Further Excavations at the Iron Age Enclosure at Tattershall Thorpe, Lincolnshire, by Peter Chowne, 1986

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with contributions by W. A. Boismier, Glynnis Edwards, A. P. Fitzpatrick, C. A. I. French, Clive Gamble, S. Hill, and Maisie Taylor and illustrations by S. E. James

Introduction
The first season of excavations at the double ditched Iron Age enclosure at Tattershall Thorpe (TF 223 598; Fig.1; Pl.1) were undertaken in the winter of 1979-80 by Peter Chowne for the then North Lincolnshire Archaeology Unit (Chowne et al. 1986). An entrance causeway across the inner ditch was identified and the ditches were found to contain substantial quantities of preserved organic material in their lower fillings. Pottery and an associated radiocarbon date of cal BC 530-370 at 68% confidence or cal BC 780-200 at 95% confidence (HAR-4315; 2350 ± 90 BP) from wood found on top of the organic lower ditch filling in the outer enclosure ditch (Chowne et al. 1986, p.162) dated the deposition of the organic material. Large quantities of early first-century AD pottery were also found in a recur of the inner ditch. The site was subsequently designated a Scheduled Monument (Lincolnshire no. 329).

In 1986, however, planning permission was granted for gravel extraction in a field containing approximately a hundred metres of the outer ditch at the south-eastern end of the enclosure (Fig.2). The inner ditch at this point lies beneath Aumpasture Lane which serves as a modern footpath and was not therefore available for investigation. Limited excavations, financed by English Heritage and Bain Aggregates, again directed by Peter Chowne, were undertaken in 1986 to examine this section of the outer enclosure ditch. Attention was focused on the organic deposits, further endangered by the artificial lowering of the water table to facilitate gravel extraction.

Location
The enclosure is situated at a height of 9.2m OD in an area of acidic sands and gravels overlying the valleys of the Rivers Bain and Witham (Fig.1). Modern land-use largely consists of poor-quality arable farmland and pasture, and there is extensive mineral extraction on the western banks of the Bain. The Tattershall Thorpe Neolithic site and Anglo-Saxon burial lie about 1.5 kilometres to the north-east (Chowne et al. 1992; Hinton 1993).

The excavation
Methods
The limited financial resources available restricted the area excavated to a line of the outer ditch itself. The topsoil and upper fillings of the ditch were removed by machine with a toothless grading bucket. Where other archaeological features were encountered (in the area of the entrance, Fig.2), the trench was widened beyond the line of the ditch. A series of segments, each initially approximately two metres wide, was then excavated manually through the lower ditch fillings, although many segments were subsequently widened resulting in the complete emptying of longer sections of the ditch. Most of the site records were entered directly onto a computer. Once exposed, the organic layer was recorded by vertical photography, the survey points being computer plotted. Plastic sheeting was employed to prevent further dehydration of the exposed organic layers. All other artefacts were three-dimensionally recorded, the data later being transferred to the computerised system. It was decided not to duplicate the plant macrofossil, pollen and insect data collected during the 1979 excavations (Chowne et al. 1986, pp.162-80) and instead samples were taken for soil micromorphological and particle size analysis and a full programme of wood analysis examining woodland management practices and woodworking techniques was undertaken to complement this earlier work.

Results
The entrance
Unlike the entrance causeway across the inner ditch, where the line of the ditch was continuous but not dug to the same depth encountered along the rest of its length (Chowne et al. 1986, p.162, pl.21a), the entrance in the outer ditch was flanked by the terminals of two separate ditches. In plan (Fig.2), the terminal of the southern ditch (ditch 501) was rounded, while that of the northern ditch (ditch 500) appeared to be of a similar shape, leaving a causeway approximately 3.5 metres wide between them. On the southern side of the entrance, a shallow gully (feature 510, 5.8m long, 1m wide and 0.12-0.18m deep), cut into the subsoil and, at its western end, into the upper secondary filling of the enclosure ditch (context 3), ran across the entrance. A section (514) was dug across the eastern end of this feature, showing that the gully was filled with dark brown sand, and contained one piece of pottery, recorded as being of Romano-British date, but which is now missing. Another gully (feature 511, not less than 5m long, 0.55m wide and 0.22m deep) was located on the inner side of the entrance and extended westwards beyond the limits of the excavation. Flanking this gully were two tree root or animal disturbance holes (features 512-13). All these features were sealed by dark brown sand (context 2) which also formed the tertiary filling of the enclosure ditch. Feature 510 may represent an attempt to
narrow or block the entrance causeway during the Romano-British period. No evidence for a gate or entrance structure contemporary with the cutting of the ditch was recovered.

The ditches
The whole of the northern ditch lying within the extraction area (ditch 500) was completely emptied, while four segments (502-505) were excavated through the southern ditch (ditch 501) (Pl.2). The dimensions of the ditches were comparable to those recorded during the 1979 excavations (Chowne et al. 1986, p.126). Ditches 500 and 501 were approximately five metres wide and vary from about 1.5m to 2m in depth. Their profiles were a wide U-shape, the slight irregularities in their sides probably resulting from variability in the gravel subsoil. A single set of context numbers was used to describe the sequence of ditch fillings throughout all the excavated segments as little variation in the soil profile was apparent between the segments (Fig.3). This sequence is summarised in Table 1, while full descriptions of the soils can be found in the project archive. As in 1979 large quantities of wood, likely to be cuttings or damaged roots perhaps from hedges, were found in the base of the ditch (Pl.3-4).

