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INVESTIGATION OF BRONZE AGE AND IRON AGE FEATURES AT RISELEY FARM, SWALLOWFIELD

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SUMMARY

A complex of cropmarks, including apparently nucleated settlement features, was identified in 1975 at Riseley Farm, Swallowfield, Berkshire. In advance of a planning application for gravel extraction an evaluation was carried out by Wessex Archaeology in 1982 on behalf of the Department of the Environment Inspectorate of Ancient Monuments. Three areas were excavated: part of a double-ditched rectangular enclosure, part of a curvilinear ditch defining a possible enclosure, and a small ring-ditch. The ring-ditch proved to be Early–Middle Bronze Age in date and probably funerary in function; the putative enclosure proved to be an enclosure of Middle Iron Age date, probably not domestic in function; and the double-ditched enclosure dated to the first century AD and may have been occupied, although its primary function may have been ironworking.

INTRODUCTION

Riseley Farm lies on a broad tract of gravels on the floodplain of the Blackwater River (SU 735 636), on the Hampshire/Berkshire border (Fig 1). The present course of the Blackwater rises near Farnham and runs north-eastwards, past Riseley Farm, to join the River Loddon about 2km north-east of the site; the Loddon drains into the Thames at Sonning.

The land slopes gently down from 50m OD in the south-west corner of the site to about 44m OD along the north-east edge where the land is about 1m above the level of the river. The courses of old river channels are clearly visible both on aerial photographs and as slight depressions, running parallel to the river, cutting across the north part of the site. The ground is liable to flooding in the winter months. The landuse appears to have alternated between arable and pasture in recent years but the ground is generally known to be poorly drained.

Aerial photographs taken by the Royal Commission on Historical Monuments in 1975 had identified complex and apparently nucleated settlement features with more dispersed, and sometimes indefinable features, in the surrounding area (Fig 1). The site lies adjacent to the Roman road from Silchester (*Calleva*) to London, which is thought to pass along the line of the present county boundary. Gates classifies the site as category 2, recommending preservation or large-scale excavation if any form of development should take place (Gates 1975, 61).

In 1981 informal enquiries were made about obtaining planning permission for gravel extraction from 50 hectares at Riseley Farm. Because of the potential importance of this archaeological landscape, it was decided

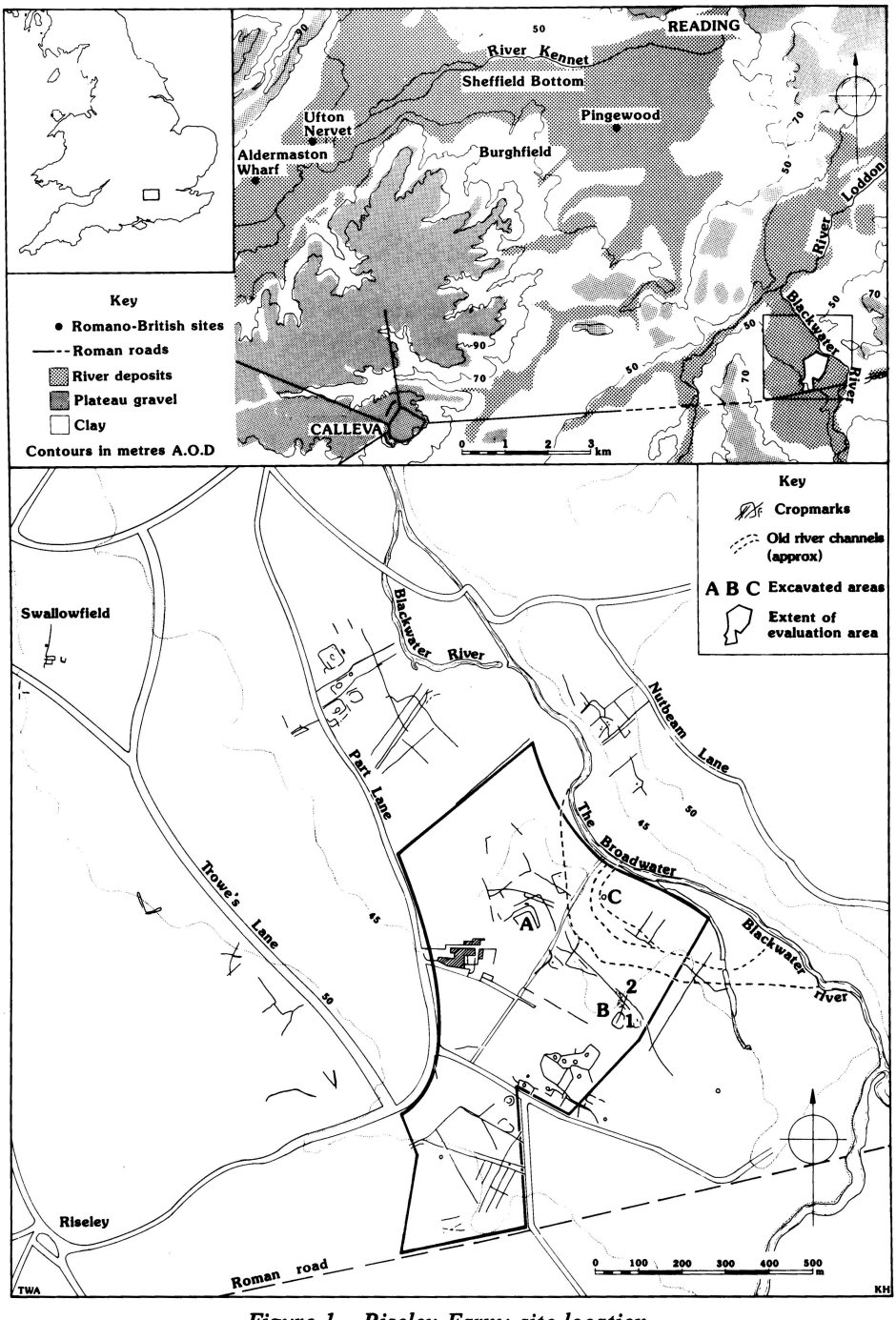


Figure 1 Riseley Farm: site location

that evaluation should be carried out in order to assess the date, nature, and state of preservation of a sample of the archaeological features. The evaluation was carried out by a team from Wessex Archaeology, directed by Sue Lobb, in the summer of 1982, funded by the Department of the Environment, Inspectorate of Ancient Monuments (subsequently English Heritage).

Excavation strategy

The aims of the evaluation were broadly to assess the nature and chronological span of the occupation at the site whilst also examining the state of preservation of the archaeological and associated environmental evidence. Features visible on aerial photographs in the south part of the farm present a fairly coherent and definable group which had already been recommended for preservation. North of this cluster, the subsoil features cannot always be clearly defined from the aerial photographs although, in some cases, specific isolated monument types can be identified. It was felt that these apparently peripheral monuments were potentially at greater risk than the larger and more easily identifiable nucleated group. For this reason three areas were selected for investigation widely located across the area and away from the larger cropmark complex in the hope that this would provide a general assessment of preservation conditions across the site.

The areas selected for investigation (Fig 1) included:

Area A A double-ditched rectangular enclosure with possible entrance on the south side with associated trackway and possible field system to the north-east of the farm buildings.

Area B An area about 100m to the north-east of the large cropmark complex adjacent to a low-lying area crossed by old river channels, where the cropmarks were ill defined. A curvilinear ditch possibly forming an enclosure was identified among other ditches and soilmarks of unclear pattern.

Area C A small ring-ditch situated on a gravel bank between river channels overlooking, and about 1m above, the river.

THE EXCAVATION

Method

In each area excavation was preceded by geophysical survey carried out by the Ancient Monuments Laboratory. Results were variable, probably due to the soil conditions (see microfiche).

Topsoil in the area of the trenches was removed by machine to expose the underlying subsoil or gravel, except in Area C where all excavation was carried out manually. Following this all features were sectioned manually. The excavations revealed an uneven gravel surface sealed in places by an apparent flood deposit layer of silt loam of varying depth. At the base of the ploughsoil in some areas (especially Trenches A3 and B2) a solid, almost impenetrable layer of manganese pan sealed archaeological levels. This must have formed as a result of a substained high water level sometime since the Roman period, and has in the past, according to the farmer, been an impediment to ploughing and crop growth. He has tried many times to break it up with a pan buster.

The topsoil was generally very shallow (0.20m) and in each subsite a sample was excavated by hand and 50% sieved in order to assess damage to archaeological levels through ploughing. This could also be related to the fieldwalking survey (see below). In general the finds in the topsoil reflected the underlying archaeological features but only the more durable finds, such as slag and burnt/worked flint, survived; no contemporary pottery was recovered. The quantities of burnt flint and slag (from Area A) in the topsoil suggests some damage to the underlying archaeological stratification and on both Areas A and B ploughmarks were recorded scoring the subsoil surface.

Fieldwalking was carried out, subsequent to the evaluation, in arable fields to the north

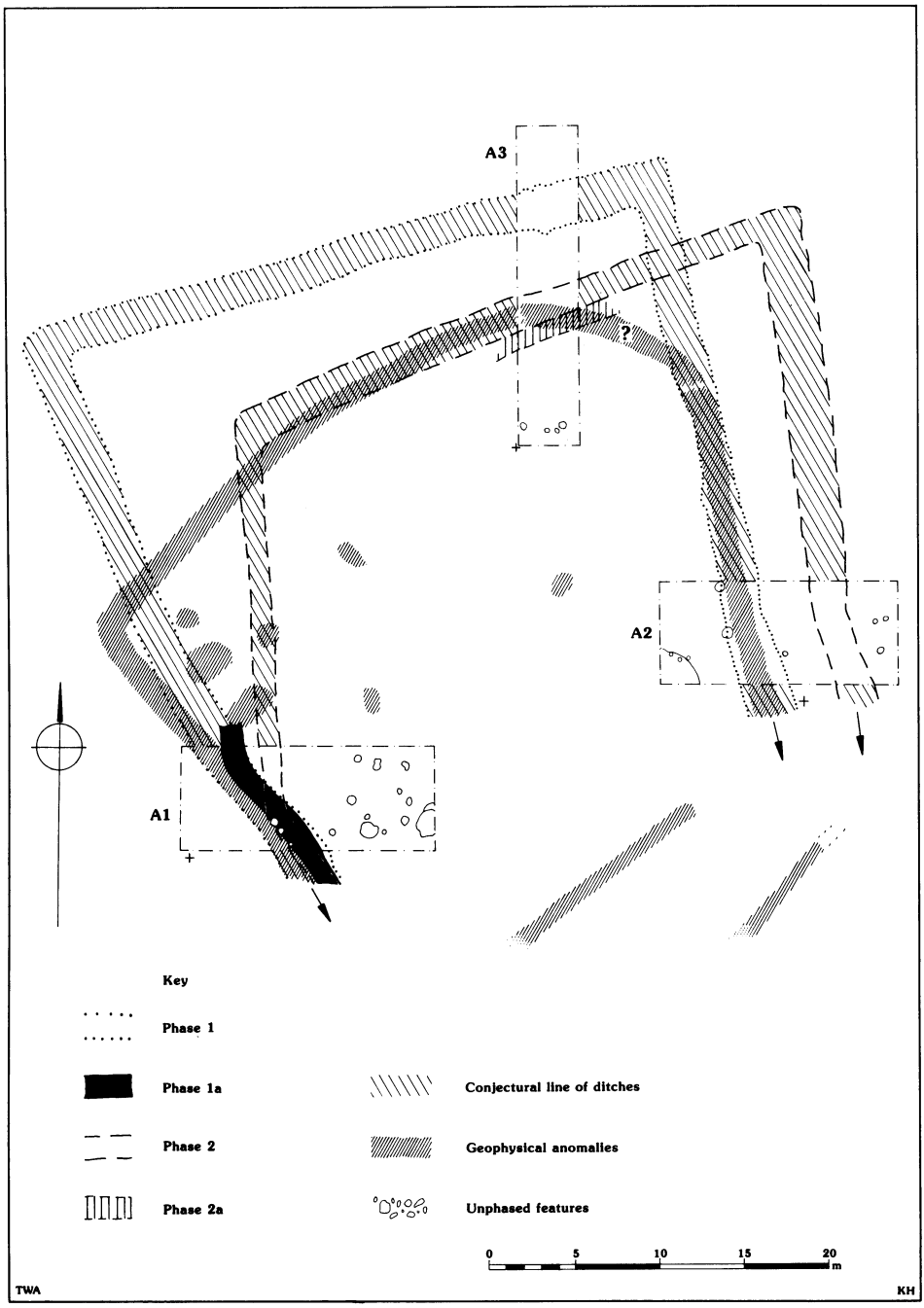


Figure 2 Riseley Farm: Area A, phase plan

of Area A and in the field south of the cropmark complex, adjacent to the Roman road; surface finds were collected on a 25m-grid. Finds were sparse, even of post-medieval or modern date, and consisted largely of a dispersed low-density scatter of worked flints and two concentrations of burnt flint; one corresponding to the cropmarks in the north-west and the other adjacent to the Roman road. The area of the enclosure examined in Area A was not included in this survey but the excavated finds from the topsoil suggest that this would probably have yielded a similar burnt flint concentration.

Organisation of the report

The results of the excavation together with a summary of the relevant finds are presented in text by site subdivision. Details of feature dimensions are presented in Appendix II. Site type series have been established for the pottery and fired clay, and numbers relating to these have been used throughout the text. Full finds reports and other supporting evidence appear in microfiche. The summaries in text highlight only major categories of artefacts and other material, with particular emphasis on their relevance to the dating of features with which they were associated. Discussions of each area subdivision together with an assessment of the broader archaeological context are presented at the end.

All the finds were examined and reported on by Elaine Morris except where otherwise stated. The trench reports were prepared by both authors and the discussion by Sue Lobb. The following abbreviations have been used: FT relating to pottery fabric type and FCFT relating to fired clay fabric type.

AREA A (Figs 2–6)

A double-ditched enclosure is visible on the aerial photographs to the north-east of the farm buildings, associated with ditches which probably represent two different field systems. The geophysical survey identified the main enclosure, confirming the presence of a south ditch with a possible entrance in the south-east corner, not visible on the aerial photograph, and possible pits in the north-west corner, which were not investigated. Three small trenches were excavated across the ditches and into the interior (Fig 2). The topsoil in this area was only 0.25m deep overlying gravel, the surface of which contained patches of sand and clay and occasional manganese pan.

Trench A1 (Fig 4)

Three intercutting ditches were identified. Ditch 79, the earliest and largest (Fig 3, S50 and S53), was filled with small dumps of silty gravel occasionally interspersed with lenses of silty clay. In some of these dumps burnt flints, charcoal, slag and/or fired clay were present, especially on the east edge, and, to a lesser extent, in the primary levels. It was not possible to excavate the full depth because of the high water table which had created a hard iron pan near the bottom.

A smaller ditch, 182, cut through the fill of ditch 79 (Fig 3, S50) and was also filled with silty gravel layers which appear to have been deliberately dumped, sometimes containing large quantities of burnt material and/or slag. Before the ditch had filled up fully a short period appears to have elapsed in which a silt lens accumulated. The primary fill of the ditch was again not fully excavated because of the high water level; indeed many of the layers were gleyed and iron pan was evident indicating a fluctuating water level with standing water at the base of the ditch. This feature was not recognised in plan during excavation and its exact course is not clear. It appears to follow a similar direction to the earlier ditch, possibly diverging slightly to the north of this trench cutting across the corner of the enclosure (Fig 2).

Ditch 78, the latest in the sequence, was much smaller (Fig 3, S53). The fill was largely a mixed silty gravel although a stone-free horizon was apparent in one section in the

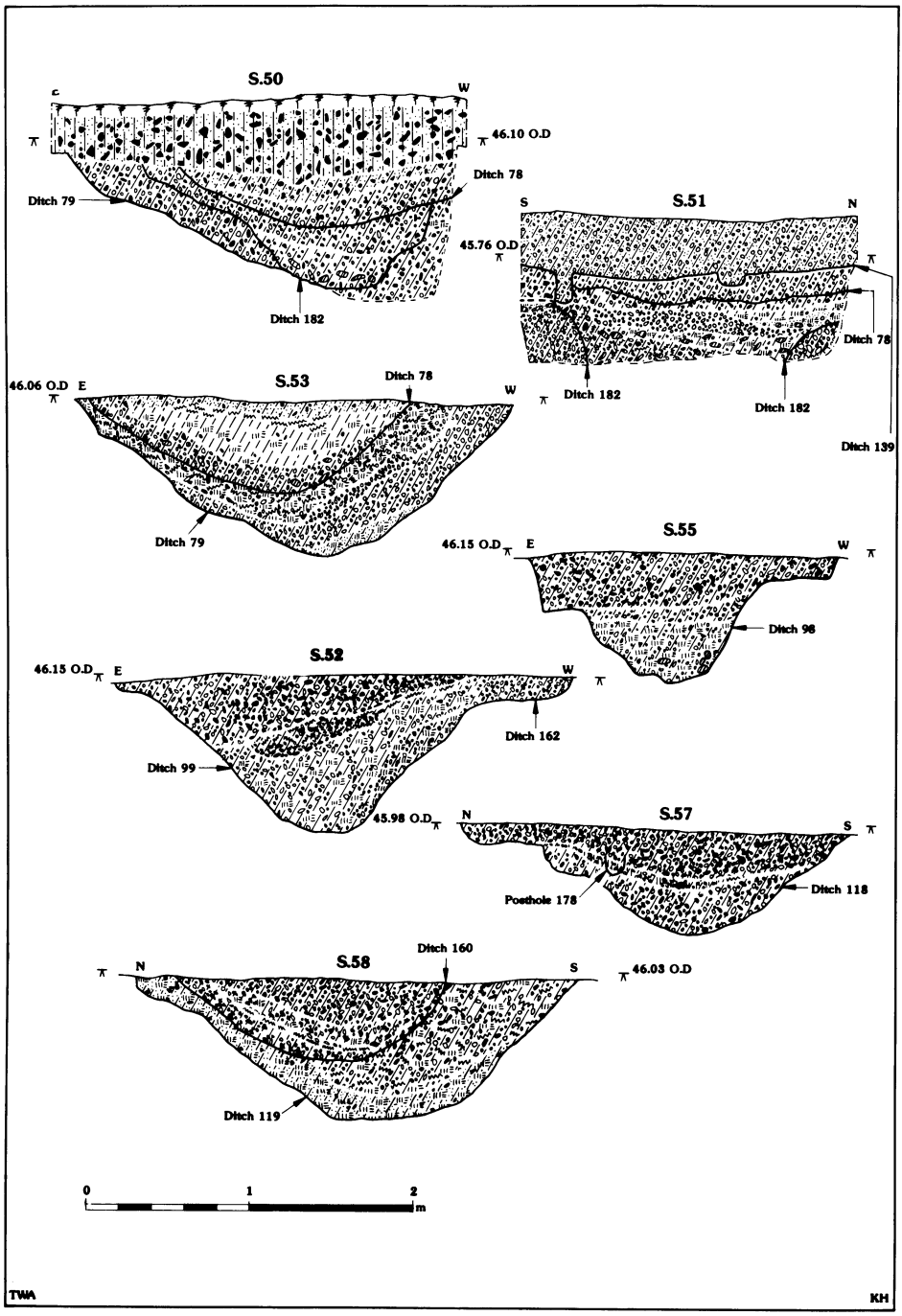


Figure 3 Riseley Farm: Area A, ditch sections

middle of the fill. A layer of dense charcoal and burnt flint filled the upper levels. This ditch transects the fills of the other two but diverges to the west at the north edge of the trench.

The final phase in the enclosure sequence was a row of postholes cutting into the latest fills of the ditches (Fig 3, S51). At least two postholes were noted cutting through the top of ditch 78 and possibly a third further east (Fig 4).

On the east side of the ditches, in the interior of the enclosure, a spread of silt overlay the natural gravel apparently surrounded on three sides by a series of post- or stakeholes (163–5, 93, 113, 167–170). A number of other possible postholes were not excavated (68, 172–4). An additional posthole (166) and a stakehole (69) were identified in the middle of this layer. Features 164 and 165 appear to have had replacement posts while feature 167 contained four stakeholes around posthole 170 which may represent reinforcement of the post. The excavated features were fairly shallow (0.10–0.40m) and filled with silty gravel with no sign of post-packing. Stakehole 113 was filled with dense charcoal and large slag fragments. Feature 94/112, to the east of the postholes in the corner of the trench, was a shallow and irregular hollow containing charcoal, slag fragments, and lumps of fired clay. The west end of layer 64 was difficult to define but it might represent a trampled floor area of a post-built structure, perhaps associated with metalworking.

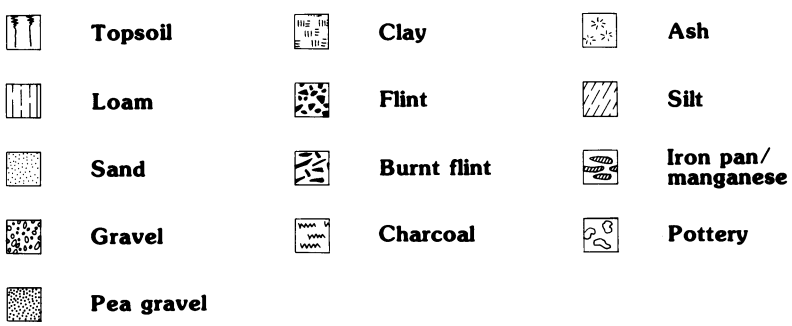
Trench A2 (Fig 5)

Parallel ditches 98 and 99, *c* 3m apart, ran north–south across the trench. The inner ditch (99) (Fig 3, S52) was filled with a shallow lens of silt overlain by silty gravel; a layer of carbon-rich silt with dense burnt flint was dumped on the west side of the ditch. Cut through the upper fills on the west edge were two possible postholes (162 and 176) (Fig 3, S52). Neither feature was recognised during excavation and it was not determined whether further similar features existed extending the line south across the trench.

The outer ditch (98) was more irregular in profile (Fig 3, S55); it was felt, at the time of excavation, that the hard consolidation of the gravel formed by the manganese pan may have influenced the shape of the ditch. It was filled with a homogeneous silty gravel becoming more stony in the upper levels. Five subsoil features were observed cutting the gravel, one between the ditches (130) and four to the east of ditch 98 (128, 131, 157, 158). These may represent the base of postholes.

Approximately 2m from the west edge of ditch 99 was a small curved gully (154), a section of which was excavated. Three stakeholes (152, 155, 156) were revealed at the base

Key to all sections



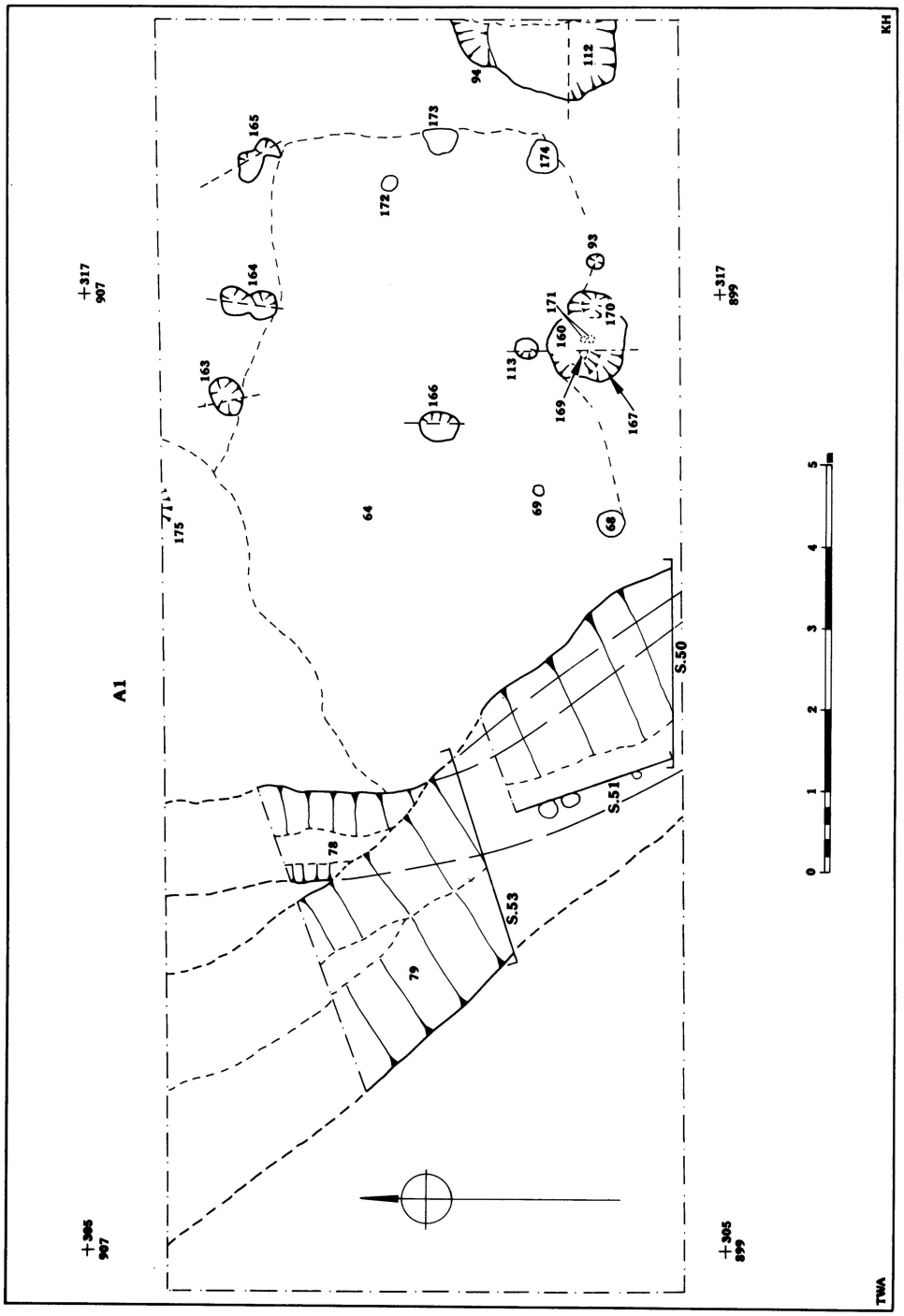


Figure 4 Riseley Farm: Trench A1, detailed plan

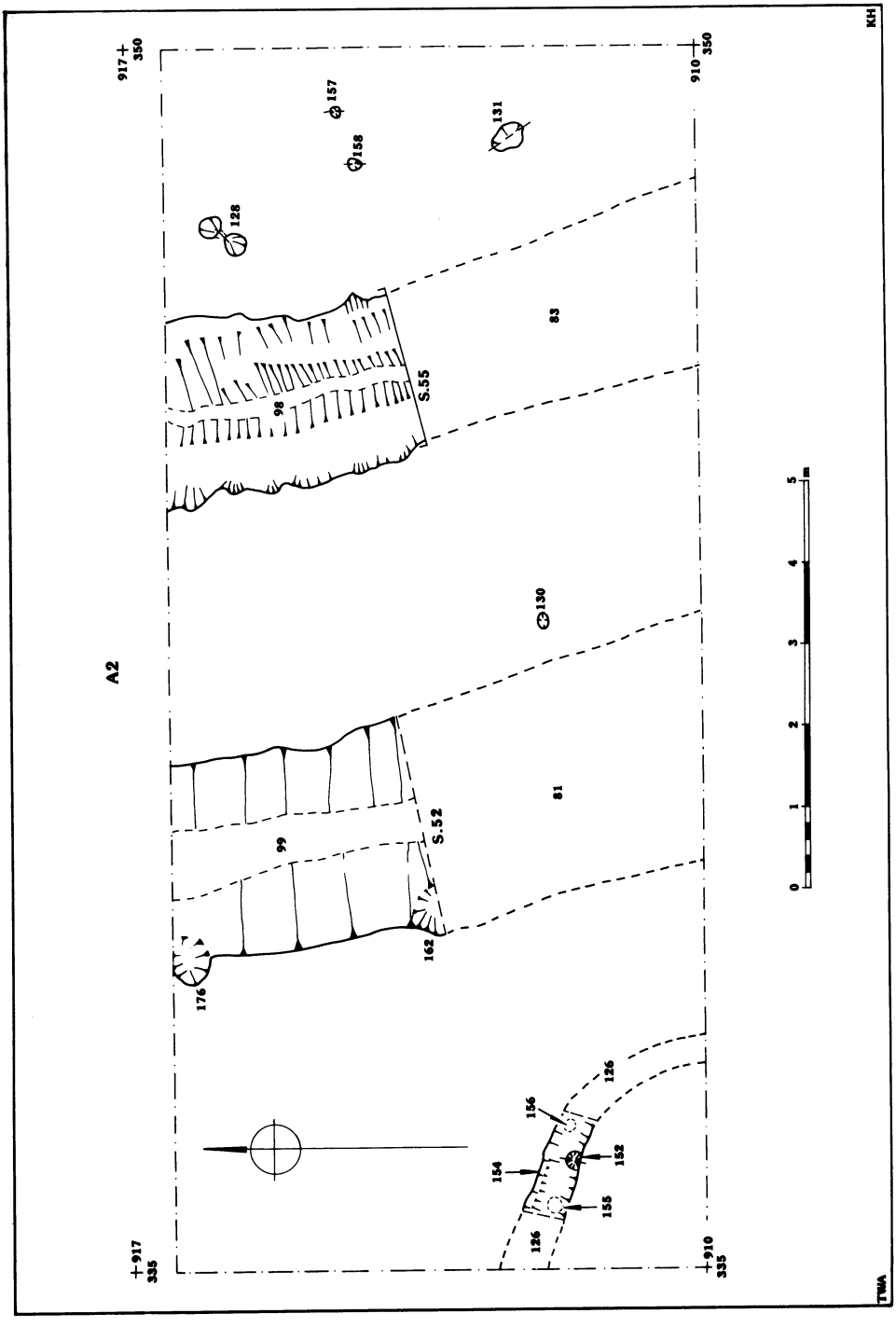


Figure 5 Riseley Farm: Trench A2, detailed plan

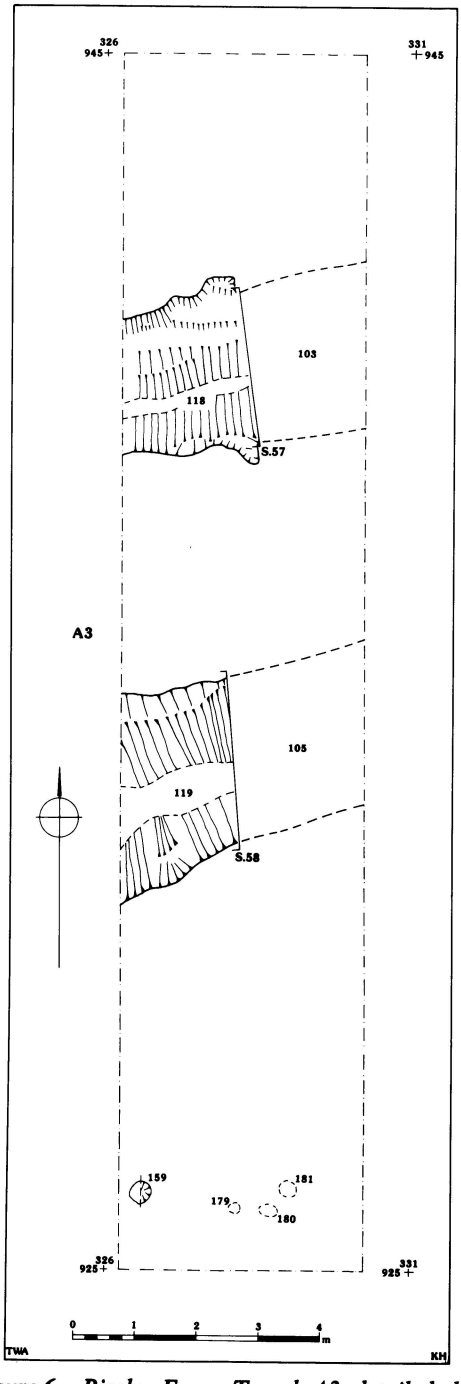


Figure 6 Riseley Farm: Trench A3, detailed plan

with diameters of 0.15–0.20m, spaced 0.40–0.60m apart. Only 152 was sectioned and was found to be 0.22m deep. As only a small area was excavated, it would be unwise to make too much of this feature but it is tempting to suggest that it might be part of a round structure.

