

# Archaeological Investigations at Appleford

By JOHN HINCHLIFFE and ROGER THOMAS

With contributions by DON BRAMWELL, STEWART BROWN, ERIC EDWARDS,

JILL GREENAWAY, GEORGE LAMBRICK, DAVID MILES, GWYN MILES,

MARK ROBINSON, DEE DE ROCHE, JANET SANDERS, and BOB WILSON

## SUMMARY

*Salvage work during gravel extraction on a 20ha. cropmark site produced features and artefacts suggesting occupation throughout the Iron Age and Roman periods. Discoveries included a hoard of currency bars and a hoard of late Roman pewter. A full-scale excavation in 1973 revealed late Bronze Age pits with pottery of a type rarely found in the Upper Thames, a sequence of middle Iron Age enclosures associated in their last phase with a trackway and series of possible field boundaries, a Romano-British ditched trackway and enclosure system first laid out in the 2nd century AD and finally abandoned late in the 4th century AD, five R-B waterholes and a small inhumation cemetery of late R-B or post-Roman date.*

## INTRODUCTION

In 1966 the Amey Group Ltd. (now the Amey Roadstone Corporation) began a programme of gravel extraction in an area lying between the villages of Sutton Courtenay and Appleford, to the south of the River Thames. This area included the piece of land known as 'Appleford Field', immediately to the west of the present village of Appleford, and to the south of the Sutton Courtenay Road. Aerial photography had revealed cropmarks indicating the pits and ditches of a settlement covering about 20ha. of the field, one of many such sites along the gravel terraces of the river valley in this area.<sup>1</sup> (Figs. 2 and 3 and Pl. 1)

A number of archaeological finds were already known from Appleford Field before gravel extraction began. Between 1967 and 1973 several separate archaeological operations took place at the gravel pit and material of Iron Age and Roman date, including a hoard of Iron Age currency bars<sup>2</sup> and a hoard of Roman pewter<sup>3</sup> was recovered from the site. Because of the amount of archaeological material present it was decided in 1973 to mount a full scale rescue excavation on the remaining, north-eastern, part of the site. This was carried out in the summer of 1973, under the direction of John Hinchliffe, with the full co-operation of Amey Roadstone Corporation. It is the account of this excavation that comprises the main body of this report, but also included are summaries of previously published material from the site, an account of the salvage work carried out between 1967 and 1974 and a report on excavations carried out in 1969 by Mrs. Jill Greenaway of Reading Museum.

<sup>1</sup> D. Benson and D. Miles, *The Upper Thames Valley: an Archaeological Survey of the River Gravels* (1974), Maps 34 and 35.

<sup>2</sup> D. Brown, 'A hoard of Currency Bars from Appleford, Berks.' *Proc. Prehist. Soc.*, xxxvii (1971), 206-8.

<sup>3</sup> D. Brown, 'A Roman Pewter hoard from Appleford, Berks.' *Oxoniensia* xxxviii (1973), 184-206.

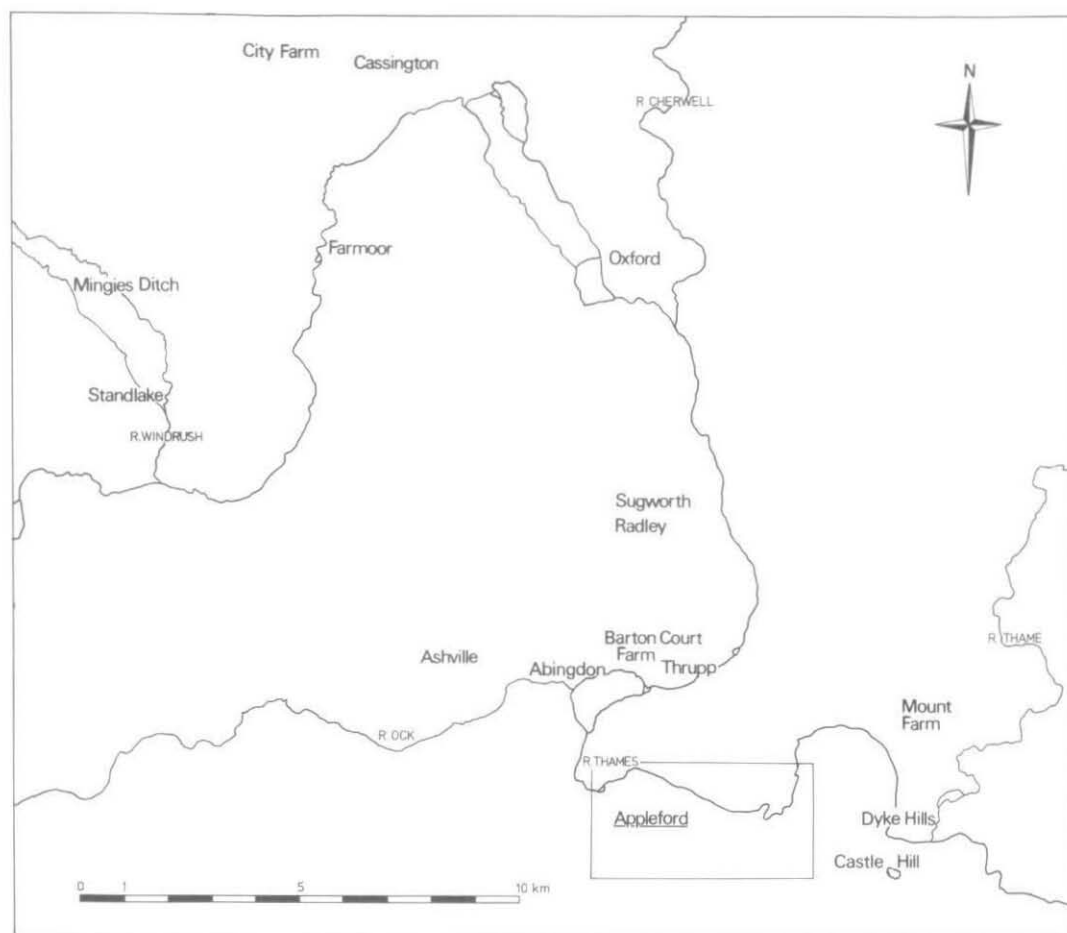


Fig. 1 Iron Age Sites in the Oxford Region. Box indicates the area of Fig. 2.

#### ACKNOWLEDGEMENTS

Many people have been involved in the archaeological work at Appleford over the years, and to these people thanks are due. A great debt of gratitude is owed to the staff of the Amey Roadstone Corporation, who readily granted permission for archaeological operations to take place on the site and who rendered assistance in many ways during the execution of this work.

Members of the Abingdon and District Archaeological Society and the Wantage and District Field Club, and the staff of the Abingdon Excavation Committee all participated in salvage work at the site on various occasions. Reading Museum loaned equipment for the 1969 excavation.

The 1973 excavations were carried out under the auspices of the Upper Thames Archaeological Committee and the Oxfordshire Archaeological Unit, with finance provided by the Department of the Environment, and thanks are owed to these bodies. In the 1973 excavation, Peter Crane acted as Site Supervisor and Martha Gay was Finds

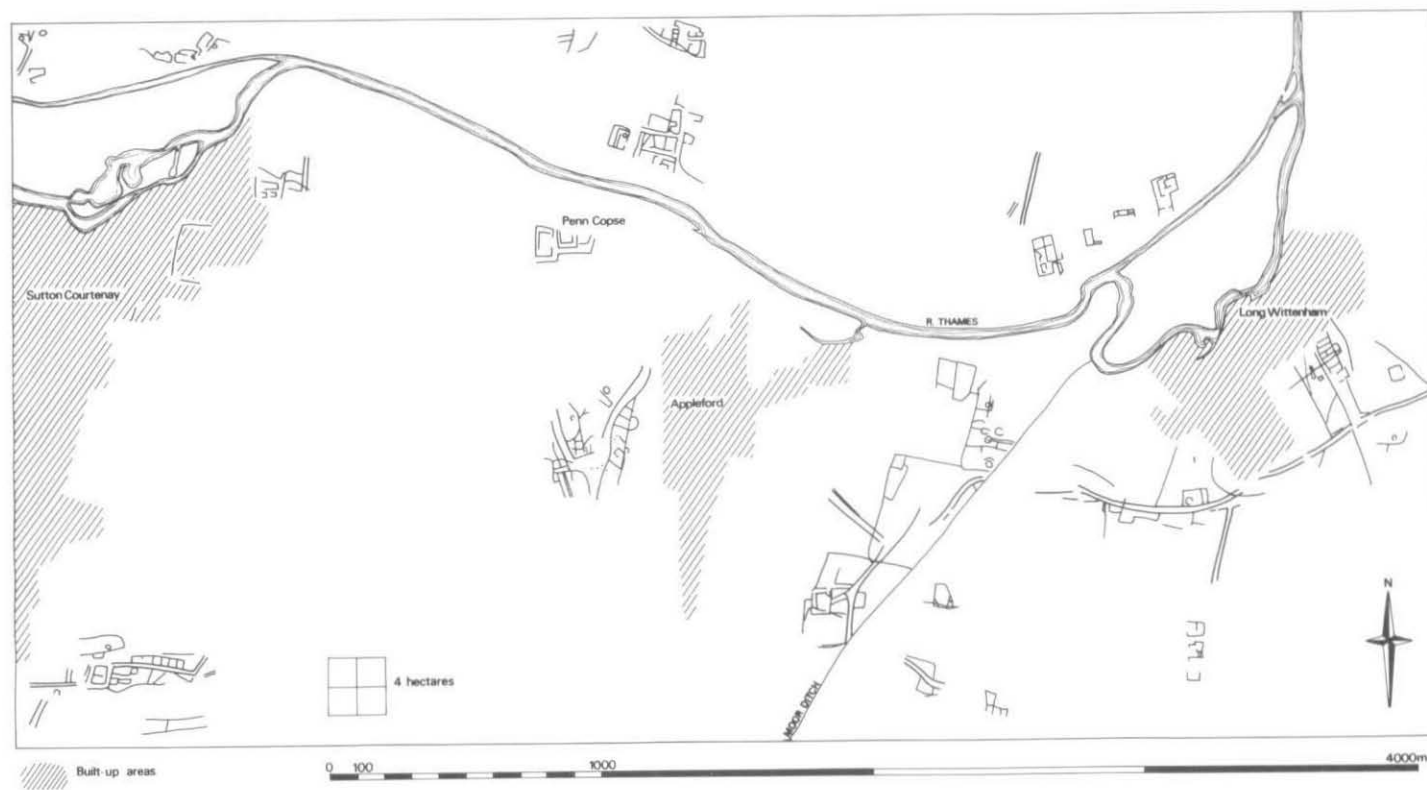


Fig. 2 Cropmarks in the vicinity of Appleford.

Supervisor. Thanks are also due to those who worked as volunteers on the excavation, to those members of the Oxford University Archaeological Society who assisted with excavation and field walking, and to the Oxford section of the British Sub-Aqua Club for undertaking diving in the Thames.

The illustrations in the report were produced by Siriol Hinchliffe, Wendy Lee, Patricia Roberts and Jonathan Skollern. H.P. Powell identified the quernstones. We are grateful to David Miles and George Lambrick for reading and commenting on an earlier draft of this report.

#### ARCHIVE

The Site records relating to the Appleford 1973 Excavations are deposited with the Oxfordshire Archaeological Unit. The finds are deposited with the Ashmolean Museum, Oxford.

#### THE SITE

Appleford field lies on the First gravel terrace of the Thames at a height of about 51m. OD.<sup>4</sup> The site was not inundated in the great floods of 1947.<sup>5</sup> The modern soil overlying the gravel belongs to the Sutton series, neutral sandy loam.<sup>6</sup> Over much of the site the soil was over a metre deep, unusually deep for a Thames Valley site.<sup>7</sup> Prior to gravel extraction the area had been arable land for a considerable period, and a ploughsoil 0.25m. – 0.30m. deep was noted in the 1973 excavations. Before gravel extraction began it was possible to find unabraded sherds of Iron Age and Roman pottery in the ploughsoil,<sup>8</sup> which suggests that deep ploughing may have been taking place in recent years.

### THE CROPMARKS AT APPLEFORD By DAVID MILES

The Appleford settlement was first recorded in a series of excellent photographs taken by W.A. Baker in 1961.<sup>9</sup> At this time Appleford Field had not been encroached on by gravel extraction. The Berkshire County Survey carried out by Fairey Surveys Ltd. in April 1969 shows that quarrying had extracted the whole of the field to the west of the site and the eastern edge of the cropmark complex itself.

The Appleford Field cropmarks cover approximately 20ha. (Fig. 3). The extent of the known cropmarks is delimited by modern land use. To the north they stop at the Sutton Courtenay–Appleford Road and to the south along the line of a field boundary. The trackways visible on the aerial photographs presumably continued beyond these points. The cropmarks seem however to represent the nucleus of the ancient settlement. The Appleford cropmarks are dominated by a trackway system radiating in three directions from a central, triangular, open area. The trackways run due north, north-east and south. The northerly ones can be traced for about 400m. before they reach the modern road; the southerly track is truncated by the changing crop conditions after about 100m. The trackway ditches show evidence of multiple recutting but even at their narrowest are considerably wider than the modern lanes in the neighbourhood.

<sup>4</sup> Geological Survey 1" Map, Sheet 253.

<sup>5</sup> Information from Lt. Col. D. Williams of the Thames Conservancy.

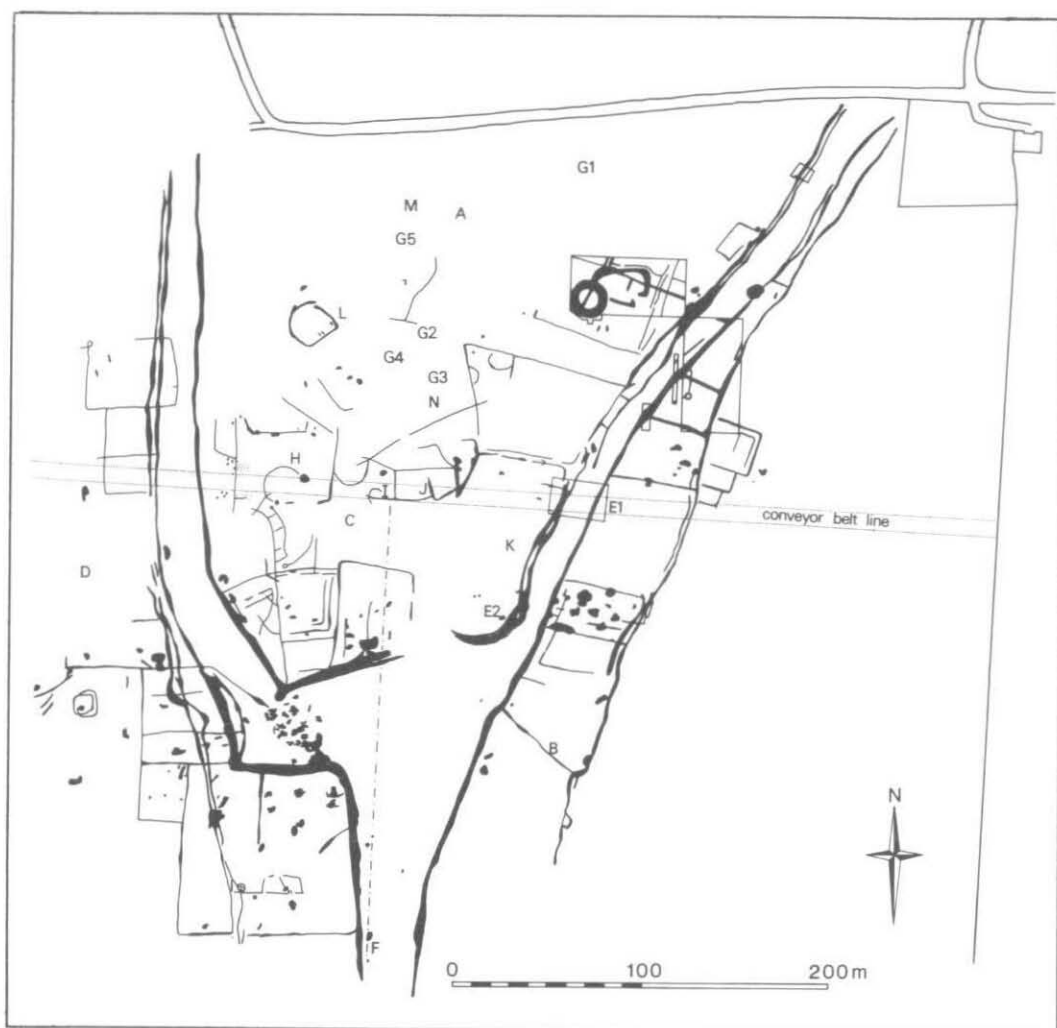
<sup>6</sup> M.G. Jarvis, *Soils of the Abingdon and Wantage District* (1973), 117–20.

<sup>7</sup> See p.

<sup>8</sup> Information from Mr. Derek Steptoe.

<sup>9</sup> National Monuments Record Nos. SU 5293/2–6.





Key to Fig. 3.

Fig. 3 Appleford Field: Cropmarks

- A - Findspot of Roman coin hoard. (See p. 16)
- B - Findspot of Neolithic stone axe. (See p. 17)
- C - Approximate findspot of currency bar hoard. (See p. 18)
- D - Approximate findspot of pewter hoard. (See p. 19)
- E1 - Area examined in 1969. (See Fig. 4 and p. 26)
- E2 - Position of wicker-lined pit recorded in 1969. (See p. 26)
- F - Area to the west of this line and south of the conveyor belt destroyed without record.
- G1 - Skeletons recorded by Abingdon Excavation Committee. (See p. 29)
- G2 - Drawn section. (See Fig. 10 and p. 29)
- G3 - Waterhole (See p. 29)
- G4 & G5 - Pits. (See p. 32)
- H & I - Iron Age hut circles. (See p. 18)
- J - Two Iron Age pots found together. (See p. 18)
- K - Approximate position of Romano-British gravel floor. (See p. 18)
- L - Polygonal Iron Age enclosure. (See p. 18)
- M - Approximate location of Iron Age hut circle. (See p. 18)
- N - Approximate location of Iron Age pit or scoop. (See p. 18)

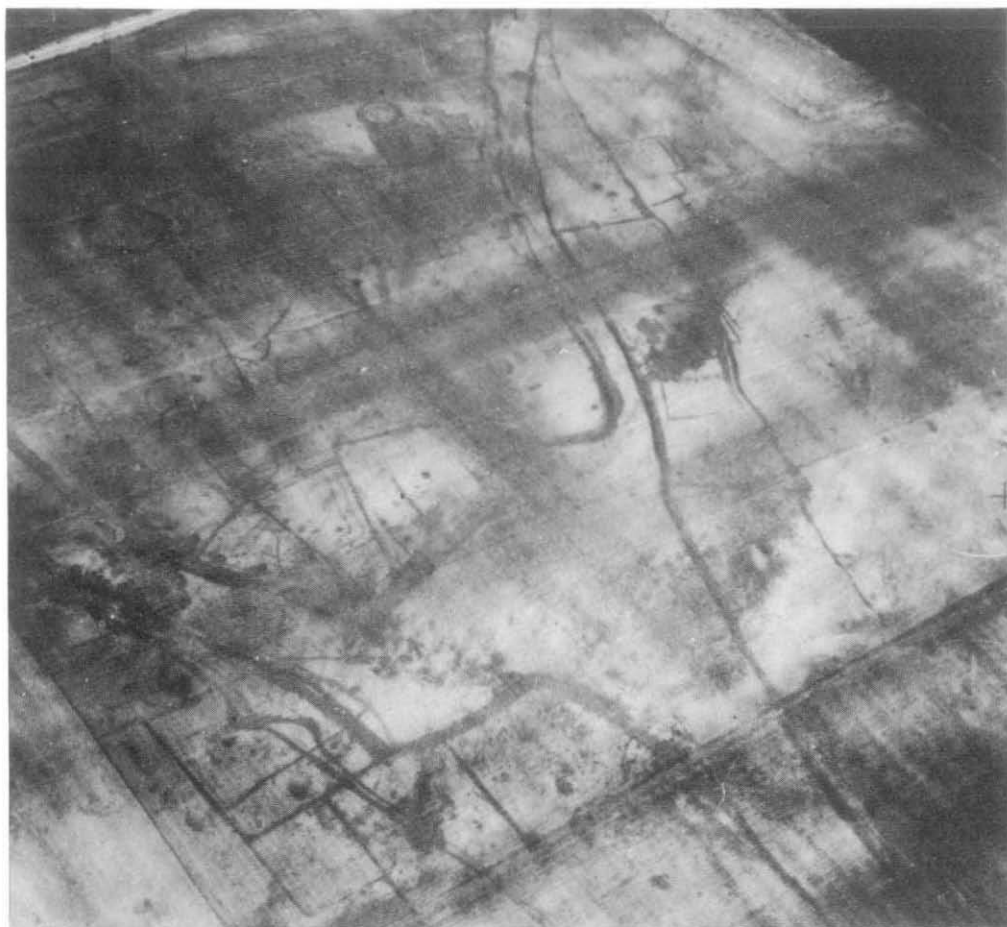


Plate 1: Cropmarks in the vicinity of Appleford.

*(Photo W.A. Baker)*

The north and south trackways widen out as they approach the central open space. This 'green'-like area covers a little under 2 hectares. It does not seem to have been encroached upon throughout the occupation of the settlement.<sup>10</sup> The discolorations on the aerial photographs probably indicate natural subsoil changes and, in the case of two regular broad bands which run east-west across the field, the position of headlands in the post-Roman open fields.

The main settlement consists of a large number of ditched enclosures attached to the trackway system. On the east side a continuous, though irregular, ditch runs behind the trackway, about 80m. from it on the south and gradually converging until the two almost join in the north near the modern road. This suggests that the limit of the main settlement in this direction lies approximately along the line of the modern road. The ground between these two ditches is divided by a series of transverse ditches into enclosures or paddocks of varying size and shape. There is relatively little evidence of occupation within the enclosures: various irregular marks may indicate wells, pits and quarries, or even Saxon sunken huts, although there is no artefactual evidence for Saxon occupation. The eastern ditch may mark the limit of the settlement nucleus at one stage. Three enclosures in the north-central section show this limit was breached. The largest of these has within it a regular three-sided rectangular cropmark which might indicate a rectangular building with a continuous foundation slot.

Ditched enclosures continue in the western part of the site and in the triangle between the two northern ditches. There is also a minor trackway crossing the south-western area. Unfortunately the north-central area is not very clear on the photographs.

The general impression is of a coherent settlement coalescing around a central hub and spreading along the lanes. There is much evidence for the recutting of features and the abandonment of others. Occupation appears to be lengthy, presumably through the Roman period.

Some features suggest earlier settlement, notably the ring-ditch to the north-east of the complex, subsequently excavated.<sup>11</sup> The cropmark indicates recutting of the main ditch. There is a distinct inner circle with a much narrower gully, visible on the photograph, which was not located in the excavation.

The enclosure c. 180m. west of the ring-ditch has been dated to the Iron Age by pottery salvaged from its filling.<sup>12</sup> This trapezoidal feature has a northern edge which curves around to form an entrance at the north-eastern corner. One hundred metres south of this are several segments of arcs which might indicate round houses, and a faint scatter of pit-like marks. These round houses were dated to the early Iron Age by pottery recovered from their fillings.<sup>13</sup>

The Appleford Field site is an example of a common type of late Iron Age/Romano-British settlement in the Upper Thames Valley. Unfortunately little excavation has been carried out on native settlements in this region, or in any other. A very similar plan can be seen at a site 500m. north-west of Lechlade<sup>14</sup> where one of the trackways runs north-east off towards the Roughground Farm Villa 700m. away.<sup>15</sup> Settlements at Cote and Standlake<sup>16</sup> also have tracks radiating from a central nucleus, with traces of underlying prehistoric settlement.

<sup>10</sup> See p. 18.

<sup>11</sup> See p. 35.

<sup>12</sup> See p. 22.

<sup>13</sup> See p. 18.

<sup>14</sup> R.C.H.M. *Iron Age and Romano-British Monuments in the Gloucestershire Cotswolds* (1976), 73-75.

<sup>15</sup> *Ibid.*

<sup>16</sup> D. Benson and D. Miles, *The Upper Thames Valley* (1974), Maps 14 and 21.

The Appleford site lies within a densely settled Romano-British landscape, between the walled town of Dorchester and the probable market at Abingdon (Fig. 2). One of its trackways runs due north, linking with a modern (and possibly ancient) stretch of the Appleford-Sutton Courtenay Road, and heads towards a Romano-British cropmark complex at Penn Copse, 400m. to the north. The clearance of woodland at Penn Copse produced Romano-British material. Subsequent small-scale excavation in 1962-3 by G.D. Leyland of Sutton Courtenay revealed the stone foundations of buildings at SU 5200 9421, a stone lined well and 1st-4th century AD pottery.<sup>17</sup> The cropmarks here are consistent with the existence of a Romano-British villa. If the owners of the Appleford pewter hoard need to be sought on a site of higher status than the Appleford settlement itself, then Penn Copse may be appropriate. David Brown has suggested<sup>18</sup> that the occupants of Dropshort villa, 2.5km. to the west, might have owned the pewter, but they seem to have been unnecessarily far away in this well-populated area.

Other rural settlements, probably contemporary with Appleford, can be seen in all directions at distances of between 1 and 1.5km., near Sutton Courtenay, and to the east and south-east of Appleford. The trackway leading from the site to the north-east heads towards the Thames. There are a number of settlements on the north bank around Culham and a crossing of the Thames in the area of the present railway bridge is possible, especially in view of the timber piles found by divers at this point.<sup>19</sup>

Without exception the Romano-British settlements in this area have trackways leading from them, but only around Long Wittenham does the cropmark evidence allow us to trace one for any considerable distance (about 4km.). It seems likely however that they would have linked up with one another to form a network of lanes joining the settlements.

## ARCHAEOLOGY AT APPLEFORD BEFORE THE EXCAVATIONS OF 1973

By ROGER THOMAS

### EARLY FINDS

A number of early finds are recorded as coming from 'Appleford Fields'. A handled Beaker<sup>20</sup> in the British Museum is said to have been found 'by the shoulders of a skeleton in Appleford Field'.<sup>21</sup> Among 'various articles of antiquity, chiefly Roman and Romano-British . . .' of which drawings were exhibited to the British Archaeological Association in 1845 were: 'Fragments of a light brown urn, full of fine black mould, taken from beside a large and a small skeleton, found about three feet below the surface in Appleford Fields.'<sup>22</sup>

In 1954 a large hoard of Roman coins was ploughed up in the northern part of Appleford Field,<sup>23</sup> (Fig. 3, A). The find was made about 50 yards south of the Sutton Courtenay-Appleford Road, at about SU 5210 9366.<sup>24</sup> The hoard was contained in two pots of local grey ware. Pot A held 1650 coins, mainly of 320-26 AD while Pot B held 4000 coins minted mainly between 335 and 347 AD. Very few coins minted between 326

<sup>17</sup> Oxfordshire County Museum, Sites and Monuments Record PRN 2582.

<sup>18</sup> D. Brown, 'A Roman Pewter hoard from Appleford, Berks.' *Oxoniensia*, xxxvii (1973), 204.

<sup>19</sup> See p. 68.

<sup>20</sup> D.L. Clarke, *Beaker Pottery of Great Britain and Ireland* (1970), ii, 475 (Corpus No. 13).

<sup>21</sup> L.V. Grinsell, 'Berkshire Barrows. Part IV — Addenda and Corrigenda', *Berks. Arch. J.*, xliii (1939), 9 (quoting from British Museum Register).

<sup>22</sup> *Journ. Brit. Archaeol. Assoc.*, i (1846), 309-10.

<sup>23</sup> C.M. Kraay, 'A Roman coin hoard from Appleford', *Oxoniensia*, xx (1955), 92-3.

<sup>24</sup> Oxfordshire County Museum, Sites and Monuments Record PRN 2859.

AD and 335 AD were represented. It seems likely that the hoard in Pot A was buried c. 326 AD and its position noted, allowing the hoard in Pot B to be buried in the same spot (and probably by the same man) in c. 347AD.<sup>25</sup>

A Neolithic Group VI (Langdale) polished stone axe was found at about SU 5216 9341.<sup>26</sup> (Fig. 3, B).

#### SALVAGE ARCHAEOLOGY AT APPLEFORD

Prior to the major excavations of 1973 a number of separate salvage operations had taken place at Appleford. From 1967 to 1974 the gravel pit was visited regularly by local field workers, notably Mr. Derek Steptoe of Sutton Courtenay. A debt of gratitude is owed to Mr. Steptoe for his work at the site, which produced a number of important observations and finds.

In 1967 part of a hoard of currency bars (Fig. 3, C) was recovered by workmen at the gravel pit, and in 1968 the pewter hoard (Fig. 3, D) was salvaged from a spoil heap by David Brown of the Ashmolean Museum.<sup>27</sup>

In 1969 excavations were carried out on behalf of Reading Museum by Mrs. Jill Greenaway (Fig 3, E1-3) and in 1973 staff of the Abingdon Excavation Committee under David Miles undertook a limited amount of salvage recording of features in the northern part of the site (Fig 3, G1-5).

#### Observations 1967-74

The south-western part of the site, which included some of the densest and most complex cropmarks, was destroyed without any archaeological work at all taking place, although it was from this area that the pewter and currency bar hoards later came. From 1967 onwards Derek Steptoe carried out a watching brief at the gravel pit, and the following section is based on observations made by him.

The usual method of gravel extraction at the pit was first to strip the topsoil and subsoil from the top of the gravel with a dragline. At the same time, the fills of any pits or ditches cut into the gravel were removed in order to leave the gravel clean for extraction. Thus most of the archaeological features were obliterated at this stage, and it was only rarely possible to record features or to recover material from them. However, large quantities of pottery were recovered from the spoil heaps and some useful information was obtained.

The soil overlying the gravel was a metre or so deep over the whole site<sup>28</sup> and was darker and deeper in the central part of the site. This is presumably due to an accumulation of occupation refuse.

The features noted were mainly pits, ditches and gullies. Two single inhumation burials were found *in situ*, and the presence of others is suggested by human bones found on the spoil heaps. Concentrations of stones were noted in some spots. These may be derived from features such as waterholes,<sup>29</sup> or, in the case of burnt quartzite pebbles, from hearths or pits. There was no evidence to suggest that there had been any substantial

<sup>25</sup> D. Brown, 'Appendix — The Appleford Coin Hoard' in 'A Roman Pewter Hoard from Appleford, Berks.' *Oxoniensia*, xxxviii (1973), 184-206.

<sup>26</sup> Oxfordshire County Museum, Sites and Monuments Record PRN 7669.

<sup>27</sup> See p. 17-19.

<sup>28</sup> See p. 29.

<sup>29</sup> See p. 29-30.

stone buildings on the parts of the site which were observed, and only a very few pieces of Roman tile came from the site.

The site was effectively divided into two parts by a conveyor belt for gravel running E-W (see Fig. 3). To the south of this belt, the area at the trackway junction was more or less devoid of features, as suggested by the cropmarks. No features were noted to the east of the trackway and enclosure complex, indicating that these features marked the limits of the settlement. The trackway ditches to the south of the conveyor belt did not produce much pottery, suggesting that this area may have been peripheral to the main focus of the Romano-British settlement.

A number of features were noted on the line of the conveyor belt. The ditches of the western trackway contained some Romano-British pottery. In the central part of the site, two circular hut gullies were recorded. One was about 30 feet (9.1m) in diameter, (Fig 3, H) while the other comprised an incomplete arc which, had it been complete would have been about 45 feet (13.7m) in diameter (Fig 3, I). Both features produced sherds of Early Iron Age pottery, some of it shell-gritted with finger-tip decoration.<sup>30</sup>

To the east of these gullies two virtually complete Early Iron Age pots were found together (Fig 3, J). In addition, much Late Iron Age and Roman pottery was found in this part of the site. It was also in this general area that the currency bar hoard was found. Jill Greenaway's excavations were carried out on the line of the conveyor belt.

To the south of the belt, just inside the trackway ditch, an area of gravel floor, with Roman pottery on it, was uncovered, but was destroyed before it could be fully investigated (Fig. 3, K). This feature, of which an area about 3m. square was uncovered, may represent a building. Its existence also suggests that in this part of the site some occupation levels survived above the surface of the gravel.

To the north of the conveyor belt, several features were recorded. The large polygonal enclosure (Fig. 3, L) was observed, and was seen to have a ditch about 3m. wide, with an entrance causeway. Sherds of Early Iron Age pot were retrieved from this ditch.<sup>31</sup> Some distance to the north-east of this enclosure a circular ditch which had been recut several times was noted (Fig. 3, M). This feature, which was presumably a hut-circle, does not seem to be visible on the aerial photographs. It contained undiagnostic Iron Age pottery. Some distance to the south of the waterhole excavated by Abingdon Excavation Committee was a small pit or scoop which produced Iron Age sherds, including a haematite-coated sherd, and a fragment of a triangular loomweight (Fig. 3, N).<sup>32</sup>

Much Iron Age pottery was found on the spoil-heaps in the north part of the site. The impression was gained that the Iron Age features and finds were concentrated in the north-west part of the site, between the two 'arms' of the Romano-British trackway system, and that Iron Age material did not really extend south of the conveyor belt. This is supported by the fact that there was no Iron Age Material in Jill Greenaway's excavation on the Roman trackway. It was noted, however, that Roman features occurred all over the 'Iron Age' part of the site.

#### *The Currency Bar Hoard and the Pewter Hoard*

For the sake of completeness, summaries of the published accounts of these finds are included here.

A hoard of perhaps 6-12 currency bars was found by workmen at the gravel pit in

<sup>30</sup> D.W. Harding, *The Iron Age in the Upper Thames Basin* (1972), 28.

<sup>31</sup> See p. 22-4, Fig. 5, nos. 32-5.

<sup>32</sup> See p. 24, Fig. 5, nos. 36-9.

1967. The hoard had probably been contained in a pit or ditch. Only two pieces were recovered, a sword-shaped currency bar and a genuine sword blade.<sup>33</sup>

The hoard was probably found in the general vicinity of the Iron Age hut circles on the line of the main belt (Fig. 3, C).<sup>34</sup>

A hoard of 24 pieces of Roman pewter was recovered from a spoil-heap in the south-west of the site in 1968 (Fig. 3, D). It had probably been contained in a well, as the soil in which the pewter lay was peaty and contained preserved plant remains. Pottery, bones, pieces of two querns and a number of pieces of ironwork were found at the same spot, and may represent items dropped into the well over a period of years.<sup>35</sup>

## FINDS

The Appleford site was notable for the large quantity of archaeological material present. Large amounts of Iron Age and Romano-British pottery were recovered from the spoil-heaps of the gravel pit, and animal bone was also abundant. Other finds included a few implements of bone and metal, pieces of 'hearth-tile',<sup>36</sup> and a few pieces of Roman tile. In addition, Mr. Derek Steptoe reports that a number of Roman coins were found on the ploughed surface of the field, before gravel extraction began, by the late Mr. G.D. Leyland of Sutton Courtenay. In general, however, Roman coins do not seem to have been particularly numerous on this site (obviously excepting the hoard).

A selection of unstratified Iron Age sherds is illustrated here to demonstrate the chronological and stylistic range of the Appleford material. Some material from features is also included.

The Roman pottery types present on the site included a range of grey wares (including some Boars Hill products<sup>37</sup>), coarse storage jar fabrics, calcite-gritted wares, Oxfordshire white-ware, red colour coated wares and parchment wares, a small amount of Nene valley colour-coated ware, and Samian ware. The Roman pottery suggests that occupation at the site was continuous from the beginning of the Roman period until late in the 4th century AD.

### *Iron Age Pottery*

Much of the diagnostic pottery recovered from the 1973 excavations dates to the 'Late Bronze Age' and to the Middle Iron Age and certain phases of the Iron Age are poorly represented.<sup>38</sup> The selection of sherds illustrated in this section spans the period up to the 1st century BC/1st century AD. It is clear that the Appleford site was occupied, probably continuously, throughout the Iron Age.

A range of expanded rims with finger-tip decoration is present (Fig. 4, Nos. 1-5). This form, of which a few examples came from the 1973 excavation,<sup>39</sup> is well known in the Early Iron Age of the Upper Thames Valley, for instance at Mount Farm.<sup>40</sup> A variety of vessel shapes is apparent, some vertical-sided (e.g. no. 4) and some more globular (e.g. no. 2). No. 1, with a broad shallow groove below the rim, is an unusual form without exact parallel. Heavy sooting on the outside of some of these vessels (e.g. no. 4) suggests that some at least served as cooking pots.

Angular jars and bowls in fine dark ware are well represented at Appleford. Such vessels are characteristic of an early phase of the Iron Age in the Upper Thames Valley, and are common at such sites as Long Wittenham<sup>41</sup> and Allens Pit.<sup>42</sup> The use of incised diagonal lines on the shoulder is a feature seen at Allens Pit<sup>43</sup>

<sup>33</sup> D. Brown, 'A hoard of Currency Bars from Appleford, Berks' *Proc. Prehist. Soc.*, xxxvii (1971), 206-8.

<sup>34</sup> Information from Mr. Derek Steptoe.

<sup>35</sup> D. Brown, 'A Roman Pewter hoard from Appleford, Berks.' *Oxoniensia*, xxxviii (1973) 184-206.

<sup>36</sup> See comments of Robinson, p.

<sup>37</sup> E. Harris and C.J. Young, 'The 'Overdale' Kiln Site at Boar's Hill, near Oxford', *Oxoniensia*, xxxix (1974), 12-55.

<sup>38</sup> See pp. 45-59.

<sup>39</sup> See p. 48, Fig. 19, no. 1.

<sup>40</sup> J.N.L. Myres, 'A Prehistoric and Roman Site on Mount Farm, Dorchester', *Oxoniensia*, ii (1937), 30, Fig. 7.

<sup>41</sup> H.N. Savory, 'An Early Iron Age Site at Long Wittenham, Berks', *Oxoniensia*, ii (1937), 5, Fig. 2.

<sup>42</sup> J.S.P. Bradford, 'An Early Iron Age Site at Allens Pit, Dorchester', *Oxoniensia* vii (1942), 46, Fig. 11.

<sup>43</sup> *Ibid.*



and elsewhere, and the scratched zig-zag lines and other motifs, sometimes with white inlay (Nos. 15, 33, 34) can also be paralleled locally, e.g. at Blewburton<sup>44</sup> and Chinnor.<sup>45</sup>

Three further sherds seem to belong to the early part of the Iron Age. One (No. 39), a haematite-coated piece, was found in association with a fine angular bowl (No. 36). The sherd, of which the angle and diameter are uncertain, has a series of parallel sharply-defined V-shaped furrows, running at an angle to a broader furrow. There are traces of white inlay in these furrows. This sherd may be related to the cordoned haematite bowls.<sup>46</sup>

A second sherd (No. 17) has two tooled chevrons one above the other, beneath a pair of horizontal grooves. There are traces of a haematite coating on the exterior. The exact angle and diameter of the sherd are uncertain but it appears to be the shoulder of a small ? angular vessel. The sherd has a smooth red-brown surface with slight traces of a haematite coating. The neck/rim appears to have been broken off and the break rubbed smooth to form a new rim. The decoration, a chevron composed of three strokes below three horizontal furrows, is formed by broad shallow tooled lines.

The use of chevrons on the shoulders of pots is common at Allen's Pit<sup>47</sup> and is seen, further afield, at All Cannings Cross.<sup>48</sup> However, at those sites the decoration is usually formed by scratched lines, whereas these sherds have more substantial carefully tooled lines.

In Harding's sequence<sup>49</sup> the middle Iron Age is marked by globular and barrel jars and bowls in 'smooth dark ware'. Such vessels are represented at Appleford (Nos. 18-24). On some an incipient bead-rim is seen. One example of a Frilford type globular bowl decorated with interlocking swags was found (No. 25).<sup>50</sup> A fragment (No. 26) may be from a similar vessel, but also carries linear decoration.

The latest phase of the Iron Age, the 'Belgic' period, is marked at Appleford, as elsewhere in the Upper Thames, by necked bowls with cordons (Nos. 27, 28) and bead rim jars (Nos. 30, 31). Some of these vessels are wheel-thrown. Parallels are seen locally at Linch Hill, Stanton Harcourt<sup>51</sup> and at many other sites.

Pottery in 'Belgic' forms and fabrics continued in use until well after the Roman Conquest, being only gradually supplanted by the grey wares and other Romano-British types which were so abundant at Appleford.

## CATALOGUE

Numbers refer to Figs. 4 and 5. Abbreviations: E, exterior surface, I: interior surface, BK, section seen in clean break.

I am grateful to George Lambrick for comments on the fabrics.

### *Expanded Rim Vessels*

1. Fabric tempered with sand and coarse shell. The fabric is unusual for this form. E and I red-orange, smoothed. BK black with surface layers of red-orange. ? Finger tipping in groove on top of rim.
2. Fabric tempered with coarse shell and ? grog. E and I buff to dark grey. BK grey.
3. Fabric tempered with coarse shell and ? grog, in ? alluvial clay matrix. E and I light brown, BK dark grey.
4. Fabric tempered with coarse shell and ? grog. E heavily sooted, I buff to dark grey, BK black.
5. Fabric tempered with shell. E and I buff to grey, BK black.

### *Angular Bowls and Jars*

6. Fabric tempered with sand, ? from Corallian beds. E dark grey and lightly burnished, I dark grey and burnished on rim only. BK dark grey.
7. Fabric tempered with sand and sparse shell. E dark grey and lightly burnished, I dark grey and burnished lightly on upper part. BK black.

<sup>44</sup> A.E.P. Collins, 'Excavations on Blewburton Hill, 1947', *Berks. Arch. J.*, 1 (1947), 16, Fig. 8, No. 8.

<sup>45</sup> K.M. Richardson and A. Young, 'An Iron Age Site on the Chilterns', *Antiq. J.* xxxi (1951), 143, Fig. 8, No. 51.

<sup>46</sup> D.W. Harding, *The Iron Age in Lowland Britain* (1974), 166, Fig. 52.

<sup>47</sup> Bradford, *op. cit.*, 45, Fig. 10, Nos. 2, 5, 8.

<sup>48</sup> M.E. Cunningham, *All Cannings Cross* (1923), Pls. 35, 36.

<sup>49</sup> D.W. Harding, *The Iron Age in the Upper Thames Basin* (1972), Chap. 3.

<sup>50</sup> *Ibid.*, Pl. 67.

<sup>51</sup> W.F. Grimes, 'Excavations at Stanton Harcourt, Oxon., 1940', *Oxoniensia* viii/ix (1943-4), 5, Fig. 24.



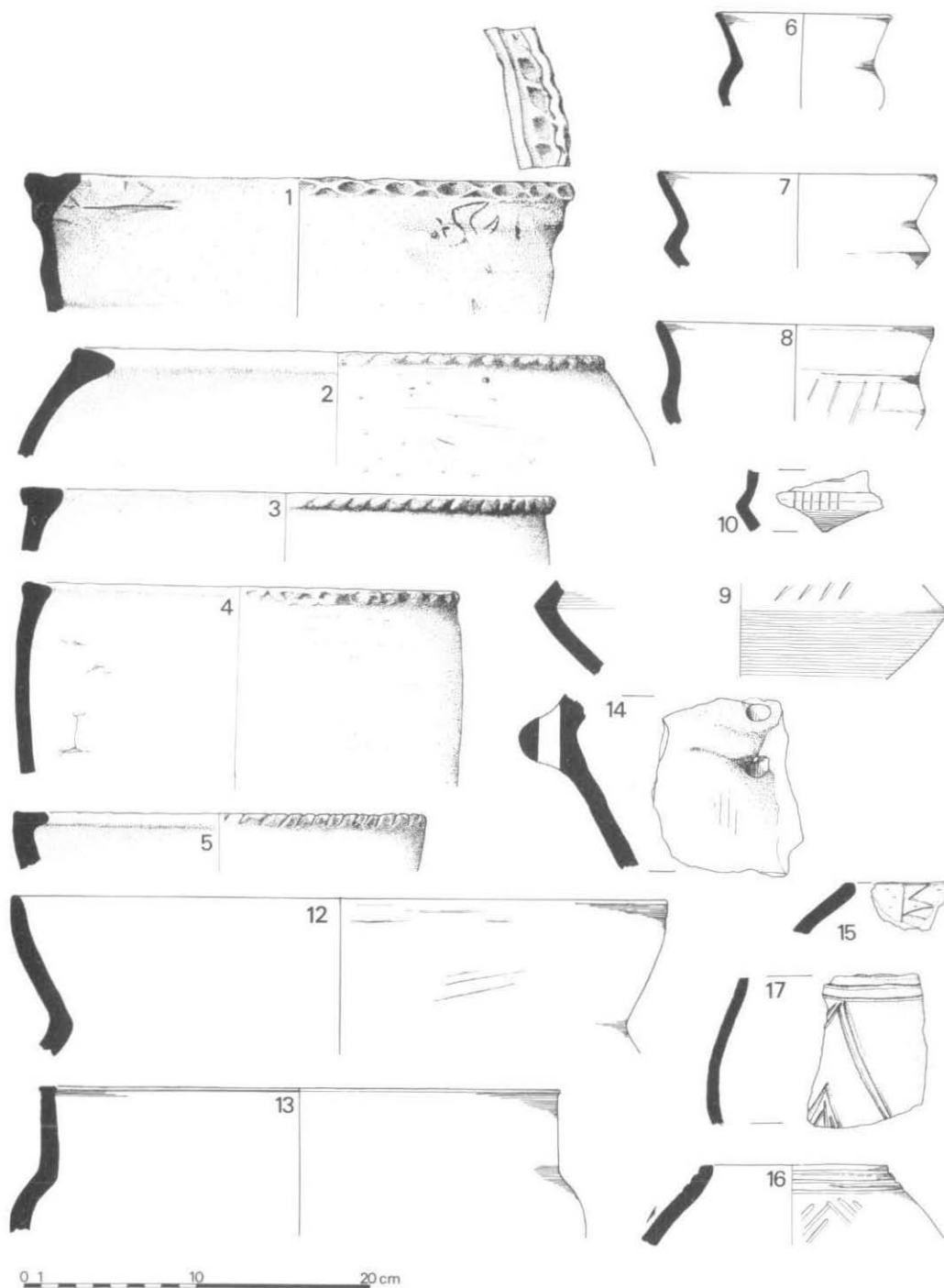


Fig. 4 Iron Age Pottery. Scale 1/

8. Fabric tempered with sand and sparse shell. E and I black and well burnished, with lightly burnished diagonal strokes on shoulder. BK black.
9. Fabric tempered with sand. E and I grey and well burnished BK black. Sharply incised diagonal slashes on shoulder.
10. Fabric tempered with sand. E and I grey, unburnished. Group of six vertical incised lines on shoulder. BK grey.
11. (Not illustrated). Rim and neck. Vessel walls are only 3.5mm. thick. Fabric tempered with sand. E and I are haematite coated, deep red-brown, highly burnished and lustrous. BK black.
12. Fabric tempered with sand with some larger grits. E and I dark grey and smoothly finished. BK black.
13. Fabric tempered with sand and sparse shell. E grey to dark grey and partially burnished, I dark grey. BK light grey to black.
14. Fabric tempered with sand. E dark brown to grey, burnished, I black and burnished. BK black. Lug is pierced vertically, with a cylindrical hole.