The only feature in ditch 500 was a probable post-hole
Fig. 2. Plan of enclosure showing the 1979-80 and 1986 excavation areas, and plan of the 1986 excavation.
Table 1: Soil descriptions (see Fig. 3)

<table>
<thead>
<tr>
<th>Context</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Topsoil</td>
<td>10YR 3/2 Very dark greyish brown sandy loam, friable. Stones up to 100 mm. Charcoal, pottery, brick. Modern plough soil removed mechanically, thickness not recorded.</td>
</tr>
<tr>
<td>2 Tertiary fill</td>
<td>10YR 3/2 Dark brown sand, friable. Stones up to 40 mm. Pottery, iron, flint, tile. Very leached, windblown sand; iron pan forming at base. Thickness 1.07 m.</td>
</tr>
<tr>
<td>3 Secondary fill</td>
<td>10YR 4/6 Dark yellowish brown sand, friable. Stones up to 30 mm. Pottery, bone, material eroded from external side of ditch. Thickness 0.18 m.</td>
</tr>
<tr>
<td>4 Primary fill</td>
<td>10YR 3/2 Very dark greyish brown sandy clay, sticky. Stones up to 100 mm. Pottery, bone. Extensive iron panning. Thickness 0.08 m.</td>
</tr>
<tr>
<td>5 Subsoil</td>
<td>10YR 3/2 Very dark greyish brown sandy silt, friable. Stones up to 50 mm. Pottery, wood, flint. Thickness not recorded (not shown on Fig. 3).</td>
</tr>
<tr>
<td>6 Subsoil</td>
<td>10YR 2/1 Black sandy peat, friable at top/sandy. Stones up to 100 mm. Wood, leaves, bone, pottery. Thickness 0.40 m.</td>
</tr>
<tr>
<td>7 Subsoil</td>
<td>10YR 4/3 Dark brown sand, friable. Sparse wood. Lens of sand between peat layers. Thickness not recorded (not shown on Fig. 3).</td>
</tr>
<tr>
<td>8 Subsoil</td>
<td>10YR 3/2 Very dark greyish brown sandy clay, plastic. Wood, mainly long, thin, twigs aligned along ditch bottom. Thickness not recorded (not shown on Fig. 3).</td>
</tr>
<tr>
<td>9 Subsoil</td>
<td>10YR 3/2 Dark brown clay, plastic. Not present in all sections; thickest in southern section. Thickness 0.08 m.</td>
</tr>
</tbody>
</table>

(feature 508, 0.64m N/S, 0.69m E/W, 0.18m deep), situated in the terminal (Fig. 2). The post-hole appears to have been cut into the upper primary filling (context 5; Fig. 3) of the ditch and was filled with a very dark brown silty clay with small stones and charcoal flecks. It was sealed by the layers of sand and small stones eroded from the ditch sides (contexts 9 and 4; Fig. 3).

Five features were noted within the secondary fillings of the ditch 501 (Fig. 2). A lens of black, plastic, sandy clay (feature 515, 0.54m N/S, 0.51m E/W, depth unrecorded) containing charcoal, burnt bone, flint and small burnt stones was located in the terminal (segment 502) of the ditch. Similar lenses of very dark grey, greyish brown sand and charcoal (feature 519, 0.73m N/S, 0.65m E/W, 0.06m deep; feature 520, 0.70m in diameter, 0.03m deep; feature 521, 0.90m N/S, 0.56m E/W, 0.06m deep; feature 522, 0.70m N/S, 0.65m E/W, 0.07m deep) were located towards the eastern edge of the ditch, to the west of the terminal. Features 519 and 521 occurred within the upper secondary filling of the ditch (context 4), while features 520, 521, and probably 515, were situated between this material and the layer of small stones and extensive iron-panning (context 3). These features are interpreted as in situ hearths. One of them (hearth 515) yielded a date of cal BC 40-130 cal. AD at 68% confidence level or cal BC 160-240 cal. AD at 95% confidence (HAR-8530; 1940 ± 80). Soil analysis indicates (below) that there might have been a short-lived standstill in the ditch infilling at this point but the absence of clear traces of burning in the surrounding deposits suggests that, at best, these must have been very short-lived episodes of burning. A similar feature was encountered in the outer ditch during the 1979 excavations and was interpreted as the base of a post-hole cut into the ditch filling or rubbish thrown into the ditch after its abandonment (Chowne et al. 1986, p.162, fig.2, feature 20).

Radiocarbon dating
A. P. Fitzpatrick and Sarah Hill

Three radiocarbon determinations were made from context 5, one of the tertiary fills of ditch 501 (Table 2). The calibrated date ranges have been calculated using the maximum intercept method of Suiker and Reimer (1986) and they are quoted in the form recommended by Mook (1986) with the end points rounded outwards to 10 years. The calibrations have been calculated using the data published by Suiker and Pearson (1986), Pearson and Suiker (1986) and Pearson et al. (1986).

HAR-8527 from between segments 502 and 503 is not inconsistent with the date of cal BC 530-370 at 68% confidence or cal BC 780-200 at 95% confidence (HAR-4315; 2350 ± 90 BP) from wood found on top of the organic lower ditch filling in the outer enclosure ditch in 1979-80 and thought to be contemporary with the construction and early use of the enclosure (Chowne et al. 1986, p.162). The later Iron Age or Roman-British date of HAR-8530 from hearth 515 within the ditch is also not inconsistent with the stratigraphic position of feature 20 found in 1979-80.

There are, however, difficulties with HAR-8528 and 8529, both from between segments 502 and 503. The certificate and their initial publication in Radiocarbon 33 (1991), p.99 as HAR-8528; 990 ± 70 BP and HAR-8529; 410 ± 70 BP are appreciably younger than those given in the subsequent volume of Radiocarbon 34 (1992), p.54-55 as HAR-8528; 1990 ± 160 BP and HAR-8529; 6410 ± 70 BP. At the 68% confidence level the certificate dates might just be thought compatible with the small quantities of thirteenth to fifteenth century medieval pottery from the tertiary fill of the outer ditch but the dates given subsequently in Radiocarbon 34 are difficult to reconcile. One of the dates from the 1979-80 excavations of the inner ditch also provided some difficulties. In that case HAR-4313; 5200 ± 110 BP was much older than anticipated and the charcoal was interpreted as having been re-deposited.

