THE EXCAVATION OF A ROMAN TRACKWAY AND FIELD SYSTEM AT THREE LOCKS GOLF COURSE, STOKE HAMMOND, BUCKINGHAMSHIRE, 1994

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with contributions by

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The proposed extension of a lake at the Three Locks Golf Course, Stoke Hammond, Buckinghamshire, prompted an evaluation, carried out in 1992 by Wessex Archaeology, which located what appeared to be the stone footing of a Roman building, together with a cobbled area and several field ditches. The area of the lake extension was subsequently modified to preserve what was thought to be the core of the Roman site in situ. The subsequent excavation by Thames Valley Archaeological Services in 1994 of an area to the south revealed ancillary features, comprising Roman field and droveway ditches, gullies, pits and a large metalled area. The site produced a moderately large assemblage of pottery dating to the mid–late 2nd century through to the later 4th century AD, together with several Roman coins and metal objects, including a rare side-axe which is likely to be of Roman date.

Introduction

This report documents the archaeological excavation, carried out by Thames Valley Archaeological Services in 1994, in advance of the extension of a lake as part of the continuing development of the Three Locks Golf Course, Stoke Hammond, Buckinghamshire (SP 891287) (Fig. 1). The project was commissioned and funded jointly by Mr G Critchley and Peter Bennie Ltd and carried out to a specification agreed with the Buckinghamshire County Archaeologist (site code 3LGC94).

The site lies at a height of about 75m above Ordnance Datum on a level gravel terrace which, when stripped of topsoil, revealed that it was capped by a sandy, gravelly loam. The river Ouzel is 120m to the west and the ground forming the valley side begins to rise gently some 50m to the east. Previous gravel extraction has created a lake to the north occupying an area of *c.* 0.75 hectares and the generally flat topography is punctuated only by the bunkers and tees created for the golf course.

Previous observations and the recovery of Roman finds from the area (Buckinghamshire County Museum SMR Ref 1659) highlighted the archaeological potential of the proposal site. In 1973 approximately 20 sherds of Roman pottery associated with a 'scatter of stone' and a 'black soil' were recovered from the central part of the field where the later evaluation took place. In 1990 metal detectorists found 45 Roman coins ranging in date from the early 2nd century to the mid 3rd century AD in the area of the existing lake. Also, two possible ditches which contained Roman pottery and metalwork were recorded in the area. As a consequence, the County Archaeologist requested an evaluation of the site to determine its archaeological potential.

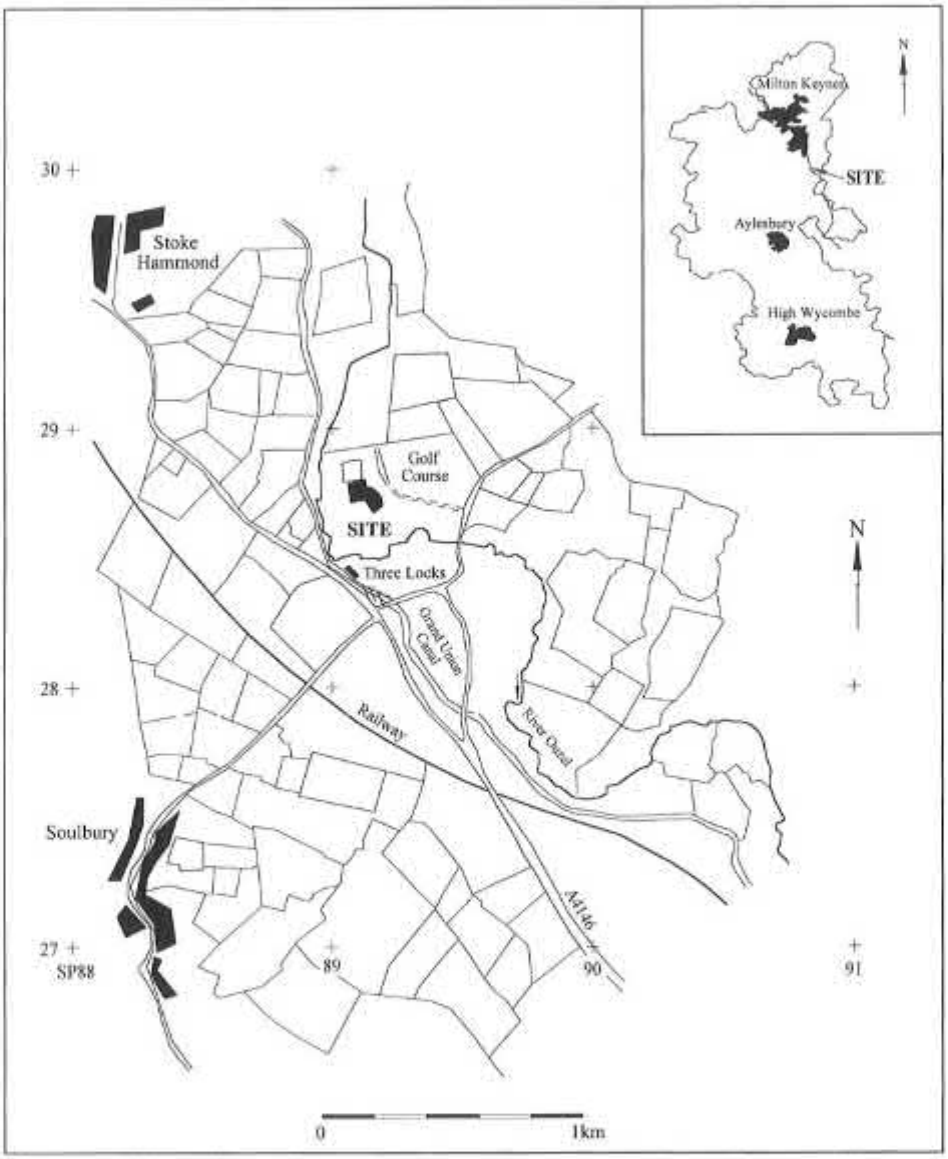

Fig. 1: Location of Three Locks.

The evaluation, by Wessex Archaeology, comprised eight 20m long and two 25m long trenches, all approximately 1.8m wide (Anon 1992a; Hearne 1991). Of the ten trenches, six contained archaeological deposits but waterlogging in trenches 6, 7 and 8 meant that any exposed features could not be examined in detail. Features in trenches 3, 5 and 6 were confidently dated to the Roman period, whereas those in trenches 2, 7 and 8 were undated but likely to be Roman. Trench 2 contained two ditches/gullies (48 and 50) aligned NW–SE. Trench 3 contained a single waterlogged ditch (40) aligned east-west. Roman pottery, tile, animal bone and two iron nails were recovered from Trench 5, which also revealed an east-west wall (in section) consisting of two courses of ferruginous sandstone slabs (36). A hollow (55) towards the centre of the trench was filled with dense cobbling (31 and 33) and cut by a ditch/gully (55). Trench 6 revealed two ditches (46 and 52) and two further ditches/gullies were found in trenches 7 and 8 (18 and 13 respectively). An additional trial trench by Buckinghamshire County Museum Archaeology Section was excavated to ascertain water levels (Anon 1992b).

The subsequent excavation by TVAS comprised the mechanical topsoil stripping of approximately 8520sq m, the western side of which had not been evaluated, although evaluation trenches in the centre and in the eastern part of the site had revealed a series of field ditches. The site did not include the area around Trench 5 where the evaluation had revealed a wall and a cobbled area as this was left *in situ*.

Results

The excavation revealed a series of ditches and other features. In all 31 features were investigated: nine ditches (102, 105 and 300–306); four gullies (121, 139, 201 and 208); thirteen pits (100, 104, 107, 109, 110, 124, 125, ?129, 141, 149, 200, 202 and 209); three postholes (140, 146 and 147); one hearth/burnt patch (126); and one metalled area (106 with overlying layers 101, 166 and 167). All of the features that produced dating evidence belong to the Roman period. They consist of part of a field system, several pits and an area of metalling.

Ditches

The ditches were numbered 102, 105 and 300–306. Sections through these were individually numbered (apart from 102 and 105). For convenience each drawn section number and its accompanying 'slot' number are tabulated below.