#### *Decorated Sherds*

15. Fabric tempered with sand and sparse shell. E black, smooth, I dark grey. BK black. Decoration consists of incised lines down.
16. Fabric tempered with sand. E red-brown, lightly burnished, slight trace of haematite coating, I dark brown. BK black. Decoration consists of broad tooled lines. It appears that the neck/rim of this vessel has been broken off and the break ground smooth to create a new rim.
17. Fabric tempered with sand. E orange-brown, with slight traces of deep red-brown haematite coating. I grey brown. BK dark grey. Decoration consists of broad tooled lines.

#### *Barrel and Globular Jars, Bowls etc.*

18. Fabric is alluvial clay, with some burnt out inclusions of vegetable matter. E grey to dark grey, lightly and patchily burnished, and sooted. I grey. BK black.
19. Fabric tempered with grog. E and I grey, lightly burnished, E sooted. I has traces of lime scaling. BK black with dark brown surface layer on I.
20. Fabric tempered with sand ? from Corallian beds. E sooted, I light brown to black, with some traces of lime scaling. BK black.
21. Fabric tempered with sand. E red-brown to black, very lightly burnished. I dark grey. BK dark grey.
22. Fabric tempered with sand. E dark grey and burnished. I grey brown. BK black.
23. Fabric is alluvial clay. E black and burnished, I dark grey and smooth. BK black.
24. Fabric is alluvial clay. E grey-brown, highly burnished. I dark grey and burnished. BK black with brown surface layers.
25. Fabric tempered with sand. E brown and highly burnished, I grey-brown and lightly burnished. BK mainly red-brown. Decoration consists of broad shallow tooled lines.
26. Fabric tempered with sand and contains one flint inclusion 7mm. long. E and I black and well burnished. BK black. Decoration consists of shallow tooled lines and lightly impressed dots.

#### *Necked Bowls and Bead Rim Jars*

27. Fabric tempered with sand and ? fine shell. E dark grey and lightly burnished. I light grey. BK black. A small hole has been drilled in the neck. Wheel thrown.
28. Fabric tempered with sand. E dark grey and burnished. I dark grey. BK black. ? Wheel finished.
29. Fabric tempered with grog. E dark grey, rim and upper part of shoulder burnished, I grey. BK light grey. ? Wheel thrown.
30. Fabric tempered with grog. E dark grey, rim and upper part of shoulder burnished and slightly sooted. I grey. BK light grey. Wheel thrown.
31. Fabric tempered with sand. E dark grey, slightly sooted. I grey. BK brown and black layered.

#### *Pottery from L, Early Iron Age Enclosure*

32. Fabric tempered with ? grog and shell. E varies dark grey to brown. I dark grey. BK black.
33. Fabric tempered with shell. E brown, burnished. I dark grey, smooth. BK brown. Scratched motif with white inlay, on ? shoulder of vessel.

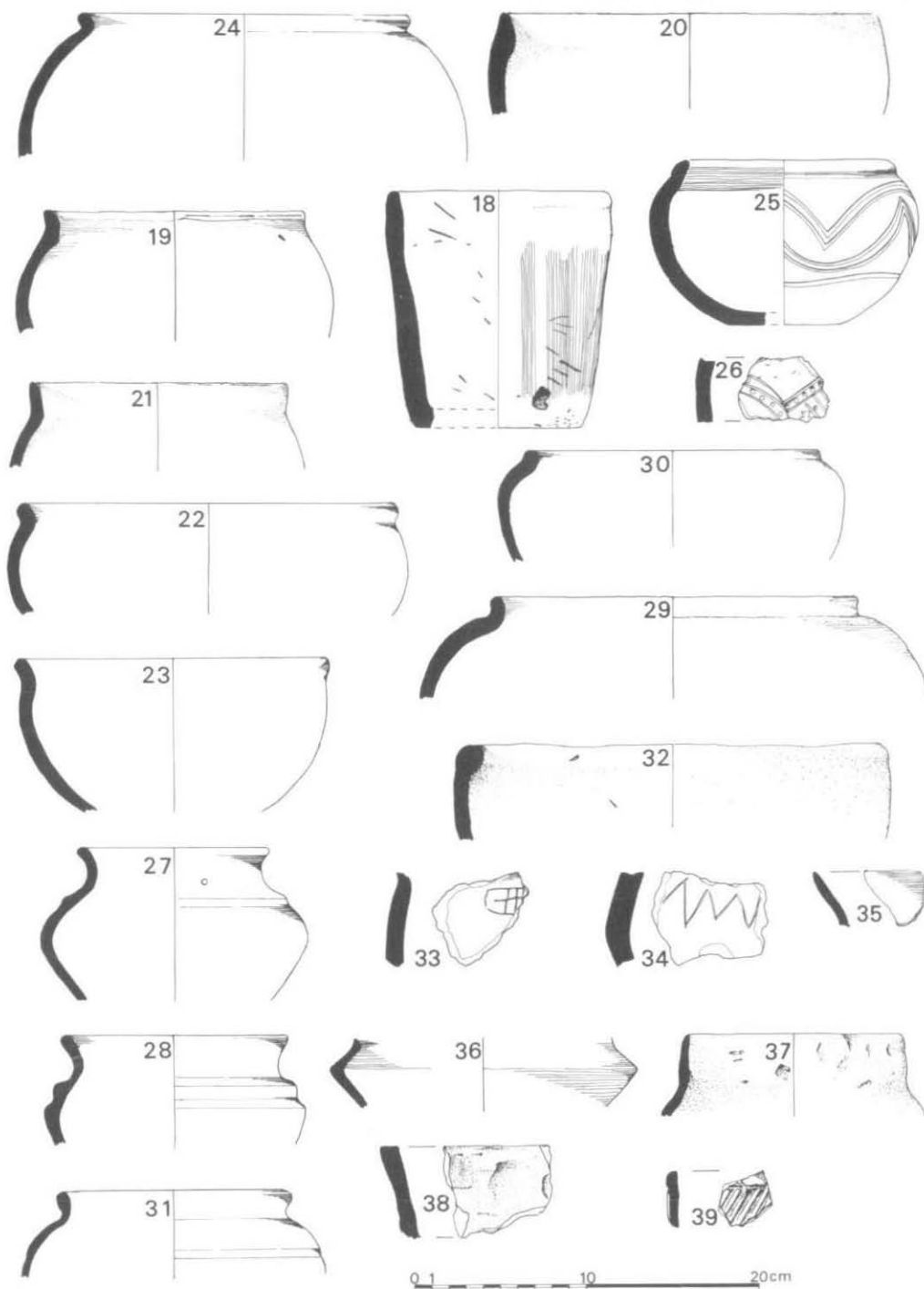


Fig. 5 Iron Age Pottery. Scale 1/4

34. Fabric tempered with sand. E dark grey-brown. I dark grey, E and I smooth. Brown oxidation layers 2mm. thick on E surface. BK brown. Irregular scratched zig-zag pattern with traces of white inlay.
35. Fabric tempered with sand. E and I buff and burnished. BK grey.

*Pottery from N, Iron Age Pit*

36. Fabric tempered with sand and shell fragments up to 8mm. long. E brown. I dark grey, surfaces rough. BK black. Irregular finger-nail impressions below rim.
37. Fabric tempered with sand. E and I dark grey. E and upper part of I burnished. BK dark grey.
38. Fabric tempered with sand and sparse shell. E grey-brown, I dark grey. Surfaces rough. BK black.
39. Fabric tempered with sand. E red, smooth, with haematite. I light brown. BK dark brown. There are traces of white inlay in the grooves.

*Addendum*

Since the above report was written, drawings have come to light<sup>52</sup> of the two pots found together to the east of the early Iron Age hut gullies.<sup>53</sup> The pots themselves are not now available for study. One is a large round-shouldered jar with a pie-crust rim (Fig. 6). The other is a vessel with an expanded rim and a flat base (Fig. 7). This latter vessel is of especial interest as its rim-form is clearly related to the expanded rims of the Mount Farm 'cauldrons',<sup>54</sup> but the vessel has a flat base. Thus some at least of the expanded-rim vessels cannot be classed as cauldrons (although the presence of sooting on some, e.g. No. 4 above, indicates that some probably were used for cooking).

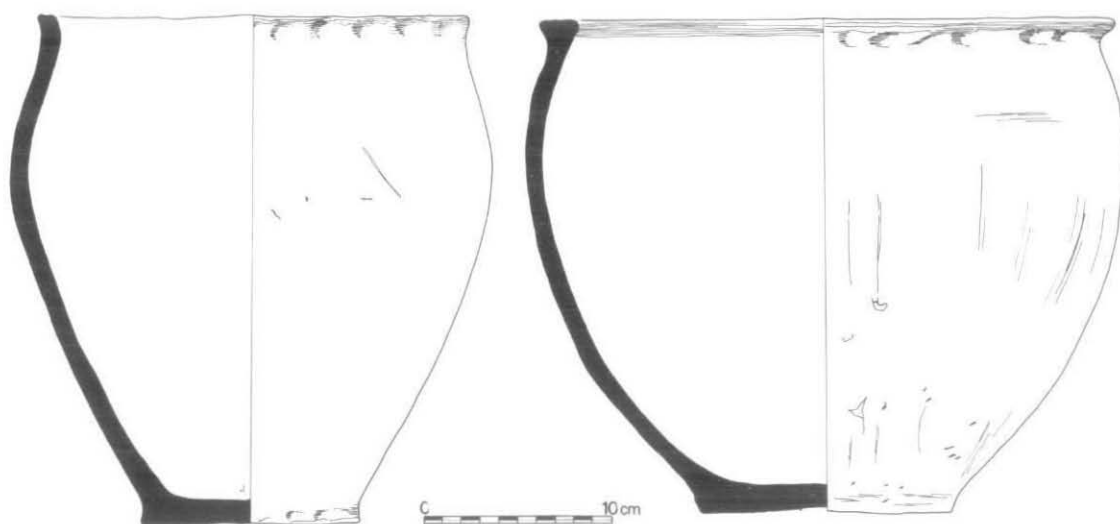


Fig. 6 & 7 Iron Age Pottery

<sup>52</sup> Ashmolean Museum, Dept. of Antiquities: unpublished. I am grateful to Dr. Andrew Sherratt for permission to publish these drawings.

<sup>53</sup> See p. 18.

<sup>54</sup> J.N.L. Myres, *Oxoniensia*, ii (1937), Fig. 7.

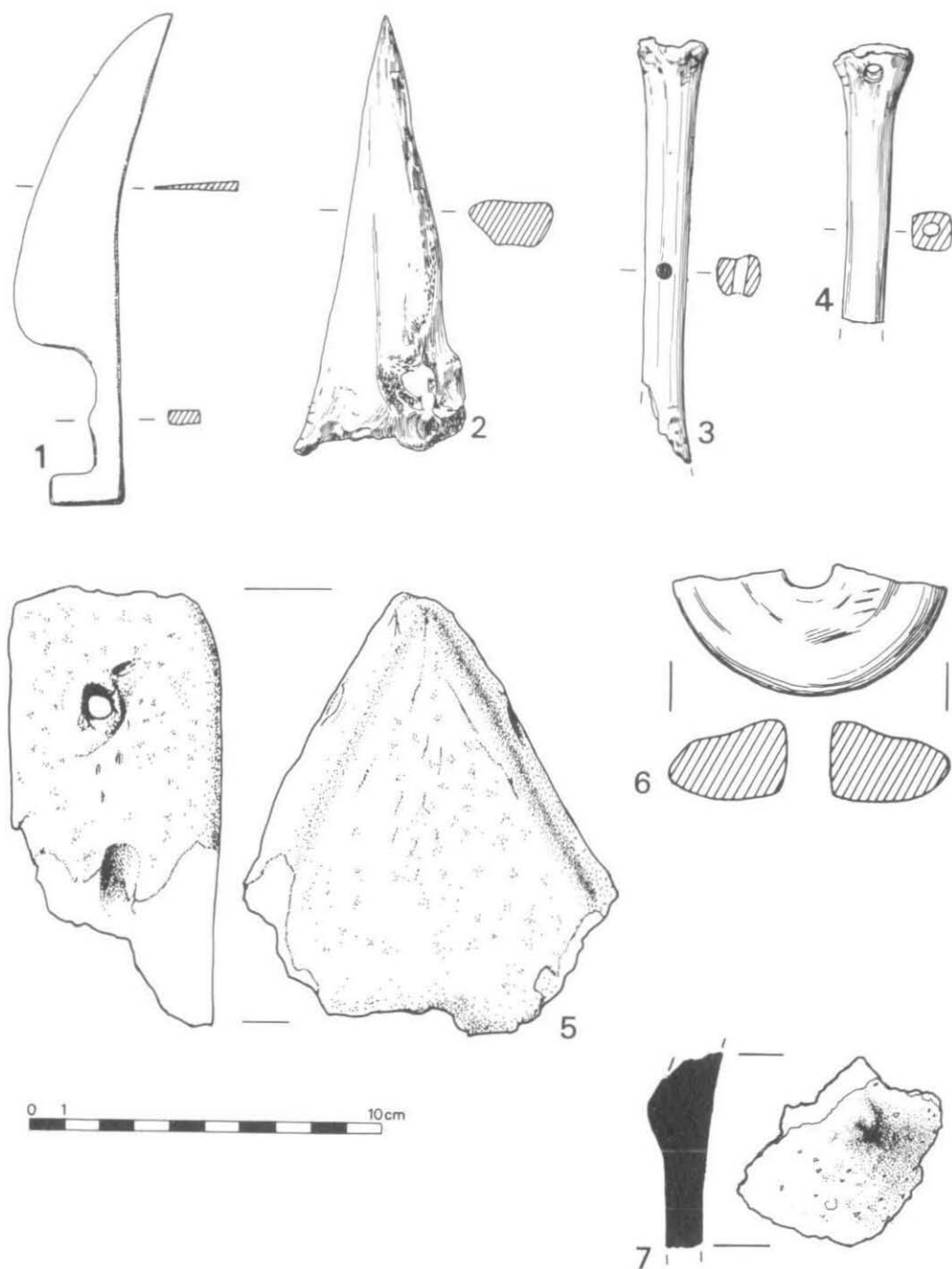


Fig. 8 Small Finds

*Small Finds (Fig. 8)*

1. Curved iron knife. ? Roman.
2. Bone point, made from a cattle ulna. Slightly polished by use.
3. Sheep metatarsal, pierced in its centre by a drilled hole 4mm. in dia. Slightly polished.<sup>55</sup>
4. The shaft and distal end of a sheep tibia. The sides have been flattened off, the distal end has been worked and has a hole 5mm. in diameter drilled through it. The shaft of the object is polished and bears numerous longitudinal striations, presumably the result of use.<sup>56</sup>
5. Baked clay triangular loomweight. Fragments of a number of these were found at the site.
6. Baked clay spindle-whorl, broken in half.
7. Sherd. Fabric is heavily tempered with crushed flint. E and I light brown - grey. BK: black. The fabric and presence of the boss suggest that this is part of Deverel-Rimbury vessel.<sup>57</sup> A number of body sherds in a similar fabric were found with this piece.

## THE EXCAVATIONS OF 1969 BY JILL GREENAWAY

In the Spring of 1969, after the discovery of a human skeleton on the stripped surface of the gravel pit, an area 62 feet by 88 feet (18.9m × 26.8m) was examined on behalf of Reading Museum.<sup>58</sup> The features found lay for the most part on a north-south alignment (Fig. 9). They fell into two groups, one on the east side of the excavation and the other on the west, separated by a completely blank area. On the west side, the earliest features excavated comprised a block of ditches and recuts which ran for the full north-south length of the area. These were cut by various features, including a large pit which produced 1st century AD pottery. This pit also contained throughout its fill a number of soft poorly-fired pieces of clay, some round and some rectangular in shape, bearing grass impressions on both surfaces.

A narrow, shallow north-south ditch to the west of this block of ditches produced early 2nd century AD pottery, as did the butt ends of three small ditches to its west. West of these were two further north-south ditches, one of which turned to run west at the edge of the excavated area. The pottery from the earliest layers of these ditches dated to the 2nd century AD.

The eastern features consisted of two north-south ditches. The latest of these had been recut several times, and was 10-11 feet (3.05m-3.35m) wide and two feet (0.60m) deep below the stripped gravel surface. It produced pottery dating from the 3rd and 4th centuries AD. This ditch intersected a smaller ditch on its west side. The skeleton, a flexed young male, lay in a grave between the two ditches to the north of the intersection. The grave contained some sherds of Roman pottery.

The excavation lay in an area of primarily Roman activity. Stripping to the south and south-west of the excavation produced exclusively late pre-Roman to 4th century AD pottery.

Salvage work took place on two further features. Just to the south-west of the excavation, Belgic pottery was recovered from a ditch which may have been the corner of a rectilinear enclosure.

To the south of the excavation, the bottom of a wicker lined pit was examined (Fig. 3). The pit was about 3 feet 6 inches (1.06m) in diameter. Twelve upright stakes, which

<sup>55</sup> Cf. R.E.M. Wheeler, *Maiden Castle, Dorset*, (1943), Pl. xxxv, Nos. 11-13 and pp. 306-7.

<sup>56</sup> Cf. M. Parrington, *The Excavation of an Iron Age Settlement, Bronze Age ring-ditches and Roman features at Ashville Trading Estate, Abingdon (Oxfordshire) 1974-76* (1978), Fig. 60, No. 34.

<sup>57</sup> H. Case, et al., 'Excavations at City Farm, Hanborough, Oxon.', *Oxoniensia*, xxix-xxx (1964-5), Fig. 28, No. 5.

<sup>58</sup> The finds and site records from this excavation are in Reading Museum. This report is intended as a summary of the main points to emerge from the work; it is intended that a full report will appear in due course.

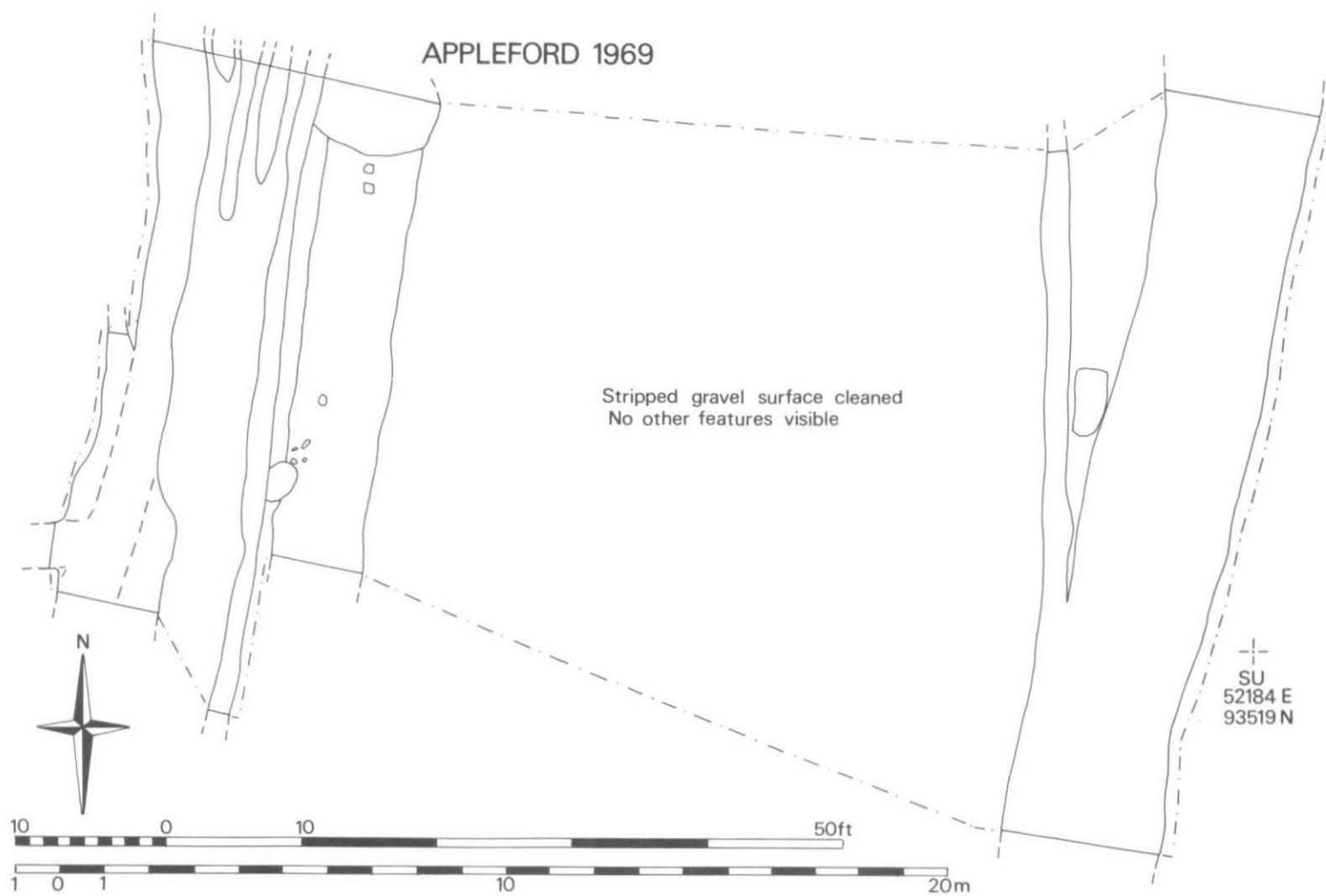


Fig. 9 Area examined in 1969

mostly survived to a height of 4-5 inches (0.10-0.12m) were arranged around the inner-circumference of the pit to form a circular structure. Branches had been woven in and out around these uprights to form a wicker lining, and clay had been packed behind this lining, between it and the walls of the pit. The pit, which is presumably another type of waterhole,<sup>59</sup> had been damaged by the dragline and its original depth below the surface could not be ascertained.

Some pottery of the late 2nd century AD was recovered from the lower layers of this feature.

### *Discussion*

The area excavated in the main excavation apparently lay across the R-B trackway. The large ditch on the east side of the area would thus be equivalent to F14 excavated in 1973, the eastern trackway ditch.<sup>60</sup> The block of north-south ditches on the west side of the area must thus represent the western boundary of the trackway. The fact that at least one of these ditches was cut by a 1st century AD pit suggests that the Roman trackway was following some earlier alignment at this point.

The fact that no pre-Belgic Iron Age pottery was found in the area around this excavation confirms that the Iron Age occupation was confined to the north-western part of the site.

### ABINGDON EXCAVATION COMMITTEE SALVAGE WORK, 1973

In the Spring of 1973, staff of the Abingdon Excavation Committee under David Miles carried out salvage recording of a number of features in the north-western part of the site. A number of lengths of ditch of Iron Age and Roman date, several large pits containing Romano-British pottery, a small group of inhumation burials, and a few miscellaneous undated features were noted on the stripped surface of the gravel pit. All the features had been badly damaged by the dragline, and no plan was obtained, nor was excavation feasible in most cases. The following notes record a few points which did emerge from the work.

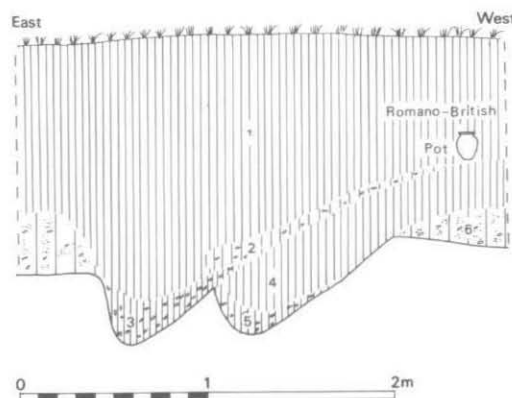


Fig. 10 Section illustrating depth of stratification in vicinity of G3

<sup>59</sup> Cf. pp. 29-31, 66.

<sup>60</sup> See p. 62.



The mutilated remains of what was probably a small group of burials were noted (Fig. 3, G1). One grave, dug slightly into the gravel, contained the remnants of an inhumation lying with its head to the west. Traces of two other possible graves were noted close to this inhumation, but these contained only fragments of human bone. More human bone was found in the spoil derived from this area. These features may be outliers of the small cemetery excavated by John Hinchliffe 150m. to the east.<sup>61</sup>

An interesting result was obtained from drawing the sections of two ditches seen in the edge of the stripped area of the gravel pit (Fig 3, G2). The section (Fig. 10) showed that there was some 1.20m. of soil over the surface of the gravel. Directly above the gravel was 0.20-0.30m. of dark brown loam (layer 6), of a type noted elsewhere on the Thames gravel terraces but not always present in such depth. Above this was *c.* 0.50m. of presumably undisturbed Iron Age and Roman deposits and *c.* 0.40m. of dark loam and ploughsoil (layer 1). This confirms Harding's comment that between 3 and 4 feet of topsoil were being removed by the scrapers at Appleford in 1968.<sup>62</sup>

Work on the site concentrated on the excavation of a large pit (Fig. 3, G3), which proved to be a waterhole. This feature appeared at the stripped surface of the gravel as a large, roughly oval, pit. Its maximum dimensions were not determined as its west side had not been stripped of topsoil at the time of excavation. The feature was sectioned down to the level at which the top of a wooden shaft appeared. At this point the section was cut back to expose the top of the shaft fully, and excavation was continued down inside the shaft.

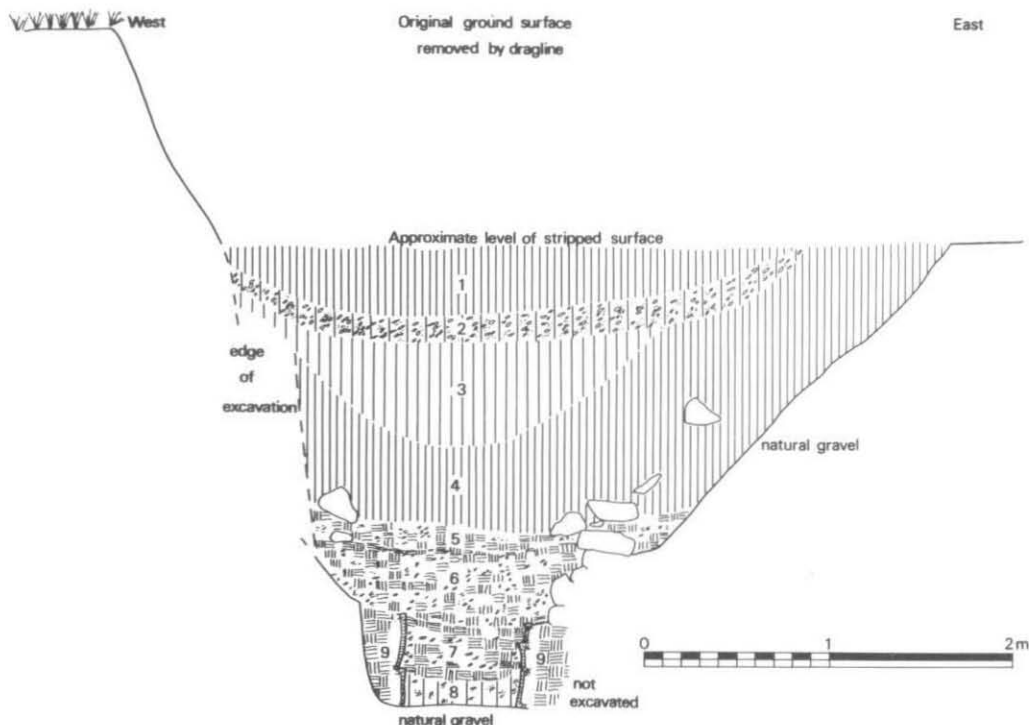


Fig. 11 Section of Waterhole G3. For layer descriptions, see text

<sup>61</sup> See p. 66-8.

<sup>62</sup> D.W. Harding, *The Iron Age in the Upper Thames Basin* (1972), 28.

The feature consisted of a roughly conical pit, with its sides sloping at about  $45^\circ$  (see Fig. 11). To judge from the stratigraphy noted in G2 above, this pit may have been dug from a level only about 0.40m. below the modern surface. At the bottom of the conical pit, at a depth of about 3.20m. below the modern ground surface, a roughly square hole about 1.00m. across and 0.50m. deep, had been dug. In this hole a wooden shaft about 0.95m. square had been built. Clay and vertical timber stakes had been packed in behind the shaft (layer 9). A mass of stones which sat on top of this clay may have acted as a crude retaining wall around the shaft. To the east of the shaft, rising up the east side of the pit, were a number of larger slabs of stone, which were probably the remnants of a series of steps leading down to the shaft.

The lower part of the shaft was filled with a brown loam flecked with gravel (layer 8). Above this, filling the upper part of the wooden shaft and the lower part of the conical pit, were layers of black clayey and organic material (Layers 7, 6, 5). The upper part of the conical pit was filled with a series of layers of loam (Layers 4, 3, 2, 1). These had been truncated by the removal of the upper part of the pit by the dragline.

*The Well Construction* By DAVID MILES

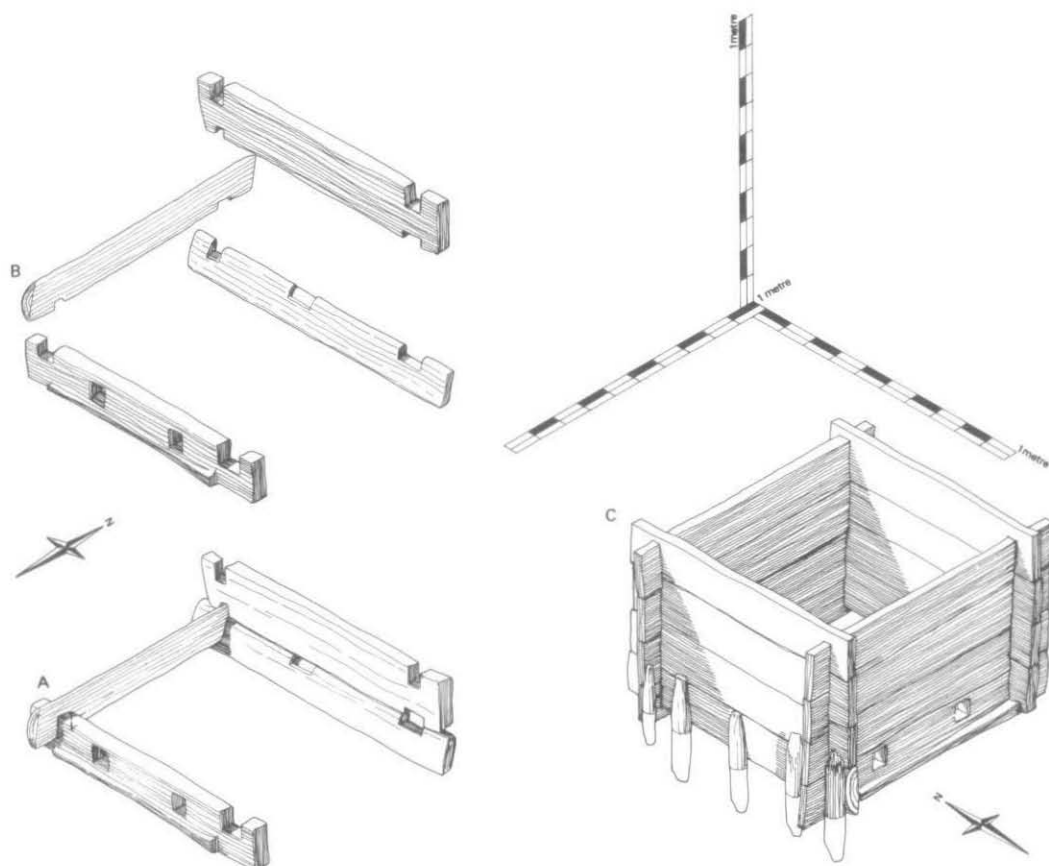


Fig. 12 Waterhole G3: Timber lining  
A-Drawn timbers; B-Drawn timbers, assembly; C-Reconstruction of box.

The well box was made up of four courses of oak, the timbers averaging 950mm. long and forming an internal area about 690mm. square (Fig. 12). The box was about 550mm. deep and probably indicates the average depth of water in the Romano-British well. The north and south sides of the box were made of the heavier timbers, several of them evidently re-used. They each had two slots cut into their upper side about 70mm. square and 50mm. from the ends of the timbers. The east and west timbers were split logs of about 130mm. diameter with a slot sawn in their undersides near each end in order to slot into the upper surface of the north and south sides. As a result of these half housing joints, the east and west split timbers acted as tie-beams. The upper sides of the tie-beams were left untouched, but the north and south side timbers, above the first course, had slots in their underside so that they could sit securely in place. The fronts were relatively crudely cut and, where the fit was loose, small oak wedges were knocked into place. A number of axe-trimmed stakes of alder with diameters ranging from 55mm. to 85mm. had been driven into the clay filling behind the box. The purpose of these stakes is not apparent.

At least the lowest courses on the north and south sides were made from re-used timbers. The southern one was the most complex (see Fig. 12). Its cross-section was L-shaped with two square holes about 55mm. square and 700mm. apart. These had no function in the structure of the well and presumably indicate previous use of the timbers. Similarly the first course timber on the north side, a roughly squared-off log, had a rectangular slot 70mm. long, 70mm. wide and 20mm. deep cut into its inner face about half way along it.

The first course timbers on the north and south sides were the most substantial, up to 80mm. thick. The courses above them were formed from plants 30-50mm. thick. The highest course was badly rotted, but from the position of the stone steps presumably represents the original height of the box.

The timber box was most damaged on the east side, presumably as a result of water being drawn from that side.

The base of the well was simply gravel, with no attempt to construct any solid floor in order to avoid stirring up the bottom when a bucket was lowered into the well.

#### *Note on the Conservation of the Well Timbers* By GWYN MILES

It was decided that the most practical method for the treatment of this size of timber was impregnation with Polyethylene Glycol 4000 (PEG).<sup>63</sup> The advantage of this material is that, being water-soluble, it should diffuse easily into waterlogged wood without needing any pre-treatment. While tanks suitable for this purpose were being made, the timbers were stored in tanks of water with a fungicide (Sodium Orthophenyl Phenate - Dovicide A).

Two rectangular stainless steel tanks (762 × 460 × 200mm. and 1016 × 254 × 150mm) were surrounded by an isomantle incorporating heating elements on a glass cloth heating surface; the main heating load was applied to the sides, concentrated nearer the base of the tank. A thermostatic control kept the temperature throughout the liquid in the tank steady at between 10 - 60° C, without any mechanical stirring apparatus. The tanks were well lagged to prevent heat loss.

The cleaned timbers were placed in batches in the tanks in a weak 5% solution of PEG at a temperature of 30° C. The temperature of the bath was slowly raised to 60° C

<sup>63</sup> This method is more fully discussed in B.B. Christensen, *The Conservation of Waterlogged Wood in the National Museum of Denmark* (Copenhagen 1970) and R.M. Organ 'Carbowax and Other Materials in the Treatment of Waterlogged Paleolithic Wood, *Studies in Conservation*, iv (1959) 96-105.

over a period of three to four weeks. The concentration of the solution was increased to 60% over the next three months by the addition of PEG. The solution was then allowed to evaporate so that the concentration was around 100% after 5 to 6 months altogether.

The timbers treated were generally satisfactory, with shrinkages of no more than 2.5% recorded. The disadvantage of the method was that only 2 large timbers could be treated at a time and the others, while stored in water, were subject to deterioration.

#### *Waterhole G3: Dating and Discussion*

The filling of this feature produced large quantities of animal bone and pottery. The pottery types represented spanned the 1st–4th centuries AD — clearly some of this material must be residual. Sherds of parchment ware and Oxfordshire red colour-coated wares were found in the filling, and a sherd of a calcite gritted jar from layer 5 (similar to one found at Shakenoak villa in the context dated 370–390 AD<sup>64</sup>) suggests that the feature was filling up in the latter part of the 4th century A.D.

A few sherds of coarse grey ware dateable to the late 1st or 2nd century AD came from the construction material layer 9, but in view of the amount of residual material present in the filling of the feature, these may not be an accurate indicator of the date of construction.

Several other waterholes were noted at Appleford (e.g. F200, F210, F220, F250 in the 1973 excavations.<sup>65</sup>) and parallels are known elsewhere in the Upper Thames, for instance at Wally Corner<sup>66</sup> and at a Roman kiln site near Dorchester. This latter feature was interpreted as a potters puddling hole<sup>67</sup> but Young has suggested<sup>68</sup> that a domestic function is more likely for this feature, and its similarity to the Appleford waterhole suggests that this may be the case.

The evidence of this feature suggests that in Roman times the watertable stood about 2.00m. below the surface of the gravel, which is rather higher than the present level.

Two other large pits were recorded in the vicinity of F3 (Fig. 3, G4). One was 2.5m. in diameter and produced large quantities of late 1st to early 2nd century AD pottery from its surface. The other (Fig. 3, G5) contained Romano-British pottery including sherds of Oxfordshire red colour-coated ware. Neither of these features were excavated but they may have been waterholes similar to G3.

### THE 1973 EXCAVATIONS By JOHN HINCHLIFFE

Stripping by drag-line was clearly unsuitable for archaeological purposes and the Amey Roadstone Corporation kindly agreed to strip areas for excavation with a John Deere mechanical scraper which left a more even surface. Two principal areas (Area 2 and 4: Fig. 13), both 60m. by 30m., were stripped in this way. Over Area 2, the first area to be stripped, the ploughsoil and much of the underlying loam were removed by the scraper, exposing the gravel in some places. This may have resulted in the destruction of some shallow features. Over Area 4 the ploughsoil alone was removed so that all features which had survived the plough were revealed. The ploughsoil here was c. 0.35m. in depth and directly overlay the natural loam.

<sup>64</sup> A.C. Brodribb, A.R. Hands and D.R. Walker, *Excavations at Shakenoak Farm near Wilcote, Vol. III* (1972), p. 55, Fig. 23, No. 390.

<sup>65</sup> See p. 66.

<sup>66</sup> J.E.G. Sutton, 'A late Romano-British site at Wally Corner, Dorchester', *Oxoniensia*, xxvi/xxvii (1961/2).

<sup>67</sup> D.B. Harden, 'Two Romano-British Potters' Fields near Oxford', *Oxoniensia*, i (1936).

<sup>68</sup> C.J. Young, *The Roman Pottery Industry of the Oxford Region* B.A.R. 43 (1977), 16.

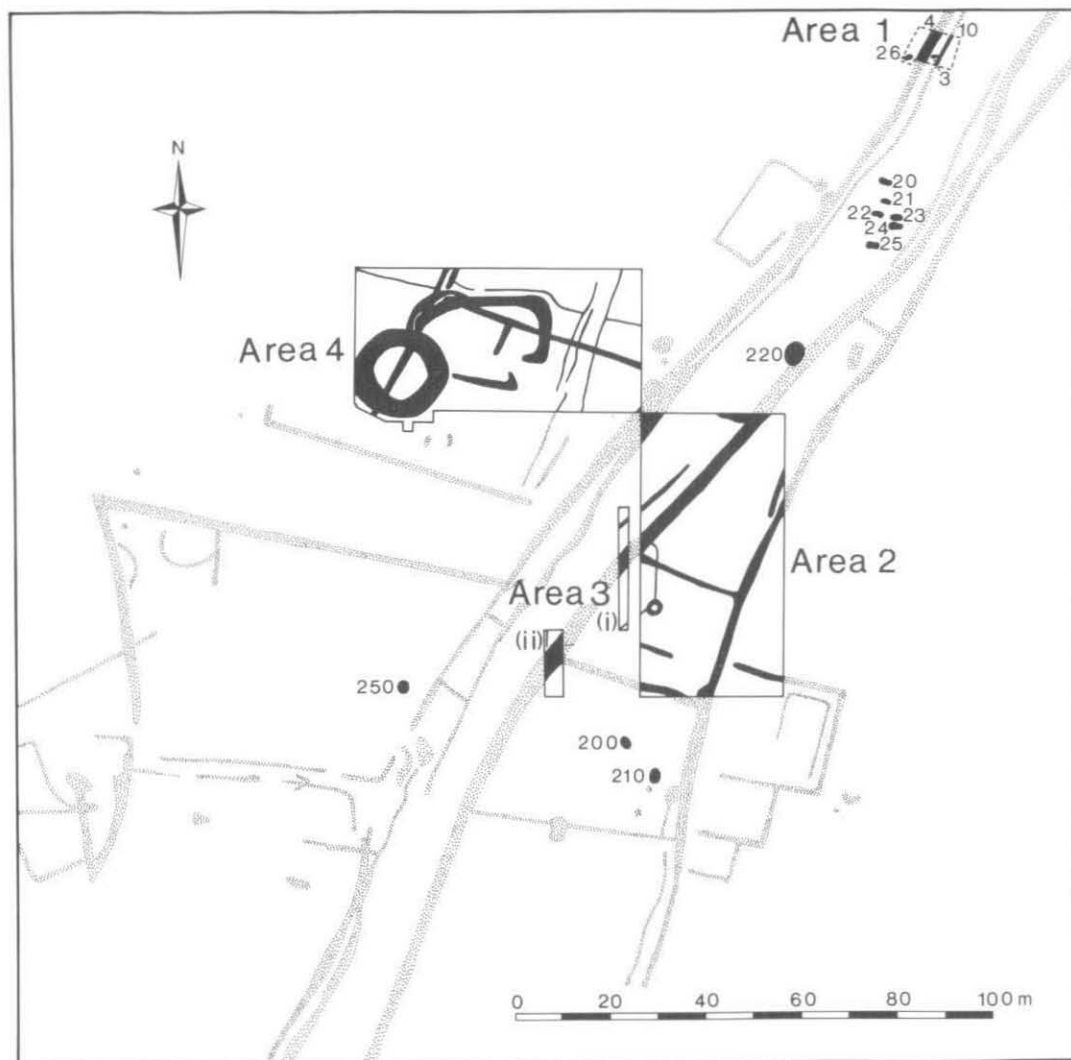


Fig. 13 Location of 1973 excavations, showing cropmarks

Work was not confined to these two areas. The discovery of inhumations during the drag-line stripping led to salvage excavation in the north-eastern part of the site (Area 1: Fig. 13). To the west of Area 2 two trenches were opened by hand to locate specific features (Area 3, trenches I and II: Fig. 13). A number of waterholes located during drag-line stripping after the end of the formal excavation were also examined and plotted (Fig. 13: 200, 210, 220 and 250).

Although it is likely that the Appleford cropmark site as a whole represents continual, if not continuous, occupation from the late Bronze Age to the late Roman period, within the areas excavated in 1973 two distinct phases of activity could be distinguished. For the purposes of this report these two phases are treated separately and are distinguished as 'The Prehistoric Occupation' and the Romano-British Occupation'.

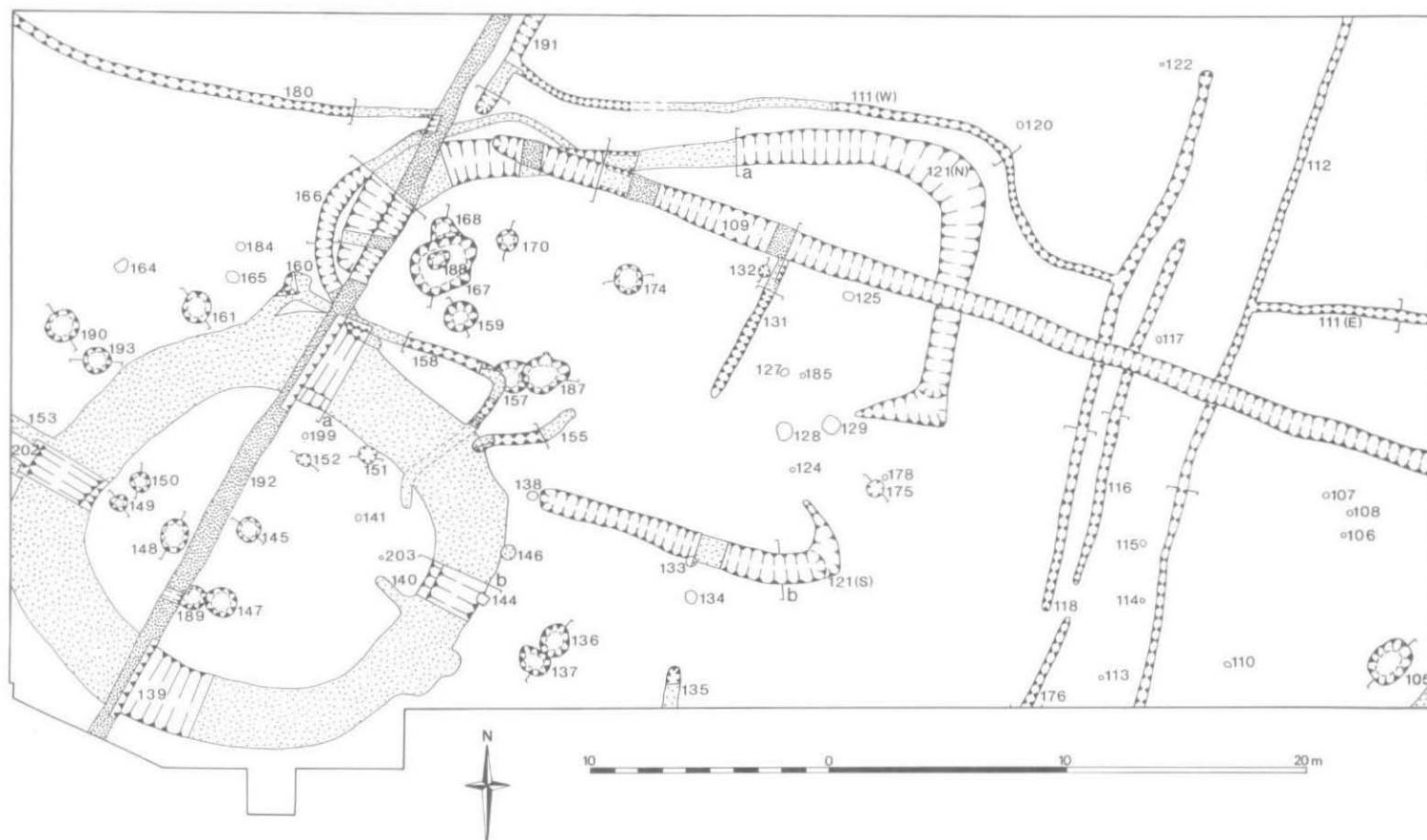


Fig. 14 Area 4

## THE PREHISTORIC OCCUPATION

In Area 4 (Fig. 14) an interesting arrangement of Iron Age enclosures and pits was revealed. On the basis of the pottery within them, some of the pits would appear to belong to an earlier phase of activity than the enclosures and can be classified as late Bronze Age.<sup>69</sup> These pits are F33, F34 (Area 2), F105, F136, F174, F189 and, possibly, F132 (Area 4). All these features contained high proportions (in excess of 27% by weight) of flint tempered fabrics. This 'late Bronze Age occupation' can be taken to account for the presence of considerable quantities of flint-gritted pottery in some of the Iron Age features.