Trench A3 (Fig 6)

Two roughly parallel ditches (118 and 119), about 4m apart, crossed this trench in an east–west direction. The fills from half the exposed lengths of both ditches were excavated. The inner ditch (119) was more complex as a secondary ditch (160) had been cut into the upper fills (Fig 3, S58). The primary fill, which was partly waterlogged at the time of excavation, was a fairly stone-free silty clay, overlain by a more stony silty clay. Ditch 160 was filled with silty gravel. A charcoal lens ran along the length of the ditch in the upper levels and appeared to have accumulated around a row of at least seven stakeholes (not illustrated). Ditch 118, to the north (Fig 3, S57), was filled with a stony silt containing a charcoal spread in the middle. A possible posthole (178) was identified within the upper levels, filled with dense charcoal.

The interior of the enclosure in this trench was not fully investigated. Visibility of potential features was made difficult by the presence of several patches of manganese concretion. However four possible post- or stakeholes were identified (159, 179–81), only one of which (159) was sectioned; this was 0.35m in diameter and 0.22m deep. The other three appeared to be of similar diameter.

The finds

Pottery

A full report on the pottery appears in microfiche where definitions of fabrics and descriptions of forms and decoration with evidence for dating are presented. The distribution of fabrics by feature is given in Table 1, by site in Table Mf1, and of rim types by

Table 1 Riseley Farm: pottery fabric groups by feature (sherd count and weight)

Trench	*Feature (Context)*	*FT21 and 24*	*FT22–3 and 25–8*	*FT30–4*	*FT35–7*	*FT38*	*FT40–1*	*FT42–3*	*FT50–1*	*Total*
C	617				1 3g					1 3g
C	619		1 3g					1 1g	27 201g	29 205g
B1	359/395		176 1216g						2 19g	178 1235g
B1	368		20 63g							20 63g
B1	354/378		48 423g			26 100g				74 523g
B1	352		41 1137g							41 1137g
B1	350		1 3g							1 3g
B1	370/387		8 57g							8 57g
A1	79	7 93g	9 152g		38 273g		11 211g	7 83g		72 812g
A1	182	1 8g	46 767g		42 501g		8 185g	15 168g		112 1629g
A1	78	13 131g	10 101g	25 246g	24 173g		47 528g	6 33g		125 1212g
A1	(61)	1 5g								1 5g
A1	163		1 10g		1 2g					2 12g
A1	164				1 2g		1 9g			2 11g
A1	(94)						1 17g			1 17g
A2	99	17 165g	41 615g	1 3g	176 1431g		28 550g	47 406g		310 3170g
A2	98		5 43g	14 99g	20 348g		10 172g			49 662g
A2	154 (126)						2 3g			2 3g
A3	118	22 101g			80 390g		19 198g	1 1g		122 690g
A3	119			1 22g	8 133g		1 7g	1 9g		11 171g
A3	160	5 46g			15 68g		122 951g			142 1065g

feature in Table Mf2. Essentially, the pottery from Area A is latest pre-Roman Iron Age and early Roman in date, although there are some interesting differences in the distribution of the various fabrics across the three trenches which has some chronological significance.

In Trench A1, ditch 79, stratigraphically the earliest feature, handmade sandy and organic fabrics occurred alongside other sandy, grog- and flint-tempered wares including Silchester wares (Fig 11, 18–25; Tables 1 and Mf1). A similar range is present in the fills of ditch 182 (Fig 11, 26–43), which cuts ditch 79. The proportion of Silchester wares in the two is fairly low (under 20% by weight) but the association between handmade sandy wares and Silchester wares is important, demonstrating their contemporaneity, especially since no features contained only the former fabrics. A suggested date for the filling of these features is early pre-Flavian since Silchester ware tends to be more dominant in assemblages of the later pre-Flavian period (Timby 1985, 25–6). A complete absence of Gallo-Belgic wares in these ditches is noteworthy. The size of the assemblage (Table 1) is such that, had imported fine wares been present on the site, they are likely to have been represented.

Ditch 78, which cuts both 79 and 182, contained a similar proportion of later sandy wares but with a very significant reduction in the handmade sandy and organic group, grog-tempered wares, and non-Silchester wares. The Silchester ware fabrics increase considerably, however, and several imported, or British copies of, Gallo-Belgic wares of pre-Flavian date occur. The predominance of Type 4 bead-rimmed vessels and presence of two local butt beakers confirm a slightly later date for this ditch (Fig 12, 44–55).

In Trench A2, ditch 99, which appears to be a continuation of the enclosure ditch of which ditch 79 and possibly recut 182 also formed part, may have filled up slightly earlier than the parallel ditch 98. It contained a similar range of fabrics and forms (Fig 13, 56–69) to ditches 79 and 182. Ditch 98, which possibly corresponded with ditch 78 on the opposite side of the enclosure, contained no later sandy or non-Silchester flint-tempered wares but was dominated by the grog-tempered group with Silchester wares and a large amount of the Gallo-Belgic wares (Table 1; Fig 13, 70–6).

The innermost ditch in Trench A3, 118, contained significant proportions of Silchester and later sandy wares (Fig 13, 77–82) but no examples of the handmade sandy and organic fabrics, unlike ditches 79, 182, and 99. Again, on pottery evidence, it seems to be earlier than the outer ditch 119 and its recut 160, which together contained a larger proportion of Silchester ware fabrics from a similar size assemblage (Table 1) and also a rim sherd of a possible local imitation of a Gallo-Belgic platter and a lid, amongst other forms (Fig 13, 83–6).

Ironworking residues incorporating identifications and comments by G McDonnell

Over 27kg of ironworking slags and associated overfired clays were identified as smithing slag (6.7kg), smithing or smelting slag (6.6kg), smelting slag (6.6kg), furnace or hearth lining (7.0kg), possible bog ore (0.6kg), and fuel ash slag (0.1kg). Nearly all of the metallurgical residues were recovered from ditches and layers in this area (Table 2) with a particular concentration in the fill of ditches 79, 182, and 99, and from the enclosed area in A1 and A3. A plano-convex-shaped piece of fired clay fragment characteristic of a hearth bottom (McDonnell 1983) was recovered from the lowest layers of ditch 79.

The quantities of slag in the three different phases of ditch fills in Trench A1 strongly suggest that waste material from ironworking was being discarded in significant quantities in all phases. Clearly the production and processing of iron was taking place within the enclosure during the pre-Conquest and Conquest phases of the first century AD, particularly on the west side where part of a possible structure was identified. Quantities

Table 2 Riseley Farm: distribution of slag, burnt flint, fired clay, and charcoal from major features (weights in grams)

	Feature	*Type*	*Slag*	*Burnt flint*	*Fired clay*	*Charcoal*	*Pottery*
B1	350	Hollow	30	2850	11	5	3
	354/378	Ditch	586	3335	359	11	523
	352	Pit	–	440	2	1	1137
	359	Hearth	26	62720	24	3662	1235
	368	Ditch	110	1150	–	2	63
	370	Hollow	–	10	22	–	57
	382	Stakehole	–	25	20	–	–
	384	Pit	–	575	–	–	–
	387	Hollow	–	400	27	–	40
B1 totals			752	71330	465	3681	3058
B2	397	Pit	–	1125	–	21	–
A1	78	Ditch	2275	1100	340	78	1220
	182	Ditch	1416	3330	1406	–	1629
	79	Ditch	5175*	5310	1562	11	812
	85	Dump	1118	75	1602**	68	–
	94	Layer	75	10	90	–	17
	61	Posthole complex	275	350	39	2	5
	113	Stakehole	1 large frag	225	20	88	–
A1 totals			10334	10400	5059	263	3683
A2	98	Ditch	675	2650	–	1	662
	99	Ditch	4460	51645	1585	90	3170
A2 totals			5135	54295	1585	91	3832
A3	160	Ditch	580	1700	52	608	1065
	118	Ditch	–	50	–	–	690
	119	Ditch	225	625	–	–	171
A3 totals			805	2375	52	608	1926

* Bottom of hearth.

** ?Hearth structure and fused clays included.

of slag, fused clay, and other structural fired clay, some with slag adhering, were located in several of these features and in the ditches immediately to the west which were obviously used as a convenient dumping place. Slag was also found in some quantities in ditch 99 on the east side, apparently dumped from the interior of the enclosure. The residues were much less frequent in the ditches of A3.

The presence of the bog ore, in the absence of any iron sources in Berkshire (Tylecote 1962, 175), strongly supports the interpretation that raw materials for smelting had been purposefully brought on to this site for processing. In addition smithing, a more simple process, was also clearly in evidence.

Burnt flint

Approximately 83kg (4208 pieces) of burnt flint were recovered from Area A (Table 2). Much less burnt flint was recorded in ditches 118 and 119 in A3 than in the other sections of the enclosure ditches. Although the volume of soil excavated affects the total quantity of material recovered from these trenches, there is, nevertheless, a relative similarity between the distribution and quantity of slag and burnt flint recovered. In contrast, the unusually large amount of burnt flint from ditch 99 is not correlated to an equally large amount of slag in that feature; there is in fact ten times the amount of burnt flint to slag.

Fired clay

There are 348 pieces (677g) of fired clay material from this site including one obviously structural piece (FCFT 4) from context 85, a spread of carbon, slag, burnt flint, and fused fired clays in A1, which was thought to be a dump from a metalworking furnace or hearth. This fragment (600g) is from a curved structure, from which a diameter cannot be determined. Other pieces from the same context display similar characteristics. These particular pieces are not overfired or fused in any way; however, other fragments found in that context had been subjected to extreme heat. Several pieces of fired clay, either partially overfired or with pieces of slag adhering to the surfaces, and fired clay furnace lining were identified in the specialist analysis of the slag material (see microfiche). All examples of fired clay material with this condition from other contexts were also recovered in association with slag material (Table 2).

In addition to the furnace material, there is a single piece of fired clay, 65mm thick, from the fill of ditch 182, which may be a fragment of loomweight, and a second possible piece of loomweight with a pierced hole (12mm across), both made from the same fired clay fabric type (FCFT 5). Pieces of daub with wattle marks, surface plastering daub or fused fragments were identified from the fills of ditches 79 and 182 and 99, and the plastering daub was also found in ditch 160 (A3). There were no pieces from ditch 98 and only one piece of plaster-like fired clay (FCFT 2) from 78. The majority of fired clay from Area A was recovered from A1 (5042g) and is listed by context or feature in Table 2.

Worked stone

Eighteen pieces of non-local sedimentary rock were identified from Trenches A1–3. Thirteen pieces have at least one or more surfaces indicating use as grinding stones. Five fragments have been identified, by Dr David Peacock (Department of Archaeology, University of Southampton) as Lodsworth Greensand, the source of which is in West Sussex (Peacock 1987) 50km south-east of Riseley Farm. These examples had originated from one or more rotary querns and included a fragment of an upper stone, 500mm in diameter and 75mm thick with part of a handle slot, and another piece, 34–60mm thick.

Four of the Lodsworth Greensand fragments, including the upper quernstone, were found in the fill of the later ditch 98 in A2, in association with the decorated *terra rubra* vessel. There are also 12 fragments of undiagnostic Greensand, seven from querns, from the earlier ditch 99 in A2 and from the recut ditch 160 in A3. In addition, one complete square cross-section of a possible broken whetstone, made from a fine-grained sandstone, was also found in ditch 99.

Discussion

There is clearly a complex sequence of recut and replacement ditches associated with this enclosure. Two broad phases are suggested by the pottery, although the total length of occupation, in the first half of the first century AD appears to have been fairly short. Ditches 79 and 99 are contemporary and, with the recut (182) of ditch 79, are likely to have been abandoned sometime in the earlier part of the pre-Flavian period, prior to the Conquest (late pre-Roman Iron Age). Ditch 118 is also likely to belong to this phase. The abandonment of ditches 78 and 98, as well as ditch 119 and the recut 160, probably occurred shortly after this, around or just after the Conquest.

It is not clear, from such a small excavated sample, exactly how the ditches in each of the trenches in each suggested phase might relate to each other. A stratigraphic sequence can be demonstrated in Trench A1, but in the other trenches there is no direct association between the ditches except where they have been recut. In the suggested earlier phase, if ditches 79, 99, and 118 are the same ditch, then there is clearly some variation in size and profile around its circuit, with ditch 118 being

much shallower and more comparable with ditch 182, which is cut into the top of ditch 79. No similar recut was apparent in the other two ditches. The ditches of the later phase show similar disparity. Ditch 78 is much smaller than 98 and 119 and more comparable with ditch 160, cut into the top of 119.

There is some evidence to suggest that, in its final phase, the enclosure was defined by a fence; three postholes were identified cut into the top of ditch fills in Trench A1 and two postholes cut into the edge of ditch 99. A possible stakehole was identified in the upper filling of ditch 118. The date of these features could not be ascertained and it is not clear if they are contemporary.

It is similarly impossible to relate the internal features to any particular phase of occupation. Two possible structures may be suggested and although the exact nature of these is not clear, they appear to have been of different construction. In Trench A1 the postholes line the edges of an area of possibly trampled soil which may have been a floor and the indications are that a building here would have been rectangular in plan. Only a small area of the structure in Trench A2 was exposed but it seems to have been less substantial, with a framework of small stakes driven into a shallow ring-gully; fragments of daub with wattle impressions from ditch 99 may have been associated with this building. Only one fragment of the same type of daub was recovered from the ditch fills adjacent to the suggested structure in Trench A1, further emphasising the different nature of the two buildings.

Some functional variation across the enclosure is indicated by the distribution of the finds. Large quantities of burnt material including iron slags, burnt flint, and charcoal were recovered in the ditch fills and the internal features in Trench A1 indicating that both smithing and smelting of iron was being carried out in the south part of the enclosure. By contrast to the ditches in Trenches A1 and A2, where the debris appears to have been cleared out and dumped from the interior of the enclosure, the ditches in Trench A3, in the north area, contained very little burnt material except in the final ditch phase (160). The potential structure identified within the enclosure in Trench A1 was clearly associated with this industrial activity, with both waste products and the remains of a possible hearth or furnace structure being recovered.

The quantity of pottery and range of types in the ditch fills, the clay weight fragments, and the fragments of quernstones might suggest that ordinary domestic activities were taking place alongside the industrial ironworking processes. The presence of quernstones which are usually associated with grain grinding is, however, in contrast to the evidence from the seed analysis (Appendix II) which shows that carbonised cereal grains are absent.

AREA B

Trench B1 was located to investigate a curvilinear enclosure and associated features suggested by the aerial photographs, Trench B2 to examine more amorphous features 25m to the north. Geophysical survey in this area failed to identify any of the features visible on the aerial photographs and suggested the rather doubtful possibility of two features in the south-east corner of the site (see microfiche).

The gravel in this area had a very uneven surface and was sealed by a silty loam flood deposit. Although the topsoil was only 0.20m deep, sample excavation and sieving produced very few finds, despite the fact that the underlying silt had clearly been truncated by ploughing. A layer of very hard panning at the base of the topsoil over much of Trench B2 made excavation very difficult, if not impossible, in places.

Trench B1 (Figs 7 and 8)

Three lengths of ditch were revealed. Ditch 421, running north–south, located at the west

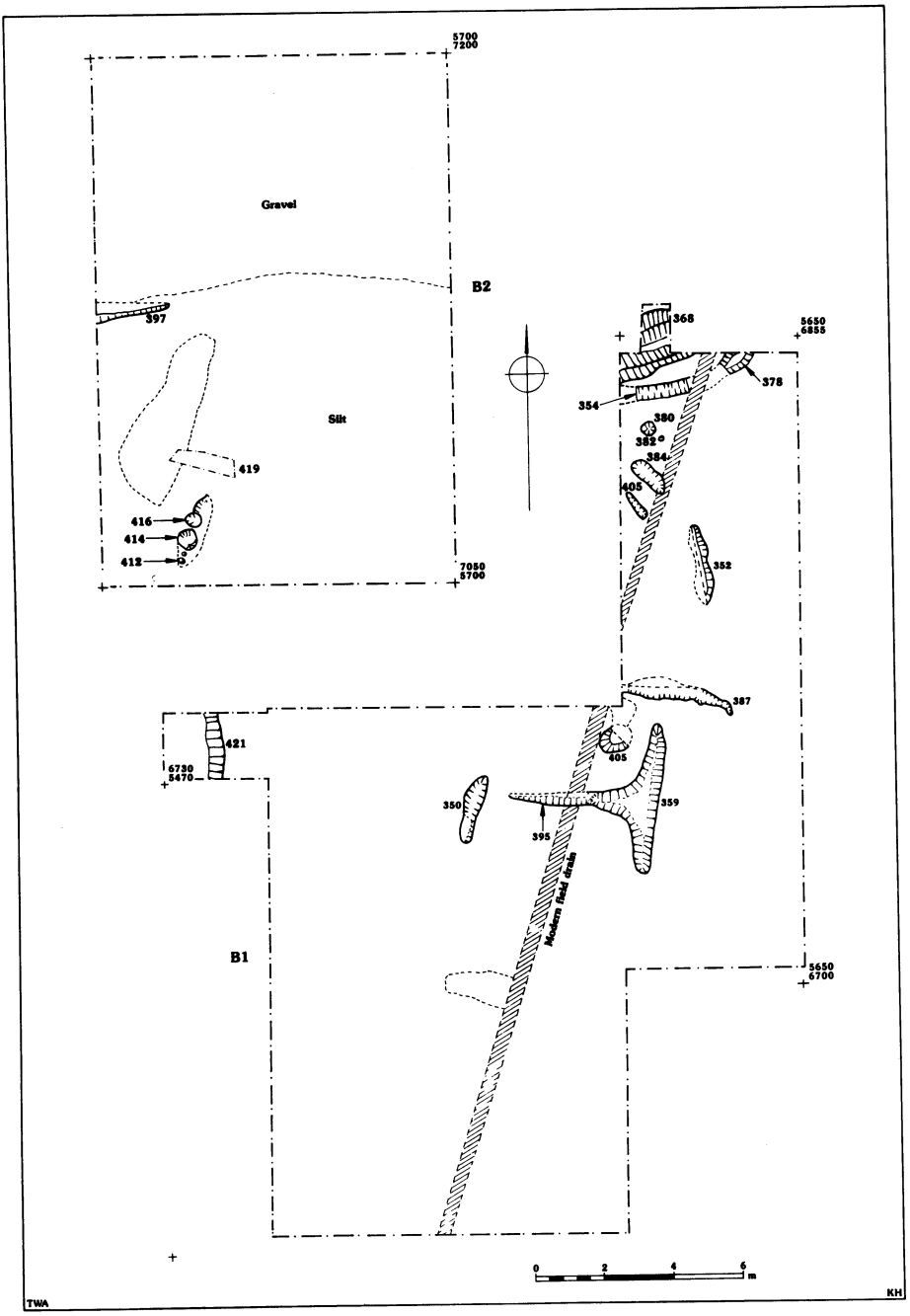


Figure 7 Riseley Farm: Area B, plan of features

end of the trench, was cut into a depression in the gravel surface filled with a deeper accumulation of silt. It was difficult to distinguish the fill from the silt overlying the gravel and interpretation of the sequence is unclear. However, it seems likely that the ditch was deeper than initially suggested and cut through the silt. Ditch 368 was located at the north end of the trench, running south-west to north-east. Ditch 354, to the south, was smaller and more irregular than ditch 368 with which it apparently ran parallel. Both had been cut through the silt covering the gravel and were sealed by topsoil only.

To the south of ditches 368 and 354 features excavated included the base of a probable posthole (380), a stakehole (382), and several amorphous hollows. The rather linear nature of these features perhaps suggests some spreading by ploughing.

At the south edge of this cluster a T-shaped feature, possibly a hearth, was excavated (359) (Fig 8). This consisted of three narrow gullies leading in to a deeper (0.50m) central area; the north and south arms were each *c* 2m long, filled with burnt flint packed along the sides, with layers of dense charcoal, ash, and silt in the upper levels. Several sherds of pottery (Fig 10, 17) were found against the edge including part of a vessel with burnt clay adhering. The west arm did not contain the burnt flint packing along the base and edges but the filling was largely ashy. Close to the west end of the feature there was a shallow hollow (350) which contained dense patches of burnt material. The survival of a narrow 'bridge' of clay over the top of the west gully may indicate that the feature or at least the 'arms' were originally sealed by a clay capping or superstructure. The central area was filled with alternate layers of silt and clay containing dense burnt flint and charcoal, especially at the base, interspersed with lenses of ash (Fig 8). Charcoal from the primary deposit produced a radiocarbon date of 2250 ± 60 BP (HAR-9157).

Trench B2 (Fig 7)

Very few features were encountered in this area. Feature 355 (not illustrated on Fig 7) proved to be a thin spread of burnt flint and charcoal, while 397 was a shallow elongated pit containing burnt flint (1.1kg) and some charcoal. Close to 355 a row of stake- and postholes (412, 414, 416, 417) was excavated but none contained artefacts.

The finds

Pottery

All of the stratified pottery on this site was found in Trench B1 (Fig 10) and is dominated by a range of sandy wares (FT22–8) with one grog-tempered fabric (FT38) from handmade vessels of Middle–Late Iron Age and residual Late Bronze Age date (FT50–1). The bulk of the material came from the T-shaped hearth, 359. Middle Iron Age pottery includes slack-shouldered and ovoid jars, and 'scored' body sherds characteristic of the period in the midlands (Cunliffe 1978, 42–3, 371, fig 5.3, A:13 and A:22). Part of a single bowl (Fig 10, 9) was recovered from pit 352 and is of a type which is particularly common in Oxfordshire, a little further up the Thames valley (Cunliffe 1978, 50). It is significant that there are no examples of fabrics FT30–7 or FT40–2 in Area B since they form the bulk of material in Area A and there are no 'saucepan pots' or wheelthrown vessels of the first century AD. Crushed burnt flint is also not used as a tempering agent in any of the pottery from Area B despite the presence of large quantities within contemporary features observable on the site.

There are few sites of this date known in Berkshire. The pottery from Trench B1 as a whole is not identical to the Iron Age material from either the Kennet and Thames valleys to the north (Cowell *et al* 1978, fig 3, 9; Piggott and Seaby 1937; Thames Valley Park, Mepham pers comm) or Hampshire to the south (Smith 1977; Millett and Russell 1984; Oliver and Applin 1979; Rees forthcoming), where saucepan pots are a common feature,

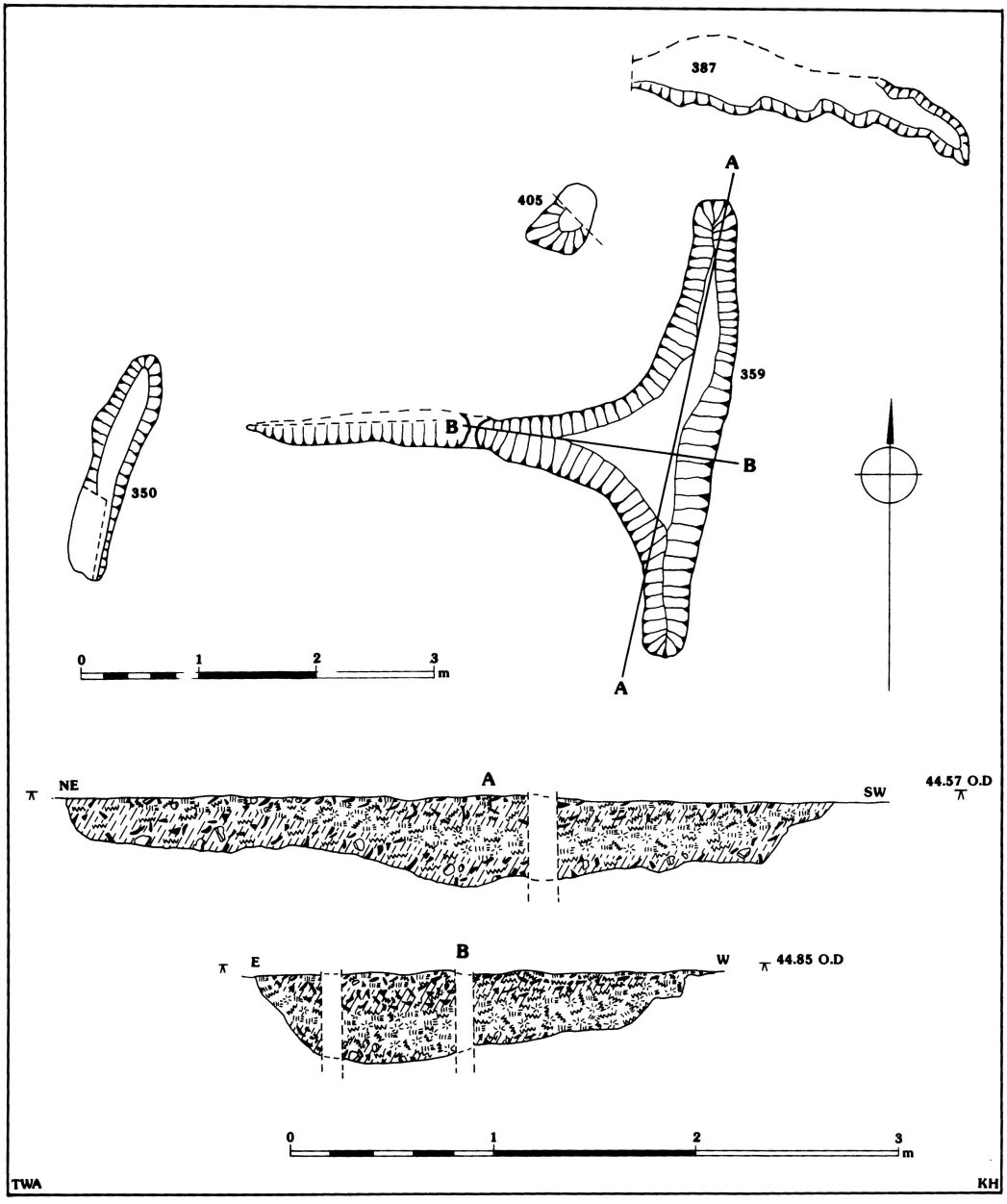


Figure 8 Riseley Farm: Trench B1, detailed plan of feature 359 and associated features

but is more closely paralleled by Middle Iron Age sites in the upper Thames (Harding 1972; DeRoche 1978), Surrey, and south midlands (Cunliffe 1978, figs 3.6 and 3.9) where open hemispherical bowls, jars, and scored-type wares characterise assemblages.