Ditch No	*Section and Slot Nos*
300	S19 slot 137
301	S6 slot 128, S8 slot 130
302	S13 slot 194, S34 slot 131, slot 142 (no section drawing)
303	S1 slot 127, S9 slot 123, S11 slot 144, S14 slot 136, S15 slot 138, S20 slot 132
304	S21 slot 133
305	S11 slot 145, S17 slot 148
306	S2 slot 122, S3 slot 111, S4 slot 108, S23 slot 143, S26 slot 103, S35 slot 203

It is evident that the excavation only uncovered a small portion of this field system and any interpretation is based on incomplete evidence. The two parallel ditches (302 and 303/4) in the north of the site may form sides of a droveway passing from north-west to south-east (Fig. 2), the pattern of which is similar to that at Farmoor, Oxfordshire (Lambrick and Robinson, 1979). At Farmoor the droveway's flanking ditches were approximately 12.5m apart; at this site they are *c.* 14m apart. Several of the ditches appear to have been recut one or more times (eg Fig. 3, S13 and S19).

Metalled Area

Towards the centre of the excavated area, layers 101, 166 and 167 contained a substantial proportion of the pottery and bone recovered from the site and probably represent dump deposits. Beneath these layers was an area of hard standing, 20m × 12m, made up of stones and cobbles from 10 to 250mm wide, some angular and some rounded. It had no clear edges although the western limit was cut by an earlier evaluation trench. In at least two places the metalled area had been disturbed by plough stripes and there was also an area of modern disturbance near its centre. One feature cut through the metalling: the undated pit 200. Once the metalling was removed, further possible fea-

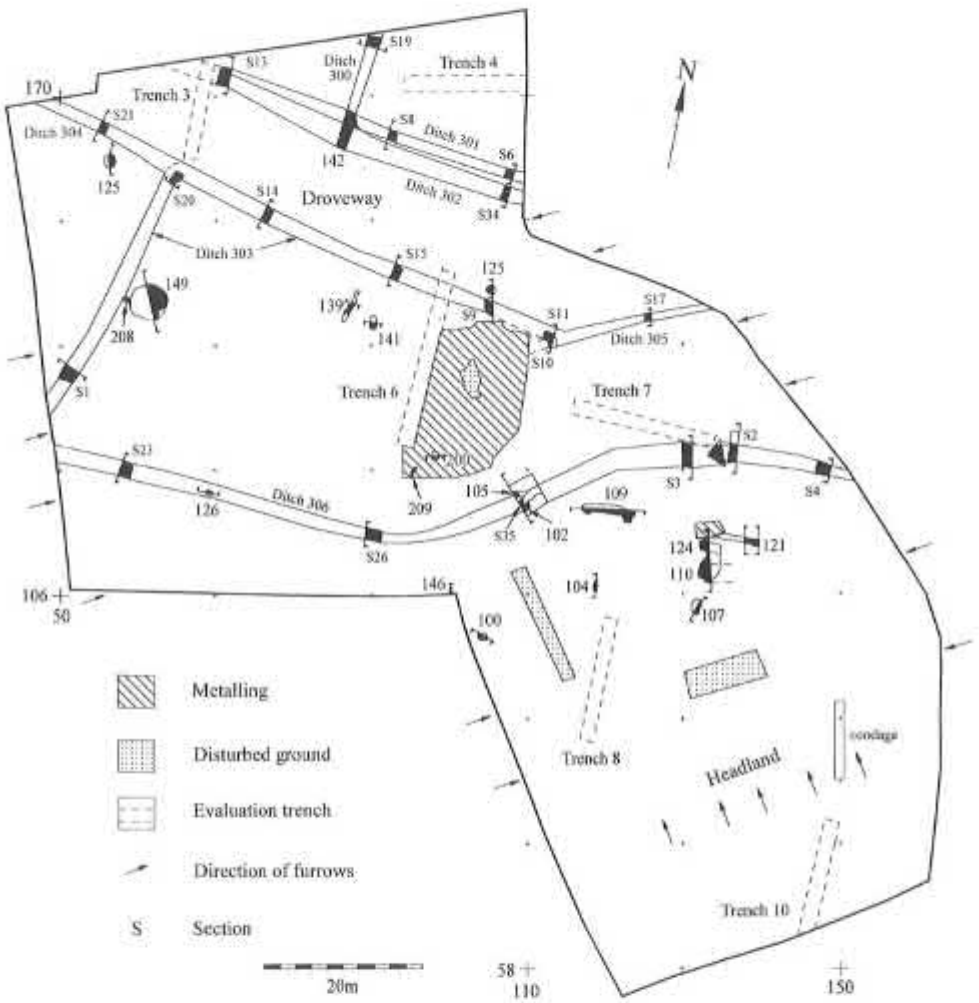

Fig. 2: Plan of the excavated area, including location of some of the evaluation trenches (trenches 3, 4, 6, 8 and 10).

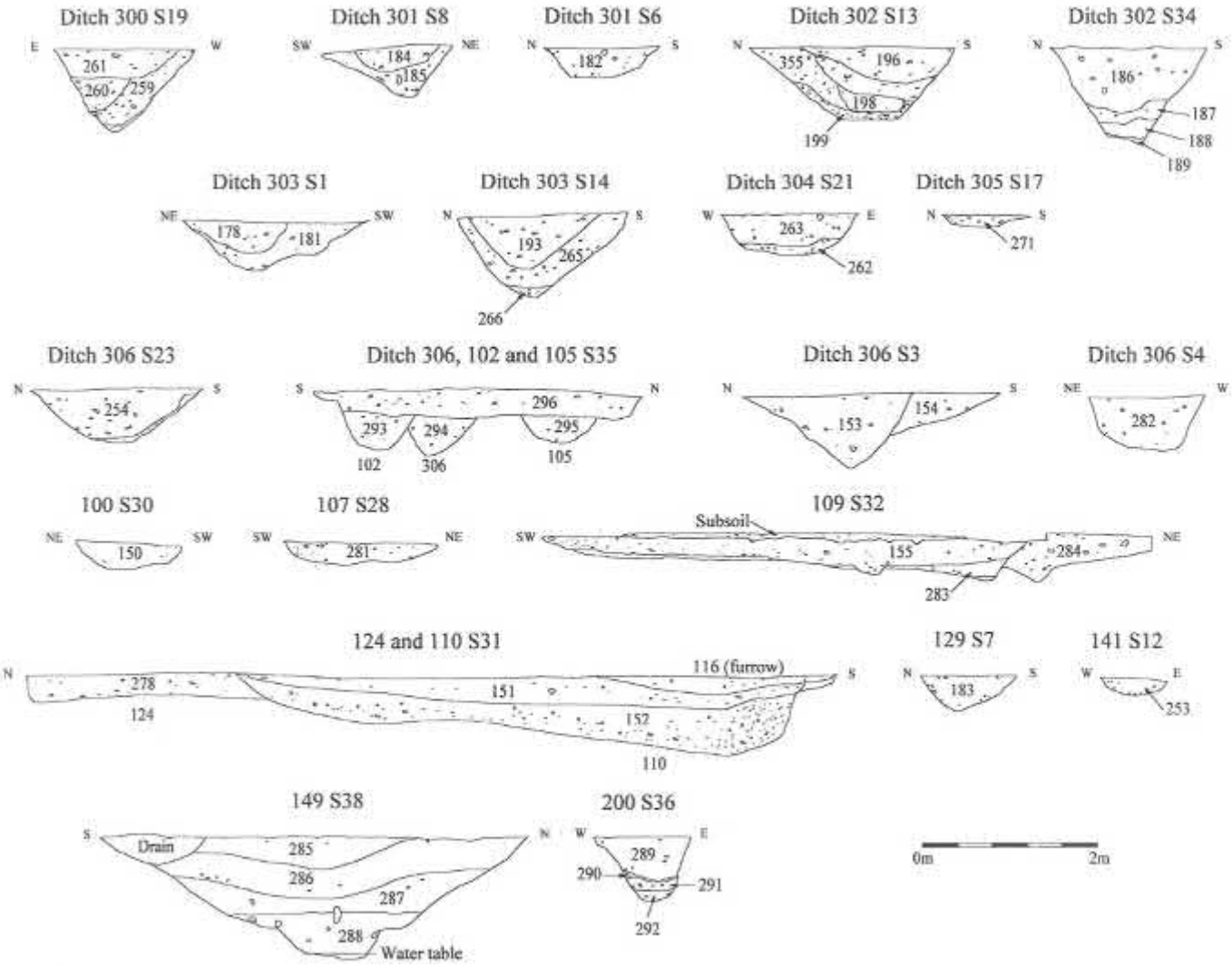

Fig. 3: Selected sections of the excavated features.

tures were exposed but most were thought to be tree/root holes. Of these, feature 209 was kidney-shaped with a charcoal-rich fill and may be the result of a root burnt *in situ*.