Lastly it should be noted that a sample from the base of the ditch organic sequence from the 1979-80 excavations which was regarded as being unsuitable for radiocarbon dating (Chowne et al. 1986, p.186), did yield a date of cal AD 440-650 at 68% confidence or cal AD 380-690 at 95% confidence (HAR-5107; 1480 ± 100 BP) (Radiocarbon 34 (1992), p.54).

The finds
Distribution of the finds
The acidic nature of the soils affected the preservation of materials and even the Romano-British pottery was frequently poorly preserved. The major material types recovered consist of animal bones, leather, pottery and worked flint, in addition to substantial quantities of preserved wood. All the finds were three-dimensionally recorded. The majority occurred in

Pl.2. View of the 1986 excavations looking east towards the quarry.
ditch 501, the area of the terminal (segment 502) being especially prolific. Only twelve objects were found in ditch 500 but this may, in part, be due to desiccation owing to its proximity to the gravel quarry rather than reflecting the ancient distribution. Full details of the distribution of the finds are available in the project archive. Only the animal bone showed strong horizontal clustering. Joining pottery sherds and sherds probably from the same vessel occurred in fairly close proximity to each other but in general the pottery was distributed fairly evenly along the excavated lengths of the ditch. Preserved wood also occurred in all excavated segments (PL.4-5), but leather was only found towards the western end of segment 502. Not surprisingly, the very small quantities of worked flint recorded show no grouping.

Only very limited excavations were carried out in an area of the site that might perhaps be considered unlikely to produce a great quantity of finds: the outer ditch. Assuming that most activities were carried out within the enclosure, more material is likely to be deposited in the inner ditch than in the outer, simply as a result of proximity to the activity centre, unless it forms a special deposit associated with the boundary (for example Hingley 1990). Nevertheless, the density of objects recovered from the outer ditch seems surprisingly low compared with that from other Iron Age enclosures either in the
eastern Midlands, such as Gamston, Nottinghamshire (Knight 1992) or in Wessex, such as Winnall Down, Hampshire (Fasham 1985, fig. 84). However, the concentration of finds in the terminals of the enclosure ditches or at the ‘front’ of the site conforms to the pattern of deposition seen at some sites where the distribution of artefacts around the enclosure circuit has been studied (for example Hill 1994).

Metal objects
A small iron chisel-like object (Fig. 4; L. 111mm, W. 3-12mm, Th. 3-6mm) with a square tapering section was found during the general cleaning after machine stripping of context 4. The date of this tool is uncertain. Chisels have been recovered from Iron Age contexts at Hunsbury, Northamptonshire (Fell 1936, p. 66), Maiden Castle, Dorset (Wheeler 1943, p. 272, fig. 89.3-4) and Danebury, Hampshire (Sellswood, 1984, p. 351, fig. 2.47, 2.48); and are well known from the Roman period (Manning 1985, pp. 21-24). They continue with little morphological change until the present day. A second iron object, an amorphous lump (not illustrated; L. 126mm, W. 40mm, Th. 24mm) was found in the upper secondary filling (context 3) in the terminal of ditch segment 502. Its date is uncertain.

The pottery
A total of 101 sherds (1435g) was recovered from the stratified deposits within the ditch. Of these, sixty-eight sherds (771g) are of middle to late Iron Age date, thirty sherds (639g) are Roman, and three (25g) medieval. All the sherds occurred, within or above the organic infill deposit (context 5). The assemblage was recorded using an abbreviated version of Wessex Archaeology’s standard pottery recording system (Morris 1992). The occurrence of sherds by fabric type and context is summarised in table 3.

Middle to late Iron Age
Four fabric types were recognised amongst the sixty-eight sherds recovered.

Fabric D1: Coarse vesicular fabric
An iron-rich matrix containing sparse—moderate (7-10%) amounts of poorly-sorted, irregular, angular voids up to 4mm across, rare—sparse pale greyish-brown, non-calcareous clay-like particles up to 4mm across. Oxidised surfaces or irregularly fired. Hand-made. Vessel forms: medium to large jars with straight or slightly flaring walls and wedge-shaped bases (Fig. 5,1-2). Surface treatments: unaltered or very slightly smoothed (Fig. 5,2) or with shallow vertical scoring (Fig. 5,1). One body sherd (Fig. 5,3) has an inlaid cross or lattice decoration.

Fabric D2: Fine vesicular fabric
A finer version of Fabric D1 containing sparse (7%) amounts of angular voids and pale grey clay-like particles up to 4mm across and rare (2%) quartz grains up to 0.5mm across. Generally unoxidised with both interior and exterior surfaces burnished. Hand-made. Vessel forms: the greater part of the profile of a rounded, high-shouldered necked bowl with a slightly everted rim (Fig. 5,4) and body sherds from a closed, cordoned vessel, probably a jar (Fig. 5,5). Also small, flat-bottomed base sherds from closed forms (Fig. 5,6). Surface treatments: all sherds have a smooth, glossy burnished exterior surface, in some cases (such as Fig. 5,4) also found on the interior.