Ironworking residues
Just over 2kg of metallurgical residues were recovered. The majority of the material was smithing slags (1.4kg), with less than 0.5kg each of undiagnostic ironworking slag, and some possible smelting slag. These were mainly recovered from ditches 354 and 368. A Middle Iron Age date is suggested by the associated pottery. The quantities are too small to provide clear evidence for ironsmelting in Area B although smithing was apparently being carried out.

Burnt flint
A little over 96kg (6622 pieces) of burnt flint were recovered though this material was not totally collected. The majority (63kg) came from the T-shaped hearth (359), but significant amounts were recovered from other features (350, 352 (*c* 3kg) and ditch 354 (*c* 3kg)). The limited size range of fragmentation for the burnt flint from Trench B1 (see microfiche) suggests repeated heating in hearth 359.

Fired clay
The 61 fragments (940g) recovered from this area represent three different fabrics. Only two examples of daub with wattle impressions were identified. One piece from ditch 354 has very good surfaces and a cob-like structure to the fabric, including pebbles, and is likely to be daub. The other fragment was found in feature 370 and has a double wattle mark.

Worked stone
One broken fragment of medium-grained sandstone was found in the T-shaped hearth; one polished surface perhaps suggests it may be a whetstone.

Discussion
The pottery from the few features in this area suggests contemporaneity and a Middle Iron Age date is indicated by the radiocarbon date from feature 359. It is possible that ditch segments 421 and 368 are the same feature, forming a curvilinear ditch which may be part of the enclosure which is partly visible on the aerial photographs. The ditch was cut through a deep flood silt and was filled with very similar material, and it is likely that this is one of the reasons for the poor definition both on the photographs and the geophysical survey. The features within this enclosure do not appear to be widespread over the whole area, tending to cluster at the north edge of the trench. No structural evidence was positively identified but two wattle and daub fragments may suggest a building.

The T-shaped feature (359) lies in the centre of the site. The burnt flint lining, large quantities of charcoal, and pottery with burnt clay attached indicate that this feature must have functioned as a hearth or oven though the specific purpose remains unclear. The primary fill contained large quantities of burnt flint and charcoal (Table 2) but the clay and gravel forming the base and sides of the pit did not appear to be particularly burnt, even though the lenses of charcoal and ash in the fill would seem to suggest several firings. The longer arm of the feature on the west side may have been a stokehole or a rake-out point and it is significant that the hollow at the west end of this part of the feature (350) also contained large quantities of burnt flint. The clay 'bridge' over this arm extension may suggest that at least part of the structure may have been covered over.

The lack of cereal remains in the carbonised material from this feature precludes its interpretation as a corn dryer (Appendix II). Charcoal from the feature itself was almost exclusively oak from mature trees and it has been suggested that, as oak is not represented

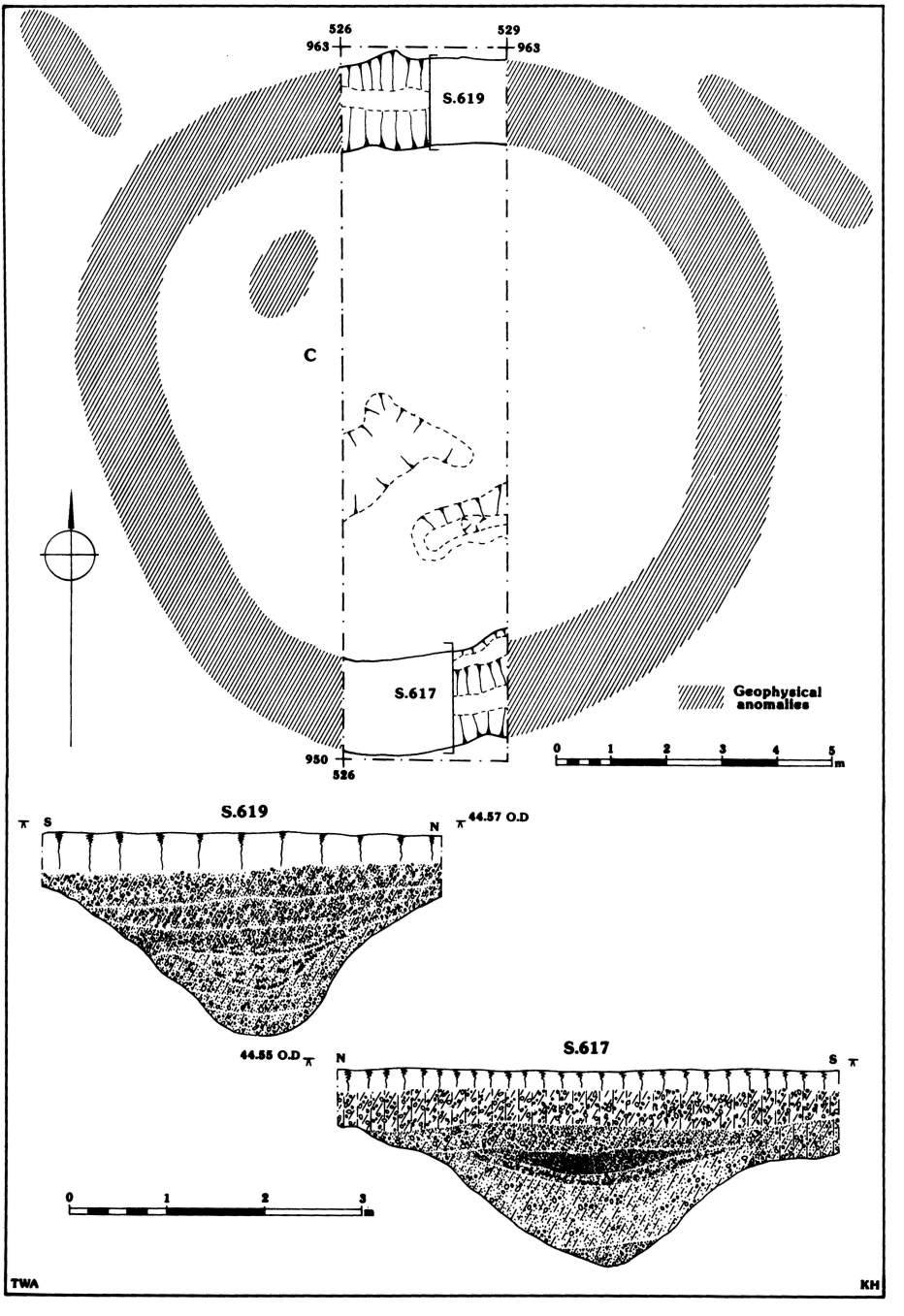


Figure 9 Riseley Farm: Trench C, plan and sections of ring-ditch

in the pollen record from the open grassland environment of the site, the wood must have been deliberately acquired. It is possible that the structure may have been used in connection with pottery-making, functioning as a pottery drying oven similar to the T-shaped ovens recognised on several Romano-British sites such as the Churchill potteries at Oxford, Norton in Yorkshire, and Hamstead Marshall in Berkshire (Young 1977, 20). However, to our knowledge, there is no other similar feature from an Iron Age site in the south of Britain. Many of the features to the north of the hearth contained fairly large quantities of burnt flint, and in ditches 354 and 368 moderate quantities of iron slag from smithing processes were also recovered, possible suggesting some association of the hearth and these other features with some aspect of ironworking.

TRENCH C (Fig 9)

The geophysical survey of this area identified a slightly elliptical ring-ditch and indicated the presence of both internal and external features (see microfiche). A trench, 3m wide and 13m long, was positioned across the centre of the ring-ditch, on a north–south axis, in order to examine two opposing sections of the ditch and part of the central area, including one of the geophysical anomalies.

The ring-ditch is located on a gravel bank above the level of the surrounding old river channels and the present course of the river at a height of about 44m OD. The natural gravel surface in the interior of the ring-ditch was fairly irregular with amorphous hollows up to 0.25m in depth. A shallow (0.10m) layer of fine silt loam sealed the gravel.

The pre-ring-ditch occupation
Quantities of worked flint, including Mesolithic types and burnt flint, were recovered from both the silt layer and the topsoil, as well as in residual contexts within the ditch, and it seems likely that this represents a pre-existing surface.

The ring-ditch
The ditch enclosed an area about 9m in diameter, and was cut fairly steeply through the silt and into the gravel, with sloping sides and rounded base. The ditch was shallower in profile on the south side. The fills of the ditch comprised an homogeneous fine sandy silt, although the primary fill in the north section (cut 619) contained a high density of gravel; in this section the upper fill contained large quantities of burnt flint, charcoal, and other artefacts. A small concentration of charcoal and possibly ash was noted at a similar level in the south section (cut 617) and may indicate that this distribution was more widespread. Filling the upper levels of the ditch was a soil very similar to the subsoil sealing the gravel which probably accumulated as a result of repeated ploughing.

Internal features
Two irregular features were excavated in the interior of the ditch; both were shallow and filled with soil, similar to the soil covering the gravel in this area, and it is likely that they were natural undulations in the gravel surface.

The finds

Pottery
Nearly all the pottery in this trench (29 sherds, 250g) came from cut 619 on the north side of the ring-ditch. Two small body sherds of handmade Iron Age pottery in sandy fabrics came from the upper fills and were probably deposited after abandonment of the ring-ditch. The majority of the pottery is Early–Middle Bronze Age in both a purely grog-tempered and a coarse flint- and grog-tempered fabric. This small collection included three rim sherds (Fig 10, 1, 3, and 4), one of which is decorated with fingernail impressions on the upper rim edge, and a body sherd decorated with fingertip impressions on a

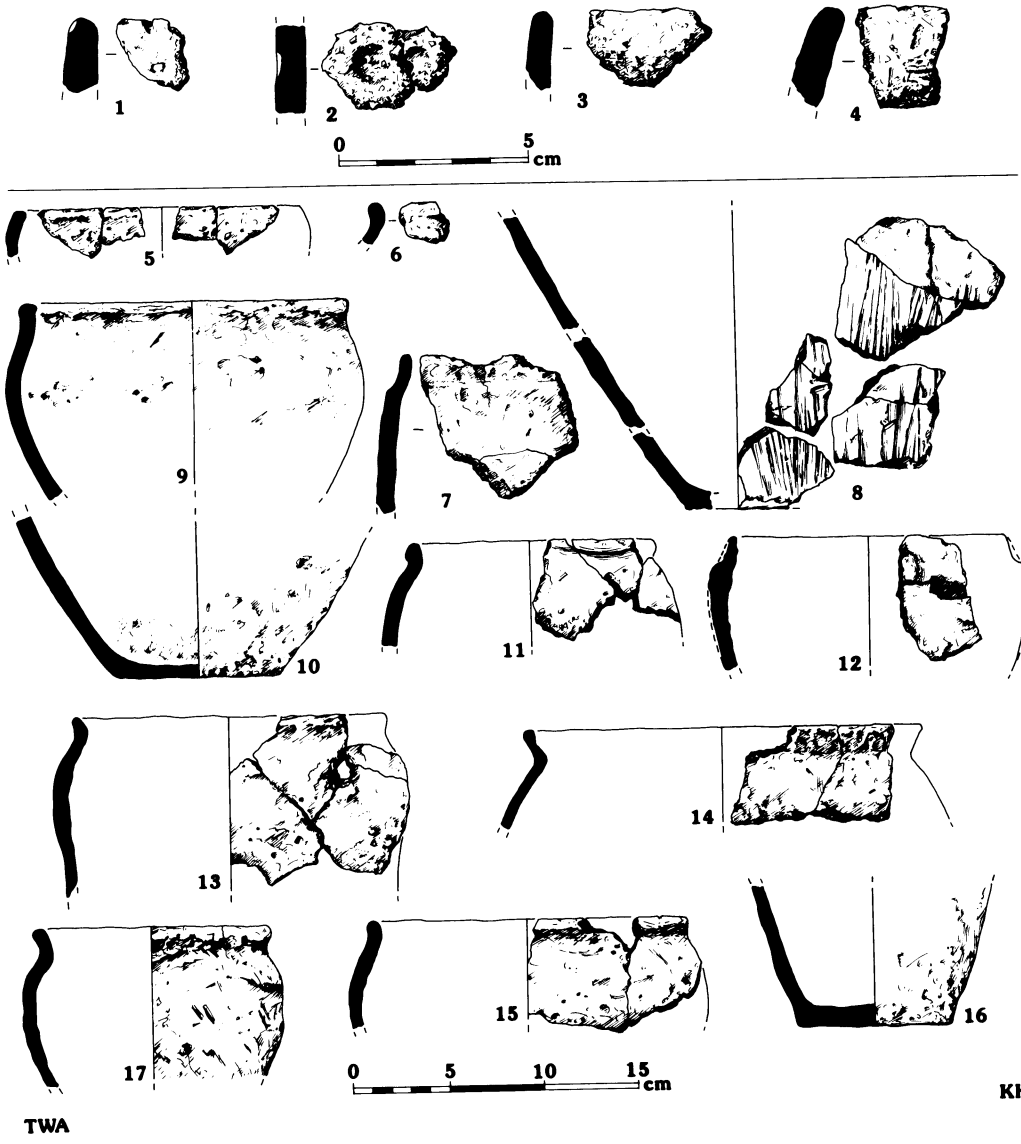


Figure 10 Riseley Farm: pottery (1–17: see Appendix III). Scale 1 : 4

straight wall side (Fig 10, 2) typical of Middle Bronze Age urns (Ellison 1975 and 1978; Dacre and Ellison 1981; Barrett 1973). One small body sherd in a grog-tempered fabric of later Iron Age type, from the uppermost fill of cut 617, is likely to be intrusive.

Burnt flint

Large quantities (10.6kg, 1914 pieces) of burnt flint were found in this trench with the greatest density in the topsoil and subsoil (8.16kg), spread evenly across the trench. Sieving of a sample of the topsoil indicated

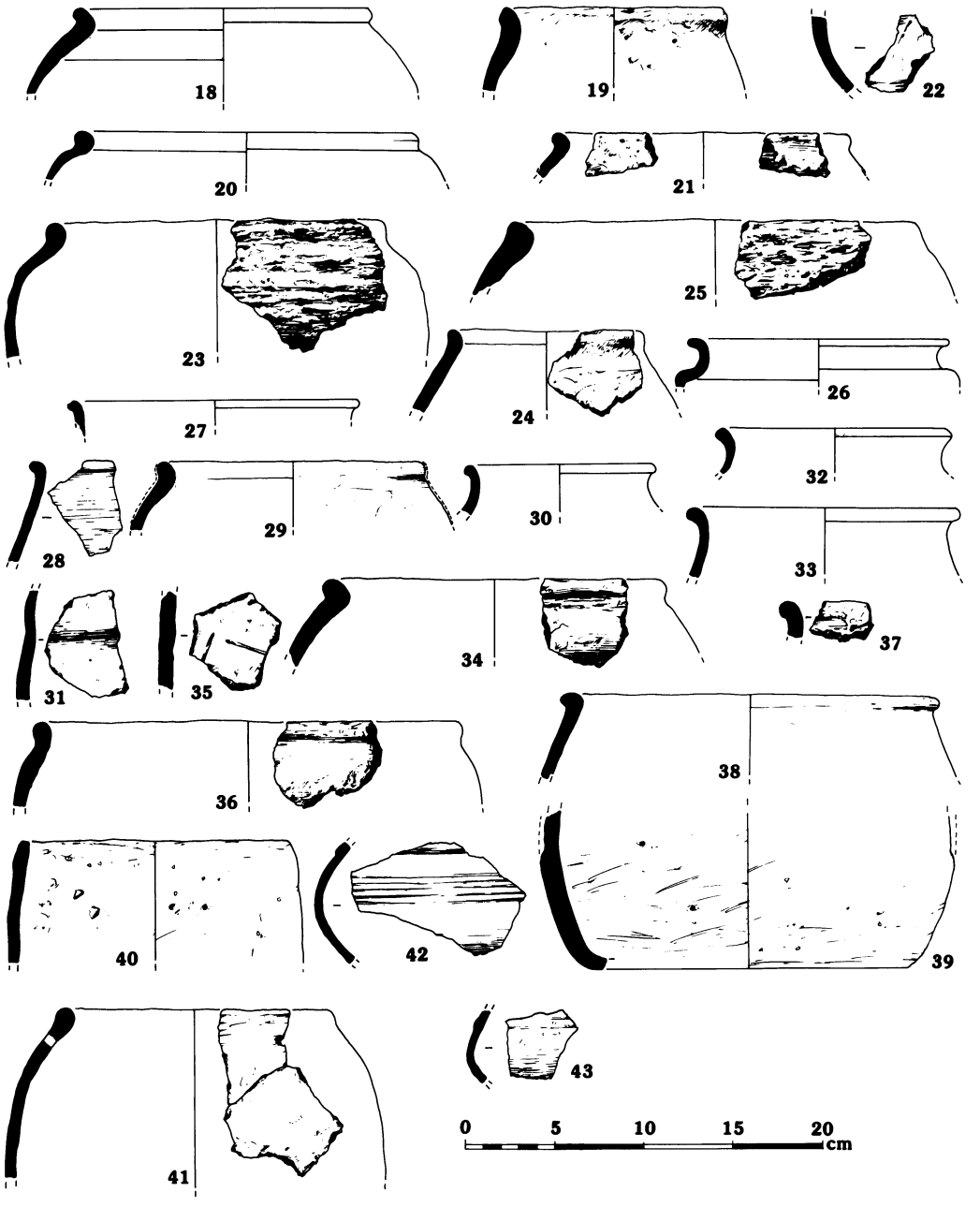


Figure 11 Riseley Farm: pottery (18–43: see Appendix III). Scale 1 : 4

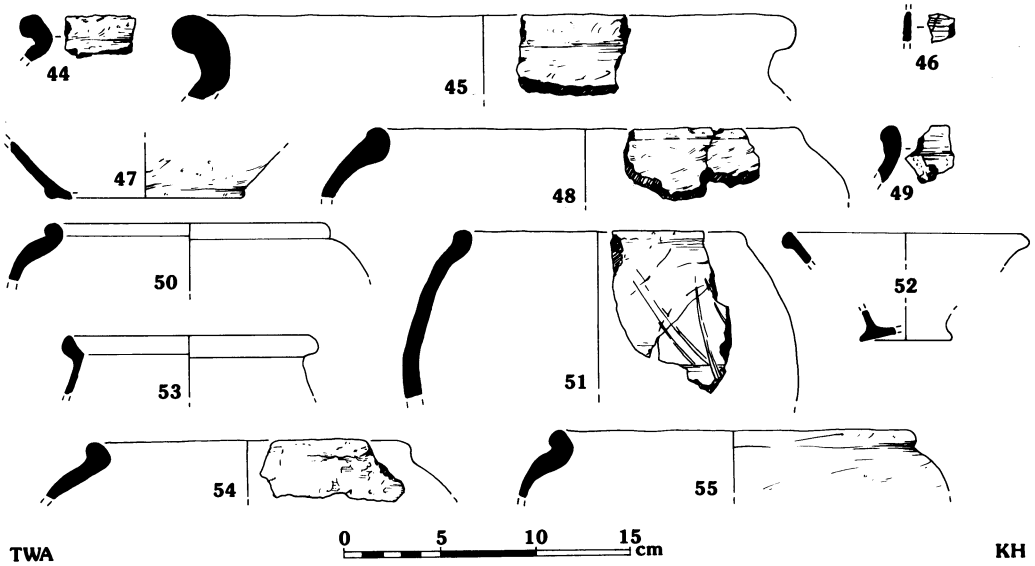


Figure 12 Riseley Farm: pottery (44–55: see Appendix III). Scale 1 : 4

that roughly a quarter of the total by weight was recovered by normal excavation methods. Moderate quantities of burnt flint were also recovered from the silts filling the upper levels of the ditch on both sides of the ring.

Amber bead

A fragment of a small convex-sided annular amber bead (overall diameter 4mm with a diagonal perforation 2mm across) was found in sieving from layer 631.

Flint by P A Harding

Worked flint was found mostly in the topsoil and subsoil with smaller quantities in the ditch fills. A total of 240 pieces was found and is summarised in Table 3.

The presence of bladelet cores, blades, and bladelets with abraded butts, and microliths suggests that most is residual Mesolithic material; however, artefacts from the upper ditch fills include knapping debris possibly associated with Early–Middle Bronze Age pottery. These observations are confirmed by statistical information on technological aspects such as butt width, percussion angle, platform preparation, and hammer mode recorded from flakes with complete proximal ends found in the topsoil/subsoil (59 flakes) and the ditches (47 flakes) which indicate a clear distinction between the two groups of material. The results are detailed in microfiche.

Few retouched tools were recovered. They include three microliths from the topsoil/

Table 3 Riseley Farm: flint from Area C

Context	*Cores*	*Core frags*	*Flakes*	*Broken flakes*	*Burnt flakes*	*Retouched flakes*	*Tools*
Topsoil/subsoil	2	8	57	100	8	2	9
Ditch 617	–	–	2	1	1	–	–
Ditch 619	1	6	18	14	3	1	2
Cut 638	–	–	1	1	1	–	–

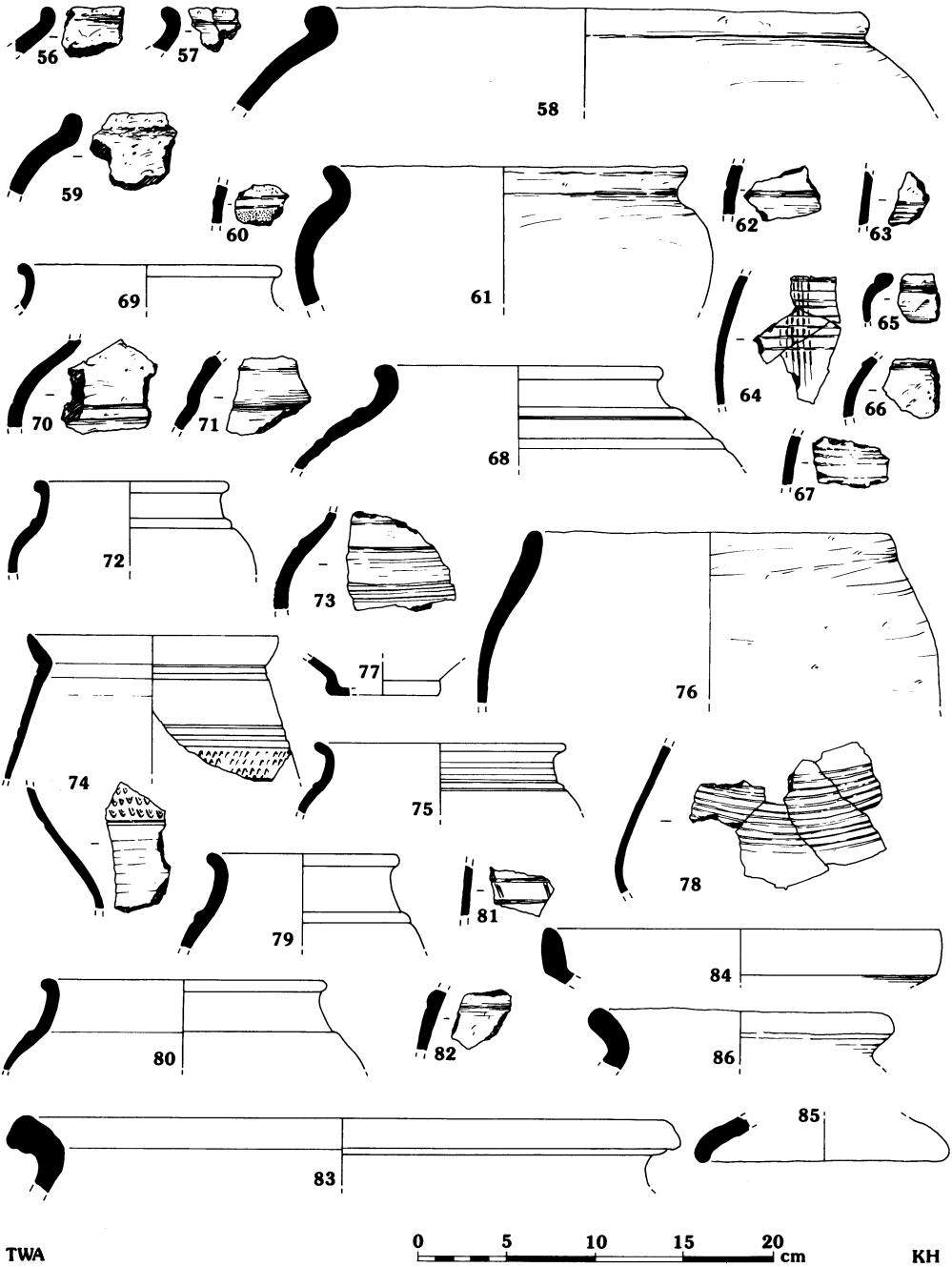


Figure 13 Riseley Farm: pottery (56–86: see Appendix III). Scale 1 : 4

subsoil, a broken leaf-shaped arrowhead, and a flake with denticulate retouch along one edge of typically Middle Bronze Age working.

Discussion

The earliest phase of activity is represented by Mesolithic flints and burnt flint in the topsoil and subsoil within the ring-ditch. The extent and nature of this activity was not ascertained but is likely to have been confined to the higher and presumably drier ground afforded by the natural gravel bank.

The ring-ditch was also apparently sited to take advantage of the higher ground overlooking the river and the lower-lying ground of the silted-up river channels. After the ditch had been excavated it appears to have been left to silt up naturally and there is no indication as to whether the gravel was used to create a mound within the ditch or an external ring-bank. A third phase of activity is signalled by the presence, in the upper levels of the ditch on the north side of the ring, of what appears to be a dump of domestic rubbish including burnt flint, charcoal, and artefacts. The few sherds of pottery and the worked flint would suggest a date in the Middle Bronze Age. There is no evidence of function for the ring-ditch although the fragmentary amber bead may indicate the former presence of a burial.

CONCLUSIONS

As an evaluation exercise, the aims of the work at Riseley Farm were necessarily restricted. The aerial photographs suggest the extent of the archaeological 'site' and only those features apparently peripheral to the main cropmark complex have been examined. Nevertheless, considerable valuable information was recovered and some degree of complexity and longevity is suggested for the occupation of this site.

The earliest activity appears to have been in the Mesolithic period and, although the nature of the activity identified in Area C is unclear, it can be seen as part of an increasing pattern of riparian settlement in the Loddon and Blackwater valleys (Ford 1987, 57). Indeed occupation of this date is not to be unexpected as these waterways would have been an important route between the Thames and the contemporary sites of the Weald.