The metalled area was located within the enclosed fields but there was no evidence for buildings in the vicinity of the metalling. It is, therefore, difficult to determine whether the metalling functioned as an area of hard standing only, or as a courtyard or floor of a structure which has left no other trace. The insubstantial nature and irregular pattern of the metalled area, plus the fact that it was slightly hollow, may perhaps suggest that it was laid to provide a firmer footing in an area liable to be wet.

Other Features

Thirteen pits were excavated, ranging from the large circular pit 149 to very small or irregular features (eg 100 and 109). The large pit 149 had steep sides and was waterlogged at the bottom. It produced a wide range of finds including part of a quernstone, part of a possible whetstone, some slag, and a piece of worked and nailed wood from the base (Fig. 6). A hearth/burnt patch had been cut into the top of ditch 306. Only three possible postholes were discovered on the site, one in the side of gully 139, the second south of the metalled area (146) and the third west of this near 126 (not on plan).

Phases

This excavation has only examined a part of what appears to be a much larger area of activity. The evaluation stage of the project found evidence of a stone-founded structure to the north-east of the excavation but this feature was excluded from the development area and was preserved *in situ*. The pottery evidence and some coin evidence for the later periods, indicates occupation in the area from around the mid to late 2nd century through to the later 4th century AD, with particularly intense use during the 3rd century. Within this broad chronological band three possible phases of activity may be identified from the pottery: a first phase from the mid–late 2nd century through to the 3rd century AD, a second phase in the later 3rd to 4th centuries and a final phase of activity in the mid–later 4th century (Fig. 4).

Phase 1 (Fig. 4: A)

The examination of ditch profiles and recuts, together with pottery, provides evidence for the first phase of activity. In the northern part of the site, the first cut of ditch 300 (S19, fill 259) is similar to that of ditch 302 at its western end (S13, 199, 355), implying that a right-angled ditch was the first to be dug in this sequence of ditches. Ditch 304, to the south-west, may also belong to this phase, although there is no direct pottery evidence from S21 to support this. Ditch 303 has produced pottery belonging to the second phase (see below) and this ditch cuts 304, which therefore pre-dates it. Ditch 306 has also produced pottery belonging to the first phase (from S23, S26 and S2). However, no pottery was recovered from S35 and the very few sherds from S3 fit well with the second phase of use. This ditch appears to snake across the site from west to east, disappearing under the east and west baulks and presumably joining with ditch 303 beyond the limits of the excavated area to the west. The profile of this ditch is similar in many of the sections but differs at S2 and S3 where it is possible that it has been recut at some point.

Also of this phase are various pits (125, 141, 109 and 124), together with the small gully 121.

Phase 2 (Fig. 4: B)

The western end of ditch 302 was probably recut during the second phase of use (S13, 196–8) and then extended across the site to the eastern perimeter (S34, 186–189). A new enclosure was formed by digging ditch 303 to the south and a new droveway created between the two. Ditch 303 would appear to end at or around S11, where it was cut by shallow ditch 305. The metalled area appears to have been laid at this time. Pit 107 and posthole 100 were also in use at this time.

Phase 3 (Fig. 4: C)

The third phase comprises the shallow ditch 301, which appears to continue as a right-angle utilising the former ditch 300 (S6, 182; S8, 184–5; S19, 261). This shallow recut may also have extended along the western arm of ditch 302 (S13, 196).

Another shallow ditch/gully, 305, also appears

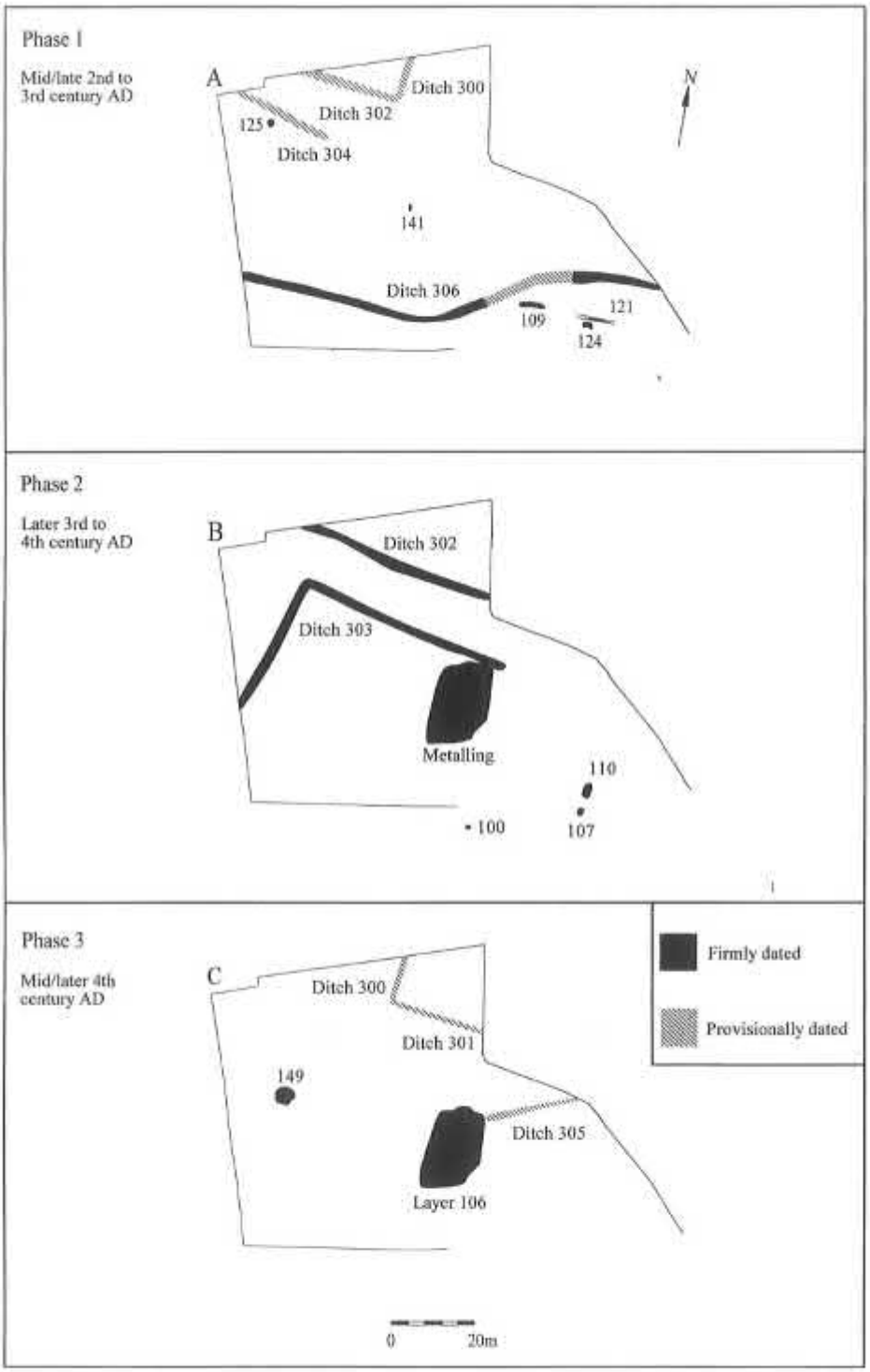

Fig. 4: Probable phases of activity in the excavated area.

to belong to this phase and, as it cuts the top of ditch 303 it is certainly later than it. The large pit 149, adjacent to ditch 303 at the western edge of the site, has also produced pottery of this phase, as has layer 101, which overlies the area of metalling indicating that it was still in use.