Fabric Q1: Fine-grained quartz tempered fabric
An iron-rich clay matrix containing moderate (15%) amounts of quartz

Table 2: Radiocarbon dates

<table>
<thead>
<tr>
<th>Laboratory Number</th>
<th>Site Reference</th>
<th>Context &amp; Small Find No.</th>
<th>Material</th>
<th>Radiocarbon Age (BP)</th>
<th>Calibrated date range (1σ)</th>
<th>Calibrated date range (2σ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAR-8527</td>
<td>TTB6204</td>
<td>5, tertiary ditch fill, sf 204</td>
<td>Wood**</td>
<td>210 ± 70</td>
<td>cal BC 390-180</td>
<td>cal BC 400-100</td>
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<td>HAR-8528</td>
<td>TTB6151</td>
<td>5, tertiary ditch fill, sf 151</td>
<td>Wood charcoal**</td>
<td>990 ± 70</td>
<td>cal AD 890-1160</td>
<td>cal AD 890-1210</td>
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<tr>
<td>HAR-8529</td>
<td>TTB6226</td>
<td>5, tertiary ditch fill, sf 226</td>
<td>Wood*</td>
<td>410 ± 70</td>
<td>cal AD 1430-1650</td>
<td>cal AD 1440-1650</td>
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<tr>
<td>HAR-8530</td>
<td>TTB615</td>
<td>515, hearth, 15</td>
<td>Charcoal</td>
<td>1940 ± 80</td>
<td>cal BC 40-130 cal AD</td>
<td>cal BC 160-240 cal AD</td>
</tr>
</tbody>
</table>

* Rowena Gale has identified all the remaining subsamples as containing (Quercus sp. fav). HAR-8527 contained heatwood and HAR-8529 sawdust but the quantity of material which could be identified is very small. The sample for HAR-8228 may have been oak charcoal (both heartwood and sawdust were present).
grains up to 1 mm across, rare (1%) organic matter up to 3 mm across and occasional (<1%) rounded voids up to 2 mm across. Oxidised surfaces or irregularly fired. Hand-made. Vessel forms: probable stack-shedded or shouldered jars with very slightly internally bevelled rims (Fig.5.7) or everted with diagonal slashes on the upper surface (Fig.5.8). Surface treatments: surfaces of all sherds were unaltered.

Fabric O2: Quartz with flint gritted fabric

An iron-rich matrix containing moderate-common (15-20%) amounts of quartz grains up to 0.5 mm across and sparse (<1%) crushed burnt flint pieces up to 2 mm across. Oxidised surface irregularly fired. Hand-made. Vessel forms: body sherds only. Surface treatments: present, surfaces were unaltered.

Discussion

Perhaps the most unusual feature of this assemblage is the apparent absence of shell-temper, normally the most predominant inclusion type in Iron Age assemblages throughout the Northamptonshire and Lincolnshire region (Pryor 1984, p.134; Jackson & Knight 1985, p.76; Jackson & Dix 1986, p.73; Taylor & Dix, 1985, p.92; Elsdon 1993; May 1996, p.418; Clean forthcoming). It is possible that the vesicular fabric (Fabric D1 and D2) originally contained shell, now leached out by acidic soil conditions and fluctuating groundwater levels. However, the irregular, angular shape of the voids and the presence of the pale greyish-brown, poorly-cohesive clay-like material visible against the darker matrix in a freshly broken fracture argues against this. This material is non-calcareous, lending further weight to the argument against shell. Similar inclusions, identified as mudstones, have been recognised in some of the Malvern fabrics from the West Midlands (Morris 1982, pp.15-16). In the Lincolnshire region, similar mudstones bearing clay occur amongst the Triassic mudstones of the Trent valley which then run westwards towards Birmingham (Ordnance Survey 1979 1625,000 Geology Map). They also occur further up the Bain valley, otherwise the nearest outcrop of these clays to Tattershall Thorpe would be in the Newark area, some fifty kilometres to the west.

The material recovered is encompassed by Knight's Group 2 ceramic assemblages (1984, p.40), with the majority of coarseware sherds recovered belonging to the East Midlands Scored Ware tradition (Elsdon 1992). Both Scored (Fig.5.1) and undecorated (Fig.5.2) coarseware vessels occur in the same coarse vesicular fabric (Fabric D1). If the voids and unidentified inclusions present in this fabric are indeed mudstones, then these vessels may have originated from the Trent valley, one of the major centres of the distribution of Scored Wares (Elsdon 1992, fig.2; 1993, fig.3). Plain rims (Elsdon 1992, fig.1.4, 6, 8-12) and rims with diagonal slashes (ibid., fig.1.2, 5) are both common elements within the Scored Ware tradition. The sandy fabric Q1 rims (Fig.5.7, 8) may also be part of this group, although there is no reason why this fabric could not have been produced locally. The sand and flint gritted fabric (Fabric Q2) is also likely to be a local product, although no affinities have been established given the small size and fragmentary nature of these sherds.

Fineware vessels are also represented (Fig.5.4-6). These vessels are comparatively thin-walled, their burnished surfaces providing a high contrast to the unaltered or scored surfaces of the coarsewares. The vessels are probably hand-made but the careful surface finish masks all traces of manufacturing technique. The rounded, high-shouldered necked bowl (Fig.5.4) is similar to the range of small, undecorated jars/bowls encompassed by the Types 4 and 15 vessels at Dragonby, which are often burnished (May 1996, pp.413-15, fig.19.6-7), although these occur in the shelly fabrics dominant at that site and in the Lincolnshire region in general. A variety of cordoned vessels also occur at Dragonby (ibid., fig.19.6-7) and it is uncertain whether the cordoned sherds (Fig.5.5) are from an open or closed form, much of the interior surface being severely abraded. Although the form of a Type 15 jar from Dragonby, of very late Iron Age or early Roman date, (ibid. pp.406, 471, fig.19.37, 304) offers perhaps the closest parallel for the clustered, variably sized cordon, the profile of the vessel is more like the Dragonby Types 4-5 small bowls or globular jars. No evidence for the use of vessels was encountered amongst the assemblage.