A number of sherds were also recovered which are diagnostic of the early phases of the Iron Age, such as expanded rim forms from the ditch of Enclosure C and a few pieces of angular vessels (e.g. Fig. 21, no. 13). No features can be definitely ascribed to this period, however, and the main evidence for Iron Age activity on the site is the series of enclosures which can be assigned to the Middle Iron Age.

Area 4 was sited to locate the large, apparently circular feature visible on the aerial photograph (Plate I). On excavation this feature proved to be a sub-rectangular Iron Age Enclosure (Enclosure A), the primary feature in a sequence of enclosures which is now described.

*Phase I (Fig. 15)**Iron Age Enclosure A*

The enclosure was sub-rectangular and measured approximately 13m. by 12m. internally. It was defined by Ditch 139 which at the base of ploughsoil appeared to be 2.5m. wide. This width was exaggerated, as the ditch had in fact been recut, the second cutting enclosing a slightly larger area than the first, as the sections indicate (Fig. 16). The original ditch (F139 (ii)) had silted up to a high level before being recut. Both this ditch and its recut (F139 (i)) varied in depth and profile, but the average depth of each was approximately 1m. from the base of ploughsoil. The filling of both cuts was generally a brown sandy loam with some gravel. The sections suggest silting largely from the interior of the enclosure, although had all the material excavated from the ditch been heaped up to form an internal bank, the available interior area would have been substantially reduced. The proportion of gravel to loam in the filling of the ditch would match fairly closely the composition of the upcast from the ditch, the greater part of which would have been loam rather than gravel (there was approximately half a metre of loam over the gravel in this part of the site).

No convincing trace of any structure was located within the enclosure, although the aerial photograph (Plate I) appears to show within it a circular gully some 7m. in diameter. Great care was taken during the mechanical scraping of the area to ensure that as far as possible ploughsoil alone was removed from the area of the enclosure, and the last few centimetres of ploughsoil were removed by hand. It is unlikely therefore that this gully was destroyed by the machine, although it may have been ploughed away in the decade between the taking of the photograph and the excavation. The apparent survival of a 'ghost cropmark' for a period after the complete erosion of the feature which it reflects is a phenomenon which may also be considered here.

<sup>69</sup> The term 'late Bronze Age' is used here in the light of recent researches concerning the ceramics of the first part of the first millennium BC. It should not be assumed the term has validity in technological or social terms.

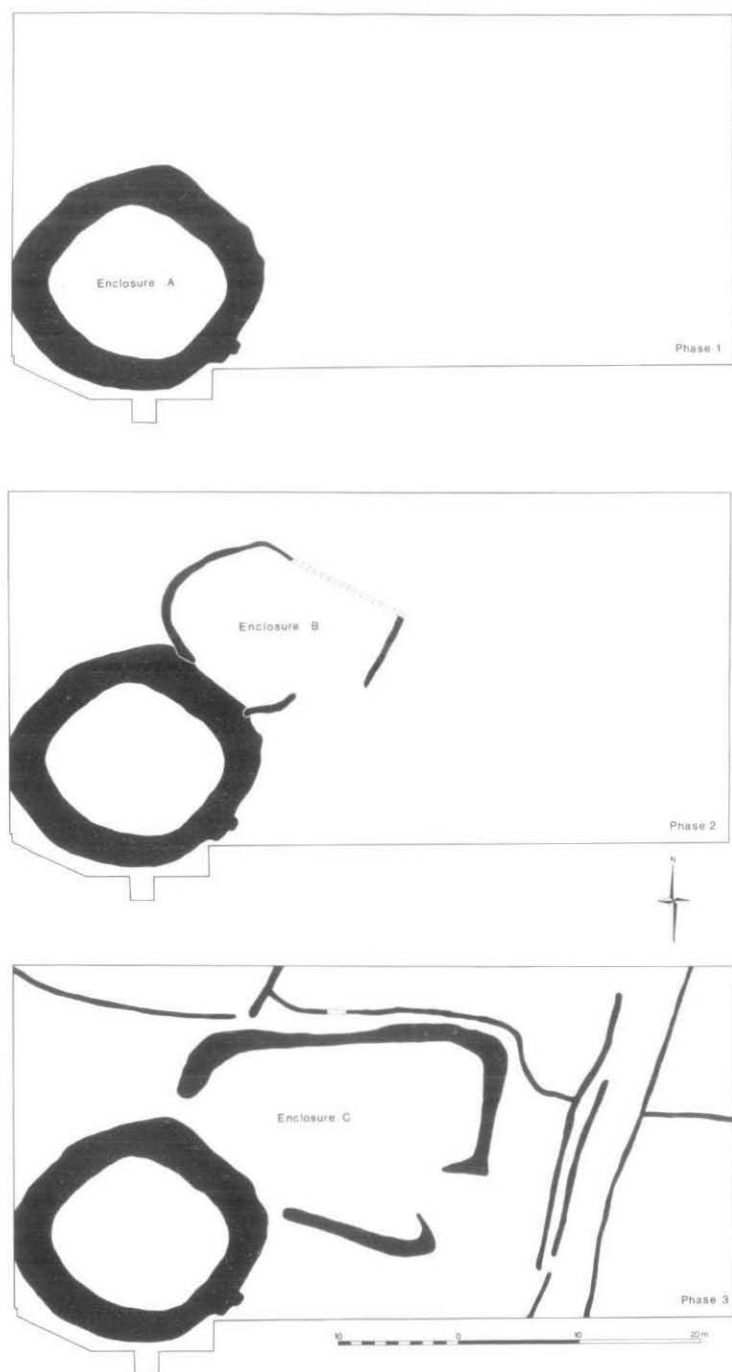


Fig. 15 Sequence of Iron Age enclosures



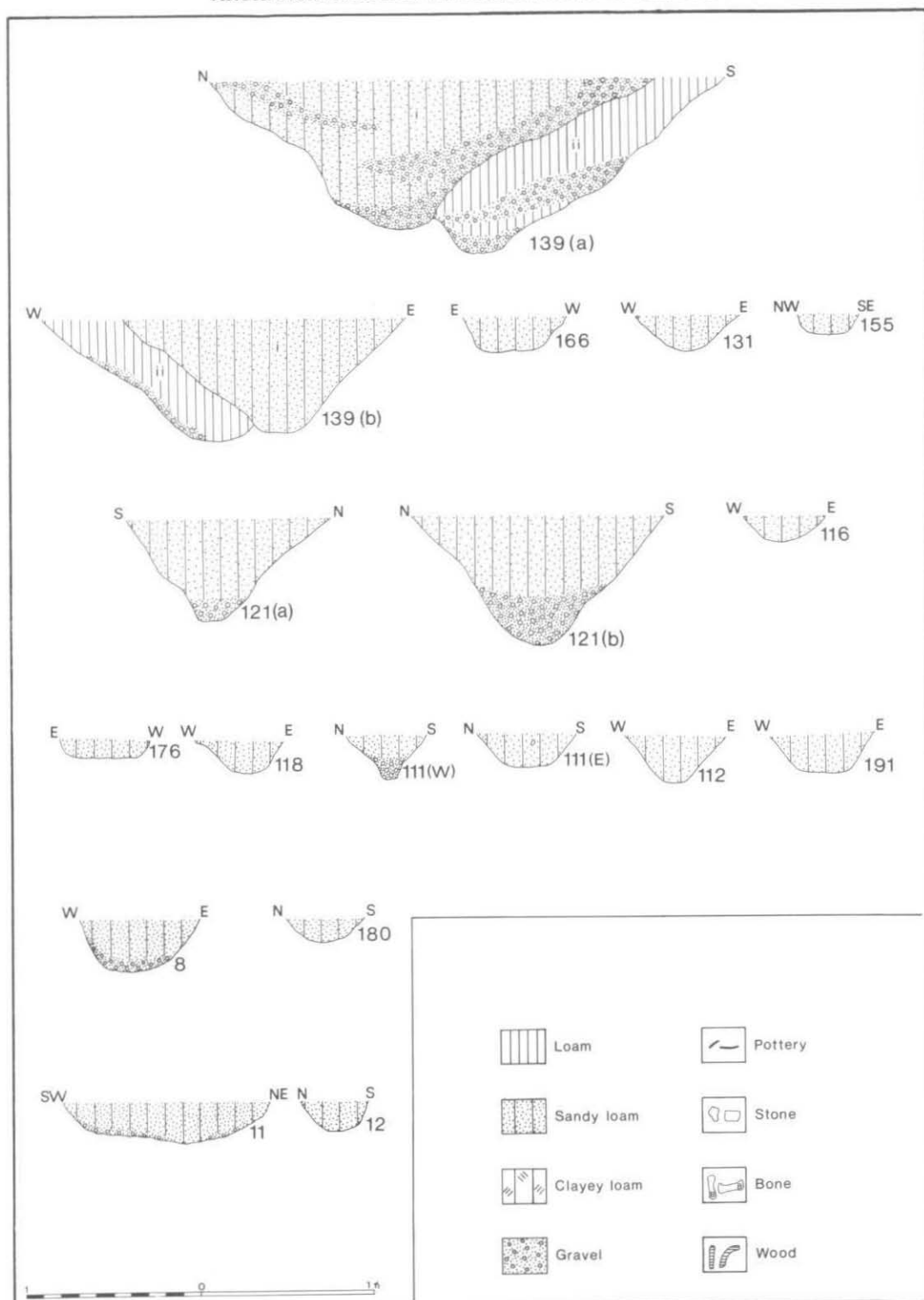


Fig. 16 Iron Age Enclosure ditches and gullies

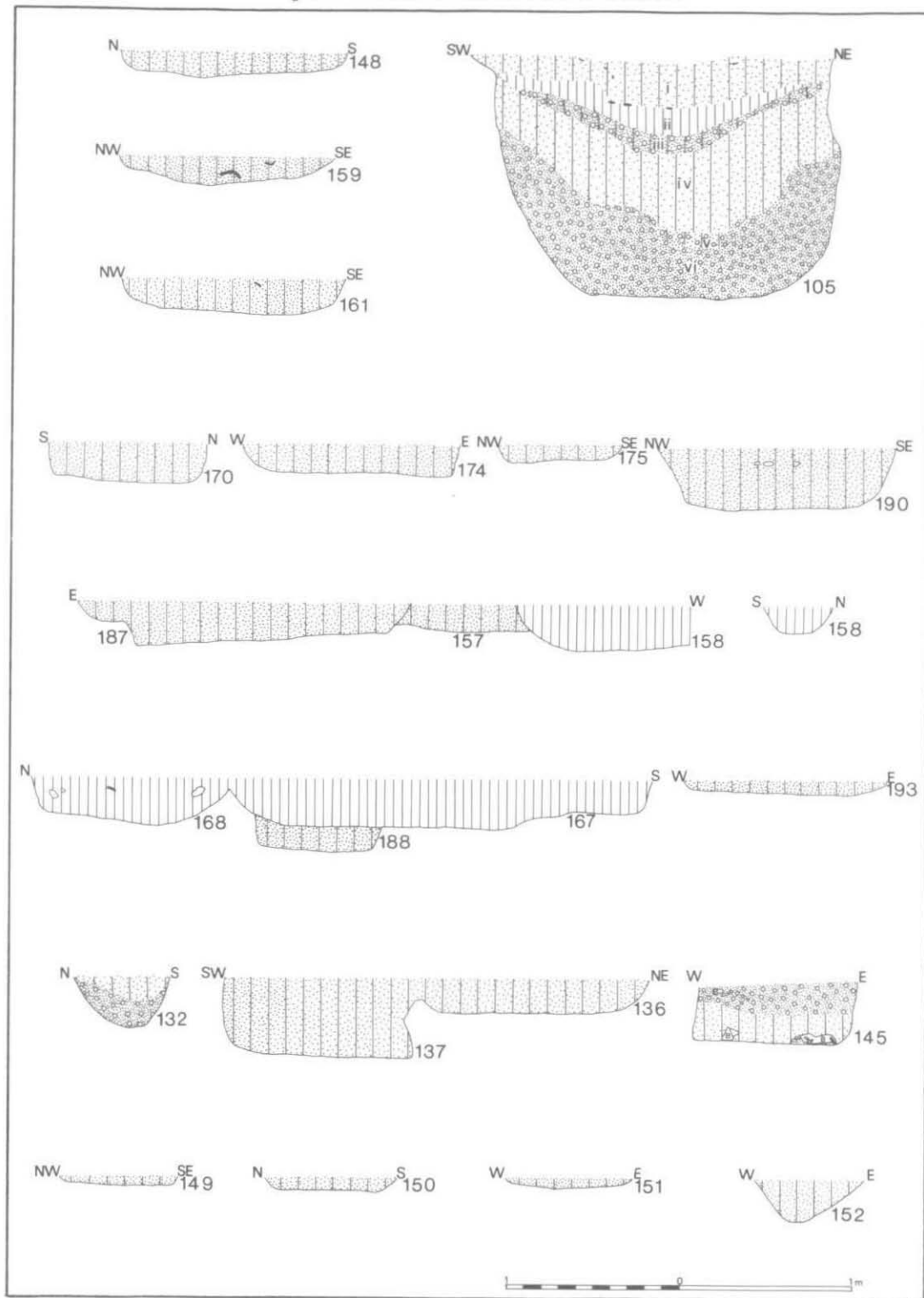


Fig. 17 Iron Age Pits: Sections

Several pits lay within the area of the enclosure, although in the absence of vertical stratigraphy it is impossible to state with certainty that they were associated with it. One of these, Pit 145, occupied a position in the centre of the enclosure. It appeared to have been deliberately backfilled, as the layer of clean gravel in the section indicates (Fig. 17). Its contents, the skull of a horse and the upper part of a dog's skull, laid directly on the bottom of the pit, might have had a ritual significance. A line of three post holes, F199, F141 and F203, ran along the north-eastern side of the enclosure.

### *Phase 2 (Fig. 15)*

#### *Iron Age Enclosure B*

This was a polygonal enclosure defined by Ditches 166, 155 and 131 (Fig. 14). The shape of the enclosure was irregular, 17m. long and 12m. wide, with an entrance 5m. wide to the south-east. The inclusion of Ditch 131 as part of the boundary of this enclosure is hypothetical, as later ditches had cut away any traces of it to the north and west. The projected line of Ditch 166 would, however, meet Ditch 131 at the point where it was removed by a later ditch, F109 (Fig. 14), and Ditch 131 did appear to be turning slightly to the west at this point. The pottery from the filling of Ditch 131 matches closely that from Ditch 166.

The boundary ditches of Enclosure B butt-ended against the ditch of Enclosure A, which had silted up to some extent but was clearly still a recognisable feature at the time of Enclosure B's definition. In view of this relationship, it seems reasonable to assume that Enclosure A, whatever its function, existed as an entity alongside Enclosure B during this phase of the Iron Age occupation, the latter being 'tacked on' to the earlier enclosure. There was however, no evidence of the ditch of the earlier enclosure being recut or even cleared out at this time; the butt-ends of the secondary enclosure overlay the silting-up of the *recutting* of the earlier ditch.

The ditches which defined Enclosure B were rather less substantial than that of the earlier enclosure, being on average slightly over 0.5m. wide and surviving to a depth of only 0.2m. to 0.3m. below the base of the ploughsoil (Fig. 16; 131, 155, 166). In places, and in Ditch 166 which defined the western side of the enclosure in particular, the profile was quite flat-bottomed, but there is no firm evidence for interpreting this feature as a palisade trench.

There was no trace of any structure falling within Enclosure B, but this is not necessarily significant in view of the lack of structural evidence on the site as a whole.

Post-dating this enclosure, and at its western end, was a shallow, flat-bottomed gully, F158, which may represent a timber structure of some kind (Section : Fig. 17). This gully cut Pits 157 and 160, as well as the ditch of Enclosure B, and so must postdate Enclosure A, although it could not be traced where it crossed the ditch of that enclosure (Fig. 14). The gully formed three sides of a rough rectangle measuring 7m. by 10m. The flat bottom and fairly vertical sides of this gully, which was 0.4m. wide and 0.15m. deep suggest that it may have been a slot for timber.

### *Phase 3 (Fig. 15)*

#### *Iron Age Enclosure C*

Enclosure C was somewhat larger than Enclosure B, which it apparently replaced, and like it had been added on to the north-east side of Enclosure A. It was defined by Ditch 121, a rather more substantial feature than the ditches which had defined the Phase 2 enclosure, Enclosure B. The ditch of Enclosure C butt-ended short of the ditch of

Enclosure A to the north and east, stopping a little short of the earlier ditch in each case. A post hole, F138, lay in one of the intervening spaces.

The entrance to the enclosure was indicated by a gap in the ditch which, like that of Enclosure B, lay to the south-east and was 5m. wide. The entranceway was emphasised on each side by a pair of inturned 'horns' in the form of short, shallow, tapering lengths of ditch attached to the butt-ends of the principal enclosure ditch. A post hole, F178, and a shallow flat-bottomed pit, F175, lay in the centre of the entrance. A post hole in that position may be significant, although a scatter of post holes and shallow scoops lay just inside the entrance and its position may be fortuitous.

The shape of Enclosure C was sub-rectangular, the overall length being 23m. internally. It was 17m. across at its widest point. Ditch 121 varied in width, being rather wider where it turned at the corners of the enclosure. The average width at the level to which it survived was c. 1.5m. The ditch was quite steep-sided (Fig. 16) and survived to a depth of 0.6m. to 0.7m. The gullies forming the 'horns' in the entranceway were rather shallower — that of the northern was 0.4m., that of the southern 0.25m. No stratigraphic relationship between these features and the main ditch could be established by section. The homogeneous filling would suggest they are contemporary.

The filling of Ditch 121 was a brown loam, though in some cuttings (F121 (b): Fig. 16) there was a distinctive lower gravelly filling. Whether or not this represents silting down from an internal bank is open to question — this lower filling where it occurred being generally horizontal. As with the ditch of Enclosure A there would be little gravel in the upcast (this ditch barely penetrated the natural gravel), so the absence of gravel spill-lines would not necessarily preclude the presence of a bank. There is also the possibility that the inturned 'horns' at the entrance represent the foundation of some sort of revetment to hold back the internal bank at this point.

There was no trace of any internal structure within Enclosure C. If the group of pits which lay within Enclosure B is assigned to that enclosure, there are few features remaining within Enclosure C at all, and to these the caveat of lack of vertical stratigraphy must again be applied. Amongst the remaining features only Pit 129 produced any quantity of pottery. The pit also produced a large quantity of daub, which might be taken to indicate the presence of a structure somewhere in the vicinity. Adjacent to this pit was a small shallow scoop, F128, which contained calcified bone and charcoal.

In the upper filling of the southern stretch of Ditch 121 just east of its butt-end against Ditch 139 was an infant burial, F177.

#### *Trackway and Gullies (Figs. 14 and 15)*

In Area 4, to the east of the enclosures described above, ran a trackway some 4.5m. wide defined by gullies on either side and aligned roughly north-south. The eastern side of the trackway was marked by a single shallow gully (F112) 0.35m. wide running unbroken right across the excavated area. The western side was defined by three separate but roughly parallel lengths of gully of similar dimensions — F116, F119 and F176. There was a break between F116 and F176 suggesting an entrance corresponding to that of Enclosure C. F116 and F119 were parallel, only 1m. apart, and unlikely to be contemporary. The gullies were very shallow — 0.15m. to 0.25m. deep — but did appear to be round-bottomed in profile (Fig. 16), and it seems unlikely they carried a continuous timber fence, although it is possible the upcast from the gully might have carried a hedge.

The trackway made an entrance through another linear gully, F111, which was of similar dimensions to the trackway gullies, though rather more steep-sided and flat-bottomed (Fig. 16). West of the trackway this gully veered northwards and then west-

wards again, clearly to avoid the ditch of Enclosure C. It must therefore have been either contemporary with, or later than, this enclosure. Insufficient material was recovered from the gully to confirm this, but what pottery was recovered from the filling of the gully was certainly Iron Age.

Further west still, Gully 111 ran into a length of ditch, F191, running on approximately the same alignment as the trackway. This ditch butt-ended a little to the south, just short of the ditches of Enclosures B and C. The relationship of Gully 111 and Ditch 191 could not be established by section but it seems likely that they are contemporary and part of the same system. Beyond the junction with Ditch 191, the line of the boundary formed by Gully 111 was apparently continued by another, similar, length of gully, F180, which seems to have ended short of the butt-end of Ditch 191, possibly making a narrow entrance at this point (Fig. 14). The relationship is obscured by a later Romano-British ditch which crossed Ditch 180 at this point.

Some features excavated in Area 2 (Fig. 25) may also be part of the same system. Ditch 8, running into the area from the north on very much the same alignment as the Iron Age trackway in Area 4, contained two Iron Age sherds only and no Romano-British material. Between this ditch and the trackway was a group of intersecting late Bronze Age pits on the northern section of Area 2 (F33, F34 and F74) as well as Pit 105 in the south-east corner of Area 4. Pit 105 was the deepest prehistoric pit on the site (1.4m.) and produced a good group of pottery.

It would appear that the trackway and associated gullies are all part of a single system, incorporating Enclosure C, and probably Enclosure A, and representing the latest phase of Iron Age activity in this part of the site. Unfortunately the gullies were too insubstantial to show as cropmarks, so it is impossible to see of what overall system they may have formed a part. It is worth noting in this context that the northern end of the trackway Gully 119 did appear to be a genuine butt-end and not simply a shallowing-up lost to plough erosion, suggesting that the trackway may well have opened up to the west at this point.

Two other features must also be considered here. One is the narrow gully, F12, emerging from the west section of Area 2 (Fig. 25). The gully appeared to form the eastern boundary to some form of enclosure to the west. Trench 1, Area 3, was opened to trace the course of this gully, which was located at the southern end of the trench, but not at the north. It may have veered further to the north. Gully 12 was clearly cut by the Romano-British ditch system and although it produced no dating evidence, being very slight (0.2m. wide and less than 0.1m. deep), it is best regarded as pre-Roman. The only feature located within the area apparently enclosed by Gully 12 was an inhumation, F104, the burial of an adolescent aligned north-east/south-west with its head to the north-east. Only the head and left shoulder lay within the trench (Area 3, trench 1: Fig. 25).

Against the south-east corner of the area enclosed by Gully 12 was a circular ditch, F11, enclosing an area 3m. in diameter. This feature was apparently contemporary with or earlier than Gully 12 which butt-ended against it. The ditch was quite shallow, surviving to a depth of 0.2-0.25m. and was rounded in profile (Fig. 16). As with Gully 12 there were no finds from the filling and also, like the filling of that gully, the filling was a black loam very different from the brown loam which formed the filling of the majority of features on the site. These fillings in fact resembled that of the earliest cutting of the ditch of Iron Age Enclosure A, which may be indicative of contemporaneity.

Within the area surrounded by the ditch were four post-holes arranged in a square 1m. across, with a fifth, slighter, post hole a little to the east. Four post structures such as this are of course a not uncommon feature of Iron Age settlement sites, but here the circular ditch around the structure is an additional factor in the interpretation.

*Discussion*

That part of the Iron Age settlement excavated at Appleford is represented by a sequence of small subrectangular or polygonal enclosures and their associated pits, enclosed in the final phase within a fenced or hedged area relating to a trackway. None of the types of enclosure represented at Appleford is novel to the Upper Thames gravel terraces — all can be paralleled by examples known from excavated sites or from the less conclusive evidence of cropmarks.

The Phase 1 enclosure can be compared with examples excavated at the Ashville Trading Estate, Abingdon<sup>70</sup> and Farmoor.<sup>71</sup> It also resembles Port Meadow Site 5,<sup>72</sup> a circular enclosure measuring 15m.-16m. in diameter with a ditch 3m. wide containing early Iron Age pottery in its primary filling.

In his discussion of ring ditches in the Oxford region Case<sup>73</sup> discusses the possibility of certain of these monuments being habitation sites, the paucity of evidence for internal structure being explained by their ephemeral nature. The lack of evidence for structures within these enclosures may well be attributable simply to the erosion of the subsoil by cultivation. The gravel terraces have certainly been ploughed for centuries and the loss of structural evidence on archaeological sites is undoubtedly widespread and severe. Guilbert<sup>74</sup> has stressed the extent to which the loss of 0.24m. of natural subsoil at Moel-y-Gaer would have reduced and distorted the evidence for even quite substantial timber structures.

As suggested above, the Iron Age Enclosure A at Appleford may have contained a circular house, visible as a cropmark on aerial photographs but removed by ploughing before the 1973 excavation. In the absence of direct structural evidence the interpretation of the feature as a house enclosure must obviously be tentative, but the presence of a quantity of domestic refuse in the filling of the ditch and the apparent relationship to later enclosures would support this interpretation.

The enclosure arrangement of Phase 2 at Appleford bears a striking resemblance to an example excavated at Ashville Trading Estate, Abingdon.<sup>75</sup> In both cases the annexe is attached to the north-east side of the principal enclosure, with access from the south-east. The excavations at Farmoor have also furnished examples of such annexes associated with penannular enclosures.<sup>76</sup> A further interesting parallel is provided by the later phase enclosures at Linch Hill,<sup>77</sup> where the double-enclosure layout would seem to be rather later in date.

It seems reasonable to assume, bearing in mind the manner in which Enclosures B and C are attached to the north-east side of Enclosure A, that the latter continued in use. Assuming a house within this enclosure, Enclosures B and C may be seen as performing a subsidiary function, though precisely what, it is beyond the scope of the surviving evidence to define. It must be noted however that these annexes were not part of the

<sup>70</sup> M. Parrington, *The Excavation of an Iron Age Settlement, Bronze Age ring-ditches and Roman features at Ashville Trading Estate, Abingdon (Oxfordshire) 1974-76*. (1978) Figs. 4, 5 and 6.

<sup>71</sup> G. Lambrick and M. Robinson, *Iron Age and Roman riverside settlements at Farmoor, Oxfordshire* (1979) Figs 11 and 13.

<sup>72</sup> R.J.C. Atkinson, 'Archaeological Sites on Port Meadow, Oxford', *Oxoniensia*, vii (1942), 28.

<sup>73</sup> Humphrey Case, 'Notes on the Finds and on Ring-Ditches in the Oxford Region', *Oxoniensia*, xxviii (1963), 49.

<sup>74</sup> G.C. Guilbert, 'Planned hillfort interiors', *Proc. Prehist. Soc.*, xxxi (1975), 203-221.

<sup>75</sup> M. Parrington, *op. cit.*, Fig. 12.

<sup>76</sup> G. Lambrick and M. Robinson, *op. cit.*, Figs 11 and 13.

<sup>77</sup> W.F. Grimes, 'Excavations at Stanton Harcourt, Oxon., 1940', *Oxoniensia*, viii-ix (1943-4), Fig. 23, i.

original scheme at Appleford, as both were added at a time when the *recutting* of Enclosure A had already silted up to its surviving level. This being so, there are grounds for considering the later and more substantial enclosure (Iron Age Enclosure C) as a separate entity, simply utilising the silted-up ditch of Enclosure A as its boundary on the east. The contrast in the proportions of pottery fabrics from the fillings of the ditches of the two enclosures would also support this interpretation.

Such a small polygonal enclosure may be classed with those identified as typical of the 'Lower Windrush multiple settlement' by Harding.<sup>78</sup> The enclosure at Beard Mill<sup>79</sup> is very similar in size to Iron Age Enclosure C at Appleford. This enclosure had a linear gully running across the east side of the entrance (the west side was not excavated) which, although apparently later than the enclosure ditch, may, like the inturned 'horns' on the Appleford enclosure, have served to define the entranceway. Harding<sup>80</sup> suggests that the Beard Mill gully may have supported a fence to retain the bank terminal, and the Appleford arrangement may have performed a similar function. The ditch of the Beard Mill enclosure was of similar dimensions to that of Iron Age Enclosure C and contained at least one circular hut.

A similar 'horned' entrance to that of Enclosure C can be seen on a rectangular enclosure containing a circle showing as a cropmark at Northfield Farm, Long Wittenham.<sup>81</sup> The principal enclosure at Langford Down<sup>82</sup> also possessed an inturned entrance in its third phase, although this enclosure was somewhat larger than the Appleford example and was associated with Belgic material.

The gullies which form the trackway and associated system are of a kind identified elsewhere on Iron Age sites in the Upper Thames Valley. Eight stretches of gully of similar dimensions to the Appleford examples were recorded at Stanton Harcourt.<sup>83</sup> The earliest feature, apparently pre-Belgic, on the Langford Down site<sup>84</sup> was a gully which, turning through 90 degrees, seems likely to have been the corner of an enclosure. At Standlake Down<sup>85</sup> a similar gully, recut in places, bounded an area of pits and two-post structures and at Beard Mill<sup>86</sup> gullies G3 and G4 may be seen to form the corner of a rectangular enclosure. Most recently, excavations at Mount Farm have revealed more extensive lengths of gully forming part of a system of fields or paddocks one of which was apparently bounded by a hedge.<sup>87</sup>

The comparative slightness of these features makes their survival and identification rather less likely than their more substantial successors of the later Iron Age and Roman periods but these examples indicate that they represent a form of land division widely adopted on Iron Age sites in the region. It would appear that in the trackway and enclosure system defined by these gullies we see the origins of a form of land division characteristic of numerous cropmark sites in the region<sup>88</sup> and a pattern of land management which was to continue on into and throughout the Roman period.

<sup>78</sup> D.W. Harding, *The Iron Age in the Upper Thames Basin* (1972), 41.

<sup>79</sup> Audrey Williams, 'Excavations at Beard Mill, Stanton Harcourt, Oxon., 1944', *Oxoniensia*, xvi (1951), Fig. 4.

<sup>80</sup> D.W. Harding, *op. cit.*, 17.

<sup>81</sup> G.W.G. Allen, 'Crop-marks seen from the Air, Northfield Farm, Long Wittenham, Berks.', *Oxoniensia*, v (1940), Fig. 10.

<sup>82</sup> Audrey Williams, 'Excavations at Langford Downs, Oxon., in 1943', *Oxoniensia*, xi-xii (1946-7), Fig. 16.

<sup>83</sup> Ann Hamlin, 'Early Iron Age Sites at Stanton Harcourt', *Oxoniensia*, xxxi (1966), Fig. 1.

<sup>84</sup> Audrey Williams, *op. cit.*, 49.

<sup>85</sup> D.N. Riley, 'A Late Bronze Age and Iron Age site on Standlake Downs, Oxon.', *Oxoniensia*, xi-xii (1946-7), Fig. 9.

<sup>86</sup> Audrey Williams, 'Excavations at Beard Mill, Stanton Harcourt, Oxon., 1944', *Oxoniensia*, xvi (1950), Fig. 7.

<sup>87</sup> Information from George Lambrick.

<sup>88</sup> D. Benson and D. Miles, *The Upper Thames Valley: an Archaeological Survey of the River Gravels* (1974).



*The Pits*

The majority of the pits found in association with the Iron Age enclosures were similar in character. The shape was generally circular or oval with a flat bottom and an average width of slightly over a metre. Plough erosion had clearly truncated these features (Fig. 17) but the majority would appear to have possessed a steep-sided profile. The depths varied from 0.1m. to 0.6m. into the subsoil (0.4m. to 0.9m. from the modern ground surface, which may approximate to the level from which they were originally excavated.)

The uniformity of the pits would imply a common function, presumably storage. Their comparative shallowness may indeed reflect the high watertable (water was apparently obtainable in the Roman period at a level less than a metre beneath the base of some of these pits) and the need to keep dry whatever was being stored. Several of the pits were so vertical-sided that their gravel walls would certainly have collapsed had they not been either lined or filled immediately after excavation. No trace of a lining of any kind was observed. The pits had generally been backfilled with dark brown loam containing a certain amount of domestic refuse — animal bone, pottery and, in some cases, fragments of daub. Only one pit, F159, produced a complete pottery vessel (Fig. 23, No. 15). The disposal of refuse may have been the ultimate function of some of the pits, although simple backfilling with soil derived from the surrounding area would obviously have led to the incidental incorporation of occupation-derived material into the filling. It is unlikely that on a rural site, a pit would be dug specifically for the disposal of rubbish. Organic waste would in any case have a use as manure.

*The Four-post Structure and Associated Enclosure.*

The function and significance of four post structures has been the subject of much discussion.<sup>89</sup> In view of the varying interpretations put forward, it is perhaps simplest to regard the four post form as a simple and stable framework which can form the basis of a number of structures of differing functions, and rely on individual context for interpretation.

The four-poster at Appleford is unusual in that it is surrounded by a small circular ditch (Fig. 25). No artefacts were recovered from the fillings of the ditch or the postholes. It is presumed to be Iron Age on the basis of its relationship to gully 12 which was cut by the ditches of the Romano-British enclosure system.

The Appleford structure seems rather small for a hut, and, therefore, a traditional interpretation as a raised granary<sup>90</sup> is tempting. This interpretation does not, however, explain the circular ditch surrounding the four-poster, assuming the features to be contemporary. The structure also appeared to be somewhat isolated from the rest of the Iron Age settlement area, rather like the four-posters at Tollard Royal<sup>91</sup> and Grimthorpe.<sup>92</sup>

There are grounds for considering certain of these four-post structures, especially those situated within their own small enclosures, as funerary monuments or shrines. The

<sup>89</sup> G. Bersu, Excavations at Little Woodbury, part I', *Proc. Prehist. Soc.*, vi (1940), 97-8; G.J. Wainwright, 'The Excavation of a Durotrigan farmstead near Tollard Royal', *Proc. Prehist. Soc.*, xxxiv (1968) 112-16; A. Ellison and P. Drewett, 'Pits and Post-holes in the British Early Iron Age; some alternative explanations', *Proc. Prehist. Soc.*, xxxvii (1971), 183-94; G. Guilbert, 'Planned hillfort interiors', *Proc. Prehist. Soc.* xxxi (1975), 203-221.

<sup>90</sup> G. Bersu, *op. cit.*, 97-8.

<sup>91</sup> G.J. Wainwright, *op. cit.*, 112-16.

<sup>92</sup> I.M. Stead, 'An Iron Age hill-fort at Grimthorpe, Yorkshire, England', *Proc. Prehist. Soc.*, xxxiv (1968), 157-9.



evidence has been summarised by Harding,<sup>93</sup> and by Piggott<sup>94</sup> who cites a number of continental parallels, including Fin d'Ecury in the Marne, where a four-post structure with a square enclosure was associated with similar enclosures containing inhumation and cremation burials. In the same region at L'Obit, in the valley of the Retourne, recent excavation has revealed a number of these structures, along with eight-posters, forming an integral part of a La Tène III cremation cemetery.<sup>95</sup>

Two other sites may also be considered here. At Frilford<sup>96</sup> one of two circular shrines of Iron Age date has a six-post structure within it, and at Winchester<sup>97</sup> a four-poster lay in an off-centre position within a circular ditch and is interpreted as a shrine. The examples from these latter sites are somewhat larger than the Appleford structure but this does not preclude the possibility that this could also have possessed a ritual or funerary function, particularly in view of its association with an enclosure, bounded by gully 12, within which the only feature located was an inhumation.

## THE FINDS

### THE IRON AGE POTTERY\*\* By C.D. DE ROCHE and GEORGE LAMBRICK

#### DESCRIPTION OF THE ASSEMBLAGES By C.D. DE ROCHE

##### *Introduction*

This analysis deals with fabric composition, vessel form and surface-finishing technique. The site's principal assemblages are compared in an attempt to discern and define chronological developments within what is judged to be a local industry.

Excluding residual sherds from Romano-British features, the bulk of the pottery, consisting of nearly 3000 sherds weighing approximately 45kg., was recovered from 31 features. Designation of other features in Area 2 as Iron Age was not based on ceramic evidence. Some features in Area 4 which yielded only a few undiagnostic sherds are not included in the analysis.

##### *Fabric Groups*

The pottery has been separated into three fabric groups based primarily on the types, and to a lesser extent the size and amount, of inclusions in the clay which could be visually identified in the section of sherds. Inclusions identified include flint, quartz, limestone or dolomite, shell, fired clay and plant material, the last being represented either by charcoal fragments or voids of characteristic shape. It is not always clear which of the inclusions may have been purposely added to improve the modelling or firing properties of the clay, as some may have been present in the clay deposits exploited or else have been inadvertently incorporated as vessels were being formed by the potter. None of the materials identified is uncommon in the area today. It is assumed that similar materials were obtainable locally at the time of the pottery's manufacture.

<sup>93</sup> D.W. Harding, *The Iron Age in Lowland Britain* (1974), 96-112.

<sup>94</sup> S. Piggott, *The Druids* (1968), 40-53.

<sup>95</sup> Information from Dr. I.M. Stead.

<sup>96</sup> J.S.P. Bradford and R.G. Goodchild, 'Excavations at Frilford, Berks.', *Oxoniensia*, iv (1939), Fig. 5.

<sup>97</sup> M. Biddle, 'Excavations at Winchester, 1964', *Antiq. J.*, xxxv (1965), Pl. lxviii.

<sup>98</sup> Mrs. De Roche, who has since returned to the USA, originally wrote this report before recent work on the late Bronze Age/early Iron Age. Where necessary the discussion has been added to, and the discussion of the fabrics in relation to the form typology and its significance for the chronology has also been added to by Mr. Lambrick. This report also includes sections of Mrs. De Roche's B. Litt. Thesis 'An analysis of selected groups of Early Iron Age Pottery from the Oxford Region', University of Oxford, 1977.

The dominant inclusions of Fabric 1 are shell or calcareous grit. Fabric 2 has a sandy texture due to the presence of quartz grains. Fabric 3 is characterised by the presence of flint particles. Many sherds contain a combination of these three principal inclusions, as well as others, and have been classified by what would appear to be the dominant type of inclusion in each case. Fabrics 1 and 2 correspond to fabric groups defined on the Ashville Trading Estate site at Abingdon.<sup>99</sup> Flint was too rare an inclusion at Ashville to merit the definition of a third group.

#### *Vessel Form*

The range of vessel forms from Appleford is comparable to a portion of the vessel form type series derived from the Ashville Iron Age pottery. For convenience of comparison the same system has been applied here.

- Form A: vessels with expanded rims
  - A1: rim expanded internally
  - A2: rim expanded externally
  - A3: T-shaped rim expanded internally and externally
- Form B0: coarse ware jars of curving profile
  - B1: jars with slack shoulders
  - B2: globular jars
  - B3: barrel jars
- Form C0: vessels with angular profiles
  - C1: coarse vessels with flaring rims and/or carinated shoulders
  - C2: bowls with sharp neck and/or shoulder angles
- Form D0: rounded bowls or jars with well-finished, usually burnished surfaces
- Form M: unclassified forms, mainly very short profiles and unusual forms

#### *Potting technology*

All the pottery recovered from Iron Age features was hand-moulded by coil- or ring-building or pinching. Many of the exterior surfaces have been carefully smoothed. Some vessels were burnished and a few sherds show traces of a haematite slip. Decorative techniques are often plastic and include rows of finger impressions or slashed lines on rims and shoulders of the heavier vessels. Other decoration has been tooled onto slightly hardened clay or incised or punched while the clay was still wet. Clamp-firing methods were probably used, as is indicated by the frequently mottled surfaces and layered cross-sections which can result from poorly controlled firing atmosphere and temperature.

#### CATALOGUE (Figures 19-24)

The assemblages illustrated have been chosen as representative of the site. They are illustrated here as four closed groups plus miscellaneous vessels from other features.

The description of each sherd is in the following sequence:-

Form, Fabric and inclusions. Description of surface colour with Munsell chart No. (E — external; I — internal; Bk — Break). Surface treatment.

#### *Enclosure A Ditch 139 (Fig. 18)*

Original cut, primary fill (Ditch 139 (ii))

1. B1, Fabric 2 with medium amount of quartz up to 3mm. E very dark grey 10YR 3/1 to pale brown 10YR 6/3. I very dark grey 10YR 3/1 to dark greyish brown 10YR 4/2. Bk very dark grey 10YR 3/1. Surfaces wiped.
2. M, Fabric 2 with medium amounts of shell and grog up to 1mm. E very dark grey 10YR 3/1. I reddish brown 5YR 4/3. Bk very dark grey 5YR 3/1.

Original cut, upper and general fill (Ditch 139 (ii))

3. D0, Fabric 2 with medium amount of quartz up to 1mm. E very dark grey N3 and reddish brown 5YR 5/4 burnished but worn. I and Bk very dark grey N3. I wiped.

<sup>99</sup> De Roche in M. Parrington, *Ashville Trading Estate*, 40-74.

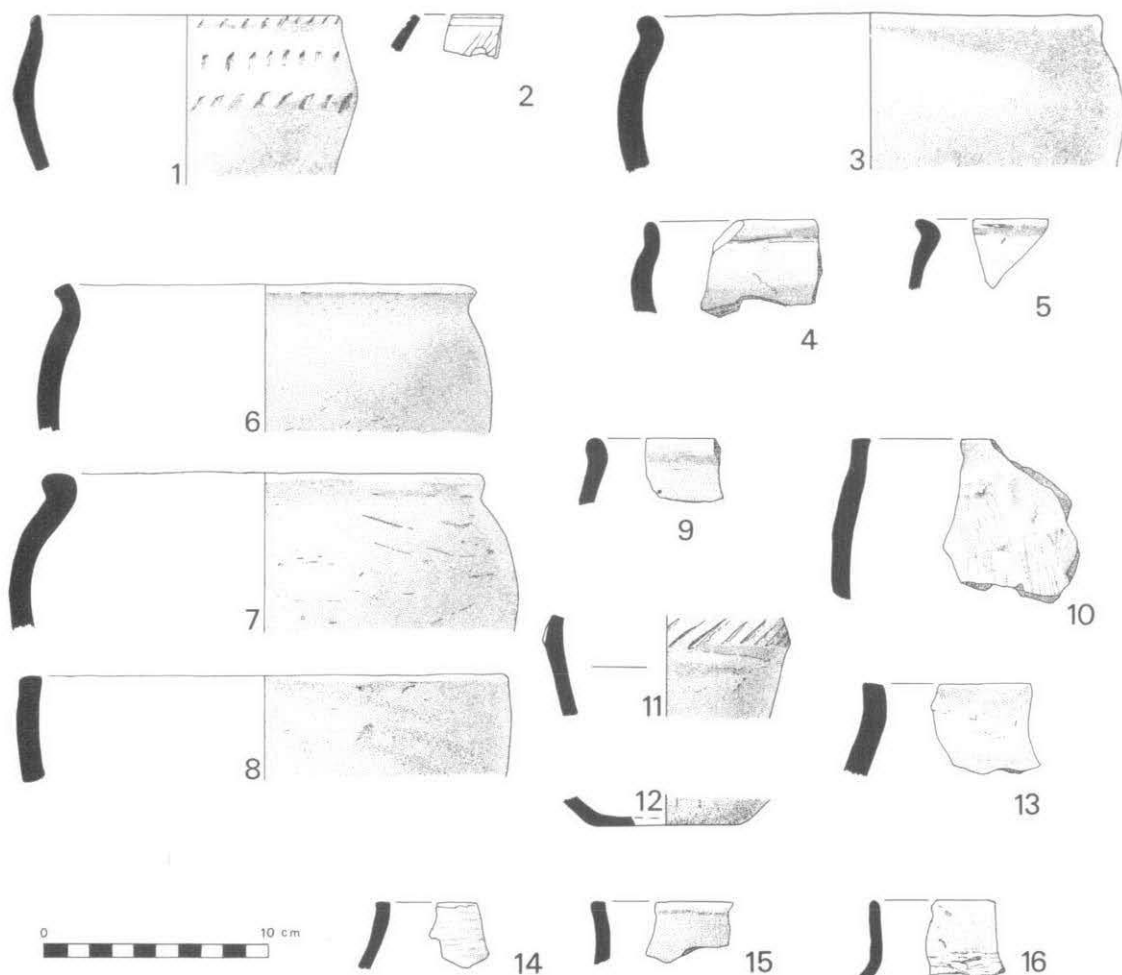


Fig. 18 Pottery from the filling of the Phase 1 Enclosure Ditch

4. D0. Fabric 2, fine sandy. E very dark grey N3. I dark grey N3 to dark greyish brown 10YR 4/2. Surfaces burnished. Bk very dark grey N3 with surface layers of light yellowish brown 10YR 6/4 in some areas.
5. D0. Fabric 2, sandy. E, I, and Bk very dark grey N3. Surfaces burnished.

Recut (Ditch 139 (i))

6. B2. Fabric 2, sandy, with a few limestone lumps up to 6mm. E brown 10YR 5/3 and very dark grey N3. I brown 7.5YR 5/2 and burnished but worn. Bk dark grey 10YR 4/1.
7. B2. Fabric 2, sandy, with medium amount of shell up to 1mm. and light amount of grog up to 2mm. E brown 10YR 5/3 to dark grey 10YR 4/1 and burnished but worn. I and Bk dark grey 10YR 4/1
8. B3. Fabric 2 with medium amount of quartz up to 2mm. E and I dark greyish brown 10YR 1/2 to very dark grey 10YR 3/1 and wiped. Bk very dark grey 10YR 3/1.
9. D0. Fabric 2, sandy, with light amounts of grog and shell up to 5mm. E and I dark grey 10YR 4/1 over reddish brown 5YR 5/3 and burnished. Bk very dark grey 5YR 3/1.
10. B2. Fabric 2, fine sandy. E very dark grey N3 with carbon deposits, wiped vertically. I very dark grey N3 through light brown 7.5YR 6/4 to pale brown 10YR 6/3, wiped horizontally. Bk very dark grey N3.
11. M. Fabric 2 with medium amount of quartz up to 3mm. E, I, and Bk very dark grey N3. Same vessel as 12.