Headland

At the southern end of the site was an apparent headland visible as an earthwork (Fig. 2). A sondage 1.4m wide and 0.5–0.7m deep machine-excavated across this revealed gravel at a depth of 0.35m at the southern end but did not locate a buried soil. The plough stripes visible during the excavation to the north of the headland are oriented north-east to south-west and are approximately 10m apart, whereas those to the south of the headland are at right-angles to this and only 7m apart. It is likely, therefore, that this is a headland or boundary between two furlongs of the Medieval open field system created by the gradual accumulation of soil at the ends of the plough stripes to the south. Unfortunately, the full pattern of plough furrows has not been revealed and at least one 'furrow' in the northern part of the site proved coincident with a land drain.

The Finds

Pottery

by Jane Timby

A moderately large assemblage of some 2530 sherds (34kg) of Roman pottery was recovered from the excavation. The material was sorted into broad fabric types and quantified by weight and number for each excavated context.

Fabrics and forms

Some 32 fabrics were defined based on the main macroscopic characteristics of the paste and surface treatment (see below). The group was dominated by two local fabrics: H1 a shelly ware and O1 a pink, grogged ware, which together accounted for 45% by weight of the total assemblage. A small quantity of imported ware was present including samian, Rhenish beaker and Dressel 20 olive oil amphora. Regional imports include a moderate amount of Oxfordshire wares: colour-coated tableware and mortaria and small quantities of Nene Valley colour-coated ware and Dorset black-burnished ware (BB1). The forms were fairly limited in type with jars featuring as the dominant type closely followed by bowls/dishes. Mortaria were also present but restricted to examples from the Oxfordshire industries. The local wares included several grey wares copying the later BB1 forms, in particular flanged bowls and straight-sided dishes. Other vessels present were limited to small numbers of flagons and cups. Of particular note was a single sherd of red-painted ware from 125 (179) which may be a Northamptonshire product. Another unusual item was a pottery ring from ditch 303 S1 (181) in a grey sandy fabric with a black surface.

Description of pottery fabrics and forms

All dates AD unless otherwise stated. The number of sherds present and weight are given in brackets.

(i) Imported Wares

Samian (No. 22, wt. 181gms)

The samian was not well preserved and largely comprised plain bodysherds. The main forms present include cups Drag. 33, bowls Drag. 31, mid–late 2nd century date.

East Gaulish (Rhenish) ware (No. 3, wt. 5gms)

Three beaker bodysherds from ditch 306 (S23) and layer 101 probably dating to the 3rd century.

Dressel 20 amphora (No. 6, wt. 221gms)

Olive-oil amphora imported into Britain from Southern Spain during the 1st–3rd centuries. Sherds were recovered from the metalled area and from ditch 303 (S1, 178).

(ii) Regional Imports

Nene Valley colour-coated ware (No. 33, wt. 364gms)

Featured sherds include beakers, a castor-box and a flanged bowl. Late 2nd–4th century.

Oxfordshire wares (Young 1977)

Fabric C2: Oxfordshire colour-coated ware (No. 78, wt. 811gms). Forms include Young (1977) types C45, C49, C51, C55, C73 and C75 dating from the later 3rd and 4th centuries.

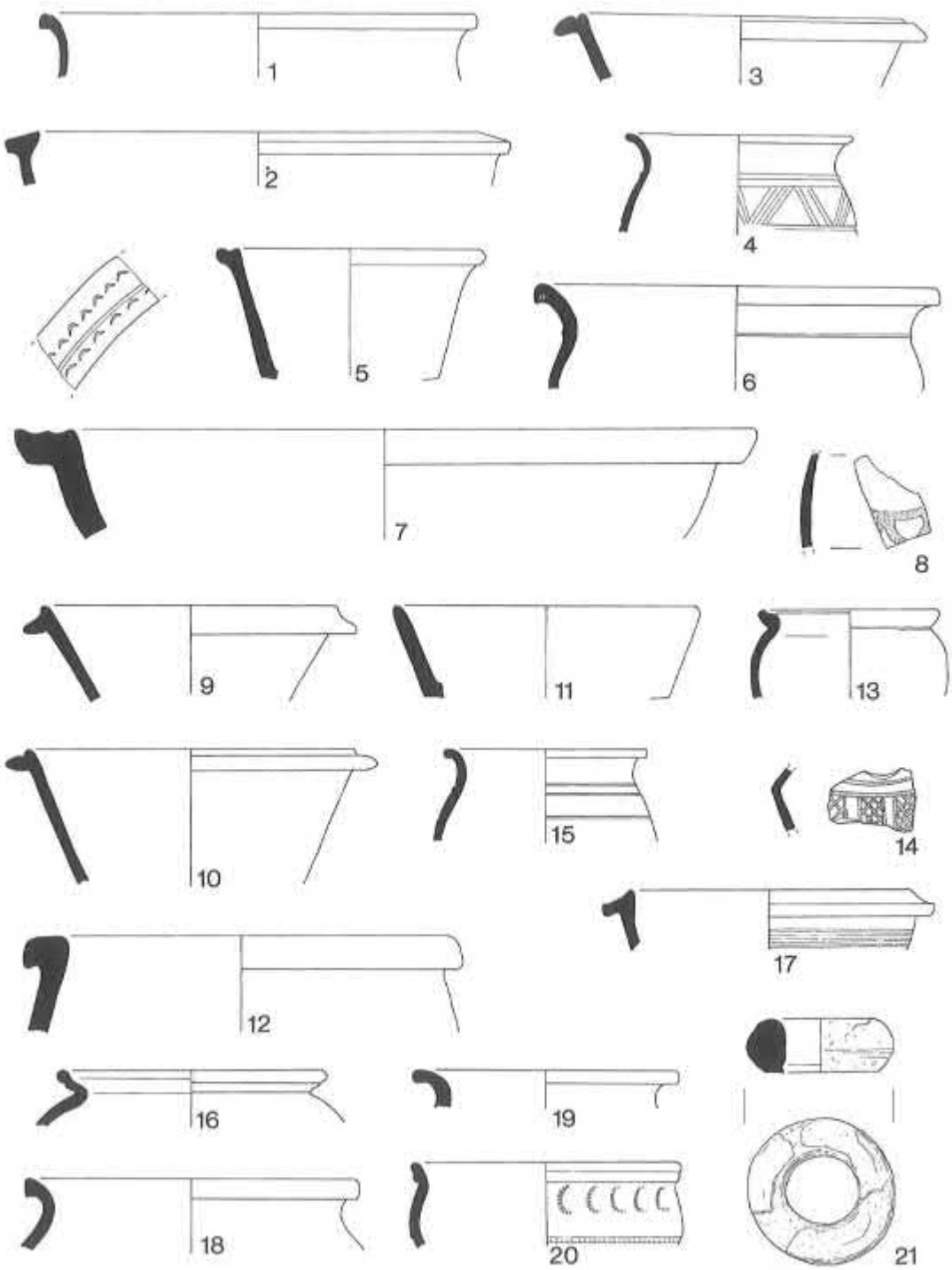

Fig. 5: Pottery (*scale 1:4*).

Fabric W1: Whitewares (No. 15, wt. 121gms). Forms include jars, flagons and bowls mainly dating to the 2nd–3rd centuries.

Fabric F3: Parchment ware (No. 2, wt. 24gms). Three bodysherds, late 3rd–4th century.

Fabric M1: Whiteware mortaria (No. 23, wt. 808gms). Forms include Young (1977) types M6, M7, M17, M18, M20 and M22 ranging in date from the later 2nd through to the 4th century.

Fabric M2: Colour-coated mortaria (No. 12, wt. 185gms). Young (1977) forms C97 and C100 dating to the later 3rd–4th centuries.

Fabric M3: White-slipped mortaria (No. 1, wt. 64gms). Single example from a surface layer. Manufactured from the late 3rd–4th centuries.