Dating and distribution of the Iron Age pottery

The dating evidence for the construction and early use of the enclosure from the 1979-80 excavations was slight; a single sherd from a cordoned pedestal vessel and an associated radiocarbon date from the outer ditch (Chowne et al. 1986, p.183, fig.8.28). The remaining pottery from those excavations was of early first-century AD date and was mainly recovered from a recut of the inner ditch (ibid., p.183, fig.8 & 9). The cordoned pedestal base was dated on stylistic grounds to the fifth to third century BC, while a radiocarbon date of cal BC 530-370 at 68% confidence or cal BC 780-200 at 95% confidence (see above) was obtained from carbonised wood recovered from the same context in the outer ditch. It was on the basis of this date that the dated, high-shouldered necked bowl (Fig.5.4) was ascribed to the early La Tène by Elsdon (1993, p.19).

Pentead bases are known from La Tène I contexts (Clay 1925, p.LIV, 6), but similar forms also occur, perhaps more commonly, amongst later material. At Hengistbury Head, Dorset, cordoned pentead bases are generally date to the late Iron Age I phase (c.100-50 BC; Culiffe & Brown 1987, p.212, ill.181) and while pentead bases do occur throughout the sequence at Dragonby, perhaps the most similar examples occur in later first-century BC groups (May 1996, pp.624, fig.19.28, 160). Consequently although a fourth- to third-century BC date for this sherd cannot be ruled out, a later Iron Age date is also possible. A further argument for a late Iron Age date is the fabric of this sherd which might correspond with the coarse, vesicular fabric (Fabric D1) used for the Scored Wares which continue into the early first century AD (Elsdon 1992). The fabric of this sherd is recorded as being coarse with a high grog content (Chowne et al. 1986, p.183). The remaining clay-like inclusions Fabric D1 are, at first sight, very reminiscent of grog, although they are generally finer grained and more loosely structured. However, the form of this sherd is far more elaborate, more suitable for a fineware vessel form, than any of the Fabric D1 sherd's recovered or encompassed by the Scored Ware tradition (Elsdon 1992). Equally, the suggestion of late Iron Age date requires dismissing the associated radiocarbon date.

The practice of scoring coarseware vessels seems to have begun during the fourth century BC but did not become
Table 3: Quantification of the stratified pottery by context and fabric

<table>
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<tr>
<th>CONTEXT</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<td>Wt (g)</td>
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<td>Wt (g)</td>
<td>No.</td>
<td>Wt (g)</td>
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<td>733 g</td>
<td>9</td>
<td>96 g</td>
<td>2</td>
<td>8 g</td>
<td>49</td>
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</table>

A later Iron Age date is also suggested by the fineware sherds recovered (Fig.5.4-5). The Type 15 vessels from Dragonby begin in Dragonby Ceramic Stage 3, but continue into the middle of the first century AD (May 1996, p.415, Fig.19.5) while parallels for the vessel with the variably sized, clustered cords (Fig.5.5) occur on groups of very late Iron Age or early Romano-British date at Dragonby.

Therefore the dating of the small Iron Age assemblage remains uncertain and it offers little support in attempting to date the Dragonby sequence (May 1996, p.624). While many of the sherds recovered could be as early as the third century BC, a later Iron Age date is possible for the small group as a whole. Such a date would fit more easily with the substantial quantity of first-century AD pottery recovered from the inner ditch during the earlier excavations (Chowne et al. 1986, fig.8-9). Although it was suggested that the apparent absence of pre-Conquest imports indicated that the 1979-80 finds dated to the turn of the millennium (ibid., p.185), such imports are generally rare in the region and a rim of a flagon in a non-Continental fabric (ibid., p.180, fig.8.1) is most likely to be Romano-British, suggesting that a date nearer to the middle of the first century AD is perhaps more likely.

The virtual absence of other first-century AD pottery from the 1986 excavations may be functional or chronological, but is perhaps most likely to be due to the small size of the assemblages; 129 and 68 sherds from 1979-80 and 1986 respectively. In view of this and the limited size and location of the areas excavated (all in one part of the site), it may be prudent to assign only a broad mid to late Iron Age date to the site.

With the exception of groups of joining or closely related sherds (such as Fig.5.2, 4-5), little horizontal clustering is apparent in the distribution of Iron Age sherds along the length of ditch exposed in 1986. The majority of sherds occurred in the organic deposit of the upper primary and lower secondary fillings (contexts 5 & 9, Table 3). The pedestal base and the carbonised wood from the earlier excavations (Chowne et al. 1986, p.162, fig.3a, pl.19b) also occurred at a similar level. It is uncertain whether the poor condition of the sherds is due to the acidity of the contexts in the upper levels or to the redeposition of the vessels.

Romano-British

Three fabric types were recognised amongst the surviving thirty Roman sherds (639g). The majority occurred in the upper secondary or tertiary fillings of the ditch (Table 3).

Fabric Q100: Sandy grey coarsewares
Group of fabrics all predominantly unoxidised. Contain moderate to abundant (15-50%) amounts of sub-rounded quartz grains up to 0.5mm across. Generally hard and well-fired, hand-made and wheel-made examples occur.

Fabric Q101: Fine, buff fabrics
An iron-poor matrix containing moderate (15%) amounts of quartz up to 0.25mm across, very occasional larger quartz grains (<1%) up to 0.75mm across and rare (1-2%) red iron oxides up to 0.5mm across. Oxidised. Wheel-made.

