 lengths of curvilinear ditch, which may have formed a single circular structure with an internal diameter of c.11 m. No features were recorded within the area enclosed by this structure.

To the south, S10 formed a complex sub-rectangular enclosure adjoining the southern side of S1 with which it may have been contemporary. The eastern side of S10 was aligned north–south and was 29 m long and c.1.5 m wide. Half way along its length it widened to c.4 m, probably as a result of multiple ditch phases where two additional lengths of ditch joined the main boundary. The first extended to the south-west for c.10m forming a sub-division within the enclosure represented by S10; its line was continued to the south-west by a further short length of curvilinear ditch, [805]. The second extended northwards for c.15m creating a triangular enclosure to the east of S10 and the south of S1. At its south-eastern corner S10 turned through 90° to run east–west for c.30 m. At the south-western corner a number of ditch phases and other features were present. From here the ditch turned through 90° to run south–north for c.10 m to terminate c.1 m south of S1, with an intervening entrance adjacent to the gateway (S19).

Five sections were excavated across the S10 boundary ditch. The first was located on the eastern side of the enclosure where it cut S1. There the ditch [813] was 1.3 m wide and 0.6 m deep, its sides sloped at c.70° to a rounded base, and it was filled by (771). It cut an early phase of S1 but was cut by the second phase [768].

The second section, across the internal subdivision of the enclosure [805], was found to be 0.59 m wide and 0.55 m deep. Three fills were recorded, the earliest thought to be silting (815) in the base of the ditch; the later fills comprised domestic waste.

In a third section, on the southern part of the eastern side, the ditch [871] measured 1.22 m wide and 0.43 m deep. At the fourth section on the south-western corner, the cut [860] was 1.15 m wide and 0.37 m deep. The lower fill (859) comprised silt and the later fill (858) contained domestic waste. The fifth section was excavated adjacent to the terminal on the western side of the enclosure. It [829] measured 0.9 m wide and 0.52 m deep, with two fills (827) and (828). This feature was cut by S18 indicating a realignment of the entrance into the enclosure formerly delineated by [829].

A group of three postholes was recorded in the south-western corner of S10. One [857] was excavated and measured 1.10 x 0.50 x 0.39 m. Its eastern half was the deeper and contained vertically placed stone packing (856). The nature of the structure was not ascertained.

Cutting the western side of S10 were two short lengths of linear ditch (S18). The western segment [804] was 4.5 m long and aligned NW–SE. It was 0.57 m wide and 0.33 m deep and contained two fills, (811) and (803). The eastern segment [816] was 4.5 m long and aligned east-west. The cut was 0.86 m wide and 0.33 m deep and also had two fills, (810) and (806). The upper fill within each ditch contained large

quantities of pottery and animal bone. These ditches appear to have created a new alignment from gateway S19, redirecting access from the entrance between the terminal of S10 and the south ditch of S1 towards an area to the south and east. The western ditch segment cut the postholes [836/837] on the southern side of the gate (S19), suggesting S18 was a later modification to the settlement layout in this area.

The function of the enclosure S10 was not elucidated by the limited excavation. Due to its shape and its position away from the most likely areas of domestic occupation (S8/9 and S6/7), it may represent a group of enclosures for animals or working areas. It is unclear if some or all of the features within this enclosure were contemporary, and some (S12 and S16) certainly pre-dated it. There was no evidence to suggest that the enclosure represented by the S10 ditches was directly accessible from S1. The only evidence for a direct access was from gate S19 where a small gap was present between S10 and S1 but this appeared to have been later blocked by S18. The western side of S10 and S11 formed a passageway to the area to the south of S10 and possibly into Area C. As with the ditched corridor S1, it is possible that the ditches which formed S10 were enhanced by the use of banks, hedges or fences, as here also they appeared too slight to contain stock.

### *Area C*

The focus of activity within Area C was penannular ditch S27 with an associated ditched corridor (S24, 25, 26 and 35) which extended westwards towards a gap in the western settlement boundary between S11 and S22. The northern side of the ditched corridor comprised at least 4 phases. A second penannular ditch (S29) was located to the north of these central features.

### *Structure 27*

S27 comprised two lengths of curvilinear ditch forming a small sub-circular enclosure, with a diameter of 13.5 m (externally) and 11.5 m (internally). The gaps between the two lengths of ditch were 9 m wide on the western side and 1.5 m wide on the south-eastern and may be the result of later truncation. An unexcavated pit was located on the south-east side of S27. Sections across the structure recorded a ditch 0.7 m wide and 0.32 m deep. At the junction of S27 and S28 a centrally placed posthole [564] 0.7 x 0.4 m and 0.4 m deep was recorded. S27 and S28 were filled by the same material (565) and were considered to be contemporary. Within the area enclosed by S27 six postholes were recorded. They ranged in diameter from 0.16 to 0.72 m and in depth from 0.13 to 0.23 m. They were interpreted as the remains of a circular posthole structure, probably a roundhouse, within S27. Two of the posts, 537 and 538 may be the remains of an entrance leading to the corridor formed by S24 and S26.

### *Structures 24, 25, 26 and 35*

The northern side of the ditched corridor, as represented by S24 and S25, was c.25 m long and 1 m wide where S24 joined S27, expanding to 3 m wide at the western end where four phases were apparent. A section through S24 at its eastern end recorded a ditch [39] 1.7 m wide and 0.5 m deep with a single fill (38) and cut on its southern edge by S35. S25, the continuation of S24 to the north-west, comprised 4 phases [763, 778, 794 and 732] all aligned SE–NW. The earliest in the sequence, ditch [763], was 1 m wide and 0.38 m deep with a single fill (762). This was cut by ditch [778] which was 1.16 m wide and 0.25 m deep with two fills (777) and (776). Ditch [794], terminating within 1 m of the northern side of the entrance into Area C, measured 0.7 m wide and 0.6 m deep and contained two fills, (793) which was heavily burnt and (792). A further length of ditch, [732], may have been part of the sequence but could equally have been a continuation of S32. This ditch was 0.62 m wide, 0.12 m deep and filled by (731). Ditches [778] and [794]

produced dating evidence which assigns them to ceramic phase 2. This ditch sequence and S24 have been interpreted as successive phases of the northern side of the ditched corridor leading from S27 to the gateway.

Parallel to, and 7m to the south of, S24/S25 was S26, a linear ditch [30] 21.5 m long, 0.9 m wide and 0.63 m deep and containing four fills (26–9). The finds placed the ditch within ceramic phase 1. The primary fill (29) comprised gravel collapsed from the sides of the ditch; the others were considered to be the result of silting combined with collapse of the ditch sides. S26 formed the southern side of the ditched corridor leading from S27.

S35 comprised a curving ditch, c.22 m long and 0.75 m wide at its eastern end and c.1.5 m wide at its western end. A section through the eastern end recorded two phases, [36] and [37]. [36] (Fig 7c) was c.0.5 m wide and 0.6 m deep and it cut the southern side of S24. [37] was c.0.75 m wide and 0.53 m deep. S35 post-dated and possibly modified the former ditched corridor represented by S24/25 and S26 suggesting that traffic coming into the enclosure from the west was filtered eastwards towards S32.

### *Structure 29*

S29, to the north of S27 and the ditched corridor, was 8 m in diameter across its north–south axis. A gap of 6 m on its western side may represent the position of an entrance. The southern terminal of the ditch, [524], was 0.41 m wide and 0.14 m deep. The eastern side of this feature was located close to the northern terminal of S28 with a possible entrance, 1 m wide, between them. No evidence for internal features was found and there was no indication of the function of this structure.

### *Paddocks/small enclosures*

In Area C these were located to the north of the pennanular ditch (S27) and associated corridor (S24/25 and S26). S28 joined the north side of S27 and was a linear ditch, 19 m long and aligned N-S. At its northern end it curved to the west and then to the north, terminating adjacent to S29. The gap created in this location may represent an entrance to an area to the east of Areas B and C. Two sections were excavated through this feature. At its junction with S27, S28 was indistinguishable from the penannular ditch, suggesting that the features may have been contemporary. Here the cut [569] was 0.56 m wide and 0.55 m deep and had vertical sides and a flat base falling from north to south, perhaps implying that these ditches may have served as both drainage and boundaries. Cut [534] at the northern terminal was 0.31 m wide and 0.1 m deep. S28 was a continuation of S27 and may be the eastern side of a small paddock formed by structures 24, 27, 29 and 32. S33 may represent the remains of a structure or internal divisions within this area.

Adjoining the northern edge of S29 was a linear feature (S30) aligned SE–NW. It comprised two or possibly three lengths of ditch forming a right angle between S29 and S10. This structure was not excavated and its relationships with the adjacent features were unclear. A narrow entrance through the ditch provided access from east to west. Parallel to S30 and 11 m to the west was a short length of ditch (S31). It was 6 m long, 0.37 m wide and 0.04 m deep and possibly formed the western side of an enclosure or paddock together with structures 10, 29, 30 and 32.

S32 comprised a complex of linear features arranged predominantly SW–NE. The north side of the structure was investigated by one section across the southern of two parallel ditches. Here three phases of ditch were recorded. The earliest cut [592] was 0.9 m wide and 0.76 m deep and contained a single fill (608), a combination of silting of the feature and domestic waste. Cutting this was [609] which measured 0.6 m wide and c.0.36 m deep. The fill (610) was cut by a third phase of ditch [611] on the same alignment. It

measured 0.85 m wide, was 0.34 m deep and contained two fills, (612) which represented collapse from the sides of the ditch and (614). Another section through the same structure, [585] to the north-east, produced evidence of only a single ditch phase.

The eastern side of S32 was investigated by three sections, (north to south) [579] [583] and [544]. An entrance was located centrally to this length of ditch, but it was difficult to define where cut by a pit, S34. The entrance was c.1 m wide and elongated by a corridor defined by two parallel ditches extending to the west. These were c.4.5 m long and a section, [596], recorded the northern ditch as 0.48 m wide and 0.4 m deep and containing three fills, (595), (594) and (593).

Cut [579] was 0.6 m wide and 0.35 m deep with a single fill, (578). Cut [583] was 0.66 m wide and 0.17 m deep also with a single fill, (582). At its southern terminal the ditch, [544] (Fig. 8a), was 1.18 m wide and 1.6 m deep, with under-cut vertical upper edges, probably as a result of the collapse of the ditch sides, and a 'V'-shaped base. The primary fill, (558), comprised grey clay with up to 60% gravel. The three fills above, (557), (603) and (602), were similar and all are considered to be the result of collapse of the ditch sides. Overlying these gravel fills was a layer of compacted orange clay, (636). Above the clay was a mixture of clay and gravel, (556), which again appeared to be the result of collapse of the ditch sides. The ditch had been re-cut at this point, and [604] was 1.06 m wide and 0.78 m deep and 'V'-shaped in profile. The primary fill, (555), comprised almost entirely charcoal. Sealing this was (543), a mid orange brown clay silt. Ditch [544] was the deepest feature within the settlement area and despite being similar in depth to the well (S20) displayed no evidence of waterborne deposits. However this ditch terminal could have been used to collect water for use within the enclosure; clay fill (636) may have been a deliberate deposit to aid water retention.

The function of S32 was unclear but it could have been a paddock for stock. The north side may have formed part of an enclosure to its north, with S10, S30 and S31. To the south, its southern terminal appears to form an entrance adjacent to S24 or S35 allowing access from S32 to an area bounded by S28 to the east.

### *Pits*

No pits were present within Area B. One example (S34) was present within Area C. Cutting the line of S32 it, [551], was 1.54 m in diameter and 0.55 m in depth. Its eastern side was vertical whilst its western side sloped gradually at 45° to a flat base. It had two fills, (607) and (606). The pit's function was unclear but its position, in the entrance to S32 and blocking a possible entrance to S29, suggests that these earlier structures had gone out of use before it was dug.

### *Enclosed settlement - features to the west*

Two features, field boundary S21 and well S20, were recorded to the west of the enclosed settlement. S21, represented by two lengths of ditch, [734] and [738], and a row of possible postholes to the south, was located to the west of, and on the same alignment as, the southern half of S11. None of its features exceeded 0.2 m in depth and all were backfilled with a reddish brown silty clay. This discontinuous boundary continued the alignment of part of the western boundary of the settlement and may represent part of an adjacent field system.

S20, [704] (Fig. 7a), positioned 19 m to the west of gate S19 was a large pit measuring 6.6 m across its north-south axis, 2.8 m from east to west, and 1.97 m deep. It was oval in plan with a flattened southern side. Its western side sloped at 30° for 0.3 m and then vertically to the base. The eastern side sloped at 45° for 0.5 m and was then likewise vertical. The primary fill, (707), comprised a very soft, grey silty clay, with

frequent inclusions of charcoal and organic material. It was over 0.68 m deep, and included lenses of gravel, presumably collapsed from the sides. Pottery recovered from the fill placed the feature within ceramic phase 1. The central fill, (706), comprised a compacted light brown silty clay, which became stony with depth. Of this material 40% was animal bone, burnt limestone, charcoal and pottery, suggesting that the pit was used for the deposition of domestic refuse. The top fill, (703), comprised a loose mid brown clayey silt mixed with 10% gravel, probably the result of gradual silting over the slumped secondary fill (706).