Dorset black-burnished ware (BB1), (No. 41, wt. 612gms)

(iii) Local Wares

Fabric H1: Shelly ware (No. 488, wt. 5681gms). A smooth, soapy, dense fossil shell-tempered ware. Equates with Marney (1989) fabric 1. Kilns producing such fabrics have been documented at Harrold, Bedfordshire and Emberton, Buckinghamshire. The fabric accounts for 17% by weight of the assemblage. Evidence from elsewhere shows it to be around for most of the Roman period from the 1st to 4th centuries with an apparent decline in the 3rd century (Marney 1989, 58ff). It is particularly common in the mid to later 4th century. Forms: Mainly jars largely with hooked, triangular, or everted rims and a lesser number of bowls. Of particular note is a large storage jar with a reeded rim decorated with incised wavy lines from layer 101. There did not appear to be any of the earlier 1st century types with channel rims present in this assemblage, suggesting the wares are predominantly later Roman in date. In addition to pottery, tiles were also made in the same fabric.

Grog-tempered wares

Fabric G1: (No. 7, wt. 426gms). A brown or dark grey grog-tempered ware. Forms: Handmade storage jars.

Fabric GH: Grog and shell-tempered ware (No. 4, wt. 56gms). As G1 but with visible limestone/shell in the paste. No featured sherds.

Oxidised wares

Fabric O1: Soft pink grogged ware (No. 575, wt. 9512gms). A moderately soft, powdery ware containing many rounded clay pellets. Equates with Marney (1989) fabric 2 suggested to be of local manufacture in the Milton Keynes area. In the 2nd and 3rd centuries the fabric occurs in a sandier version (O2) or contains shell/limestone inclusions. The fabric first occurs in the mid 2nd century where it increases at the expense of the shelly wares. It is particularly important in the 3rd century but declines again by the 4th century when the shelly wares begin to pick up. The fabric accounts for 28% of the total assemblage. Forms: Wide-mouthed jars with triangular rims, hooked rims or everted thickened rounded rims. Only a single bowl rim was recorded. The same fabric was also used to manufacture tiles.

Fabric O2: Sandy pink grogged ware (No. 52, wt. 1073gms). A sandy version of fabric O1. Forms: Recognised as jars only including at least one storage jar.

Fabric O3: A pink sandy ware (No. 4, wt. 13gms). A fine–medium sandy ware, pink in colour. Source unknown. Form: The only form is a cup from layer 166.

Fabric O4: A fine orange micaceous ware (No. 5, wt. 38gms).

Fabric O5: Miscellaneous oxidised sandy wares (No. 81, wt. 819gms).

Fabric O6: Fine-medium orange sandy ware (No. 27, wt. 262gms). A fine-medium grained sandy ware with sparse iron. Forms: Mainly unfeatured sherds but including at least two jar rims.

Fabric O7: White-slipped orange ware (No. 1, wt. 13gms). A dark orange fine sandy fabric with remains of a thin white slip. Form: Flagon with a hollow-disked neck.

?Local colour-coated ware

Fabric C3: (No. 23, wt. 143gms). Mainly orange sandy wares with brown, orange or red colour-coats which do not match with either the Oxfordshire or Nene Valley range of wares. Forms: Beakers, jars and dishes.

Reduced wares

Fabric R1: Medium grey sandy ware (No. 80, wt. 1011gms). A wheelmade, medium grained sandy grey or black ware. Forms: Forms include jars, necked everted, thickened rim and triangular hooked rim varieties, flanged bowls, straight-sided dishes and bowls.

Fabric R2: Fine grey ware (No. 53, wt. 773gms). A moderately fine, powdery ware containing sparse clay pellets, organic matter and iron. Generally pale

to medium grey in colour. Forms: Mainly bowls, straight-sided and flat-rimmed jars and a possible tankard.

Fabric R3: Fine-medium grey sandy ware (No. 60, wt. 789gms). A fine-medium sandy fabric containing a moderate to common density of well-sorted quartz sand and sparse iron. Reduced version of fabric O6. Forms: Everted thickened rim and simple rim jars, straight-sided dishes.

Fabric R4: Black sandy micaceous ware (No. 26, wt. 792gms). Description: A hard, fine-medium black sandy ware distinguished by a high mica content. Forms: Jars and bowls.

Fabric R5: A fine grey micaceous ware (No. 14, wt. 393gms). Description: A moderately hard, slightly sandy textured grey micaceous ware, contains less sand than R4. Forms: No featured sherds but mainly closed vessels.

Fabric R6: Miscellaneous grey/black sandy wares (No. 472, wt. 4761gms). Forms: Forms mainly restricted to everted rim jars, flanged bowls, grooved rim bowls, straight-sided bowls/dishes and flat-rimmed bowls. Included in this group is a single bodysherd with red-painted decoration from pit 125.

Fabric R7: Black-slipped grey sandy ware (No. 20, wt. 250gms). Forms: Mainly BB1 copies, everted rim jars and flanged bowls.

Fabric R8: Black sandy ware (No. 75, wt. 1279gms). Forms: Mainly occurs in forms similar to those found in the BB1 repertoire, namely everted rim jars and bowls with flanged, grooved or flat rims and straight-sided dishes.

Fabric R9: Forms include flanged bowls, straight-sided dishes, a grooved rim bowl and jars, mainly indicating a date in the 3rd and 4th centuries.

Fabric R10, Coarse grey sandy ware (No. 1, wt. 6gms). A distinctive fabric with a moderate scatter of rounded quartz sand up to 0.5mm in size. No featured sherds.

Fabric R11, Grey sandy ware (No. 67, wt. 1092gms). A medium-fine textured, dense, well-fired sandy grey ware comparable to the Alice Holt grey ware. Forms: Jars and straight-sided dishes/bowls.

Chronology

The pottery indicates occupation in the area from around the mid–late 2nd century AD through to the later 4th century AD. Two fabrics dominate the assemblage, shelly wares (fabric H1) and the soft pink, grogged ware (fabric O1). Both fabrics show a relatively long use, the former from the 1st century through to the later 4th, the latter from the 2nd through to the early 4th century AD. The dominance of fabric O1 would suggest particularly intense use during the 3rd century AD.

A large percentage of the pottery sherds were recovered from layer 101, located above the metalling. In total 101 accounts for 41% by weight and 37% by sherd number. The pottery includes examples of most of the wares present with a *terminus post quem* in the later 4th century AD. Generally speaking the material from this deposit is relatively well-preserved with a moderately good average sherd weight suggesting little disturbance. Small quantities of pottery were recovered from 112–116, furrows above 101, which were less well-preserved with almost half the sherd size compared to that from 101. The metalled area below 101 (ie 106) produced a further substantial quantity of material. This does not appear to contain much late material, with the emphasis on the 3rd, possibly into the 4th century AD.

A good group of pottery suggesting a date in the mid–later 4th century AD was recovered from pit 149 (285/86). Groups of pottery dating to the later 3rd–4th century were recovered from pits 100 (150), 107 (281) and 110 (151–2). Similar pottery came from several ditches: 102 (293); 105 (295); 302 (S13, 196–7 and slot 142, 352); 303 (S1, 178/181 and S14, 193) although material from S14 (265) may be slightly earlier; and 306 (S35, top and S3, 153–4) although S3 contained very few featured sherds.

Slightly earlier groups of pottery, perhaps 2nd/3rd century AD, were recovered from: possible gully 121 (163/165/279/280); ditch 306 (S26, 273; S2, 164; and S23, 254); pits 110 (152), 125 (179), 141 (253) and possible pit 109 (155/283/284); and two layers over the metalling, 166 and 167.

Other features producing single or very low numbers of sherds, preventing any chronological assessment, include pits 104, 124 (278) and 200 (289); ditches 303 (S20, 264; S15, 250; and S11, 256), 305 (S11, 270) and 306 (S35, 294); and gully 139 (251).