Fabric E175: Nene Valley colour-coated ware
Only single body sherds of the ‘fineware’ buff flagon fabric and Nene Valley colour-coated ware were recovered (Hartley 1966; Howe et al. 1981) (Table 3). All four of the diagnostic greyware sherds were from standard Romanised vessel forms, a narrow-necked jar with a rolled rim (Fig.5.9), slightly everted rim jars (Fig.5.10-11) and a shallow straight-sided dish (Fig.5.12). Two flat bases and the majority of body sherds were derived from closed forms, probably jars. Most sherds had suffered considerable surface abrasion, no clear traces of surface finishes were recorded and only two decorated sherds were noted, one with an incised groove and another
Fig. 5. Pottery: nos 1-8 Iron Age; nos 9-12 Romano-British.

List of Illustrated Sherds

<table>
<thead>
<tr>
<th>No.</th>
<th>Iron Age</th>
<th>Context</th>
<th>Small Find</th>
<th>Fabric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
<td>D1</td>
<td>Body sherds from straight-walled jar, scored</td>
</tr>
<tr>
<td>2</td>
<td>5/9</td>
<td>200/202/203</td>
<td></td>
<td>D1</td>
<td>Wedge-shaped base, slightly flaring walls</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>181</td>
<td></td>
<td>D1</td>
<td>Decorated body sherd</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>110/178</td>
<td></td>
<td>D2</td>
<td>Rounded high-shouldered, necked bowl</td>
</tr>
<tr>
<td>5</td>
<td>3/5</td>
<td>24/67</td>
<td></td>
<td>D2</td>
<td>Cordoned vessel</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>5</td>
<td></td>
<td>D2</td>
<td>Base of small closed form</td>
</tr>
<tr>
<td>7</td>
<td>5</td>
<td>72</td>
<td></td>
<td>Q1</td>
<td>Rim; slightly internally bevelled</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>229</td>
<td></td>
<td>Q1</td>
<td>Rim; diagonal slashes on upper surface</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Romano-British</th>
<th>Context</th>
<th>Small Find</th>
<th>Fabric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td></td>
<td>2</td>
<td>62</td>
<td>Q100</td>
<td>Narrow-necked jar with rolled rim</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>2</td>
<td>67</td>
<td>Q100</td>
<td>Slightly everted rim jar</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>2</td>
<td>83</td>
<td>Q100</td>
<td>Flat flanged bowl/dish</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>2</td>
<td>38</td>
<td>Q100</td>
<td>Shallow, straight-sided dish</td>
</tr>
</tbody>
</table>
with burnished line lattice. This material is likely to date from the second century AD or later (Hartley 1960; Howe et al. 1981) and can only be taken to indicate some activity in the area.

**Medieval**

Three medieval sherds (25g) were recovered, all of predominantly oxidised, sandy coarseware fabrics (Fabric Q400).

Fabric Q400: Medieval sandy coarseware

Group of fabrics, predominantly oxidised, containing moderate (10-15%) amounts of subrounded quartz up to 0.5mm across. Hard, well-fired fabric. Wheel-made. Some examples have traces of glaze on the exterior surface.

Two sherds have traces of glaze on the exterior surfaces. All the sherds are of thirteenth- to fifteenth-century date and occurred in the tertiary filling of the ditch (Table 3).

**The leather**

Glynis Edwards

Leather was found in the organic deposit (context 5) towards the south-western end of ditch segment 502, having also been found in the earlier excavations (Chowne et al. 1986, p.177, pl.22b). Most of the leather consists of very degraded, featureless fragments which have become incorporated into compressed plant material including leaves. The only two pieces of any size (from Small Find 224) have folds in them but it is impossible to say whether this was accidental or deliberate. There are no traces of stretching and, although there are some probable cut edges, no recognisable shape. It has been impossible to identify the function of the material. The surviving grain pattern on these larger pieces indicate that the leather was probably calf.

**The worked flint**

W. A. Boismier

Eighteen flint objects were recovered from the line of the ditch. These consist of eleven worked flakes, a battered and frost-shattered, water-worn pebble, and six unworked, probably plough-damaged fragments, one of which was burnt. Of the eleven flakes, three were retouched tool forms, the remainder being unretouched flakes. The retouched tools comprise two scrapers, both found in segment 502, one from the organic layer (context 5), the other from the secondary fill (context 3), and a marginally retouched flake from the secondary fill (context 3) of segment 504. This material is presumably residual.

**The animal bone**

Rachael H. Seager Smith and Clive Gamble

Sixty small find numbers were assigned to one or more fragments during the excavation. The preservation of bone in this section of the enclosure ditch was unexpected, given the highly acidic soil conditions and the absence of bone from the earlier excavations at this site (Chowne et al. 1986). Over half the occurrences of animal bone were found within the organic deposits in the ditch (contexts 5 and 17) and this was the only material type to be found in dense horizontal clusters. A small group of bones was found in the terminal of ditch 500 while three groups, including one in feature 515, were found in segment 502 of ditch 501. Other clusters in this ditch occurred in the vicinity of features 519 and 522.

Only fifteen of the sixty small find numbers allocated to animal bone were available for study and these were examined by Clive Gamble. Four of the objects were found not to be bone but the remainder consist of 144 fragments of bone (360g). A further five fragments (73g) of unstratified animal bone were also examined. The bone is generally in a very poor condition, all the fragments are very small and either abraded and friable, or brittle and mineralised. Only the teeth could be assigned to species, indicating the presence of horse, cattle and sheep/goat amongst the assemblage.

**The wood**

Maisy Taylor

In addition to eighty-seven fragments of wood which were individually recorded as possibly being worked, twelve samples were also taken from the organic ditch deposits to examine the range of species and wood types (roots, twigs, roundwood etc.) preserved. Full details can be found in the project archive.