The ring-ditch in Trench C provides evidence of activity in the Early or Middle Bronze Age in this area. Ring-ditches, including examples of Middle Bronze Age date, are well attested on the river gravels of the Kennet and Loddon (Bradley and Richards 1979–80), and the amber bead supports this date (C Beck and S Shennan pers comm). It is assumed that this monument served a funerary function and as such, located on marginal agricultural land, it is unlikely to have been very far from the area of settlement (Bradley 1981). The recovery of sherds of later Bronze Age pottery in residual contexts in Area B perhaps indicates that there may be occupation of this date somewhere on the site, possibly away from the river on drier ground.

The curvilinear enclosure in Area B provided evidence for occupation in the Middle Iron Age. This was clearly used for non-domestic activities and probably not for any great length of time. Its low-lying situation is likely to have meant that it was not usable in the winter months. The hearth at the centre of the enclosure suggests that it was used in connection with the production of pottery, although this may not have been the primary function as it seems that the hearth may have been fired on a few occasions. The settlement in this period may have been confined to the higher ground to the south-west where the cropmark complex is sited. The layout of this complex is in marked contrast to the more rectangular enclosures and associated field systems of later Iron Age settlements in the area, such as Pingewood (Johnston 1983–5) and Ufton Nervet (Manning 1974). Indeed, such a complex is visible on the aerial photographs to the north-west of the areas

investigated. However, the pattern of enclosure with hut circle and associated compound seen at Riseley Farm is not unusual on Middle Iron Age sites in the upper Thames, as at Farmoor (Lambrick and Robinson 1979) and Ashville (Parrington 1978). Area B has no wheelthrown pottery nor any sherds of the Late Iron Age/early Romano-British flint-tempered fabrics. The assemblage is dominated by sandy and organic wares and the forms are handmade and typically Iron Age in type, some of which are also found in Area A. The forms from Area B reflect mainly influences from the south midlands and the upper Thames region.

The Late Iron Age enclosure (Area A) may represent a change in focus of the settlement in the area, as it was constructed on a new site, on higher ground above the level of the winter flooding. The enclosure may not have been at the centre of settlement at this time as its primary use appears to have been associated with ironworking, although it may well have been occupied at the same time. Despite the apparent recutting and realignment of the enclosure ditches the occupation, in the first half of the first century AD, appears to have been fairly short-lived.

Located only 9km to the east of Silchester, adjacent to the main road to the east, the Late Iron Age occupation at Riseley must have fallen within the influence and perhaps the control of this important centre. Silchester, which was clearly a large and powerful settlement, perhaps the tribal centre of the Atrebates, was established by the end of the first century BC. There is evidence for long-distance connections from the earliest phase at Silchester, which must also have been an important focus for local marketing and redistribution of various commodities (Fulford 1987). This is reflected in the pottery from Area A which includes local imitations of imported wares and examples of imported sherds found all over the south and south-east region at this time (Hawkes and Hull 1947; Bedwin and Holgate 1985) as well as grog-tempered fabrics and the flint-tempered Silchester ware found at Silchester itself in this period.

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The finds and archive are deposited, with the permission of English China Clay, in Reading Museum (accession number 25.82). A copy of the archive is held on microfiche by Wessex Archaeology (site code W33).

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APPENDIX I: FEATURE DIMENSIONS

Context	*Type*	*Width/ diam (m)*	*Depth (m)*	*Comment*
Trench B1				
421	Ditch	1.5	0.30	Flat-bottomed
368	Ditch	1.5	0.70	
354	Ditch	0.59	0.15	
Trench A1				
79	Ditch	2.5	1 (at least)	Steep-sided
182	Ditch	1.7	0.70	Steep sloping sides
78	Ditch	1	0.45	Rounded
Trench A2				
99	Ditch	2.8	1	V-shaped
162	?Posthole	0.60	0.15	Rounded with flat base
176	?Posthole	0.50	0.03	
98	Ditch	1.85	0.80	Steep-sided, rounded base
130	?Posthole	0.20	0.06	
157	?Posthole	0.15	0.08	
158	?Posthole	0.13	0.14	
154	Gully	0.55	0.15	
Trench A3				
119	Ditch	2.5	0.85	Rounded
160	Ditch	1.5	0.55	Shallow and rounded
118	Ditch	2.4	0.65	Shallow
178	?Posthole	0.10	0.15	

APPENDIX II: SEED AND POLLEN ANALYSIS, A SUMMARY by W J Carruthers

Plant macrofossils

Uncarbonised seeds were recovered from almost all of the samples examined, even from the deepest features. Since only the very bottoms of some of the features were observed to be waterlogged at the time of excavation, and the seeds occurred in the greatest frequencies in the uppermost contexts, it seemed very likely that these seeds were intrusive. Indeed contamination by modern seeds, probably due to worm, root, and water action, was a problem all across the site (see microfiche). The almost complete absence of bone and molluscs suggested that the site had been fairly acidic in prehistoric times. It is evident that the level of the water table has fluctuated in the past, since deposits that were observed to have been waterlogged during the excavation contained no waterlogged plant remains. Changes in the water table may have carried small modern seeds through the gravel and been a contributory factor towards the contamination.

Very few carbonised seeds were recovered despite the large number of samples that were processed. No cereal remains were present and it seems likely that the carbonised remains were also intrusive. This negative evidence may be of some significance since 'it is a rare habitation site that fails to yield charred remains of food plants once one of the systems of flotation recovery is applied' (Hillman 1981). Occupation sites which produce little crop processing debris, and are therefore considered to have been consumer sites only, still usually produce evidence for the use of cereals if sieving is carried out. It appears that, throughout the various phases, the areas examined were used solely for non-domestic and industrial purposes or were entirely pastoral in nature and, despite the presence of quern fragments, occupation must have occurred elsewhere, possibly on drier land away from the floodplain.

Pollen analysis

Using the number of intrusive seeds present in a context as a rough guide to the level of contamination, it was considered useful to examine only primary ditch silts that may have been waterlogged. Some stratigraphic series of ditch fills were also examined in order to see whether, by comparing frequencies of taxa and taking into account the number of modern seeds recovered, the intrusive taxa could be separated from those which were naturally occurring.

The low concentration of pollen indicated that preservation was not good, even in the partially waterlogged primary silts. The relatively high occurrence of Liguliflorae, *Polypodium* sp, and grass pollen and the low species diversity indicated that differential preservation had taken place. It is possible that all of the pollen examined was of recent origin, but some factors could be seen as suggesting otherwise.

In Area A, where the topsoil was deepest, the intrusive seeds showed the clearest decrease in number with increase in depth; the pollen results appear to show an increase in taxonomic diversity in the lower levels. Pollen of the lesser reedmace/bur-reed type (*Typha angustifolia* type) was present in the lowest silt excavated in ditch 79 and water plantain pollen (*Alisma* type) was present in the bottom of ditch 160. These species grow in still or slow-running shallow water such as may have been present in the ditch. Samples from the primary fill of ditch 78 contained large numbers of amoebic cysts of a kind normally found in standing water in ditches. It is possible that these remains could have been introduced as contamination by river flooding, although they were only present in the primary silts.

Comparison of the small amount of tree pollen recorded with the results from the charcoal analysis showed some similarities in the taxa present with an emphasis on oak (Gale, microfiche) but, again, problems of contamination suggest that much of the pollen may be intrusive. It is,

however, possible that some of the pollen observed in the lowest, semi-waterlogged ditch silts represents the original flora of the area indicating primarily damp, disturbed grassland with very little evidence of woodland.

APPENDIX III: ILLUSTRATED SHERDS

Fig no.	*Trench*	*Context*	*Feature*	*Form*	*Fabric*	*FSN*
10.1	C	618		Rim type 12 Motif type 8	FT51	127
.2	C	623	Ditch 619	Motif type 8	FT51	128
.3	C	626		Rim type 12	FT51	129
.4	C	630		Rim type 12	FT51	130
.5	B1	353		Rim type 12	FT38	101
.6	B1	353	Ditch 354/378	Rim type 5	FT38	105
.7	B1	377		Rim type 13	FT23	109
.8	B1	377		Base type 1 Motif type 7	FT23	110/111
.9	B1	351	Pit 352	Rim type 14	FT25	96
.10	B1	351		Base type 1	FT25	97
.11	B1	362		Rim type 5	FT25	113
.12	B1	363		Rim type 15	FT22	115
.13	B1	363		Rim type 13	FT25	117
.14	B1	363	Feature 359/395 (T-shaped hearth)	Rim type 16	FT25	118
.15	B1	363		Rim type 5	FT25	119
.16	B1	363		Base type 1	FT25	121
.17	B1	363		Rim type 13	FT26	122
11.18	A1	87		Rim type 4	FT21	15
.19	A1	87		Rim type 5	FT25	16
.20	A1	87		Rim type 4	FT36	17
.21	A1	135		Rim type 4	FT35	43
.22	A1	135	Ditch 79	Motif type 3	FT36	45
.23	A1	135		Rim type 4	FT40	46
.24	A1	150		Rim type 5	FT25	47
.25	A1	150		Rim type 4	FT40	48
.26	A1	62		Rim type 6	FT35	11
.27	A1	62		Rim type 7	FT36	12
.28	A1	62		Rim type 7	FT36	13
.29	A1	62		Rim type 4	FT40	14
.30	A1	91		Rim type 10	FT35	24
.31	A1	91		Motif type 6	FT35	126
.32	A1	91		Rim type 10	FT36	25
.33	A1	91		Rim type 10	FT36	26
.34	A1	91		Rim type 4	FT40	28
.35	A1	100	Ditch 182	Motif type 2	FT42	29
.36	A1	108		Rim type 5	FT25	33
.37	A1	108		Rim type 5	FT25	34
.38	A1	108		Rim type 11	FT27	36
.39	A1	108		Base type 4	FT27	37
.40	A1	108		Rim type 12	FT27	38
.41	A1	108		Rim type 5	FT28	30
.42	A1	108		Motif types 1 & 5	FT35	41
.43	A1	108		Motif type 3	FT36	42

Fig no.	*Trench*	*Context*	*Feature*	*Form*	*Fabric*	*FSN*
12.44	A1	5		Rim type 2	FT40	3
.45	A1	60		Rim type 3	FT24	5
.46	A1	60		Motif type 1	FT32	8
.47	A1	60		Base type 2	FT35	9
.48	A1	60		Rim type 4	FT40	7
.49	A1	60		Rim type 5	FT42	10
.50	A1	89	Ditch 78	Rim type 4	FT 21	19
.51	A1	89		Rim type 5 Motif type 2	FT25	18
.52	A1	89		Rim type 9 Base type 3	FT31	21
.53	A1	89		Rim type 8	FT34	20
.54	A1	89		Rim type 4	FT35	22
.55	A1	89		Rim type 4	FT40	23
13.56	A2	6		Rim type 5	FT25	49
.57	A2	6		Rim type 10	FT35	50
.58	A2	81		Rim type 4	FT40	135
.59	A2	81		Rim type 4	FT41	137
.60	A2	95		Motif type 5	FT21	57
.61	A2	95		Rim type 13	FT25	140
.62	A2	95	Ditch 99	Motif type 2	FT35	60
.63	A2	95		Motif type 1	FT35	61
.64	A2	95		Motif types 3 & 4	FT35	62
.65	A2	95		Rim type 4	FT36	63
.66	A2	129		Motif type 5	FT35	83
.67	A2	97		Motif type 3	FT35	66
.68	A2	123		Rim type 6	FT35	169
.69	A2	123		Rim type 10	FT35	69
.70	A2	109		Motif type 2	FT35	74
.71	A2	123		Motif type 6	FT35	75
.72	A2	123		Rim type 6	FT36	78
.73	A2	123	Ditch 98	Motif types 1, 3 & 5 Rim type 18	FT36	79
.74	A2	83/109		Motif types 3 & 4	FT31	55/67
.75	A2	83		Rim type 6	FT35	138
.76	A2	114		Rim type 5	FT35	165
.77	A3	110	Ditch 118	Base type 5 (oddity)	FT35	188
.78	A3	120	Ditch 119	Rim type 17	FT33	94
.79	A3	103		Rim type 6	FT36	181
.80	A3	103	Ditch 118	Rim type 10	FT36	180
.81	A3	110		Motif type 2	FT36	89
.82	A3	116		Motif type 5	FT36	90
.83	A3	120	Ditch 119	Rim type 3	FT35	193
.84	A3	120		Rim type 17	FT33	94
.85	A3	7	Ditch 160	Rim type 19	FT41	178
.86	A3	105		Rim type 3	FT41	87

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Investigation of Bronze Age and Iron Age Features at Riseley Farm, Swallowfield, Berkshire

by S J Lobb and E L Morris

MAGNETOMETER SURVEY

by A. Bartlett and D. Bolton

Ancient Monuments Laboratory Report No. 3783
Date of fieldwork: 23 August 1982

Three cropmark sites on gravel at Riseley Farm, Berkshire (SU6363) were surveyed to test their magnetic response prior to excavation. A 1/2m fluxgate magnetometer was used to record traverses at 1m intervals on a grid of 30m squares. The 1:200 chart recorder p ots are in the archive with an interpretation showing magnetic anomalies of possible archaeological significance outlined.

Site A

The main enclosure was clearly detected in the survey, but only as a single ditch and not as the double boundary shown by the cropmark. There may be some pits within the enclosure but they were not very well defined.

Site B

None of the cropmarks in this area was recorded by the survey. There were two features which might represent pits in the SE corner of the plot but both were close to magnetic anomalies caused by pieces of iron and might be spurious.

Site C

The ring ditch was detected and there were a few doubtful anomalies which might represent pits.

Gravel sites vary greatly in their magnetic response, but there was no immediately evident reason for the great contrast between neighbouring sites, unless the cropmarks at site B, which were weaker than the others, represent more superficial disturbances than those at sites A and C. The variation between them does not relate to the magnetic susceptibility values of the topsoil (site B gave a reading of between A and C: A 14.3, B 27.3, C 52.8 x 10^{8} SI units/kg). It could be that there is magnetically enhanced material of archaeological origin in the fill of the features at A and C which is not dispersed in the topsoil and which is lacking at B.

POTTERY

by Elaine Morris

The assemblage recovered from the excavation includes a total of 1477 sherds (13445g), and is significant for its prehistoric and early Romano-British material (1312 sherds, 12723g), found on each subsite as follows: Site A, 958 sherds, 9492g; Site B, 324 sherds, 3023g; Site C, 30 sherds, 208g.

Methodology

The pottery from sites A, B, and C was analysed using the standard TWA pottery recording system. It was examined macroscopically and with the aid of a binocular microscope (x10 magnification) where necessary. Fabric groups were identified on the basis of the dominant inclusion observed and were then subdivided into fabric types according to the range of inclusions and the type of clay matrix present. Within each fabric type, all sherds were weighed to the nearest whole gram and all rim and base sherds were measured to the nearest centimetre range.

Each featured sherd or groups of joining featured sherds have been given individual numbers (FSN) and a detailed record can be found in the archive. In a context each featured sherd or group of joining featured sherds is given a FSN. Featured sherd numbers are not vessel counts but could be consolidated to create estimated vessel equivalents (Orton 1980, 164-7). FSNs were not recorded for medieval and modern pottery which occurred only in unstratified deposits.

In the form and fabric type series the vessels illustrated in the figures in text (Figures 10 - 13) are referred to only by their unique illustration numbers; figure numbers are not given.

Fabrics

The assemblage was divided into 9 major fabric groups (33 fabric types) on the basis of the identifiable inclusions, and chronologically on the basis of form and surface characteristics where present. Detailed descriptions of the fabric types with site by site quantification, possible sources, the forms and decorations found in the fabric type, the likely firing conditions and the date range of use are given here and in the archive. The proportional amount of each fabric type by group and by subsite is presented in table Mf1, below, and fabric groups from features in text Table 1. Not all numbers in the series were utilised.The prehistoric and Romano-British fabric types are summarised in the following list:

Bronze Age fabrics: FT50 - FT51
Middle-later Iron Age grog-tempered fabrics: FT35 - FT38
Iron Age and Romano-British sandy fabrics: FT21 - FT28
Later Iron Age and early Romano-British fine wares and imported material: FT30 - FT34
Late Iron Age and early Romano-British flint-tempered fabrics: FT40 -FT43

Fabric methodology

All of the pottery was examined macroscopically and allocated to a defined fabric type based on further detailed examination with a binocular microscope (X 10 power) if necessary. Fabric types have been created according to the TWA Pottery Fabric Sheet record which

differentiates between clay matrix type, hardness of firing, feel or texture, and fracture in addition to the type, frequency, sorting, rounding and size of inclusions. Each fabric type group was counted and weighed by context and recorded on the Pottery Context Record forms by sherd type.

The first group of 20 fabric type numbers has been allocated for medieval to ;modern types of pottery. Only very limited details about this material are presented here due to its incidence being of minor importance as part of the purpose of the excavation and this report.

The term 'iron-rich' used in the description of the fabric types means that when fired in an oxidizing atmospere, this fabric will appear to be orange-red in colour. An 'iron-free' clay matrix appears white under similar firing conditions. The manufacturing techniques 'handmade' and 'wheelthrown' are abbreviated 'HM' and 'WT' respectively. Dating of a fabric type is usually provided by the forms recovered in that fabric or by association with other fabrics and forms.

FABRIC TYPE	SITE A by number	SITE A by weight	SITE B by number	SITE B by weight	SITE C by number	SITE C by weight
21	6.5% (62)	4.6% (439g.)	0	0	0	0
24	0.5% (5)	1.1% (100g.)	0	0	0	0
sub-total	7.0% (67)	5.7% (539g.)	0	0	0	0
22	0.2% (2)	0.2% (18g.)	7.7% (25)	3.7% (111g.)	0	0
23	1.1% (11)	2.0% (191g.)	13.3% (43)	13.3% (401g.)	0	0
25	6.9% (66)	9.2% (869g.)	54.0% (175)	64.4% (1946g.)	3.3% (1)	1.4% (3g.)
26	0	0	13.9% (45)	11.2% (338g.)	0	0
27	2.4% (23)	4.3% (410g.)	2.3% (7)	3.5% (106g.)	0	0
28	1.0% (10)	2.1% (196g.)	0.3% (1)	0.1% (2g.)	0	0
sub-total	11.7% (112)	17.1% (168g.)	91.4% (296)	96.2% (2904g.)	3.3% (1)	1.4% (3g.)
30	0.1% (1)	1.8% (174g.)	0	0	0	0
31	3.7% (35)	1.8% (172g.)	0	0	0	0
32	0.3% (3)	<0.1% (2g.)	0	0	0	0
33	0.1% (1)	0.2% (22g.)	0	0	0	0
34	0.1% (1)	0.1% (8g.)	0	0	0	0
sub-total	4.3% (41)	4.0% (378g.)	0	0	0	0
35	24.6% (236)	22.8% (2164g.)	0	0	3	0
36	17.5% (168)	11.9% (1130g.)	0	0	3.3% (1)	1.4% (3g.)
37	0.5% (5)	0.5% (51g.)	0	0	0	0
38	0	0	8.0% (26)	3.3% (100g.)	0	0
sub-total	42.7% (409)	35.2% (3345g.)	8.0% (26)	3.3% (100g.)	3.3% (1)	1.4% (3g.)
40	8.1% (78)	10.6% (1010g.)	0	0	0	0
41	18.0% (172)	19.2% (1825g.)	0	0	0	0
sub-total	26.1% (250)	29.9% (2835g.)	0	0	0	0
42	7.0% (67)	6.3% (601g.)	0	0	3.3% (1)	0.5% (1g.)
43	1.3% (12)	1.2% (110g.)	0	0	0	0
sub-total	8.2% (79)	7.5% (711g.)	0	0	3.3% (1)	0.5% (1g.)
50	0	0	0	0	10.0% (3)	2.9% (6g.)
51	0	0	0.6% (2)	0.1% (19g.)	80.0% (24)	93.8% (195g.)
sub-total	0	0	0.6% (2)	0.1% (19g.)	90.0% (27)	96.6% (201g.)
TOTAL %	100%	100%	100.1%	99.6%	99.9%	99.9%
TOTALS	958	9492g.	324	3023g.	30	208g.

Table Mf 1: Proportion of fabric types by site

Modern to medieval fabrics

FT1 porcelain

Forms: hollowares and flatwares
Date range: 18th - 20th centuries

FT2 white earthenware

Forms: hollowares and flatwares
Date range: 18th - 20th centuries

FT3 stoneware: light-pale grey or buff stoneware fabric similar to modern drainpipe fabric

Forms: hollowares
Date range: modern

FT4 Not used

FT5 very fine, sandy earthenware: very pale, fleshy orange-coloured, very fine and dense sandy clay matrix with rare pieces of iron oxides (1% concentration or less)

Forms: hollowares
Date range: post-medieval

FT6 stoneware: medium grey fired stoneware fabric

Forms: hollowares
Date range 17 - 18th centuries

FT7 dense, slightly sandy, orange-red coloured earthenware: hard fired, dense, iron-rich clay matrix which contains a sparse amount of fine quartz grains in less than 10% concentration

Forms: hollowares and flatwares
Date range: 17th -18th centuries

FT8 sandy, orange-red firing earthenware: hard fired, dense, iron-rich, sandy clay matrix with a moderate-common amount (10-25% concentration) of quartz grains, up to 0.5mm across; sandier than FT7

Forms: hollowares
Date range: 16th - 18th centuries

FT9 unoxidized, moderately sandy, earthenware: very similar to FT8 but not as hard fired; from a wheelthrown vessel

Forms: uncertain
Date range: ?late medieval / early post-medieval

FT10 oxidized/unoxidized, iron-rich, medium-fine, sandy earthenware: moderately hard fired clay matrix containing subangular to rounded quartz grains ranging up to 0.5mm across in moderate concentration (10-20%)

Forms: ?cooking pot or jar
Date range: ?medieval / late medieval

FT11 Surrey whiteware: fine, only slightly sandy, iron-free clay matrix

Forms: jugs and cups with apple green glaze
Date range: 15 - 17th centuries

FT12 - FT19 Not used

Iron Age and Romano-British sandy fabrics

FT20 Not used

FT21 moderately sandy fabric: moderately hard-soft fired, clay matrix containing a moderate to common amount (15-30% concentration) of subrounded to rounded, well-sorted quartz grains, up to 0.5mm across; found on Site A only.

Source: ?local
Forms: HM and WT types; Types 4 and 10 rims (illustrations 18 and 50)
Decoration: Motif Type 5 - cordons (illustration 60)
Firing conditions: unoxidized
Date range: 1st century AD

FT22 very fine, sandy and micaceous fabric moderate to common amount of very fine, very well-sorted quartz grains, 0.1mm or less in size (very fine sandy to silt-sized grains) and an appreciable amount of fine mica in a softly fired, iron-rich clay matrix; the inclusions are only microscopically measurable; found on Sites A and B.

Source: ?local
Forms: HM Rim Types 1 and 15 (illustration 12)
Decoration: none
Firing conditions: oxidized exterior surfaces or irregularly fired
Date range: ?Middle to later Iron Age

FT23 very fine, sandy fabric with small amount of organic matter: a softly fired iron-rich clay matrix containing a sparse-moderate amount (5-15%) of well-sorted, subangular to rounded quartz grains less than 0.5mm across, and a rare-sparse amount (1-7%) of linear vesicles, up to 3.0mm long, representing burnt out (oxidized) organic matter; similar to FT22; found on Sites A and B.

Source: ?local
Forms: HM; Rim Type 13; Base Type: 1 (illustrations 7 - 8)
Decoration: Motif Type 7 - randomly scored, rough incisions (illustration 8)
Firing conditions: oxidized or unoxidized
Date range: Middle to later Iron Age (Cunliffe 1978, 42-3, 51, figs 3.5, A.13 / no.3, and A:22 /no. 6

FT24 coarse, round-grained sandy fabric: softly fired unoxidized fabric containing a common to very common amount (20-30%) of well-sorted, subrounded to rounded large quartz grains, up to 2.0mm across; this is an 'Alice Holt-type' fabric; found on Site A.

Source: Alice Holt/Farnham, Surrey (Lyne and Jeffries 1979) - *c.* 25km south-east of Riseley Farm
Forms: HM; Type 3 thick everted rim (illustration 45)
Decoration: none
Firing conditions: on this site examples unoxidized
Date range: *c.*AD 50-60 or later (see Fulford 1984, 125)

FT25 sandy fabric with iron oxides: softly fired fabric containing a moderate amount (15-20%) of well-sorted, subangular to subrounded quartz grains, up to 0.5mm across, a rare to moderate amount (1-10%) of poorly-sorted, subrounded to angular red iron oxide fragments, up to 3.0mm across, and a rare amount (1%) of ?cortex-bearing flint usually less than 3.0mm across; the feel of this fabric is diagnostically harsh; similar to fabric ST1 at Lea Farm, near Hurst, Berkshire (J. Lancely in Trust for Wessex Archaeology archive report); found on Sites A, B, and C.

Source: ?local; similar to FCFT 5
Forms: HM; Rim Types 1, 5, 12, 13, 14, 16; Base Type 1 (illustrations 9-11, 13-16, 19, 24, 36-37, 51, 56, and 61)
Decoration: Motif Type 2 (illustration 51)
Firing conditions: oxidized, irregularly fired and unoxidized
Date range: Middle to later Iron Age; similar to Fabric 3 at Aldermaston (Cowell *et al* 1978, 25, fig. 8)

FT26 sandy fabric with moderate amount of organic matter; softly fired iron-rich clay matrix containing a moderate-common amount (10-20%) of well-sorted, subrounded to subangular quartz grains, less than 0.5mm across, and a moderate amount (10-15%) of organic matter represented by linear vesicles up to 5.0mm across; this fabric is very similar to FT25; found only in the T-shaped hearth feature on Site B.

Source: ?local
Forms: HM; only Type 13 rimmed jars (illustration 17)
Decoration: undecorated
Firing conditions: producing oxidized exterior surfaces or patches
Date range: found with other handmade sandy fabrics (FT22, FT23 and FT25); Middle to later Iron Age; the use of organic matter as temper in pottery is common amongst Iron Age potter fabrics as identified at Ruestalls Hill (Oliver and Applin 1979, 59-60) and Brighton Hill South, near Basingstoke in Hampshire (Rees in prep.) and at Silchester (Timby 1985)

FT27 coarse sand and gravel fabric; softly fired clay matrix containing a moderate to common amount (15-25%) of poorly sorted, rounded to subangular quartz grains usually 1.5mm or less across with rare examples up to 3.0mm, a sparse amount (3-7%) of poorly sorted flint which is subangular in shape and measures from 2.0 - 12.0mm across, and rare pieces (1%) or red iron oxides up to 3.0mm; this fabric is a very coarse version of FT25 with large detritus; found on Sites A and B.

Source: ?local
Forms: HM; Rim Types 11 and 12; Base Type 4 (illustrations 38-40)
Decoration: none
Firing conditions: unoxidized or irregularly fired
Date range: recovered from the lower fill of the ditch 182 in A1; in the same context with FT21, 22, 25, 28, 35, 36, 40, 41, and 42; with Type 5 rims, and Motif Types 1 and 3 from two different wheelthrown fine jar/bowls, and also in Site B in the T-shaped hearth feature; therefore dated from the Middle to later Iron Age in to the early 1st century AD
Note: The description of this fabric type is similar to the Iron Age fabric type S3 from Ruestalls Hill, Basingstoke (Oliver and Applin 1979, 59-60)

FT28 fine-medium grained sandy fabric; softly fired, unoxidized fabric containing a moderate amount (10-20%) of subangular quartz grains, less than 0.3mm across; this fabric is finer than FT21, but coarser than FT22; similalr to fabric ST2 at Lea Farm, Hurst (J. Lancely, TWA archive report); found on sites A and B.

Source: ?local
Forms: HM and WT; Types 4 and 5 rims (illustration 14)
Decoration: perforated after firing
Firing conditions: usually oxidized
Date range: contemporary in deposition with FT27 above; similar in average sherd size to FT27 examples in ditch 182 (FT27/17.4g; FT28/19.8g)

FT30 amphora : identification by specialist (see separate report by Dr David F. Williams); found on Site A only.

Source: Italian origin
Form: Dressel 1 or Dressel 2-4
Firing conditions: single sherd is oxidized
Date range: 130-10 BC if Dressel 1; late 1st century BC - AD mid-second century if Dressel 2-4 (Peacock and Williams 1986)

FT31 Terra Rubra and Terra Rubra types: an extremely fine, orange firing clay with only microscopic inclusions - identification often based on form and decoration; specialist examination recommended; TR3 or imitation TR types (local butt beaker type fabrics) also included in this group due to difficulty of differentiation; found on Site A only.