Catalogue of illustrated sherds (Fig. 5)

1. Wide-mouthed jar. Fabric 01. 102/105/203 (296).
2. Large bowl with a squat flanged rim. Fabric H1. 102/105/203.
3. Flanged bowl imitating BB1. Fabric R1. (101) 105E 136N.
4. Necked jar with a burnished line chevron pattern. Fabric R3. (101) 98E 130N.
5. Squat flanged rim deep bowl. Fabric R8. (101) 99E 137N.
6. Wide-mouthed jar in an oxidised ware. Fabric 01. 100E 133N.
7. Large bowl with impressed finger-nail decoration on a reeded rim. Blackish-brown ware. Fabric G1.
8. Bodysherd in a white sandy ware decorated with a dark red painted pattern. (101) 98E 136W.
9. Flanged bowl, in a reduced ware. Fabric H1. 110 (151/152).
10. Flanged bowl. Fabric R1. 110 (151/152).
11. Straight-sided dish with black surfaces in a red-brown core. Fabric R7. 110 (151/152).
12. Large storage-type jar. Fabric 01. 110 (151/152).
13. Small lid-seated jar. Fabric R6. 125 (179).
14. Carinated bodysherd from a closed form, orientation uncertain. Fabric R6 decorated with a red painted design. 125 (179).
15. Necked jar. Fabric R3. 103 (273).
16. Lid-seated jar. Fabric R2. 143 (254).
17. Flanged bowl with a rilled exterior. Fabric H1. 149 (286/287).
18. Wide-mouthed jar. Fabric 01. From metalled area 99E 134N.
19. Jar. Fabric H1. From metalled area 96E 125N.
20. Oxfordshire colour-coated bowl with stamped decoration, as Young 1977, type C73 dated AD ?270–400+. 127 (178).
21. A well-fired pottery ring in a grey sandy fabric with a black surface which has laminated in places. The purpose of the ring is unclear, although one flatter surface lending it some stability suggests it could have supported a vessel. Alternatively it may be a weight, or have had some other undefined purpose. It is associated with material dating to the 4th century. 127 (181).

Animal Bone

by Sheila Hamilton-Dyer

Animal bone was recovered from most features and dating indicates that the material ranges from the late 2nd to the late 4th centuries AD. Identifications were made using the modern comparative collections of S Hamilton-Dyer. Many of the bones were fragmented and, where possible, these have been joined and counted as single bones. Measurements were taken using a vernier calliper and are in millimetres. In general these follow the methods of von den Driesch (1976). Withers heights are based on factors recommended by von den Driesch and Boessneck (1974). Table 1 lists all the species identified and their abbreviations. Further information not detailed in the text, including toothwear codes following the method of Grant (1982), is in the archive.

A total of 764 bones and bone fragments were recorded, nearly half of which came from the layer 101. Bones of cattle were the most frequently identified, with sheep/goat second. Other species present in small quantities are horse, pig, dog, red deer, roe and fowl. Undiagnostic fragments have been divided into cattle/horse sized (LAR) and sheep/pig sized (SAR) with a further group identified only as mammalian. The distribution of the species is given in Table 2.

TABLE 1:
Species list and abbreviations used in text, tables and archive

HOR	domestic horse
COW	domestic cattle
RED	red deer, *Cervus elaphus*
ROE	roe, *Capreolus capreolus*
S/G	identified to 'ovicaprid' only
SHE	domestic sheep
LAR	large ungulate (probably mostly cattle but may also include horse and red deer)
SAR	small artiodactyl (probably mostly S/G but may also include some pig)
PIG	domestic pig
DOG	domestic dog
MAM	unidentified bone, probably mostly SAR and/or LAR
FOW	domestic fowl

TABLE 2:
Species distribution

Feature	*Horse*	*Cattle*	*Sheep/ goat*	*Pig*	*Deer*	*Cattle size*	*Sheep size*	*Mammal*	*Dog*	*Fowl*	*Total*
Metalling	1	19	21	–	1	58	24	–	–	–	124
%	0.8	15.3	16.9	0	0.8	46.8	19.4	0	0	0	
Layer 101	3	63	58	2	3	104	68	3	3	1	308
%	1	20.5	18.8	0.6	1	33.8	22.1	1	1	0.3	
Ditch 303	6	35	8	3	–	30	4	–	1	–	87
Ditch 306	–	15	4	–	–	13	3	–	1	–	36
Other ditches	6	36	10	1	–	27	13	–	–	–	93
Total ditches	12	86	22	4	0	70	20	0	2	0	216
%	5.6	39.8	10.2	1.9	0	32.4	9.3	0	0.9	0	
Pits	6	49	18	3	1	22	15	–	1	1	116
%	5.2	42.2	15.5	2.6	0.9	19	12.9	0	0.9	0.9	
Grand total	**22**	**217**	**119**	**9**	**5**	**254**	**127**	**3**	**6**	**2**	**764**
%	**2.9**	**28.4**	**15.6**	**1.2**	**0.7**	**33.2**	**16.6**	**0.4**	**0.8**	**0.3**	

The main domestic mammals

Cattle

Bones of cattle dominate the assemblage at 28.4% of the overall total and 62.9% of the cattle/sheep/pig total. Most of the larger unidentified fragments are also probably of cattle, as bones of horse and red deer are few. This class includes all ribs and vertebrae other than the axis and atlas. The bones are a mixture of anatomical elements both from primary slaughter waste (heads and feet) and butchery and kitchen waste. Butchery marks are of two types: knife marks made when stripping meat from the bone and marks from a heavy bladed instrument such as a cleaver or axe. Several of the metapodia from layer 101 had been axially split. Bones of the elbow and ankle were often heavily chopped rather than carefully disjointed. The distal scapula was also often chopped and sometimes had evidence of stripping the meat from the blade with knives. This style of butchery is not usually found at Iron Age and native Roman sites. Most of the bones were of adult or sub-adult animals and most of the jaws had fully erupted tooth-rows but a small number of calf bones (though not neonatal) were identified and also some jaws with the deciduous 4th premolar still present and the third molar unerupted. One of the mandibles is anomalous, having no final cusp on the third molar.

Sheep/goat

No bones could definitely be identified as goat, but many could be positively identified as sheep and it is likely that most, if not all, the ovicaprid bones are of sheep. They form 15.6% of the total and 34.5% of the cattle/sheep/pig total. The bones are a mixture of anatomical elements with a slight bias against fragile and small bones such as scapula and toes. Humerus and femur were also slightly under-represented especially in layer 101 where these were rarely identified but where there were many broken limb-shaft fragments. A skull fragment from pit 110 is of a hornless animal while another from ditch 303 (S15) has short, sturdy horn-cores and is probably male. No bones of young lambs were found but some of the jaws and bones were of immature animals. Butchery marks were mostly of the type associated with disjointing with knives.

Pig

Pig bones are very few, a total of nine fragments, less than 2% of the overall total and only 2.6% of the cattle/sheep/pig total. No bones were recovered from the metalled layer 106 and only two from layer 101. One of these is a chopped jaw, probably from splitting a pig's head in half axially. The percentage of pig is slightly higher for pit contexts and, although the numbers involved are too small for statistical analysis, this may indicate better preservation in these contexts.

Other species

Horse bones number 22, less than 3% of the total. They consist of a variety of anatomical elements including a complete radius and a complete metacarpus; none of the bones had evidence of butchery. A metatarsus from the metalled layer is pathological with the tarsal bones fused on and extra bone growth around the joint but not involving the joint surfaces. This condition is not uncommon in old horses. Red deer is represented by fragments of antler, a tine tip from the metalling and three pieces from layer 101. The largest of these is part of the crown cup of a large deer and has been partly worked. Roe is also present: a partial tibia was recovered from pit 149.

Evidence of dog is direct and indirect, several bones show evidence of dog gnawing and six dog bones were also recovered. The three bones from layer 101 were all jaws without teeth, a similar jaw was recovered from ditch 303 (S15). A metapodial in ditch 306 (S3) was the only post-cranial bone recovered. The remaining bone is a maxilla from pit 100. Bird bones numbered two only, both are fowl tarsometatarsus, one from layer 101 and the other from pit 149. The latter is complete and spurred, indicating a male bird.

Worked bone

In addition to the smoothed antler fragment there are five worked bone fragments, three from layer 101 and two from the metalling. These appear to be rejected pin blanks or rough-outs. In one case the bone used is a cattle metapodial but the others have been too modified for identification.