The majority of fragments recovered were of Salix sp. (willow) and Betula sp. (birch) with smaller quantities of Quercus sp. (oak). One long straight stem of Alnus glutinosa (alder) and one piece of either Alnus glutinosa or Corylus avellana (hazel) root were recognised. Fragments of both worked and unworked root, twigs, sapwood, bark and roundwood were found. Twiggly willow or birch and willow root fragments predominated, and much of the assemblage, especially the willow, is weathered.

**Willow**

No strong evidence for coppicing was encountered. A few long, straight stems including one or two which have a feel preserved, were present but lacked the distinctive ring growth characteristic of coppicing (Rackham 1977) and were all quite slow grown. This suggests that the willow was simply growing nearby on the edge of, or even actually in, the ditch. All the fragments of root which were initially regarded in the field as being worked were of willow and many were weathered. The most likely explanation for this is that the willow roots were damaged (thus appearing to have been worked) during the cleaning of the ditch, thrown aside and subsequently reincorporated into the ditch filling in a weathered state sometime after the cessation of ditch maintenance. The fragments of sapwood with bark attached or tangentially split off the timber and significant quantities of roundwood trimming debris recovered indicate that willow roundwood was being harvested and trimmed down to square without splitting, in the immediate vicinity of the ditch.

**Birch**

Although a high proportion of birch was recovered, no worked fragments or pieces of root were identified. None of the birch was weathered and it is likely that it was derived from trees growing close by, but not so close that the roots actually penetrated the ditch.

**Oak**

There is some evidence, provided by the presence of a few root fragments, for oak growing in the vicinity. However, no fragments of bark or sapwood were identified, most of the oak...
being in the form of radial woodchips from large, fast-grown trees. This sort of debris is produced by the fine trimming of timbers from trees already split into halves or quarters. It is more likely that the oak was grown and rough trimmed (the bark and sapwood removed) some considerable distance away.

One oak object was found in context 5 in ditch 500, a one-eighth split fragment (L. 188mm, W. 46mm, Th. 55mm), trimmed to give a roughly square cross-section and chamfered at one end with a single oval hole (L. 30mm, W. 23mm) through the centre of the object (small find 48, Fig.6; Pl.5). Its use is unknown.

Discussion

Although the preserved wood provides glimpses into the sort of everyday activities seldom revealed by dry deposits, less detail about woodworking skills than might have been hoped was recovered. Once the water table falls detail is quickly lost from worked wood, a process which, of course, is irreversible (French & Taylor 1985). By 1986 the de-watering of the adjacent quarry was already severely affecting the preservation of the organic deposits in the ditch.

Soil analysis of the ditch deposits

C. A. I. French

Fifteen samples were taken from the north facing section of ditch 501 in segment 504 (Fig.3a) for particle size analysis using the hydrometer method (after Shackley 1975) and a further three samples were taken as intact blocks of soil for soil micromorphological analysis (Bullock et al. 1985a; 1985b). A profile description and full details of the particle size and micromorphological analysis can be found in the project archive.

The composition of the primary fill represents at least four separate events. Initially there was a rapid accumulation of sand derived from the exposed sides of the ditch. This was followed by an accumulation of organic matter in a permanently waterlogged, open ditch. The consequent peat formation and the preservation of wood in this deposit was a result of a locally high ground water table. Within this episode there was at least one temporary period of drying out and sediment accretion witnessed by the formation of a lens of cemented sand within the peat deposit. Finally there was a phase of erosion and sediment deposition under alternating wet and dry conditions.

The secondary filling is characterised by naturally derived yellowish brown sand and greyish brown loamy sand sediments. These two sediments exhibit slight lensing and intercalation. Both sediments were subject to alternating wet and dry conditions, presumably due to a fluctuating ground water table. The greyish brown loamy sand filling is also characterised by the relative accumulation of organic matter. This feature is suggestive of a short-lived 'standstill' in the process of ditch infilling, combined with a temporarily high ground water table. The relatively thick lens of iron pan formation at the base of the lower secondary filling is indicative of a relatively lengthy phase of alternating wet and dry conditions. It probably reflects the average height of the ground
water table of the day at some point after the abandonment of the
ditch.

The sandy homogeneous nature of the tertiary filling reflects the
continued accumulation of naturally derived sediments
under alternating wet and dry conditions.

The minor silt and clay fractions in the ditch filling were probably derived from the adjacent soil and subsoil, and were
probably deposited in two ways: as a result of the settling out of
suspension in standing water, and/or were translocated down
the ditch profile and deposited due to hydromorphism.

The general impression gained is of an abandoned ditch that was left
to fill slowly by natural means under a fluctuating, but
gradually rising ground water table.

Discussion

Rachael H. Seager Smith and A. P. Fitzpatrick

As previously discussed (Chowne et al. 1986, p.184),
Tattershall Thorpe shares some similarities with a small number of
large, but poorly known, and effectively undated, enclosures in
Lincolnshire such as Burgh Banks, Old Somery, near
Grantham (Chowne et al. 1986, p.184, fig.11). Most of these
enclosures are univallate but Careyby Camp, near Stamford,
which was described by Phillips as bivallate, oval in plan and
slightly larger than Tattershall Thorpe (Phillips 1934, p.102;
May 1976, p.143; Chowne et al. 1986, p.184, fig.10) appears to
be the most similar. The most comparable site in Lincolnshire
is, however, known from air photographs and lies only two
kilometres to the north-west where an undated, sub-oval,
double-ditched enclosure about 150 metres long has been identified (Oxford Archaeological Associates 1994). To
the south a number of related ringwork sites in Cambridgeshire
have been examined more fully and several have been shown to
date to the later Iron Age, for example Coveney near Ely and
Stonea Camp near March (Hall & Coles 1994, pp.94-104;
Jackson & Potter 1996).