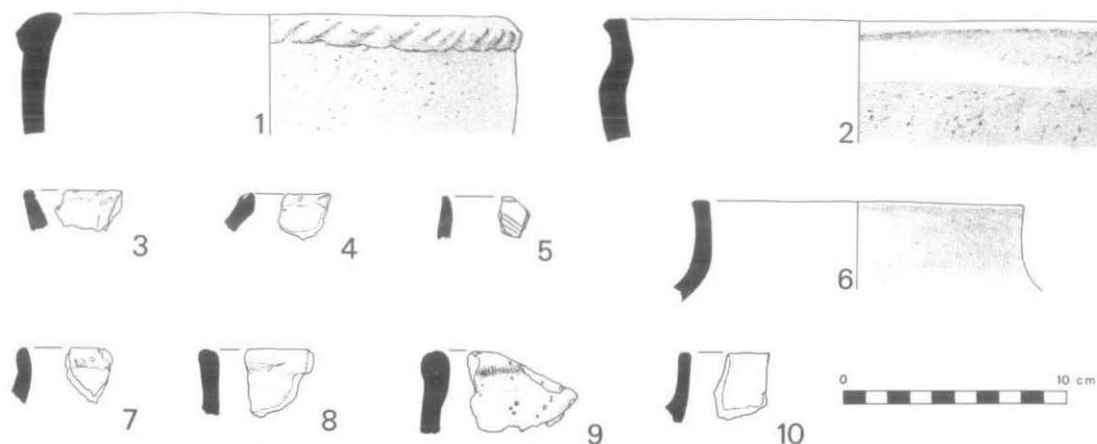


Fig. 19 Pottery from the filling of the Phase 2 Enclosure Ditch

12. Base. Fabric 2 with medium amount of quartz up to 3mm. E, I, and Bk very dark grey N3. Same vessel as 11.
13. B0. Fabric 2 with medium amount of quartz up to 2mm. E very dark grey N3 to brown 7.5YR 5/2 and burnished. I light brown 7.5 YR 6/4 and wiped. Bk very dark grey N3.
14. M. Fabric 2 with light amount of flint up to 2mm. E light brown 7.5YR 6/4 to pinkish grey 7.5YR 6/2. I dark grey N3.
15. B0. Fabric with heavy amount of quartz up to 1mm. E very dark grey N3. I dark reddish grey 5YR 4/2. Surfaces wiped. Bk dark grey N4 to reddish brown 5YR 5/4.
16. C0. Fabric 2 with medium amount of vegetable voids up to 5mm. and light amounts of shell and grog up to 2mm. E dark reddish grey 5YR 4/2 to very dark grey 5YR 3/1. I and Bk very dark grey 5YR 3/1. Surfaces wiped.

*Enclosure B Ditches 131, 155 and 166. (Fig. 19)*

*Ditch 166*

1. A3. Fabric 1 with medium amounts of shell up to 6mm. vegetable voids up to 3mm. and grog up to 2mm. E dark brown 7.5YR 3/2 to very dark grey N3. I greyish brown 10YR 5/2 to dark grey 10YR 4/1 and pitted. Surfaces wiped. Bk very dark grey 10YR 3/1.
2. B1. Fabric 2 with medium amount of quartz up to 1mm. E light brown 7.5YR 6/4 to very dark grey N3 on neck with carbon deposits. Rim and neck burnished. I dark grey 5YR 4/1 to yellowish red 5YR 5/6. Bk very dark grey N3.
3. M. Fabric 2 with light amounts of quartz and grog up to 2mm. and medium amount of vegetable voids. E, I and Bk very dark grey 10YR 3/1 with reddish brown 5YR 4/3 on interior.
4. M. Fabric 2, sandy with medium amount of grog up to 1mm. E dark brown 7.5YR 4/2. I and Bk very dark grey N3.
5. M. Fabric 2, fine sandy. E, I and Bk dark grey 10YR 4/1 with brown 10YR 5/3 layer beneath E.

*Ditch 131*

6. M. Fabric 2. E very dark grey N3 to dark greyish brown 10YR 4/2 and roughly burnished. I dark grey 10YR 4/1. Bk very dark grey N3.
7. D0. Fabric 2, fine sandy. E very dark grey N3 and burnished. I very dark grey 10YR 3/1. Bk dark greyish brown 10YR 4/2.
8. B0. Fabric 2 with medium amount of quartz up to 1mm. E very dark grey 10YR 3/1. I and Bk very dark grey N3. Surfaces wiped.

*Ditch 155*

9. M. Fabric 1 with medium amounts of shell up to 5mm. and grog up to 2mm. E brown 7.5YR 5/4. I reddish yellow 5YR 6/6. Bk and worn edge of rim very dark grey N3.
10. M. Fabric 3 with medium amount of flint up to 2mm. E brown 7.5YR 5/4 I dark grey 10YR 4/1 to very dark grey 10YR 3/1. Surfaces smoothed. Bk layered as surfaces.

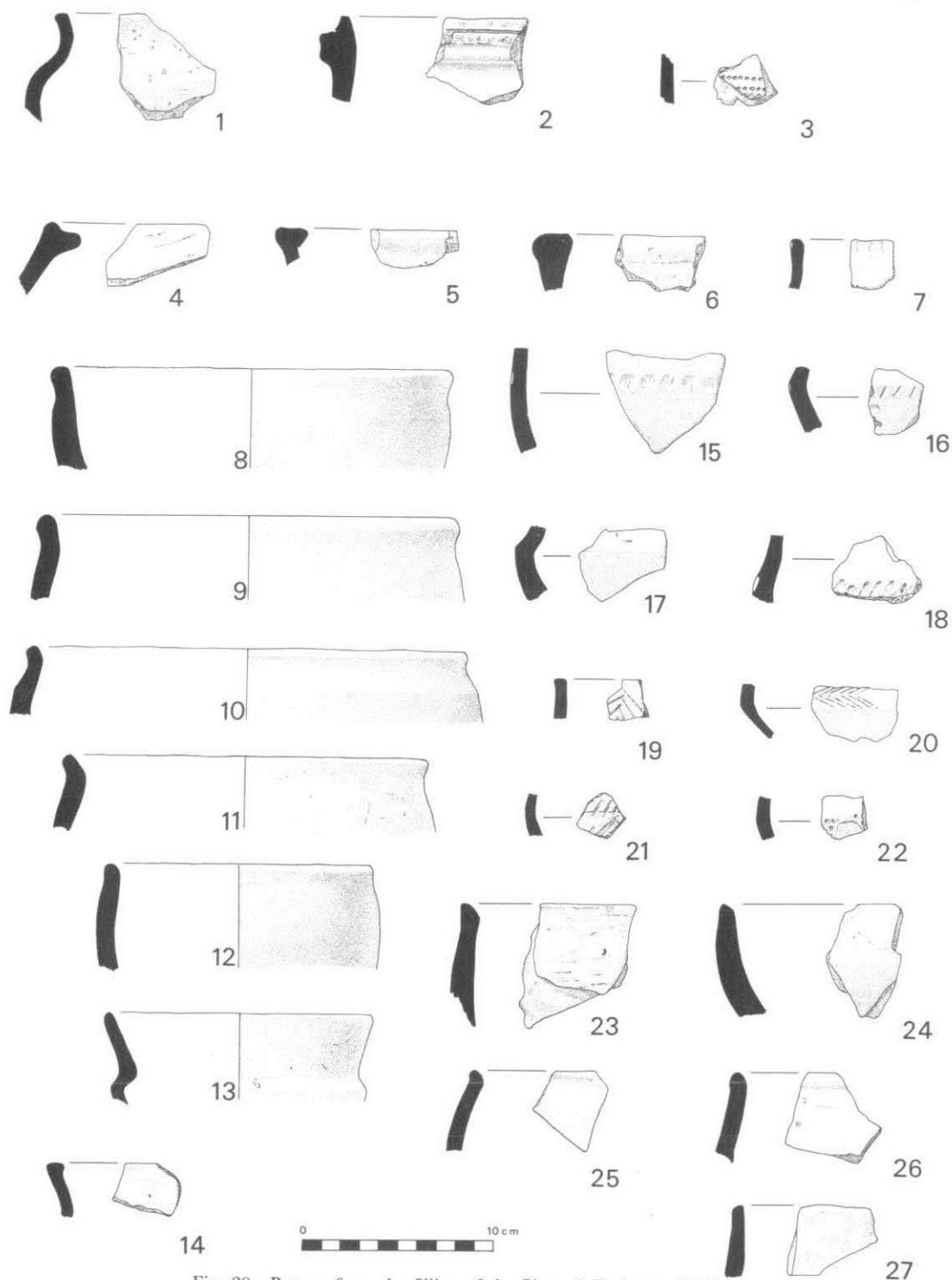


Fig. 20 Pottery from the filling of the Phase 3 Enclosure Ditch

*Enclosure C Ditch 121. (Fig. 20)*

## Lower Filling (Ditch 121 (ii))

1. B1. Fabric 3 with medium amount of flint up to 4mm. E very dark grey N3. I and Bk black N2.5. Surface wiped.
2. M. Fabric 2 with medium amounts of quartz up to 1mm and grog up to 2mm. E light grey 10YR 7/2 and burnished. I and Bk pale brown 10YR 6/3
3. Decorated body sherd. Fabric 2. fine sandy. E pale brown 10YR 6/3 to greyish brown 10YR 5/2. I very dark grey N3 and burnished. Bk varies as surfaces.

## Upper Filling (Ditch 121(i))

4. A1. Fabric 2 with medium amount of grog up to 3mm. E greyish brown 10YR 5/2. I and Bk very dark grey 10YR 3/1. E and top of rim burnished.
5. A3. Fabric 1 with medium amounts of shell up to 6mm and grog up to 1mm. E very dark grey 5YR 4/4. Bk very dark grey 10YR 3/1.
6. A3. Fabric 2 with medium amount of grog up to 1mm and light amount of shell up to 2mm. E and I reddish brown 5YR 5/4 to very dark grey N3 and wiped. Bk very dark grey N3.
7. M. Fabric 2 with medium amounts of shell and grog up to 1mm. E brown 10YR 5/3 to dark grey 10YR 4/1. I brown 7.5YR 5/2. Bk very dark grey N3.
8. D0. Fabric 2, fine sandy. E, I and Bk very dark grey 10YR 3/1 with traces of burnishing on surfaces.
9. D0. Fabric 2, fine sandy. E and I very dark grey N3 and burnished. Bk dark grey N4.
10. D0. Fabric 2 with medium amount of quartz up to 1mm. E very dark grey N3 to dark grey 10YR 4/1 and burnished. I dark grey 10YR 4/1 and worn. Bk dark grey N4
11. B2. Fabric 2 with medium amount of quartz up to 2mm. E reddish brown 5YR 5/4 I dark grey 10YR 4/1 Bk varies as surfaces.
12. D0. Fabric 2 with medium amount of quartz up to 1mm. E very dark grey 10YR 3/1, burnished but worn. I dark grey 10YR 4/1 to greyish brown 10YR 5/2. Bk dark brown 7.5YR 4/2 and very dark grey N3.
13. C2. Fabric 2, fine sandy. E light brown 7.5YR 6/4 and smooth. I very dark grey with traces of burnishing. Bk varies as surfaces.
14. C0. Fabric 2 with medium amount of quartz up to 1mm. E and I grey 10YR 5/1. Bk very dark grey N3.
15. B1. Fabric 2 with medium amount of quartz up to 2mm. E reddish brown 5YR 5/4 to red 2.5YR 5/6. I brown 7.5YR 5/4. Bk dark grey N4.
16. B1. Fabric 1 with medium amount of shell up to 8mm. E and I light grey 10YR 7/2. Bk grey 10YR 5/1.
17. B1. Fabric 1 with medium amount of shell up to 8mm. E light brown 7.5YR 6/4. Bk dark grey N4 core.
18. B1. Fabric 2, sandy. E and I brown 7.5YR 5/4 over dark grey N4. Bk varies as surfaces.
19. M. Fabric 2, sandy. E reddish brown 5YR 5/4. I brown 7.5YR 5/2. Bk very dark grey N3.
20. C2. Fabric 2, fine sandy. E light yellowish brown 10YR 6/4 and very dark grey N3. I light brown 7.5YR 6/4. Bk varies as surfaces.
21. M. Fabric 2, sandy. E brown 10YR 5/3 to dark grey 10YR 4/1. I missing. Bk very dark grey 10YR 3/1.
22. Decorated body sherd. Fabric 2, fine sandy. E dark greyish brown 10YR 4/2. I and Bk very dark grey N3. Surfaces burnished.
23. B2. Fabric 2 with medium amount of quartz up to 1mm. E and I 7.5YR 5/2 and wiped. Bk dark grey N4.
24. B3. Fabric 2, sandy with light amount of shell. E very dark grey 10YR 3/1 to dark greyish brown 10YR 4/2. I reddish brown 5YR 5/4. Bk very dark grey 10YR 3/1 surfaces wiped.
25. D0. Fabric 2 with medium amounts of shell and grog up to 2mm. E and I brown 7.5YR 5/2 over reddish brown 5YR 5/4. E burnished. Bk very dark grey N3.
26. B2. Fabric 2 with medium amount of quartz up to 1mm. E greyish brown 10YR 5/2 and burnished but worn to light yellowish brown 10YR 6/4. I and Bk very dark grey 10YR 4/1.
27. B0. Fabric 2 with medium amount of quartz up to 1mm. E, I and Bk very dark grey 5YR 3/1.

*Pit 105 (Fig. 21)*

## Layer iii

1. B0. Fabric 1 with medium amount of crushed shell up to 3mm. E brown 7.5YR 5/2. I very dark grey 10YR 3/1. Bk very dark grey N3.

## Layer ii

2. C2. Fabric 3 with medium amount of flint up to 2mm. E and I dark grey 5YR 4/1. E horizontally burnished. Bk very dark grey N3.
3. C2. Fabric 2 with quartz up to 2mm. E, I and Bk very dark grey N3. E burnished but worn.

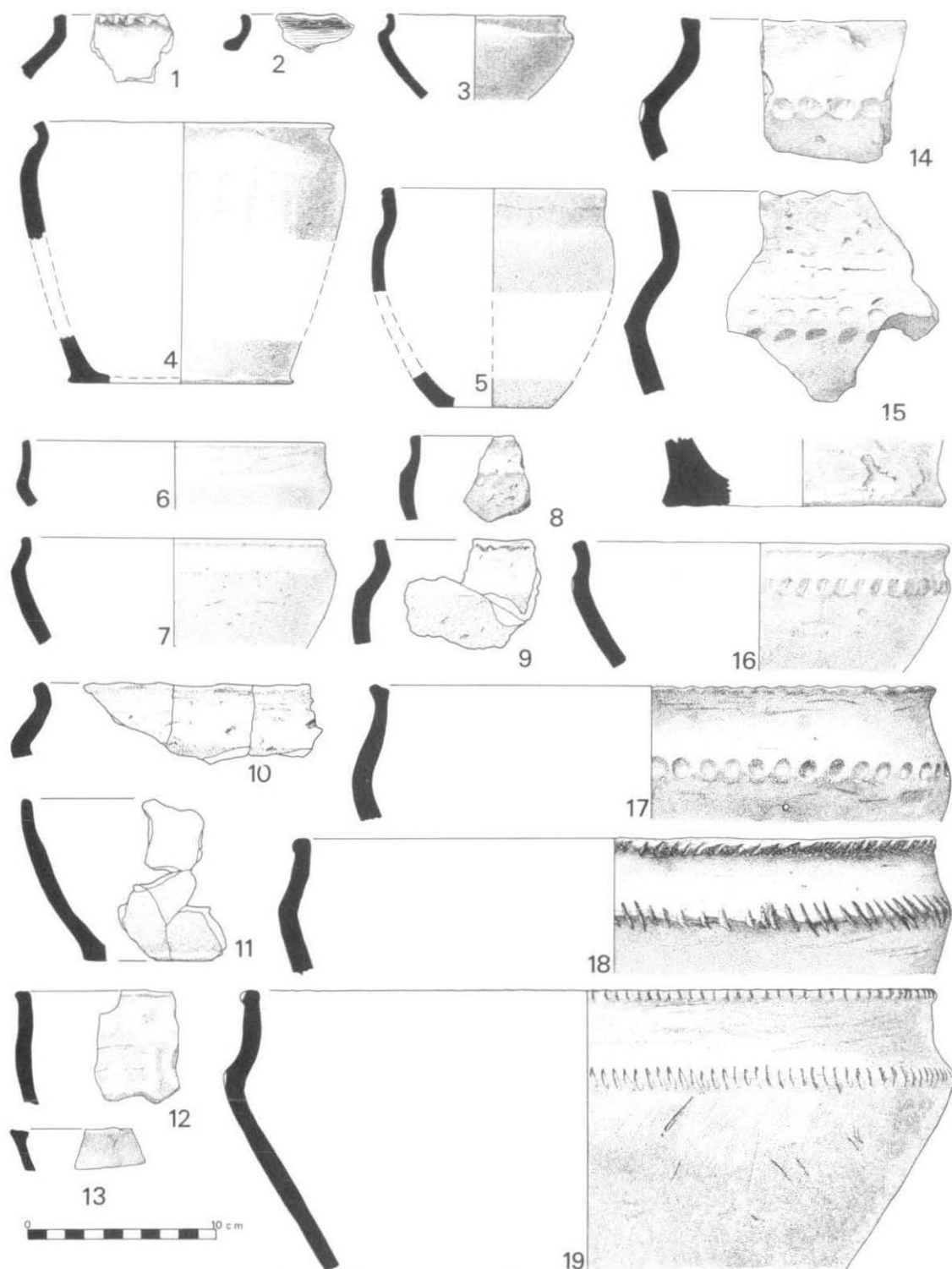


Fig. 21 Pottery from the filling of Pit 105

4. B2. Fabric 3 with medium amounts of flint up to 2mm and shell up to 10mm. E reddish yellow 5YR 7/6 to very pale brown 10YR 8/4. I reddish grey 5YR 5/2. Bk grey N3.

Layer i

5. B2. Fabric 2 with medium amount of quartz. E very dark grey N3 to greyish brown 10YR 5/2 and smoothed. I and Bk very dark grey N3.
6. C2. Fabric 2, fine sandy with light amount of shell up to 1mm. E very dark grey N3 worn to brown 7.5YR 5/4. I dark grey 10YR 4/1. Bk very dark grey N3.
7. C2. Fabric 2, fine sandy. E dark greyish brown 10YR 4/2 to reddish brown 5YR 5/4 and smooth. I and Bk very dark grey N3.
8. B1. Fabric 3 with medium amounts of flint up to 2mm. and shell up to 7mm. E reddish brown 5YR 5/3 to dark grey 5YR 4/1. I dark grey 5YR 4/1. Surfaces wiped. Bk dark grey 10YR 4/1.
9. B2. Fabric 1 with medium amount of crushed shell up to 5mm. E and I dark grey 10YR 4/1 to pink 7.5YR 7/4 and wiped. Bk very dark grey.
10. M. Fabric 2 with medium amount of quartz up to 1mm. E mottled light yellowish brown 10YR 6/4 and dark grey 10YR 4/1. I and Bk dark grey 10YR 4/1.
11. M. Fabric 1 with medium amount of crushed shell up to 3mm. E, I and Bk very dark grey 10YR 4/1. Base diameter  $\approx$  80mm.
12. B0. Fabric 3 with medium amounts of flint up to 2mm. and shell up to 5mm. E reddish brown 5YR 5/3 to dark grey 5YR 4/1. I dark grey 10YR 4/1. Surfaces wiped. Bk very dark grey N3.
13. C0. Fabric 2 with light amounts of flint up to 2mm. E very dark grey N3 with carbon deposits. I greyish brown 10YR 5/2. Bk very dark grey N3.
14. B1. Fabric 3 with medium amounts of flint up to 1mm and shell up to 6mm. E very pale brown 10YR 7/3 to very dark grey N3 at rim. I very dark grey N3. Bk dark grey 10YR 4/1.
15. C1. Fabric 3 with medium amount of flint up to 5mm. E very dark grey N3, reddish brown 2.5YR 4/4 and brown 7.5YR 5/4. I dark brown 7.5YR 4/2 to dark grey 10YR 4/1. Surfaces wiped. Bk dark greyish brown 10YR 4/2.
16. C2. Fabric 3 with light amount of flint up to 2mm and heavy amount of quartz up to 2mm. E very dark grey N3, brown 7.5YR 5/4 and reddish brown. I dark reddish grey 5YR 4/2. Surfaces wiped. Bk very dark grey N3.
17. B1. Fabric 2 with medium amount of quartz up to 2mm. E very dark grey N3 above shoulder to pale brown 10YR 6/3 below. I pale brown 10YR 6/3 and wiped. Bk very dark grey N3.
18. B1. Fabric 1 with medium amount of shell up to 7mm. E light yellowish brown 10YR 6/3 to dark grey 10YR 4/1. I and Bk dark grey 10YR 4/1.
19. B1. Fabric 1 with medium amount of shell up to 9mm. E light yellowish brown 10YR 6/4 with some plant impressions. I very grey N3 and wiped. Bk dark grey N4.

*Miscellaneous Features (Figs. 22 and 23)*

Pit 34 (Fig. 22)

1. B1. Fabric 2, sandy with heavy amount of vegetable voids. E reddish brown 5YR 4/3 to dark reddish brown 5YR 3/2 and wiped. I dark greyish brown 10YR 4/2 and very worn. Bk very dark grey 10YR 3/1.
2. B2. Fabric 1 with medium amount of shell up to 8mm. E reddish yellow 5YR 5/6 to brown 10YR 5/3. I red 2.5YR 5/8. Bk dark greyish brown 10YR 4/2.

Pit 136: (Fig. 22)

3. B1. Fabric 3 with medium amount of flint up to 2mm. E reddish brown 5YR 5/4. I dark reddish grey 5YR 4/2. Surfaces wiped. Bk dark grey 10YR 4/1.
4. M. Fabric 2, fine sandy with light amount of grog up to 1mm. E and I reddish brown 5YR 5/4 and worn, possibly haematite coated. Bk dark reddish grey 5YR 4/2.

Pit 137 (Fig. 22)

5. B0. Fabric 2 with medium amounts of quartz up to 2mm and vegetable voids. E dark brown 7.5YR 5/4 near rim. Surfaces worn. Bk very dark grey N3.
6. B2. Fabric 2 with medium amount of quartz up to 1mm. E light brownish grey 10YR 6/2 and wiped. I light brown 7.5 YR 6/4. Bk very dark grey N3.
7. D0. Fabric 2 with medium amounts of quartz and grog up to 1mm. E and I very dark grey N3 and burnished. Bk reddish brown 5YR 4/3.

Pit 149 (Fig. 22)

8. C0. Fabric 2 with medium amount of quartz up to 1mm. E reddish brown 5YR 4/3 worn to brown 7.5YR



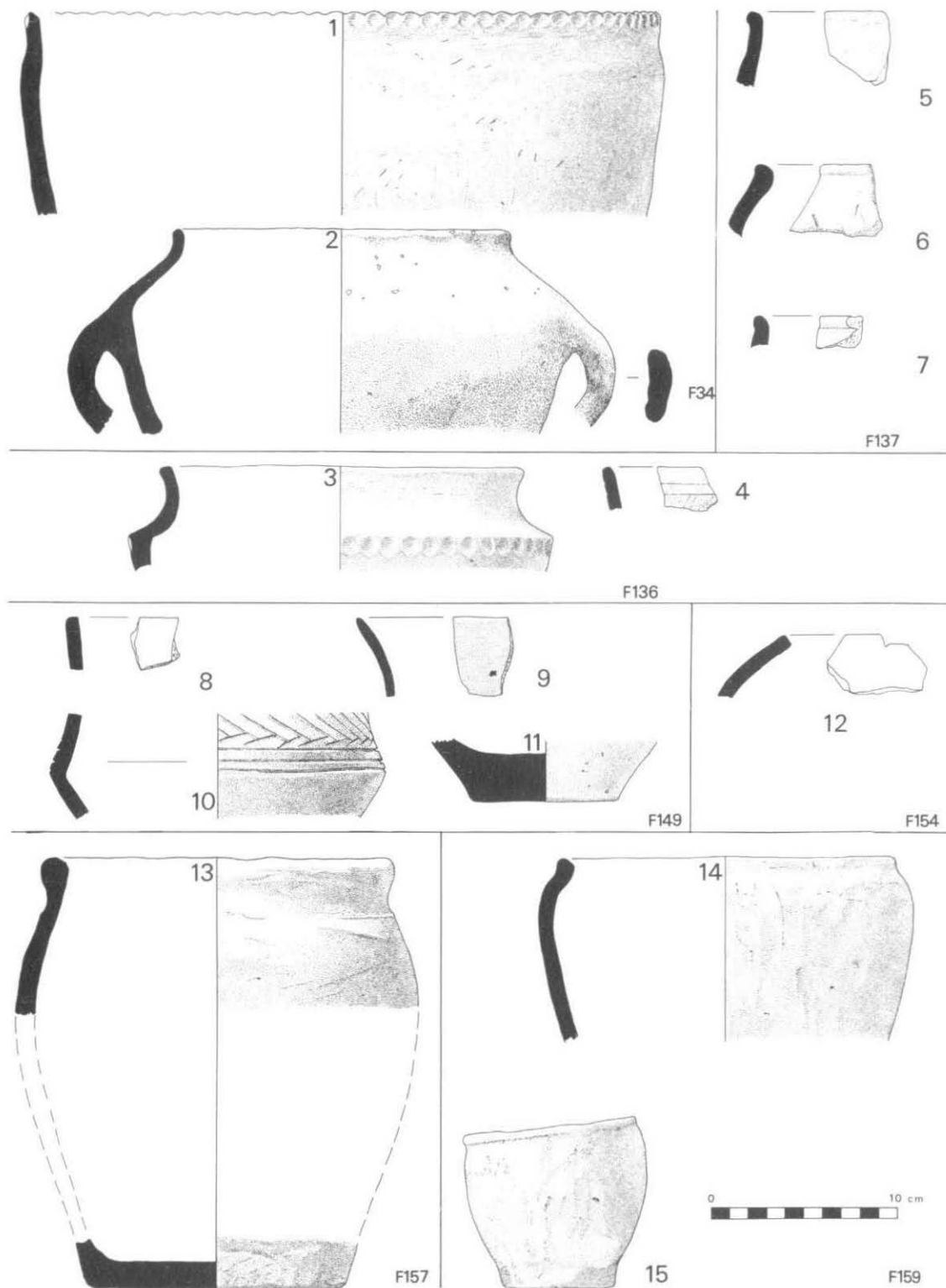


Fig. 22 Pottery from Iron Age Features

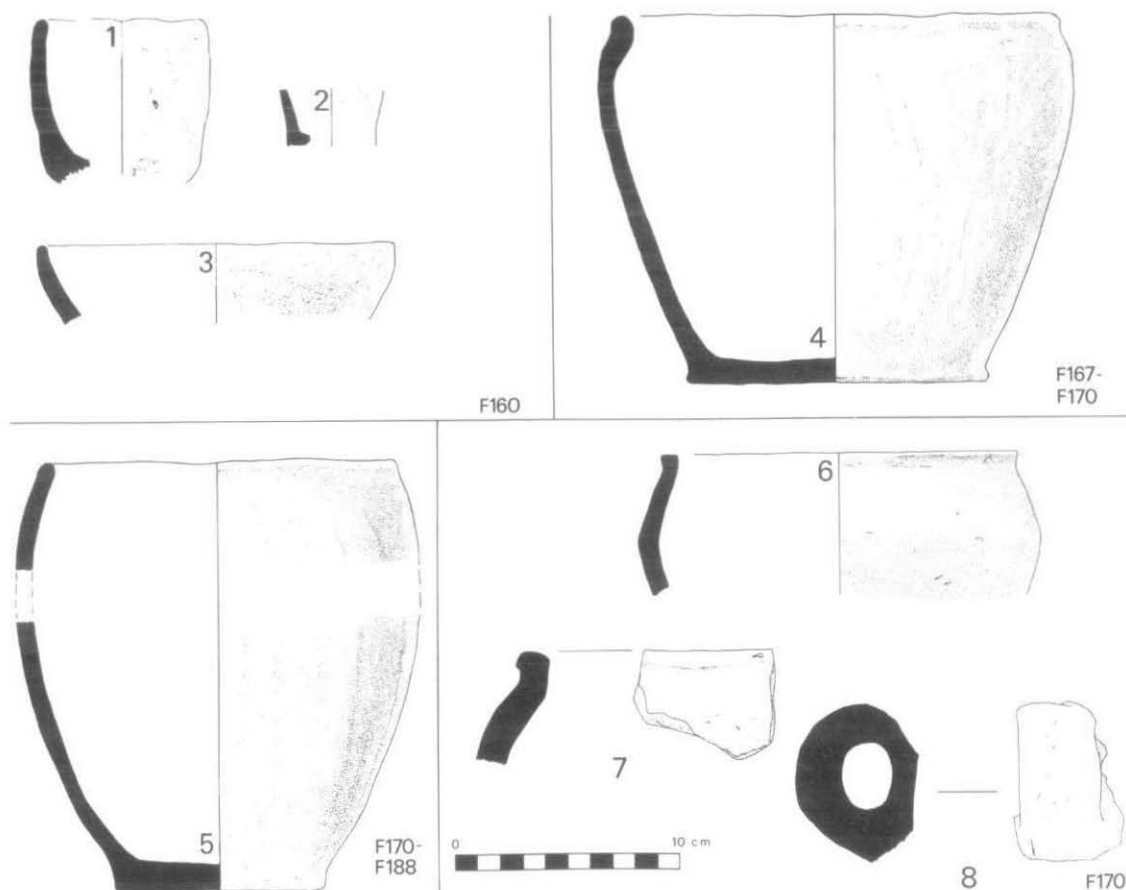


Fig. 23 Pottery from Iron Age Features

- 5/4. I light brown 7.5YR 6/4. Surfaces burnished but worn, possibly haematite coated. Bk very dark grey N3.
9. C2. Fabric 2, fine sandy, E red 10YR 4/6. I reddish brown 2.5YR 4/4 worn to brown 7.5YR 5/4. Surfaces burnished but worn and possibly haematite coated. Bk dark grey N4.
10. C2. Fabric 2, fine sandy. E, I and Bk very dark grey N3. Surfaces burnished but worn.
11. Base angle. fabric 2 with medium amount of quartz up to 2mm. and few calcareous inclusions up to 6mm. E and I very dark grey 5YR 3/1 and smoothed. Bk dark reddish brown 5YR 3/3.
- Gully 154 (Fig. 22)
12. M. Fabric 2 with heavy amount of quartz grains up to 1mm. E and I black N2 and burnished. Bk very dark grey 5YR 3/1.
- Pit 157 (Fig. 22)
13. B2. Fabric 2 with heavy amount of quartz grains up to 1mm. and some vegetable voids up to 10mm. E reddish brown 5YR 5/3 to very dark grey 5YR 3/1. I and Bk very dark grey 5YR 3/1. Surfaces horizontally wiped.
- Pit 159 (Fig. 22)
14. B2. Fabric 2, sandy. E and I red 2.5YR 5/6 to black N2 and burnished irregularly. Bk not visible.
15. B2. Fabric 2 with medium amount of quartz up to 3mm. E and I light brown 7.5YR 6/4 to very dark grey N3 and wiped. Bk very dark grey N3.
- Pit 160 (Fig. 23)
1. B3. Fabric 2 with quartz up to 2mm and light amounts of shell and vegetable voids up to 6mm. E reddish brown 5YR 5/4. I dark grey 10YR 4/1. Bk very dark grey 10YR 3/1.

2. M. Fabric 2 with light amounts of shell and vegetable voids up to 5mm. E reddish brown 5YR 5/4 and vertically burnished. I missing. Bk very dark grey 5YR 3/1.
  3. M. Fabric 1 with medium amounts of shell up to 10mm. and grog up to 3mm. and light amount of vegetable voids up to 5mm. E light brown 7.5YR 6/4 to very dark grey 10YR 3/1. I light reddish brown 5YR 6/4 to dark grey 5YR 4/1.
- Pits 167 and 170 (Fig. 23)
4. B2. Fabric 2, sandy with medium amount of quartz up to 1mm. E and I brown 10YR 5/3 to very dark grey N3 at base and wiped. Bk light brown 7.5YR 6/4 with dark grey N4 core of variable thickness. Pits 170 and 188 (Fig. 23)
  5. B2. Fabric 2 with medium amount of quartz up to 2mm. and some vegetable voids. E light brown 7.5YR 6/4, brown 7.5YR 5/2 and very dark grey N3. and vertically wiped. I light brown 7.5YR 6/4 to very dark grey 10YR 3/1. Bk very dark grey N3. Pit 170 (Fig. 23)
  6. D0. Fabric 2, fine sandy. E light yellowish brown 10YR 6/4 and burnished. I brown 7.5YR 5/2 to light brown 7.5YR 6/4 and wiped. Bk dark grey N4.
  7. B2. Fabric 2, with medium amount of quartz up to 3mm. E brown 7.5YR 5/4 to red 2.5YR 4/6 and wiped. I very dark grey 5YR 3/1 Bk dark grey 10YR 4/1.
  8. Lug handle. Fabric 2 with medium amount of vegetable voids up to 8mm. E pale brown 10YR 6/3 to very dark grey N3. I and Bk dark grey 10YR 4/1.

#### DISCUSSION by C.D. DE ROCHE and GEORGE LAMBRICK

##### *General Observations*

Half the vessels from the analysed Appleford assemblages which could be assigned to form categories are shouldered types, though whether bipartite or tripartite it is often impossible to say. Over half of these vessels are decorated with finger impressions or slashes on rims and/or shoulders. This last type of plastic decoration is most characteristic of Appleford material but a great range of ornamentation techniques is illustrated, including rouletting and various forms and patterns of incision. After the shouldered types, the next most common form is globular jars, two thirds of which occur in Fabric 2 though this is largely a reflection of the general predominance of this fabric throughout the assemblage. These vessels were generally wiped to achieve a smooth surface, but burnished vessels also occur.

##### *Late Bronze Age*

Neither Mount Farm with its abundant and exaggerated expanded rims, nor any of the other early Iron Age sites in the general vicinity of Appleford, such as Long Wittenham,<sup>100</sup> Wittenham Clumps<sup>101</sup> and Allens Pit,<sup>102</sup> presents a ceramic assemblage similar to that of Appleford. Fabrics with flint inclusions are lacking in these sites whilst at Appleford the distinctive large sharply angular jars of Long Wittenham are not present. Despite some form and fabric similarities, such as the small angular jars and bowls and rows of punched-dimple and incised-line patterns, the basic differences in the Appleford material preclude a close relationship.

The material from Pit 105 represents the most distinctive assemblage from the 1973 excavations. It was by far the largest group analysed, numbering over 500 sherds representing 43% by weight of all the material recovered from the pits. Three layers were distinguished within the pit, but in considering the character of the pottery it is treated as one group, the vast majority of the material coming from layer iii. The pit is of particular interest in that its relatively isolated position and the quantity of material it contained precludes major distortion by residual or intrusive material and biases arising from too small a sample.

Shouldered vessels are by far the most common, comprising two thirds of the classifiable forms. Some of these (e.g. Fig. 21, Nos. 2, 3, 6, 7, and 16-19) are clearly bipartite in form. Such profiles have rarely been found in the Upper Thames. They are more common in the very early groups of the eighth to sixth centuries B.C. with which Cunliffe illustrates his types Ultimate Deverel-Rimbury, Early All Cannings Cross, Kimmeridge-Caburn, and West Harling-Staple Howe.<sup>103</sup> The vessel mouths are wide and open and the shoulders often unusually

<sup>100</sup> H.N. Savory, 'An Early Iron Age Site at Long Wittenham, Berks.', *Oxoniensia*, ii (1937), 1-11.

<sup>101</sup> P.P. Rhodes, 'A Prehistoric and Roman Site at Wittenham Clumps, Berks.', *Oxoniensia*, xii, (1948), 18-31.

<sup>102</sup> J.S.P. Bradford, 'An Early Iron Age Settlement at Allens Pit, Dorchester', *Oxoniensia*, vii (1942), 36-60.

<sup>103</sup> Barry Cunliffe, *Iron Age Communities in Britain* (1974), Appendix A 1-4.

high, as in vessels 3, 6, 7, and 16-19 in Fig. 21.

In direct association with these forms are found the tripartite angular forms (Fig. 22, Nos. 15 and possibly 13 and 14) more characteristic of Upper Thames early Iron Age assemblages, though these forms are also paralleled by 'Class VI' material at West Harling.<sup>104</sup>

The bipartite forms occur in all three fabrics; the tripartites only in Fabrics 2 and 3. The plastic decoration of finger impressions or slashed incisions on rims and/or shoulders was often used, and is well illustrated by vessels 16-19 in Fig. 21. Slashed angles are found only on the bipartite forms. The double row of finger tip impressions on vessel 15 is closely paralleled at West Harling<sup>105</sup> where the fabric also contains flint inclusions, but the form is bipartite, lacking the flaring rim of the Appleford example. The West Harling material also shows liberal use of rows of short vertical or diagonal slashes as decoration. Of the Appleford features analysed, only Pit 105 contained vessels with such decoration on the clearly bipartite forms.

In addition to these angular types, Pit 105 contained several globular jars (Fig. 21, Nos. 4, 5, 9 and 12) made in all three fabrics. All have slightly everted rims and are undecorated but with fairly regular surfaces. Also present were three joining rim sherds (Fig. 21, No. 10) which are from a shouldered jar of a type known from five other sites in the Upper Thames region — Tubney, Allens Pit, Stanton Harcourt, Wytham and Rainsborough. The only other definable form in this assemblage is an open bowl of simple profile (Fig. 21, No. 11).

As can be seen in Table (i), the three fabrics are almost equally represented in the Pit 105 assemblage. A wide range of surface treatments is discernible — some vessels have been roughly wiped while on others the surfaces are smoothed or even burnished. One body sherd with haematite coating was recovered.

Four other pits, F136, F174, F33, F34 and perhaps F189 can also probably be assigned to this period on grounds of form and fabric (see below). F34 and F136 produced haematite coated sherds.

Parallels for the Appleford material in terms of form and decoration can be found in sites on the chalk escarpment, particularly Ivinghoe Beacon<sup>106</sup> and Rams Hill,<sup>107</sup> and in the valley at Wallingford.<sup>108</sup> At all of these, flint inclusions were common in the pottery. These parallels suggest contemporaneity with Saunders' Chilterns Phase I, which he would assign to the seventh and sixth centuries,<sup>109</sup> Barret's late Bronze Age period, and Cunliffe's eighth to sixth century phases.<sup>110</sup> A further area of influence may be the middle Thames, beyond the Goring Gap. The occupation site at Runnymede Bridge, Egham, Surrey has produced abundant pottery of flint tempered fabric and forms similar to the Appleford assemblages,<sup>111</sup> though the Egham vessels lack the slashed rims and shoulders and are more often decorated with incised and combed designs. The evidence of associated metalwork at Ivinghoe, Egham and Wallingford would place these sites in the eighth to seventh centuries B.C.,<sup>112</sup> which would reinforce the view that the Appleford pottery is one of the few late Bronze Age assemblages in the Upper Thames Valley.

### Early Iron Age

No features can definitely be assigned to this period. The recognizable forms from F149 seem to be early Iron Age, as do sherds from some of the middle Iron Age contexts. In particular, the angular bowl with incised decoration and the haematite coated sherds are comparable with the later material from Rams Hill and All Cannings Cross<sup>113</sup> which seem to exemplify the transition into the Iron Age. This pit contained very little flinty ware, but the very high proportion of sandy wares (92%) would point more strongly in this region to a middle Iron Age date, since early Iron Age assemblages tend to have large proportions of shelly wares. The absence of

<sup>104</sup> J.G.D. Clark and C.I. Fell, 'The early Iron Age Site at Micklemoor Hill, West Harling, Norfolk and its Pottery', *Proc. Prehist. Soc.*, xix (1953), 26.

<sup>105</sup> Ibid.

<sup>106</sup> M.A. Cotton and S.S. Frere, 'Ivinghoe Beacon Excavations, 1963-5', *Records of Buckinghamshire*, xviii, 187-260.

<sup>107</sup> R. Bradley and A. Ellison, *Ram's Hill B.A.R.* 19 (1975), 101-6 and Fig. 3:5.

<sup>108</sup> 'Archaeological notes from Reading Museum', *Berks. Arch. J.*, lviii (1960), 55-58; R. Bradley pers. comm.

<sup>109</sup> C. Saunders, 'The Pre-Belgic Iron Age in the Central and Western Chilterns', *Arch. J.*, cxviii (1971), 1-30.

<sup>110</sup> J.C. Barret, 'Later Bronze Age Pottery in Southern Britain', *Current Archaeology*, Vol. vi, No. 8, 230-1; B. Cunliffe, op. cit., 29-36.

<sup>111</sup> D. Longley, 'Excavations at Runnymede Bridge, Egham', *London Archaeologist*, iii (1976), i.

<sup>112</sup> D. Britton, 'The Bronzes' in M.A. Cotton and S.S. Frere, op. cit.; D. Longley, op. cit., 10-17; M. Ehrenberg, *Bronze Age Spearheads from Berkshire, Buckinghamshire and Oxfordshire B.A.R.* 34 (1977), Appendix II, 59-60.

<sup>113</sup> R. Bradley and A. Ellison, op. cit., 106-12; M.E. Cunningham, *All Cannings Cross* (1923), 29-40, 144.

diagnostically middle Iron Age sherds need not be an objection to this dating, since sherds diagnostic of the relatively formless vessels of this period are rarer than diagnostically early sherds. There is certainly no reason to expect one to occur in a context with only 50 sherds, and it is clear that some of the middle Iron Age features did contain early sherds.

Pit 161 contained a very high proportion of shelly pottery, but the assemblage is so small that the figures are extremely unreliable. No diagnostic forms were recovered and its dating thus remains doubtful.

Among the early Iron Age pottery from the site in general expanded rims were not entirely absent, the majority coming from the upper fill of the phase 3 enclosure (F121 i), a feature belonging to the end of the excavated Iron Age sequences. If these rims can be considered contemporary with examples from Mount Farm,<sup>114</sup> Radley,<sup>115</sup> and Ashville,<sup>116</sup> which are similarly in Fabric 1 (with large shell inclusions), they alone would suggest that there was more early Iron Age activity than is apparent from the excavated features.

### *Middle Iron Age*

The globular bow rims (Figs. 18 nos. 3, 4, 5) from the top of the first cut of Enclosure A are clear middle Iron Age types comparable with the later phases at Ashville and Farmoor,<sup>117</sup> and the remaining phases of the enclosure are stratigraphically later than this (see p. ). F131 in Enclosure B, and the top fill of F121 in Enclosure C also produced a few comparable forms (Fig. 19, no. 7, Fig. 21, nos. 25, 26). Fabric proportions and forms from the primary fills of F139, F121 and other parts of the enclosure suggest that much residual material was present (see below). Pits 137, 160, 190, 193 and 170 can also be dated to this period on the basis of forms and fabric proportions,<sup>118</sup> but they cannot be related either as a group or individually to any particular phase of the enclosures.

## THE CORRELATION OF FABRIC AND FORM AND THE DATING OF THE ASSEMBLAGES

By GEORGE LAMBRICK

The material from the fillings of the different elements and phases of the enclosures has been grouped by phase in Table (I). The pits have been put in two chronological groups, 'Late Bronze Age', and 'Iron Age' within which they are arranged by flinty and sandy fabric proportions respectively. A stratigraphic sequence is apparent in the development of the small enclosures, but very few relationships between the enclosures and the pits, or between the pits themselves, were apparent, and no chronological sequence is necessarily implied by the order in which they have been arranged within the two broad groups mentioned. Weight was used for calculating fabric proportions; the characteristics of the three fabric groups and the form designations are given above. The average weight of sherds in each assemblage gives an approximation of the relative size of fragments.

The most unusual feature of this material compared with other groups studied in the area<sup>119</sup> is the relatively high proportion of flint tempered pottery. This fabric is normally absent from Iron Age sites in the region, as is increasingly evident from continuing analyses. The flinty wares are most common in the late Bronze Age assemblages<sup>120</sup> notably F105. Pits 33, 34, 136, 174, and 189 can also be assigned to this period showing similar high proportions of flinty wares (27% to 41%) and, where available, forms consistent with this date (Figs. 22-3). The smaller of these must be uncertain members of the group since much early flinty pottery was found in datable middle Iron Age features, and the absence of diagnostic middle Iron Age sherds is not a reliable guide. The common occurrence of flinty pottery in the late Bronze Age is apparent at Wallingford, Rams Hill, Ivinghoe and (further afield) Egham and West Harling.

Only two features, F149 and F161, may even tentatively be assigned to the early Iron Age. These small assemblages have already been discussed in terms of forms and features and neither can be dated with any certainty. There is certainly not a distinctive group of early Iron Age features, as at many other sites in the area,

<sup>114</sup> J.N.L. Myres, 'A Prehistoric and Roman Site on Mount Farm, Dorchester', *Oxoniensia*, ii (1937), 18-31.

<sup>115</sup> E.T. Leeds, 'An Iron Age Site near Radley, Berks.', *Antiq. J.*, xi (1931), 399-404.

<sup>116</sup> De Roche in M. Parrington, *Ashville Trading Estate*, 40-74.

<sup>117</sup> *Ibid.*, 50-7 and Figs. 40-9; G. Lambrick and M. Robinson, *Settlements at Farmoor*, 43-6 and Figs 22-3.

<sup>118</sup> De Roche, 'An analysis of selected groups of Early Iron Age Pottery from the Oxford Region', University of Oxford B. Litt. Thesis, 1977.

<sup>119</sup> De Roche in M. Parrington, *op. cit.*, 41, 46, Table II; G. Lambrick and M. Robinson, *op. cit.*, 35-7, Fig. 20.

<sup>120</sup> See p. 56.

FABRIC PERCENTAGE BY WEIGHT				VESSEL FORMS														Number of Sherds	Weight of Sherds in Grams	Average Weight of a Sherd in Grams
		FABRIC 1	FABRIC 2	FABRIC 3	A1	A2	A3	B0	B1	B2	B3	C0	C1	C2	D0	D1	M			
ENCLOSURE DITCHES	Phase 1	139(i)						2		4	1	1			3		8	293	3375	11.5
		139(ii)						2							4		2	131	1775	13.5
	Phase 2	166					1		1								5	51	1000	19.6
		155							2								3	15	150	10
		131						2	2			1			1		3	114	1210	10.6
	Phase 3	121 (i)			2		3	2	18	5	1	9		2	12		31	737	12025	16.3
		121 (ii)							2			1					6	59	650	11
		111															2	36	375	10.4
		180								1	1				1		2	81	875	10.8
	Phase 1 Total							2	2	4	1	1					7	424	5150	12.1
PITS	Phase 2 Total						1	2	5			1			1		11	180	2360	13.1
	Phase 3 Total				2		3	2	20	6	2	10		2	13		41	913	13925	15.3
	Total for all Ditches				2		4	6	27	10	3	12		2	21		62	1517	21435	14.1
	Late Bronze Age	132													1		3	9	50	5.5
		174																53	425	8
		33															3	46	550	11.9
		189															4	79	500	6.3
		136						2							1		2	24	375	15.6
		105			1		3	10	4			5	2	6			6	521	9275	17.8
		34						1	1								3	130	2300	17.7
PITS	Iron Age	161															1	14	400	28.6
		168																7	125	17.9
		148													1			23	275	11.9
		190								1							1	36	750	20.8
		160			2						1				1			31	475	15.3
		193								1		1					1	34	350	10.2
		147															1	19	175	9.2
		137						1		1					1		2	17	175	10.3
		187															1	17	150	8.8
		170								3					2			31	875	28.2
PITS		149										1		2				49	1300	26.5
		167						1	1	1							3	55	1300	23.6
		159							2								1	25	725	29
		157															2	27	650	24
		188																10	200	20

TABLE 1

Summary of pottery quantifications

Histogram of fabric percentage gives range of  $\pm$  one sherd to give an indication of the accuracy of the figures.

Fabric types are described on p.