Analysis of the primary fill indicates it was created by the build up of waterborne sediments, and this feature has therefore been interpreted as a well. The finds recovered from the primary fill did not suggest that any ritual significance can be associated with the feature, but its position may be significant. It was directly in front of gateway S19, so that all traffic would have passed by it. It would therefore have provided a convenient watering point for stock as it travelled from the settlement into potential grazing areas to the west, as well as a source for domestic water supplies.

#### *Area D (Fig. 4)*

Area D was located on the eastern side of the excavated area, separated from Areas B and C by boundary S2/23. The excavated evidence suggested that this area of activity was unenclosed, but the presence of the terminal of a large ditch (S45) to the south raises the possibility of an outer settlement boundary.

#### *Penannular ditches*

Area D contained 6 whole or part penannular ditches (S36, S37, S38, S39, S42 and S43), all with entrances facing east. The earliest phase of S36 may have pre-dated the settlement layout. As with Areas B and C the focus of the settlement appeared to be a penannular ditch, S37, with a ditched corridor formed by S40 and S42, which in this area was aligned west–east and extended beyond the edge of the excavation. However it is possible that earlier activity may have originally centred on S36 and/or S42. Aerial photographic evidence (Fig. 3) suggests that a trackway may have continued northwards, to the east of Area D.

S36 was a penannular ditch with an external diameter of 9.5 m across its north–south axis and appeared to be an early feature of the settlement layout in Area D. An entrance c.4 m wide was located on its eastern side. Excavation of the terminal on the entrance's southern side, [549], recorded a ditch 0.7 m wide and 0.25 m deep with a single fill, (548). A second section, [575] excavated on its north side, recorded the cut as 0.45 m wide and 0.25 m deep also with a single fill, (574). One metre to the east of the circular ditch, adjacent to its southern terminal, was a further length of ditch 8.5 m long and 0.7 m wide, which may have formed the southern side of a ditched corridor associated with this structure. The other side may have been removed by a later structure, S42. S36 produced little in the way of pottery or other finds and may indicate this area housed stock rather than being the site of domestic occupation.

S37 appeared to be the focus of activity in Area D. It comprised a small oval enclosure, 14.5 m north–south and 14 m east–west, with a 6 m wide entrance on its eastern side and was located at the western end of a ditched corridor, formed by S40 and S42. No internal features were identified within S37. Three sections were excavated across it. A box section at the southern extent of the structure investigated its relationship with S38 and recorded three ditch phases. The earliest, [581] (Fig. 8b), was an amorphous cut, of which only the northern vertical side remained; it was 0.4 m deep with a single fill, (580). This has been interpreted a possible early alignment of S37. Cutting (580) was the line of the ditch which formed the southern side of S37. The cut, [542], was 0.4 m wide and 0.35 m deep with a single fill, (541). A further cut, [540], was also recorded in this location and was considered to be the northern side of S38. The relationship of S37 with S38 could not be established in this location.

The second section was excavated to the west at the junction of S37 with S38. The cut, [589], was 0.5 m wide and 0.3 m deep with a single fill, (588). Here the line of S37 appeared to have been re-cut when S38 was created, the two ditches becoming indistinguishable and suggesting that the later phase of S37 was contemporary with S38. A third section was excavated at the junction of S37 and S40. Cut [90] was 0.9 m wide and 0.58 m deep and filled by three deposits, (87/88/89). S37 cut the northern edge of S40, suggesting that the northern side of the ditched corridor (S40) was earlier than S37 and that the enclosure to the north, delineated by S40 and S41, may have existed prior to the cutting of S37.

East of the oval enclosure, ditch S40 (north side) and S42 (south side) formed an approach corridor, similar to S1 in the western half of the settlement. S40 comprised a linear ditch 35 m long, aligned east–west and extending beyond the excavation area. Cut [92] was 0.74 m wide and 0.28 m deep with a single fill, (91). The inconsistent width of the structure along its length suggests that it was formed from a number of phases.

S42 was a penannular ditched enclosure, 13.9 m in diameter with a 5 m wide entrance on its eastern side. Two short lengths of ditch extended eastwards from the entrance to form a ditched corridor into the enclosure. The northern side was 5 m long and comprised two phases, the second of which also formed the southern side of the ditched approach leading to S37. The southern side was 3.5 m long and continued beyond the excavation area. Four sections were excavated through the ditch of the enclosure. The ditch that formed the northern side of the entrance comprised two phases. The earlier cut, [620], was parallel to the ditch on the southern side of the entrance and was 0.8 m wide and 0.6 m deep. The single fill, (619), was interpreted as gradual silting in the base of the ditch. The ditch was then recut and re-aligned so that the northern side of S42 also formed the southern side of the corridor formed by S37 and S40. The recut, [617], was 0.8 m wide and 0.48 m deep and contained a single fill, (616), thought to be the result of the silting of the ditch. A section across the southern side of the entrance ditch, [525], recorded a single phase 1 m wide and 0.36 m deep with a single fill, (522). To the south-west section [560] recorded the ditch cut as 0.6 m wide and 0.32 m deep also with a single fill, (559)

S42 was the largest enclosure recorded within Area D and no evidence for structures was recorded within it. Finds recovered from the fills of the enclosure may suggest a domestic function. S42 cut S36, S38, S43 and possibly S37 and represents a second phase of activity in this area. The earliest alignment of the entrance allowed access from the trackway leading to S37 this was later blocked by a second phase ditch which re-emphasised the line of the southern trackway ditch.

Located on the southern side of S37 and to the west of S42, were two lengths of curvilinear ditch interpreted as the remains of a single structure, S38. The southern component of this structure was c.12 m long and aligned SE–NW, cut by S42 and joining with S37. The northern component was in part indistinguishable from S37 but appeared to continue the radius of the southern ditch.

The southern length of ditch was examined in three sections. At the eastern terminal a large posthole, [653], 0.5 m in diameter and 0.9 m in depth was recorded below the base of the ditch cut, [591]. The ditch was 0.65 m wide, 0.95 m deep with a single fill (590). The second section was excavated 3 m west of the terminal. There, the ditch [600] was square in profile, 0.4 m deep and 0.6 m wide, and was filled by (601). The third section was excavated where S38 intersected with S37. There, the cut [587] was 0.9 m wide and 0.4 m deep and filled by (586). This ditch possibly continued north-westwards as a re-cut of S37. The northern component of S38 was poorly defined and a gap of 1 m between it and southern section may have formed a western entrance. The south-western terminal comprised a cut [563], 0.7 m wide and 0.45 m deep, which contained two fills containing domestic waste, (562) and (561). A second section was excavated



where it merged with S37, [540] (Fig. 8b). The two parts of S38 would have enclosed an area c.8.5 m in diameter and there was no evidence of internal features.

The function of S38 is unclear. The presence of a posthole in the southern ditch terminal may suggest the ditch held a structure such as a palisade. The high concentration of domestic waste may suggest a domestic use for this structure.

S39 was recorded 1 m to the south of S38. It was a penannular ditch enclosing an area 6.5 m in diameter, with an entrance 5 m wide on its eastern side, one section was excavated. There, the ditch [598] was 0.4 m wide and 0.18 m deep and contained a single fill, (597).

S43 was located on the southern side of S42 and comprised two lengths of curvilinear ditch. The longer ditch comprised the southern third of a penannular enclosure with a terminal at its eastern end and was 10.5 m long. Cut [547] was 0.4 m wide and 0.25 m deep and 'U'-shaped in profile. The shorter length of ditch was aligned NW–SE. Cut [553] was 1.6 m long, 0.7 m wide and 0.35 m deep. In the base were two postholes, [570] and [571]. All three cuts were filled by (552) within which two patches of purplish brown silt thought to represent the mineralisation of the posts were observed. The function of this feature and any relationship with S42 are uncertain.

#### *Paddocks/small enclosures*

To the north of the ditched corridor and defined on its western side by a large ditch, S41 was part of a larger enclosure. The western ditch was 25 m long, oriented SW–NE and extended beyond the excavation area. It joined the north-eastern side of S37, but the relationship was not investigated. Cut [85] was 1.4 m wide and 0.36 m deep with a single fill, (84). Within this area were several unexcavated features forming subdivisions or structures within the enclosure.

#### *Pits*

Three pits were recorded within Area D. One, S44, was partially excavated. It was an oval cut, [554] (Fig. 8c), measuring 3 m by 3.5 m and 0.65 m deep. The sides sloped at 45° to a flat base falling slightly to the west. The fill, (545), contained lenses of burnt material which comprised oxidised clay, charcoal and burnt limestone, possibly the waste from a hearth. The pit appeared to block a former entrance between S38 and S39 and it cut S38 and S42, perhaps indicating a change of use or realignment of the affected structures. To the north-west of S37 two unexcavated oval features, (646) and (650) measuring 4.0 x 2.5 m and 3.0 x 1.5 m, may be further evidence of wells (see S20).

## **THE FINDS**

### **POTTERY AND BRIQUETAGE by Elaine L. Morris and Andrew Crosby**

A total of 3,078 sherds (29,477 g) of prehistoric pottery and 50 pieces (218 g) of ceramic salt containers or briquetage was recovered. The collection consists of a small amount of Early-Middle Bronze-Age pottery and a sizeable assemblage of local and regional Middle Iron-Age pottery and Droitwich salt containers.

The collection is in good condition with a mean sherd weight of 9.5 g. Both surfaces are present on nearly all sherds and very few split sherd flakes were observed. The edges of most sherds are crisp and soot and burnt food deposits are evident on several, indicating that little depositional abrasion has occurred and that due care during finds processing was observed. Unfortunately, no total profiles were identified but

several vessels have more than 20% of the rim circumference present, thus enabling diameter measurements to be recorded and general vessel sizes to be reconstructed. The collection has a variety of both form and fabric types and is consistent in the almost total absence of vessel decoration.

### *Methodology*

The collection was examined using a binocular microscope at x 10 power and each sherd assigned to a fabric group based on the dominant inclusion present and to a fabric type based on the variation within that group. The pottery and briquetage were recorded by both number and weight (in grams) of sherds for each fabric type and by context. Ten rim forms, two base types and a handle fragment were defined and diameters were measured where appropriate. In addition, observed surface treatments, wall thicknesses, and evidence for use were recorded. The wall thickness ranges recorded were code 2 (< 7 mm), 3 (7 < 9 mm), 4 (9 < 11 mm), 5 (11 < 13 mm), 6 (13 < 15 mm), and 7 (15 < 17 mm).

### *Bronze-Age Pottery*

#### *Fabrics*

The Bronze-Age pottery was recovered from a single feature, pit/posthole [504] in Area A and is grog-tempered. The presence of three definable fabric types (Table 1) shows that sherds from at least three vessels were recovered. Grog-tempered pottery is a very common fabric group utilised in many areas from the Beaker period to the Middle Bronze Age and occasionally even to the Late Bronze Age (Morris 1991; 1994). However, Middle Bronze-Age Deverel-Rimbury urns recovered in Gloucestershire are limestone-tempered (Darvill 1987; O'Neil 1967). The Spratsgate vessels are therefore more likely to be earlier rather than later Bronze Age in date.

#### *Description of fabrics*

G1: a coarse fabric containing a common amount (20-25%) of ill-sorted, crushed, angular fragments of grog measuring up to 20 mm across but usually < 5 mm across; rare fragments of limestone present.

G2: a moderately coarse fabric containing an abundant amount (40%) of well-sorted, angular grog fragments measuring < 2 mm across.

G3: a fine fabric containing a sparse amount (5-7%) of well-sorted, angular grog measuring < 2 mm across.

#### *Forms*

Only one rim sherd was identified (Fig. 9, no.1). It is a simple, upright rim with flattened top edge from a very thick-walled (15 mm), handmade and oxidised vessel. An identical example, but made from a shell-tempered fabric, was recovered at Roughground Farm, Lechlade, and dated to the later Bronze Age (Hingley 1993, fig. 24, 23). The body sherds made from the other grog-tempered fabrics derive from thinner-walled vessels (6-9 mm thick).

### *Iron-Age Pottery*

#### *Fabrics*

Thirteen fabric types of Iron-Age pottery were defined (Table 1). These are described below using the visual charts and definitions of attributes provided by the current guidelines for the analysis of later prehistoric pottery (PCRG 1995, 25-32, app. 1-8). The pottery is derived from four different fabric groups: limestone-gritted or tempered, shell-gritted or tempered, sandy wares, and a metamorphic and igneous rock fabric. All of the fabrics are orange when oxidised, and the majority are irregularly fired with patches of orange, brown

and grey. Only fabrics L2 and R1 are consistently unoxidised on the exterior surfaces and therefore black in colour.