Tattershall Thorpe may be considered in relation to Knight’s
analysis of settlement in the Nene and Great Ouse basins, where
it falls within his Group 2/3 settlements, with Type 3 (two
widely spaced, concentric ditches) boundaries (Knight 1984,
pp.169, 204). However, the size of the Tattershall Thorpe
enclosure (about two hectares) is far in excess of the range
suggested by Knight for sites of this type. The location of an
enclosure, at least through the outer ditch, roughly in the
centre of one of the enclosures, conforms to the expected
pattern for what were classified as late Bronze Age/Iron Age 1
and Iron Age 2 sites in Knight’s study area (1984, p.221).
The enclosure discovered in 1986 is paralleled by Knight’s type 1
enclosures which are flanked by one or more pairs of opposing
terminals (ibid., p.214).

The possibility that the entrance causeway across the inner
ditch (Chowne et al. 1986, p.162, fig.2), and the entrance
through the outer ditch, found in 1896, together represent a
staggered entrance cannot be excluded, but the differences in
width between the two causeways, 2 metres and 3.5 metres
respectively, suggest that this is unlikely. If the entrance through
the inner ditch on the south-east is similar to the entrance in
the north-west of the enclosure seen on air photographs (Fig.2,
Pl.1), it probably lies beneath Ampasture Lane (Fig.2).
The causeway across the inner ditch recorded in 1979-80 may
represent an additional entrance or access to the area between the
ditches or that the circuit of the inner ditch was not completed.

The substantial nature of the enclosure ditches, some five
metres wide, led to the identification of defence as the primary
role of the enclosure (Chowne et al. 1986, p.184). Although
large enough to fall within definitions of a hillfort (for example
Knight 1984, p.169), and an interpretation accepted by some
(May 1996, p.624), the excavated evidence is enigmatic.

No evidence for ramparts or eroded bank material in the
ditches has been discovered, although the distance between the
ditches (some sixteen metres; Chowne et al. 1986, p.184) is
clearly sufficient for substantial banks. Nor were any traces of
activity in the inter-ditch zone or immediately outside the
enclosure revealed when areas beyond the line of the ditches
were stripped of topsoil (Chowne et al. 1986, fig.2, pl.18a).
Despite this it seems likely that the hedges surrounding the
ditches grew on at least part of the uppermost soil on the ditches
but it may be that one of the prime purposes of the ditches, which
initially were permanently wet, was for drainage or flood
defence.

With the possible exception of a single sherd found in 1979-
80, no finds associated with the construction or primary uses of
the enclosure have been found. Although there are a few
relevant comparanda, the density of the finds recovered from
the ditch fillings seems comparatively low and, with the
exception of the pottery, a single fragment possibly from a
loom weight found in 1979-80 (Chowne et al. 1986, p.184),
and the upper stone from a beehive quern found in the mid 1970s
and now in private possession, few objects indicative of settlement
(such as building debris, loom weights, spindle whorls) were
found.

The slight evidence from the animal bone for the presence of
cattle, sheep/goat and horse would, however, be consistent with
domestic refuse. Worked leather was found, both in 1979-80
and 1986 (Chowne et al. 1986, p.177, pl.22b, and above),
and there is some inferential evidence for buildings from some
of the species of beetles which are favoured by human activity,
often being found in buildings (ibid., p.177). The evidence for
woodworking found in 1986 would be consistent with
settlement activity.

Given the evidence for the contemporary environment as
having been largely open grassland with some woodland or
scrub and limited areas of cultivation little importance should
be attached to the rarity of artefactual evidence for cereal
cultivation and/or processing (Chowne et al. 1986, pp.167,
169). Grassland plants dominated the pollen and seed
assemblages, and the presence of grazing animals was indicated
by considerable quantities of dung-associated fauna and
meadow plant-feeding species amongst the insects present
(ibid., p.169.). The presence of leaves, twigs, seeds and nuts of
certain trees and shrubs suggested that hedges grew adjacent to
the ditch, which permanently contained open water (ibid.,
p.167), and it has been suggested above that willow may have
grown in the ditch.

The association of enclosures delineated by two or more
widely spaced boundary features, with animal husbandry has
been noted by Knight, with examples of such sites occurring
widely in England and Wales (1984, p.204). The space between
the ditches may have been used as a corral, and at Tattershall
Thorpe the open water in the ditches may have been used to
water cattle and other animals.

The weight of the evidence from this southern section of the
enclosure supports the interpretation of the site as being
associated primarily with stock grazing. Situated with ready
access to summer pasture on the fen and marsh to the south, and
with winter grazing on the freer draining sands and gravel of
the Bain valley, the enclosure will have provided defence to
animals as much as people, and perhaps more importantly, as
Evans (1992) has put it, ‘a commanding gesture’ in a
comparatively low lying and relatively unenclosed landscape.

Further investigation of other areas of the site, especially the
central area of the enclosure is necessary for a fuller
understanding of its chronology, in particular the resolution of
the apparent discrepancy between the slight evidence for
fourth- to third-century BC activity found in 1979 and the
great majority of the evidence being of late Iron Age first-century AD
date, and also the series of widely divergent radiocarbon dates.
A better understanding of the roles of this enclosure also
depends on a better characterisation of contemporary settlement
and other activity in the landscape. The evidence, particularly
of pottery, may be hard to locate (Lane 1993, p.83), but finds such
as the lynch pins from Tattershall Thorpe (Owen 1993) suggest

that it exists. For Tattershall Thorpe, however, by 1986 the de-watering of the adjacent quarry was already having serious effects on the preservation of archaeological deposits, much of which, by now, may well have reverted to sterile sand.

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Unpublished report.