The occurrence of forms is given in number of sherds. Form types are described on p.

although there is clear evidence of some occupation material of this date in the pottery. Compared with most early Iron Age assemblages from the areas,<sup>121</sup> shell tempering is generally fairly low, there being only one assemblage of a respectable size (F190 with 36 sherds) which has over 40%. High percentages in most cases can probably be explained either by large sherds occurring in small assemblages or, as perhaps in the case of F190 which contains middle Iron Age forms, the survival or redeposition of early pottery in the later periods. Most of the distinctively early forms come from later features (notably F121 (i)), and for all the middle Iron Age features allowance has to be made for redeposition of early material.

Middle Iron Age forms (principally globular bowls and jars often with rounded or bead rims) occur in the top of the first cut by Enclosure 1 and in its recut and subsequent additions, which must stratigraphically be later. They also occur in Pits 137, 160, 170, 190 and 193. Apart from F160 these have low percentages of flint tempered pottery (under 14%) and most have little shell except for F190, leaving sandy wares as predominant, which agrees with the pattern observed elsewhere in the region.<sup>122</sup> These contexts were all situated in the immediate vicinity of Enclosure 1.

The fabric proportions in parts of the enclosures, however, seem to contradict the normal Iron Age pattern of no flint and increasing sandy wares with time<sup>123</sup> (too much flint in F131, F121 (i) and F180; too much shell in F121 (i) and F11). Nonetheless this need not cast doubt on the pattern observed elsewhere and apparent here in the pits. It is important to appreciate that the chronological sequence of the enclosures is also a spatial sequence expanding from the vicinity of Enclosure 1 (already noted as the main focus of middle Iron Age activity). Still further from Enclosure 1, virtually no pottery at all was recovered from the various gullies associated with the trackway east of the main enclosure complex although they were fully excavated. If the amount of contemporary refuse reaching the enclosure ditches thus dropped rapidly with distance from Enclosure 1, a higher proportion of the pottery found in their more distant parts might be redeposited early material. Since the late Bronze Age pits did not appear to be as tightly concentrated in the same small area, this is quite reasonable. It may also be reflected in the figures for the size of sherds: except for F121 (i) the sherds are uniformly small suggesting that they had been kicked around longer (than for instance those in most of the pits) before they were incorporated with the back fill of the features. In the case of F121 (i) it is not known how fragment size correlated with fabrics, but more detailed analysis of this type at Mount Farm has shown a general trend of shelly sherds becoming smaller compared with sandy ones in the Middle Iron Age,<sup>124</sup> and this might be the explanation here.

It is thus reasonable to suggest that what appears to be a chronological sequence in the fabrics is actually the product of the spatial distribution of pottery of different periods. Although this interpretation cannot be proved, it is at least as valid as one based purely on the superficial correlation of fabric proportion and the stratigraphic sequence. Against the background of the general development of fabrics from the early to the middle Iron Age evident at other sites in the region, most notably Farmoor which was not complicated by problems of redeposited material, this interpretation seems if anything more likely than the more superficial one. It certainly highlights one of the problems of this type of analysis, but does not invalidate the approach, which continues to be valuable, even if increasing care has to be taken in interpreting the results. By and large the Appleford ceramics conform to the pattern elsewhere observable in the region and are important in adding the late Bronze Age phase.

An important addition to the analysis of pottery assemblages is the study of fragment size. Locally a more detailed analysis has been done at Mount Farm<sup>125</sup> and the fragmentation of pottery in archaeological deposits forms part of a study at present being undertaken by Mr. Hinchliffe on behalf of the Central Excavation Unit of the Department of the Environment. He reports that, perhaps somewhat surprisingly, the average sherd weights for both ditches and pits match quite closely figures for Romano-British pottery from comparable features at Brancaster, Norfolk,<sup>126</sup> and St. Albans, Herts.<sup>127</sup> The disparity in average sherd size between pits and ditches is similar in all three sites and would clearly seem to represent predictable differences in the patterns of deposition for the two classes of feature. This would agree with the interpretation of the presence of redeposited material given above, and is clearly an important factor in the future interpretation of sites of this type.

<sup>121</sup> De Roche in M. Parrington, *op. cit.*, 41, 46, Table II; G. Lambrick and M. Robinson, *op. cit.*, 35-7, Fig. 20.

<sup>122</sup> De Roche, *op. cit.*, 41, 46, Table II; Lambrick and Robinson, *op. cit.*, 35-7, Fig. 20.

<sup>123</sup> De Roche, *op. cit.*, 41, 46, Table II; Lambrick and Robinson, *op. cit.*, 35-7, Fig. 20.

<sup>124</sup> G. Lambrick, in preparation, report on excavations at Mount Farm, Dorchester.

<sup>125</sup> *Ibid.*

<sup>126</sup> J. Hinchliffe, *Excavations at Brancaster 1977*, East Anglian Archaeology (Norfolk Series) forthcoming.

<sup>127</sup> J. Hinchliffe, 'Excavations within the Roman City of Verulamium', *Herts. Arch.* (1980) forthcoming.



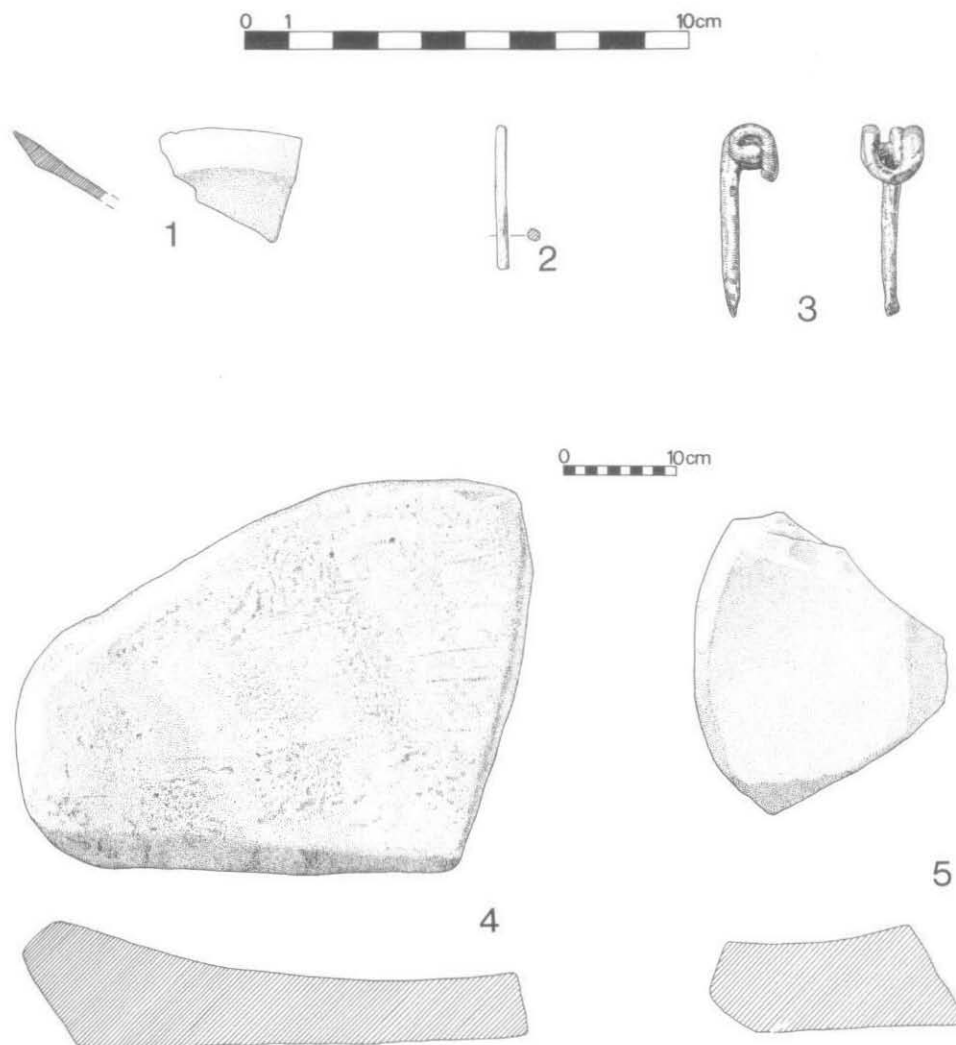


Fig. 24 Small finds associated with the Iron Age occupation (Nos. 1 And 2, bronze; No. 3, iron; Nos. 4 and 5, stone)

SMALL FINDS ASSOCIATED WITH THE IRON AGE OCCUPATION (Fig. 24)

1. Fragments of circular bronze fitting. From the upper filling of the Phase 1 Enclosure Ditch (F139 (i)).
2. Fragment of Bronze Rod. From the upper filling of the Phase 3 Enclosure Ditch (F121 (i)).
3. Part of an Iron Brooch. Apparently derived from the 'Nauheim' type with four-turn spring. Cf. *Camulodunum*<sup>128</sup> Fig. 59, No. II; *Bagendon*<sup>129</sup> Fig. 29 No. 1. From the ploughsoil (included here as typologically earlier than the Romano-British occupation).  
Querns by S.W. Brown (Petrological identification by H.P. Powell).
4. Fragment of saddle quern, hollowed in two directions. Wt 18.432kg. Lower Green Sandstone. Source:

<sup>128</sup> C.F. Hawkes and M.R. Hull, *Camulodunum*, Soc. of Antiq. Research Report No. xiv (1947).

<sup>129</sup> E.M. Clifford, *Bagendon. A Belgic Oppidum* (1961).



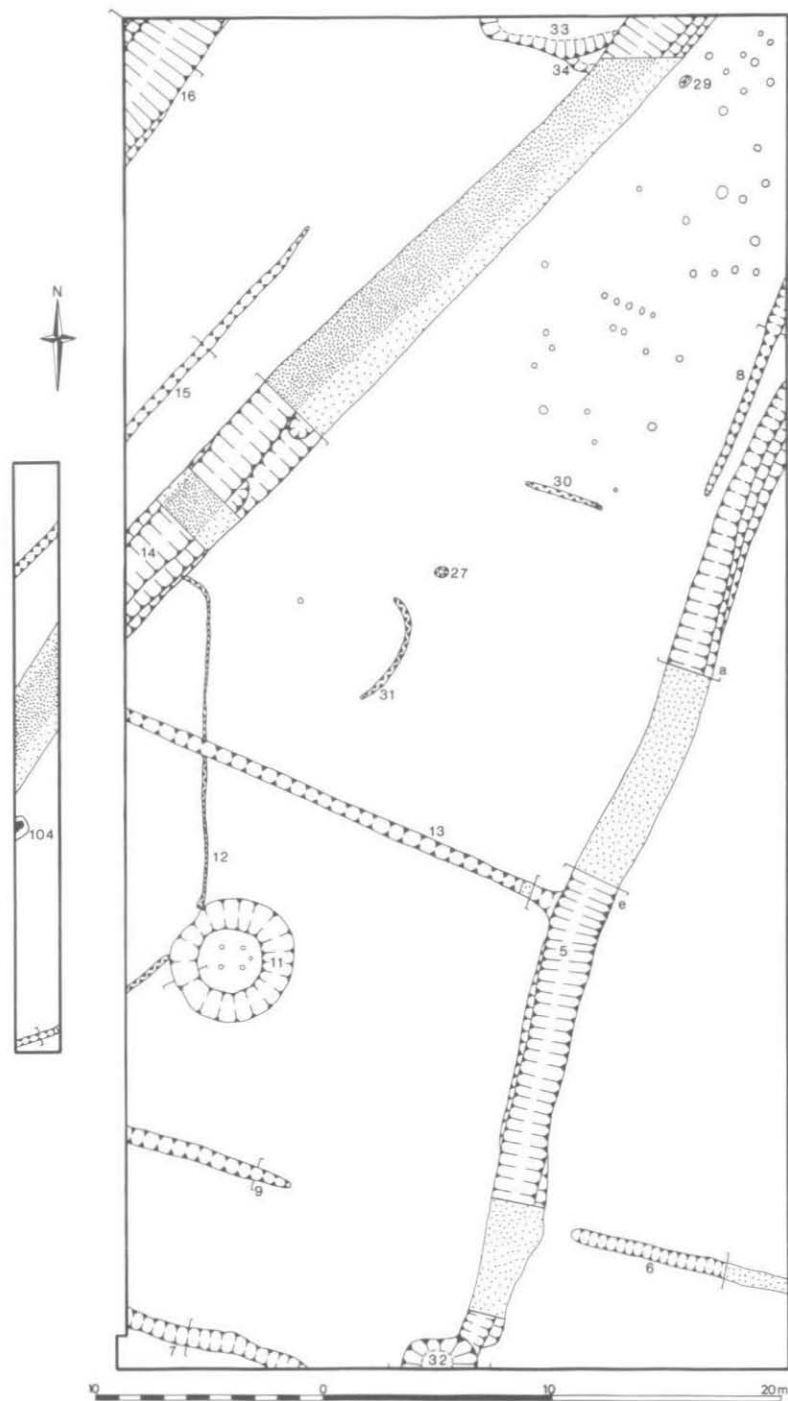


Fig. 25 Area 2

Culham ? From the filling of ditch 135.

5. Saddle quern fragment, hollowed in two directions with a roughly level base. One shallow linear groove indicates secondary use as a whetstone. Wt 7.627kg. Upper Green Sandstone. Source: Wilts ? From the ploughsoil.

#### THE ROMANO-BRITISH OCCUPATION

Superimposed on the Iron Age settlement was a ditch system of Romano-British date, defining a trackway and a number of associated enclosures. The continuation of these features as cropmarks beyond the excavated area was established from aerial photographs (Plate I and Fig. 3).

To the east of the trackway, and aligned roughly north-east/south-west like the trackway ditches, a major ditch (F5 in Area 2) formed the principal boundary of the enclosures (Fig. 25). This area between this ditch and the trackway was subdivided by a series of west-east ditches visible as cropmarks, including two ditches, F7 and F13, excavated in Area 2. Three additional rectangular enclosures had been added on to the outside of the system to the east. Ditch 6 in Area 2 formed the northern boundary of these enclosures.

The presence of ditches F109 and F192 in Area 4 (Fig. 14) and of further features observed during gravel extraction suggests that a similar arrangement of enclosures existed on the west side of the trackway, although little can be seen on the aerial photograph. In Area 4 (Fig. 14) the relationship of ditches F192 and F109 may be the same as that of ditches F5 and F13 on the east side of the trackway — that of north-south boundary ditch and west-east internal division.

The trackway ditches, F14 and F16, defined a strip 11m. wide. No trace of metalling or rutting survived. It is unlikely that the trackway was surfaced in any way — there was nothing in the filling of the ditches which could have represented dislodged metalling material. Both ditches had been recut at least twice after silting up to a high level (Fig. 26). Material from the primary fillings of the ditches indicates that the trackway was first defined in the early second century AD. The filling of the final recutting of both ditches indicates that they were kept open until well into the fourth century (Roman Pottery Nos. 46-61).

The total width of the recut ditches on either side was over 3m. at the level to which they survived, this being a false width as in places the recuts of the ditches were so far removed from their predecessors' line as to constitute an almost separate ditch. The tendency of the later cuts to be further in towards the centre of the trackway (Fig. 26) suggests the presence on either side of an external bank whose profile into the silted ditch would obscure its central point as originally excavated and cause the 'creeping' inwards, reducing the width of the track.

The depth of the original ditches and the principal recuttings was generally just under 1m. from the base of ploughsoil (Fig. 26). The final recutting was approximately 2m. wide at this level in both ditches. The fact that each side of the trackway was defined by three principal ditch cuttings, each of which was apparently contemporary with its equivalent on the opposite side, indicates two major re-definitions of the trackway, one in the late second century and one in the early fourth, with intermittent clearing and minor recutting. It was noticeable that the fillings of the cuts grew successively darker, the filling of the final recut, which was particularly dark, being clearly visible in plan as well as in section (this is indicated by the darker shading in Fig. 25). The same basic sequence was observed in ditch 4 (Area 1) which was a northward continuation of ditch 16 (Fig. 13). Ditch F10, running parallel to ditch F4 at this point, produced no dating evidence but seems from the cropmark to be a localised feature (Fig. 13).

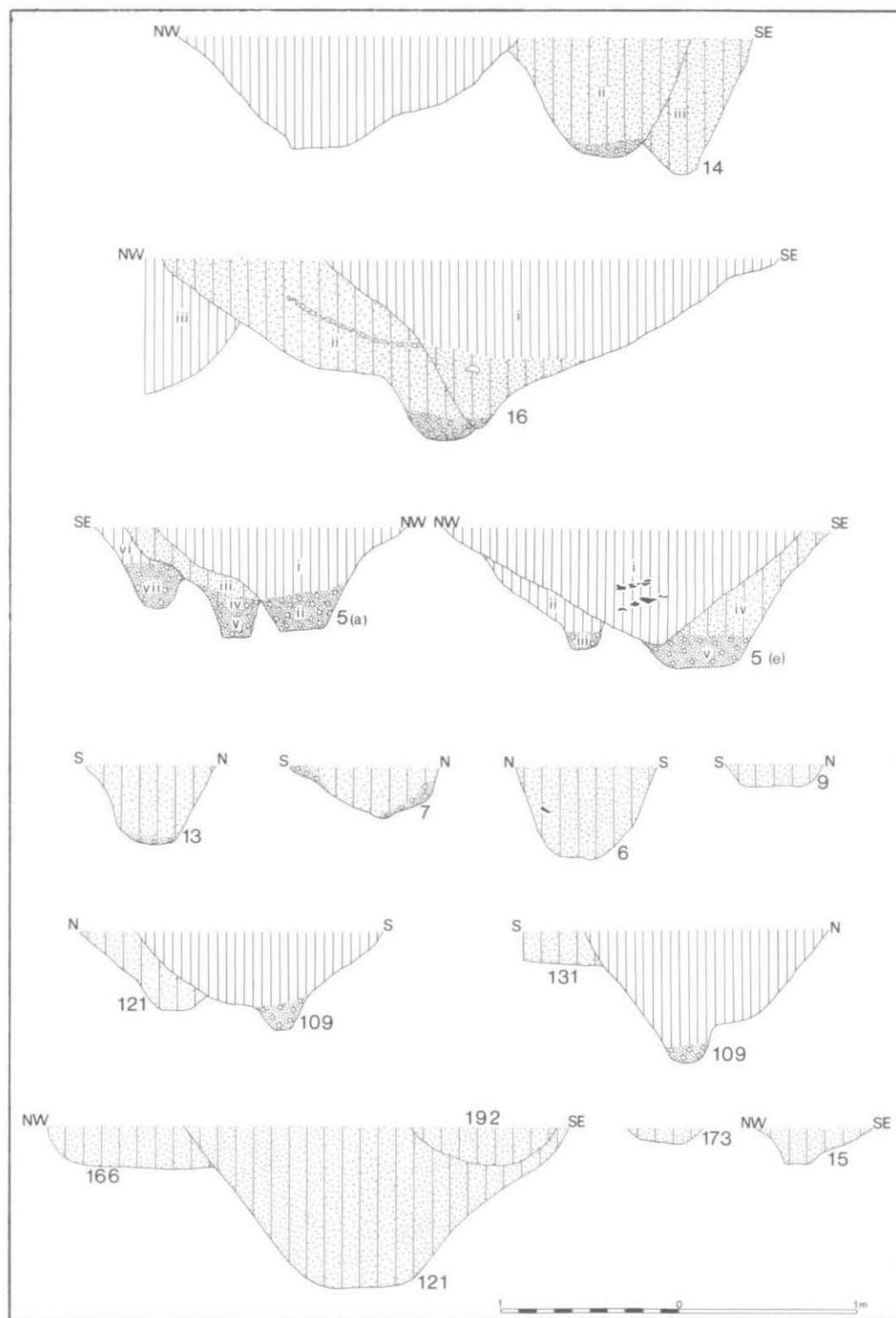


Fig. 26 Romano-British ditches and gullies: sections

Like the trackway ditches the eastern boundary ditch, F5, had been recut several times though seemingly in a more piecemeal fashion. Here the general tendency was for the recuts to creep further west, suggesting a bank to the east. Further evidence for this is the manner in which ditch F6 and the other enclosure ditches to the east, visible as cropmarks, stopped short of it (Fig. 25). The depth and width of ditch F5 showed some variation but the depth of the ditch was on average 0.6m. It would appear from the dating evidence (Roman Pottery Nos. 1-2) that the first cutting of ditch F5 was broadly contemporary with that of the trackway ditches, but it was not kept open so long, silting up finally in the late second century. During the silting of this final cut a large quantity of pottery (Roman Pottery Nos. 14-38), presumably along with more perishable domestic refuse, had been dumped in a horizontal layer along it at a point to the south of its intersection with ditch F13 and Fig. 26. This was one of very few instances on the site of rubbish being deliberately dumped and clearly implies domestic activity in the vicinity.

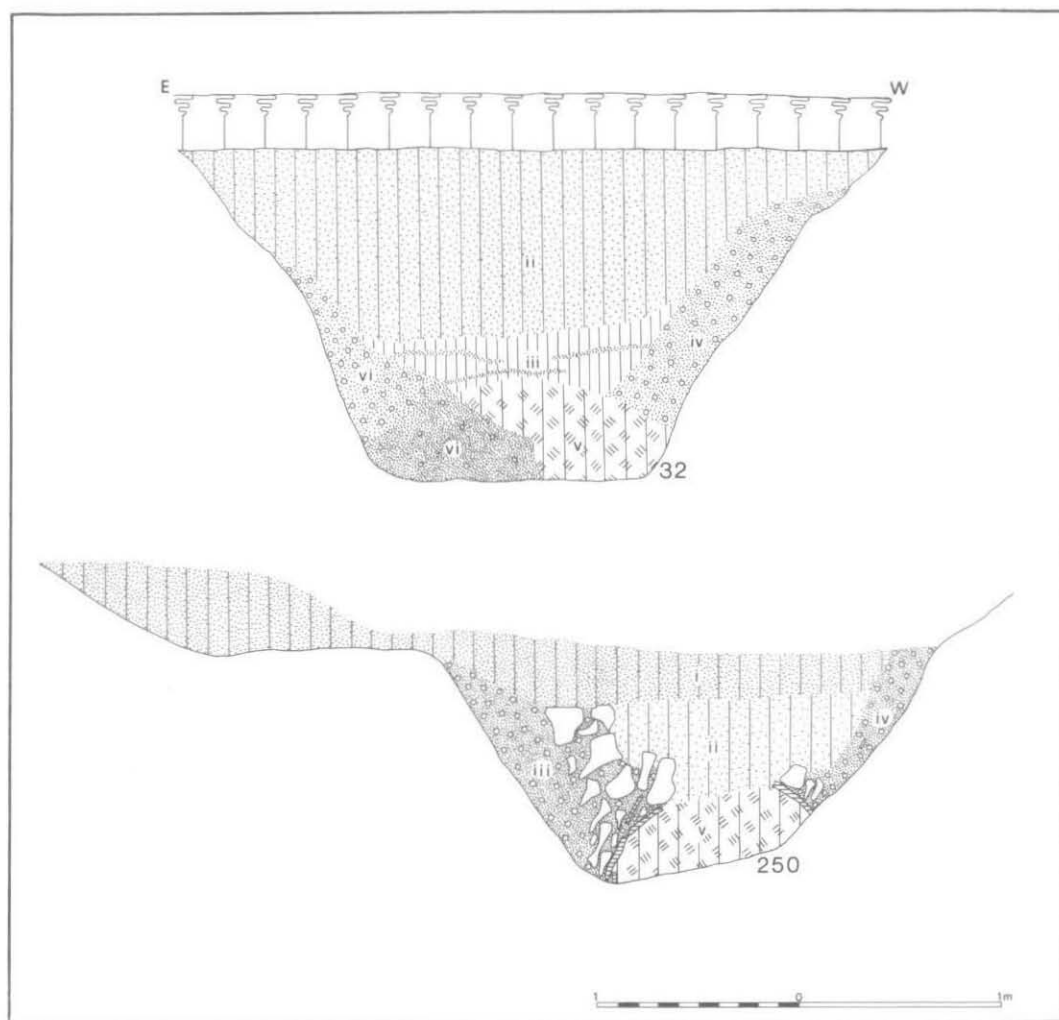


Fig. 27 Waterholes F32 and F250: sections

It is clear from the excavation of Area 2 and the cropmarks (Fig. 13) that the trackway and the eastern enclosure ditch converged towards the north. The cropmarks indicate that the area between the ditches had been subdivided into separate enclosures even where the principal ditches were less than 10m. apart.

Neither of the internal enclosure ditches, F7 and F13, excavated within Area 2 showed evidence of recutting and the pottery from their fillings, though sparse, suggested a date broadly contemporary with the first cutting of the trackway ditches and ditch F5. These enclosure ditches were somewhat different in character, F13 being very straight and steep-sided (0.75m. wide and 0.3m. deep) whilst F7 was more irregular and with a rather more rounded profile (0.9m. wide and 0.2m. deep) (Sections: Fig. 26). Ditch F6, forming the northern side of one of the enclosures visible as cropmarks to the east of ditch F5, butt-ended short of that ditch within Area 2. The ditch was of similar shape and dimensions to ditch F13.

The two ditches of the Romano-British system which crossed Area 4, F109 and F192, seemed to relate to the eastern boundary ditch F5 rather than to the trackway itself in terms of their alignment. The material recovered from the filling of these ditches suggests that they were kept open longer than ditch F5 (Roman Pottery Nos. 62-71). Neither ditch, furthermore, showed any evidence of the substantial recutting to which ditch F5 and the trackway ditches had been subjected. There was some evidence however that slight recutting, or cleaning-out, had periodically taken place. Such periodic cleaning-out down the same basic channel would have removed any earlier deposits so that the comparative lateness in date of the pottery from these ditches cannot be taken to indicate that they are not broadly contemporary with the other enclosure ditches in terms of origin. It would appear, however, that the definition of the enclosures to the west of the trackway at the point of excavation, as opposed to those to the east, was maintained virtually until the end of the trackway's use.

Ditch F109 butt-ended some 2m. short of ditch F192, suggesting either a gap for access at this point or the presence of a bank along the east side of the latter ditch. F109 was generally *c.* 1m. wide with a depth varying from 0.4 to 0.6m. The sides were somewhat concave and in places there was a pronounced sump. Ditch F192 was less substantial, being 0.7m. wide and 0.3m. deep (Sections: Fig. 26).

Two ditches, F9 and F15, which do not seem to fit directly into the enclosure system, were excavated in Area 2 (Fig. 25). Ditch 9, which was very shallow (Section: Fig. 26), may originally have run on eastwards to meet ditch F5 which ran to the north of, and parallel to, ditch F7. If ditches F7 and F9 were both enclosure ditches they are unlikely to have been in use at the same time as the area between them would have been impractically small but insufficient material was recovered from the filling of ditch F9 to determine whether it differed substantially in date from ditch F7.

Ditch F15 seemed to be associated with the trackway, being parallel to it and lying within the trackway ditches. Again, insufficient material was recovered from the filling of this feature to date it closely, it was certainly Romano-British. The profile of the feature was rather too sharp-sided for it to represent a rut. At its deepest the feature was 0.3m. in depth but it grew shallower as it ran north-eastwards to its end.

There were few internal features assignable to the Romano-British enclosure system, which may be the result of plough erosion or, in some places in Area 2, of removal by the scraper. Bearing in mind the general loss of levels, the shallow gully F31, forming an arc to the north of ditch F13 (Fig. 25) may represent the only surviving segment of a circular gully relating to a structure of some kind. At its deepest this feature was only 0.05m. in depth. There is a suggestion of a circle at this point showing as a cropmark on the aerial photograph (Plate I). A single sherd of Romano-British pottery was recovered from gully F31.

In Area 2, to the north of ditch F13 sand between ditches F14 and F5, was a mass of small circular depressions in the subsoil (Fig. 25). The filling of these features was almost invariably a brown sandy loam and their depth varied between 0.35m. and 0.1m. with the exception of F38, which produced a single bodysherd of Iron Age pottery, the fillings of all were sterile. There was no sign of packing and the profiles of the features varied from steep-sided and flat-bottomed to conical. There were also within the excavated area other irregular patches of brown sandy loam in the surface of the natural gravel which, when tested by excavation, proved to be as shallow or even shallower than these small circular features and were certainly natural in origin. This clearly casts considerable doubt on the interpretation of these features as postholes, although the possibility of natural solution holes forming below man-made features subsequently removed by the plough or scraper cannot be discounted. The presence of an infant burial, F29, amongst these features further suggests the possibility of a structure or structures at this point, relating, presumably, to the Romano-British enclosure system within which these features lie.

At the southern end of Area 2 was a pit, F32, 1.7m. deep and 3m. across (Section: Fig. 27). At the base of the filling was a damp dark grey deposit of clayey silt with organic matter preserved in it (Layer 32 (v)). Samples taken for analysis are discussed below. It seems likely that the pit was a waterhole. No trace of a lining survived and much of the filling appears to have been derived from the collapse of the sides of the feature. The pit cut across the filling of the eastern enclosure ditch, F5. Material recovered from the filling of F32 indicates a third century date (Roman Pottery Nos. 72-79).

In addition to the waterhole excavated prior to the principal excavation (pp. 29-32. above) four others were examined (F200, F210, F220 and F250: Fig. 13). All were encountered during gravel extraction, after the completion of the formal excavation, and all were partially destroyed prior to salvage work. Only in the case of F250 was a section obtainable (Fig. 27) and in no case was the true shape and dimensions of the feature accurately determined.

F250 was a substantial waterhole lying to the west of the trackway (Fig. 13). It was over 4m. across and had been excavated to a depth of 1.5m. into the natural gravel. In the base was a square timber frame consisting of short planks, some clearly re-used, pegged back against an external packing of stones and gravel by vertical stakes (Section: Fig. 27). The framework had collapsed inwards, sealing within it a deposit of dark brown clayey silt containing organic matter which was sampled (Layer (v)). The date of the feature's construction is uncertain as only one sherd of uncertain date was recovered from behind the lining. Material from the filling (Roman Pottery Nos. 87-103) indicates a fourth century date for the abandonment of the feature. The shallow incline on the east side visible in the section may indicate that access was from this side.

Waterholes F200, F210 and F220 were all largely emptied by the drag-line. All seem to have possessed the same kind of timber frame at their bases as F250. F200 and F210 lay close together near the centre of an enclosure against the east side of the trackway, bounded on the north by ditch 7 (Fig. 13). A waterlogged sample was recovered from the lower filling of F200. Waterhole F220 actually lay between the trackway ditches, to the north of Area 2 and impinging on the eastern ditch, F14. The trackway must either have gone out of use or have been reduced in width at the time of the waterhole's excavation. Such dating evidence as survived suggests that F200, F210 and F220 were filled in in the fourth century.

#### *Cemetery in Area 1 (Fig. 13)*

Stripping by the drag-line outside the principal areas of excavation revealed a number of

inhumations lying across the line of the trackway to the north-east of Areas 2 and 4. Eight graves were excavated, none of which penetrated to any depth into the natural gravel. Had human bones not been observed during the stripping it is unlikely that any burials would have been recovered at all, as at least a foot of gravel was generally removed with the topsoil and loam to ensure a clean gravel surface. The majority of burials recovered were therefore disturbed, some severely, and it seems fairly certain that there were other burials in the area between ditches F3 and F26 to the north, and the other six burials, to the south, as this area had been stripped right down to the gravel before the discovery of human bones.

#### Inhumation 3

The body had been laid on its back, west-east, extended, with the head to the west. The bones were relatively undisturbed. The head overlay the fill of the western trackway ditch, the body lying within the area of the trackway. The grave measured 1.50m.  $\times$  0.35m.

#### Inhumation 20

The body had been laid on its back, west-east, extended, with the head to the west. The bones were relatively undisturbed. The grave measured 2.40m  $\times$  0.80m., and was dug 0.10m. into the gravel.

#### Inhumation 21

The body had been laid on its back, west-east, extended, with the head to the west. The bones had been disturbed by the drag-line. An iron knife, which had perhaps been attached to a belt of some kind, was found adjacent to the pelvis. A small iron nail was found in the same area. The grave measured 1.90m  $\times$  0.75m.

#### Inhumation 22

The body had been laid on its back, west-east, extended with the head to the west. The bones had been disturbed by the drag line. The grave measured 2.00m.  $\times$  0.75m.

#### Inhumation 23

The body had been laid on its back, west-east, extended, with the head to the west. The bones had been disturbed by the drag-line. The original dimensions of the grave were unclear.

#### Inhumation 24

The body had been laid on its back, west-east, extended, with the head to the west. The bones had been disturbed by the drag-line. The grave measured 1.45m.  $\times$  0.50m.

#### Inhumation 25

The body had been laid on its back, west-east, extended, with the head to the west. The bones had been much disturbed by the drag-line, and amongst them, in the general region of the pelvis, and broken into two pieces, was an iron knife. The approximate dimensions of the grave were 1.70m.  $\times$  0.60m.

#### Inhumation 26

The body had apparently been laid west-east, head to the west, but the bones were very disturbed. The approximate dimensions of the grave were 1.60m.  $\times$  0.75m.

None of the graves produced any evidence of a coffin, but the least disturbed burial excavated (20) certainly had room in the base of the grave to accommodate a coffin as well as the body.



There is no clear dating evidence for this cemetery. The position of Inhumation 3, overlying the trackway ditch would, on the basis of the materials from the latest cut of that feature, place it at the end of the fourth century or later.

### Discussion

The basis of the Appleford Romano-British settlement, a ditch system defining a trackway with associated enclosures on either side, has numerous parallels in the Upper Thames Valley. Riley,<sup>130</sup> on the evidence of cropmarks, recognised 'lanes' generally 10m. to 15m. wide, both in isolation and in association with enclosures, as a common feature on Upper Thames settlement sites.<sup>131</sup> There are at least six comparable sites in the immediate vicinity of Appleford.<sup>132</sup> The two cropmark sites at Northfield Farm, east of Long Wittenham, show the same basic characteristics,<sup>133</sup> and are linked by a continuous ditched trackway.

Another similar trackway-and-enclosure system occurs at Mount Farm, Dorchester.<sup>134</sup> Recent excavation<sup>135</sup> has demonstrated that, as at Appleford, the Romano-British system is superimposed on its Iron Age predecessor. Further up the valley, the same kind of clustering of trackway-and-enclosure systems as occurs in the Appleford-Long Wittenham area can be seen in the vicinity of Stanton Harcourt.<sup>136</sup> Such systems are of course not confined to the Upper Thames Valley and numerous examples known from cropmarks could be cited from lowland England. In the Welland Valley, for instance, a similar clustering of trackway-and-enclosure systems has been recognised on the gravel terraces in the area of Tallington, West Deeping and Maxey.<sup>137</sup>

The full extent of the Appleford trackway is undetermined. It has not been traced as a cropmark beyond the Sutton Courtenay-Appleford Road to the north of the site (Fig. 3) but field-walking in this area by the Oxford University Archaeological Society indicated a spread of Romano-British material on the surface of the field along the projected line of the trackway beyond Bridge Farm. This line would reach the river north of the present village, at the point where the railway line now crosses. Diving by the Oxford section of the British Sub-Aqua Club at this point in the river revealed the presence of timber piles on either side which from their position could not have been associated with nineteenth century bridge-building operations. Although there is obviously no reason to suppose these timbers to be associated with the Romano-British trackway, their presence, together with the place name of the modern village, would suggest a crossing-place of some antiquity.

It is suggested that the width and character of the trackway indicates that its primary function was to control the movement of livestock. There were no entrances apparent which might have allowed direct access to the adjoining enclosures from the trackway, although this might have been achieved by plank bridges to avoid interfering with drainage. The overall impression however is that the enclosures represent areas

<sup>130</sup> D.N. Riley, 'Archaeology from the Air in the Upper Thames Valley', *Oxoniensia*, viii-ix (1943-4), 85.

<sup>131</sup> In the more recent and comprehensive survey of cropmarks in the region — D. Benson and D. Miles, *Upper Thames Valley*, — a considerable number of examples can be seen.

<sup>132</sup> Benson and Miles, *op. cit.*, Maps 34 and 35.

<sup>133</sup> G.W.G. Allen, 'Crop-marks seen from the Air, Northfield Farm, Long Wittenham, Berks.' *Oxoniensia*, v (1940), Fig. 10.

<sup>134</sup> J.N.L. Myres, 'A Prehistoric and Roman Site on Mount Farm, Dorchester', *Oxoniensia*, ii (1937), Fig. 3.

<sup>135</sup> Information from G. Lambrick.

<sup>136</sup> D. Benson and D. Miles, *op. cit.*, Maps 20-22.

<sup>137</sup> W.G. Simpson, 'Romano-British settlement on the Welland Gravels' in *Rural Settlement in Roman Britain* (1966) ed. A.C. Thomas, 15-25.



divided off for separate use, with the uninterrupted trackway ditches reflecting the movement of stock through, rather than into the enclosures, with the boundary ditches separating the enclosures from open pasture. The environmental evidence, which suggests an open grassland with some arable activity, accords with this interpretation.

Some 200m. to the south of the area excavated in 1973 cropmarks indicate that the trackway funnelled out into an open area into which ran similar trackways from the north-west and south (Fig. 3). This linking of trackways into a communal (?) area is a most interesting aspect of the site and has been noted on similar sites in Wessex.<sup>138</sup> The destruction of this crucial area by gravel extraction before formal archaeological investigation of the site makes any interpretation tentative. The confluence of the trackways may represent a nucleus for human settlement in the vicinity but this interpretation would not explain the need for a broad open area at this focal point. A more likely explanation is related to the function of the trackways themselves in the controlled movement of livestock. Might the open area be used as a collecting area for herds brought down the connecting trackways from the open pasture beyond?

Most of the trackways visible as cropmarks in the region can be traced for only relatively short distances. This may simply be due to the differential cropmark potential of different fields but in many cases the termination of trackways in apparently open land would appear to be genuine. Some of the trackways are not associated with any identifiable enclosures, but where they are the indication is that having traversed the area of the enclosures they simply open out into unenclosed pasture. The ditches would only be required where it was necessary for stock to be moved through these areas of separate use, where they would also perform a drainage function. Beyond the enclosed areas, where the straying of stock would not be a problem the line of the trackways may well have been established by less substantial means such as hedges, low kerbs without ditches, fences, markers or simple usage and wear, none of which are likely to produce a visible cropmark.

With regard to the enclosures themselves the evidence from the excavation throws little light on the function of these 'areas of separate use'. It seems likely that some would have contained domestic and/or agricultural buildings, though the paucity of evidence for structures within the areas excavated at Appleford has already been stressed. The 'postholes' and the fragments of gullies might suggest that at one time the enclosure to the north of ditch F6 in Area 2 was occupied by timber buildings (Fig. 25), and the dump of material in the upper filling of ditch F5 south-east of this enclosure seems to indicate disposal of domestic rubbish, suggesting occupation in the vicinity. It is possible that some of the larger enclosures might have been used for cultivation, while others were areas set aside for specific functions relating to the pastoral aspect of the site. The addition of enclosures to the eastern boundary of the enclosure bloc (Fig. 3) seems to indicate an expansion of this zone of separate use. It is not possible to establish what factors determined the limits of the enclosed zone, but the indications are that the eastern boundary ditch at least was in origin a fairly rigid boundary, as the subdivision of the internal area continues even where the enclosed zone has become extremely attenuated.

## THE FINDS

THE ROMANO-BRITISH POTTERY By J.E. SAUNDERS

### *Introduction*

It has been possible to publish only a limited selection of sherds from the Romano-British features on the site. This is particularly the case with the upper fill of Ditch 5, the material from which comprised just over 50% of

<sup>138</sup> H.C. Bowen and P.J. Fowler, 'Romano-British Rural Settlements in Dorset and Wiltshire' in *Rural Settlement in Roman Britain* (1966) ed. A.C. Thomas, 43-68.

the whole. The bulk of the wares are products of the Oxfordshire kilns. The black-burnished sherds from the second century features and a small quantity of shell-gritted sherds from some of the fourth century levels were probably made in the Northamptonshire area. Only two colour coated sherds were not local products (Nos. 67-8), coming from the Nene Valley kilns.

The system used for the description of the sherds is as follows: form, fabric (texture and inclusions), colour (E — exterior, I — interior, Bk — core of fabric), other remarks.

The following abbreviations are used in this report:

<i>Shakenoak I, II, III, IV</i>	A.C.C. Brodribb, A.R. Hands, and D.R. Walker, <i>Excavations at Shakenoak Farm, near Wilcote, Oxfordshire</i> (4 vols.) 1968-73.
<i>Overdale kiln</i>	E. Harris and C.J. Young, 'The 'Overdale' kiln site at Boar's Hill, near Oxford', <i>Oxoniensia</i> , xxxix (1974).
<i>Cowley</i>	R.J.C. Atkinson, 'A Romano-British potters field at Cowley, Oxon.' <i>Oxoniensia</i> , vi (1941).
<i>Verulamium</i>	S.S. Frere, <i>Verulamium Excavations</i> , I, (1972).
<i>Dorchester</i>	S.S. Frere, 'Excavations at Dorchester on Thames, 1962', <i>Arch. J.</i> cxix (1962).
<i>Young, 1973</i>	C.J. Young, 'The pottery industry of the Oxford Region', in <i>Current Research in Romano-British coarse pottery</i> , ed. Detsicas, (1973).
<i>Sanders, 1973</i>	J.E. Sanders, 'Late Roman shell-gritted ware in Southern Britain', unpublished B.A. thesis for London University, 1973.

#### *Ditch 5* (Figs. 28, 29 and 30)

##### First recut, middle fill

1. Jar with neck cordon and carination. Very hard, smooth, small black inclusions. E, I, Bk light grey. Cf. *Shakenoak IV* no. 425, first half of 2nd C., *Overdale kiln* no. 17.
2. Fragment of rim of jar. Very hard and gritty, small white inclusions. E, I, black, Bk, grey. Surfaces burnished, underside of rim decorated with burnished wavy line.

##### First recut, upper fill

3. Ring-necked flagon single handed flagon. Hard, smooth, few small black inclusions. E, I, Bk, white.
4. Pie-dish, with zone of scored lattice decoration on the side and squiggles on the underside of the base. Hard, sandy, micaceous, small black inclusions. E, I, mid-grey, Bk red and grey laminated.
5. Pie-dish. Hard, sandy, micaceous, small white inclusions. E, I, Bk black. Surfaces burnished, with a zone of lattice decoration.
6. Pie-dish. Hard, sandy, micaceous, small white inclusions. E, I dark grey, Bk light grey.
7. Jar with slight neck cordon and three girth grooves. Very hard, sandy, small black and red inclusions. E, I mid-grey, Bk red and grey laminated.
8. Narrow-mouthed jar with neck cordon. Soft, small black and white inclusions. E, I, buff-grey, Bk buff. Cf. *Shakenoak II* no. 200, c. 140 A.D.

##### Second recut, lower fill

9. Plain-rimmed flagon; scar of handle just below rim. Hard, sandy, small black inclusions. E. white, I, Bk, pink.
10. Jar with neck groove. Hard, sandy, micaceous, small black inclusions. E, I, dark grey, Bk light grey.
11. Jar with neck cordon. Hard, sandy, micaceous, small black inclusions. E, I, Bk mid-grey.
12. Jar. Very hard, sandy, micaceous, quartzitic inclusions. E, I, Bk black, burnished with reddish sheen on the exterior and inside rim, above a matt zone with lattice decoration. Cf. below nos.
13. Jar with fine girth groove. Soft, few small black inclusions. E, I, buff-grey, Bk buff-orange.

##### Second recut, upper fill (pottery dump)

14. Plain-rimmed single handled flagon. As (10) above but more clumsily made; the joint of the neck and body are marked by a ridge of clay and the handle is set askew.
15. Flanged carinated dish. Fabric as (14). Cf. *Cowley* no. 30.
16. Dish in imitation of Dr. 18. Hard, sandy micaceous, small red inclusions. E, I, orange, Bk, grey.
17. Pie-dish. Hard, sandy, micaceous, small white inclusions. E, I, black, Bk, red and grey laminated. Surfaces burnished except for matt zone with burnished curved decoration on the exterior. Cf. *Verulamium* no. 708, c. 150 A.D., *Shakenoak II*, nos. 152-5, pre 140 A.D.
18. Carinated dish. Fabric as (17). Surfaces burnished with curved decoration over.
19. Jar with cavetto rim. Very hard, sandy, white inclusions. E, I, Bk, black. Surfaces burnished on exterior and rim, except for matt zone with lattice decoration on the exterior.
20. Jar with cavetto rim. Fabric as (12).
21. Jar with cavetto rim. Hard, sandy, many black and quartzitic inclusions. E, Bk, burnt dark and light grey in patches, I, light grey. Burnished on exterior above matt zone with lattice decoration. Cf. *Verulamium* no. 854, c. 155-160 A.D.