Comparison of feature groups

Detailed statistical analysis of such a small assemblage is not possible but a number of observations can be made. There are differences in the sizes of fragments recovered from the different feature types. From both the metalling layer and layer 101 above it, over 50% of the fragments are under 50mm and very few are over 150mm (Table 3). Material from the ditches and pits included more of the larger fragment sizes and more bones were measurable. The largest pieces of bone were found in the ditch contexts. This is consistent with a pattern of disposal seen at most sites, with large bones, often of cattle and horse, in ditches and smaller bones, mostly sheep and pig, in pits. Many bones were recorded as slightly or moderately eroded, this did not appear to be from soil erosion as the fragments were generally well preserved with a hard, even mineralised, appearance.

The percentage of eroded bones from the ditch contexts is 55.5%. The percentage is lower for bone from the metalled layer and the pits at just over 25%. The percentage from layer 101 above the metalled layer is markedly higher at 68.5%. Some of these bones also had surface scratch marks. It is interesting to note that the three dog bones recovered from layer 101 are lower jaws, a relatively tough bone in this species. None had teeth, the spaces being hard packed with soil, suggesting that they had been disturbed after the flesh had decayed. This is somewhat at variance with the ceramic evidence which suggests that the sherds had not been disturbed. This may indicate that the material came from different sources and perhaps the animal bone had been redeposited from a context where it had been exposed to mechanical erosion.

Animal sizes

The small number of cattle measurements were all of large animals. The four measurable distal tibiae range from 58.4mm to 67.2mm. These are comparable with the large group from Portchester which range from 50mm to 69mm (Grant 1975) and the group of 13 from Gadebridge Park, Hemel Hempstead, which range from 44mm to 60mm (Harcourt 1974). Similarly, the metapodia are large and fit well with material from these sites. Four are sufficiently complete for estimation of the

TABLE 3:
Percentages of fragment sizes and erosion

	Size class				
Feature	*0–49mm*	*50–99mm*	*100–149mm*	*150mm+*	*eroded bones*
Metalling 106	54.0	39.5	4.0	2.4	25.8
Layer 101	52.6	38.6	4.9	3.9	68.5
Total ditches	39.4	37.0	10.2	13.4	55.5
Pits	32.8	43.1	15.5	8.6	26.7
Total %	**46.1**	**39.0**	**7.9**	**7.1**	–

withers height: these range from 1.133m to 1.286m. The smallest and the largest are probably both male. It has been noted that cattle bones from Roman sites, especially in south and east England, are larger than those from Iron Age sites. There were few measurable sheep bones but three offered withers height estimations of 0.616m, 0.636m and 0.645m. These are comparable with other material in the south-east. The few horse bones include two complete ones, a radius in ditch 303 (S1) giving a withers height of 1.367m and a metacarpus in pit 149 giving a withers height of 1.545m. This is just over 15 hands and such large horses are rare but not unknown from Roman sites. One of the two fowl bones is a complete male tarsometatarsus measuring 81.9mm in length. This is small for most modern breeds but compares well with measurements of spurred tarsometatarsi from pre- and proto-historic material.

Conclusion

This is a very small assemblage and any interpretation should be treated with caution. The large size of one horse bone and the cattle bones, as well as the style of some of the butchery marks on the bones, suggest a Roman or Romanised settlement, rather than a native one. Overall, the general impression is not of a high status site; there are few bones of pig and fowl and no bones of fish. However, bones from a more central position at the settlement may have provided different species proportions. As it stands the evidence points towards the vici and Romanised settlement pattern rather than a villa, which would usually produce more pig bone (King 1989).

Metalwork
by David Richards

A metal detector survey by members of the Milton Keynes Searchers enhanced the recovery of metal finds from the site, searching the surface of the excavated area and spoil heaps. Some 30 copper alloy and *c.* 40 iron objects of various dates make up the metalwork collection, together with *c.* 0.5kg of lead scrap (a full catalogue is in the site archive). Most of the non-ferrous material is unstratified and is probably present as a result of accidental incorporation into manure spread onto arable fields in late Medieval times. However, in themselves many of the objects are interesting as they are recognisable as buckles, belt mounts and pieces of bracelet from the 14th and 15th centuries. The lead is undatable dross from a casting industry and includes several pieces of sprue or casting cones. Although many of the iron objects are similarly unstratified, others are from stratified Roman contexts. Twenty-five objects are nails or nail fragments, all but one of the recognisable pieces being Manning type 1, ie standard flat-headed hand-made nails (Manning 1985). The exception is a medium-sized 'lost-head' specimen (type 4), a form which does not seem to occur outside of the Roman period. The most significant iron object is undoubtedly the side-axe (Fig. 6, 2), an unusual form of which only about a dozen have been recorded in Britain. We have to accept Rees' view that these are Roman tools, although many examples in the published catalogue are stray finds (Rees 1979, 470). This example, from a layer overlying the metalled area (167), adds to the corpus of these rare tools.

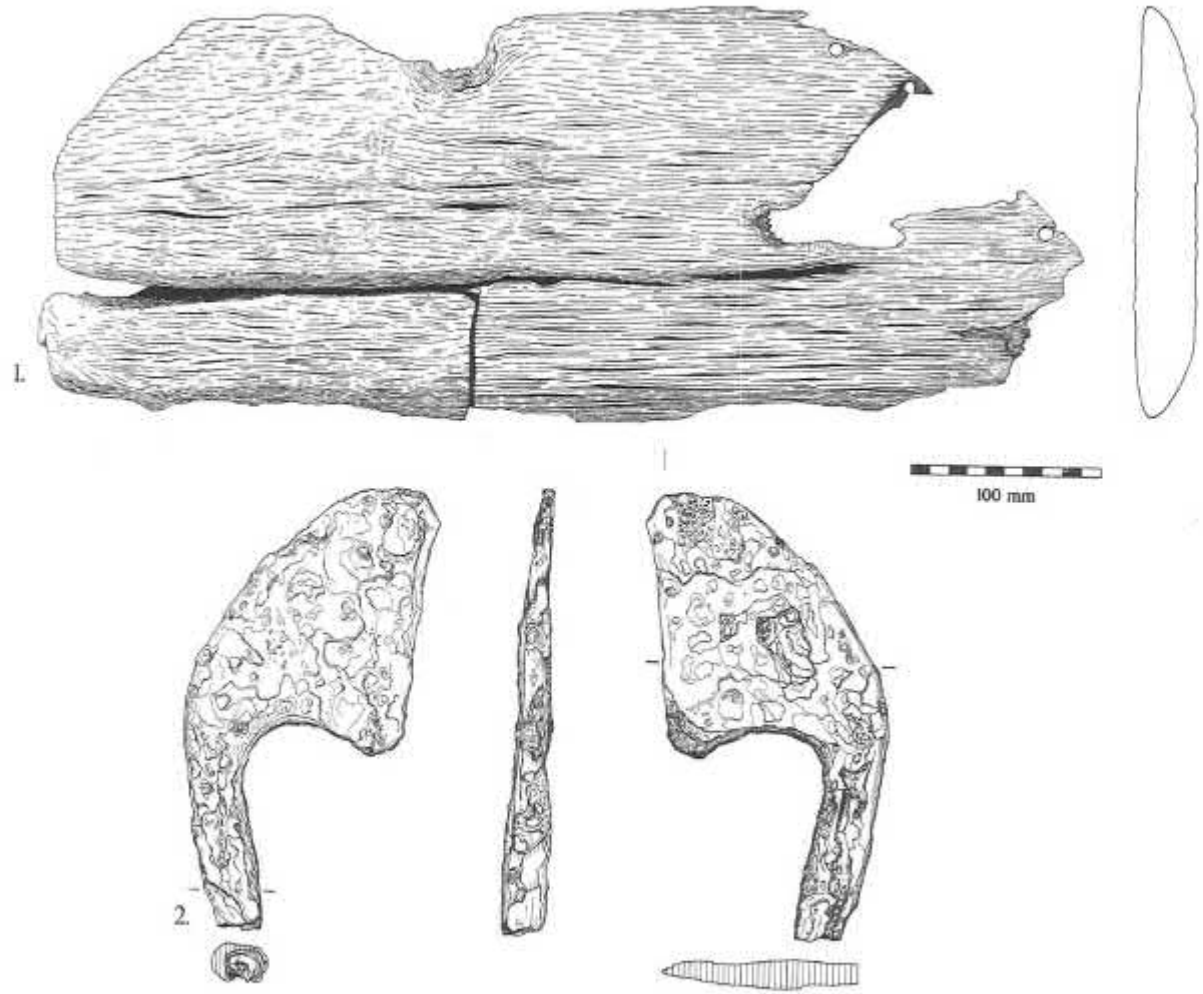

Fig. 6: 1. Worked wood from the base of pit 149. 2. Iron side-axe, likely to be of Roman date, from layer 167.