The limestone group consists of three types (L1, L3, L4) produced probably locally and one type (L2) made elsewhere. The local types contain various quantities of oolitic limestone fragments or sparse quantities of limestone rock. These inclusions are most likely to have derived from Jurassic deposits of Inferior Oolite or Great Oolite which are common in the immediate area (Kellaway and Welch 1948, 60-77). The non-local ware is a calcite-bearing fabric, which probably derives from the Bristol area (see below), and accounts for a small but significant proportion of the Iron-Age pottery assemblage, 3.4% by number of sherds. It is of considerable interest that, while the majority of the Iron-Age pottery found at Spratsgate Lane was made from locally-derived calcareous inclusions and clays (89.3%), a similar fabric was brought to the settlement from 30-50 km away. This suggests that the functional properties of this non-local fabric type were not the only reasons for obtaining it and we must rather look to socio-political reasons for the appearance of this ware at the site.

The shell-bearing pottery is the other major calcareous fabric group. It consists of three fabric types which contain different proportions of crushed fossil shell fragments and represents 48.5% of the Iron-Age pottery assemblage. All of the shelly fabrics are likely to have been made from local Jurassic deposits (Kellaway and Welch 1948, 45-79).

The sandy wares represent 6.8% of the Iron-Age pottery assemblage. At least one fabric (Q3) is probably a local ware as indicated by the presence of limestone fragments. Of the other four fabrics one (Q2) is probably derived from a narrow band of Greensand and Gault deposits located 20-25 km to the south-east in Wiltshire and Oxfordshire (Sherlock 1960, 17-20) (see below) and three (Q1, Q4, Q5) have no ready diagnostic inclusions for determining their sources but are considered to be local.

A very small number of sherds was identified as the well-known Group A Malvernian rock fabric described in detail by Peacock (1968, 415-21). Only 0.6% of the Iron-Age pottery was made from this fabric (R1) and it is highly likely that no more than two vessels were found within the area of excavation, a single sherd from an unburnished vessel and the base from a burnished jar.

In summary, at least three fabrics (L2, Q2 and R1) were made from non-local resources. Each derives from a different location, to the west, east and north respectively, and together they represent 5.2% of the Iron-Age pottery assemblage. The remainder was made from a variety of local inclusions and clays, primarily oolitic limestone and shelly limestone, or contains a range of quartz grains (5.0%) and is probably of local manufacture.

### *Description of fabrics*

#### *Limestone group*

- L1: a coarse fabric containing an ill-sorted moderate to common amount (10-25%) of ooliths, oolitic limestone, limestone and shell fragments usually measuring < 6 mm across; the ooliths are rounded but the remaining inclusions are usually angular in shape.
- L2: a moderately fine fabric containing a common to very common concentration (20-30%) of moderately well-sorted, angular to subangular fragments of fresh calcite and weathered or heated and recrystallised calcite measuring < 2 mm across with occasional pieces up to 3 mm.
- L3: a very coarse fabric containing an ill-sorted and unusually abundant amount (40% or more) of oolitic limestone, and disaggregated pieces of this material, measuring up to 6 mm across.
- L4: an infrequent fabric containing an ill-sorted but sparse amount (5-10%) of undiagnostic limestone and shelly limestone fragments measuring up to 4 mm across; there may be ooliths in the limestone fragments.

### *Shelly group*

- S1: a coarse fabric containing a common to abundant amount (25-40%) of crushed and complete fossil shells and shelly limestone fragments measuring < 8 mm with the majority of pieces of 6 mm or less across; only rarely are there also individual oolites visible in this fabric.
- S2: a coarse fabric containing a common to very common amount (20-30%) of shells measuring < 6 mm across which appear to be fossil shells but there are no pieces of shelly limestone visible using a binocular microscope at x 10 power.
- S3: not used.
- S4: a relatively fine fabric containing a very common to abundant amount of finely crushed shells and shelly limestone measuring < 1 mm across and a rare to sparse amount (2-3%) of much larger shell fragments measuring up to 4 mm across.

### *Sandy group*

- Q1: a moderately fine fabric containing an abundant amount (40-50%) of very fine to medium-sized, very well-sorted, subrounded quartz grains measuring < 0.5 mm across.
- Q2: a moderately coarse fabric containing a common to very common amount of subrounded to rounded, coarse to medium-sized quartz grains and glauconite pellets measuring < 1 mm or less across and a sparse amount (3-7%) of fossil shells and curiously dissolved or pitted smooth grey limestone pieces; this limestone appears to be very different from all the other types described in this report.
- Q3: an intermediate fabric containing a moderate amount (10-15%) of medium-sized, subrounded to rounded quartz grains measuring < 5 mm across and a rare to sparse amount (2-7%) of undiagnostic, rounded limestone fragments up to 1 mm across and some possible mica.
- Q4: an extremely fine silty fabric which contains a common to abundant amount of very fine, subangular to subrounded quartz grains measuring < 0.25 mm across and a rare amount of rounded quartz grains up to 1 mm across; superficially it appears that there is also mica in this fabric due to considerable glittering of the surfaces of sherds but this may simply be due to the fineness of the silt grains.
- Q5: an intermediate fabric containing a moderate amount (10%) of fine to medium-sized quartz grains measuring < 5 mm across and a sparse amount (3-5%) elongated voids which measure < 10 mm long; it is uncertain whether these voids which represent burnt-out organic matter are naturally occurring in the clay matrix or added temper due to their infrequency; it is likely that only one vessel made from this fabric was recovered.

### *Group A Malvernian rock fabric*

- R1: this fabric is recognised by the presence of a moderate to common amount (10-25%) of subangular fragments of Pre-Cambrian igneous and metamorphic rock from the Malvern Hills of Worcestershire located about 50 km to the north-west of the site (Peacock 1968, 414-21).

### *A note on the petrology of two Iron-Age sherds by David F. Williams*

#### *Fabric Q2*

Thin-sectioning and study under the petrological microscope show moderately frequent fragments of fossiliferous shell scattered throughout the fabric, together with some disaggregated pellets of well-rounded glauconite, oxidized light brown to reddish-brown in colour. Also present are subangular quartz grains, normally below 0.40 mm in size, and some iron oxide.

Glauconite is especially characteristic of Cretaceous Greensands, is found to a lesser extent in associated deposits of Chalk marl and Chloritic marl and occurs occasionally in certain Eocene formations. It has proved to be a distinctive feature of some prehistoric pottery fabrics, in particular certain Iron-Age wares of the Wessex region (for the Danebury material see Cunliffe 1984, fig. 6.15 and 16, although a single source for this fabric from other sites has yet to be demonstrated). The fabric of the Spratsgate Lane sherd differs somewhat from the glauconitic Iron-Age pottery from Wessex studied by the writer in recent years. On the present evidence, the relatively high shell content in the Spratsgate Lane sherd stands out as being slightly unusual, although occasional pieces of shell and/or limestone can sometimes be found in this type of fabric. There is, however, some variability in this general group and an origin in Wessex, perhaps the north-west area where the Upper Greensand borders on the Jurassic, appears quite possible for the Spratsgate Lane sherd.

### *Fabric L5*

Thin-sectioning shows frequent twinned angular fragments of calcite of variable size, scattered throughout the clay matrix. Also present are a few small grains of quartz and a little iron oxide. The comparatively fresh condition, angularity and large size of many of the pieces of calcite suggest that this may have been deliberately crushed and added to the clay by the potter as a form of temper. A comparison with thin-sections of Iron-Age pottery held in the Department of Archaeology, University of Southampton, shows that the fabric appears similar to Peacock's Glastonbury ware Group 3 (calcite), with the Mendip Limestone suggested as source material (1969).

### *Forms, decoration and dating*

Amongst the Iron-Age pottery seven diagnostic rim types from jars, one from a bowl and two from either jars or bowls were defined. There are also two varieties of flat bases and a few small fragments from a single handle.

The rather simple upright or slightly everted rims from sloping shoulder jars, bevelled rim and plain rim ovoid jars, barrel-shaped jars with flared rims, proto-beaded rim jars and hemispherical bowls are typical examples of Middle Iron-Age vessels which date from the fourth to first centuries B.C. Similar examples have been recovered from Groundwell Farm (Gingell 1982, figs. 13-15), north of Swindon in Wiltshire, Guiting Power (Saville 1979, fig. 9) and Uley Bury (Saville and Ellison 1983, figs. 9-10) in Gloucestershire, Ashville Trading Estate at Abingdon (DeRoche 1978, figs. 34, and 44-49) and Watkins Farm at Northmoor (Allen 1990, figs. 21-25) in Oxfordshire. At Blaise Castle Hill outside Bristol examples of handled vessels were recovered (ApSimon 1959, fig. 37, 8 and 18) and at least one was made from a calcite-gritted fabric similar to that identified for the Spratsgate Lane handle. The calcite fabric rim type R6 is extremely similar to several other Blaise Castle vessels (*ibid.* 10, 22, 24-5).

Only one vessel was decorated, with fingernail impressions on the outside edge of an R9 rim. The type and position of this decoration, which is more common in the Early Iron Age, the overall rarity of decoration in the assemblage (less than 1%), and the single example of a later Iron-Age proto-beaded rim jar allow the dating of this assemblage to span comfortably the full Middle Iron-Age period, which would not be unexpected due to the complexity of stratigraphical phasing found at the settlement.

Table 2 presents the number of vessels in each form type by fabric. The two most common general forms are the different ovoid profile jars (R2, R4) and the simple barrel-shaped jars (R1, R7, R8). The very large ovoid jars with slightly more complex rims are quite common. There is only one example of the hemispherical bowl (R3) but other bowls can be found amongst the type R5 vessels. There are only single examples of types R6 and R10 because these occurred solely in the non-local, and therefore infrequent, fabrics (L2 and Q2 respectively). It is more common to find examples of ovoid vessels in the shelly fabric group (S1-S3), and more common to find barrel-shaped jars with upright or flat-topped rims made from oolitic fabrics (L1, L3). The largest vessels (R9) are made from both of the dominant local calcareous fabric groups.

### *Description of rims*

R1: upright rim on necked, sloping shoulder profile jar; the rim may be flat topped or slightly rounded (Fig. 9, nos. 2-3).

R2: ovoid profile jar with bevelled edge to the incurving rim (Fig. 9, nos. 4-5).

R3: hemispherical profile bowl with a flat-topped, thickened rim (Fig. 9, no. 6).

R4: simple ovoid jar with rounded incurving rims (Fig. 9, nos. 7-8).

R5: slightly everted, short rim from either a jar or bowl; the jars usually have a sloping shoulder profile when present (Fig. 10, nos. 9-10).

R6: sharply everted or flared, short rim from a sloping shoulder jar (Fig. 10, no. 11).

R7: barrel-shaped profile, necked jar with flat-topped and slightly everted or pulled-out rim (Fig. 10, nos. 12-13).

R8: barrel-shaped profile, necked jar with a short, upright, flat-topped rim (Fig. 10, nos. 14-15).

R9: ovoid profile jar with a bevelled edge and flaring rim; the flaring effect can be towards the interior or exterior of the vessel; occasionally the exterior of the vessel has a manufacturing indentation which appears to create a neck zone (Fig 11, nos. 16-17).

R10: proto-beaded rim, barrel-profile jar (Fig 11, no. 18).

R99: indeterminate rim form.

#### *Description of bases*

B1: simple flat base.

B2: flat base with spur to exterior as a result of manufacture.

B99: indeterminate base form.

#### *Description of handle*

H1: applied handle fragment with vessel wall attached.

#### *Surface treatment*

Only one type of surface treatment burnishing was observed, and it is not common in the assemblage (1% of all sherds). Burnishing, a technique known to improve water retention, enhance heat transfer and provide a polished surface appearance similar to metal, occurred most frequently on the exterior of vessels, but was also applied on both the exterior and interior surfaces of some sherds. Exterior burnishing was only found on jar forms and interior with exterior burnishing on the few examples of bowls. Burnishing is most common on vessels in non-local fabrics L2 and R1 and in sandy fabrics. It is rare on vessels in local calcareous fabrics (Table 3).

#### *Vessel sizes and use evidence*

Although there are no examples of total profiles in the assemblage, it is possible to compare the range of vessel sizes by rim diameter to give some indication of the assemblage variation. Table 4 presents the number of examples for each rim type by fabric. The vessels recorded are those for which at least 5% of the diameter was present. There are many more vessels in the small (100-200 mm: 42 examples) and medium (200-300 mm: 22) diameter ranges than in the very large (300-400 mm: 11). Rim types R1, R3, R5, R6 and R10 only occur in the small and medium ranges, type R9 only occurs as large vessels. The assemblage is bimodal with peaks of frequency in vessel rim diameter at 160 mm and 360 mm. The general divisions of small, medium and large diameter sizes are likely to represent an individual's vessels which are easy to pick up, group vessels which may have rested on or beside the hearth, and large family vessels or storage jars which probably remained stationary due to their unwieldy size.