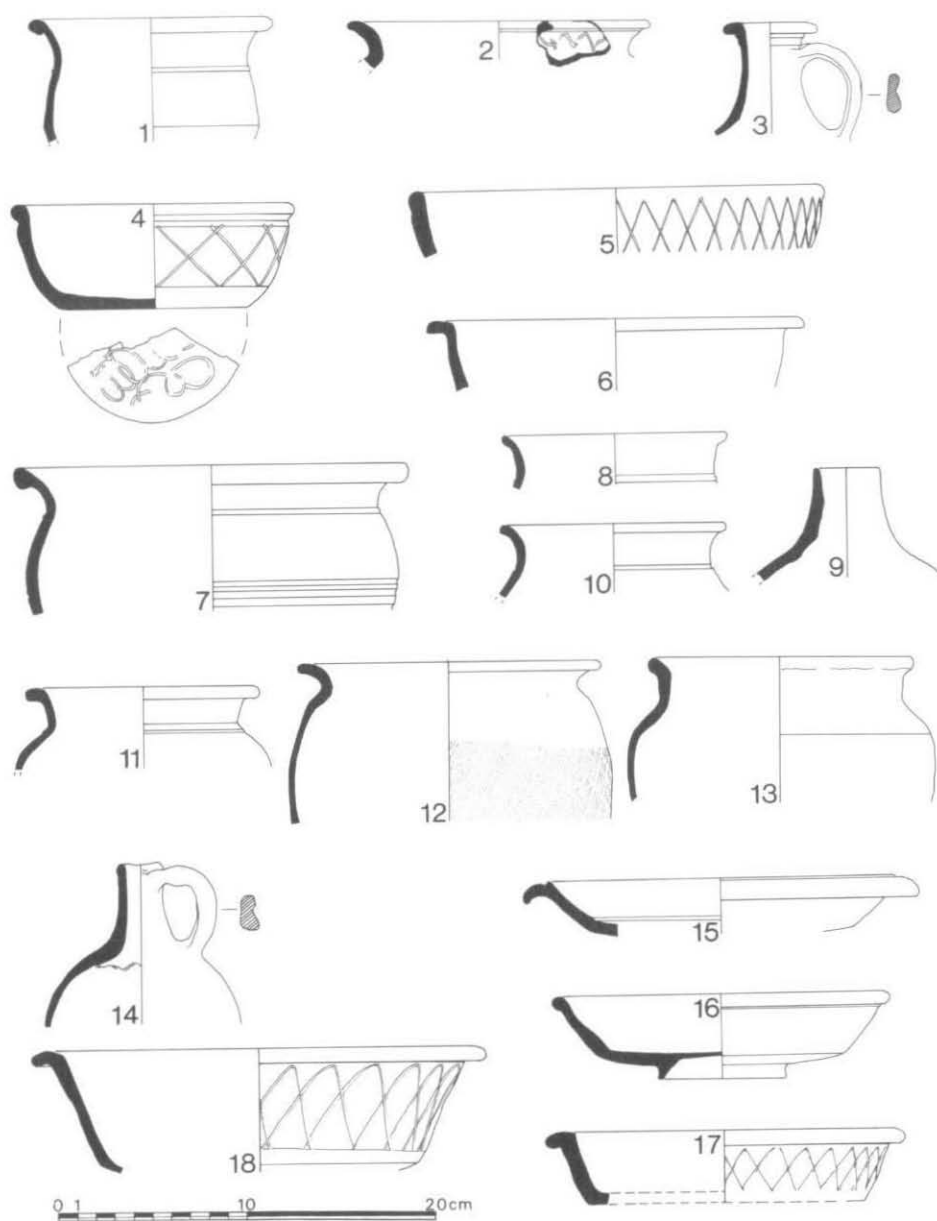


Fig. 28 Roman pottery. Scale 1/4

22. Beaker. Hard, smooth, slightly micaceous, small black inclusions. E. I., patchy, mid-grey, Bk., buff. Cf. *Verulamium* no. 585, c. 130-140 A.D., *Overdale kiln* no. 30.
23. Beaker, As (22).
24. Jar. Hard, sandy, many small red and grey inclusions. E. I. Bk., light orange.
25. Pie-dish. Hard, very gritty, many small black inclusions. E., fumed grey, I. Bk., orange-pink. Uneven exterior surface.
26. Jar. Hard, smooth, small red inclusions. E. I., light orange-grey, Bk., light orange.
27. Beaker decorated with appliqué spots. Hard, sandy, small black inclusions. E. I. Bk., light grey. Cf. *Verulamium* no. 428, c. 105-130. A.D., nos. 602-4 c. 130-150 A.D.
28. Jar. Very hard, gritty, white and grey inclusions. E., light grey, Bk., mid-grey. Light reddish wash on exterior surface.
29. Carinated bowl. Hard, sandy, slightly micaceous, few small grey inclusions. E. I. Bk., mid-grey.
30. Carinated bowl. Hard, sandy, slightly micaceous, few small grey inclusions. E. I. Bk., mid-grey.
31. Narrow-mouthed jar with shoulder cordon. Hard, sandy, grey inclusions. E. I. Bk., light grey.
32. Jar with two slight girth grooves. Hard, very gritty, many quartzitic inclusions. E. I., mid-grey, Bk., light grey.
33. Jar with neck cordon and two girth grooves. Hard, sandy, few grey inclusions. E. I. Bk., buff-grey.
34. Jar. Fabric as (33). Cf. *Shakenoak II* no. 246, c. 160-250 A.D.
35. Jar with shoulder cordon. Fabric as (33) and (34).
36. Jar with shoulder groove. Hard, sandy, micaceous, few small grey inclusions. E. I. Bk., mid-grey.
37. Jar. Fabric as (36).
38. Storage jar. Hard, sandy, large white and red inclusions. E. I. Bk., dark grey.

A relatively larger proportion of pottery from the first recut and lower fill of the second recut has been published than from the large dump of pottery in the upper fill of the second recut. There is insufficient material from the earlier levels to attempt any assessment of a time-lag between the cuttings on the basis of the pottery. The large number of sherds in the upper fill of the second recut, of which it has been possible to illustrate only a small selection, appear to form a homogeneous body, the bulk of which consists of types current in the mid-second century A.D.

#### *Ditch 6* (Fig. 30)

39. Cup in imitation of Dr 27. Hard, sandy, few small grey inclusions. E. I. Bk., light grey. Cf. *Dorchester* no. 102, c. 135-145 A.D.
40. Flanged bowl with white painted decoration on the flange. Hard, sandy, small red inclusions. E. I., red-orange, Bk., light orange.
41. Jar. Hard, sandy, small grey inclusions. E. I., mid-grey, Bk., light-grey.

#### *Ditch 7* (Fig. 30)

42. Pie-dish with faint lattice decoration. Hard, sandy, small black inclusions. E. I. Bk., light grey. Cf. *Dorchester* no. 141, c. 160-185 A.D.
43. Dish in imitation of Dr. 18/31R. Hard, sandy, small red inclusions. E. I. Bk., red-orange.
44. Jar with neck cordon and applique spot decoration. Hard, sandy, slightly micaceous, small black inclusions. E. I., dark grey, Bk., mid-grey. Cf. *Verulamium* nos 837-8, c. 130-250 A.D., nos. 1047, 1049, c. 155-160 A.D.
45. Jar. Very hard and gritty, many small grey and red inclusions. E. I. Bk., light grey.

#### *Ditch 14* (Figs. 30 and 31)

##### First recut, upper fill

46. Jar with shoulder groove and faint lattice decoration. Very hard and gritty, many small grey inclusions. E. I. Bk., very light grey.
47. Beaker with shoulder groove. Fabric as (33).
48. Dish in imitation of Dr 18/31. Hard, sandy small red inclusions. E. I., light orange, Bk., grey.

##### Second recut, upper fill

49. Small lid or stopper. Hard, sandy, small red inclusions. E. I. Bk., red-orange. Surfaces red-slipped.
50. Mortarium with thumbled-over spout. Hard, sandy, small grey inclusions. E. I., orange, Bk., grey. White slip over surfaces, translucent pink quartzite grit. *Young* 1973, nos. 8-11.
51. Mortarium. Fabric as (50). Grit scattered in clusters.
52. Wall-sided mortarium with rouletted decoration. Fabric as (50) and (51) but surfaces red slipped. *Young*

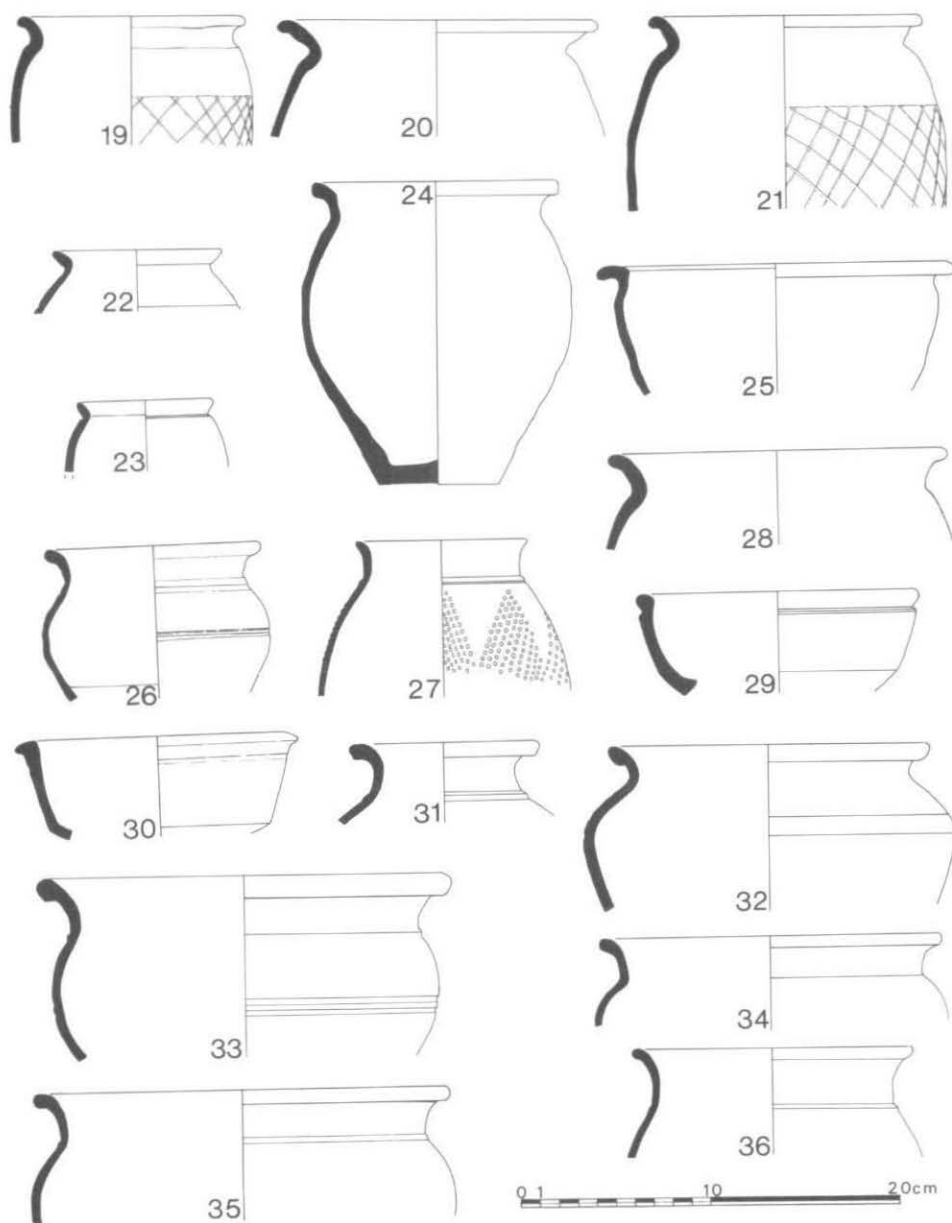


Fig. 29 Roman pottery. Scale 1/4

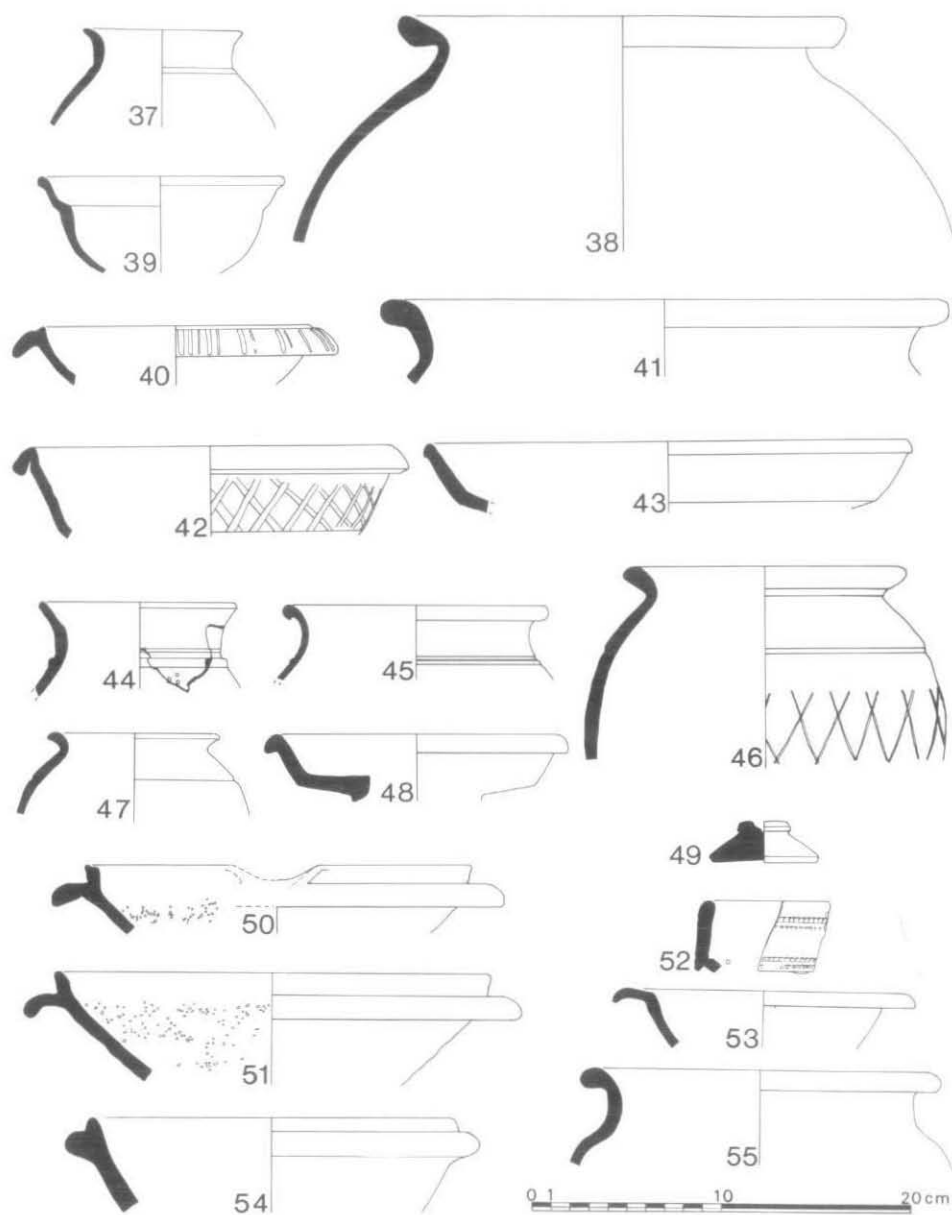


Fig. 30 Roman pottery. Scale 1/4

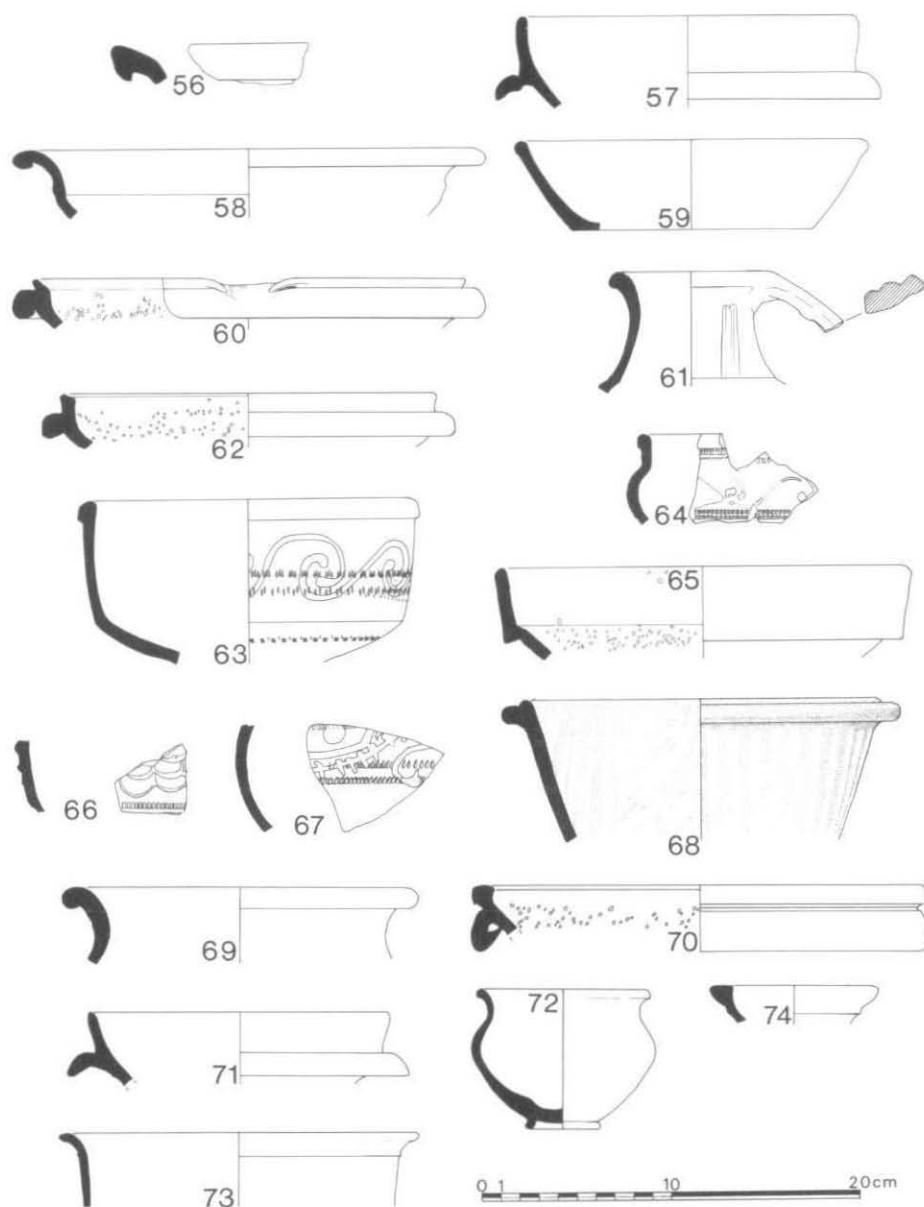


Fig. 31 Roman pottery. Scale 1/4

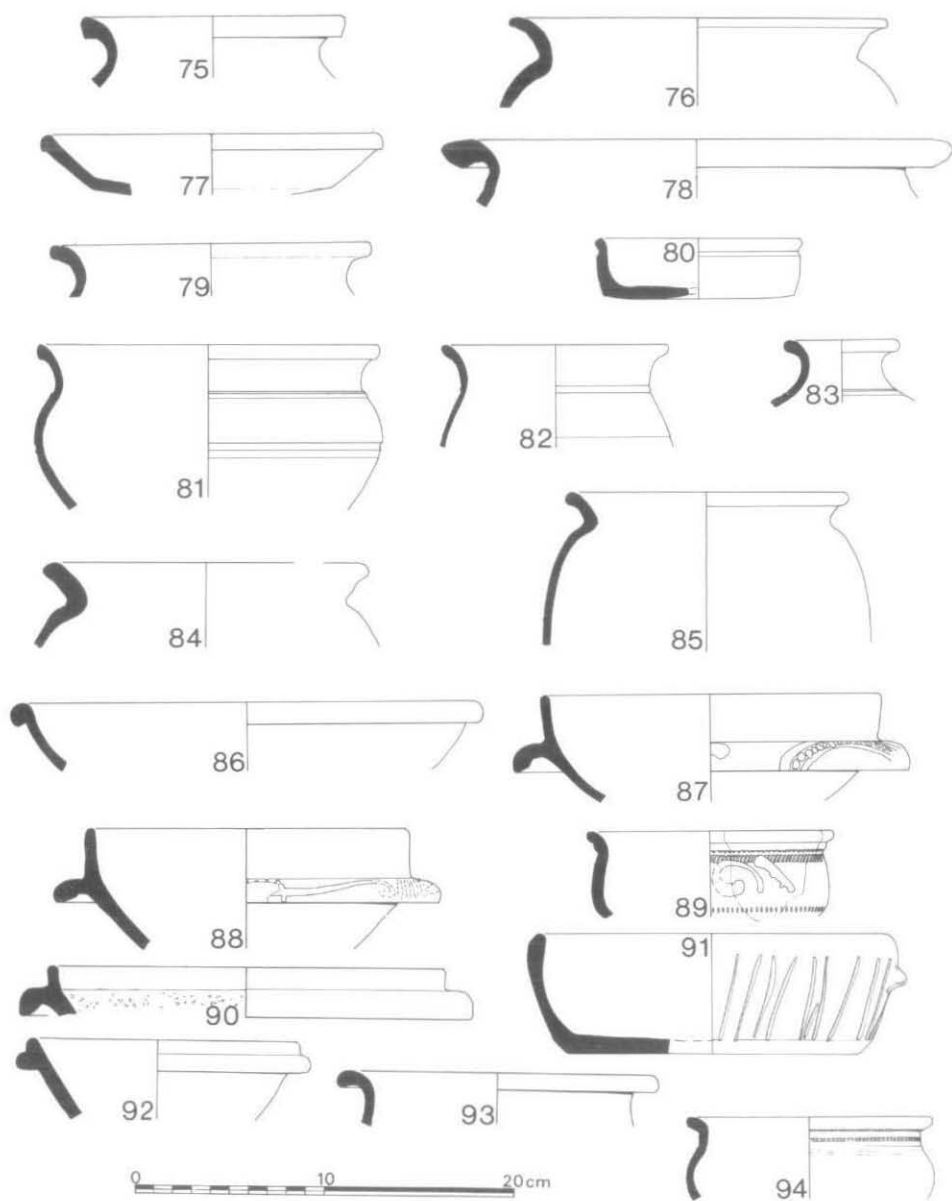


Fig. 32 Roman pottery, Scale 1/4



1973, nos. 19 and 20.

53. Flanged bowl. Hard, sandy, small black inclusions. E. I. Bk., light orange.
  54. Flanged pie-dish. Hard, sandy, micaceous, small black inclusions. E. I., light grey, Bk., mid-grey.
  55. Jar. Hard, sandy, micaceous, many small grey inclusions. E. I. Bk., mid-grey.
  56. Rim of jar. Hard, shell inclusions. E. I., pink, Bk., grey.
- Not illustrated; two rims of bowls in imitation of Dr 31 R, Cf. *Young* 1973, no. 28; two rims of necked bowls with rouletted decoration, Cf. *Young* 1973, no. 35.

The presence in all the levels of the first and second recuts of red-slipped pottery from the Oxfordshire kilns indicates a date after 250 A.D. (Cf. *Young* 1973). Coin evidence (p. ) and the presence of shell gritted pottery (Cf. *Sanders* 1973) points to a date in the late fourth century A.D. for the final filling of the feature.

#### Ditch 16 (Fig. 31)

##### Second Recut, upper fill

57. Bowl in imitation of Dr. 38. Hard, sandy, micaceous, small red inclusions. E. I., red-orange, Bk., grey. Surfaces red-slipped. Fragments of another not illustrated. Cf. *Young* 1973, no. 30.
58. Bow in imitation of Dr. 36. Fabric as (57). Cf. *Young* 1973, no. 29.
59. Pie-dish. Fabric as (57) and (58) but unslipped.
60. Mortarium with small bead, stubby flange and thumbled-over spout. Hard, sandy, small black and red inclusions. E. I. Bk., off-white. red painted decoration in spout. Pink and grey quartzite grit. Cf. *Young* 1973, nos. 8-11.
61. Single handled flagon. Hard, sandy, small white and black inclusions. E. I., pinkish-white, Bk., light grey.

The coin evidence (below p. 81) reinforces this deposit's apparent contemporaneity with the equivalent fill in ditch 14.

#### Ditch 109 (Fig. 31)

62. Mortarium with stubby flange. Hard, sandy, small black inclusions. E. I., pinkish white, Bk., light grey. Translucent pink quartzite grit. See above nos. (50), (51), (60).
  63. Bowl in imitation of Dr. 37, decorated with rouletting and white paint. Hard, sandy, micaceous. E. I., red-orange, Bk., grey. Surfaces red-slipped. Cf. *Young* 1973, no. 32.
  64. Necked bowl with rouletted and painted decoration. Fabric as (63). Cf. *Young* 1973 no. 34.
  65. Mortarium in imitation of Dr. 45. Fabric as (63), (64). Translucent pink grit. Cf. *Young* 1973 no. 19.
  66. Fragment of beaker with rouletted and applied scale decoration. Hard, smooth, few small white inclusions. E. I., buff-orange, Bk., grey. Matt brown slip on the exterior.
  67. Body sherd of jar or flagon. Fabric as (66); exterior has matt black slip with rouletted and white painted decoration.
  68. Pie-dish. Hard, sandy, micaceous, small black inclusions. E. I., mid-grey, Bk., red and grey laminated. Burnished on the top of the rim and flange and in striations on the exterior and interior.
  69. Jar. Hard, sandy, micaceous, small black inclusions. E. I., dark grey, Bk., mid-grey.
- Not illustrated: fragments of three bowls in imitation of Dr. 38, four bowls in imitation of Dr. 31R and one in imitation of Dr. 36; all fabric as (63-5). Also body sherds of shell-gritted ware.

Coin evidence and the presence of shell-gritted pottery indicate a date in the second half of the fourth century.

Nos. (66) and (67) are products of the Nene Valley kilns.

#### Ditch 192 (Fig. 31)

70. Mortarium with heavy bead and hooked flange. Hard, sandy, small black inclusions. E. I. Bk., greyish white. Translucent grey and pink grit. Cf. *Young* 1973, nos. 6-7.
71. Bowl in imitation of Dr. 38. Hard, sandy, small black inclusions.

Coin evidence indicates a late fourth century date for this feature.

#### Well 32 (Figs 31 and 32)

##### Layer (i)

72. Small jar. Hard, sandy, very few small grey inclusions. E., grey-buff patchy, I. Bk., light grey. Cf. *Shakenoak IV* no. 480, c. 220-50 A.D.

- 73. Beaker. Hard, sandy, small red inclusions. E. I. red-orange, Bk., grey.
- 74. Lip of flagon. Hard, gritty, many small red and black inclusions. E. I. Bk., pinkish white.
- 75. Jar. Fabric as (74).

## Layer (ii)

- 76. Jar. Hard, sandy, small white inclusions. E. I. Bk., black. Highly burnished on the exterior and inside rim, with decoration on the undrside of the rim.
- 77. Dish in imitation of Dr. 18/31. As (48).
- 78. Jar. Hard, very gritty, micaceous, many small black inclusions. E. I., white, Bk., grey-white, external surface dark grey.
- 79. Jar. Fabric as (78).

The complete absence of the colour-coated products of the Oxfordshire kilns, which are abundant elsewhere, indicate a date before 250 A.D. The feature cuts ditch 5 and must therefore be later than the middle of the second century.

*Well 200* (Fig. 32)

## Layer (i)

- 80. Small pie-dish. Hard, sandy, few black inclusions. E. I. Bk., light grey.
- 81. Jar with neck cordon and two girth grooves. As (33).
- 82. Jar with neck cordon. Fabric as (81).
- 83. Narrow-mouthed jar with neck cordon. Hard, sandy, micaceous, small black inclusions. E. I., mid-grey, Bk., red and grey laminated. Cf. above (31).
- 84. Jar. Hard, sandy, small white inclusions. E., black, I., dark grey. Bk., black to dark red. Burnished on exterior and inside rim. Fragments of two others
- 85. Jar. Very hard and gritty, micaceous, many small black and white inclusions. E. I. Bk., dark grey.

## Layer (ii)

- 86. Bowl in imitation of Dr. 31R. Hard, sandy, micaceous, small black inclusions. E. I., red-orange, Bk., grey. Surfaces red-slipped.

Not illustrated: three body sherds, fabric as (86).

The presence in the lower level (ii) of Oxfordshire colour coated products made after 250 A.D. (*Young* 1973) indicates that the pottery from the upper level (i), all of which appears to be of second century type was redeposited.

*Well 250* (Figs. 32 and 33)

## Layer (i)

- 87. Bowl in imitation of Dr. 38. Hard, sandy, micaceous, small black inclusions. E. I., red-orange, Bk., grey. Surfaces red-slipped, white painted decoration on flange.
- 88. Bowl as (87).
- 89. Necked bowl with rouletted and white painted decoration. Fabric as (87). Cf. above (64).
- 90. Mortarium. As (50).
- 91. Pie-dish with knob handle. Hard, sandy, small grey inclusions. E. I., light orange, Bk., grey. Brown painted decoration on interior and exterior.
- 92. Pie-dish. Hard, sandy, micaceous, small grey inclusions. E. I., mid-grey, Bk., blue-grey. Interior and top of flange highly burnished.
- 93. Jar. Hard, sandy, very micaceous, small white inclusions. E. I., dark grey, Bk., light grey.

Not illustrated: two more bowls in imitation of Dr. 38, one with white painted decoration, one plain; rilled body sherds of shell-gritted ware.

## Layer (ii)

- 94. Necked bowl with rouletted decoration. Hard, sandy, micaceous. E. I. Bk., red-orange. Red-slipped surfaces. Cf. *Young* 1973, nos. 34-5.
- 95. Dish with handle(s). Hard, sandy, micaceous, small white inclusions. E. I. Bk., black. Burnished inside and out. Cf. *Shakenoak IV* no. 670, c. 330-390 A.D.
- 96. Pie-dish. Hard, sandy, small black inclusions. E. I. Bk., light grey. Burnished on exterior and top of rim.

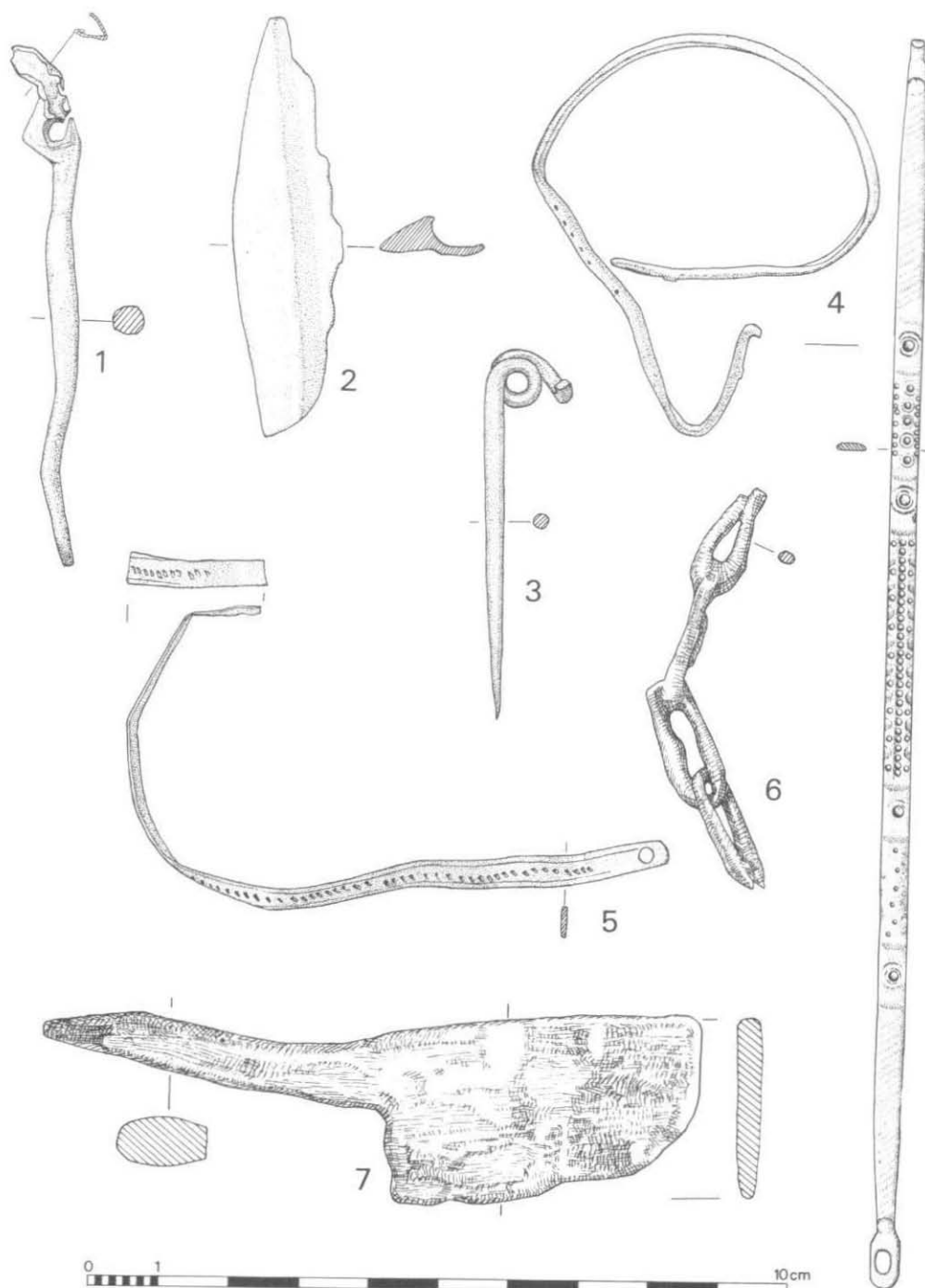


Fig. 34 Small finds associated with the Romano-British occupation (No. 1, silver; Nos. 2-5, bronze; Nos. 6 and 7, iron)

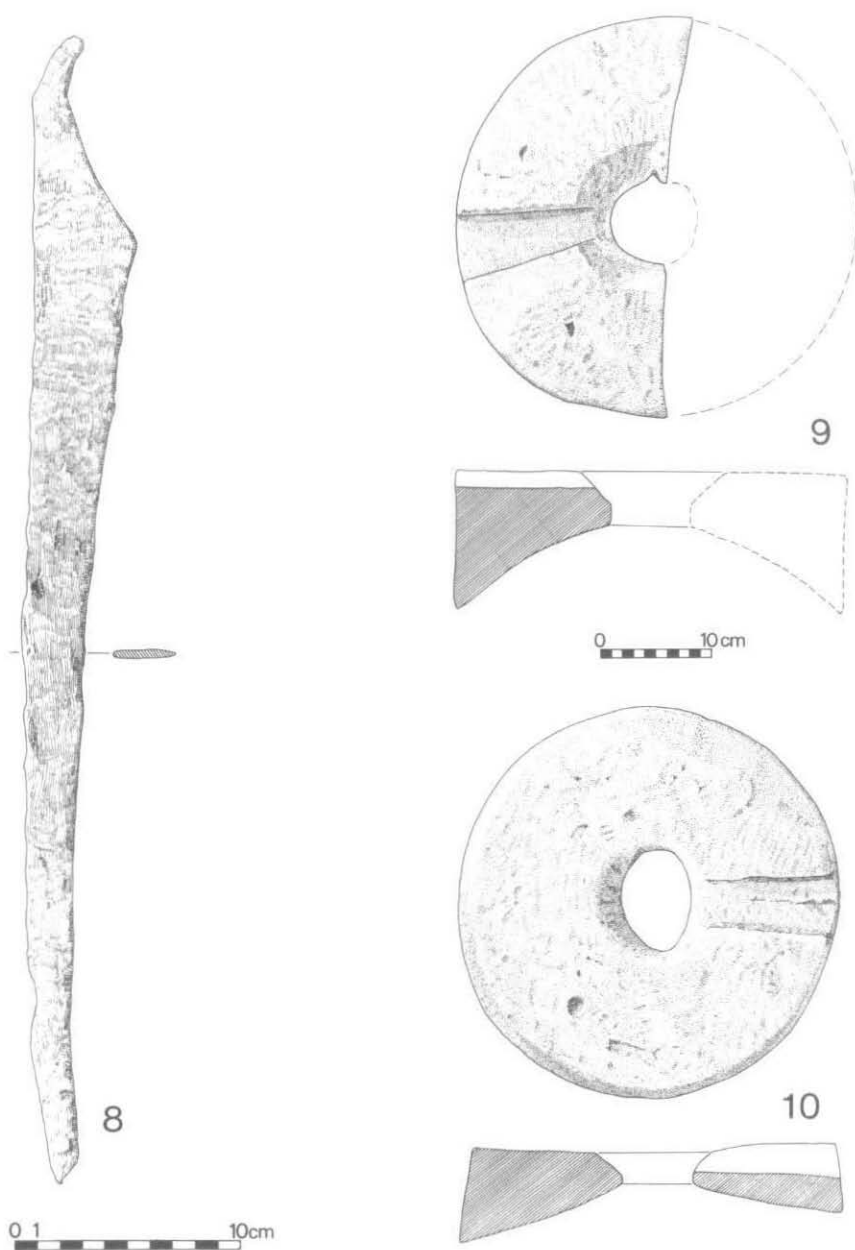


Fig. 35 Small finds associated with the Romano-British occupation (No. 8, iron; Nos. 9 and 10, stone)

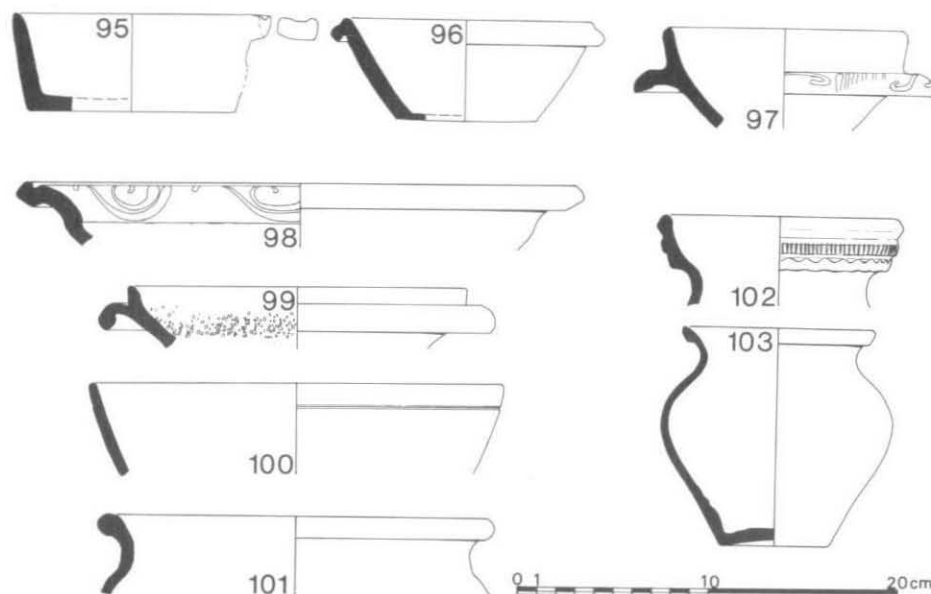


Fig. 33 Roman pottery. Scale 1/4

Layer (iii)

- 97. Bowl as (87), (88).
- 98. Bowl in imitation of Dr. 36. Fabric as (87). White painted decoration on rim.
- 99. Mortarium. As (50), (90).
- 100. Pie-dish. Very hard and micaceous, small white inclusions. E. I., very dark grey, Bk., light and dark grey laminated. Surfaces lightly burnished.

Layer (iv)

- 101. Jar. Hard, sandy, very micaceous, small black inclusions. E. I. Bk., light grey.

Layer (v)

- 102. Narrow-mouthed jar with moulded rim. Hard, sandy, micaceous, small black inclusions. E. I. Bk., mid-grey. Lines of burnishing on inside of the moulding and outside of the neck. Cf. *Shakenoak I*, nos. 125-6, after 250 A.D. and after 350 A.D. respectively, *Shakenoak IV* nos. 606-9, c. 330-90 A.D.
- 103. Small jar. Hard, shell inclusions. E. Bk., dark grey, I., pink.

All the pottery from the filling of this well can be assigned to the fourth century; the presence of shell-gritted ware indicates a date in the second half of the century, at least for Layer (i).

THE COINS (All Ae)

1. From the upper filling of ditch 5, final recut. TRAJAN. c. 104-111 A.D. Obv. Illegible. Rev. SPQR OPTIMO SC. Mint Rome.
2. From the ploughsoil. POSTUMUS. c. 260-268 A.D. Obv. IMP C POSTVMS P F AVG. Rev. PROVIDENTIA AVG.
3. From the upper filling of ditch 14, final recut. CONSTANTIVS CHLORUS. c. 300-305 A.D. Obv. FL VAL CONSTANTIVS NOB C. Rev. GENIO POPVLI ROMANI. Mint London. RIC vi pg 125 No 20.
4. From the upper filling of ditch 16, final recut. CONSTANTINE I. c. 320 A.D. Obv. CONSTANTIVS AVG. Rev. D N CONSTANTINI MAX AVG. Mint (...)IS Siscia ?
5. From the ploughsoil. CONSTANTINE II. 321-2 A.D. Obv. CONSTANTINVS IVN N C. Rev. BEATA TRANQVILLITAS VOTIS XX. Mint London. RIC vii pg 112 No 236.
6. From the upper filling of ditch 14, final recut. CONSTANTINUS. 331-341 A.D. Obv. DIVI CONSTANTINVS P F AVGG (Sic) Rev. Quadriga. Mint Trier.

7. From the ploughsoil. VALENTINIAN I or VALENS c. 364-367 A.D. Obv. Illegible. Rev. GLORIA ROMANORVM. Mint Arles.
8. From the filling of ditch 109. VALENS. c. 364-367 A.D. Obv. D N VALENS P F AVG. Rev. SECVRITAS REIPVBLICAE. Mint Arles.
9. From the ploughsoil. VALENS. c. 364-375 A.D. Obv. D N VALENS P F AVG. Rev. SECVRITAS REIPVBLICAE. Mint Arles.
10. From the upper filling of ditch 14, final recut. VALENTINIAN I. 367-378 A.D. Obv. D N VALENTINIANVS P F AVG. Rev. SECVRITAS REIPVBLICAE. Mint Arles.
11. From the upper filling of ditch 14, final recut. VALENTINIAN II, THEODOSIUS I, or ARCADIUS. c. 388-392 A.D. Obv. Off flan. Rev. SALVS REIPVBLICAE.
12. From the filling of ditch 192. VALENTINIAN II, THEODOSIUS I, or ARCADIUS. c. 388-392 A.D. Obv. Illegible. Rev. SALVS REIPVBLICAE.

#### SMALL FINDS ASSOCIATED WITH THE ROMANO-BRITISH OCCUPATION (Figs. 34-36)

1. (Fig. 34) Handle of silver spoon. From the upper filling of the late recut of the eastern trackway ditch (F14 (i)). Fourth century.
2. (Fig. 34) Fragment of moulded bronze strip. From the filling of enclosure ditch F6. Second century.
3. (Fig. 34) Bronze brooch pin. From the upper filling of enclosure ditch F5. Second century.
4. (Fig. 34) Bronze bracelet with hook and eye fastening, finely decorated with incised circles and dots. From the filling of enclosure ditch F192. Fourth century.
5. (Fig. 34) Bronze bracelet with notched decoration. on text as (4).
6. (Fig. 34) Fragment of iron chain. From the filling of ditch 109. Fourth century.
7. (Fig. 34) Iron cleaver blade. From the ploughsoil.
8. (Fig. 35) Iron hand saw (?) with narrow blade and tang. The absence of teeth and the length (51cm.) throw the function of the object into question but the form resembles a slightly shorter example from *Verulamium* (46) (Fig. 61, No. 12). From the filling of ditch F109. Fourth century.

*Querns* by S.W. Brown (Petrological identifications by H.P. Powell).

The tangential grinding angle with the horizontal has been given or estimated in the case of fragments.

9. (Fig. 35) Upper rotary quern. The stone has a slightly concave top with a handle slot tapering towards the centre where it intersects with a small hopper. There is an oval central perforation with one markedly angular end. The long axis of the oval is at right-angles to the line of the handle slot. The grinding surface is convex (15°) and exhibits differential wear reducing the outer thickness of the stone on the handle side by 1cm. Wt 10.996kg. Upper Green Sandstone. Source: Wilts? From machine clearance over Area 2.
10. (Fig. 35) Half of upper rotary quern. The stone has a flat top into which is cut a squared handle slot tapering towards the centre where it intersects with the hopper. There is a central oval perforation extended at either end by two round-sectioned bores. The grinding surface is concave (25°) and differentially worn on the side opposite the handle slot producing a reduction in thickness of 3.5cm. The grinding surface is striated. Wt 6.356kg. Upper Green Sandstone. Source: Wilts? From machine clearance over area 2.
11. (Fig. 36) Lower rotary quern fragment with shallow (4°) grinding surface. The edge of the stone shows signs of wear. The upper surface has been incised with bundles of parallel grooves radially arranged to aid the cutting of the grain. Millstone Grit. From the filling of the latest recut of the eastern trackway ditch (F14 (i)).
12. (Fig. 36) Rotary quern fragment marked with rectangular gouges. Very flat grinding surface. Millstone Grit. Context as (11).
13. (Fig. 36) Lower rotary quern fragment. The grinding surface is shallow (4°) with a concentric rebate around the edge of the stone. The edge of the stone shows signs of wear. The underside is very well levelled and flat. Millstone Grit. From the filling of the latest recut of the western trackway ditch (F16 (i)).
14. Lower rotary quern fragment with uneven base. Grinding surface convex (13°). Millstone Grit. Context as (11).
15. Lower rotary quern fragment. A central hollow has a continuous worn surface. Rough side and bottom. Millstone Grit. From the ploughsoil.

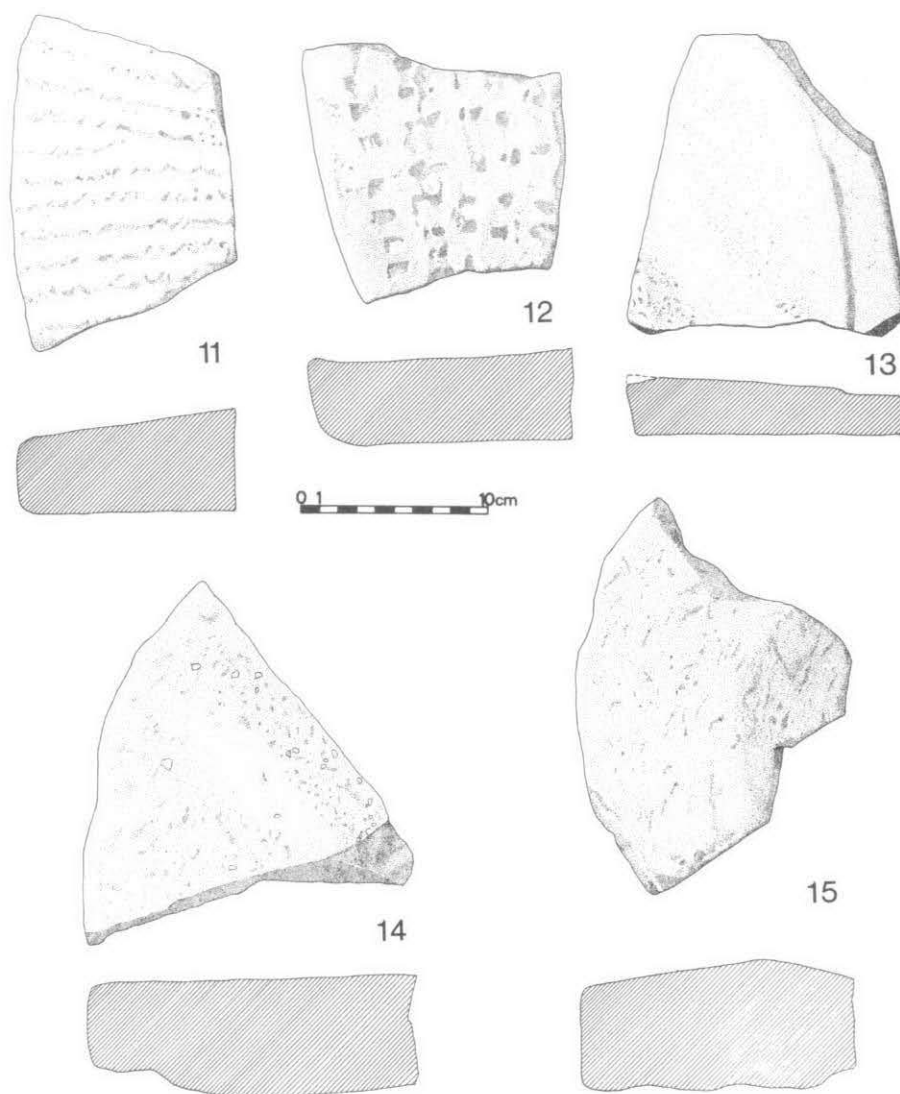


Fig. 36 Small finds associated with the Romano-British occupation. All stone

## THE HUMAN REMAINS By ERIC EDWARDS

The following is a summary of a fuller report contained within the site archive.