Source: northern France or Britain
Forms: WT; Tim Type 9; Base Type 3 (illustration 52) - British imitation; Rim Type 18 (illustration 74) - imported TR3 vessel
Decoration: Motif Types 3 and 4 (illustration 74)
Firing conditions: oxidized
Date range: found in ditches 78 and 98; first half of the first century AD (Hawkes and Hull 1947, 204 and 237-41, fig. 50:5; Partridge 1981, fig. 78, 39a; Timby, J.R., pers. comm.)

FT32 soft, pale orange fine fabric: an extremely fine, iron-poor firing clay matrix with only microscopic inclusions; specialist examination recommended; found on Site A only.

Source: Britain
Forms: WT; butt beakers - only decorated body sherds recovered
Decoration: Motif Type 1 (illustration 46)
Firing conditions: oxidized
Date range: found in ditch 78; pre-Flavian/Conquest period *c.* AD 50-60 (Timby, J.R., pers. comm.)

FT33 fine, sandy buff-firing fabric: a fine fabric with a moderate- common amount of fine, well-sorted, sub-rounded to rounded quartz sand, less than 0.3mm across, and raare pieces of fine mica; (exterior has a black surface all over slip or closed-down firing technique used in production?); found on Site A only.

Source: ?local copy of a Terra Nigra form
Form: WT; Rim Type 17 (illustration 84)
Decoration: none
Firing conditions: unusual - oxidized core and interior margins but unoxidized surfaces
Date range: identical to recent Silchester excavations fabric S24 which is believed to be local (Timby, J.R., pers. comm.); pre-Flavian/Conquest period in date; recovered from ditch 119 in A3

FT34 fine, sandy fabric with rare-sparse iron oxides: an iron-rich firing clay matrix containing a moderate (10-15%) concentration of well-sorted, subrounded to subangular quartz grains less than 0.3mm across, a rare-sparse amount of iron oxide fragments less than 0.1mm across and rare pieces of mica; similar ro FT22 in the Anslow's Cottages assemblage (Mepham, L. 1986, TWA archive report); found on Site A only.

Source: ?local
Form: WT; Type 8 rim jar or butt beaker form (illustration 53)
Decoration: ?none
Firing conditions: oxidized
Date range: 1st century AD; found in ditch 78 in A1

Middle to Later Iron Age grog-tempered

FT35 soft, grog-tempered fabric: iron-rich firing clay matrix containing a moderate-common amount (15-25%) of angular fragments of poorly-sorted, orange-coloured grog, up to 2.0mm across, with only a rare to sparse amount (1-3%) of well-sorted subrounded to subangular quartz grains, less than 0.5mm across and rare pieces of subangular flint up to 2.0mm; similar to FT25 at Anslow's Cottages (Mepham, L. 1986, TWA archive report), fabric ST4 at Lea Farm, HUrst (Lancely, J., 1986, TWA archive report) and fabric C9 at Thames Valley Park, Reading (Mepham, L., 1988, TWA archive report); found on Site A only.

Source: probably somewhere in Berkshire; similarly described fabric found at Aldermaston and at Silchester
Forms: HM-Type 3 thick rimmed jar; HM-Type 4 bead rimmed jars; HM-Type 5 slack form jar; WT-Type 6 cordoned long necked bowls; WT-Type 10 simple everted rim from necked jar or bowl; Base Types 1 and 2 (illustrations 21, 26, 30, 47, 54, 57, 68, 69, 75, 76, 77 and 83)
Decoration: Type 1 - rilling; Type 2 - wide tooled/burnished line; Type 3 - incised line(s); ?Type 4 - rouletted lines (unusual fabric variation); Type 5 - cordon; Type 6 - corrugated/wavy profile indentations; (illustrations 31, 42, 62-64, 66-67, 70-71, 75)
Firing conditions: oxidized, unoxidized or oxidized
Date range: first half of the 1st century AD (equivalent to Cowell *et al.* 1978, 26, fig. 14: 1, 5-6, 8; fabrics 1(a) and 1(b)

FT36 sandy, grog-tempered fabric: an iron-rich firing clay matrix containing a sparse-moderate amount (5-15%) of poorly-sorted angular grog fragments up to 2.0mm across, a moderate amount (10-15%) of very visible (up to 1.0mm) poorly-sorted, rounded to angular quartz grains and rare-sparse amount (1-3%) of angular flint fragments up to 1.0mm; the fabric is harsh to touch but otherwise very similar to FT35; also similar to fabric GT3 at Lea Farm, Hurst (Lancely, J., 1986, TWA archive report); found on Sites A and C.

Source: ?Berkshire
Forms: HM and WT; Rim Types 4, 6, 7 and 10 (illustrations 20, 27, 28, 32, 65, 72, 79-80)
Decoration: Motif Types 1 - 5 (illustrations 22, 43, 73, 78, 79, 81-82)
Date range: first half of the 1st century AD; (equivalent to Fabrics 1(a) and 1(b) in Cowell *et al.*1978, 26

FT37 an unusual, vesicular fabric: an iron-poor firing, micaceous clay matrix containing a moderate-common amount (15-25%) of irregularly shaped vesicles which may have contained either grog or charcoal or carbon matter, a rare amount of subrounded quartz and quartzite grains, from 0.5 - 2.0mm across, and a rare-sparse amount (1-3%) of angular to subrounded pieces of calcined flint from 1.0-8.0mm across; found only on Site A.

Source: uncertain
Forms: HM; indeterminate
Decoration: Motif Type 2 - not illustrated
Firing conditions: oxidized surfaces
Date range: probably sometime during the first half of the 1st century AD, including the Conquest period; there is only one body sherd in this fabric from ditch 119 in A3

FT38 coarse grog-tempered sandy fabric: an iron-rich firing clay matrix containing a moderate-common amount (10-25%) of angular pieces of grog up to 4.0mm across, and a sparse-moderate amount (3-15%) of sub-rounded to subangular quartz grains, 2.0mm or less in size; this is a gravelly, uncleaned version of FT25 and FT36; the grog is bigger than either FT35 or FT36 and the detrital flint is usually large and very visible on examples found on Site B, but appears to be cleaned of flint and gravel pieces in the example from Site A.

Source: ?local
Forms: HM; Rim Types 5 and 12 (illustrations 5 -6)
Decoration: none
Firing conditions: irregularly fired
Date range: Iron Age or later; recovered from ditch 354/378 in B4 in association with FT23/Rim Type 13 jar twith scored decoration motif type 7 and FT25/Rim Type 12 jar; found in lowest fill of ditch 98 on Site A

FT40 'Silchester Ware' Type 1: an iron-rich micaceous clay matrix which is usuallly unoxidized, containing a common-abundant amount (25-40%) of poorly sorted angular pieces of calcined flint measuring 5.0mm or less in size, and a sparse amount of fine quartz; simialr to fabric FT1 at Lea Farm, Hurst (Lancely, J., 1986, TWA archive report); found on Site A only.

Source: Silchester area of Berkshire based on the distribution of examples (Charles 1979, fig. 6)
Forms: HM; Rim Type 2; Rim Type 4 (usually with well-smoothed by not burnished surfaces); Rim Type 5; illustrations 23, 25, 29, 34, 44, 48, 55, and 58
Decoration: none
Firing conditions: most often unoxidized but all conditions occur
Date range: *c.* AD 30/40 - *c.* AD 60/70 for most popular period of use with occasional examples continuing into the later 1st century AD (Boon 1969, 80; Charles 1979, 44-5; Timby 1985, 25-6); found in all ditches in A1-A3

FT41 'Silchester Ware' Type 2: an iron-rich clay matrix, which isusually unoxidized, containing a moderate-common amount (10-20%) of angular calcined flint up to 4.0mm across and a similar amount of angular grog fragments of the same size range; it has both a sharp harsh area if touching the flint, and also a smooth/soapy feeling due to the grog; found on Site A only.

Source: Silchester area, Berkshire
Forms: HM; Type 3 - thickened, everted rim jar; occasionally has well-smoothed, but not burnished surfaces (illustration 86); Type 4 (illustration 59); Type 19 (illustration 85)
Decoration: none
Firing conditions: all conditions occur
Date range: probably *c.* AD30/40 - AD 60/70, as fof FT40 above, but Rim Type 3 suggests mid-first century AD and later as for FT24 above (Conquest/post-Conquest period)

FT42 fine, flint-tempered fabric: an iron-rich clay matrix containing a sparse-common amount (5-25%) of angular calcined flint up to 2.0mm across and a moderate amount of subangular to subrounded quartz grains aless than 0.5mm across; found on Sites A and C.

Source: ?local; at least Berkshire
Forms: HM; Rim Type 5 (illustration 49)
Decoration: Motif Type 2 - wide burnished/tooled lines (illustration 35)
Firing conditions: usually oxidized but irregularly fired examples present, including oxidized exterior surfaces only
Date range: early 1st century AD; a finer tempered flint fabric is found in the earliest contexts at Silchester (Timby 1985) and is thought to pre-date 'Silchester Ware'

FT43 flint and quartz gravel fabric: an iron-rich clay matrix containing a moderate-common amount (15-20%) each of poorly-sorted, rounded to angular quartz and calcined flint, up to 2.5mm across with rare larger pieces; similar to fabric FT5 at Lea Farm, Hurst (Lancely, J., 1986, TWA archive report); found on Site A only.

Source: ?local
Forms: HM; only body sherds
Decoration: none
Firing conditions: unusually and irregularly fired in a post-breakage or post-depostional context
Date range: from the fill of ditch 98 in A2 and not associated with any early fine wares or imported pottery; therefore probably early 1st century AD

Bronze Age fabrics

FT50 fine, grog-tempered fabic, ? domestic beaker-type: an iron-rich firing clay matrix containing a common-abundant amount (20-40%) of poorly-sorted, subangular to angular pieces of grog, up to 4.0mm across; the fabric is soft to touch; the sherds are not burnished or well-smoothed in any special manner; similar to examples from Field farm, Burghfield (Mepham, L., TWA archive report); found on Site C only

Source: ?local
Form: indeterminate; only two body sherds recovered; 6-7mm thick
Decoration: none
Firing conditions: oxidized on the exterior margin and surface only
Date range: ?Early - Middle Bronze Age (Cleal, R., pers. comm.); recovered from fill of north side of ring ditch in Site C

FT51 flint and grog-tempered fabric, ?urn - type: an iron-rich firing clay matrix containing highly variable moderate-common amounts (10-35%) of poorly sorted angular calcined flint usually measuring up to 3.0mm with rare examples up to 7.0mm and rare-sparse amounts (1-10%) of poorly-sorted subangular to subrounded grog, usually up to 3.0mm, with occasional examples up to 5.0mm across the flint often breaks through the surface of the sherd; the sherds are never burnished, or even well-smoothed and never have evidence of finger wiping, as found on later Bronze Age material in the area (Bradley *et al.*1980); similar to FT25 at Anslow's Cottages (Mepham, L. 1986, TWA archive report)

Source: uncertain, ?local
Forms: Rim Type 12 form vertical-sided or barrel-shaped jars (illustrations 1, 3, 4)
Decoration: Motif Type 8 - fingernail impression on upper rim edge or paired finger tip impressions somewhere on the flat side of the body of vessel (illustrations 1-2)
Firing conditions: firing can also be variable with an externally oxidized sssrface and margin most commn but total oxidization and lack of oxidization can also occur
Date range: probably Middle Bronze Age (Ellison 1975, 1980; Dacre and Ellison 1981); it is not yet possible to differentiate later Bronze Age from Middle Bronze Age flint-tempered fabrics as was demonstrated by Dacre and Ellison 1980 for the phased Kimpton cemetery

Forms

Broad classifications of rim and base forms were established for this assemblage due to the absence of any complete profiles necessary for the creation of a valid vessel form series. Vessel types are indicated if known. Details of the forms, fabric types present in the forms, range of rim diameters obtainable, manufacturing technique, and dating evidence from associations on the site and to parallels in the region are presented below. The forms are illustrated as a type series (Figures Mf1-3)

Rim forms

1-- indeterminate form--usually given to small rim sherd fragments which may be highly variable in type but with <5% represented;
No. of examples: 2
Fabric types: FT22; FT25
Rim diameter range: unobtainable
Manufacturing technique: HM
Not illustrated
Parallels/dating evidence: inappropriate for type

2-- short, everted squared edge rim--from a necked vessel; Site A find
No. of examples: 1
Fabric types: FT40
Rim diameter range: (<5%)
Manufacturing technique:HM
Illustration nos: 44
Parallels/dating evidence: Only one example was recovered from excavation, in the initial cleaning of area above ditches in Trench A1, in association with modern material. It is not dissimilar to an example from Ufton Nervet dated c.AD70-100 (Manning 1974, fig.17:93).

3-- thick, everted, rounded edge rim--from a necked jar; Site A only;
No. of examples: 3(7)
Fabric types: FT24; FT41
Rim diameter range: 16-30cm.
Manufacturing technique: HM
Illustrations: 45 and 72
Parallels/dating evidence: The two stratified examples are from upper fills of the later ditches 78 and 160 in Trenches A1 and A3 respectively. The FT24 example (illustration 45) is likely to be an Alice Holt-type vessel dated to c.AD50-60 or later (Lyne and Jeffries 1979, fig.21; Timby, J., pers.comm.). The FT41 example is similar in fabric and form to examples from Aldermaston Site III dated to c.AD30/40- c.AD60-70 (Cowell, *et al.* 1978, 25-28, fig.14:20-22).

4-- pulled, thickened, beaded rim--on a necked jar with a high, thick-walled shoulder and thin-walled ovoid body; Site A only
No. of examples: 12(14)
Fabric Types: FT21, FT35, FT36=WT; FT40=HM;
Rim diameter range: 14-22cm.

Manufacturing techniques: HM and WT
Illustration nos: 18; 20-21; 23; 25; 29; 34; 48; 50; 54-55; 62;
Parallels/dating evidence: Beaded rim jars with high shoulders were found only in Trenches A1-3 but were recovered in both major phases of the ditches and increased with frequency in the latest fills: 14% of all rims from the lowest fills of ditch 79; 64% of all rim in the upper fills of ditch 79. Beaded rim vessels in this region are commonly found in grog-tempered and flint-tempered fabrics in the first 70 years of the first century AD (Cowell, et al. 1978, 25-28; Manning 1974, 33-7; Boon 1969, 74-9). The relative proportions of these vessels by fabric, however, change through this period with grog-tempered examples more common in the earlier part of the century and flint in the middle years around the Conquest period, from c.AD30/40-c.AD60/70 (Cowell, et al. 1978, 25-7)--ie., pre-Flavian.

The presence of only one beaded rim jar of Silchester Ware fabric (FT40)in the lowest fills of ditch 79 suggests that the deposition of these fills may have been contemporary with activity on Site I at Aldermaston (Cowell, et al. 1978, 26, fig.14:1-14), which just post-dates the inner earthwork at Silchester (Boon 1969, 74-9) and Pits H and R at Ufton Nervet (Manning 1974, 33-7, figs.18: 113-126), where beaded rim forms did occur but not in Silchester Ware fabrics. Similarly, the upper fills of ditch 79 and all of ditch 78 in A1 could have been contemporary with the activity on Site III at Aldermaston.

5-- pulled and/or thickened, vertical or slightly everted rim from a necked, sloping shouldered ovoid-bodied jar--Sites A and B
No. of examples: 14(20)
Fabric types: FT25, FT28, FT38, FT42
Rim diameter range: 10-32cm.
Manufacturing technique: HM
Illustration nos: 6, 11, 15, 19, 24, 36-37, 41, 49, 51; 56;
Parallels/dating evidence: This form is always handmade and predominantly correlated to sandy fabrics, particularly in the lower fills of ditch 79 (56% of all rims) in Trench A1 and throughout the features of Trench B (34%).This form with slack shoulder profile and sandy fabrics with coarse naturally included pieces of flint or organic matter are typical of Iron Age forms in the immediate region at Aldermaston (Cowell, et al 1978, fig.13:8) and elsewhere (DeRoche 1978, figs.44-52; Periods 2-3) and would date anywhere from the fourth century BC to the first century AD. The single decorated example with irregularly applied shallow tooling marks (illustration 51) is rather unique in the region, but the technique is Iron Age in tradition (Cowell, et al. 1978, fig.13:9 and 11; Millet and Russell 1984, fig.6:A1.16; Cunliffe 1978, 371, A:22, no.9).

The absence of any saucepan pot forms in association with this type of jar-- as was common at Aldermaston, and at Viables Farm (Millett and Russell 1984), Rucstalls Hill (Oliver and Applin 1979), Winklebury (Smith 1977) and Brighton Hill South (Rees, forthcoming) in the Basingstoke area to the south, or Brooklands, at Weybridge (Hanworth and Tomalin 1977), West Clandon (Frere 1946) or Hawks Hill (Hastings and Cunliffe 1966) in Surrey to the east plus the presence of this form in ditches 79 and 78 in quantity and in similar sherd size to other fabrics and forms (such as Type 5 jars) suggests that Type 5 forms continued to be used into the first half of the first century AD. The absence of saucepan pots at Riseley Farm is likely due either to the site not being part of the distributional network (trading

relationships/partnerships) of regional wares (see Cunliffe 1978, 46, fig.3:6 for regional saucepan pot style distributions) or simply because of the Sites A and B functioning mainly as industrial sites in both the Middle and later Iron Age periods.

The Type 5 jar is more similar in form to pottery from the Upper Thames area, than to elsewhere in Berkshire or Hampshire. These slack shouldered jars, especially in sandy fabrics with occasional additional inclusions such as angular flint, or sparse organic matter are very characteristic of most of Period 2 and a large proportion of Period 3 pottery from Ashville, Oxfordshire where an exact fabric and form combination can be found (DeRoche 1978, fig.47: 226).

The presence of "scoring" on vessels in the same fabrics in the same contexts as Type 5 vessels also supports an Iron Age date for this rim type (Cunliffe 1978, 42-3 and 51, fig.3.5, A:13/no.3, A:22/no.6). The distribution of this decorative technique, from the Trent to the Thames again indicates that the Iron Age ceramic asemblage found at Riseley Farm is not representative of a typical Wessex tradition.

6-- sharply everted rim from a long-necked bowl/jar--with a cordon on the lower neck to body join; similar to Rim Type 7; Site A only
No. of examples: 2
Fabric types: FT35; FT36
Rim diameter range: 10-14cm.
Manufacturing technique: WT
Illustration nos: 26; 38
Parallels/dating evidence: This very distinctive wheelthrown rim form is found only in the ditch fills of Trenches A1-3, and does not occur on Site B. Vessels in this general form with cordon decoration in grog-tempered fabrics are found in the assemblages of Sites I and III at Aldermaston, where they are considered to be pre-Flavian in date(Cowell, et al. 1978, 25-28; fig.14:8 and 26). Other examples were recovered at Ufton Nervet (Manning 1974, fig.18: 113 and 121), Silchester (Timby 1985, fig.8:22), and Southcote, Reading (Piggot and Seaby 1937, fig.7). The form is also extremely common on early 1st century\AD sites in the Upper Thames area (Harding 1972;Plates 69:E and 71:H).

7-- sharply everted, flat-topped rim with slightly curled over external edge from a neckless ovoid jar--similar to Rim Type 11; Site A:
No. of examples: 2
Fabric type: FT36
Rim diameter range: c.16cm.
Manufacturing technique: WT
Illustration nos: 27; 28
Parallels/dating evidence: same as for Rim Type 6 above

8-- lid-seated, club-like rim --from a necked, thin-walled, butt beaker type jar; Site A find
No. of examples: 1
Fabric type: FT34
Rim diameter range: 12cm.
Manufacturing technique: WT

Illustration nos: 53

Parallels/dating evidence: The single example of this rim type was found in the fill of ditch 78 associated with several examples of Rim Type 4 (FT21, FT35, FT40), an unusual fine ware vessel (Rim Type 9, Base Type 3, FT31), the sherd of amphora and the decorated Iron Age Type 5 rim vessel (FT25)(illustrations 44-55). There is no independent dating evidence for this form, but it would not be out of place in a pre-Flavian context.

9-- widely-flared rim with trace of internal lip from a small and fine, wheelthrown, thin-walled, shouldered jar with Base Type 3; the single example is likely to be a British imitation of a Gallo-Belgic butt beaker form and fabric; Site A find;

No. of examples: 1

Fabric type: FT31

Rim diameter range: 12cm.

Manufacturing technique: WT

Illustration nos: 52

Parallels/dating evidence: The contextual evidence is the same as for Type 8 above, therefore a pre-Flavian date is likely but not proven.

10- simple, everted rim from necked jar-- this type is very similar in form to Rim Type 6 above; probably could be amalgamated; Site A; No. of examples: 5(6)

Fabric types: FT35; FT36

Rim diameter range: 10-14cm.

Manufacturing technique: WT

Illustration nos: 30; 32; 33; 58; 66

Parallels/dating evidence: Three of the examples were recovered from the upper fill of ditch 79, one from the lower fill of ditch 99 and one from a disturbed context above ditch 99. The fabrics and the form, as with Rim Type 6, are likely to be pre-Flavian in date. An example with a cordoned neck was recovered from Southcote (Piggott and Seaby 1937, fig.7:5W/1). This vessel form is also common in the upper Thames region (Harding 1972, Plates 69-72).

11- rounded, hammerhead rim --probably from a large coarse, sloping shouldered jar with a Base Type 4 and wiped interior; similar to Rim Type 7; Site A only.

No. of examples: 1

Fabric type: FT27

Rim diameter range: 20cm.

Manufacturing technique: HM

Illustration nos: 38

Parallels/dating evidence: This example was recovered from the lower fill of ditch 79 in association with Type 5 rim sherds (FT25 and FT28), Type 12 ovoid rims (FT27), grog-tempered, wheelthrown, cordoned jars (FT35 and FT36), a small quantity of Silchester ware (FT40 and FT41:3 sherds)) and finer flint-tempered sherds (FT42:5 sherds).The form belongs to an overall Iron Age tradition in the area with similar forms found at Ashville (DeRoche 1978, fig.50:280-1), but it is actually a distinctively uncommon form.

12- smooth, concave rim from a neckless ovoid, barrel-shaped jar or a vertical-sided, jar/urn--usually unsmoothed or roughly finished; Sites A, B and C

No. of examples: 7 (15)
Fabric types: FT25; FT27; FT38; FT51
Rim diameter range: c.14cm.+
Manufacturing technique: HM
Illustration nos: 1; 3; 4; 5; 40
Parallels/dating evidence: Very simple ovoid or barrel-shaped jars were produced throughout the Iron Age, and the larger, thick walled and more vertical-sided urn form is also common to both the bronze and Iron Age periods.

At Riseley Farm, one ovoid vessel (illustration 40) was found in ditch 182 of Trench A1, in association with Types 4, 5, 7 and 10 rims, and grooved and rilled sherds (illustrations 25-43) as well as sherds of both coarse and fine, flint-tempered fabrics (FT40-42). In Trench B1, several sherds from one vessel (illustration 5) was recovered from a section of ditch 354/378 with a Type 5 rim in the same fabric and FT23 sherds while fragmentary Type 12 rim sherds from a vessel were recovered with a Type 13 rim (illustration 7) and scored ware body sherds (illustration 8), all made of FT23, and other FT38 sherds.

Ovoid vessels can be paralleled to examples from Iron Age contexts at Ruestalls Hill (Oliver and Applin 1978, fig.15:3 and 14; fig.16:21), Viables Farm (Millett and Russell 1984, fig.6·B3.6-B3.7), Winklebury (Smith 1977, fig.31:10) and Brighton Hill South (Rees, forthcoming) in the Basingstoke area, and to examples from Ashville in Oxfordshire (DeRoche 1978, fig.43: 150, 152; fig.47:243, 245; fig.48:259; fig.49:265-7). Barrel and straight-sided jars common Iron Age vessel forms in the upper Thames area (Harding 1972, Plates 60 and 62).

Three rim sherds from Site C were also assigned to this form (illustrations 1; 3; 4). These are from slightly thicker walled vessels than those from Sites A and B, and are more similar to Middle Bronze Age Barrel Urns both in form and decorative technique (Dacre and Ellison 1981).

13- vertical or slightly everted rim from a necked and shouldered jar; Site B only:

No. of examples: 4(6)
Fabric types: FT23; FT25; FT26
Rim diameters: 10-12cm. (FT26); c.16cm. (FT25); c.32cm.(FT23)
Manufacturing technique: HM
Illustration nos: 7; 13; 17
Parallels/dating evidence: Two of the fabric types (FT23 and FT25) used for these forms contain a proportion of organic matter, a temper type known to have been used in the Iron Age (see relevent details in fabric section).

This form occurs only at Site B and is found both in the T- shaped hearth 359/395 in association with a Type 15 vessel (FT22), a Type 16 vessel (FT25), a Type 5 rim (FT25) (illustrations 11-12, 14-15) and additional sandy fabrics (FT27 and FT28), and also in the fill of ditch 378 with scored ware body and base sherds in the same fabric (FT23), Type 12 rims (FT25) (illustrations 5-6; 8) and several other sherds (FT38).

Small shouldered jars are usually dated to the Iron Age and in particular to the Early-Middle Iron Age (Cunliffe 1978, 354, 357; Oliver and Applin 1979, fig.15: 2 and 18). The low proportion of organic matter in some vessels in this form (FT23 and FT26) and the association

of one example (FT23) with scored ware sherds of the same fabric indicate that an Iron Age date for this type is not unexpected. However, this simple form is also known from Saxon occupation at Wraysbury (Lobb, S. pers.comm.) c.30 km. northeast of Riseley but only sandy fabrics of Saxon date were recovered at Ufton Nervet which is c.12km. northwest of Riseley (Manning 1974).

14- short, thickened flat-topped rim with vertical neck on a round-bodied bowl--probably with a Type 1 base; Site B find

No. of examples: 1 (2)
Fabric type: FT25
Rim diameter: 16cm.
Manufacturing technique: HM
Illustration nos: 9
Parallels/dating evidence: This vessel was found in the fill of pit 352 on Site B, unassociated with other forms. Plain bowls in general are a common Iron Age form as demonstrated in the assemblages from Ruestalls (Oliver and Applin 1978. fig.16:23), Ashville (DeRoche 1978, fig.43:153, fig.44:185, fig.46:209, fig.47:237, fig.50:286), Southcote (Piggott and Seaby 1937, fig.7:3W/3) and Winklebury (Smith 1977, fig.32: 8 and 9). An open, hemispherical bowl tradition has been noted for the upper and middle Thames area during the Iron Age period (Cunliffe 1978, 55).

15- short, vertical rim and neck on a round-bodied bowl; Site B

No. of examples: 1(2)
Fabric type: FT22
Rim diameter: 14cm.
Manufacturing technique: HM
Illustration nos: 12
Parallels/dating evidence: The single example comes from layer 363 in the T-shaped hearth 359/395 and was recovered in association with Type 13 (FT25 and FT26), Type 5 (FT25) and Type 16 (FT25) rims (illustrations 11; 13-15; 17). Bowls are represented amongst Iron Age forms at Ashville, Ruestalls Hill and Winklebury as discussed above for Rim Type 14.

16- flat-topped rim with a thin, vertical neck from an ovoid body vessel with smooth, sloping shoulder; Site B only

No. of examples: 1(2)
Fabric type: FT25
Rim diameter: 20cm.
Manufacturing technique: HM
Illustration nos: 14
Parallels/dating evidence: This single vessel was recovered from the T-shaped hearth 359/395 in association with the same range of rims as for Rim Type 15. A similar example was recovered at Winklebury (Smith 1977, fig.30:11).

17- thick, rounded rim from a platter; Site A only

No. of examples: 1

Fabric type: FT33

Rim diameter range: 22cm.

Manufacturing technique: WT

Illustration nos: 71

Parallels/dating evidence: This single example was found in the lower fill 120 of ditch 119 in A3, in association with grog- tempered fabrics (FT36 and FT37) and flint-tempered fabrics (FT41 and FT42). This Gallo-Belgic form is in imitation of a Terra Nigra platter (Cam.2) and similar examples of pre-Flavian/Conquest period date have been found at Silchester (Fabric Type S24-Timby, J.R., pers.comm.) and at Fishbourne (Cunliffe 1971, fig.84: Type 15). Had this example been a true Terra Nigra fabric platter, it is more likely to have been pre-Conquest in date.

Base forms

1--flat base
No. of examples: 40 sherds
Fabric types: FT21; FT23; FT25; FT26; FT28; FT35;FT36; FT40; FT42;
Diameters: 7-14cm. when measurable
Manufacturing technique: HM; WT;
Illustration nos: 8; 10; 16;
Associations: This form was recovered form both trenches A1-3 and B1, in association with all rim forms and most fabrics.