Coins

by Paul Cannon

Fourteen coins were recovered from the site with the aid of metal detectors see: Table 4.

Table 4:

Featured coins

Context	*Co-ords/slot*	*Description*	*Inscription*	*Date*
101	103E/129N	AE3, Valens or Valentinian I	Rev: GLORIA ROMANORUM, mm=CON	c. AD 367–375
302	slot 142 (top)	AE2, Magnentius	Rev: VICTORIAE DD AVG ET CAES, mm=TRP	c. AD 351–353
303	slot 132 (264)	AE sestertius, Lucilla	Rev: VENVS	AD 164–169

Surface finds

Context	*Co-ords/slot*	*Description*	*Inscription*	*Date*
–	74E/119N	AE sestertius, Clodius Albinus (as Caesar). Both faces of this coin have been defaced with numerous cuts	Rev: MINER PACIF COSII	c. AD 195
–	74E/122N	AE dupondius/?as, unidentified	–	?2nd/3rd century AD
–	85E/117N	AE sestertius, Marcus Aurelius	Rev: TRPOTXX IMPIII COSIII Providence with globe at feet	c. AD 165
–	85E/117N	AE sestertius, Commodus	Rev: LIBERAL AVG VII PMTRPXV IMPVIII COS VI	c. AD 190
–	97E/134N	AR denarius, Antoninus Pius	Rev: TRPOTXV COSIII	c. AD 152
–	97E/136N	AE3, Valens or Valentinian I	Rev: SECVRITAS REIPVBLICAE	c. AD 364–367
–	103E/127N	AE4, Constantius II	Rev: VICTORIAE DD AVGG Q NN	c. AD 341–346
–	115E/117N	AE4, Constantine I	Obv: VRBS ROMA Rev: she wolf suckling twins	c. AD 335–341
–	118E/131N	Antoninianus, Postumus	Rev: COS V. Victory type	c. AD 268
–	140E/151N	AE as, Commodus	Rev: TRPII IMPII COSPP. Victory type	c. AD 177
–	146E/141N	AE sestertius, unidentified	–	?2nd century AD

Stone

by David Williams

Three pieces of stone were examined from the site, including a possible whetstone and part of a large ?saddle quern both from pit 149 see: Table 5.

Table 5:

Context	*Description*	*Dimensions*
149 (285/286)	Part of a ?whetstone formed from a pebble of quartzite 322gms. ?Locally obtained.	(62mm × 65mm × 33mm)
110 U/S	Two irregular pieces of arkose sandstone (102gms). From Permo-Triassic formations in the Midlands?	–
149	Most of a large ?saddle quern of Old Red Sandstone, which mainly outcrops in Wales and Somerset, although pieces can be found in the drift deposits of the region (see King, 1986, 80–83 and map 2).	(260mm × 220mm × 165mm)

Carbonised Plant Remains
by John Letts

Nine samples from eight features were assessed for their archaeobotanical potential as documented in Table 6.

TABLE 6:

Cut	*Deposit*	*Volume(l)*	*No.*	*Description*
110	(151)	50	20	Cereal indeterminate
			5	Barley (Hordeum vulgare)
			3	Hulled wheat – emmer/spelt (Triticum cf. dicoccum/spelta)
			4	Wheat (Triticum sp.)
			1	Naked wheat (Triticum cf. aestivum)
			1	Spikelet fork of emmer/spelt wheat (Triticum dicoccum/spelta)
121	(163)	6	–	
122	(160)	12	2	Cereal indeterminate
126	(177)	8	–	
127	(178)	8	5	Cereal indeterminate
139	(251)	10	–	
141	(253)	12	–	
149	(286)	10	1	Hulled barley (Hordeum vulgare)
149	(288)	8	–	

The quantity of material recovered is too small to be of much significance. The single spikelet fork from pit 110 would indicate pre-early Saxon cultivation of hulled wheat (emmer or spelt), if residuality can be ruled out. The single grain of what is probably free threshing (ie bread) wheat is too poorly preserved to be confirmed, but is rarely common in pre-Saxon contexts.

Waterlogged Wood

A piece of unidentified wood *c.* 540mm long, by *c.* 220mm wide and up to 20mm thick came from the base of pit 149 (288). The wood has been shaped at one end and has four nail holes along the shaped edge (Fig. 6, 1).

Struck Flint
by Tess Durden

A small amount of worked flint was recovered from the site. Only two of the pieces were retouched; scrapers from ditch 306 S2 (160) and furrow 113. Unfortunately, these, together with the flakes and the flake core, are largely undiagnostic and not assignable to any particular period. The two blade fragments (both from layers above the metalling) are datable to the Mesolithic or earlier Neolithic and the discoidal core found in ditch 303 is more likely to be of late Neolithic origin.

Burnt Flint

Small quantities of burnt flint (64gms in total) were recovered from the surface of the excavation area and from 121 and layer 101.

Lead Slag

A total of 108gms of lead slag was recovered from pit 149 and small quantities (32gms) were recovered from the excavated surface.

Discussion

The excavation has examined part of an area of Roman occupation consisting of ditches forming enclosures, a trackway, a few pits and postholes and an area of metalling. The focus of the site may exist to the north-east where stone building footings and a cobbled area were observed during the evaluation. The site extends to the east, west and north but not to the south.

The Roman pottery recovered from ditches and other features shows a period of use from the mid–late 2nd century through to the late 4th century AD. The dense occupation of the Ouzel Valley during Roman times is well known, particularly north of the small defended town of Magiovinium situated *c.* 4.5km north of Three Locks, which began as an auxiliary fort in the first century AD (Zeepvat et al 1987, 8). A number of totally new occupation sites appeared throughout the 2nd century, eg Wood Corner (MK64) and Windmill Hill (MK96). Some remained native in character through to the late 4th century, whereas others such as Stantonbury (MK301) began life as native-style farms and were later replaced by Romanised farmsteads. In the Milton Keynes area there were more sites occupied during the 2nd century than at

any other time and, although the number declines at the end of the century, the sites that survive this decline continued to be occupied for a further 150–200 years (Zeepvat et al 1987). The Three Locks site appears to be of this character.

Roman field ditches have been recorded at a number of other small sites in Buckinghamshire such as Walton Court (Farley et al 1981). At Three Locks the ditches which make up the field system may have been constructed or recut during three different phases of activity, as indicated by the pottery: the first from the mid–late 2nd century through to the 3rd century; the second from the later 3rd to 4th century; and the third from the mid–later 4th century. Similar phases can also be attributed to several of the pits discovered. These phases must, however, remain provisional for the site as a whole.

The droveway in the north of the site, flanked by ditches 302 and 303/4, is similar to that at Farmoor, Oxfordshire (Lambrick and Robinson 1979) where the flanking ditches were roughly 12.5m apart, compared to 14m apart here. It presumably provided access between parts of the field system and land adjacent to the river, perhaps for riverside grazing or watering, or even to a crossing point on the river.

The majority of the finds were recovered from the layers 101, 166 and 167, which overlay the area of metalling in the centre of the site. These layers were presumably the result of rubbish dumping. The pottery from the layers is relatively well-preserved with a moderately good average sherd weight, which suggests little disturbance. This contrasts with the faunal evidence, which may indicate that the material came from different sources; perhaps the animal bone was redeposited from a context where it had been exposed to mechanical erosion.

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