*Inhumation F3*

The fragmented skeleton of an adolescent male. Age probably 15/16 years, possibly a year younger. There was a complete adult set of teeth, minus the wisdoms and no evidence of caries or other dental disease.

*Inhumation F20*

A fairly well preserved skeleton of a male of 30 years or slightly younger. The individual was well-built and tall with a height of 6ft. (1.83m.). A complete dentition survived, with evidence of periodontal disease, calculus, abscesses and caries. Attrition was medium to slight.

*Inhumation F21*

A fragmentary skeleton of a female of 16 years or a little younger. There was no evidence of dental disease apart from slight calculus and some reabsorption of the bone surrounding the roots.

*Inhumation F22*

A fragmentary skeleton of a female some 5ft. 4ins. (1.63m.) in height. The maxilla was devoid of teeth, all of which were ante-mortem loss and presented a senile appearance giving an impression that the individual may have been as old as 45/50 years. The vertebrae indicated a generalised and diffuse degenerative condition, with osteophytoses and distortion of shape. This may have been caused by an arthritic condition though other diagnoses are possible.

*Inhumation F23*

A fragmentary and poorly preserved skeleton. Probably female, with an estimated stature of 5ft. 3ins. (1.60m.) There was evidence of periodontal disease, very heavy calculus and ante-mortem tooth loss. There was generalised osteophytoses and diffuse degenerative condition of the vertebrae. Age probably 35 years.

*Inhumation F24*

A fragmentary and poorly preserved skeleton of an immature female. The teeth showed little or no wear with several deciduous molars in situ and with permanent teeth in various stages of eruption suggesting an age between 9 and 11 years.

*Inhumation F25*

A fragmentary and poorly preserved skeleton. No cranial skeleton was present and therefore age and sex estimation was not possible. Height was calculated from the tibial length and an estimate of 5ft. 1in. (1.5m.) was obtained. The fragmentary nature of the pelvis allows only for a tentative estimation that the sex was male. The vertebrae, especially the lumbar components, exhibited osteophytoses. If these were due to an advanced arthritic condition a tentative estimation of age would be over 55 years.

*Inhumation F26*

A fragmented and incomplete skeleton of a juvenile in a very poor state of preservation. The pelvis, despite its immaturity, showed a wide sciatic notch which would suggest the individual was a juvenile or pre-adolescent female. The dental development indicates an age between 8 and 9 years.

## BONE AND SHELL REPORT By BOB WILSON

*Fragment numbers*

Fifty-two Prehistoric (Late Bronze Age-Mid Iron Age) and Romano-British features provided 1987 fragmented bones and oyster shells in good preservation, only 3% of the bones being markedly more weathered than the rest, 1% burnt, and 1% animal gnawed. 55% of the bones were newly broken fragments.

The 42% of remains which were identifiable are recorded in Table II. Fifty-six fragments from two newly broken horse skulls have been counted as reunited entities (Fs 14, 145); 3 shed red deer antlers (Fs 14, 74 and 109; 78 fragments in all) and parts of Iron Age skeletons of a dog (F139) and a hedgehog (F137) have been excluded from the fragment frequency percentages. An exceptionally large Romano-British cattle horn core was more than 227mm. in outer curvature and 230mm. in basal circumference.

The identified bones of each of the four main species were divided into three categories in Table III and a



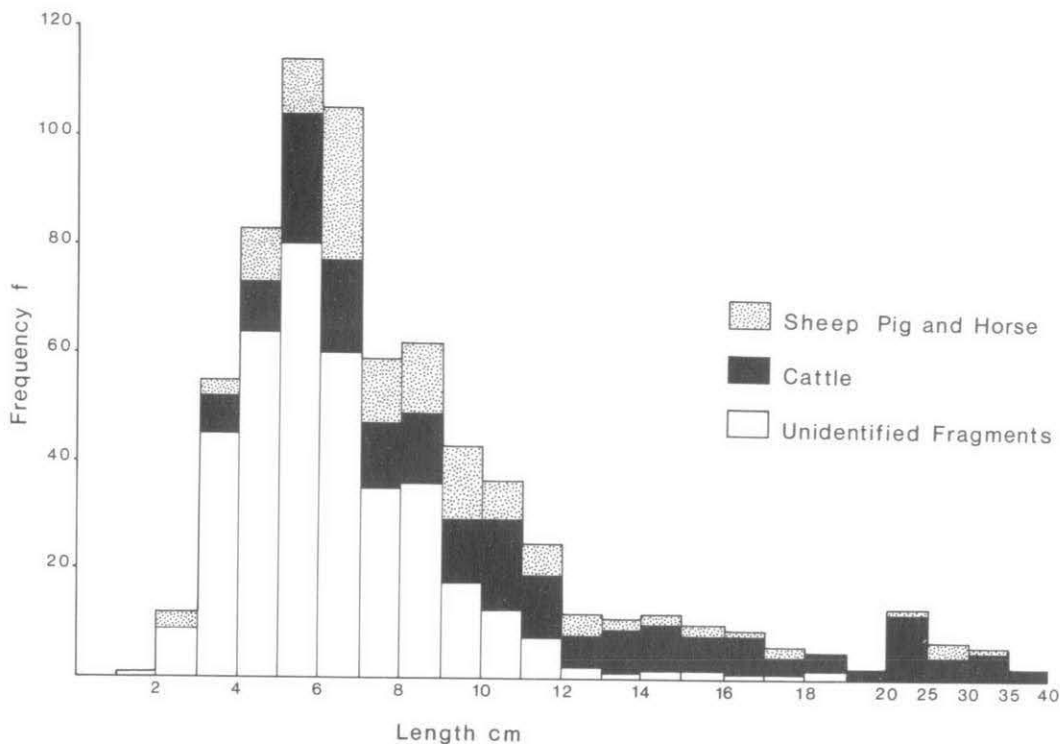


Fig. 37 Frequency distribution of Bone Fragment Lengths n 695

more detailed comparison is given in Table IV. There is more skull debris among the sheep and pig remains from this site than from the medieval site at Abingdon.<sup>139</sup> Table IV shows that there were no bones from the carpal and hock joints of sheep although these bones comprised 10% of the cattle fragments. The frequencies of the phalanges and the vertebrae differ in the same way for the two species, but the amount of metapodial debris is more equal. This indicates sampling variables as well as differences in butchery and other fragmentation patterns which have resulted in the under-representation of sheep remains. Table IV also shows that there are lower proportions of sheep to cattle bones from the ditches compared to the pits. If the species totals were reliable there would be an interesting distribution of rubbish to explain. The species totals also imply that any estimates of animal abundance must depend on the extent and type of feature excavated.

#### *Minimum numbers of individuals*

Table V gives, following Chaplin,<sup>140</sup> the minimum numbers of individuals for the bone sample of each of the four main species at different periods, and the totals of the minimum numbers determined for each feature. 'Sample M.N.I.' is retained in Table V to facilitate comparison with medieval sites in Abingdon. There both methods gave comparable results,<sup>141</sup> but here the pig and horse feature totals are proportionally greater than the sample minimum numbers. The absence of Romano-British pits makes it difficult to decide whether the minimum numbers are biased by either bone recovery or differences in the distribution of bone in the features, or over time.

<sup>139</sup> R. Wilson, D. Bramwell and A. Wheeler, 'The animal bones from the Broad Street and Old Gaol sites, Abingdon', *Oxoniensia*, xl (1975), Table 12.

<sup>140</sup> R. Chaplin, *The Study of Animal Bones from Archaeological Sites* (1971), 70-75.

<sup>141</sup> R. Wilson, D. Bramwell and A. Wheeler, op. cit., Table 10.

TABLE II  
BONE AND SHELL FREQUENCY AT APPLEFORD

	<i>Iron-Age</i>				<i>Romano-British</i>		Site Total
	Pits	Ditches	Total	%	Ditches & Wells	%	
Cattle	106	92	198	49	189	64	387
Sheep	72	27	99	25	53	18	152
Horse	39 <sup>a</sup>	14	53	13	18 <sup>a</sup>	6	71
Pigs	26	17	43	11	12	4	55
Dog	7	3 <sup>b</sup>	10	2	8	3	18
Red deer	1 <sup>d</sup>	—	1	—	1 <sup>d</sup>	—	2
Oyster shell	—	—	—	—	14	5	14
Total	251 <sup>c</sup>	153	404		295		699

a reunited newly fragmented horse skull (37 fragments in Iron Age F145 and 19 fragments in Romano-British F14).

b excludes part dog skeleton (21 bones)

c excludes part hedgehog skeleton (19 bones)

d excludes shed red deer antler (total of 78 fragments)

TABLE III  
FREQUENCY OF BONES IN HEAD, FEET AND MAIN CARCASS

	<i>Cattle</i>		<i>Sheep</i>		<i>Horse</i>		<i>Pigs</i>	
	f	%	f	%	f	%	f	%
Cranium, mandible and loose teeth	144	37	67	44	32	45	34	62
Carpal and hock joints								
Metapodials, Phalanges	96	25	29	19	17	24	4	7
Other body bone except rib	147	38	56	37	22	31	17	31
Total	387		152		71		55	

#### Fragmentation

All 695 bones and fragments of the four main species and the unidentifiable bones that did not show signs of recent breakage were measured to the nearest centimetre and the lengths of these were tallied in classes of one centimetre interval, i.e. 0-99mm., 100-199mm., etc. Table VI shows the means from such raw data, small sample sizes, and where the frequency distributions are skewed towards zero. Figure 37 shows the distribution of the bone lengths and particularly those of cattle and unidentified material. Within the cattle bones, those from the ditches (11.3cm) are longer than those from the pits (9.8cm.). The Romano-British bones (14.2cm.) are longer than the prehistoric bones (10.2cm.) but this may be affected by the fact that all the pits are prehistoric, and all the wells are Romano-British. Parallel differences in the means of unidentified bone that range from 6.3cm. to 6.9cm. suggest some variation in bone collection and identification, but it may be that wells and ditches do tend to have longer bones in them than do the pits. Watson has predicted that, with a frequency

TABLE IV

## FREQUENCY OF CATTLE AND SHEEP BONES IN THE FEATURES

	<i>Prehistoric</i>			<i>Romano-British</i>	
	Pits	Ditches	Total	Ditches & Wells	Site Total
<i>Cattle</i>					
Cranium, mandible and loose teeth	44	31	75	69	144
Vertebrae	2	5	7	16	23
Upper limb and girdle	29	35	64	60	124
Carpal and hock joint	13	11	24	15	39
Metapodials	10	4	14	25	39
Phalanges	8	6	14	4	18
Total	106	92	198	189	387
<i>Sheep</i>					
Cranium, mandible and loose teeth	29	11	40	27	67
Vertebrae	—	—	—	1	1
Upper limb and girdle	29	11	40	15	55
Carpal and hock joint	—	—	—	—	—
Metapodials	13	5	18	10	28
Phalanges	1	—	1	—	1
Total	72	27	99	53	152

TABLE V

## APPLEFORD: MINIMUM NUMBERS OF INDIVIDUALS (M.N.I.)

	<i>Prehistoric</i>		<i>Romano-British</i>		<i>Total</i>	
	Sample MNI	Feature Total	Sample MNI	Feature Total	Sample MNI	Feature Total
Cattle	8	34	8	21	16	55
Sheep	12	42	3	10	15	52
Pigs	4	23	3	7	4	30
Horses	4	22	2	5	4	27
Dogs	3	7	2	5	3	12
Deer	1	1	1	1	1	2

TABLE VI

## AVERAGE LENGTH OF BONES AND FRAGMENTS LACKING NEW BREAKS

	<i>Appleford</i>		<i>Broad Street Pits</i>	
	Sample Number (n)	Mean (cm)	Mean (cm)	Sample Number (n)
Cattle	185	11.5	7.7	258
Sheep	57	8.2	7.2	212
Pigs	38	7.9	7.4	74
Horses	33	11.6	—	1
Unidentified	382	6.4	Not comparable	
Total	695	8.2	abundance of species	

TABLE VII

## EPIPHYSEAL FUSION DATA

		<i>Iron Age</i>		<i>Romano-British</i>	
Fusion stage		fused	unfused	fused	unfused
Cattle	early	37	2	30	—
	late	13	12	27	12
Sheep	early	8	1	1	—
	late	6	8	3	—
Horse	early	4	1	3	—
	late	5	2	4	—
Pig	early	2	—	1	—
	late	—	2	—	—

distribution like that shown in Fig. 37, the smallest fragments are most numerous in the soil, their abundance following a logarithmically based distribution line. He worked under more closely defined conditions<sup>142</sup> than allowed by this excavation sample, but on his model many bones are missing from the 0-5cm. length range.<sup>143</sup> The possible failure to collect them implies that species as large as sheep are under-represented by fragment number results and is confirmed by scarcely any sheep joint bones, phalanges or vertebrae being identified at Appleford (Table IV). The equivalent bones of cattle are larger, more easily seen in the soil, and comprise some 20% of the cattle fragment numbers.

Sheep (10) are less well represented in average numbers of fragments per individual (from sample M.N.I.) than pig (12), horse (31 or, 19 excluding recent skull breakage), and cattle (24). The species also vary in the percentage of their identified bones which are complete or nearly complete; sheep and pigs 1% - 8% (range allows for excavation breakages), horse 11% - 42% and cattle 16% - 36%. These results may be explained by the failure to collect the smallest sheep and pig bones, but whether the pattern of bone fragmentation is also different for large or small animals is not known.

<sup>142</sup> J.P.N. Watson, 'Fragmentation analysis of animal bone samples from archaeological sites', *Archaeometry*, xiv (1972), 221-282.

<sup>143</sup> Ibid.; S. Payne, 'Partial recovery and sample bias', *Papers in Economic Prehistory*, ed. E. Higgs (1971), 49-64.

*Butchery.*

A full account is preserved in the archive record. Probable skinning marks were noted on the following bones: a cranial eye socket, horn core bases, distal metatarsals, and proximal first phalanges. Cuts or chops around the glenoid and acetabular cavities and at the elbow, carpal and hock joints, indicate disjuncting of the carcass but it is not clear how closely this is associated with meat removal or marrow extraction. The occasional split bone may be waste from bone working.

In sheep, mandibles and midshafts of long bones were less targets of butchery than in cattle; limb bones received most attention. Butchery marks are evident on some horse bones: late Bronze Age skull debris from F149 indicates both skinning and tongue removal; in F145 the only evidence of butchery on the Iron Age skull are breakages on the mandible condyles. A dog skull, F145, has a fractured snout and palate, chopped zygomatic arches and nicked occipital condyles, the head appears to have been severed from the backbone; two sets of cuts run upward slightly anteriorly over the snout from above both carnassial teeth, indicating skinning.

*Worked bone*

There are three incomplete, very fragmented, shed red deer antlers. Six tine points are worn including a burnt point (Ditch F109) and one has been trimmed as if to sharpen it (Pit F74). There were no tine points among the fragments from Ditch F14. An antler base or pedicle has a cut on it (Well F200).

A sheep humerus appears to have been very evenly trimmed off around the fusion line of the missing proximal epiphysis (Pit F133). The saw marks on the cattle horn in F197 are 3.5mm. wide.

*Pathology*

There is little sign of bone deformity. One fragment of cattle metatarsal (F16) out of 16 distal ends shows the presence of bone callus but it is less developed than in two markedly callused and enlarged metatarsals from 19th century Abingdon.<sup>144</sup>

*Age data*

Table VII gives the numbers of fused and unfused epiphyses of bones in their early and late fusing groups, the early fusing groups include those which fuse in the first 1.5 years of life in modern cattle sheep and horses and in the first 2 years of life in modern pigs.<sup>145</sup>

Eight of the 10 cattle mandibles, 12 of the 18 sheep mandibles, all 3 horse mandibles and 2 of the 4 pig mandibles show wear on the 3rd molar; the rest of the mandibles are from immature animals. Tooth eruption and wear stage distributions of the sheep mandibles are different from those for Abingdon<sup>146</sup> and Farmoor<sup>147</sup> sites, but the sample numbers are small and the prehistoric one is from a single enclosure complex.

## BIRD BONES By D. BRAMWELL

Iron Age, F189. Duck cf. mallard, distal femur of adult.

Early Romano-British, F16. Domestic Fowl 1 adult bone.

*Discussion*

The fragment numbers are shown to be unreliable and the minimum numbers of individuals are questionable. The Ashville<sup>148</sup> and Barton Court Farm villa<sup>149</sup> reports place Appleford bones in a wider perspective particularly

<sup>144</sup> D. Miles, 'Excavations at West St. Helens Street, Abingdon', *Oxoniensia*, xl (1975), 98-101.

<sup>145</sup> I.A. Silver, 'The ageing of domestic mammals', *Science in Archaeology* ed. D. Brothwell and E. Higgs (1969), 283-98, Table A.

<sup>146</sup> J. Hamilton, 'A comparison of the age structures at mortality of some Iron Age and Romano-British sheep and cattle populations' *The Excavation at Ashville Trading Estate, Abingdon*, ed. M. Parrington, C.B.A. Research report, xxviii (1978), 126-33.

<sup>147</sup> R. Wilson, 'The vertebrates', *Iron Age and Roman Riverside Settlements at Farmoor, Oxon.*, ed. G. Lambrick and M. Robinson, C.B.A. Research report, xxxii (1979), 128.

<sup>148</sup> R. Wilson, 'The animal bones', *The excavation at Ashville Trading Estate Abingdon*, ed. M. Parrington, C.B.A. Research Report, xxviii (1978), 110-126, 133-9.

<sup>149</sup> R. Wilson, Report in *Archaeology at Barton Court Farm, Abingdon* ed. D. Miles (forthcoming).

with regard to slaughtering ages and butchery of carcasses. From the modern soil survey<sup>150</sup> much of the pasture around the site would seem suitable to all domestic stock, but cattle would seem more favoured than sheep on the pastures of the wetter, poorly drained soils of the Thames and Kelmscott series. Such pasture could include meadows used for hay mowing and cattle grazing. There is a possibility of liverfluke, associated with the presence of the host snail *Lymnaea truncatula* L. in Romano-British times (p. 94).

#### ROMAN WATERLOGGED PLANT AND INVERTEBRATE EVIDENCE By MARK ROBINSON

##### INTRODUCTION

Several shallow timber revetted wells and water holes were encountered during the 1973 excavations. Samples were taken by the excavator from two of them (F32 and F200). Subsequently, another well (F250) was discovered during gravel extraction and sampled by the author in the early summer of 1974. They all proved to be rich in preserved organic remains.

Results from the investigation can usefully be compared with those from Farmoor, a somewhat similar Romano-British 'native' settlement on the first gravel terrace, and the Barton Court Farm villa, on the higher gravels of the second terrace.<sup>151</sup>

The samples were investigated in the Hope Department of Entomology, University Museum, Oxford and the Institute of Archaeology, London. I would like to thank Professor G.C. Varley and Professor G.W. Dimbleby for the provision of working facilities and access to the collections under their care. I am grateful to Dr. R.B. Angus for help with identification of *Helophorus* spp.

##### METHODS — The Samples

F32 (v) Roman well or water hole. Dark grey organic loamy silt with plant stems.

F200 Roman well or water hole. Black gritty organic loam.

F250 lower level Roman well. Dark brown organic silt.

F250 upper level Brown-black gravelly organic loam with many pieces of wood and twigs.

TABLE VIII

THE SIZE OF SAMPLES

Sample from	Sub-sample Examined for:	
	Macroscopic Invertebrate and Plant Remains	Arthropods, Twigs Wood etc. only
F32 (v)	2.27kg. (5lb.)	6.8kg. (15lb.)
F200	2.27kg. (5lb.)	2.7kg. (6lb.)
F250 lower level	2.27kg. (5lb.)	10.4kg. (23lb.)
F250 upper level	2.27kg. (5lb.)	10.4kg. (23lb.)

##### Extraction and Identification

The samples were processed as described in Lambrick and Robinson,<sup>152</sup> except that the 2.27kg. samples were only sieved down to a mesh size of 0.5mm. (rather than 0.2mm.). The residues on the sieves from the 2.27 kg. samples were sorted under water for plant and invertebrate remains. The bulk samples were sieved over a 0.5mm. sieve.

<sup>150</sup> M.G. Jarvis and T. Batey, *Soils of the Wantage and Abingdon district* (1973), 179-82.

<sup>151</sup> G.H. Lambrick and M.A. Robinson, *Iron Age and Roman riverside settlements at Farmoor, Oxfordshire* (1979); D. Miles, *Archaeology at Barton Court Farm, Oxfordshire* (forthcoming).

<sup>152</sup> Lambrick and Robinson, *Farmoor*, 79-80.

wood and twigs picked out and then the residues subjected to paraffin flotation. The floatants were sorted for arthropod remains.

Specimens were identified with reference to the collections given in Lambrick and Robinson.<sup>153</sup>

## RESULTS

The identifications are listed in Tables IX -XII. Nomenclature follows the same sources as used elsewhere in this volume.<sup>154</sup> Habitat information is from the sources used to interpret the results from Farmoor and Barton Court.<sup>155</sup> The single piece of *Quercus* (oak) from 250 upper level could have been a very rotten piece of structural timber; the rest of the wood comprised pieces with bark present or was young sticks and twigs.

### *Distribution of Species.*

All the plant and molluscan species identified either live at present in the 10km. grid square within which the site is located<sup>156</sup> or have been previously identified from Roman deposits in that square.<sup>157</sup> The site lies just outside the seven mile (11km.) radius of Oxford for which Walker compiled Coleoptera lists.<sup>158</sup> Only one species not included on Walker's lists or in his Oxford District collection in the Hope Department of Entomology, University Museum, Oxford, or found from a Roman context within the area, was discovered.<sup>159</sup> It was a single rather large specimen of *Otiorhynchus raucus* from F200.

### *The Environment of the site*

These three wells or water holes seem to have had their own autochthonous faunas of molluscs, chironomid larvae, branchiopods and ostracods, but apart from a few small water beetles such as *Ochthebius* sp., no Coleoptera. Neither does it seem likely that any higher plants grew in them.

The Mollusca which probably lived in the well water, *Aplexa hypnorum*, *Lymnaea truncatula* and *Anisus leucostoma*, all belong to the freshwater slum group. F32, in particular, had a large fauna of these species, which can tolerate the poor conditions of small bodies of water such as stagnation.<sup>160</sup>

By far the larger part of the death assemblages identified from the wells, however, did not live in them. There are no 'superabundant' species of Coleoptera or Hemiptera.<sup>161</sup> Putting the Coleoptera and Hemiptera in rank order of abundance suggests that several or many different habitats made major contributions to the death assemblages, although a percentage value of 8% for *Anotylus sculpturatus* followed by 3.7% for *Oxyomus sylvestris* and 3.4% for *Aphodius contaminatus* may mean that decaying vegetation or dung was particularly important for F250 lower level. The rank positions for phytophagous species are quite high, even for a rural archaeological occupation site. The waterlogged seeds, as seems normal for wells on the Thames gravels, are dominated by species of disturbed ground, although a wide range of other habitats is represented. Human transport does not seem to have been an important factor in introducing the remains into the wells, neither is there any reason to suggest a concentration of a distant component in the fauna to the exclusion of more local individuals as has been shown by Kenward.<sup>162</sup> Therefore, it is hoped that a useful interpretation of conditions prevailing around the site can be made.

<sup>153</sup> Ibid. 80-1.

<sup>154</sup> M.A. Robinson, 'Waterlogged plant and invertebrate evidence' in N. Palmer, 'A Beaker Burial and Medieval Tenements in the Hamel, Oxford', below.

<sup>155</sup> Lambrick and Robinson, *Farmoor*, 80-100; M.A. Robinson in Miles, *Barton Court* (forthcoming).

<sup>156</sup> F.K. Perring and S.M. Walters, ed. *Atlas of the British Flora* (1962).

<sup>157</sup> Robinson in Miles, *Barton Court* (forthcoming).

<sup>158</sup> J.J. Walker, 'Preliminary lists of the Coleoptera observed in the neighbourhood of Oxford', *Ashmolean Natural History Society of Oxfordshire Reports* (1906-29).

<sup>159</sup> Lambrick and Robinson, *Farmoor*, 107; Robinson in Miles, *Barton Court* (forthcoming).

<sup>160</sup> B.W. Sparks, 'The Ecological Interpretation of Quaternary Non-marine Mollusca', *Proc. Linn. Soc. Lond.* clxxii (1959-60), 76.

<sup>161</sup> H.K. Kenward, *The analysis of archaeological insect assemblages: a new approach* (The Archaeology of York xix (i), 1978), 16.

<sup>162</sup> H.K. Kenward, 'Reconstructing ancient ecological conditions from insect remains: some problems and an experimental approach', *Ecological Entomology*, i (1976), 8-13.

### The Open Landscape

Although pollen analysis was not undertaken for this site, the low proportion of tree or wood feeding species of beetles (excluding *Anobium punctatum* and *Lyctus* spp.) give an idea of the general environment. They make up 1.2% of the total number of individuals of terrestrial Coleoptera from the site. For the Barton Court villa the corresponding value for the Roman well fills was 0.2%, and the percentage of tree and shrub pollen ranged from 2% to 5%.<sup>163</sup> At Farmoor the corresponding value for the Roman features was 1.4% while the percentage of tree and shrub pollen ranged from 2% to 12%. These results imply the background environment to have been relatively treeless, as suggested for Barton Court and Farmoor (although there is evidence for the presence of some scrub). The problems inherent in attempting to assess the importance of grassland, arable and the disturbed weedy ground of the habitation area have been discussed elsewhere,<sup>165</sup> but all are likely to have been present to some degree.

### Grassland

The Coleoptera and Hemiptera include many grassland species, both individuals which feed on grassland herbs and also dung beetles. Dung beetles from the super family Scarabaeoidea, including some species which are confined to the dung of large herbivores under 'field' conditions, were present in all the deposits. They made up just under 10% of the total terrestrial Coleoptera from the site, not as high a value as their averages for the Roman features at Barton Court or Farmoor, but sufficient to indicate the presence of a significant area of pastureland. Meadowland may also have been important. F32 was especially rich in species such as *Cantharis* spp. and *Olibrus* sp., which tend to be characteristic of flowery meadows, but they are by no means confined to them. F32 also had, for an archaeological sample, an extraordinary diversity of Coccinellidae (ladybirds) with five species present. Although a wide range of Coccinellidae can be collected in old haymeadows, again, they are not indicative of them. Perhaps more useful are weevils of the genus *Apion* (excluding the identified mallow and nettle feeding species) and the genus *Sitona*. Their species are largely confined to feeding on members of the family Papilionaceae and from personal experience can be caught in much higher numbers in ancient, species-rich meadowland, than on grazed grassland. This group makes up about 11% of the total number of individuals of Coleoptera (less aquatics) for Appleford, twice the percentage for Farmoor and about four times the percentage for Barton Court.

The seeds including *Ranunculus* spp. (buttercups), *Stellaria graminea* (stitchwort), *Prunella vulgaris* (self-heal) and *Leontodon* sp. (hawkbit) give an idea of some of the species present in the grassland, and they are similar to those found at Barton Court. They were not sufficiently abundant to be of use in determining the use of the grassland.

### Arable/Disturbed Ground

The abundant seeds of disturbed ground weeds include those from plants which may or may not be associated with arable such as *Chenopodium album* (fat hen), those most unlikely to be arable weeds, such as *Chelidonium majus* (greater celandine) and just a couple of seeds of a plant normally associated with arable, *Agrostemma githago* (corn cockle). The finds of quern stones during the excavation as well as the presence of a small quantity of cereal remains in the samples, both charred and waterlogged, show that, not unexpectedly, cereals were used on the site. Several objects of fired clay, perhaps tile fragments, with one face covered in impressions of *Triticum spelta* chaff were also discovered on the site. *Linum usitatissimum* (flax) seeds occurred in two of the three wells and that plant is another likely candidate for cultivation at Appleford. It is difficult to establish whether the arable agriculture took place in the fields around the site or whether its products had been brought to the site from rather further away. The small fields excavated and shown on the aerial photographs have the appearance of being paddocks rather than arable fields because each appears to contain at least one water hole. The Coleoptera also provide good evidence for the proximity of grassland. Perhaps the main arable fields, if the site possessed any, were situated beyond the trackside enclosures of the settlement. There is no cropmark evidence for field boundaries beyond the immediate vicinity of the site, but perhaps the fields were very large or even unenclosed. In general the cropmark evidence shows large 'blank' areas between the cluster of small fields around Roman settlements on the Upper Thames gravels.<sup>166</sup>

<sup>163</sup> J. Greig and M. Robinson in Miles, *Barton Court* (forthcoming).

<sup>164</sup> Lambrick and Robinson, *Farmoor*, 82-97.

<sup>165</sup> Robinson in Miles, *Barton Court* (forthcoming).

<sup>166</sup> Lambrick and Robinson, *Farmoor*, 139.



The seeds of plants of disturbed ground include many from species such as *Conium maculatum* (hemlock) and *Sambucus nigra* (elder), characteristic of nutrient-rich rather dank waste ground associated with human settlement. Seeds of these two species were more abundant in the Appleford samples than the Roman deposits at Farmoor or Barton Court but the ecological reasons behind this difference are obscure. There are also seeds from weeds characteristic of roadsides or hedgebanks including *Malva sylvestris* (mallow), *Ballota nigra* (black horehound) and *Nepeta cataria* (cat-mint). The margins of the trackways would have provided suitable habitats although these plants can also occur on other types of disturbed ground. Finally there are seeds from annual weeds which could have grown in freshly broken ground in the settlement or in arable fields, as mentioned above.

#### Damp and Marshy Ground

The site is just above the modern extremely high flood level of the River Thames. It was not inundated by the great flood of 1947.<sup>167</sup> Most of the aquatic species in the water holes would have had little problem reaching them, for example all the water snails are capable of travelling along wet ditch bottoms and making short overland journeys. Just how the freshwater sponges managed to reach F250 is puzzling. Before flooding can be considered a likely agency, however, other evidence that it occurred would be required and there is none.

Some seeds of marsh or aquatic plants were identified from the deposits, as were beetles of such habitats. The plants included *Caltha palustris* (Kingcup), *Thalictrum flavum* (meadow rue), *Iris pseudacorus* (yellow flag) and *Eleocharis s. Palustris*. (Rush, *Juncus* spp., seeds would only have been recovered if a finer sieve had been used). The number of seeds of marsh plants is not as high as for Farmoor, but the Roman site at Farmoor was on the edge of the first gravel terrace nearer the river level than Appleford. Likewise, the proportion of Coleoptera inhabiting wet ground or feeding on marsh plants was considerably lower at Appleford than at Farmoor. Barton Court, high and dry on the second gravel terrace, had the lowest proportion of marsh species of any of the three sites although a very few seeds of plants of extremely wet places, e.g. *Oenanthe fistulosa*, managed to reach it.

It is probable that the presence of the seeds of marsh plants in the deposits is due to several different factors. Those species which require their roots to be waterlogged for most of the year such as *I. pseudacorus* were probably brought to the site, perhaps in hay or in the gut of animals which had been grazed on the floodplain, but some of the numerous drainage ditches on the site may have contained standing water for enough of the year to support them. Other species such as *Eleocharis s. Palustris* require waterlogging in the spring, but can withstand drought in the summer and suitable conditions for them must have existed along the margins of many of the ditches which dried up in summer. Finally, it is likely that the grassland of the site was sufficiently damp to support the least water-demanding of these plants, including *Thalictrum flavum*.

#### Hedges or Scrub?

Although few tree dependent insects were found from the site, wood and thorny twigs were present in all the deposits. The wood was predominantly *Prunus* sp. but *Crataegus* sp. (hawthorn) and *Salix* sp. (willow) also occurred, along with prickly stems of *Rosa* sp. (rose) and *Rubus* sp. (blackberry). Remains such as leaves and bud scales were present as well. Most of the herbs identified which commonly occur in hedgerows also grow in other habitats, but *Bryonia dioica* (white bryony) is a hedge/scrub/woodland edge climber rarely occurring elsewhere. Its seeds occurred in all the samples. Clearly there were shrubs on the site, but were they growing as patches of scrub or as hedges? For the Roman site at Farmoor it was possible to postulate the presence of thorn hedges by combining the results from pollen analysis with the evidence of macroscopic plant and animal remains.<sup>168</sup> Unfortunately no pollen analyses were undertaken for Appleford. The arguments as to whether some of the scrub on the site was in the form of hedgerows will have to rest upon the archaeological evidence. The enclosure ditches on the site would not form animal-proof boundaries by themselves and their various re-cuts suggest that they were well maintained. There is no reason to suggest that part of the site was abandoned to scrub in the Roman period.

#### Vegetable Refuse and Human Habitation

Although no definite Roman buildings were discovered on the site, the finds show that it was a substantial occupation site. The Coleoptera include species that live in foul rotting plant remains which may be expected to occur around human habitations or in a farmyard, such as dung heaps or accumulations of refuse. Small

<sup>167</sup> Information from Lt. Col. D. Williams of the Thames Conservancy.

<sup>168</sup> Lambrick and Robinson, *Farmoor*, 121-2.

Sphaeridiinae (*Cercyon*, *Megasternum* and *Cryptopleurum* spp.), *Platystethus arenarius*, *Anotylus rugosus* and *A. sculpturatus* make up 9.1% of the total Coleoptera (less aquatics). This is a similar proportion to Barton Court where the deposits sampled were close to the buildings and within the farmyard area of the villa. However, many of these species can also occur in dung under field conditions, and the feature in which they formed the highest percentage, F250, was also the one with the highest proportion of the Scarabaeoidea group of 'field' dung beetles. It is, of course, possible that an area where cattle were concentrated was also next to a farmyard with manure heaps. If F250 is excluded, the percentages value for the above group of 'filth' beetles falls to 5%.

Grain beetles form a very small proportion of the total death assemblages from Appleford, with only a single species, *Stegobium paniceum*, represented by three individuals, being present, but this follows the same trend shown by other rural Roman sites on the Thames gravels.<sup>169</sup> Grain beetles along with some other species of mouldy plant remains form a group of synanthropic species often found in thatch or about houses.<sup>170</sup> This group (*S. paniceum*, *Plinus fur*, *Mycetaea hirta* and *Typhaea stercora*) made up 2% of the Coleoptera (less aquatics) from the Roman deposits at Barton Court, 0.7% of the total from Appleford but only 0.2% (a single individual) if the samples from F250 (about half the total) are excluded from the Appleford total. These results might suggest the area of controlled excavation, within which F32 and F200 fell, was not as close to any habitation area as the deposits at Barton Court.

#### Other Aspects of the Environment

*Actual and Potential Sheep Parasites* A single puparium of *Melophagus ovinus*, the sheep ked, a wingless fly which is an ectoparasite of sheep, was identified from F200. In itself it need mean no more than that a sheep once passed by the well, and in low numbers it is not a serious pest.<sup>171</sup>

Potentially more dangerous was the presence of the gastropod *Lymnaea truncatula*, the intermediate host of the sheep liver fluke, *Fasciola hepatica*, in F32.<sup>172</sup> The site would seem to have provided a suitable habitat for this debilitating parasite if sheep were kept in high numbers. Many of the numerous water holes probably supported populations of *L. truncatula*, the field ditches either aiding the snail in its dispersal or being another habitat for them.

*Other Cultivated Plants* Several of the plants identified from Appleford have varieties which are at present grown as vegetables, e.g. *Pastinaca sativa* (parsnip) but their seeds are indistinguishable from their wild relatives, all of which could have grown on the site.<sup>173</sup> The plums, however, are likely to have been cultivated. The stone of *Prunus domestica* cf. *insititia* (bullace or damson) from the insect sample of F250 lower level was quite similar to the one illustrated from Farmoor, measuring 15.0mm. long by 10.5mm. wide, by 8.00mm. face to face.<sup>174</sup> The stone of *P. domestica* cf. *italica* while resembling reference material of the modern variety 'Old English Greengage' need not necessarily belong to this subspecies of plum at all. (Its measurements are: 16.0mm. long by 13.00mm. wide, by 9.5mm. face to face.) Many modern varieties of plum occasionally have globose stones. Likewise the stone resembling *P. domestica* ssp. *insititia* might not have been from a fruit which could be equated with modern damsons or bullaces.

#### Conclusions

In the light of the results from Farmoor and Barton Court no startling conclusions emerge from this investigation. All three sites were set in a cleared landscape and the range of species from Appleford was within that of Farmoor and Barton Court. The species common to all three sites included some which are rarely, if ever, encountered in the region at present, for example *Anthriscus caucalis* and *Apion urticarium*, although no definite explanation can be given for this change in distribution.

Pastoral agriculture seems to have been important to both the Appleford and the Farmoor sites, although there is a hint that there may have been more haymeadow close to the site at Appleford. Both sites were partly concerned with arable agriculture although it is thought likely that either it was not the major concern of these sites or the cultivated fields were elsewhere. Barton Court produced somewhat better evidence for the proximity

<sup>169</sup> Ibid. 122.

<sup>170</sup> Ibid.

<sup>171</sup> Another archaeological record of *M. ovinus* and further details of its ecology are given in M.A. Robinson 'Waterlogged evidence' in N. Palmer 'A Beaker Burial and Medieval Tenements in The Hamel, Oxford', below.

<sup>172</sup> D.H. Goodwin, *The Production and Management of Sheep* (1971), 180-2.

<sup>173</sup> Lambrick and Robinson, *Farmoor*, 115, 121.

<sup>174</sup> Ibid., 101-3.

of arable fields but it is by no means conclusive. It is unfortunate that no stratified Roman soils were encountered above the gravel on any of these three sites. As at Farmoor, thorn shrub was present at Appleford, perhaps in the form of hedges.

In terms of the abundance of marsh and damp ground species, Appleford falls between Farmoor and Barton Court. This is as would be expected from the relationship of the three sites to river level. Appleford was probably closer to Farmoor than Barton Court on the basis of damp ground species but closer to Barton Court than Farmoor for marsh and aquatic species (apart from those which lived in the deposits).

It might have been expected that the waterlogged evidence would show up the higher status of the villa site from Barton Court. Superficially, a comparison between Appleford and Barton Court does reveal just the difference that would be expected: synanthropic beetles were more abundant at Barton Court and a few seeds of culinary herbs were also present, unlike Appleford. However, the hypothesis breaks down when Farmoor is taken into the comparison as well, it was a 'native' settlement but excelled Barton Court in terms of synanthropes and cultivated exotics. These differences could all be due to the degree of proximity of the deposits examined to the habitation areas.

Finally, although the deposits examined at Appleford ranged in date from 2nd century AD to the very end of the 4th century, there is no definite evidence for environmental change with time. All differences can be attributed to the non-uniform nature of the site; for example, it is possible that F250 was closer to habitation/farmyard area of the site than F32.

TABLE IX

## SEEDS

		Number of Seeds				Habitat
		32	200	250 lower level	250 upper level	
RANUNCULACEAE						
<i>Caltha palustris</i> L.	Kingcup	—	—	2	—	M. wet G. and W.
<i>Ranunculus cf acris</i> L.	Buttercup	—	2	4	1	G.
<i>R. cf repens</i> L.	Buttercup	2	1	14	9	damp G. and W. D(a)
<i>R. parviflorus</i> L.	Buttercup	—	1	—	—	dry Da. and G.
<i>R. sceleratus</i> L.		—	—	—	1	M.B.A. — shallow
<i>Thalictrum flavum</i> L.	Meadow Rue	—	—	9	2	M. wet G.
PAPAVERACEAE						
<i>Papaver rhoeas</i> L. <i>dubium</i> L., <i>lecoqii</i>						
Lamotte or <i>hybridum</i> L.	Poppy	—	1	—	—	Da.
<i>P. argemone</i> L.	Poppy	—	3	—	—	Da. — esp. dry sandy soils
<i>Chelidonium majus</i> L.	Greater Celandine	—	90	—	—	D. esp. hedgerows and waste places near human habitation.
FUMARIACEAE						
<i>Fumaria</i> sp.		1	—	1	1	Da.
CRUCIFERAE						
Brassicaceae gen. et sp. indet.		—	4	2	—	Da. B.C.
<i>Coronopus squamatus</i> (Forsk.) Aschers	Swine-cress	1	—	—	—	D. esp. trampled muddy places
<i>Thlaspi arvense</i> L.	Penny-cress	1	2	—	—	Da.
Cruciferae gen. et sp. indet.		—	1	—	2	
HYPERICACEAE						
<i>Hypericum</i> sp.	St. John's Wort	1	—	—	—	M.G.S.W.
CARYOPHYLLACEAE						
<i>Silene cf alba</i> (Mill.) Krause	White Campion	6	1	1	2	Da. (G.S.)
<i>Lychnis flos-cuculi</i> L.	Ragged Robin	—	—	1	—	M. wet G. and W.
<i>Agrostemma githage</i> L.	Corn Cockle	—	1	+	—	Da.
<i>Cerastium cf holosteoides</i> Fr.	Mouse-ear Chickweed	—	—	2	—	G.Da.

TABLE IX continued

## CARYOPHYLLACEAE continued

<i>Stellaria media</i> gp.	Chickweed	16	18	19	7	Da.
<i>S. graminea</i> L.	Stitchwort	—	1	3	—	G.W.
<i>Sceleranthus annuus</i> L.		—	2	1	1	Da. — sandy often acid soil
Caryophyllaceae gen. et sp. indet.		2	2	—	—	

## CHENOPODIACEAE

<i>Chenopodium album</i> L.	Fat Hen	5	13	38	9	Da. — esp. nitrogen rich soil
<i>Atriplex</i> sp.	Orache	4	4	7	3	Da.
Chenopodiaceae gen. et sp. indet.		—	2	4	1	Da.

## MALVACEAE

<i>Malva sylvestris</i> L.	Common Mallow	—	3	5	3	D. esp. roadsides (G.)
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## LINACEAE

<i>Linum usitatissimum</i> L.	Flax	—	1	2	2	C.
<i>L. catharticum</i> L.		—	—	—	10	G. esp. calcareous

## ROSACEAE

<i>Rubus fruticosus</i> agg.	Blackberry	19	76	1	3	W.S.D.
<i>Potentilla</i> cf <i>reptans</i> L.		—	1	—	—	D.G.
<i>Aphanes arvensis</i> agg.	Parsley Piert	—	—	1	—	Da. and G. — mostly on dry soils
<i>Rosa</i> sp.	Rose	—	1	2	—	S.W.
<i>Prunus spinosa</i> L.	Sloe	1	1	—	—	S.W.
<i>P.</i> cf <i>domestica</i> L.	Plum etc.	—	—	1	—	C.
<i>P. domestica</i> L. cf <i>insititia</i>	Bullace	—	—	+	—	C.
<i>P. domestica</i> L. cf <i>italica</i>	Greengage	—	—	+	—	C.
<i>Crataegus</i> sp.	Hawthorn	—	11	1	—	S.W.

## UMBELLIFERAE

<i>Chaerophyllum temulentum</i> L.		3	52	1	—	S. and D. — esp. hedges (G.)
<i>Anthriscus caucalis</i> Bieb.		—	6	9	6	Da. — often dry or sandy
<i>A. sylvestris</i> (L.) Hoffm.	Cow Parsley	—	—	3	—	W. — edge, S. (G.D.)
<i>Torilis</i> sp.		—	—	1	—	Da.
<i>Conium maculatum</i> L.	Hemlock	38	6	3	3	B.W.S. and D. — all damp
<i>Oenanthe fistulosa</i> L.	Water Dropwort	—	—	1	—	A.M.
<i>Aethusa cynapium</i> L.	Fool's Parsley	4	—	1	1	Da.
<i>Pastinaca sativa</i> L.	(Wild) Parsnip	8	1	—	—	D. and G. on calcareous soil C.
<i>Daucus carota</i> L.	(Wild) Carrot	1	1	1	—	(D.) and G. on dry calcareous soil

## CUCURBITACEAE

<i>Bryonia dioica</i> Jacq.	White Bryony	11	12	3	1	S. esp. hedges.
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## POLYGONACEAE

<i>Polygonum aviculare</i> agg.	Knotgrass	6	8	29	12	Da.
<i>P. persicaria</i> L.	Red Shank	—	11	—	1	M.G.B. and Da. — all damp
<i>P. convolvulus</i> L.	Black Bindweed	—	—	1	—	Da.
<i>Rumex</i> cf <i>crispus</i> L.	Dock	—	—	—	20	Da. G.M.
<i>R.</i> cf <i>conglomeratus</i> Murr.	Dock	—	—	—	1	G.W.M.
<i>Rumex</i> spp.	Dock	5	4	32	13	Da.G.M.S.W.

## URTICACEAE

<i>Urtica urens</i> L.	Small Nettle	—	1	17	3	Da. — often dry light soils
<i>U. dioica</i> L.	Stinging Nettle	87	256	62	38	D.W.S. and B. — often nitrogen and phosphorus rich soils

## CORYLACEAE

<i>Corylus avellana</i> L.	Hazel	—	—	1	1	S.W.
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## PRIMULACEAE

<i>Anagallis arvensis</i> L.	Scarlet Pimpernel	—	—	—	1	Da.
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## OLEACEAE

<i>Fraxinus excelsior</i> L.	Ash	—	—	2	—	S.W.
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## SOLANACEAE

<i>Hyoscyamus niger</i> L.	Henbane	1	1	1	—	D. — esp. nutrient rich soils
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Table IX continued

## SOLANACEAE continued

<i>Solanum</i> cf <i>dulcamara</i> L.	Woody Nightshade	1	—	—	—	D.S.W.B. (A.)
<i>S.</i> cf <i>nigrum</i> L.	Black Nightshade	1	8	3	7	Da.
LABIATAE						
<i>Mentha</i> sp.	Mint	—	2	—	—	G. and W. — wet. Da. M.A.
<i>Lycopus europaeus</i> L.	Gipsy-wort	3	—	4	—	M.B.
<i>Prunella vulgaris</i> L.	Self-heal	2	2	20	5	G.
<i>Ballota nigra</i> L.	Black Horehound	2	12	31	11	D. — esp. roadsides and hedges
<i>Lamium</i> sp.	Deadnettle	2	2	2	1	Da.
<i>Galeopsis tetrahit</i> agg.	Hemp-nettle	2	—	—	—	<i>Nepeta cataria</i> L.
Cat-mint	1	8	—	—	—	D. — eg. roadsides and hedges
cf. <i>Glechoma hederacea</i> L.	Ground Ivy	8	—	—	—	G.S.W.
Labiatae gen. et sp. indet.		—	1	1	—	
PLANTAGINACEAE						
<i>Plantago major</i> L.	Plantain	1	—	—	2	G. — short or grazed. Da.
CAPRIFOLIACEAE						
<i>Sambucus nigra</i> L.	Elder	34	84	213	49	S.W. and D. — esp. base and nitrogen rich soils
COMPOSITAE						
<i>Anthemis cotula</i> L.	Stinking Mayweed	—	13	8	1	Da. — esp. base rich heavy soil
<i>Achillea</i> sp.	Sneczewort or Yarrow	2	—	—	—	G.M.
<i>Chrysanthemum leucanthemum</i> L.	Ox-eye Daisy	5	—	8	1	G.
<i>Arctium</i> sp.	Burdock	—	—	—	1	D.S.
<i>Carduus</i> sp.	Thistle	5	9	—	—	Da. M.G.S.
<i>Carduus</i> or <i>Cirsium</i> spp.	Thistle	21	3	1	1	Da. M.G.S.
<i>Centaurea</i> cf <i>nigra</i> L.	Knapweed	—	—	1	3	G.
<i>Lapsana communis</i> L.	Nipplewort	6	5	—	1	Da.
<i>Leontodon</i> sp.		3	—	1	5	G.
<i>Sonchus oleraceus</i> L.	Sow-thistle	3	2	—	1	Da.
<i>S. asper</i> (L.) Hill.	Sow-thistle	18	1	1	1	Da.
<i>Taraxacum</i> sp.	Dandelion	2	—	—	—	D.M.G.
Compositae gen. et sp. indet.		—	2	—	1	
IRIDACEAE						
<i>Iris pseudacorus</i> L.	Yellow Flag	—	—	1	—	A.M.B.
CYPERACEAE						
<i>Eleocharis</i> S. <i>Palustres</i> sp.		6	8	7	4	A. — shallow water M.G. — wet. all open vegetation
<i>Carex</i> spp.	Sedge	2	—	12	11	esp. wetter soils
GRAMINEAE						
cf <i>Bromus</i> sp.		1	1	—	—	Da. G.
cf <i>Triticum</i> or <i>Hordeum</i> sp.	Wheat or Barley	—	—	1	—	C. (Da.)
Gramineae gen. et sp. indet.	Grass	6	7	5	3	
Varia		2	9	4	2	
Total		362	781	613	269	

Habitat information: A, aquatic; B, bankside; C, cultivated; D, disturbed ground; Da, disturbed ground including arable; G, grassland; M, marsh; S, scrub; W, woodland; less usual habitats given in brackets + indicates presence in insect but not seed sample.