2--flat with moulded edges on side and underside
No. of examples: 2
Fabric types: FT35; FT36
Diameters: 8-10cm.
Manufacturing technique: WT
Illustration nos: 47
Associations: One each was recovered from the ditches 79 and 78 in trench A1.This base form is likely to belong to the wheelthrown, necked vessels represented by Type 6 and 10 rims, with cordoned or grooved decoration on the neck and body join and rilling on the body.

3--flared, with slight recess, from a fineware vessel--probably butt beaker form
No. of examples: 1
Fabric type: FT31
Diameter: 4.5cm.
Illustration nos: 52
Associations: The only example originated from an extremely fragile and abraded vessel with Rim Type 9 from ditch 78.

4--rounded base which is roughly manufactured
No. of examples: 1(2)
Fabric type: FT27
Diameter: 18cm.
Manufacturing technique: HM
Illustration nos: 39
Associations: The example from this site was found in the fill of ditch 79 in association with a variety of sandy wares (FT21 and FT22) including Type 5 rims (FT25 and FT28), a Type 11 rim (FT27) and at least one Type 12 rim vessel (FT27), along with grog-tempered sherds (FT35 and FT36), especially examples of grooved and rilled round-bodied, wheelthrown jars and flint tempered sherds (FT40-42).

TRENCH	FEATURE (CONTEXT)	RIM TYPE 1	RIM TYPE 2	RIM TYPE 3	RIM TYPE 4	RIM TYPE 5	RIM TYPE 6	RIM TYPE 7	RIM TYPE 8	RIM TYPE 9	RIM TYPE 10	RIM TYPE 11	RIM TYPE 12	RIM TYPE 13	RIM TYPE 14	RIM TYPE 15	RIM TYPE 16	RIM TYPE 17	RIM TYPE 18	RIM TYPE 19	TOTAL
C	617																				0
C	619												3								3
C	sub-total	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0			3
B1	359/395					3								3		2	2				10
B1	368																				0
B1	354/378					1							6	1							8
F1	352														2						2
B1	350																				0
B1	370/387																				0
B1	sub-total	0	0	0	0	4	0	0	0	0	0	0	6	4	2	2	2	0			20
A1	79			6	2																8
A1	182			2	4	1	2						2								15
A1	78	1	1	5	2			1	1												12
A1	(61)																				0
A1	163																				0
A1	164																				0
A1	(94)																				0
A2	99			10	4	7				9				5							35
A2	98				3	1				1								1			6
A2	154 (126)																				0
A3	118					2				4											6
A3	119			1														1			2
A3	160	1		3						1										1	6
A1-3	sub-total	2	1	5	23	15	11	2	1	18	1	2	5	0	0	0	0	1	1	1	90
A, B, C	TOTALS	2	1	5	23	19	11	2	1	18	1	11	9	2	2	2	2	1	1	1	113

Table Mf2 : Quantity of rim types by feature

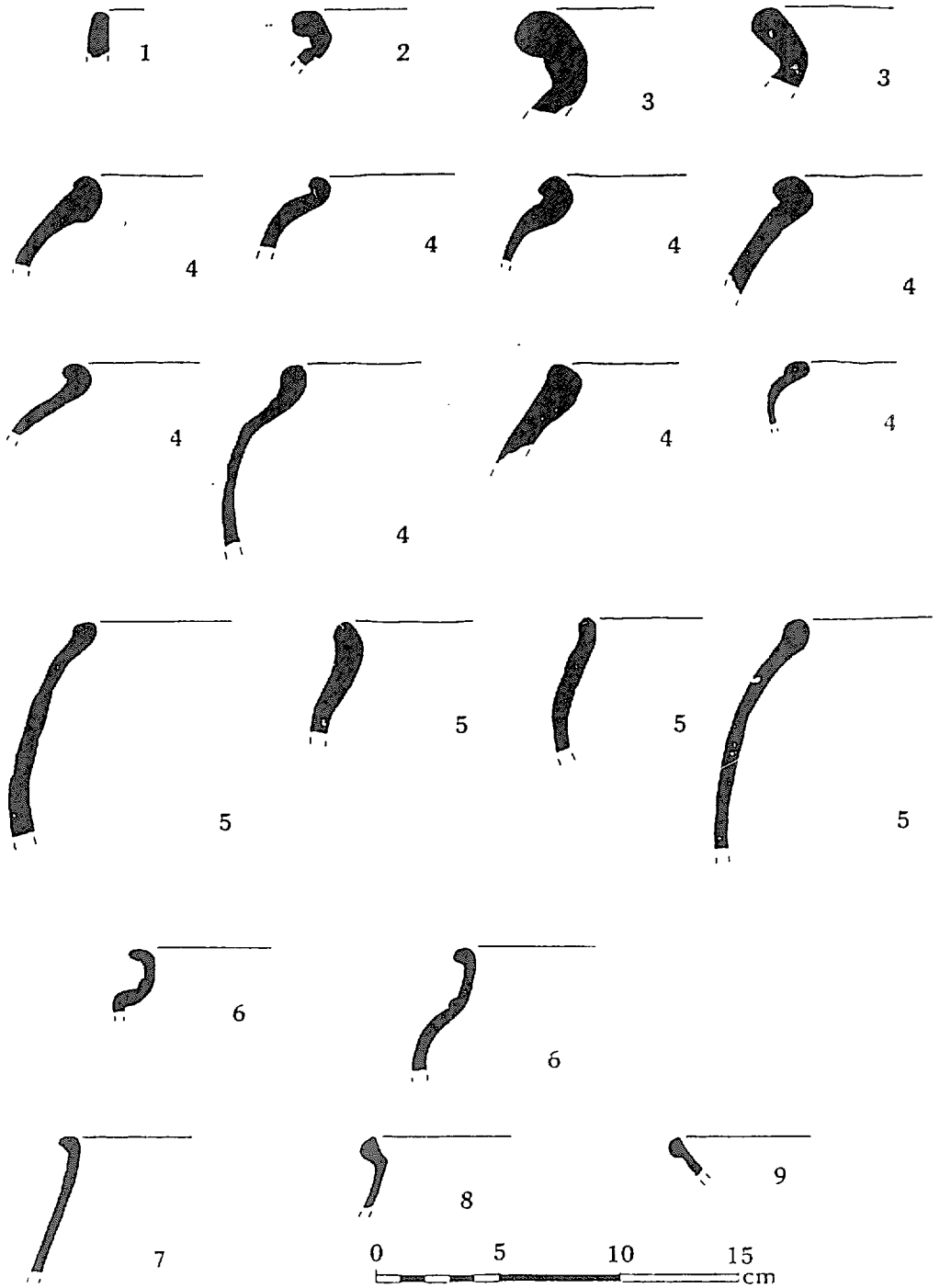

Figure Mf1 : Rim Types

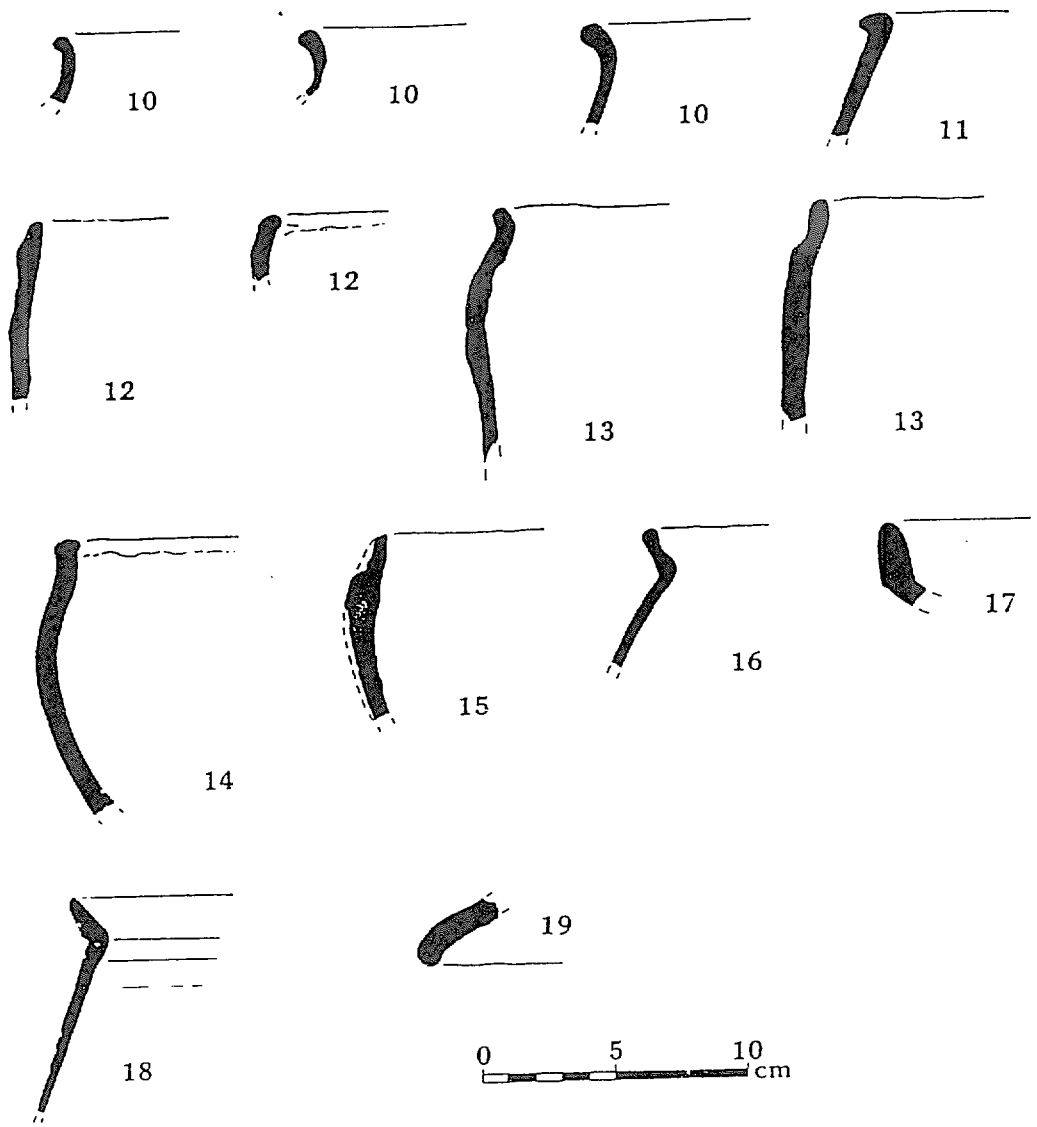

Figure Mf2 : Rim Types

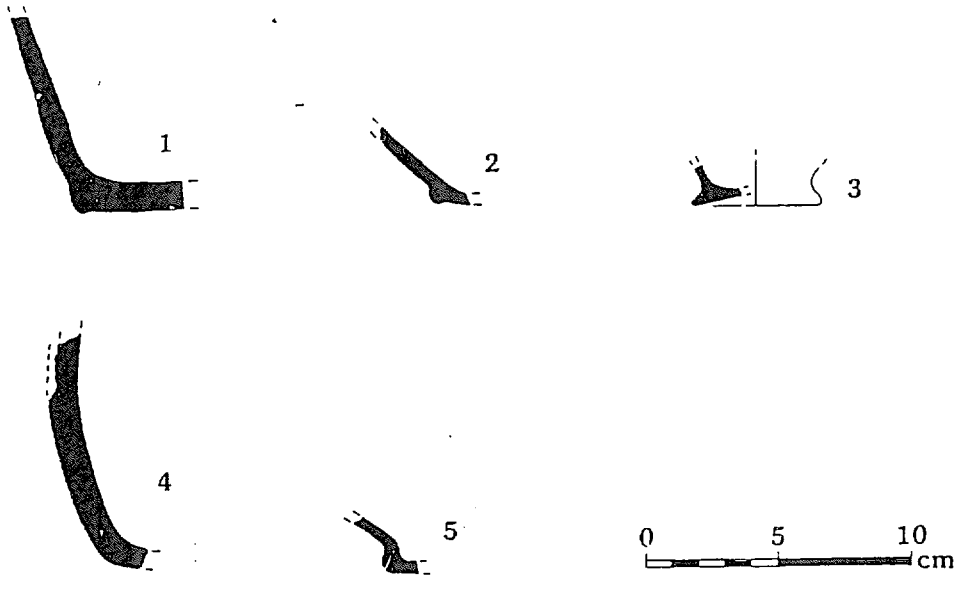

Figure Mf3 : Base types

Fabric type	Rim form types																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	total
21	–	–	–	2	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	3
22	1	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	3
23	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1
24	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
25	1–	–	–	–	11	–	–	–	–	–	–	2	6	2	–	2	–	–	–	24
26	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	–	2
27	–	–	–	–	–	–	–	–	–	–	1	2	–	–	–	–	–	–	–	3
28	–	–	–	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3
30	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
31	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1–	–	2
32	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
33	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1
34	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1
35	–	–	1	7	1	8	–	–	–	10	–	–	–	–	–	–	–	–	–	27
36	–	–	–	3	–	3	2	–	–	7	–	–	–	–	–	–	–	–	–	15
37	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
38	–	–	–	–	1	–	–	–	–	–	–	4	–	–	–	–	–	–	–	5
40	–	1	–	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10
41	–	–	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4
42	–	–	–	–	5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5
43	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
51	–	–	–	–	–	–	–	–	–	–	–	3	–	–	–	–	–	–	–	3
TOTAL	2	1	6	23	20	11	2	1	1	18	1	11	9	2	2	2	1	1	1	

Table Mf3 : Correlation of fabrics to rim forms

TYPES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	*	*																	
2	*	*																	
3			*	*	*														
4			*	*	*	*	*	*	*	*			*						
5			*	*	*	*		*	*	*	*	*	*		*	*			
6				*	*	*	*			*			*						
7				*		*	*												
8				*	*			*	*										
9				*	*			*	*										
10	*			*	*	*				*									
11					*						*	*							
12					*						*	*							
13				*	*	*				*			*		*	*			
14														*					
15					*								*		*	*			
16					*								*		*	*			
17			*														*		
18					*	*												*	
19			*																*

Table Mf4 : Rim types co-occurrence matrix

Fabrics	Base types				
	1	2	3	4	5
21	1	–	–	–	–
22	–	–	–	–	–
23	2	–	–	–	–
24	–	–	–	–	–
25	7	–	–	–	–
26	2	–	–	–	–
27	–	–	–	1	–
28	–	–	–	–	–
30	–	–	–	–	–
31	–	–	1	–	–
32	–	–	–	–	–
33	–	–	–	–	–
34	–	–	–	–	–
35	2	9	–	–	1
36	2	1	–	–	–
37	–	–	–	–	–
38	–	–	–	–	–
40	–	–	–	–	–
41	3	–	–	–	–
42	4	–	–	–	–
50	–	–	–	–	–
51	–	–	–	–	–

Table Mf5 : Correlation of base types and fabric types

Decorative motifs

1 - 'rilling': numerous, narrow and shallow incised or combed lines; only found on Site A.

No. of examples: 11
Fabric types: FT32; FT35; FT36
Illustrations: 42, 46, 63, 73
Dating evidence: found on wheelthrown vessels with Motif Type 5, which can be pre-Conquest in date (Timby 1985)

2 - tooling: using wide, shallow marks; found on Site A only

No. of examples: 9
Fabric types: FT25, FT35, FT36, FT37, FT42
Illustrations: 35, 51, 62, 70, 78, 81
Dating evidence: found on both handmade and wheelthrown vessels, but from Site A only. The use of such tooling is known from Middle - later Iron Age sites in the south Midlands (Cunliffe 1978, A:22, no. 9)

3 - incising: single line but different patterns; found on Site A only

No. of examples: 12
Fabric types: FT31, FT35, FT36
Illustrations: 22, 43, 64, 67, 73, 74
Dating evidence: found on wheelthrown vessels from Site A, on a sherd with Motif type 1 and on the TR3 rouletted vessel (see Motif type 4, below). Therefore, it can be pre-Conquest in date.

4 - rouletting: two different designs present - one is curvilinear and one gridded geometric; found on Site A only

No. of examples: 4
Fabric types: FT31, FT35
Illustrations: 64 and 74
Dating evidence: found on two different vessels with rare or unusual fabrics in Site A ditch fills - ie a Terra rubra 3 vessel (Rim type 18) from 83/109 in ditch 98 and an unusual FT35 vessel from 95 in ditch 99. Rouletting is a common decorative feature on TR3 closed form vessels (Hawkes and Hull 1947, fig. 50:5; Partridge 1981, fig. 68, 39a), dated to the pre-Conquest period.

5 - cordoning: created by parallel incised lines to form a raised band; found on Site A only

No. of examples: 25
Fabric types: FT21, FT35, FT36
Illustrations: 42, 60, 66, 73, 75, 79, 82
Dating evidence: found on vessels with Type 6 at Riseley Farm, as well as at Ufton Nervet (Manning 1974, fig. 13:21, 30, 34, 48; fig. 18: 113, 114, 121), where it was in use during both pre-and post-Conquest phases.

6 - corrugation: wavy profile indentations; found only on Site A

No. of examples 2
Fabric types: FT35
Illustrations: 31, and 71
Dating evidence: examples recovered from pre-Conquest contexts at Silchester (Timby 1985) and are known elsewhere in southern Britain from this period (Hamilton 1985).

7 - 'scoring': deep, irregularly applied scratch marks cutting into once leather hard clay; found on Site B only

No. of examples: 1
Fabric type: FT23
Illustration: 8
Dating evidence: found on Iron Age pottery from the Trent to the Thames (Cunliffe 1978, 42-3, 51, fig. 3.5, A:13, no. 3). The appearance of this motif technique at Riseley Farm is likely to be one of the furtherest southern distribution points.

8 - finger-tip and fingernail impressions: located on upper exterior rim edge or on flat/wall of body sherd; found on Site C only

No. of examples: 2
Fabric type: 51
Illustrations: 1 and 2
Dating evidence: found on simple ovoid jars or urns is common from the Middle Bronze Age to the Early Iron Age . The two body sherds in the Riseley collection which bear this technique are not from a shouldered jar which suggest that they are from a Middle Bronze Age urn (Dacre and Ellison 1981).

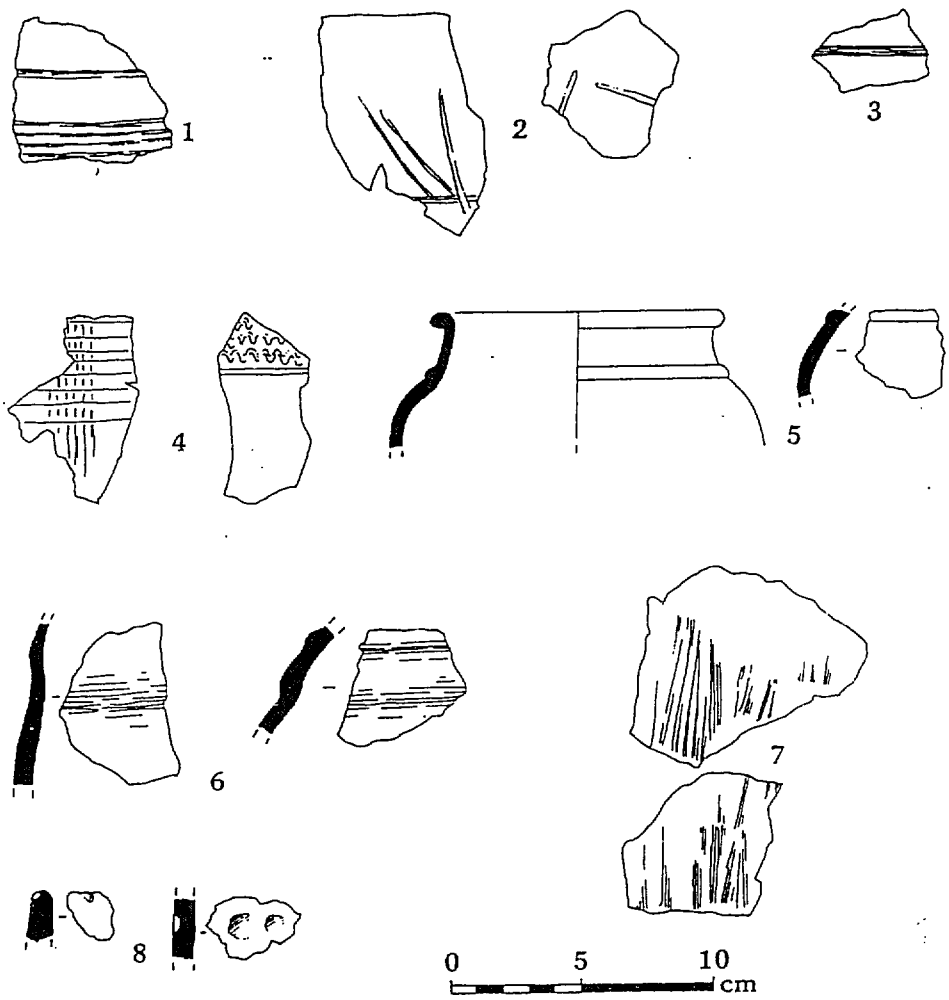

Figure Mf4 : Decorative motif types

Fabrics	Motif types							
	1	2	3	4	5	6	7	8
21	–	–	–	–	2	–	–	–
22	–	–	–	–	–	–	–	–
23	–	–	–	–	–	–	1	–
24	–	–	–	–	–	–	–	–
25	–	1	–	–	–	–	–	–
26	–	–	–	–	–	–	–	–
27	–	–	–	–	–	–	–	–
28	–	–	–	–	–	–	–	–
30	–	–	–	–	–	–	–	–
31	–	–	4	3	–	–	–	–
32	1	–	–	–	–	–	–	–
33	–	–	–	–	–	–	–	–
34	–	–	–	–	–	–	–	–
35	6	4	3	1	16	2	–	–
36	4	2	5	–	7	–	–	–
37	–	1	–	–	–	–	–	–
38	–	–	–	–	–	–	–	–
40	–	–	–	–	–	–	–	–
41	–	–	–	–	–	–	–	–
42	–	1	–	–	–	–	–	–
43	–	–	–	–	–	–	–	–
50	–	–	–	–	–	–	–	–
51	–	–	–	–	–	–	–	–

Table Mf6 : Correlation of fabrics and decorative motifs

Surface treatments

Normally, an assessment of the types of surface treatments present in an assemblage and the occurrence of these types with specific vessel forms, fabrics and manufacturing techniques would be included in the pottery report. However, the frequency of abraded surfaces within this collection and the presence of quantities of iron oxides adhering to sherd surfaces seriously impede the value or merit of such an exercise in this case.

The level of abrasion is likely to be due to a combination of the relatively low firing temperature of the majority of the pottery and the presence of a fluctuating high water table with generally damp conditions which are known to accelerate abrasion (Skibo and Schiffer 1987). The iron oxides present on many of the sherds are due to mineralisation processes which extract the natural iron from the soils.

Details were recorded where possible. Burnishing was observed on the surfaces of many sherds, and appears to be more common on the wheel-thrown first century A.D. material.

(Weights in grams, ASS=average sherd size)

Feature	fabrics 21		22-23 25-28		30-34		35-37		40-41		42-43		total	
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt
TRENCH A1														
78	13	131	10	101	25	246	24	173	47	528	6	33	125	1217
%total	10,4	10,8	8	8,3	20	20,3	19,2	14,39	37,6	43,6	4,8	2,7		
ASS		10,1		10,1		9,8		7,2		7,2		11,2		9,7
182	1	8	46	767	-	-	42	501	8	185	15	168	112	1629
%total	0,1	0,1	41,1	47,1	-	-	37,5	30,8	7,1	11,4	13,4	10,3		
ASS		8		16,7		-	11,9		23,1		11,2			14,5
79	7	93	9	152	-	-	38	273	11	211	7	83	72	812
%total	9,7	11,4	12,5	18,7	-	-	52,8	33,7	15,3	26	9,7	10,2		
ASS		13,3		16,9		-		7,2		19,2		11,9		11,3
TRENCH A2														
99	37	165	41	615	1	3	176	1431	28	550	47	406	310	3170
%total	5,5	4,2	13,2	19,4	0,3	0,1	56,8	45,1	9	17,4	15,2	12,8		
ASS		9,7		15		3		8,1		19,6		8,6		10,2
98	-	-	5	43	14	99	20	348	10	172	-	-	49	662
%total		-	10,2	6,5	28,6	15	40,8	52,6	20,4	26	-	-	-	-
ASS	-	-		8,6		7,1		17,4		17,2		-		13,5
TRENCH A3														
160	5	46	-	-	-	-	15	68	122	951	-	-	142	1065
%total	3.5	4,3	-	-	-	-	10,6	6,4	85,9	89,3	-	-		
ASS		9,2		-		-		4,5		7,8		-		7,5
119	-	-	-	-	1	22	8	13,3	1	7	1	9	11	171
ASS	-	-	-	-		22		16,6		7		9		15,5
118	22	101	-	-	-	-	80	390	19	198	1	1	122	690
%total	18	14,6	-	-	-	-	65,9	56,5	15,6	28,7	0,8	0,1		
ASS		4,6		-		-		4,9		10,4		-		5,7

Feature	Fabrics 21/24		22,23 25-28		30-34		35-38		40-43		50-51		Total	
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt
Hearth														
359	-	-	176	1216	-	-	-	-	-	-	2	19	178	1235
%total														
ASS		-		6,9		-		-		-		9,5		6,9
Ditch														
368	-	-	20	63	-	-	-	-	-	-	-	-	20	63
ASS		-		3,1	-	-	-	-	-	-	-	-		3,1
Ditch														
354	-	-	48	423	26	100	-	-	-	-	-	-	74	523
ASS	-	-		8,8		3,8	-	-	-	-	-	-		7,1

Table Mf7 : Summary of fabric types, Area A and trench B1

Dating and distribution by Area

The pottery from each of the trenches in Site A is discussed separately below and includes the suggested dating and phasing of each of the features, in conjunction with the stratigraphical and spatial information from the site where present. The general discussion presents the ceramic sequence of occupation for this site, and the problems of interpretation.

Trench A1

Stratigraphically, the earliest feature on this site is ditch 79 which contained a moderate amount of pottery (72/812g) (text Table 1) including handmade, sandy and organic fabrics (FT22-23, 25-28; 18.7% by weight), other sandy wares (FT21, 11.4%), grog-tempered fabrics (FT35-37, 33.6%), Silchester Ware flint-tempered fabrics (FT40-1, 26%) and non-Silchester Ware flint-tempered fabrics (FT42-43, 10.2%). Eight rim sherds from this ditch include only Types 4 and 5 (Table Mf.2). Secondary ditch 18? contains twice the amount (112/1629g) of the same range of material (FT22-23/25-28, 47%; FT21/24, 0.5%; FT35-37, 30.8%; FT40-1, 11.4% and FT42-43, 10.3%) with Rim Types 4-7 and 10. The occurrence of bead rim jars (2) and plain rim jars (4) with several necked bowls(4) and a few ovoid vessels (3) (Fig. 11, 18-43) is characteristic of Late Iron Age/pre-Conquest deposits in the area (Manning 1974, fig.18; Cowell *et al* 1978, fig. 4, 1-12).

The presence of Silchester Ware fabrics (FT40 and 41) in both the Phase 1 ditch 79 and the secondary ditch 182 indicates that the filling of these features is likely to have taken place after c. AD 30/40 (Boon 1969, 80; Charles 1979, 44-5; Timby 1985, 25-6). The amount of this material (less than 20% of the total weight in 79/182) suggests that these features were probably open during the *early* pre-Flavian period as opposed to the Conquest period and later, since Silchester ware is known to have been particularly common during the Claudian period (AD 41-54) (Timby 1985, 25-6). If these fabrics had dominated the assemblages, a *later* pre-Flavian date would have been appropriate.

The presence of the handmade sandy and organic fabrics, also found on Site B, in association with wheelthrown grog-tempered bowls with cordons and the Silchester ware forms, is significant since there are no features containing just the former on Site A. This suggests that all of these wares may have been in current use at this time. The similarity in large sherd size between the sandy and flint-tempered fabrics in ditches 79/182 supports the likely contemporaneity of these particular wares. It is difficult to include the grog-tempered wares in this comparison due to the thin-walled structure of the vessels and the low density of this porous group of fabrics; if the Area B wares had been small, they would probably have been residual rather than contemporary material.