If this information is compared to the evidence of use (Table 5), the functions, which these vessels performed, can be suggested. Cooking pots can be identified by the presence of soot on the exterior surface and burnt deposits on the interior. Calcareous fabric vessels holding acidic materials such as milk can be identified by pitting on the interior clay surface which leaves holes where the inclusions once were. Abrasion on the interior demonstrates that something was scraped out of the vessel or that the vessel required cleaning (Skibo 1992). Only one big vessel had soot on the exterior but three held acidic materials and were scraped on the interior. It is interesting to see that both small and medium-sized vessels were used as cooking pots and it is important to note that the fineware bowl (Fig. 9, no. 6) displays no evidence of the use that would be expected of a serving vessel.

Table 6 correlates the evidence of use to fabric types. It is apparent that the local calcareous fabrics (L1, L3, S1, S4) were particularly useful as multi-purpose fabric recipes since all visible types of use occurred on vessels made from them. The high frequency of pitting found on the interior of the non-local fabric L2

suggests that these vessels may have been traded for their contents or that they were particularly suited as containers for holding acidic liquids. This pattern is very similar to the frequency of burnishing on L2 vessels (Table 3), another characteristic of liquid containers.

#### *Droitwich salt containers*

A small quantity of Droitwich salt containers, or briquetage vessels, was identified (Morris 1985, 338-52). These vessels were used to dry and transport salt to settlements of all types in the region, from the Late Bronze Age to the Late Iron Age. Both major fabric types were present in the ceramic assemblage with the organic tempered fabric being four times more common than the sandy (Table 1). The presence of the two types and the ratio of fabrics suggest that Droitwich salt was used at this site from the end of the Early Iron Age to the Late Iron Age, a period similar to that suggested by the pottery forms and decoration. The ratio of salt container sherds to pottery sherds is 1:100, as might be expected for an assemblage found at a settlement site located 50 km to the south-east of the brine springs in Worcestershire. It is possible that Droitwich salt was being exchanged along the same routes as those of Group A Malvernian rock fabric vessels (c. 1% of the pottery assemblage), also from Worcestershire.

#### *Ceramic Phasing and Spatial Distribution*

The pottery data was examined to determine whether there was any variation present in each deposit or feature cut. By differentiating between those features which contained non-local pottery fabrics and Droitwich briquetage and those which did not, it was determined that there are two ceramic phases. Ceramic phase 1 consists solely of local fabric pottery and ceramic phase 2 consists of from 2% to 46% non-local pottery. Droitwich briquetage is present in both phases. This information was then compared to the stratigraphical relationships recorded during the excavation and found to be largely consistent.

In order to examine the contents of each deposit fairly, it is necessary to establish a minimum number of sherds below which pottery groups from features are considered too small to be representative of activity occurring during a phase at the settlement. This minimum standard is currently set at 25 sherds (or 250 g) per deposit. Amongst such groups of material, there is usually a number of individual vessels present from which fabric data can be compared. For this assemblage the presence of non-local pottery in a deposit places a feature cut into ceramic phase 2, whether or not there was the minimum number of sherds present. If the minimum was not present and only local fabrics were present, then the deposit would remain unphased for this exercise. Thus for the Spratsgate Lane Iron-Age pottery 40 deposits are available for comparison and 29 remain unphased and open to an interpretation based solely on a stratigraphical relationship if present (Tables 7-10). There may be scope for refining the ceramic phasing if the frequency of non-local fabrics in a deposit can be used to sub-divide ceramic phase 2 or if the presence or absence of Droitwich briquetage can be used to sub-divide ceramic phase 1. It is important to note that if a feature is assigned to a ceramic phase, it belongs to that phase or to subsequent phase(s). Ceramic phase 1 is thus an indicator as well as a *terminus post quem*.

#### *Area A*

One ditch, [521] contained Iron-Age pottery and can be assigned to ceramic phase 2 (Table 7). Numerous sherds were recovered from the feature and 2% were non-local in origin; all the vessels were in the small-size range. Burnt food was present on one sherd.

## *Area B*

The southern terminal of cut [862] of the western boundary ditch S3, is unphased with only 13 sherds recovered. They included two ovoid cooking jars (with 120 and 180 mm diameters) and a barrel-shaped jar (160 mm), all made from local fabrics. Ditch cut [271] in S3 contained no pottery.

The main enclosure complex contained eleven sections that can be dated to ceramic phase 1. The majority produced abundant quantities of pottery. The earliest feature stratigraphically is the pair of ditch cuttings [839/841] in S12. They contained only local pottery, a cooking pot with internal pitting and very thick walls (13-14 mm) and a very large ovoid jar (360 mm).

Curvilinear ditch cutting [881] in S8 is likely to be another of the earliest deposits in this area. It contained a small, upright rim jar and a single cook pot with internal pitting; all sherds were unburnished. Ditch cuttings [236] and [872] in S9 are from the second stratigraphical phase of this curvilinear structure; they produced several small vessels (120-180 mm diameters), and unburnished sherds from two cooking vessels. At 19.5 g, the mean sherd weight from [872] is remarkably heavy compared to the other ceramic phase 1 groups in this area. Pit [868] in S9 contained a large assemblage of pottery including a variety of vessels with rims in the medium to large category (from 220 to 360 mm; Fig. 11, no. 16). It had the unique, very large R7 vessel (Fig. 10, no. 13) which is scraped on the interior and sooted on the exterior (Table 5), the only decorated vessel (Fig. 11, no. 19), several other cooking pots and one burnished vessel. The mean sherd weight of this deposit, 13.1 g, sets it, along with that from cut [872], apart from all other deposits of this phase in the area; it is nearly double the next largest group while that from [872] is about two and half times larger. This suggests that these deposits represent material used nearby, within the immediate curvilinear enclosure zone and there is little doubt that this complex represents a domestic dwelling.

Cuttings [219] in S16 and [761] and [843] in S1 belong to the ditches which lead out from the curvilinear complex discussed above and are likely to have been contemporary with it. Their deposits contain only local fabric pottery indicating a ceramic phase 1 date. None of the sherds is burnished and together the deposits have 13 cooking vessels, one pitted. The measurable vessels are consistently small (140-180 mm). Two cuttings contain briquetage. This range demonstrates the similarity of the pottery from the curvilinear ditches and the antennae ditches, all belong to ceramic phase 1.

In contrast, cutting [238] in S1 is likely to be a later development in the curvilinear complex. It has sherds from a Group A Malvernian fabric vessel and from a small, burnished R6 calcite fabric vessel (Fig. 10, no. 11) which together date this deposit to ceramic phase 2 (Table 8). Another jar is pitted internally. Ditch cutting [240] in S1 is ceramic phase 1 or later in date and contains unburnished sherds from a small ovoid jar (160 mm) and four very small organic-tempered fragments of Droitwich briquetage. Cutting [813] in S10 could be contemporary with cutting [238], it has several sherds of the non-local glauconite bearing fabric (Q2). There is a single, medium-sized, burnished R1 jar (220 mm) and a couple of thick-walled sherds in this deposit but no evidence of use on any of the sherds. Ditch cutting [759] in S1 is also likely to belong to ceramic phase 2 as it contained sherds of Q2 and of non-local calcite fabric vessels.

## *Structure 1/Structure 5*

A very large collection of unstratified pottery was recovered from the area of ditch cutting [851]. If this group is examined together, the deposit belongs to ceramic phase 2 (Table 8). At least seventeen vessels with rims were present including the unique example of an R10 jar made from the non-local Q2 fabric (Fig. 11, no. 18), an R1 upright rim jar (Fig. 9, no. 3), an R2 ovoid (Fig. 9, no. 5) and the handled jar made from the non-local calcite fabric.



### *Structures 5 and 6*

Three features contained enough pottery for phasing purposes. Ditch [265] in S5, stratigraphically earlier than ditch [263] also in S5, is dated to ceramic phase 1. It contained a small R8 vessel (120/140 mm) (Fig. 10, no. 14), some sherds of which were also redeposited in ditch cutting [263] as evidenced by cross-context joins. Ditch [256] had other unburnished sherds, including a single with abraded interior. Ditch [263], on the other hand, contained one burnished calcite fabric vessel, a burnished, sandy ware bowl sherd, three cooking pot vessels and a fourth with internal pitting; it can be assigned to ceramic phase 2 (Table 8).

Pit/posthole [723] in S6 dated to ceramic phase 2 (Table 8): only four sherds were recovered from it but one of them is a burnished, R1 calcite fabric, medium-sized jar (220 mm diameter). The pit, which also contained a fragment of an ovoid rim jar, was stratigraphically later than pit [749] which contained no pottery.

### *South of Structure 1*

Several ditched features east of S19 produced a remarkable amount of pottery. The stratigraphical relationship of ditch cutting [826] in S18 to the earlier [829] in S10 is confirmed by the ceramic phasing data. The pottery from [829] is all locally made and has two R7 vessels, one small (160 mm) cooking pot and one very large (360 mm) probable storage jar. In addition, there are no burnished sherds but a sherd from one other cooking pot was recovered. The pottery from [826] contains four sherds from a burnished, calcite fabric cooking pot which was pitted internally, as well as sherds from several local fabric vessels.

The parallel ditches represented by cuttings [816] in S18 and [860] in S10 are both dated to ceramic phase 2. Cutting [860] was rich with pottery with about 6% coming from non-local fabric vessels. There are at least five different vessels represented, one burnished and pitted R1 (<5% of the rim present), two R2 (200 and 220 mm), an R5 (140 mm) and an R9 (320 mm). Three burnished jars and one burnished sandy ware bowl were identified but evidence of use is limited to a single pitted vessel and one cook pot. From the surface of ditch cutting [816] eleven sherds of non-local fabric vessels were recovered. They included a small R2 ovoid (190 mm) cooking pot. Another thick-walled vessel (15-16 mm) was pitted internally and an ovoid rim fragment from a local fabric vessel appears to have been sooted.

To the east of these two features is a short stretch of ditch represented by cutting [805] in S10. It, too, was rich with pottery and had about 7% non-local fabric vessels making it likely to have been contemporary with [816] and [860]. The important difference between these features is the extremely large mean sherd weight (28.4 g) for the sherds from [805]. It is over four times more than the pottery from [816] and nearly six times more than [860]. This contrast suggests that the deposition of pottery, and any other artefacts, may have been purposeful rather than casual infilling. One vessel in [805] is in non-local fabric (Q2) and is represented only by body sherds. The majority of sherds from this cutting, however, derive from a single large R9 ovoid jar (Fig 11, no. 17) with a rim diameter of 360 mm and a base diameter of 160 mm. Nearly 100 sherds were recovered from the vessel. If the whole feature had been excavated it might have been possible to determine how the vessel had been deposited in this feature – either complete or in large fragments *in situ* for ritual purposes or comminuted prior to deposition, mixed with other domestic waste within a midden and then deposited in this feature.

### *Structure 19*

Excavation of five postholes and post pipes, [705], [721], [818], [836] and [837], in S19 produced only seven local pottery sherds altogether. These features and the northern gateway therefore cannot be phased by the pottery alone (Table 8).

### *Structure 20*

The pottery recovered from well [704], the single large feature S20 can be dated to ceramic phase 1 (Table 8). There are several sherds from this feature but the mean sherd weight is only 3.7 g, well below the assemblage average. There are only two fabric types (S1, L1) in this deposit. Burnishing on the exterior of the two ovoid jars present suggests they were used to carry water. The feature may also have been used as a general rubbish receptacle at some time for sherds from four cook pots are also present.

From context (706), the upper fill of the well, nine sherds of fabric type S1 (pottery record number 2318/9) were selected to provide a Radiocarbon date from the carbonised residues adhering to the pottery. The sample was processed and measured by Accelerator Mass Spectrometry at the Oxford Radiocarbon Accelerator Unit, in the research laboratory for Archaeology and the History of Art at Oxford University. The results confirmed that the sherd was of Middle Iron-Age date, 2207±29 BP with a calibrated date range (95% confidence) of 390-170 cal BC.

### *Area C*

From Trenches 2, 3 and 4, only ditch cut [30] in S26 produced enough material for assignment to a ceramic phase, phase 1 (Table 7). In addition to Droitwich briquetage the cut contained one small vessel and five sherds from four cook pots and a container of acidic material. Ditches [36/37] in S35 also produced sherds from a cooking vessel but these features are unphased despite the presence of briquetage. It is tempting to suggest that this area of the site, located just outside a possible roundhouse (S27) in which no pottery was recovered, had been used to cook food or at least to discard broken cooking vessels and salt containers. Two other features in this area of enclosures can be assigned to ceramic phase 1. They are gully [583] and ditch cut [585], both in S32, which yielded three cooking pots among medium-size vessels (200-260 mm).