TABLE X

## WOOD

		Presence			
		32	200	250 lower level	250 upper level
<i>Crataegus</i>	Hawthorne	—	+	+	+
<i>Fraxinus</i>	Ash	—	—	+	+
<i>Prunus</i>	Sloe, Plum	+	—	+	+
<i>Quercus</i>	Oak	—	—	—	+
<i>Rubus</i>	Blackberry	?	—	—	—
<i>Salix</i>	Willow	—	—	—	+
<i>Sambucus nigra</i> L.	Elder	—	—	—	+

TABLE XI

## OTHER PLANT REMAINS

			32	200	250 lower level	250 upper level	Habitat
Bryophyta	(moss)	stem with leaves	+	+	+	+	
Bud scale			+	+	+	+	S.W.
<i>Crataegus</i> or <i>Prunus</i> sp.	(hawthorn or sloe)	thorny twig	+	+	+	+	S.W.
Leaf Abscission Pad			+	+	+	+	S.W.
<i>Rosa</i> sp.	(rose)	prickle	—	+	?	—	S.W.
<i>Rubus fruticosus</i> agg.	(blackberry)	prickle	+	?	?	—	S.W.D.
cf <i>Salix</i> sp.	(willow)	leaf	—	—	+	+	S.W.
cf <i>Trifolium</i> sp.	(clover)	calyx	—	—	+	—	G.

Habitat information as for Table IX

TABLE XIa

## CARBONIZED SEEDS

		32	200	250 lower level	250 upper level	Habitat
<i>Rumex</i> sp.	Dock	—	1	—	—	Da. G. M. S. W.
cf <i>Bromus</i> sp.	Brome Grass	—	1	1	—	Da. G.
<i>Hordeum vulgare</i> L. emend or <i>distichon</i> L.	Hulled barley	—	—	—	1	C. (Da.)
<i>Triticum aestivocompactum</i> Schiem	Bread/Club wheat	1	—	—	—	C. (Da.)

Habitat information as for Table IX

TABLE XII

	32	200	250 lower level	250 upper level	Habitat
MOLLUSCA					
GASTROPODA					
ELLOBIIDAE					
<i>Carychium</i> sp.	1	—	—	—	(M.)
PHYSIDAE					
<i>Aplexa hypnorum</i> (L.)	2	1	1	—	A.
LYMNAEIDAE					
<i>Lymnaea truncatula</i> (Müll.)	6	—	—	—	A.M.
PLANORBIDAE					
<i>Anisus leucostoma</i> (Milt.)	20	2	—	—	A.
SUCCINEIDAE					
<i>Succinea</i> or <i>Oxyloma</i> sp.	1	—	—	—	Mo.
COCHLICORDIAE					
<i>Cochlicopa</i> sp.	1	5	—	—	(M.)
VALLONIIDAE					
<i>Vallonia costata</i> (Müll.)	3	5	2	—	To.
<i>V. excentrica</i> Sterki	1	1	1	—	To.
ZONITIDAE					
<i>Vitrea</i> sp.	—	2	—	—	(M.) s.
<i>Aegopinella nitidula</i> (Drp.)	1	1	—	—	Ts.
<i>Oxychilus cellarius</i> (Müll.)	—	1	—	—	Ts.
HELICIDAE					
<i>Trichia hispida</i> (L.)	9	4	2	1	(M.)
<i>Cepaea nemoralis</i> (L.)	1	—	—	—	(M.)
Total	46	22	6	1	

Habitat information: A, aquatic; M, obligate marsh dweller; (M), terrestrial species which can live in marshes; T, terrestrial. Qualified by: o, open habitat; s, shaded habitat.

TABLE XIII

## COLEOPTERA

	Minimum Number of Individuals				
	32	200	250 lower level	250 upper level	Habitat or Food
CARABIDAE					
<i>Carabus nemoralis</i> Müll.	3	—	—	—	T.
<i>Leistus ferrugineus</i> (L.)	1	—	—	—	W.G. (rotten logs)
<i>Nebria brevicollis</i> (F.)	4	—	2	3	W.G.D.
<i>Notiophilus</i> sp.	3	—	—	—	M.W.G.D.
<i>Loricera pilicornis</i> (F.)	1	—	1	—	M.W.G.D.
<i>Clivina collaris</i> (Hbst.) or <i>fossor</i> (L.)	3	—	—	—	moist B.W.D. and G. — often under dung
<i>Trechus obtusus</i> Er. or <i>quadristriatus</i> (Schr.)	11	2	8	5	B.G.W.D. (cut vegetation)

Table XIII continued

## CARABIDAE continued

<i>T. micros</i> (Hbst.)	—	—	—	1	B. — usually of flowing water
<i>Asaphidion flavipes</i> (L.)	—	—	1	1	G. — damp B.M.W.
<i>Bembidion properans</i> Steph.	1	—	1	1	T. — open clay soil and mud
<i>B. tetracolum</i> Say	1	—	—	2	W.G.M.B.D.
<i>B. genei</i> Küst.	1	—	—	—	B.M. — esp. open
<i>B. biguttatum</i> (F.)	1	—	—	—	B.G. and W. — usually near water
<i>B. guttula</i> (F.)	1	—	—	—	M.G. and W. — moist (in manure heaps)
<i>B. lunulatum</i> (Fouc)	1	—	1	—	(W) D.B. and M. — well vegetated often clay soils
<i>B. cf. unicolor</i> Chaud.	1	—	—	—	W.M.G. — moist
<i>B. guttula</i> (F.) or <i>unicolor</i> Chaud.	—	1	1	—	M.G. and W. — moist (in manure heaps).
<i>Bembidion</i> spp.	2°	—	—	—	mostly wet or marshy places
<i>Pterostichus cupreus</i> (L.)	1	—	—	—	G.D. AND (W) — moist
<i>P. gracilis</i> (Dej.)	—	—	—	1	G. — wet M.W.
<i>P. melanarius</i> (Ill)	7	1	1	1	D.G. (W)
<i>P. minor</i> (Gyll.)	—	—	1	—	M. and B. — wooded or open
<i>P. nigrita</i> (Pk.)	—	—	1	1	M.B.
<i>P. cupreus</i> (L.) or <i>versicolor</i> (Strm.)	2	3	2	2	W.D. and G. — often in meadow-land
<i>Calathus fuscipes</i> (Goez)	5	—	1	—	G.D.
<i>C. melanocephalus</i> (L.)	1	cf	—	—	(W.) G.D.
<i>Calathus</i> sp.	—	—	—	1°	T.
<i>Synuchus nivalis</i> (Pz.)	2	—	—	—	G. and D. — often in sandy or gravelly places (W.)
<i>Olisthopus rotundatus</i> (Pk.)	6	—	—	—	G.D.
<i>Agonum albipes</i> (F.)	1	1	1	—	B.W. (D.G.)
<i>A. dorsale</i> (Pont.)	3	—	—	1	G. and D. — usually open
<i>A. moestum</i> (Duft.)	2	—	—	—	B. — rich vegetation (W.)
<i>Amara cf. aenea</i> (DeG.)	12	1	1	4	T. — dry open ground
<i>A. aulica</i> (Pz.)	3	—	—	—	G. and D. — often feeding on Compositae seeds.
<i>A. cf. bifrons</i> (Gyll.)	3	—	—	—	D. and (G.) usually sandy and open
<i>A. anthobia</i> Vill. or <i>plebeja</i> (Gyll.)	4	—	1	—	T.
<i>A. tibialis</i> (Pk.)	3	2	—	—	D. and (G.) usually sandy and open
<i>Amara</i> spp.	5°	2°	1°	1°	T.
<i>Harpalus rufipes</i> (DeG.)	3	1	—	2	D. — often cultivated (G.)
<i>H. azureus</i> (F.)	4	—	—	—	D. and G. — short vegetation
<i>H. S. Ophonus</i> spp.	5°	3	3	2	T. — mostly dry and open
<i>H. affinis</i> (Schr.)	—	1	2	—	D.G. (W.)
<i>H. cf. rubripes</i> (Duft.)	2	—	—	—	D.G. (W.)
<i>H. S. Harpalus</i> sp.	1°	—	—	—	T.
<i>Acupalpus consputus</i> (Duft.)	3	—	—	1	M.B. wet G. — shaded
<i>Acupalpus</i> sp.	—	1	—	—	M.B. (W.)
<i>Badister bipustulatus</i> (F.)	1	—	—	—	mostly wet places
<i>Microlestes maris</i> (Strm.)	1	—	—	—	inc. V.
<i>Brachinus crepitans</i> (L.)	5	—	—	—	G. dry open, often on chalk
DYTISCIDAE					
<i>Hydroporus</i> sp.	1	—	—	1	A.
<i>Agabus bipustulatus</i> (L.)	—	1	—	—	A. — ponds, puddles and ditches
<i>A. chalconatus</i> (Pz.)	2	—	—	—	A. — mostly still
GYRINIDAE					
<i>Gyrinus</i> sp.	1	—	—	—	A.



TABLE XIII continued

continued

## HYDROPHILIDAE

<i>Helophorus aquaticus</i> (L.)	—	—	1	2	A. } puddles, ponds,
<i>H. grandis</i> Ill.	2	1	—	3	A. } rarely flowing
<i>H. aquaticus</i> (L.) or <i>grandis</i> Ill	—	2	1	—	A. } water.
<i>H. nubilus</i> F.	2	—	—	—	T. — often on cruciferae
<i>H. obscurus</i> Muls.	—	2	—	4	A.
<i>H. rufipes</i> (Bosc.)	—	1	—	1	T. — often on Cruciferae
<i>Helophorus</i> spp. ( <i>brevipalpis</i> size)	4	1	1	11	A. — but sometimes spend much time out of water.
<i>Helophorus</i> sp.	—	—	1 <sup>o</sup>	—	A.
<i>Sphaeridium bipustulatum</i> F.	2	—	—	—	F.V.C.
<i>Cercyon</i> spp.	3	1	3	4	F.V.C. some species on mud at water's edge.
<i>Megasternum obscurum</i> (Marsh.)	4	1	4	2	F.V.C.
<i>Cryptopleurum</i> sp.	1	—	—	1	F.V.C.
<i>Hydrobius fuscipes</i> (L.)	—	1	—	—	A. — stagnant water often with detritus bottom

## HISTERIDAE

<i>Abraeus globosus</i> (Hoff.)	—	—	1	—	rotten wood
<i>Kissiter minimus</i> (Aub.)	—	—	2	—	at roots of grass and <i>Rumex acetosella</i> L.
<i>Onthophilus striatus</i> (Forst.)	1	—	—	1	F.V.C.
<i>Hister bissexstriatus</i> F.	—	—	1	—	F.V.
<i>Paralister carbonarius</i> (Hoff.)	1	—	—	—	F.V.C.
<i>P. purpurascens</i> (Hbst.)	1	—	—	1	F.V.

## HYDRAENIDAE

<i>Ochthebius</i> sp.	2	3	—	5	A. — mostly standing water B. — mud at water's edge
<i>Limnebius pupposus</i> Muls.	1	—	—	3	A.B. — mud at water's edge. moss

## LEIODIDAE

<i>Leiodes</i> sp.	1	—	—	—	often fungi
<i>Nargus wilkinki</i> (Spence)	—	1	—	—	V. esp. woodland leaf litter (C.)
<i>Choleva</i> or <i>Catops</i> spp.	6	—	2	3	V. — often leaf litter or fungi C. (G.)

## SILPHIDAE

<i>Silpha atrata</i> L.	—	1	—	—	mostly under bark or in rotten wood (G.D.V.)
<i>S. obscura</i> L.	1	—	1	1	C.

## STAPHYLINIDAE

<i>Acidota cruentata</i> Man.	—	—	1	—	moss leaf litter, etc.
<i>Lestera</i> spp.	5	2	6	6	B. — often at water's edge M.
<i>Omalium</i> spp.	1	2	5	2	V.
<i>Coprophilus striatulus</i> (F.)	—	—	1	—	V.
<i>Platystethus arenarius</i> (Fouc.)	—	—	7	4	F.V.
<i>P. cornutus</i> sp.	—	—	5	4	M. and B. — often on mud (V.F.)
<i>Anotylus rugosus</i> (F.)	—	—	1	4	V.F. (C.)
<i>A. sculpturatus</i> (Grav.)	11	2	24	10	V.F.C. (also G.D.)
<i>A. cf. tetracarinus</i> (Block)	1	—	—	—	V.F.C. (also G.D.)
<i>Stenus</i> spp.	1	—	2	1	W.G.D.M.
<i>Lathrobium</i> spp.	2	—	—	1	W.G.D.M.V. (C.)
<i>Gyrohypnus angustatus</i> Step.	1	—	—	2	V. — sometimes at water's edge
<i>G. fracticornis</i> (Müll.)	—	—	1	—	F.V. (C.)
<i>Xantholinus glabratus</i> (Grav.)	2	—	1	—	G.D.F.V.
<i>X. linearis</i> (Ol.)	3	—	—	—	W.G.V. (F.)
<i>X. longiventris</i> Heer	2	—	1	1	W.G.V. (F.C.)
<i>X. linearis</i> (Ol.) or <i>longiventris</i> Heer	2	—	1	2	W.G.V. (F.C.)

TABLE XIII continued

## STAPHYLINIDAE, continued

<i>X. jarrigei</i> Coiff. or <i>tricolor</i> (F.)	3	—	—	—	G.W.V.
<i>Philonthus intermedius</i> (B. & L.) or <i>laminatus</i> (Cr.)	2	—	1	1	V.F.C.W.G.
<i>Philonthus</i> spp.	5°	—	1°	4°	V.F.C. (W.G.D.)
<i>Staphylinus aeneocephalus</i> DeG. or <i>fortunatarum</i> (Woll.)	1	—	—	—	W.G.
<i>S. brunipes</i> F.	2	—	1	—	W.G.M. very rotten wood (V.)
<i>S. olens</i> Müll	1	—	1	—	W.G.
<i>Quedius</i> sp.	—	1	—	—	T.
<i>Tachyporus</i> sp.	—	—	1	1	T.
<i>Tachinus</i> spp.	10	1	1	4	T.
Aleocharinae gen. et sp. indet.	+	+	+	+	T.
LUCANIDAE					
<i>Dorcus parallelipipedus</i> (L.)	—	—	1	—	rotten hardwood
TROGIDAE					
<i>Trox sabulosus</i> (L.)	—	—	—	1	dry C., — often in sandy places (G.)
GEOTRUPIDAE					
<i>Geotrupes</i> sp.	1	1	1	1	F.
SCARABAEIDAE					
<i>Aphodius</i> cf. <i>consputus</i> Cr.	—	1	—	—	F.
<i>A. contaminatus</i> (Hbst.)	2	2	10	—	F.
<i>A. distinctus</i> (Müll.)	1	—	1	1	larvae V., adults F.V.C.
<i>A. foetidus</i> (Hbst.)	—	1	5	1	F.V.
<i>A. luridus</i> (F.)	5	—	—	1	F.
<i>A. porcus</i> (F.)	1	—	—	—	F. in <i>Geotrupes</i> burrows
<i>A. cf. prodromus</i> (Brahm)	8	—	3	—	F.V.
<i>A. cf. sphacelatus</i> (Pz.)	5	—	—	4	F.V. (C.)
<i>Aphodius</i> spp.	5°	1°	12°	12°	mostly F.
<i>Oxyomus sylvestris</i> (Scop.)	1	1	11	6	V.C.F. — mostly as dung heaps
<i>Onthophagus ovatus</i> (L.)	5	—	—	—	F.C.V.
<i>O. similis</i> (Scrib.)	—	—	—	1	F.
<i>Onthophagus</i> sp.	—	—	1	—	F. (C.)
<i>Phyllopertha horticola</i> (L.)	—	—	—	1	larvae on roots in permanent grassland
CLAMBIDAE					
<i>Calyptomerus dubius</i> Marsh.)	—	—	—	1	V. esp. old hay and straw
BUPRESTIDAE					
<i>Trachys scrobiculatus</i> Kies	1	—	—	—	Labiatae and ? <i>Hyoscyamus niger</i>
ELATERIDEA					
<i>Athous hirtus</i> (Hbst.)	1	—	—	1	W.G. — esp. meadowland
<i>Agriotes sputator</i> (L.)	7	1	—	—	larvae mostly at roots
<i>Agriotes</i> sp.	1	—	—	1	of grassland plants.
<i>Adrasus pallens</i> (F.)	2	—	—	—	G. and trees, often close to water
CANTHARIDAE					
<i>Cantharis rustica</i> Fall.	1	—	—	—	Adults often on flowers of herbs and shrubs
<i>Cantharis</i> spp.	2°	1	—	—	
<i>Rhagonycha fulva</i> (Scop.)	2	—	—	—	
<i>Rhagonycha</i> sp.	1°	—	—	—	
<i>Cantharis, Rhagonycha</i> or <i>Silis</i> sp.	—	—	1	—	
ANOBIIDAE					
<i>Stegobium paniceum</i> (L.)	1	—	1	1	P. — flour, bread, grain (in open?)
<i>Anobium punctatum</i> (DeG.)	3	2	6	1	dead wood
PTINIDAE					
<i>Ptinus fur</i> (L.)	—	—	2	1	straw, birds' nests etc. P. — grain (C. in old wood).
MELYRIDAE					
<i>Malachius marginellus</i> (O1.)	—	—	—	1	adults often on flowers

TABLE XIII continued

MELYRIDAE continued

<i>M. bipustulatus</i> (L.) or <i>viridis</i> F.	2	1	—	—	
NITIDULIDAE					
<i>Brachypterus</i> sp.	—	2	2	6	<i>Urtica</i> sp.
<i>Meligethes</i> spp.	2	1	1	—	herbs and trees, mostly on flowers
<i>Epuraea limbata</i> (F.)	1	—	—	—	wood fungus, at flowing sap
RHIZOPHAGIDAE					
<i>Rhizophagus parallellocollis</i> Gyll.	—	—	—	1	} fungal hyphae esp. on buried C. and V. under bark and rotten wood. Also at sap.
<i>Rhizophagus</i> sp.	—	—	1	—	
CRYPTOPHAGIDAE					
<i>Atomaria</i> sp.	1	—	3	—	V.F.T.
<i>Ephistemus globulus</i> (Pk.)	1	—	1	—	V.F.
Cryptophagidae gen. et sp. indet.	—	—	2	3	V. — of all sorts T.
PHALACRIDAE					
<i>Phalacrus</i> sp.	—	—	3	3	larvae on grasses and <i>Carex</i> smuts, adults on flowers
<i>Olibrus</i> sp.	7	1	2	2	larvae and adults on Compositae flowers
COCCINELLIDAE					
<i>Subcoccinella vigintiquatuorpunctata</i> (L.)	1	—	—	—	phytophagous
<i>Coccidula rufa</i> (Hbst.)	—	—	1	1	aphids of aquatic and marsh plants
<i>Platynaspis luteorubra</i> (Goez.)	1	—	—	—	on trees and in dry grassland
<i>Chilocorus bipustulatus</i> (L.)	1	—	—	—	T.
<i>Adalia bipunctata</i> (L.) or <i>decompunctata</i> (L.)	1	—	—	—	T.
<i>Coccinella septempunctata</i> L.	2	—	1	—	T.
<i>Propylea quatuordecimpunctata</i> (L.)	—	—	2	—	T.
ENDOMYCHIDAE					
<i>Mycetaea hirta</i> (Marsh.)	—	—	1	—	in fungal infested material mostly indoors
LATHRIDIIDAE					
<i>Lathridius minutus</i> agg.	1	1	6	2	V. also manure (C.G.W.)
<i>Enicmus transversus</i> (Oll.)	5	2	1	1	V. (G.W.)
<i>Corticaria</i> , <i>Corticarina</i> , <i>Corticicaria</i> , or <i>Melanophthalmus</i> spp.	7	1	2	1	mostly V.
PYROCHROIDAE					
<i>Pyrochroa serraticornis</i> (Scop.)	1	—	—	—	larvae on rotten wood esp. oak, adult on flowers
OEDEMERIDAE					
<i>Oedemera lurida</i> (Marsh.)	—	1	—	—	adults on flowers in meadows and shrubs
ANTHICIDAE					
<i>Anthicus antherinus</i> (L.)	1	—	1	—	V.
BRUCHIDAE					
<i>Bruchus</i> cf. <i>rufipes</i> Hbst.	—	—	1	—	on Papilionaceae
CHRYSOMELIDAE					
<i>Plateumaris</i> cf. <i>sericea</i> (L.)	—	—	—	1	<i>Iris</i> and <i>Carex</i> spp. (other aquatic plants).
<i>Chrysolina fastuosa</i> (Scop.)	1	—	—	—	Labiatae esp. <i>Galeopsis</i> sp.
<i>C. oricalcia</i> (Müll.)	—	—	1	—	various plants
<i>C. polita</i> (L.)	6	—	—	1	Labiatae often in marshes
<i>Gastrophysa polygoni</i> (L.)	1	—	—	1	<i>Rumex</i> and <i>Polygonum</i> spp.
<i>Phyllodecta</i> sp.	—	—	1	—	<i>Populus</i> and <i>Salix</i> spp.
<i>Phyllotreta atra</i> (F.)	—	—	1	1	} Cruciferae and <i>Reseda</i> sp.
<i>P. nemorum</i> (L.) or <i>undulata</i> Kuts.	—	—	1	1	
<i>P. nigripes</i> (F.)	1	—	1	—	

TABLE XIII continued

## CHRYSEMELIDAE continued

<i>P. vittula</i> Redt.	8	1	4	1	
<i>Longitarsus</i> spp.	6	3	7	2	various herbs
<i>Chalcoides</i> sp.	1	—	1	1	<i>Salix</i> and <i>Populus</i> spp.
<i>Podagrica fuscicornis</i> (F.)	3	1	3	3	Malvaceae
<i>Chaetocnema concinna</i> (Marsh.)	6	4	3	1	Polygonaceae esp. <i>P. aviculare</i> L.
<i>Chaetocnema</i> sp. (not <i>concinna</i> )	2	—	—	—	various herbs
<i>Sphaeroderma rubidum</i> (Grls.) or <i>testaceum</i> (F.)	1	—	—	—	Compositae esp. thistles and knapweeds
<i>Psylliodes</i> sp.	—	1	1	1	various herbs
<i>Cassida</i> sp.	—	—	—	1	
ATTELABIDAE					
<i>Rhynchites</i> S. <i>Chaenorhinus</i> sp.	2	—	—	—	various trees and Rosaceous plants
APIONIDAE					
<i>Apion malvae</i> (F.)	—	—	1	1	various Malvaceae
<i>A. rufirostre</i> (F.)	—	—	1	—	
<i>A. aeneum</i> (F.)	—	1	6	2	
<i>A. radiolus</i> (Marsh.)	—	1	1	2	
<i>A. urticarium</i> (Hbst.)	—	1	2	1	
<i>A. cf. seniculus</i> Kirb.	1	—	—	—	<i>Urtica dioica</i> L. and <i>U. urens</i> L.
<i>A. carduorum</i> Kirb. or <i>onopordi</i> Kirb.	2	—	—	—	various Papilionaceae
<i>A. aethiops</i> Hbst. or <i>pisi</i> (F.)	2	1	—	—	<i>Onopordon</i> , <i>Carduus</i> , <i>Cirsium</i> and <i>Centaurea</i> spp.
<i>A. punctigerum</i> (Pk.)	—	—	—	2	larvae <i>Onobrychis</i> and <i>Medicago</i> spp. adults Papilionaceae
<i>A. cf. reflexum</i> (Gyll.)	1	—	—	—	larvae on <i>Vicia</i> spp.
<i>A. cerdo</i> Ger.	—	—	6	1	<i>Onobrychis viciifolia</i> Scop.
<i>A. pomonae</i> (F.)	—	—	1	—	larvae <i>Vicia cracca</i> L. adult <i>Vicia</i> and <i>Lathyrus</i> spp.
<i>A. cf. nigrilare</i> Kirb.	3	—	5	—	larvae on various Papilionaceae,
<i>Apion</i> spp.	25°	3°	19°	17°	adult various trees and herbs
CURCULIONIDAE					
<i>Otiorynchus raucus</i> (F.)	—	1	—	—	larvae on <i>Trifolium</i> spp.
<i>Phyllobius</i> spp.	3	—	1	—	mostly on herbs
<i>Sciaphilus asperatus</i> (Bons.)	1	—	—	—	
<i>Sitona lepidus</i> Gyll. or <i>puncticollis</i> Step.	2	—	—	—	T.
<i>Sitona</i> spp.	4°	2	4	2	trees, grasses and <i>Urtica</i> sp.
<i>Cleonus piger</i> (Scop.)	—	—	1	—	woodland herbs esp. <i>Primula</i> and <i>Sanicula</i>
<i>Hypera punctata</i> (F.)	1	—	—	—	Papilionaceae
<i>Hypera</i> sp.	1	—	—	—	Papilionaceae esp. <i>Trifolium</i> spp.
<i>Magdalis ruficornis</i> (L.)	—	—	—	1	various herbs
<i>Acales turbatus</i> Boh.	—	—	—	1	larvae on bark of Rosaceous trees
<i>Zaenadus exiguus</i> (Oll.)	—	1	—	—	esp. <i>Crataegus</i> and <i>Prunus</i> spp.
<i>Ceuthorhynchidius horridus</i> (Pz.)	1	—	—	—	dead <i>Crataegus</i> , <i>Corylus</i> and <i>Populus</i> spp. esp. in hedges
<i>Ceuthorhynchus erysimi</i> (F.)	—	1	—	1	<i>Geranium</i> and <i>Erodium</i> spp.
<i>C. pollinarius</i> (Forst.)	—	1	2	2	<i>Onopordon</i> , <i>Carduus</i> and <i>Cirsium</i> spp.
<i>Rhinoncus bruchoides</i> (Hbst.)	—	1	—	—	Cruciferae
<i>Ceuthorhynchinae</i> gen. et sp. indet.	11°	1°	9°	5°	<i>Urtica dioica</i> L.
<i>Tychius</i> sp.	4	—	—	—	<i>Polygonum</i> S. <i>Persicaria</i> spp.
<i>Mecinus pyrastrer</i> (Hbst.)	1	—	2	—	various herbs
<i>Gymnetron labile</i> (Hbst.)	—	—	1	2	mostly Papilionaceae
<i>G. pascuorum</i> (Gyll.)	—	—	1	—	<i>Plantago lanceolata</i> L. and <i>P. media</i> L.
					<i>P. lanceolata</i> L.
					<i>P. lanceolata</i> L.

TABLE XIII continued

continued

## SCOLYTIDAE

*Hylesinus crenatus* (F.)— 1 — — } mainly *Fraxinus* sp. also*Leperisinus varius* (F.)

— — — 1 } other hardwood trees.

## TOTAL

403 90 283 232

Habitat or food information: A, aquatic; B, bankside/water's edge; C, carrion; D, disturbed/bare ground; F, dung; G, grassland; M, marsh; P, pest of stored farinaceous foods; T, terrestrial (but no detailed habitat information known); V, decaying plant remains; W, Woodland or scrub. Less usual habitats given in brackets against number of genus not identified to species from a particular sample means that it includes other species than those named to species from that sample. + indicates present but uncounted.

TABLE XIV  
HEMIPTERA

	Minimum Number of Individuals				
	32	200	250 lower level	250 upper level	Habitat or Food
<hr/>					
HETEROPTERA					
CYDNIDAE					
<i>Sehirus bicolor</i> (L.)	—	—	1	—	<i>Lamium album</i> L. <i>Ballota nigra</i> L.
<i>Thyreocoris scarabaeoides</i> (L.)	1	—	—	—	perhaps <i>Viola</i> spp.
PENTATOMIDAE					
<i>Podops inuncta</i> (F.)	1	—	—	—	often grassland
<i>Palomena prasina</i> (L.)	—	—	—	1	T.
<i>Pentatoma rufipes</i> (L.)	—	—	—	1	deciduous trees esp. <i>Quercus</i> sp.
COREIDAE					
<i>Coreus marginatus</i> (L.)	1	—	—	—	Polygonaceae
<i>Syromastus rhombeus</i> (L.)	1	—	—	—	Caryophyllaceae
LYGAEIDAE					
<i>Heterogaster urticae</i> (F.)	1	1	3	4	<i>Urtica dioica</i> L.
<i>Drymus sylvaticus</i> (F.)	—	1	—	1	T.
<i>Scelopostethus</i> sp.	—	—	3	2	T.
CIMICIDAE					
<i>Anthocorinae</i> gen. et sp. indet.	—	1	3	1	T.
MIRIDAE					
<i>Miridae</i> gen. et sp. indet.	1	—	1	1	T.
HOMOPTERA					
CICADELLIDAE					
<i>Aphrodes albifrons</i> (L.)	—	—	2	—	grasses
<i>A. bicinctus</i> (Schr.)	7	—	—	2	grasses
<i>A. flavistriatus</i> (Don.)	7	—	—	—	grasses in damp places
<i>A. histrionicus</i> (F.)	1	—	—	1	grasses
<i>APHIDOIDEA</i> gen. et sp. indet.	1	—	1	—	
<i>Homoptera</i> gen. et sp. indet.	3	1	1	2	
<hr/>					
TOTAL	25	4	15	16	

Habitat information: T, terrestrial

TABLE XV

## OTHER INSECTS

	Minimum Number of Individuals				Habitat
	32	200	250 lower level	250 upper level	
DERMAPTERA					
<i>Forficula auricularia</i> L.	14	10	21	7	T.
LEPIDOPTERA					
Lepidoptera pupa gen. et sp. indet.	1	—	—	—	T.
HYMENOPTERA					
Formicidae gen. et sp. indet.	2	4	118	31	T.
adult heads other than Formicidae	25	3	23	21	T.
DIPTERA					
Chironomid larval head capsules	—	—	+	+	A.
<i>Melophagus ovinus</i> (L.) puparia	—	1	—	—	sheep ectoparasite
Diptera piparia	5	1	1	2	
Diptera adults	4	1	4	14	

Habitat information: A, aquatic; T, terrestrial.

TABLE XVI

## OTHER INVERTEBRATES

OTHER INVERTEBRATES		32	200	250 lower level	250 upper level	Habitat
SPONGILLIDAE						
Freshwater Sponge		—	—	—	2	A
CRUSTACEA						
Branchiopoda	Water Flea	+	+	+	+	A.
Ostracoda		+	+	—	+	A.
ARACHNIDA						
Aranae	Spider	2	—	3	3	
Acari	Mite	+	+	+	+	

Habitat information: A, aquatic.

## DISCUSSION by ROGER THOMAS and JOHN HINCHLIFFE

A Neolithic axe,<sup>175</sup> a Beaker<sup>176</sup> and a few sherds of Deverel-Rimbury<sup>177</sup> pottery attest only sporadic activity in the Appleford Field before the late Bronze Age and there are virtually

<sup>175</sup> See p. 17.<sup>176</sup> See p. 16.<sup>177</sup> See p. 26.

no ring-ditches in the area around Appleford, in marked contrast to the vicinities of Abingdon and Dorchester.<sup>178</sup>

The Appleford settlement was probably founded in the 8th or 7th century BC and was occupied until late in the 4th century AD. We are thus dealing with a period of apparent stability of settlement lasting perhaps 1200 years, initiated and terminated by episodes of marked discontinuity of settlement, and the factors underlying this pattern should be considered.

### *Colonisation*

The Upper Thames Valley does not seem to have been densely occupied in the Late Bronze Age.<sup>179</sup> However, from the end of the Late Bronze Age onwards we see the foundation of a number of settlements on the gravel terraces flanking the river — for instance, Allen's Pit,<sup>180</sup> Long Wittenham,<sup>181</sup> Mount Farm<sup>182</sup> and Ashville.<sup>183</sup> On the basis of the ceramics, which seem to date from the 8th/7th centuries BC,<sup>184</sup> Appleford is one of the earliest of these settlements so far discovered. A possibly contemporary site exists on the banks of the Thames at Wallingford, where pottery similar to that at Appleford was found in association with Late Bronze Age metalwork.<sup>185</sup>

The reasons for this phase of colonisation of the Upper Thames are obscure, but it may be connected with an apparent decline in the number of settlements in the middle Thames around this time.<sup>186</sup>

Appleford was probably a favourable location for settlement. A variety of soil types<sup>187</sup> lay within easy reach, some well suited to arable while others, particularly the Thames series bordering the Thames and the Moor Ditch, would be suitable for grazing or meadows. Of special importance may have been the large expanse of Sutton soils, on which the site itself sits. Resilience of the soils under prolonged cultivation may have been an important factor for settlement stability. The apparent absence of earlier prehistoric earthworks around Appleford would have facilitated cultivation in the vicinity of the settlement.

There is no direct evidence for the Iron Age environment around Appleford. Studies of botanical remains at a mid-Iron Age first terrace site at Farmoor<sup>188</sup> suggest a largely treeless environment there by that date, but the site of Hardwick<sup>189</sup> seems to have stood in scrub environment. If the Iron Age occupation at Appleford was preceded by a phase of slight activity in the late Bronze Age, the environment may well have contained elements of scrub or woodland, especially at the beginning of the period of settlement. The

<sup>178</sup> D. Benson and D. Miles, *Upper Thames Valley*, Maps 30-35.

<sup>179</sup> J.C. Barrett and R. Bradley, 'The later Bronze Age in the Thames Valley', *Settlement and Society in the British Later Bronze Age*, ed. J.C. Barrett and R. Bradley (B.A.R. 83), 247-69.

<sup>180</sup> J.S.P. Bradford, *Oxoniensia*, vii, 36-60.

<sup>181</sup> H.N. Savory, *Oxoniensia* ii, 1-11.

<sup>182</sup> J.N.L. Myres, *Oxoniensia* ii, 12-40.

<sup>183</sup> M. Parrington, *Ashville Trading Estate*.

<sup>184</sup> See pp. 55-6.

<sup>185</sup> M. Ehrenberg, *Bronze Age Spearheads from Berkshire, Buckinghamshire and Oxfordshire*, B.A.R. 34 (1977), Appendix II, 59-60.

<sup>186</sup> J.C. Barrett and R. Bradley, *op. cit.*

<sup>187</sup> M.G. Jarvis, *The Soils of the Abingdon and Wantage District* (1973).

<sup>188</sup> G. Lambrick and M. Robinson, *Farmoor*.

<sup>189</sup> Information from G. Lambrick.

presence of red deer bones in Iron Age features at Appleford indicates some woodland in the area.<sup>190</sup>

*Occupation: the Iron Age*

The economies of nearby Iron Age sites such as Ashville<sup>191</sup> and Mount Farm<sup>192</sup> seem to have been based on mixed cereal growing and stock raising and one can reasonably postulate similar practices at Appleford. There was no direct evidence from the site of cereal growing, as no flotation of Iron Age pits was undertaken to recover carbonised grain. Quern-stones indicate crop-processing and many of the pits were probably used for grain storage. However, Appleford seems to lack the dense clusters of large numbers of pits seen at such sites as Ashville<sup>193</sup> or Beard Mill.<sup>194</sup> This may be due to its location on the first terrace and the consequent higher water-table.

Cattle, sheep, horse and pig bones were all found at Appleford.<sup>195</sup> As indicated above, suitable grazing lay close at hand, although the presence of liver fluke<sup>196</sup> may have been a limiting factor on sheep-rearing. Appleford on the first terrace had a cattle:sheep ratio lower than that at Farmoor (floodplain/first terrace), but higher than at Ashville (second terrace).<sup>197</sup> Horses were also more abundant at Farmoor and Appleford than on second terrace sites.<sup>198</sup>

It has recently been suggested that the agricultural economy of the Upper Thames Valley in the Iron Age may have been quite complex.<sup>199</sup> It may be that we should envisage a network of settlements in this area, all participating in the same basic economy but specialising to some extent in particular aspects according to their environmental location or other factors, and engaging in exchange with neighbouring communities to distribute products more evenly around the zone. Certainly, local trade is evident in some of the Appleford pottery such as that tempered with Corallian sand<sup>200</sup> perhaps coming from the Frilford area. Economic complexity can be suggested elsewhere in the southern British Iron Age, for instance on the Hampshire chalklands.<sup>201</sup>

Unfortunately we know very little about the layout and structure of the Iron Age settlement. The Iron Age occupation covered perhaps 4ha. in the north part of the cropmark complex,<sup>202</sup> but there is no way of knowing how much of this area was in use at any one time. The site contained several elements — the 1973 middle Iron Age enclosures,<sup>203</sup> the Early Iron Age polygonal enclosure,<sup>204</sup> and at least three circular hut gullies, as well as other possible hut circles visible on the aerial photographs.

The 1973 enclosures are discussed in detail above.<sup>205</sup> Circular hut gullies are well

<sup>190</sup> See p. 86.

<sup>191</sup> M. Parrington, *op. cit.*

<sup>192</sup> G. Lambrick, *forthcoming*.

<sup>193</sup> M. Parrington, *op. cit.*

<sup>194</sup> Audrey Williams, *Oxoniensia*, vii, Fig. 4.

<sup>195</sup> See p. 86.

<sup>196</sup> See p. 94.

<sup>197</sup> Wilson in M. Parrington, *op. cit.*

<sup>198</sup> *Ibid.*

<sup>199</sup> G. Lambrick and M. Robinson, *op. cit.*, 134-5.

<sup>200</sup> See No. 6, Fig. 8.

<sup>201</sup> R. Bradley, *The Prehistoric Settlement of Britain* (1978), 126.

<sup>202</sup> See p. 18.

<sup>203</sup> See p. 35-40.

<sup>204</sup> See p. 18.

<sup>205</sup> See p. 35-40.



known in the Thames Valley, for instance at Ashville. The polygonal enclosure may be paralleled at sites near Stanton Harcourt<sup>206</sup> and on numerous aerial photographs.<sup>207</sup> It may have contained a house.

It is not known whether any of these elements were in contemporary use, and the problem thus arises as to whether the Appleford Iron Age site contained several units of settlement at any one time, or only one which moved around through time. However, as remains dateable to the Early Iron Age were spread widely over the site it may be that the settlement had several units of habitation in use at once.

In its plan, Appleford Iron Age site may have been similar to the sites in the Lower Windrush, which also contain polygonal and penannular enclosures.<sup>208</sup> The Appleford site does seem to contain fewer pits than these sites, however. An important feature of Appleford is the system of gullies and a trackway which surrounds Enclosure C. There are indications of fields or paddocks adjacent to ?habitation enclosures, e.g. at Beard Mill<sup>209</sup> and at Mount Farm,<sup>210</sup> but Appleford provides the clearest example so far excavated of an Iron Age enclosure set within fields.

It is very difficult as yet to discuss the variety of Iron Age settlement types known in the Upper Thames in terms of differing social statuses of their occupants. However, metal work finds such as the swords from the Thames<sup>211</sup> and the warrior burial from Sutton Courtenay<sup>212</sup> are evidence of an aristocratic element in Thames Valley Iron Age, and the Appleford currency bar hoard may provide a hint that this was a 'high status' site in some sense, at least in the later part of the Iron Age.

### *The Romano-British Phase*

In the Romano-British phase we see certain changes in the settlement, but there was probably a basic continuity of economic and social patterns from the Iron Age into the Romano-British period. Botanical evidence from Romano-British waterholes indicates an open environment with both pasture and arable land in the vicinity of the site,<sup>213</sup> which is also very much what one would expect for the Iron Age.

The most obvious change in the Roman period is an enlargement of the area covered by the settlement (and perhaps a shift in the focus of habitation). The Iron Age settlement had contained trackways and enclosures, but in the Romano-British period an elaborate system of trackways was laid out. There is a hint, in the similar alignment of the Iron Age trackway in Area 4 and the Roman one in Area 2, that the Roman system was laid out along old established lines of land division. The Roman trackway seems to have continued in use until the abandonment of the settlement in the late 4th or early 5th century AD.

The kind of settlement plan seen at Appleford, trackways with enclosures attached to it, is characteristic of Romano-British sites in the Upper Thames<sup>214</sup> and elsewhere. The trackways may very possibly have been for controlling the movement of livestock within

<sup>206</sup> Ann Hamlin, 'Early Iron Age Sites at Stanton Harcourt', *Oxoniensia* xxxi (1966), Fig. 1.

<sup>207</sup> D.W. Harding, *the Iron Age in the Upper Thames Basin* (1972), Pl. 78.

<sup>208</sup> D.W. Harding, *Iron Age in Upper Thames Basin*, 41.

<sup>209</sup> Audrey Williams, *op. cit.*

<sup>210</sup> G. Lambrick, *forthcoming*.

<sup>211</sup> D.W. Harding, *op. cit.*, Pl. 78.

<sup>212</sup> See note by R. Whimster in *Oxoniensia* xlv (1979), 93-6.

<sup>213</sup> See p. 91-3.

<sup>214</sup> D. Benson and D. Miles, *op. cit.*

the settlement, but the function of the enclosures, even where they were excavated, is obscure.<sup>215</sup>

Despite the cropmark evidence for the Romano-British period, we are little better informed about the organisation of the settlement at this time. With the exception of one gravel floor,<sup>216</sup> no convincing traces of Romano-British buildings were found on the site. However, because of the extent of the site, the scale of the trackway and enclosure systems and the great quantity of Roman pottery found, it is reasonable to suggest that there were a considerable number of people living here in Romano-British times, and one may postulate a nucleated or 'village' settlement, as opposed to a single farmstead. The open area at the trackway junction would have been large enough for communal activities such as the collection of herds. Similar open spaces have been noted on Romano-British 'village' sites in Wessex.<sup>217</sup>

Something of a problem is posed by the presence of the pewter hoard at Appleford. This was clearly not the equipment of a poor peasant household and it has been suggested that the pewter might have come from the villa at Dropshort, 2.5km. to the west of Appleford,<sup>218</sup> or from a possible villa 800m. north of Appleford at Penn Copse.<sup>219</sup> However it is just possible that a villa could have existed at Appleford. In the south-western part of the site, which was destroyed without observation, cropmarks show a series of rectangular ditched enclosures. Within the largest of these is a rectangular cropmark which could represent a building (Fig. 3). It is particularly unfortunate therefore that no archaeological work took place on this part of the site. The possibility of the inclusion of a villa within a native settlement is one which could usefully be looked for elsewhere.

#### *Abandonment*

As with so many Romano-British rural sites, occupation at Appleford seems to have ceased late in the 4th century AD or early in the 5th. Waterholes F250, F200, F210, F220 and G3 were all filled in the fourth century,<sup>220</sup> as were the final recuts of the trackway ditch.<sup>221</sup> The presence of burials overlying the filled trackway ditches and the line of the track itself suggests that the feature went completely out of use after the final filling of the ditches.<sup>222</sup>

The lengthy occupation of the Appleford site can be taken to imply a considerable stability of population and economy in the millenium or more preceding c. 400 AD. Thus the apparently total abandonment of the site at this point represents a major disruption of a long-established pattern.

The village of Appleford, which was in existence by at least the 10th century AD,<sup>223</sup> lies adjacent to the Romano-British settlement, and this relationship may be seen else-

<sup>215</sup> See p. 69.

<sup>216</sup> See p. 18.

<sup>217</sup> H.C. Bowen and P.J. Fowler, 'Romano-British Rural Settlement in Dorset and Wiltshire', in *Rural Settlement in Roman Britain*, (1966) ed. A.C. Thomas, 43-68.

<sup>218</sup> D. Brown, 'A Roman Pewter hoard from Appleford, Berks.', *Oxoniensia*, xxxviii (1973), 206-8.

<sup>219</sup> See p. 16.

<sup>220</sup> See p. 32, 66.

<sup>221</sup> See p. 72, 77.

<sup>222</sup> See p. 66-8.

<sup>223</sup> G.B. Grundy, 'Berkshire Charters', *Berks., Bucks. and Oxon. Arch. J.* xxvii (1922), 144-5.

where locally, for instance in the case of the Romano-British settlement at Goose Acre Farm<sup>224</sup> and the present village of Lower Radley.

The fact that, in the area between Sutton Courtenay and Dorchester, we can recover from cropmark evidence so much of the Roman pattern of settlements and communications<sup>225</sup> suggests that there was a phase when many elements of the Romano-British landscape were abandoned, never to be re-used except as agricultural land.

Whereas in the case of some towns, such as Dorchester,<sup>226</sup> and perhaps at Abingdon,<sup>227</sup> there is evidence for a continuity of occupation from the Romano-British period through into Saxon times, in the countryside the complete abandonment of long-established sites such as Appleford, and the foundation of new settlements on different sites, suggests that the Romano-British patterns of population, economy, settlement and land-tenure were drastically altered or even obliterated in the late 4th/early 5th centuries AD.

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<sup>224</sup> D. Benson and D. Miles, op. cit., Map 31.

<sup>225</sup> Ibid., Maps 34 and 35.

<sup>226</sup> T. Rowley, 'Early Saxon Settlements in Dorchester-upon-Thames' in *Anglo-Saxon Settlement and Landscape* B.A.R. 6 (1974) ed. T. Rowley.

<sup>227</sup> M. Biddle, J.N.L. Myres and H.T. Lambrick, 'The Early History of Abingdon, Berks., and its Abbey', *Med. Arch.* xii (1968).