This range of handmade sandy, Middle-later Iron Age fabrics does not appear to occur in the very early deposits of the late first century BC occupation at Silchester where grog-tempered fabrics dominate in at least one large pre-conquest assemblage prior to the common use of Silchester ware (Timby 1985, 26, fig.9). This may be a result of the lack of Middle Iron Age occupation in the Silchester area, or a result of the differences in site function or status. The presence of sandy and grog-tempered wares, both handmade and wheelthrown, and the absence of Silchester ware are used to indicate an early first century AD date at Ufton Nervet (Manning 1974, 33-37, fig. 18). Grog-tempered fabrics dominate one of the early first century AD features from Site 1 at Aldermaston (88.5%) (Cowell *et al* 1978, 25-6), with a very few sherds of Silchester ware present (2.3%). A similar range of material was first noted from deposits recovered from beneath the Inner Earthwork at Silchester (Boon 1969, 74-9) and the

dominance of grog-tempered ware is diagnostic of a pre-Conquest group (1.1) from Silchester itself (Fulford 1984, 125 and 128).

It is important to note that there is a complete absence of Gallo-Belgic wares in the fill of ditch 79 and recut ditch 182. This may be a significant dating marker, or may simply signify that finewares were not in evidence during the early occupation at Area A, or at this part of the site. The quantity of pottery in these features is likely to have been sufficiently large to have included finewares had they been discarded by the time of infilling, since this is clearly demonstrated in features from Trench A2 (see below).

Ditch 78 cuts both ditch 79 and recut 182. The quantity of pottery recovered from the fill of this later feature is again large (125/1220g) and, therefore, can be compared to the material from these earlier features. There is a similar proportion (10.7%) of later sandy wares (FT21/24) with a very significant reduction in the handmade sandy and organic group (8.3%). The quantity of grog-tempered wares is also reduced (14.2%) as is the non-Silchester ware group (2.7%) but the Silchester ware fabrics increase considerably (43.3%) suggesting a later date for the infilling of ditch 78. The most dramatic change, however, is the occurrence of several imported Gallo-Belgic wares or British copies of Gallo-Belgic wares (FT31, FT32, FT34), and amphora (FT30). The absence of Gallo-Belgic wares and amphora was noted amongst the earliest material from Silchester (Timby 1985, 26), and these wares are clearly absent from similar deposits at several sites discussed above. Although the dating of these wares is generally pre-Flavian, the stratigraphic relationship sugests a slightly later pre-Flavian date for ditch 78. The pre- Flavian group 1d.2 at Silchester is similar in proportion of fabric types to the range from ditch 78 with a dominance of "Silchester ware (Fulford 1984, 136-139).

Confirmation of a slightly later date for the fill of ditch 78 comes from the presence of 2 everted rim sherds (Fig.12, 44-5), the latter in a non-local fabric (FT24), which may be post-conquest in date. The assemblage includes a predominance of Type 4 beaded rim vessels (42%) and 2 local butt beaker type vessels (Fig.12, 52-53) from a small collection of rims (11).

Trench A2

The fill of the excavated portion of ditch 99 contained the largest collection of pottery from any ditch section (310/3170g) and included later sandy wares (FT21 and 24 (5.2%)), handmade sandy and organic fabrics (FT22, 23, 25, 28 (19.4%)), grog-tempered fabrics (FT35-37 (45.1%)) and the Silchester ware fabrics (FT40 and 41 (17.4%)) (13.0%), with non-Silchester ware flint-tempered types (FT42-43 (12.8%)) and a single sherd of Gallo-Belgic imported pottery.

Ditch 98 contained much less pottery (49/662g). There were no examples of either later sandy wares or the non-Silchester ware flint-tempered fabrics and very little other sandy fabrics (6.5%), but the collection was dominated by the grog-tempered group (52.6%) with half as much Silchester ware fabrics (26%) and a large amount (15%) of the Gallo-Belgic wares (FT31). The differences between the 2 collections could suggest that the infilling of ditch 99 occurred prior to that of ditch 98, with ditch 99 likely to have been open during the same time as ditches 79 and 182, in trench A1, and ditch 98 contemporary with ditch 78 in A1. These conclusions are supported by the range of rim forms found in ditch 99. The large collection of 35 rims (Fig.13, 56-57, 65, 69 and 72) includes Types 4,5,6,10 and 12, which is similar to the collection from ditches 79 and 182. The range of decorative motifs (Fig.13, 60, 62, 63, 66, 67, 70 and 71) is also similar. There were too few rims (6) recovered from ditch 98 for comparative purposes. Gully 154 contained only 2 sherds of Silchester ware type pottery and no rims which makes any suggestion of dating or relative phasing inappropriate.

Trench A3

Ditch 118 contained only 6 rim sherds amongst its moderate amount of pottery (122/690g). It has significant proportions of 2 fabric groups: 14.6% of later sandy fabrics (FT21 and 24); 28.7% of Silchester wares (FT40 and 41) but nearly twice as much (56.5%) of the grog-tempered wares (FT35-37). There are no examples of the handmade sandy and organic fabrics and less than 1% of the other flint-tempered fabrics, unlike the earlier ditches 79 and 182 (A1) or 99 (A2). Ditches 119 and 160 contain a larger proportion of Silchester ware fabrics (77.5%) from a similar size assemblage (153/1235g) and also a rim sherd of a possible local imitation of a Gallo-Belgic platter, and 2 Type 3 rims (Fig.12, 83, 84 and 86) which are likely to be post-conquest in date, and a lid (Fig.13, 85). Therefore ditch 118 was probably infilled prior to ditch 119 and the recut ditch 160.

Area B

All of the stratified pottery on this site was found in Trench B1 (Fig. 10) including a range of sandy wares (FT22-28) and one grog-tempered fabric (FT38), which are from handmade vessels.

Ditch 368 contained a collection of pottery (20/63g) consisting of only body sherds in sandy fabrics (FT23 and FT25) which are thought to be Middle to Late Iron Age fabrics. The sherds are quite small in size (average weight 3.2g) and otherwise undistinguished.

Ditch 354/378 produced a relatively large group (74/523g) of Iron Age pottery including a Type 5 rim jar (FT38), Type 12 barrel-shaped, ovoid jars (FT25 and FT38) and a large (0.32m in diameter) possible storage jar (FT23, Type 13) (Fig.10, 5-7). The only "scored" body sherds and base sherd from the site were also found in this feature (Fig.10, 8). The average sherd size (7.1g) is twice that of ditch 368. This group is Middle Iron Age in date with a slack-shouldered jar, a large shouldered jar and several simple ovoid jars made from sandy, coarse sandy with grog and slightly organic-tempered fine sandy fabrics, and also the "scored ware" vessel so characteristic of the Iron Age in the Midlands (Cunliffe 1978, 42-3, 371, fig. 5.3, A:13 and A:22).

Pit 352 contained some of the largest sherds from this site (average sherd size 27.7g.) representing part of a single bowl (Fig.10, 9) associated with only one other fabric (FT22). Cunliffe has noted the presence of open hemispherical bowls as characteristic of the south and east Midlands during the Iron Age with plain bowls particularly common in the Oxfordshire area (1978, 50, fig. 3.9). The occurrence of this tradition in the middle Thames region south of Reading is not, therefore, surprising. Two hollows (350 and 370/387) each contained less than 10 body sherds. All of the pottery was of Iron Age fabrics (FT23 and FT25) and ranged in average size from 3-7g.

The T-shaped hearth (359) produced the largest collection of material from the site (176/1.216kg), including 2 body sherds of residual Bronze Age pottery (FT 51). The average sherd size (6.9g) is similar to ditch 354. The radiocarbon date obtained for charcoal from the fill dates the assemblage to the Middle- later Iron Age (maximum range 420-130 Cal BC). The rim forms included Type 5 (FT25), Type 13 (FT25 and FT26), Type 15 (FT22) and Type 16 examples (FT25) (Fig.9, 12-15 and 17). None of the pottery was decorated. Fragments of a slack-shouldered jar (Fig.9, 17) were found embedded in the side of the feature. This range of vessel types associated with an open bowl is typical of the material found in the other features. In addition, 2 of the fabric types (FT22 and FT25) were also found in other features

in this trench (FT22) and a third (FT27) was found in the Phase 2 ditch 160 in trench A1. All 3 of these fabric types have been identified in the material found in the phase 1-3 ditches in area A. Organic tempered fabrics (FT23 and FT26) are common in this feature (25% of total weight) but are not unique to this feature or even to site B since FT23 is also found on Area A. Similar fabrics are well known on Iron Age sites in the area such as Rucstalls Hill (Oliver and Applin 1979, 59-60), Brighton Hill South (Rees, forthcoming), and Silchester (Timby, 1985).

The most common fabric type by weight from Area B is FT25 (64.4%). FT23, FT26 and FT27 (fine medium and coarse-grained sandy fabrics with organic matter) are also quite common (28%) (see Table Mf.1) all of which are associated with the radiocarbon date from feature 359. It is significant that there are no examples of FT30-37 or FT40-42 sherds on Site B since they form the bulk of material on Site A (75%).

The most common rims are Types 5,12 and 13 (70%) with Types 14-16 also present (Figs Mf1 and Mf2). Rim Types 1-4, 6-11 and 17-19 are present on Area A but not on Area B and there are no wheelthrown vessels of first century AD date from Area B. The number of sandy fabrics found in both areas indicates a considerable longevity in the Iron Age ceramic tradition of the area, a phenomenon being recognised elsewhere (Cunliffe 1978, 43).

The range of fabrics is clearly dominated by the handmade sandy and organic group of fabrics (91.4%) in contrast to the small proportion (11.7%) found on Area A (11.7%). There are no examples of Type 4 beaded rims from high shouldered vessels, nor Types 6-10 from wheelthrown bowls and butt beakers. Instead the forms are always handmade and typically Iron Age in type (Types 12-16).

Area C

Nearly all the pottery in this trench (29 sherds, 250g) came from cut 619 on the northern side of the ring ditch. Two small body sherds (2/4g) of hand made Iron Age pottery in sandy fabrics (FT25 and FT42) came from the upper fills and were probably deposited after abandonment of the ring-ditch. The fabrics of the remaining pottery include both a purely grog-tempered type (FT50 - only body sherds) and a coarse flint and grog-tempered type (FT51). This small collection included 3 rim sherds (Fig.9: 1, 3 and 4), 1 of which is decorated with finger-nail impressions on the upper rim edge, and a body sherd decorated with finger-tip impressions on a straight wall side (Fig.9: 2). These sherds originated from neckless, slightly ovoid, convex- shaped vessels or straight-sided urn forms.

Similar types of decoration on these particular vessel forms are typical of Middle Bronze Age urns (Ellison 1975, 1978; Dacre and Ellison 1981; Barrett 1973). The association of sherds from handmade vessels in a grog-tempered fabric with these more obvious flint-tempered, Middle Bronze Age forms would not be out of place in this context. If a vessel form had been determined from these simple body sherds a more specific date range, possibly including the Early Bronze Age, might have been suggested. Pottery types have been correlated to specific fabric types in Wessex (Dacre and Ellison 1981), but this is not necessarily a uniform phenomenon in the Bronze Age of southern Britain (Ellison 1978, 32).

Only one small body sherd (3g) in a grog-tempered fabric (FT36), of later Iron Age type, was recovered form the uppermost fill of cut 617 and is likely to be intrusive.

AMPHORA SHERD

by David Williams

A body sherd (Sf 66) from a Dressel 1 or Dressel 2-4 amphora was found in layer 80 in ditch 78, trench A1. These are wine-carrying amphorae that were made primarily in the Campanian, Latium and Etruria districts of Italy, though the Dressel 2-4 type was also made in other places such as France, Spain and the Aegean (Peacock and Williams 1986).

This sherd from Riseley Farm appears to be of Italian origin, but as it is a featureless body sherd, it is difficult to tell which form is involved. Dressel 1 was made from about 130BC until the last decade of the later first century BC to the mid-second century AD.

FLINT

by P.A.Harding

The flint from Trench C

The flint from the main contexts is shown in Table Mf8, below. The presence of bladelet cores, blades/bladelets with abraded butts and microlithc suggests that most is residual mesolithic material; however, artefacts from the upper ditch fills, especially 630/631, probably include knapping debris associated with Middle/Late Bronze Age pottery. The purpose of this report is to examine this small assemblage and to explain the conclusions.

Table Mf 8

	Cores	core frags	flakes	broken flakes	burnt flakes	retouched flakes	tools
topsoil/ subsoil	2	8	57	100	8	2	9
ditch 617	-	-	2	1	1	-	-
ditch 619	1	6	18	14	3	1	2
cut 638	-	-	1	1	1	-	-

Butt width, percussion angle, platform preparation and hammer mode have been recorded from flakes with complete proximal ends found in the topsoil/subsoil (59 flakes) and the ditches (47 flakes) (Tables Mf9 and Mf10, below).

Table Mf9: Butt width (%)

	0-1mm	2-3mm	4-5mm	6-7mm	8-9mm	10+mm
topsoil/ subsoil	39	32	12	12	3	2
ditches	23	28	21	13	4	11

Table Mf10: Percussion angle (%)

	50-54°	55-59°	60-64°	65-69°	70-74°	75-79°	80-84°	85°+
topsoil/ subsoil	2	7	11	16	28	20	9	7
ditches	8	11	17	23	19	8	14	-

Discussion

There appears to be a clear distinction between the flint from the topsoil/subsoil within the ring ditch and that from the ditch fill. The butt widths from the ditch are proportionally broader than those from the topsoil/subsoil. Flakes with abraded butts which all measure less than 3mm wide occur in both groups. Platform abrasion does not appear to have been part of Bronze Age technology. The 9 flakes of this type from the ditches must therefore be regarded as residual.

The percussion angles show a similar trend with flakes from the ditches having lower

angles than those from the topsoil/subsoil. Abraded butts are also more often associated with higher angles of percussion. Analysed Middle/Late Bronze Age assemblages indicate that percussion angles cluster between 65°-74°and those from recorded earlier (Neolithic) assemblages between 70°-79° (Harding 1990) and the flint from the site is consistent with this pattern.

The hammer mode also shows a clear distinction between the two groups. The hammer cannot be identified with certainty; however, the flakes from the ditch are characterised by accentuated cones of percussion, including incipient cones which result from mis-hits. They indicate the use of a much harder hammer than was used to remove the blades.

The retouched tools include 3 microliths from the topsoil/ subsoil blunted by abrupt retouch at the proximal end. One has a flute-like break on the dorsal surface which probably resulted from impact (Barton and Bergman 1982, Fig.1d) when used in an arrow. A broken leaf-shaped arrowhead is also residual but does not indicate a major neolithic component. The material from the upper ditch fill, in contrast, includes a flake with denticulate retouch along one edge. The opposite edge, including the bulb has been removed by alternate flaking. The refitting "Janus" flake was found in the ditch fill. This type of retouch is often found with Middle/Late Bronze Age assemblages (Stone 1937, 656, pl.vi.3; Harding 1991).

It appears, in conclusion, that two technologies are represented on the basis of identifiable artefacts, the associated pottery of 619 and a limited analysis of observed and material differences. Residual mesolithic material occurred in most contexts but the middle Bronze Age flint working was only identified in the upper filling of the ditch (619) on the north side.

IRON WORKING RESIDUES

A detailed report of these materials, examined by Dr. Gerry McDonnell for the Ancient monuments Laboratory, is presented below. Additional similar materials were also identified from amongst the fired clay after Dr. McDonnell's report had been prepared, including a characteristic plano-convex-shaped pied from the bottom of a smithing hearth (see McDonnell 1983). The residues from each of the subsites have been discussed in the appropriate sections in the report. However it is appropriate to make some general comments here; these observations incorporate the comments made by Dr. McDonnell.

The production and processing of iron was clearly taking place at this site during the pre-Conquest and Conquest phases of the first century AD. within the enclosure on subsite A. Both smelting and smithing were taking place in this area. Iron working may also be associated with the occupation activity on subsite B, but the amount and form of the debris is more restricted in type and may represent only smithing activity which is common to many Iron Age sites. There is very little evidence for iron working at sites of this date in the area (see Salter and Ehrenreich 1984, fig.10.3 for other locations in southern Britain).

The presence of the bog ore, in the absence of any iron sources in Berkshire (Tylecote 1962, 175) strongly supports the interpretation that raw materials for smelting had been purposefully brought onto this site for processing. In addition smithing, which is a more simple process, was also clearly in evidence.

SLAG

by Dr. G. McDonnell

Only Area A produced significant quantities of ironworking residue. The material is dated to the Middle and Late Iron Age and it is therefore of interest due to the overall lack of Iron Age ironworking sites.

The early ironworking manufacturing cycle (ore to artefact) can be divided into separate processes, the smelting process and the smithing process.

The smelting process is the preparation and reduction of the ore by carbon monoxide derived from the combination of oxygen (air) and fuel (normally charcoal). The operation was carried out in a furnace normally constructed of clay and/or stones. The smelting process took a long time (8 hours minimum) and the furnace had to be tended throughtout, fuel and ore being charged at the top, a;nd the slag removed at the base; some furnaces may have retained the slag throughout the operation, until a bloom of metallic iron of sufficient size had been formed, which was then removed to be smithed into a refined bloom or artefacts. The nature of Iron Age furnaces is in some doubt. Until recently it was believed that they were primitive non-tapping (ie. the slag was not removed) furnaces. There is now definite evidence for the use of shaft furnaces by the Late Iron Age period (McDonnell 1984, 56). The shaft furnace was previously thought to have been introduced by the Romans; they were clay-built shafts up to 2m high, about 0.3m internal diameter, and were tapped (eg Ashwicken, Tylecote 1962, 220).

The bloom was removed from the furnace to be repeatedly hammered to drive out excess slag and then either turned into artefacts on the same site or traded to other blacksmiths. This smithing process also includes heat treatment etc. of the artefact and any subsequent repair or refashioning of the artefact. It is likely that nearly all settlements had a smithy of some form, though not perhaps a full-time 'blacksmith'. The smithing process was carried out in a hearth but this could vary between a simple charcoal fire on the ground surface blown with bellows and a purpose built forge.

Both processes produce iron silicate slag as a waste product, and, in many cases, especially with mixed assemblages (ie. where both smelting and smithing has been carried out) it is difficult to distinguish smelting from smithing slag.

Other residues also occur though they are not only associated with iron working. The residues discovered at Riseley Farm are given in Table Mf 11, below.

The list of Site A materials clearly shows the problems of distinguishing between smelting and smithing slag. There is approximately 6.5kg of both smelting and smithing slag with another 6.5kg unascribed. The presence of a single sample, provisinally identified as bog ore, confims the opinion that smelting was carried out on the site. The fuel ash slag could derive from any high temperature operation, and is not of significance.

There is no characteristic tap slag in the assemblaage except for a few 'runners' (dribbles of slag normally weighing less than 50g). The smelting slag is characterised as having a flowed appearance, often with surface dribbles. The lumps vary in size considerably, but rarely exceed 500g in weight. The smelting slag has clearly been fully liquid and tapped from a furnace, possibly into a pit in front of the furnace.

The smithing slag lacks the flowed appearance of the smelting slag. It occurs as

randomly shaped lumps, very few of which are in the characteristic plano-convex shape of the hearth bottom.

Over 99% of the slag came from the ditches, ie. no material (except for 85 from features 94 and 112) , was associated with any possible furnace structure. It is therefore probable that the slag recovered indicates a small amount of smelting activity (perhaps even a single smelting operation) with the associated smithing operation. It is also worth noting that Berkshire was one of the 6 counties listed by Tylecote as having no ore sources (Tylecote 1962, 175), yet at Riseley Farm there is definite evidence for smelting during the Iron Age with the ore source possibly being bog ore.

Table Mf11 : Iron working residues

Site A	
smithing slag	6.685 kg
smith or smelt	6.595 kg
smelting slag	6.580 kg
furnace/hearth lining	6.435 kg
bog ore	0.600 kg
fuel ash slag	0.060 kg
Site B	
smithing slag	1.390 kg
smelt/smith	0.470 kg
smelting slag	0.300 kg
fuel ash slag	0.010 kg

FIRED CLAY MATERIAL

A total of 429 pieces (7803g) of fired clay was recovered from the excavation and these are described in detail in the archive. There are 5 different fabric types defined.

FCFT1 Iron-rich, sandy clay matrix with rare iron oxides, clay pellets and gravel fragments; similar to FT21 (ie. pottery Fabric Type) but poorly wedged.

FCFT2 Iron-free, dense clay matrix with mica or fine sand.

FCFT3 Iron-rich, dense clay matrix with mica or fine sand and rare, very large pieces of flint and iron oxides; clay matrix very similar to FT22.

FCFT4 Similar to FCFT1, with 15-25% concentration of clay pellets, and rounded gravels made up of cortex-bearing, uncalcined flint and quartz; clay matrix similar to FT25.

FCFT5 Similar to FCFT1, with 7-10% concentration of iron oxides; identical to FT25.

Four of these fired clay fabric types (1 and 3-5) are similar to sandy pottery fabrics. The presence of these particular fired clays in the collections suggests that those particular pottery fabrics (FT21, 22 and 25) may have been made from local sandy clays. Fired clays used to make daub and plaster tend to have very generalised functions and are not known to require specific technological attributes, and therefore the most immediate resources of clay will be exploited if possible. The use of sandy clays for hearth functions may have been deliberate since quartz is a very good inclusion for thermal shock resistence in clay products (Lamm 1973; Rye 1976; Singer and Singer 1963), as has been demonstrated for the production and use of crucibles and moulds for bronze working in particular, and metal working activities in general (Howard 1980, 1982).

The selection of clays for various functions was markedly different between Sites A and B. Site A is dominated by FCFT1, and its sub-types FCFT4 and FCFT5, while Site B is dominated by FCFT3 with some FCFT5. This variation may well be due to the kind of pyrotechnical activity taking place at Site A which would have required a greater amount of sand in the clay matrix for use in high temperature conditions. The presence of so many plaster- like pieces and several daub fragments from Site A clearly indicates that the presence of one or more buildings is likely in this area. The complete absence of plaster pieces from excavated contexts in Site B is worthy of note, but structures of some kind may have been present indicated by the presence of two daub fragments in features.

BURNT FLINT

All collected pieces of burnt flint from both the excavations (nearly 190kg, 12744 pieces) were counted and weighed as part of the archive before discarding; this was mostly distributed in the ditch fill of trenches A1-A3 and the ditch fill and T-shaped hearth of trench B1 (text Table 2). Because the soil conditions, excavation recovery techniques and experience of personnel were similar between the 3 sites, quantitative comparisons of the burnt flint fragments were made between the features and trenches of the different sites.

The burnt flint from each area has been discussed in relation to the trench descriptions and the following discussion includes general and comparative observation for the whole site. The burnt flint from disturbed toposil contexts has not been taken into consideration.

Not surprisingly, there is a strong correlation between pyrotechnical activities and burnt flint. Such activity is represented on site A as part of a small scale iron working industry, while the activity represented at Site B is mainly non- metallurgical in origin, although metal-working debris is found in the area.

The range of the burnt flint fragmentation is surprisingly different between the sites. The average size range of the burnt flint fragments recovered by uniform excavation without sieving, from contexts in Sites A, B and C, excluding topsoil layers and any contexts containing less that 10g is presented in Figure Mf5. Site C produced pieces which averaged between 1-20g, while Site B material ranged between 11 and 40g. In contrast, Site A contained the widest variation in average size, ranging from 1-70g with most contexts containing more than 20g. Although there are more contexts containing burnt flint on Site A than Site B, the latter site had nearly the same amount of burnt flint from excavated features.

There are several possible explanation for this variation in fragmentation between Sites A and B. The different activities suggested for the two sites clearly require different firing temperatures. The greater fragmentation observed in trench A perhaps suggests that the pyro-activity was of greater duration than in site B caused by more repeated episodes of burning and cooling.

On Site A there are considerably greater quantities of burnt flint in the phase 1-2 ditch fills (ditches 79, 182 and 99) together with the greater quantities of slag waste, furnace lining and fired clay fragments (text Table 2) suggesting more intensive industrial activity in the earlier period of use of the enclosure.

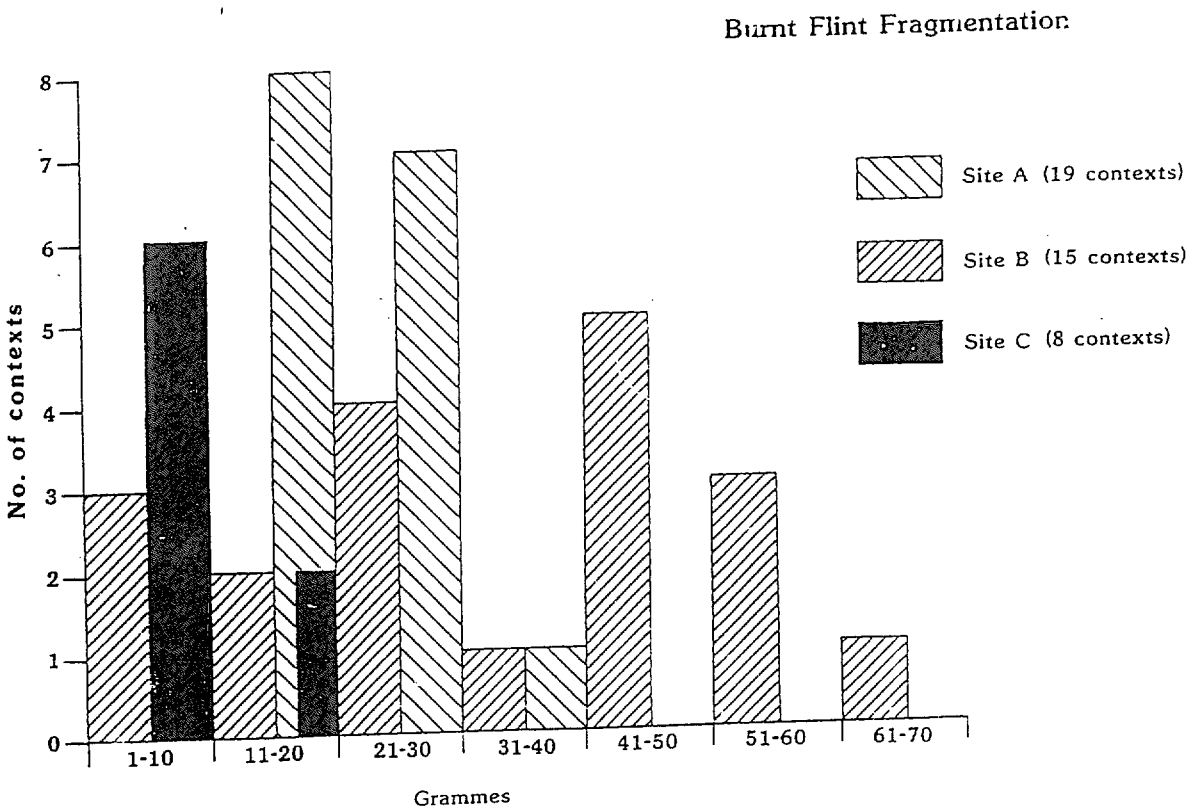

Figure Mf5 : Burnt flint fragmentation

SEED AND POLLEN ANALYSIS

by W.J.Carruthers

Introduction

The sampling strategy was designed to assess the preservation of botanical remains in a wide range of deposits. Problems of contamination were found to be widespread. This report serves primarily to highlight these problems which would not have been observed had the sieving programme not been undertaken. It also presents negative results which may be of some significance concerning the use of the site.

Methods

Plant macrofossils

A sample size of 1 bucket of soil (*c.* 17kgdry, 20kg wet) was examained initially, but provisions were made to examine more samples from depostis that proved to be promising. As the degree of waterlogging in the deposits was not known, flotation alone could not be used as the method for recovery. The soil sample was gently stirrd through a 1 mm mesh in a small overflow tank. The flot was recovered in a 300 μ sieve. Where waterlogged remains were not observed during the processing, the flot and residues were dried for ease of storage. If the presence of waterlogged remains was suspected, the residues were sorted wet. Residues from deposits with a high clay component had to be soaked in a solution of hydrogen peroxide overnight and re-sieved through the 1mm sieve.

A number of control samples of 2kg were processed entirely through 300 μ mesh sieves in order to check whether small seeds were being lost in the sieving of the bulk samples. No such loss was found to occur.

A number of the flots and residues were examined under a binocular microscope. It soon became clear that there were very few carbonised seeds and that the large number of un-carbonised seeds present was intrusive and not waterlogged. Therefore, the processing and examination of samples ceased with the exception of a few samples which were examined in order to determine the extent of contamination of the site, and some from contexts whcih were thought to have been waterlogged.

Pollen

Small soil samples of *c.* 5g were taken using clean instruments and sealed into airtight bags. The method of processing was according to Moore and Webb (1978).