Pit [551] (S34) cut through S32. This sequence is indicated by the presence in the feature of non-local pottery which includes a burnished vessel and also a cook pot and an R1 jar with abrasion and pitting on the interior. Typical domestic activity apparently took place nearby. Other features which belong to ceramic phase 2 (Table 7), include the pair of ditches [794] and [778] in S25 and the ditch terminal [544] in S32. The ditches contain a variety of both small and medium-sized jars, including two with pitted interiors, one with burnt food residue, and three with burnishing, as well as a tiny sherd of briquetage. Excavation of the terminal revealed a large sherd of briquetage and several sherds from a cooking pot.

The small cuttings from six features contained too few sherds for ceramic phasing. These include posthole [564] in S27, ditch [592] in S32 and ditch [763] in S25, all of which contained sherds of briquetage. Ditch [778] in S25 parallel to [763] also contained salt pot sherds, making the enclosure complex on this part of the site particularly rich with this distinctive material. It may well be that in Area C there is considerable continuity in the use of salt since the briquetage has been found in both ceramic phases 1 and 2 features.

### *Area D*

On the east side of the excavated area Trench 10 cut through ditches [85] in S41 and [90/92] in S37 and S40. The latter contained too few sherds for phasing but ditch [85] belongs to ceramic phase 1 or later (Table 7). The pottery consists of at least one large, thick-walled ovoid vessel (type R2) with interior pitting, which must have been a storage jar, and two thinner-walled vessels.

Ditches [560] in S42, [587] in S38, [589] in S37 and [600] in S38 contain an abundance of sherds and belong to ceramic phase 1 (Table 7). Numerous vessels are represented but none of them is burnished. A few vessels are thick-walled but none has evidence of any kind of use. The measurable rims are generally small (130-200 mm).

Ditches [540] and [563] in S38, [525] in S42 and [620] in S42 contain fewer sherds and belong to ceramic phase 2. Ditch [540] has Droitwich briquetage and one very large jar (Fig. 10, no. 15) with abrasion or scraping around the upper interior surface. Ditch [525] contains small diameter vessels (100-150 mm) and two burnished vessels, one a Group A Malvernian rock fabric jar and the other a sandy fabric bowl.

### *Discussion*

Analysis of the Iron-Age pottery assemblage recovered at Spratsgate Lane indicates that during ceramic phase 1 the inhabitants were using pottery vessels made from local resources only and that during the ceramic phase 2 a significant proportion of the pottery utilised had been brought some distance to the site. This non-local pottery was much finer in manufacture, often being burnished on the exterior, and originated from sources in three different directions – to the north, west and east. It confirms that Spratsgate Lane was at a crossroad or major junction of exchange routes in the region.

All major parts of the site (Areas B, C and D) used non-local pottery during ceramic phase 2. This suggests that no group resident in these three *foci* of settlement was excluded from the use of non-local material.

The trade in ceramic vessels started in ceramic phase 1 with the transportation of Droitwich salt in briquetage vessels to Spratsgate Lane. Not many sherds were recovered but several vessels can be identified. The presence of these salt packs prior to the trade in pottery vessels is an exciting new development in our understanding of the significance of the Droitwich salt trade spearheading intra-tribal exchange during the Middle Iron Age (Cunliffe 1991, figs. 4.6 and 8.1-8.2, 17.21; Morris 1985, fig. 6). During the latter half of the Iron Age Droitwich salt packs were exchanged as far south-east as Watkins Farm in Oxfordshire (Allen 1990, 52-3) and Groundwell Farm in Wiltshire (Morris 1985, table 1).

The variety of pottery vessel types and the evidence for the use of these vessels, as well as the absence of pottery in certain areas, can provide some idea of the activities which might have occurred in different parts of the excavated area. The sherds from the salt packs also provides clues to what might have been happening within the different enclosures.

In Area D, for example, there are only two sherds of briquetage compared to 461 sherds of pottery overall (Table 9). From the five feature cuts assigned to ceramic phase 1 only one cooking pot was recovered, from [600] in S38. For the four features assigned to ceramic phase 2 a single cooking pot has been positively identified and there are sherds of briquetage and at least one very large vessel (360 mm) amongst an array of small-sized jars and bowls.

In Area C, S27, a series of postholes surrounded by a curvilinear ditch contained no pottery. However, the area immediately to the west of it produced typical cooking and other food processing ceramics of both ceramic phases. The range of ceramics recovered from the area to the north-east of this structure indicates a similar picture. More salt was used in the two places during both phases of activity than anywhere else on site; ten times more was likely to have been consumed in these places compared to Area D (Table 9).

In the main enclosure complex (S1, S8 and S9), pottery in both phases recovered from the curvilinear ditches indicates a consistent domestic activity throughout the occupation of this area. Large quantities of pottery were deposited at all times. A variety of vessel sizes and an abundance of usewear evidence of all kinds strongly suggest that this structure was used as a typical household focus. The quantity of pottery would need to be compared to the amount of soil removed from the features in order to determine

whether this simply reflects greater deposition of domestic refuse. This area produced half as much salt pack material as the south-west enclosure complex.

In contrast within Area B the circular structure (S5, S6 and S7) to the north of the main enclosure produced no sherds of briquetage (Table 9) but it did yield the smallest group of pottery under study. Therefore the absence of briquetage may be due simply to this factor. One section was cut across this curvilinear ditch and all the postholes were emptied but only 142 sherds were recovered despite both ceramic phases being deduced in support of the stratigraphical evidence. This suggests that the structure was likely to have been an ancillary building, as indicated by its position in relation to the larger main enclosure, or that it was some kind of dormitory and the main enclosure complex a place for food processing.

No briquetage was among the sizeable collection of pottery recovered from the features south of S19 which includes the well-preserved collection in ditch cut [805]. This implies that salting of food or the preserving of hides was not likely to have occurred in this area.

Only rarely are there ready opportunities to examine the nature of a Middle Iron-Age settlement in this region by using the ceramic evidence. The quantity of material recovered provided that opportunity; it appears that with 3,000 sherds it is possible to begin to investigate settlement variation and area functions. Most collections provide chronological indicators but Spratsgate Lane is special for providing a glimpse into everyday life in lowland Iron-Age Gloucestershire.

*Catalogue of illustrated sherds* (Figs. 9, 10 and 11)

F: Fabric  
TC: Thickness Code  
PRN: Pottery Record Number

**Bronze Age**

- 1 Urn rim, upright in form, < 5% of rim present; F G1; TC 6; PRN 2131. Area A, context 501, pit/posthole 504.

**Iron Age**

- 2 R1 jar, 5% of 220 mm in diameter; F S4; TC 2; burnished exterior; PRN 2414. S10, context 801, ditch cut 813.
- 3 R1 jar, 10% of 180 mm; F S1; TC 3; sooted on exterior; PRN 2506. S1/5, context 834, unstratified finds group 851.
- 4 R2 jar, 5% of 240 mm; F S1; TC 4; PRN 2277. S32, context 595, ditch cut 596.
- 5 R2 jar, 11% of 340 mm; F S1; TC 4; PRN 2728. S1/5, context 884, unstratified finds group 851.
- 6 R3 bowl, 5% of 200 mm; F Q4; TC 2, burnished on both surfaces; PRN 2049. S11, context 202, ditch 203.
- 7 R4 jar, 7% of 120 mm; F S1; TC 4; burnt residue on interior; PRN 2065. S9, context 234, gully 236.
- 8 R4 jar, < 5% present; F S1; TC 6; PRN 2212. S33, context 555, ditch 604.
- 9 R5 jar, 7% of 160 mm; F S1; TC 5; PRN 2147. Area A, context 520, ditch 521.
- 10 R5 bowl, 7% of 160 mm; F L2; TC 4, burnished on both surfaces; pitted on the interior; PRN 2379. S25, context 777, ditch 778.
- 11 R6 jar, 7% of 160 mm; F L2; TC 3, burnished on the interior and smoothed on the upper interior surface of the rim; PRN 2082. S1, context 237, ditch 238.
- 12 R7 jar, 8% of 360 mm; F L1; TC 4; PRN 2466. S10, context 828, ditch 829.
- 13 R7 jar, 50% of 340 mm; F S1; TC 5; sooted on the exterior and abraded or scraped on the interior; PRN 2566. S9, context 848, pit 868.
- 14 R8 jar, 20-25% of 120-140 mm; F S1; TC 3-4; sooted on the exterior; PRN 2110/2114. S5, contexts 262/264, ditch 263/265.
- 15 R8 jar, 8% of 360 mm; F L3; TC 4; abraded or scraped on the upper interior surface of the rim; PRN 2171. S38, context 539, ditch 540.
- 16 R9 jar, 38% of 280 mm; F L1; TC 4; PRN 2581/2582. S9, context 848, pit 868.
- 17 R9 jar, 33% of 360 mm; F L1; TC 4-5; PRN 2430-2/2604. S10, context 807/850, ditch 805
- 18 R10 jar, 8% of 200 mm; FQ2; TC 3; burnished on the exterior; sooted on the exterior; PRN 2495-6. S1/5, unstratified 851.
- 19 Decorated R9 jar, 5% of 360 mm; F S1; TC 5; decorated with fingernail impressions on the exterior edge of the rim; PRN 2568. S9, context 848, pit 868.

### *Methodology*

The animal bones were identified and recorded at the Centre for Applied Archaeological Analyses (CAAA), Department of Archaeology, University of Southampton. All anatomical elements were identified to species where possible with the exception of ribs and vertebrae which were assigned to size categories. Mandibles and limb bones were recorded using the zonal method developed by Serjeantson (1996) to allow the calculation of the minimum number of individuals (MNI); this is based on the most numerous zone of a single element taking into account size. In addition, all bone fragments over 10 mm in the hand-recorded material were recorded to species or size category to produce a basic fragment count of the Number of Identified Specimens (NISP). Fragments categorised as large mammal are likely to belong to horse or cattle and those in the medium mammal category to sheep/goat or pig; for the purposes of this report these are included in the count of identifiable fragments.

The presence of gnawing and butchery together with the agent responsible was recorded. Measurements were taken according to the conventions of von den Driesch (1976). The wear stages of the lower cheek teeth of cattle, sheep and pig were recorded using the method proposed by Grant (1982) and age attributed according to methods devised by Payne (1973), Halstead (1985) and O'Connor (1988). The fusion stage of post-cranial bones was recorded and age ranges estimated according to Getty (1975). Measurements of the crown height of horse teeth were recorded and age estimated according to the method of Levine (1982). Withers height have been calculated using the factors of Kiesewalter for horse, Matolski for cattle and Teichert for sheep (von den Driesch and Boessneck 1974).

A selected suite of elements was used during recording to differentiate between sheep and goat according to the methods of Boessneck (1969) and Payne (1985). These were the distal humerus, proximal radius, distal tibia, metapodia, astragalus, calcaneus and deciduous fourth premolar. No elements belonging to goat were positively identified and for the purposes of this report all likely remains are referred to as sheep. Evidence for burning has not been quantified due to the ambiguous preservation and colour of some fragments as a result of waterlogging. Due to publication constraints, tables containing tooth wear data, taphonomic information and measurements have been omitted from this report. The information is available on the CAAA web page: <http://www.arch.soton.ac.uk/Research/CAAA/Facilities/sites/Spratsgate%20Lane.htm>.

### *Species representation*

A total of 2,530 fragments of animal bone assigned to the Middle Iron-Age were recovered from the site. Of these 72% were identifiable to taxon or size class. This report considers the identifiable component which comprises 1,815 fragments of animal bone, of which 86% were recovered from ditches with relatively small amounts coming from well S20 (7%) and the pits (6%). The few remaining fragments came from the ploughsoil, gullies or postholes and belong to cattle, sheep or horse. According to the NISP figures, cattle over all, are slightly more numerous than sheep; however the converse is indicated by the calculation of MNI. Similarly, NISP suggest that pig is less common than horse whilst MNI indicates the opposite. Dog is represented by 3 bone fragments and red deer (*Cervus elaphus*) by a single antler piece.

According to NISP, cattle are slightly better represented than sheep in the deposits recovered from ditches and pits; however a greater disparity exists between the representation of the two species in the well where cattle account for 15% of the identifiable assemblage and sheep for just 5%. Deposits from the well

contained the highest representation of horse (12%), their being almost as numerous as cattle, and the lowest of pig (1%). Two of the dog bones also came from the well. In contrast, pits contained the lowest representation of horse (2%) and the highest of pig (6%). As well as producing the bulk of the assemblage, deposits recovered from the ditches contained a single fragment belonging to dog and the piece of red deer antler attached to part of the skull.

#### *Anatomical representation*

The most frequent cattle element in the ditches is by far the mandible, which is also the most numerous element according to the calculation of MNI. The remainder of the cattle assemblage is comprised predominantly of major limb bones with metapodia fairly well represented. A similar pattern is apparent for sheep, horse and pig although metapodia belonging to the latter are virtually absent. Not all of the limb bones are well represented; relatively few fragments of humeri and femora belonging to cattle or horse were recorded and scapulae, pelves and femora belonging to sheep tend to be under-represented whilst radii and pelves are absent from the pig assemblage. In general, small and less dense elements are also scarce, suggesting that the effects of differential preservation and recovery have influenced the composition of the assemblage.

The sample sizes of the assemblages recovered from the pits and wells are insufficient to allow for a detailed comparison of body part representation. However, the cattle remains from both the well and pits again contain fragments of mandibles and major limb bones. In the pits, horse is represented solely by two loose teeth whereas the well contains elements representative of most parts of the body. Very few sheep and only one pig bone came from the well whilst, in contrast, the pits produced a few fragments from various parts of the skeleton of both species. A fragment of maxilla and an upper premolar belonging to dog were also recovered from the well.

The large and medium size mammal categories contain a considerable number of long bone fragments including many pieces of humeri which could not be assigned to species. Single fragments of large mammal cervical and lumbar vertebrae and a single thoracic vertebrae of a medium size mammal were present in the material recovered from ditches. A greater number of undiagnostic vertebral fragments belonging to large size mammal were also present as were a considerable number of rib fragments belonging to both large and medium sized mammals. Vertebral fragments were absent from the pits but a few rib fragments were present and the well contained both vertebral and rib fragments belonging to large size mammals.

#### *Age and sex*

Tooth eruption and wear data, although limited, indicate that of cattle almost a third were culled between 8 and 18 months of age (Halstead Stage C), that few animals were killed between 18 months and adulthood and almost half (46%) reached adult age (Halstead Stage G+) before being slaughtered. The data available from epiphyseal fusion is also based on fairly small samples but provides evidence for the slaughter of young and adult animals. The presence of very young calves is attested by the recovery of a radius belonging to a foetal/neonatal animal from a ditch (context 838).

Dental data recorded for sheep suggests that few deaths occurred during the first 12 months of life (Payne Stages A–C), that the highest rates occurred between the ages of 2 and 3 years (Payne Stage E) and from the age of 4 years (Payne Stages G+). In contrast, epiphyseal fusion data suggests that a peak in slaughter occurred at a younger age with a third of sheep culled before reaching 2 years. The discrepancy

may be explained by the scarcity of small bones (discussed below) including the calcaneum which is the only bone that fuses between 24 and 36 months. The retrieval of a humerus and radius amongst the ditch material from S10 (858) and a metatarsal from S20 (807) belonging to foetal/neonatal sheep indicates the presence of very young animals.

Only 4 mandibles were able to provide an indication of the age at which pigs were culled; two belong to immature and two to adult animals. Bone fusion data is also limited but suggests that most pigs died before reaching adulthood. In addition, a humerus belonging to a foetal/neonatal piglet was recovered from the same ditch deposit as the very young lamb bones S10 (858). Four pig canines were able to provide an indication of sex; two belonged to females and two to males.

According to the dental data all of the horse teeth belong to animals aged over 5 years. The presence of unfused limb bones indicates the death of at least one animal below 2 years of age.

### *Taphonomy*

The anatomical representation shows a clear bias in favour of dense robust bones with small less dense bones severely under-represented. This suggests that the assemblage has been affected by density mediated processes of destruction. The virtual absence of small bones such as carpals, tarsals and phalanges is, however, most likely the result of recovery bias, given the presence of the intervening metapodia. The probability that preservation of the assemblage is dependant to some extent upon density is supported by the observation that bones belonging to sheep and medium-sized mammals are less well preserved than those of larger mammals. As a result, identification to species and the recognition of surface modifications was more problematic; creating further bias in the sample.

Severe surface erosion caused by root damage and corrosion on much of the material was noted during recording and has probably masked some evidence for butchery and gnawing. However, a small proportion (2%) of the assemblage displays butchery marks, mostly in the form of cut marks. Two bones had been chopped. The majority of cuts and both the chops occur on bones belonging to cattle although a few horse, one sheep and two pig bones also display cuts. All of the butchery evidence was seen on bones recovered in the ditches. A few cattle long bones have been broken in a manner suggestive of marrow extraction.

A similar proportion (2%) of the assemblage possesses evidence for canid gnawing. Again most of the evidence was seen on bones belonging to cattle but those of the other domesticates excepting dog also displayed some marks. Gnawing is visible on specimens recovered from ditches and the well but was absent on those recovered from pits.

### *Metrics*

Metrical data has been compared to that held on the Animal Bone Metrical Archive Project (<http://ads.ahds.ac.uk/catalogue/specColl/abmap>) for the Iron Age. All of the measurements fall within the range observed at contemporary sites. The recovery of a few complete limb bones allow the calculation of withers heights. Horses ranged in height from 1.11 to 1.33 metres, cattle from 0.97 to 1.05 metres and sheep from 0.53 to 0.57 metres.

### *Pathology*

A scapula belonging to cattle possesses a depressed circular lesion on the ventral surface of the blade, probably the result of trauma.

## *Discussion*

Sheep are generally the most numerous species on Iron-Age sites in southern England, particularly those on chalk downland such as Danebury (Grant 1984, 498) where they comprise at least 60% of the animal bone during all phases of occupation. Similarly, at Ashville Trading Estate (Wilson 1978, 111), Groundwell Farm (Coy 1982, 69), Winnall Down (Maltby 1985, 102) and Balksbury Camp (Maltby no date) fragments belonging to sheep outnumber those of cattle. However, a few sites have yielded higher proportions of cattle similar to those seen at Spratsgate Lane: they include Whitehouse Farm (Hamilton-Dyer 1992) and Farmoor (Wilson 1979), both in Oxfordshire. A recent re-analysis of animal bone recovered from Middle Iron-Age deposits at Warren's Field, Fairford (Sykes no date), also shows cattle to be more numerous than sheep. Grant (1984) and Hambleton (1999) noted this disparity in species representation whereby assemblages from sites along the Upper Thames Valley generally contain higher frequencies of cattle bones than chalk downland sites do. They suggested that it could be a reflection of environmental conditions. Cattle are better suited to grazing on the lush pastures and water meadows found in proximity to river valleys than on the dry downland areas which offer relatively poor quality grazing more suitable for sheep.

On the other hand species representation may reflect the types of deposits excavated. For instance at Winnall Down (Maltby 1985) sheep were more numerous in the pits whilst cattle remains dominated the ditches. This was explained partly as the result of cultural practices and the probability that cattle were butchered on the periphery of settlements where the meat was stripped from the bones and the waste thrown into surrounding ditches. As meat from smaller animals such as sheep is better suited to being cooked on the bone, their bones may have been discarded in a convenient pit located close to areas of habitation. The bones of smaller animals are also more likely to be preserved in pits than ditches as the former afford a closed and thus protected burial environment. The majority of the animal bone from Spratsgate Lane came from ditch deposits, but as fragments belonging to cattle are represented similarly in both pits and ditches there is no reason to assume that differential deposition is responsible for the high frequency of cattle remains. It is probable that the bones of sheep and pig have survived less well than the bones of the larger animals resulting in their numbers being deflated as the calculation of MNI suggests. However cattle given their greater size clearly provided most of the meat eaten.

As at Spratsgate Lane as well as Warren's Field, Whitehouse Road and Farmoor a low proportion of pig is evidenced. It has been suggested (Harris 1997) that this is because pigs compete with humans for grain, and the concentration on arable production at these sites might explain this scarcity. Pig has its highest representation in the pits perhaps supporting the idea that pork was generally cooked on the bone with the waste discarded close to habitation areas. Alternatively, this could also reflect differential preservation given that pigs are generally culled before reaching skeletal maturity when the bones are still relatively porous.

The recovery of a relatively high proportion of horse and low proportions of sheep and pig along with two of the three dog bones from the well hints at the possibility that the well may have been used for the disposal of less mundane remains. There are numerous examples where animal bone deposits of an unusual nature have been interpreted as 'special' because of their potential symbolic association (Grant 1984). Such interpretations are controversial and have led to the proposal of set criteria to aid their identification (Wait 1985). In this case, the proportion of cattle in the well remains fairly high and includes not only loose maxillary teeth and mandible fragments (indicating the original presence of a skull), but also limb and foot bones indicative of more mundane butchery waste. Similarly, both cranial and post-cranial elements



belonging to a minimum of two horses are present and there is nothing to indicate that they were originally articulated. The maxilla and isolated premolar belonging to dog is a clear indication that the skull of at least one dog was originally deposited here but they may represent nothing more than the disposal of a sick or old animal.

A predominance of mandibles is unsurprising in an assemblage affected by density mediated preservation as they are generally considered the most robust element (Brain 1967; Lyman 1994) and therefore most likely to survive in the archaeological record. Their presence, however, along with that of major limb bones and metapodia are evidence that whole carcasses of cattle, horse, sheep and pigs were originally present and that the animals arrived at the site most probably on the hoof. The virtual absence of phalanges may result from the feet remaining attached to the hide (to be used as handles) and thus being transported to a location where tanning took place. Alternatively, it may be a consequence of recovery bias as discussed above. The general scarcity of cancellous bones such as vertebrae is more likely the result of differential preservation than cultural activities.

The recovery of a few bones belonging to foetal/neonatal cattle, sheep and pigs is evidence that animals were being bred at or close to the site. As mandibles are the most numerous element ageing data based on tooth eruption and wear should be fairly representative of the herd structure. Such data from contemporary sites showing a high proportion of cattle is scarce although both immature and adult cattle were represented at Whitehouse Road (Hamilton-Dyer 1992). Hambleton (1999: 82) notes that there is a tendency for a high cull of prime beef cattle at Upper Thames Valley sites rather than the steady mortality profile seen at sites on the chalk downland. At Spratsgate Lane, the presence of deciduous fourth premolars exhibiting Grant wear stage 'f' indicates the cull of bull calves in the first autumn or winter and is suggestive of non-intensive milking. Adult animals, past their prime, would have been kept primarily for their secondary products, milk, manure and traction, although they would have also provided meat.

The mixed nature of sheep husbandry is also evidenced by the two peaks visible in the sheep mortality profile. Animals culled between 2 and 3 years (Stage E) would have provided good quality mutton whilst the keeping of a large proportion of the flock into adulthood attests to the importance of wool, manure and probably milk, in the economy. A small proportion of animals died in the first two years of life (Stage A–D) and probably represents the culling of surplus stock to avoid over-wintering. This pattern is at odds with the high mortality of yearlings noted by Hambleton (1999: 87). The scarcity of evidence for the large-scale slaughter of prime meat animals and the predominance of adult females at Wessex sites led to the proposal that dairying was important (Maltby 1996: 22). In light of the inconsistency which exists between the dental and bone data it is possible that sheep were culled at a younger age at Spratsgate Lane. Whichever is the case, as Hambleton (1999: 87) concludes, sheep mortality profiles appear to represent mixed husbandry strategies aimed at complementing arable production. The virtual absence of very young individuals is quite likely the result of a combination of density mediated survival and recovery as the presence of a few neonatal bones provides evidence for breeding at or close to the site.

The pig assemblage is small but there is evidence for the culling of both immature and adult individuals. Pigs are generally slaughtered whilst immature because, apart from manure and bristles, they do not provide useful secondary products and tend to be kept solely for meat. The presence of adult boars and sows is likely to represent animals kept as breeding stock.

A predominance of adult horses is usual for sites of this period and it is likely that these animals were most valued as a means of transport (Maltby 1996: 23). It has been suggested that horses were not generally bred at occupation sites but instead that feral animals were periodically rounded up (Harcourt

1979, 158). The possibility exists that some communities specialised in horse breeding (Grant 1984, 522), a suggestion supported by evidence at Rooksdown, Hampshire (Powell and Clark forthcoming), where the remains of male and female horses ranging in age from foetal to neonatal were recovered. At Spratsgate Lane, although most of the horses were adult, there is evidence for at least one animal below two years of age; horses are not generally ready to train until they reach at least two years of age so this evidence must represent either an animal reared at the site or a young feral animal accidentally caught but for some reason not returned to the wild.

Although the erosion of surface features and waterlogging have probably masked some evidence for surface modifications, chop marks are less likely to have been affected than cuts. Hence the predominance of cut marks is almost certainly an indication that cattle were generally disarticulated by cutting through the ligaments and tendons surrounding the joint articulations. This is supported by the location of the cuts which tend to occur on or close to articular surfaces. A few bones had been broken in a manner suggestive of marrow extraction but this does not appear to have been a systematic operation. Cut marks on part of a cattle skull attached to a horn core attest to the deliberate removal of the horn and the value of horn as a raw material. Horse butchery is fairly common at sites of this period although horses seem not to have been butchered as intensively as cattle (Maltby 1996, 23). Similarly, at Spratsgate Lane there is a lower incidence of cut marks but the fact that they occur on the articular ends of limb bones supports the suggestion that, after death, they received similar treatment to cattle. The scarcity of butchery on bones belonging to sheep may be due in part to the taphonomic biases mentioned above although a lower frequency would be expected on an animal whose size renders it more suitable for cooking on the bone.