The slides were scanned at x 400, x 600, and x 1000. Oil immersion was used for the final identification. Reference collections at Reading University were used for comparison. As the preservation was poor, counts were made up to 150 grass pollen grains, since this was found to give a reasonable diversity without excessive time being taken.

Results

Plant macrofossils

Uncarbonised seeds were recovered from almost all of the samples examined, even from the deepest features. Since only the very bottoms of some of the features were observed to be waterlogged at the time of excavation, and the seeds occured in the greatest frequencies in the uppermost contexts, it seemed very likely that these seeds were intrusive. This suggestion was confirmed by the presence of fresh-looking embryos inside the seeds and the fact that several

seeds germinated. The species were found to be typical of the present habitat ie. disturbed grassland or arable, some showing preferences for damp, slightly acidic or nitrogen-rich soils. All of the species have recently been recorded as growing in this area of Berkshire (Bowen 1968). Table Mf12, below, shows the results of macrofossil analysis of samples from a section through ditch 79 in site A1 in order to illustrate the degree of contamination found to be present.

The distribution of moderns seeds throughout the samples indicated that the contamination was probably due to worm and root action. It had been hoped that the site would have been too acidic and wet for worms to have been a great problem, but worms were observed to be, present even in the wet primary silts in the bottom of the ditches. The almost complete absence of bone and molluscs suggested that the site had been fairly acidic in prehistoric times. Tests carried out on some of the soil samples showed that the present pH is around 6 to 6.5. This may be due to calcareous water from the North Downs draining into the Blackwater. The high pH of the river would increase the pH of the acidic gravels when episodes of flooding occured or the water-table rose.

It is evident that the level of the water table has fluctuated in the past, since deposits that were observed to have been waterlogged during the excavation contained no waterlogged plant remains. Changes in the water table may have carried small modern seeds through the gravel and been a contributory factor towards the contamination.

Very few carbonsied seeds were recovered despite the large number of samples that were processed. The few carbonised remains found were not concentrated in any one of the 3 sub- sites, and were of the same taxa as the un-carbonised seeds. No cereal remains were present and it seems likley that the carbonised remains were also intrusive. Modern seeds can be carbonised during stubble burning and become incorporated in archaeological deposits in the same manner as un-carbonised seeds (Keepax 1977).

The negative evidence may be of some significance since "it is a rare habitation site that fails to yield charred remains of food plants once one of the systems of flotation recovery is applied" (Hillman 1981). Even allowing that the sample size was small, some evidence of carbonised grain or chaff would be expected from the range of contexts examined if crop processing activities had occured in the vicinity. It is possible that the remains were present but did not become carbonised, but this seems unlikely considering the amount of charcoal recovered from some contexts. Alternatively, remains used as tinder for industrial fires may have been destroyed if high temperatures were reached. Even so, evidence is likely to have been recovered from other contexts. Occupation sites which produce little crop processing debris, and are therefore considered to have been consumer sites only, still usually produce evidence for the use of cereals if sieving is carried out. It appears that, throughout the various phases, the areas examined were used solely for non-domestic and industrial purposes or were entirely pastoral in nature and occupation must have occured elsewhere, possibly on drier land away from the floodplain.

Pollen analysis

The results from 7 of the 20 samples examined are given in Table Mf13, below; the remaining results can be found in the archive. Six of the contexts given are primary ditch silts and the seventh is an upper fill from ditch 79 which is present for comparison. The counts have been expressed as percentages of the total count in the table.

The results obtained from the sieving programme showed the problem of contamination to be widespread on the site excavated. Worm and root action and the

fluctuating water table were likely to have caused contamination of the pollen record as they had with macroscopic remains. In addition, the pH (6 to 6.5) had been found to have been much higher than was expected and was above the level required for good pollen preservation. However, since little environmental evidence had been recovered from bones, molluscs of plant macroscopic remains some pollen smaples were examined.

Using the number of intrusive seeds present in a context as a rough guide to the level of contamination, it was considered useful to examine only primary ditch silts that may have been waterlogged. Some stratigraphic series of ditch fills were also examined in order to see whether, by comparing frequencies of taxa and taking into account the number of modern seeds recovered, the intrusive taxa could be separated from those which were naturally occuring.

The sampling of ditch silts for pollen is in itself subject to problems (Dimbleby 1985). Pollen from the local vegetation may be masked by aquatics growing within the ditch, and subsidence and silting may introduce pollen from older deposits.

The low concentration of pollen indicated that pollem preservation was not good, even in the partially waterlogged primary silts. The relatively high occurence of Liguliflorae, *Polypodium* sp. and grass pollen and the low species diversity indicated that differential preservation had taken place. It is possible that all of the pollen examined was of recent origin, but some factors could be seen as suggesting otherwise.

In area A where the topsoil was the deepest the intrusive seeds showed the clearest decrease in number with increase in depth; the pollen results appear to show an increase in taxonomic diversity in the lower levels. Pollen of the lesser reedmace/bur-reed type (*Typha angustifolia* type) was present in the lowest silt excavated in ditch 79 and water plantain pollen (*Alisma* type) was present in the bottom of ditch 160. These species grow in still or slow-running shallow water such as may have been present in the ditch. Samples from the primary fill of ditch 78 contained large numbers of amoebic cysts of a kind normally found in standing water in ditches. It is possible that these remains could have been introduced as contamination by river flooding, although they were only present in the primary silts.

Of the few taxa recorded, some similarities were observed between samples from the primary fill of ditch 368 in Site B sampled at 2 different sections. Out of 20 samples examined these 2 primary silts were the only deposits to contain *Artemisia* type pollen and 5 of the 6 taxa recorded were present in both samples.

Comparison of the small amount of tree pollen recorded with the results from the charcoal analysis showed some similarities in the taxa present (Gale this report). As Gale illustrated, taxa which were not recorded in the pollen analysis were in almost every case insect pollinated species, so fewer grains would have been produced by the tree and the pollen would not have travelled as far. The taxa *Acer* sp., *Fraxinus* sp. and *Salix* sp./*Populus* sp. have been found to be amongst the types of pollen that decay rapidly in biologically active soils (Havinga 1971) which could account for their absence from the pollen samples, but *Alnus* sp. and *Corylus* sp., which are also said to be susceptible to decay, were the 2 most frequently occuring tree taxa. Correlation of the charcoal results with the tree pollen data is inconclusive as the number of pollen grains was generally low and a similar range of taxa can be found in the Blackwaer valley today.

It is, however, remotely possible that some of the pollen observed in the lowest, semi-waterlogged ditch silts represents the original flora of the area. Dimbleby (1974) has shown

that in some deposits some pollen preservation occured through partial waterlogging. If this is the case, taking the problems of intrusive pollen and differential preservation into account, the vegetation must have been much as it is today - primarily damp, disturbed grassland with very little evidence of woodland. The majority of the cereal pollen was recovered from the lower levels of the ring ditch in Area C along with most of the cruciferous pollen, many species of which are weeds of arable. However, it is not possible with evidence of this nature to identify changes in land use from the Bronze Age to the Iron Age, and the problems of contamination mean that all of the results must be regarded as suspect.

TAXA	HABITAT	Modern		Ditch 79			Carbonised
		60	62	100	107	*108	(one seed in each context given)
Aphanes arvensis agg. (parsley piert)	A	-	1	-	-	-	-
Bilderdykia convolvulus (L.) Dumort (black bindweed)	AD	-	2	-	-	-	-
Chenopodium album L. (fat hen)	AD	68	59	6	9	10	-
C. bonus-henricus L. (good king henry)	DG	-	2	-	-	-	-
Fumaria officinalis L. (common fumitory)	C	-	-	1	-	1	-
Gramineae sp. et gen indet (grass)	DG	1	-	1	-	-	(91)
Lamium cf. *purpureum* L. (red dead-nettle)	CD	-	1	-	-	-	-
Papaver rhoeas L. (field poppy)	AD	-	-	-	-	-	(353)
Polygonum persicaria L. (red shank)	CD	-	-	-	1	1	(108)
Polygonum sp.		-	-	-	-	-	(124)
Rumex acetosella agg. (sheep's sorrel)	*CG*	-	-	-	-	-	*(616)*
Scleranthus annuus L. (annual knawel)	CD	-	1	-	-	-	-
Silene sp.		-	-	-	-	1	-
Solanum nigrum L. (black nightshade)	CD	-	-	-	-	1	-
Stellaria graminea L. (lesser stitchwort)	GW	-	-	-	1	-	-
S. media (L.) Vill (chickweed)	CD	1	4	-	3	1	-
Urtica dioica L. (stinging nettle)	CDGW	1	5	-	2	-	(153)(639)
Veronica hederifolia L. (ivy speedwell)	C	-	1	-	-	-	-
Viola sp. (violet)	CDGW	1	-	-	-	1	(108)
TOTAL		72	76	8	16	16	8

* = waterlogged when excavated
habitats A= arable; C= cultivated land; D=disturbed land; G= grassland; W=woodland, heath

Table Mf12 : The seeds (from a section through ditch 79)

TAXA	Sub-site	Percentage of total pollen & spores A 62	A 108	A 124	B 391	B 420	C 633	C 639	other
Alnus	alder	1.0	0.5	3.0	0.5	0.5	1.0	-	+
Betula	birch	-	-	-	-	-	-	-	+
Corylus	hazel	-	-	1.0	-	-	0.5	1.0	+
Crataegus type	hawthorn	-	-	-	-	-	-	-	+
Pinus	pine	-	0.5	-	-	-	-	1.0	+
Quercus	oak	-	-	0.5	-	-	-	1.0	+
Gramineae	grass	92.0	83.0	83.5	91.0	91.0	82.0	85.0	+
Cereal type		1.0	0.5	3.5	-	-	7.0	4.0	+
Alisma type	water-plantain	-	-	-	-	-	-	-	+
Campanula type	bellflower	-	-	-	-	-	0.5	-	-
Caryophyllaceae		-	-	-	-	-	0.5	-	+
Chenopodiaceae		-	-	-	-	-	-	-	+
Compositae									
Anthemis type		-	1.0	-	-	-	-	-	+
Artemisia	mugwort	-	-	-	0.5	0.5	-	-	-
Aster type		-	-	-	-	-	-	-	+
Bidens type		-	-	-	-	-	-	1.0	+
Cirsium	thistle	-	-	0.5	-	-	-	-	-
Liguiliflorae		6.0	11.0	2.0	4.5	2.5	3.0	5.0	+
Cruciferae		-	-	0.5	-	-	3.5	2.0	+
Cyperaceae	sedge	-	-	-	-	-	-	-	+
Galium type		-	-	-	-	-	-	-	+
Papaver	poppy	-	-	-	-	-	-	-	+
Plantago lanceolata	ribwort plantain	-	-	0.5	-	-	-	-	+
P. major/media	plantain	-	0.5	-	-	-	-	-	-
Ranunculaceae	buttercups etc	-	-	1.0	-	-	-	-	+
Rumex sp.	dock	-	-	-	-	-	0.5	-	-
Stachys type		-	-	0.5	-	-	-	-	-
Typha angustifolia type	reedmace	-	1.0	-	-	-	-	-	+
Umbelliferae		-	-	-	-	-	0.5	-	+
Urtica type		-	-	-	1.0	-	-	-	+
Viola arvensis type		-	-	-	-	-	-	-	+
Ophioglossum	adder's tongue	-	-	-	-	-	-	-	+
Polypodium		-	2.0	3.0	2.5	3.0	0.5	-	+
Pteridium	bracken	-	-	-	-	-	0.5	-	+
TOTAL COUNTED		163	182	180	165	165	183	117	

Table Mf13 : Pollen and fern spores

IDENTIFICATION OF CHARCOAL

by Rowena Gale

Method

The charcoal was pressure fractured to expose clean surfaces in the transverse, tangential longitudinal and radial longitudinal planes and mounted in plasticine on microscpe slides. These were examined using an epi-illuminating microscope at magnification up to x400. The anatomical structure was compared and matched to named reference material.

Results

Area C

Charcoal samples from the ditch were mainly small fragments yielding a mixture of species from each context. Six genera (including taxonomic groups) were represented (Table Mf14). four of which were aiso present in the pollen analysis.

Area B

Large quantities of charcoal were reetrieved from these trenches and consisted of good sized fragments many with maximum dimensions up to 30mm. Although in very poor condition, the medullary rays were visible running at right angles to uncurved annual growth rings suggesting that this material originated from branch or trunk wood rather than coppice, stem or young branch wood.

The samples were mainly associated with the hearth area which is thought to have been used in conjunction with a potting industry. To maintain the consistently high temperatures demanded by this process a considerable volume of quality wood would have been requred. Indeed, the charcoal present was almost exclusively *Quercus*with only minimal fragments of other species (*Populus/Salix, Acer,* and *Betula).* Pollen deposits represented two of the species, *Alnus* and *Betula,* while *Quercus* pollen was notaably absent.

The evident selection of mature oak timber and the indications from the overall pollen analysis that the site was based on a predominantly non-wooded grassland area suggest that the wood must have been obtained from some neighbouring region.

Pollen from the coniferous genus *Pinus* occurs in two of the three areas examined (C and A). However, there is no evidence of the wood having been used. The resinous timber ignites readily and might have been a more sutable source of fuel thaan some of the other woods found on the damp and often flooded river valley; this would not have offered a very conducive habitat for this genus and it is more liekly that the wind-born pollen, which is released in vast quantities, was carried from some distance.

Area A

In common with the industrial activity carried out in area B, the iron working industry at this site would have involved the use of high temperature pyrolysis. However, a rather different picture of the wood available emerges.

The carbonised material was composed of small fragments from young branch wood. Several species not sen at the other sites were introduced eg. *Fraxinus, Ilex, Rhamnus cartharticus* and *?Sambucus*, the last two being shrubby. None of these woud favour the damp environment of the area and this is reflected in the pollen identification which includes only *Alnus, Corylus, Betula,* and *Quercus* (Table Mf14).

The small quantity of charcoal from each context was insufficient to indicate whether species selection for particular functions was being practised. If the earlier industry evident in area B was at all long lived it must have made considerable inroads into the oak population which may have resulted in the wholesale clearance of mature trees in the neighbourhood, thereby forcing workers to utilize other, less efficient, woody species. The small diameter of the material found may indicate that woodland management and coppicng had been introduced,. If this was so it would have been easy inadvertently to mix in other shrubs during fuel gathering forays, such as *Sambucus* and *Rhamnus*, if they were growing amongst coppice stools. Many of the speices present, *Alnus*, *Corylus*, *Fraxinus*, *Quercus* and *Salix* can be very succesfully coppiced.

The condition of the charcoal was generally very poor. Gross infiltration of soil particles and fungal hyphae had occurred filling much of the cellular structure and obscuring diagnostic cell wall features. The charcoal was very friable with much fracturing evident. Identification of some of the material was therefore not possible and in some instances only tentative names have been given.

The genera represented on each subsite are listed in Table Mf14. It is notable that, with the exception of *Crataegus*, the woody species represented by pollen deosits all produce large quantities of wind-boen pollen, whereas those occurring as charcoal include severeal species that are insect-pollinated (see Tables Mf14 and Mf15, below). Although the latter mode of pollination would greatly reduce the level of pollen deposted, one must also take into consideration the fact that, in the main, these trees and shrubs, which dislike damp or waterlogged soils, would not have flourished in the immediate area of the three subsites.

The absence of pollen from either *Populus* or *Salix* is curious. The latter which would tolerate the damp envionment, and indeed often occurs in association with *Alnus*, produces nectar and is sometimes insect-pollinated. *Populus* is wind-pollinated. Taking into acount the lack of pollen and the prevailing conditions, one could suggest *Salix* as the more likely candidate; however, positive evidence would be necessary to confirm this. Ironically, although the two genera are very similar anatomicaliy, they can be separated by their differing pollen types.

Discussion

Although only minimal deposits of pollen from woody species have been recorded, these are confirmed by the presence of similar species as charcoal. The pollen analysis suggests an area mainly of arable and open grassland with a few scattered trees and the possibility of surrounding woodlands, inferred by the inclusion of fern spores. The woody species that are common to both charcoal and pollen are in fact those which would have been most likely to survive in the given environment.

All the subsites are in close proximity to the river; subsites A and B, where industrial activity is clearly evident, are a little further away from the river than subsite C. The volume of wood required to support the type of industries practised could not have been provided by an area sparsely furnished with trees. Many of the carbonised fragments are from species favouring drier and/or calcareous soils. The indications are that substantial woodlands of oak mixed with other woody species were present in the neighbourhood.

Interestingly, the pollen shows a greater diversity of species at subsite A and this also coincides with the findings of the carbonised material. The modified vegetation may reflect

the fluctuating environmental conditions and/or the result of the clearance of shade trees such as oak. The abundance of immature woody material at Site A suggests that vegetational changes were indeed taking place.

Identifications

All fragments appear to be from small branch wood but it was not possible to count the annual rings.

TRENCH A1

Feature	Context	Identification
stakehole complex 167	61	Family Salicaceae which includes *Salix* sp. willow, and *Populus* sp., poplar. It is not possible to separate these genera by the wood anatomy alone. Also ?*Prunus*sp., cherry and blackthorn
stakehole 113	63	*Quercus* sp.; family Salicaceae.
hollow 112	85	*Quercus* sp.
ditch 78	86	*Quercus* sp.
posthole 166	88	family Salicaceae.
ditch 78	89	*Quercus* sp.; *Alnus* sp./*Corylus* sp.; a large portion of bone was included in this sample
ditch 182	100	*Quercus* sp.; *Corylus* sp.; *Prunus* sp.; family Salicaceae; *Alnus* sp.
ditch 182	108	*Quercus*sp.; *Fraxinus* sp., *Corylus* sp.
ditch 79	127	family Salicaceae.
ditch 79	135	? *Fraxinus* sp., ash; sub-family Pomoideae (family Rosaceae) which includes *Cretaegus* sp., hawthorn, *Malus* sp., apple, *Sorbus* spp. rowan and whitebeam.
ditch 79	145	*Quercus* sp.; *Prunus* sp.; *Acer* sp. field maple
ditch 79	153	*Quercus* sp.; *Ilex* sp., holly

TRENCH A2		
ditch 99	81	*Quercus* sp.
ditch 99	95	*Quercus* sp., *Alnus* sp.
ditch 99	97	? *Quercus* sp., condition very bad.
ditch 98	114	? *Sambucus* sp., elder poor condition
ditch 99	123	*Quercus* sp., family Salicaceae ? *Alnus* sp. ? *Rhamnus cathartica*,, buckthorn
ditch 99	129	1 small fragment - condition too bad to identify.
TRENCH A3		
ditch 118	103	? *Quercus* sp. ? family Salicaceae - samples very small and muddy
ditch 160	105	*Quercus* sp. ? family Salicaceae.
ditch 118	117	*Quercus* sp ? family Salicaceae.
ditch 119	120	family Salicaceae ? *Quercus* sp.
ditch 160	121	*Quercus* sp. ? family Salicaceae.
TRENCH B1 Hearth		
359	344	*Quercus* sp. Sieving also produced *Acer* sp.; family Salicaceae
"	358	3 bags of larger fragments possibly from branch or trunk wood. All fragments *Quercus* sp. except one which was *Acer* sp.
"	363	*Quercus* sp.. 4 bags of frags.
"	364	3 bags of larger fragments possibly from branch or trunk wood. Predominantly *Quercus* sp. with one sample of *Betula* sp., birch.
"	385	frags, from larger branch or trunk wood - *Quercus* sp.; *Betula* sp.
hollow 350	349	*Quercus* sp.
hollow 352	351	*Quercus* sp.
ditch 354	353	*Quercus* sp.

ditch 368	391	*Quercus* sp.
TRENCH B2		
post-hole complex 361	360	*Quercus* sp.
pit 397	396	*Quercus* sp.
TRENCH C		
ditch section 617	616	*Quercus* sp. *Prunus* sp. family Salicaceae.
"	625	*Prunus* sp.; family Salicaceae.
ditch section 619	618	very small fragments - ? *Quercus* sp. but too small to confirm
d. sect. 617	629	Quercus sp.; family Rosaceae, sub-family Pomoideae
d. sect. 619	631	*Quercus* sp.; *Corylus* sp.; family Rosaceae, sub-family Pomoideae. In addition sieving produced ?*Prunus* sp.
d. sect. 617	632	no charcoal present.
" " "	633	*Prunus* sp.; *Alnus* sp.
d. sect. 619	635	*Quercus* sp.; *Prunus* sp.

The genera represented include:
Acer campestre, field maple. Aceraceae. Mature height 24m. First recorded in England in the neolithic period. Tolerates all soil types but prefers chalk and limestone.

Alnus glutinosa, alder. Betulaceae. Mature height up to 20cm. Pollen records from early post-glacial. Thrives on rich damp soil or close to moving water but not in acid or waterlogged conditions. Coppices well.

Betula spp., birch. Betulaceae. There are two species of tree native to Britain: *B. Pendula*, mature height 35m, with a preference for dry ground and non-acidic soild; *B. pubescens*, mature height 25m, a more northerly species occurring on wetter poorer soils. Both species anatomically very similar.

Corylus avellana, hazel. Corylaceae. Generally considered a large shrub but can become a tree up to 10m., with a trunk diameter of 1 foot. Early pollen records date 9000BP. Tolerates all soil types. Historically a much coppiced species.

Fraxinus excelsior, ash. Oleaceae. Mature height 33m. Early records show two major periods of expansion. Firstly at the elm decline (3000BC) when the reduced dense woodland canopy

encouraged the infiltration of the ash and secondly recolonising abandoned agricultural clearings. A light demanding tree with a preference for chalk and limestone but can be associated with moving water on damp but not waterlogged sites. Often grows in association with field maple and hazel. Coppices well yielding strong resiliant poles.

Ilex aquifolium, holly. Aquifoliceae. Mature height up to 20m. Became widespread in the late post-glacial. An evergreen tree able to withstand dense shade and itself casting heavy shade. Often occurs as an understory in oak or beechwoods. It appears to flourish on acidic or calcareous soils.

Pomoideae, a sub-family of the Rosaceae including the following genera: *Crataegus* sp., hawthorn. A shrub or small tree up to 10m. Recorded from Boreal times as part of the primary forest flora. Flourishes in open areas and woodland margins on calcareous and acidic soils. *Malus pumila*. apple. A small tree up to 10m. Few archaeological records. Prefers to grow as a solitary tree. *Pyrus communis*, wild pear. A larger and longer lived genus up to 16m. *Sorbus aria*, whitebeam. Mature height 7m, with a preference for chalk and limestone. *S. aucuparia*, rowan. Mature height 13m. A northerly tree occurring at altitudes up to 3000 feet. *S. tormanalis*, service tree. Mature height 13m, with seed records from the late interglacial but now a rare tree only occurring in southern England.

The above genera are very similar anatomically and cannot be separated on the basis of the wood anatomy alone.

Prunus spp., cherry and blackthorn. Roseaceae. Two species are native to S. England. Although post-glacial pollen records are of *P. spinosa*, *P. avium* has been represented in the Neolithic and Bronze Age by the remains of fruit stones. *P. avium*, cherry. A large tree up to 30m favouring rich soils and clay over chalk or limestone. *P. spinosa*, blackthorn, a large shrub or woodland margins and scrub areas, recolonises open land; dislikes shade. Sometimes associated with alder.

These species cannot be separated anatomically.

Populus spp., poplar. Salicaceae. *P. tremula*, aspen. Mature height 20m. Records show this species dating to the late-glacial. A light demanding tree of damp woodlands with a preference for rich alluvial soil. *P. nigra*, black poplar. Mature height 30m. Favouring flood plain and meadows; now a fairly rare tree.

The anatomical structure of these species is very similar to *Salix* sp. (another member of the Saliceae.).

Quercus sp., oak. Fagaceae. *Q. petraea*, durmast oak. Mature height 40m. Generally a more northerly and westerly distribution but sometimes mixing with *Q. robur* on light soils and hillside woodlands in the south. *Q. robur*, English oak. Mature height (unpollarded) 57m. Common in the lowlands on basic loam and clay. Pollen records show oak to have been a dominant species in the post-glacial period. Often coppiced.

Rhamnus cathartica, buckthorn. Rhamnaceae. A large shrub up to 10m tall favouring calcareous and poor soils sometimes occurring on clay. A light demanding species of woodland margins and scrub often recolonising abandoned clearings.

Salix spp., willows. Salaceae. Several species were represented in the late-glacial period. The

larger species include *S. alba*, white willow, with a mature height of 25m., *S. caprea*, goat willow, mature height 16m and *S. fragilis*, crack willow, mature height 25m. These are non-woodland trees and shrubs with a preference for damp alluvial soils; may be associated with alder. Coppice and pollard well.

Sambucus nigra, elder. Sambucaceae. A large shrub flourishing in areas of human habitation, favouring nitrogen rich soil. A recoloniser of open land. Native but with few early pollen records.

	CHARCOAL	POLLEN
Area C	*Alnus* sp.	*Alnus* sp.
	Corylus sp.	*Corylus* sp.
	Pomoideae group	*Pinus* sp.
	(*Rosaceae*)	*Crataegus* sp.
	Prunus sp.	
	Populus sp. / *Salix* sp.	
Area B	*Acer* sp.	*Alnus* sp.
	Betula sp.	*Betula* sp.
	Quercus sp.	*Corylus*
	(predominantly)	
	Populus sp. / *Salix* sp.	
Area A	*Acer* sp.	
	Alnus sp.	*Alnus* sp.
	Corylus sp.	*Corylus* sp.
	Fraxinus sp.	*Betula* sp.
	Ilex sp.	*Pinus* sp.
	Quercus sp.	*Quercus* sp.
	Pomoideae group	
	(*Rosaceae*)	
	Prunus sp.	
	Populus sp. / *Salix* sp.	
	Sambucus sp. ?	
	Rhamnus cathartica	

Table Mf14 : Charcoal and pollen species from each site

WIND-POLLINATED SPECIES	INSECT-POLLINATED SPECIES
Alnus sp.	*Acer* sp.
Betula sp.	*Crataegus* sp
Corylus sp.	*Ilex* sp.
Fraxinus sp.	*Prunus* sp.
Quercus sp.	*Rhamnus* sp.
Populus sp.	(*Salix* sp.)
(*Salix* sp.)	*Sambucus* sp.

Table Mf15 : Method of pollination for each species

TRENCH	CONTEXT	Quercus Sp. (oak)	Salicaceae (?willow / ?poplar)	Acer sp. (field maple)	?Prunus sp. (cherry / blackthorn)	Pomoideae (hawthorn / apple / rowan)	Alnus sp. (alder)	Corylus sp. (hazel)	Fraxinus Sp. (ash)	Ilex Sp. (holly)	?Sambucus sp. (elder)	?Rhamnus cathartica (buckthorn)
A1	61		*		*							
	63	*					*	*				
	65	*	*									
	85	*										
	86	*										
	88		*									
	89	*					*	*				
	100	*	*		*		?*	*				
	108	*						*	*			
	127		*									
	135					*			*			
	145	*		*	*							
	153	*								*		
A2	81	*										
	95	*					*					
	97	?*										
	114										*	
	123	*	*				?*					*
A3	103	?*	?*									
	105	*	?*									
	117	*	?*									
	120	?*	*									
	121	*	?*									

Table Mf16 : Contexts with charcoal (A1 - 3)

TRENCH	CONTEXT	Quercus sp. (oak)	Salicaceae ?willow/ ?poplar)	Acer sp. (field maple)	Betula Sp. (birch)	Prunus Sp. (cherry / blackthorn)	Pomoideae Rosaceae (hawthorn/ apple/pear/ whitebeam)	Alnus sp. (alder)	Corylus sp. (hazel)
B1	344	*		*					
	349	*							
	351	*							
	353	*							
	358	*		*					
	363	*			*				
	364	*							
	377	*			*				
	385	*							
	391	*							
B2	360	*							
	396	*							
C	616	*	*			*	*		
	618	?*					*	*	
	625		*			*			
	629	*					*		
	631	*						*	
	633					*			
	635	*				*			

Table Mf17 : Contexts with charcoal (B1-2 and C)

RADIOCARBON DATE

Charcoal from the primary deposits of feature 359 (T-shaped hearth) in trench B1 was submitted for radio carbon determination to the Isotope Measurements Laboratory at Harwell. The charcoal was identified as *Quercus* sp. The results was as follows:

HARWELL REF	AGE BP	CALIBRATED RANGES	
		1 sigma 68%	2 sigma 95%
Har-9157	2250±60	420-240 BC	400-130 BC

The date has been calibrated after Stuiver and Pearson (1986).