The presence of dogs is attested not just by the three skeletal specimens but also by the presence of gnaw marks on bones recovered from the ditches and well, a clear indication that food waste was fed, or was at least accessible, to dogs. Gnawing on bones recovered from the well signifies that at least some of the specimens were secondarily deposited. In contrast, the absence of gnaw marks on material recovered from the pits suggests immediate deposition, perhaps followed by infilling. Gnaw marks seen on bones of horse again supports the hypothesis that after death horses did not receive special treatment.

### *Conclusion*

Although bone preservation was only patchy at the Spratsgate site, it is possible to see that animal husbandry there was typical for this period and region. Domestic animals, possibly including horses, were raised at the settlement and cattle and sheep were kept for primary and secondary uses.

### **WATERLOGGED AND CHARRED PLANT REMAINS by Julie Jones**

A range of features was assessed for plant macrofossil remains from the Middle Iron-Age settlement at Spratsgate Lane. Most of the pit and ditch fills dating to the Middle Iron Age contained few charred cereal remains and further analysis was not therefore recommended. Two predominantly waterlogged features were however given a full analysis. Of these, the large pit S20 [704], interpreted as a well, was over 2 metres deep and contained a silt fill rich in organic material, including a fragment of sharpened stake. The primary fill (707) contained an assemblage of waterlogged plant remains from different habitat groups. The primary fill (558) of a ditch [544] in S32 contained a similar but smaller assemblage.

## Methodology

The samples were sieved through a 250 micron mesh for the floats and 500 micron mesh for the residues. The floats were then examined wet under low powered magnification and identifiable plant material extracted. The residues, which were predominantly mineral, were allowed to dry. The results are shown in Table 10. Nomenclature and habitat information is based on Stace (1991).

## Interpretation

### Structure 20

The primary fill (707) of feature [704] interpreted as a well, contained well-preserved organic material which probably accumulated from a number of sources; it may have fallen, been blown in, or deliberately placed. The range of habitats suggested by the plant taxa recovered suggests that the bulk of the material represents the local environment of the feature, with weeds of waste and disturbed ground most common but also with a suggestion of scrubby growth and aquatic plants growing on wet ground and in areas of standing water.

Although many of the weeds of waste/disturbed/arable ground are classified as those of crops, especially when recovered in a charred form, they also form part of a community, growing naturally in waste places near human habitation. The majority of the species in this category are annuals, not having any specific ecological requirements apart from an adaptation to disturbed ground. Common chickweed (*Stellaria media*), for example, prefers well aerated, moist, but not waterlogged soils and often occurs in waste places such as farmyards and roadsides where there is some soil disturbance (Sobey 1981, 311-8). Similar annual weeds include red dead-nettle (*Lamium purpureum*), shepherd's purse (*Capsella bursa-pastoris*) and prickly sow-thistle (*Sonchus asper*). Many of the Chenopodiaceae (Goosefoot family), such as Good-King-Henry (*Chenopodium bonus-henricus*), fig-leaved goosefoot (*Chenopodium ficifolium*) and red/oak-leaved goosefoot (*Chenopodium rubrum/glaucum*), forming over 18% of the total assemblage, are associated with rich fertile soils and are often found in farmyards or around manure heaps. Other annual herbs prefer waste or bare damp ground, redshank (*Persicaria maculosa*) being found often close to river or stream margins and red-leaved goosefoot occurring in dried-up pond margins (Blamey and Grey-Wilson 1989). As well as these annual species, it appears that there were stands of common nettle (*Urtica dioica*) growing in nutrient rich ground with elder (*Sambucus nigra*) and other scrubby growth such as bramble (*Rubus* sect. *Glandulosus*).

There is also evidence for grassland or meadow with both grasses (Poaceae) and sedges (*Carex*) present as well as buttercup (*Ranunculus acris/repens/bulbosus*), hairy buttercup (*Ranunculus sardous*), yellow rattle (*Rhinanthus minor*), meadowsweet (*Filipendula ulmaria*) and silverweed (*Potentilla anserina*). There is some overlap between the habitat groups with some species also thriving in wet places such as stream sides or marshy ground. A few species are particularly abundant. Water-cress (*Rorippa nasturtium-aquaticum*), for example, is a creeping and sometimes floating perennial of shallow, clear freshwater habitats such as streams or ditches. Another group of aquatic species (20% of the total assemblage) suggests there were areas of standing water. Water-crowfoot (*Ranunculus* subg. *Batrachium*) is normally found in mud or shallow water, sometimes in temporary pools. Similarly water-starwort (*Callitriche*) is either aquatic or semi-terrestrial, growing in mud, while the aquatic algae stonewort (*Chara*) is able to live in diverse aquatic habitats and can survive in puddles and patches of water which may dry up completely in summer (Moore 1986). It seems unlikely that these aquatic species would have formed the surface vegetation in the well itself, they may have formed part of the flora in an area close to the well head, perhaps a stream or ditch which may have dried up in the summer months.

The only evidence recovered from the well for human activity is a small assemblage of charred cereal remains which perhaps found their way into the well fill from crop processing at the nearby settlement by chance. Those remains include barley (*Hordeum*) grain and rachis internode and spelt wheat (*Triticum spelta*) glume base and spikelet fork, together with a few arable weeds, brome (*Bromus*) and meadow-grass/cat's-ear (*Poa/Phleum*).

#### *Structure 32,*

The primary fill (558) of the ditch [544] contained a similar, although sparser, suite of waterlogged plant remains. Common nettle was particularly abundant with over 950 achenes recovered. It is likely to have formed part of the vegetation of the ditch margins and with rushes (*Juncus*) it forms over 89% of the total assemblage.

#### *Discussion*

The picture of the local environment shown by the plant macrofossils preserved in the well is likely to reflect a period when the well was no longer in use and organic material accumulated in it as part of the silting-up process. A similar situation is seen from organic sediment examined from a timber-lined well at Shorncote Quarry, c.1 km to the north-east of Spratsgate Lane. Robinson (2002) suggested that the remains of scrub or woodland plants, together with those of beetles from woodland habitats showed, that the well was fully shaded by trees and shrubs, including field maple (*Acer campestre*), ash (*Fraxinus excelsior*) and alder (*Alnus glutinosa*). Beetles of foul organic material and dung are suggested to have inhabited decaying vegetation next to the well or droppings of domestic animals. Similar nutrient rich soils are suggested by the weed flora at Spratsgate Lane, but although there is evidence for some scrubby growth of elder and bramble, the landscape would have been predominantly open. The area around the well and the ditch would have been wet at certain times of the year, although some taxa recovered from around the well are ephemeral species which can tolerate dry ground in the summer months.

#### WOOD by Rowena Gale

Three fragments of waterlogged wood, recovered from fill (707) of the large pit or well S20 were examined to identify the species of wood and to record evidence of tool marks. The feature was dated to the Middle Iron Age.

#### *Methodology*

The samples consisted of short lengths of round wood. The condition of the wood was firm and well preserved and each piece was prepared for examination using standard methods (Gale and Cutler 2000). The wood structure was examined using a Nikon Labophot-2 microscope at magnifications up to x 400 and matched to reference slides of modern wood. Evidence of tool marks were recorded.

#### *Results*

The largest of the pieces was identified as a member of the hawthorn/*Sorbus* group (Pomoideae). Genera included in this subfamily of the Rosaceae are anatomically similar and it is not possible to distinguish individual members. This group includes *Crateagus* sp. (hawthorn), *Malus* sp. (apple), *Pyrus* sp. (pear), and *Sorbus* spp. (rowan, whitebeam and wild service). The round wood retained the bark and measured some 30

mm in diameter and 160 mm in length. A single, long oblique tool mark was located at one end, presumably where the round wood had been slashed/severed from the parent stem. The wood at the other end was very abraded. Although the tip of the stem seemed slightly pointed there was no direct evidence to suggest wood-working. It seems more likely that the stem was fractured at this point and the broken fibres became water-worn.

The two other fragments consisted of slivers from the outermost area of narrow round wood (diameter unknown). Both were identified as yew (*Taxus* sp.). The pieces measured c.90 mm long and one appeared to bear shallow, oblique tool marks at either end.

#### WORKED FLINT AND STONE by Philippa Bradley

Nine pieces of worked flint and a single piece of worked stone were recovered from the excavations. The flint is generally material of poor quality and probably of local origin and it consists of debitage and a single scraper. Five pieces of flint and the worked stone, a Bronze-Age well-used hammerstone, were recovered from the pit [504] which also produced Bronze-Age pottery. Two pieces of flint came from later contexts and two were unstratified. Although not closely datable the flint from pit [504] would seem to be earlier than the ceramic evidence recovered from the same feature.

The flint consists of seven flakes, a blade-like flake and an end and side scraper. The flakes are all fairly small and abraded and many are broken. The scraper has been fairly carefully worked on a thickish cortical blank. The hammerstone has been made on an oval Bunter pebble, which would probably have been available locally within superficial deposits. It has been battered at both ends and there is a small area of polish on one side. It is likely to have been used for flint knapping.

The small assemblage of flint has affinities with later Neolithic material, although there are no diagnostic artefacts and scrapers are generally difficult to date other than in broad terms (cf. Riley 1990). Comparable flint was recovered from pits, which also produced Grooved Ware pottery, at Roughground Farm, Lechlade (Darvill 1993). Small assemblages of flint including some probable later Neolithic material were recovered from several other sites in Lechlade (e.g. Butler's Field, Gassons Road, and The Lodgers: Bradley 1998, 20–1; Walker 1998, 278; Darvill *et al.* 1986). A single very large, probably later Neolithic scraper came from the fill of the Lechlade cursus (Bradley 2003, 202). Much larger later Neolithic assemblages have been recovered in other areas of the Upper Thames Valley (cf. Bradley 1999).

#### *Catalogue of illustrated worked flint and stone* (Fig. 12)

- 1 End and side scraper, neatly retouched, made on a preparation flake. Context 501, SF3.
- 2 Hammerstone. Oval Bunter pebble with extensive areas of battering at both ends. A small area of polish is present on the upper surface. Small areas of calcium carbonate concretion present. Dimensions (maximum surviving) 95 mm long, 51 mm wide, 43 mm thick. Context 500/501, SF4.

Five metal objects were recovered from the excavations. They were in poor condition and were 'X'-rayed to aid identification. A single Romano-British coin was recovered from the plough soil. The other four items (finds 2, 7, 113 and 115) were made of iron and all were stratified within Middle Iron-Age contexts.

#### *Catalogue of metal objects*

- 2 A solid disc with a curved profile, measuring 55 x 34 mm and 8 mm deep. The object was oval in plan with a slight point central to one of its shorter sides. The 'X'-ray could not elucidate its possible function and no usewear or signs of fixings were apparent. Context (563), S38.
- 7 An object 32 mm long with a rectangular cross section measuring 7 x 6 mm and appearing to taper to a square section point. It is not known if this comprised the complete object. It may be a small metal wedge or part of a tang or handle. Context (558), S32.
- 113 An object 103 mm long and square in section, measuring 4 mm<sup>2</sup> at either end. In length it was slightly arced in profile becoming wider at its centre where it measured 9 x 7 mm. At this point the 'X'-ray indicated the presence of a hole measuring c.12 x 6 mm, which pierced the depth of the profile. The object has been interpreted as a tool. Within the upper fill of [851], S1 and S5.
- 115 A blade tip that measured 32 mm long and at its widest point 15 mm deep. In profile it was c.2 mm wide. Context 858, S10.

The recovery of iron finds was not limited to one particular type of feature or discrete area of the site. There was no evidence to suggest that iron was being produced or worked within the settlement at Spratsgate Lane.

## DISCUSSION

### *Bronze Age*

A single feature within Area A dated to this period. Other activity associated with it may have extended to the south and west. Large unenclosed Bronze-Age settlements have been recorded to the north and east of Spratsgate Lane at Cotswold Community (Laws 2000; 2003) and Shorncote (Hearne and Heaton 1994; Hearne and Adam 1999; Brossler *et al.* 2002).

### *Middle Iron Age*

The Middle Iron-Age settlement at Spratsgate Lane comprised two discrete areas, one enclosed and the other, to the east, probably unenclosed. The enclosed area was located on the western side of the excavation and covered c.0.72 ha, being longer than it was wide. Although it extended both northwards and southwards beyond the excavated area, it is assumed that it was completely enclosed with a curving boundary to the west and a linear boundary to the east. There were two entrances through the western boundary and a single entrance through the eastern. The north-western entrance (S19) was complex and gated whereas the entrance to the south was simply a gap between two ditch terminals. The entrance in the eastern boundary was offset with an 18 m long corridor between the ditch terminals.

The ten post settings which comprised gate S19 are assumed to be broadly contemporary, providing a gate c.2 m wide possibly with a central post, [721]. The main posts, [837] and [705 south], were either

reinforced or widened by additional posts, [836] and [705 north]. A possible second gate 0.8 m wide, on the south side of the main gate gave access to the paddock to the south. There is no evidence to suggest that a similar gate existed on the northern side. The function of the other postholes recorded in the gateway remains unclear. Gated structures on other prehistoric settlement sites have been identified as stock control gates. At Fengate, Peterborough (Pryor, 1998, 104–5), a complex system of stock control was identified from a series of postholes and ditches allowing the separation and grouping of animals as they passed from pastures outside of the settlement area into the adjacent enclosures. A similar although simpler arrangement was identified at Penycoed, Llangynog (Murphy 1983, 97–8). Therefore it is likely that gate S19, in conjunction with the adjacent structures, and possibly those across the line of S1 (S13 and S14) were central to the successful management of livestock maintained by the settlement inhabitants.

### *Enclosed settlement*

Within the enclosure were two main foci of activity, the northern (Area B) and the southern (Area C) each centred on a penannular ditch. Within Area B, S8 and S9 were considered to be the remains of the walls of successive roundhouses enclosed by S1. This interpretation is supported by the substantial quantities of pottery recovered from the excavated lengths of the ditches. An additional roundhouse was identified as a series of postholes, to the immediate north and enclosed by S5. The function of this area is less certain as no pottery was recovered from postholes but it does not appear to have been used for eating. However, the ditch had been backfilled with substantial dumps of domestic waste. It is suggested that the position of S8, as the earlier feature, may have influenced the setting out of the rest of the area. Within Area C, the possible position of a roundhouse was suggested by postholes enclosed by S27. Alternatively, S27 itself could have represented the position of a wall with the internal postholes representing internal structures. The positions of postholes at the junctions of S1 and S5 and of S27 and S28 may indicate that the line of the ditches was staked out prior to their excavation. However they could equally indicate the presence of a fence or palisade on the line of the ditches.

Penannular ditches are common on Bronze-Age and Iron-Age sites on the Upper Thames gravels and their average dimensions vary from site to site. At Claydon Pike their average diameter was c.10 m (Miles and Palmer 1982, 7) and that of the houses contained within them c.8 m. At Cotswold Community (Laws 2003) Early Iron-Age structures ranged from 6.6 to 9.0 m in diameter and some contained signs of internal supports, as did similar examples at Shorncote (Hearne and Adam 1999, 1) which compared directly with S6/S7. The majority of the penannular ditches at Spratsgate Lane fall within these general dimensions. The absence of any internal features within most of the penannular enclosures was considered to be the result of truncation although if turf walls had been used it is unlikely that these would leave any trace (Jennings *et al.* 2004, 148).

Ditched corridors joined the gateways in the western boundary with the entrances to the penannular ditches. These appeared to focus the flow of traffic within each discrete settlement area, and their alignment and corresponding entrances and gates were individual to each area. In Area B the corridor alignment was SW–NE, turning away from gate S19. In Area C the corridor was aligned NW–SE, joining S27 with the southern gate in the western boundary. The reason for the differing approach to the construction of each area is unclear. It has been suggested that the direction of the prevailing weather was a factor in the positioning of entrances on unenclosed sites (Allen 1990). The orientation of the entrances to banjo enclosures was determined by topography. These enclosure types are normally found on gently sloping

ground with the entrances running up the slope to the enclosures (Darvill and Hingley 1982). Neither of these factors appear to have influenced the arrangement of the settlement at Spratsgate Lane.

Adjacent to the ditched corridors was a range of other ditches and small enclosures, probably agricultural in function. In Area B these ditches were located to the south of the ditched corridor and they appeared to have a single access point adjacent to gate S19. The excavation of sections through some of these ditches provided no useful information regarding their function. Greater quantities of briquetage from this area may indicate that food processing/preserving may have been taking place. In Area B the small ditched enclosures were located to the north of the ditched corridor. The proximity of these two areas and the sharing of common boundary, S30, may indicate that both served a similar purpose. The areas appeared to rely on access to and from the entrances in the major boundaries for movement around the settlement.

There was no evidence for banks associated with any of the ditches within the excavation area. At Watkins Farm (Allen 1990, 73) and Fengate (Pryor 1998, 85) upcast from the ditches was placed on the internal side of the ditches, forming small banks through which hedges were thought to have grown. This may have also have been the case at Spratsgate Lane, as many of the ditches would not have been wide enough to prevent animals moving across them (Pryor 1998, 85). The additional security of hedging or palisades/fencing may have been needed. Given the paucity of evidence for fencing, hedges are considered to have been more likely at Spratsgate Lane. If the line of the ditched corridor S1 had been hedged from the gate to the house enclosure, it is possible that the house structures would not have been visible from the gate due to the curve in the ditched approach. An interesting interpretation of some of the ditches at Watkins Farm considered that 'the wider ditches that formed the circular enclosure may have aided the prevention of animals housed adjacent eating the thatch on the buildings within' (Allen 1990, 75).

Most of the ditches identified across the area of the excavation are thought to have had a drainage and/or delineating function. Some of the deeper features and the western boundary ditch appear have silted over a period of time. Elsewhere there was little evidence for silt build-up within the bases of the ditches, perhaps indicating the latter were regularly maintained. The majority of the lower fills were of gravel assumed to be collapse from the sides of the ditch. Above this, most contained deliberate backfills of domestic waste occasionally interspersed with further collapse of the ditch sides.

Outside the settlement, and to the west, the remains of a possible field boundary and well (S20) were recorded. The external boundary continued part of the line of the western boundary ditch and indicates that the land to the west of the enclosure was at least in part enclosed. This boundary may have aided the stock control function of the gateways in the western boundary ditch. To the north of this external boundary and west of S19 was well S20. Numerous examples of features of this type have been excavated in the vicinity of Spratsgate Lane, e.g. at Cotswold Community (Laws 2003, 5) and Shorncote (Hearne and Heaton 1994; Brossler *et al.* 2003). At Spratsgate Lane the environmental evidence retrieved from S20 suggests that there were areas of standing water for much of the year around the settlement. However had these occasionally dried up, it would have perhaps necessitated the excavation of deeper features, such as well S20 and S32 in Area C to reach the lowered water table. The environmental report also recognised plant species common to running water, suggesting that several sources of water appear to have been available to the settlement at Spratsgate Lane, each of which was perhaps more or less important at different times of year. It has been suggested (Murphy 1983, 100) that different bodies of water were required for different functions such as drinking, washing and waste. The finds assemblage did not indicate any ritual purpose for the well, but its location outside the enclosure entrance may be significant, as all traffic though the gates would need to pass its location. The well appeared to have outlived its purpose during the life of the



settlement and was backfilled with domestic waste. At Shorncote (Hearne and Heaton 1994) a suggested interpretation of similar features was that they were for the retting of flax. There was no evidence for this at Spratsgate Lane. Other features of the same type were recorded at the later excavations at Shorncote (Brossler *et al.* 2002, 84) and were interpreted as animal watering holes. However, a Bronze-Age example lined with wood and positioned adjacent to a boundary was considered to mark the entrance to the settlement; it provides a very strong parallel for the well at Spratsgate Lane.

#### *Unenclosed settlement*

The unenclosed settlement to the east contained a similar central focus as seen in Areas B and C, a central penannular ditch (S37) located at the end of a ditched corridor. However, in contrast to the enclosed settlement there was evidence to suggest that this was not always the case, with evidence for earlier features (S39 and S42) clearly having been modified to achieve this layout. No boundary ditch or gate were found within the excavated area or visible on aerial photographs. A small section of ditch to the south (S45) may have represented part of a boundary.

There was little evidence to suggest that S37 enclosed any structure and very little occupation debris was recovered from the feature. S37 was approached by a ditched corridor aligned E–W. The penannular ditches to the south of the corridor may have housed animals, delineated areas for food or fodder storage or provided working areas (Miles and Palmer 1990, 22), as there was little evidence for domestic activity in this area. The area to the north of the corridor was probably for agricultural use and sub-divisions were visible although they were not investigated. Two oval features to the north-east of this area may represent further evidence for wells.

#### *Phasing*

With the exception of a small group of features of Bronze-Age date the Spratsgate Lane settlement was entirely of the Middle Iron Age. An attempt at phasing on the basis of the ceramic evidence assessed the presence and absence of non-local wares (see pottery report) and identified two phases. The ceramic phases thus defined broadly accord with the stratigraphic evidence. However, the limited number of excavated sections hampered this analysis as did the variable quantities of pottery recovered. Analysis of the distribution of the pottery by fabric types and forms found that no one fabric type was particular to any feature types or areas. A radiocarbon date from sooty residues adhering to a sherd of pottery recovered from S20 confirmed the well was of Middle Iron-Age date, 2207±29 BP with a calibrated date range (95% confidence) of 390–170 cal BC

Given the nature of the stratigraphy and the relatively limited excavation it was not possible to elucidate the phasing and development of the settlement in any detail. Although there was localised recutting and realignment of boundaries, and several of the main structures were of several phases, it was not possible to be certain whether the entire settlement area was in use at the same time or whether the nucleus of a small settlement had shifted over time.

#### *Environmental evidence*

The survival of environmental evidence at Spratsgate Lane was poor due largely to the soil conditions. Very little grain was recovered from the sampled contexts. The preservation of the animal bone was also affected and the survival of small and fragile bones was rare. Examination of the distribution of the animal bone by species provided too little information to make any specific observations regarding discard patterns, and the

lack of butchery evidence on most of the bone, prevented identification of potential work areas. This is a pattern also seen at archaeological sites in the vicinity of Spratsgate Lane at Cotswold Community (Laws 2000, 2003) and Shorncote (Hearne and Adam 1999; Brossler *et al.* 2003). Analysis of the environmental samples suggested that the environment at Spratsgate Lane was similar but more open and scrubby than that evidenced at Shorncote by the samples from the Bronze-Age well (Brossler *et al.* 2003). The very low levels of food grain from the Spratsgate Lane environmental samples may just be a reflection of the soil conditions, but similarly low levels were recorded at Watkins Farm and Claydon Pike. These two low-lying sites may not have been producers of grain and may have depended on communities on higher ground for its provision, whilst they concentrated on the rearing of animals (Allen 1990, 79). The limited environmental evidence from Spratsgate Lane may indicate that the settlement conformed to this pattern, concentrating on cattle and sheep farming as appeared to be the case at Shorncote (Brossler *et al.* 2002) and at Totterdown Lane (Pine and Preston 2003). The proximity of Spratsgate Lane, Cotswold Community and Shorncote implies that they all formed part of the same local economy. Spratsgate Lane is likely to have been the focus of settlement activity during the Middle Iron Age, as evidence for this period is much less well defined on the adjacent sites.

### *Conclusion*

The gravel terraces of the Upper Thames Valley are rich in archaeological sites of prehistoric and Roman date, as is demonstrated by the density of cropmarks shown on aerial photographs. The excavated settlement at Spratsgate Lane extended over 1.6 ha but it was part of a wider landscape of enclosures, visible on aerial photographs on land to the south (Fig. 3) which was quarried without record. The continuation of one of the settlement boundaries (S23), other enclosures and a possible trackway demonstrate that the occupation extended over at least 3.6 ha. There is no photographic record of the land on the east side of Spratsgate Lane before quarrying, but further to the east around the Cotswold Community cropmarks of very extensive enclosures and trackways have been excavated recently (OA 2004).

The partially enclosed Middle Iron-Age settlement at Spratsgate Lane is one of three or possibly four enclosed or partially enclosed settlements excavated on the Upper Thames gravels. Other examples are those at Watkins Farm (Allen 1990) and Mingies Ditch (Allen and Robinson 1993), 60 km and 56 km to the east respectively, and at Totterdown Lane in Horcott (Price and Preston 2003), 25 km to the north-east. Within the Cotswold Water Park area, Middle Iron-Age settlement activity is generally unenclosed as at Shorncote (Hearne and Adam 1999; Brossler *et al.* 2002), Cotswold Community (Laws 2000; 2003), Claydon Pike (Miles and Palmer 1982), Thornhill Farm (Jennings 2004) and Dryleaze Farm (Kelly and Laws 2002). At Totterdown Lane enclosed and unenclosed Middle Iron-Age settlements were immediately adjacent to each other. These sites contrast sharply with the settlement pattern on the higher ground of the Cotswold escarpment. Hillforts dominate the scarp edge, with a smaller number of more scattered small enclosures elsewhere (Marshall 1997; 1999; Saville 1979; Vallender 2005). In comparison, Spratsgate Lane appears to have a plan unique in both the layout of the individual areas identified and their mutual relationships. In particular the arrangement of small penannular enclosures with long corridor entrances, located at the centre of areas of settlement, is without local parallels.

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