

EARLY IRON AGE IRONWORKING AND THE 18TH CENTURY HOUSE AND PARK AT DUNSTON PARK, THATCHAM, BERKSHIRE: ARCHAEOLOGICAL OBSERVATIONS 1993-9

A.P. FITZPATRICK

WITH CONTRIBUTIONS BY GRAHAM BROWN, ALAN J. CLAPHAM, A. CROCKETT, PETER CREW, ROWENA GALE, P.A. HARDING, NATASHA HUTCHESON AND LORRAINE MEPHAM

SUMMARY

The second, and final, report on the large housing development at Dunston Park considers i) the identification of a Bronze Age burnt mound at Dunston Plantation, ii) further modest evidence for Early Iron Age ironworking at Cooper's Farm, and iii) the site of the demolished 18th century mansion of Dunston House and those elements of its formal gardens which survive as earthworks. Enclosed gardens and associated water features, ponds and a possible mount can be identified. Other elements of the park, such as the turning circle, can also be identified from aerial photographs.

BACKGROUND

In 1986, an outline planning application was made to build housing on 50.7ha of land to the north of Thatcham, Berkshire (Figure 1). The development site was called Dunston Park after the park associated with Dunston Hall, which was built in 1722, and demolished in the late 18th century.

As the Kennet Valley has long been recognised to be rich in archaeological remains, an archaeological evaluation was asked for in accordance with the (then Draft) *Replacement Structure Plan* (Policy EN26) before the determination was made. The evaluation of the whole site was undertaken in 1988-9 (Wessex Archaeology 1989) (partly shown on Figure 2) and, on the basis of that work, a programme of archaeological works was developed by The Trust for Wessex Archaeology and Berkshire County Council. In 1989 this programme, which included a watching brief, further trial trenching and also excavation as necessary, was incorporated in a Section 52 agreement relating to the development.

This paper was prepared in 2000 once all the post excavation work associated with the project was complete. For this reason, the discussions take account of information available in 2000 and hence do not include details from more recently excavated sites. Wessex Archaeology and the Berkshire Archaeological Society are pleased to be able to publish this paper in this volume of the Berkshire Archaeological Journal.

THE EVALUATION

Some of the surrounding area had already been included in the 1982-7 Kennet Valley fieldwalking survey (Lobb and Rose 1996). That survey recorded evidence from most archaeological periods and further fieldwalking was undertaken as part of the 1988-9 evaluation. This revealed evidence for a low level of prehistoric activity, some of which was thought to be of Bronze Age date, across much of the development site (Lobb and Rose 1996: 68). Three areas were also identified as having high archaeological potential.

The first area was the copse at Dunston Park Plantation, a small deciduous copse, which contained

earthworks (see below) and perhaps part of the site of the 18th century Dunston House, though most of this was recognised to lie to the south of the plantation (Figure 2). The second area was close to Cooper's Farm in the north-west of the development area where an isolated pit containing evidence for ironworking was found.

The pit (661) was thought to date to the Late Bronze Age and represents some of the earliest evidence for ironworking in Britain (Figure 2). The third area of high archaeological potential was in the south-east of the development area (Figure 2), where what was thought to be a Late Bronze Age settlement was identified (Lobb and Rose 1996: 68-9, 81-2). That site was called Dunston Park.

With the exception of the route of Floral Way, Dunston Park Plantation was excluded from the development, and the area around the pit at Cooper's Farm where evidence for early ironworking was found was also set aside from development and the landscaping proposed there was withdrawn.

ARCHAEOLOGICAL WORKS 1989-1992

Building started in the south-eastern corner of the development site and progressed northwards and westwards. As the housing was to be built over more than a decade, the report on those archaeological works undertaken in the south-eastern part of the site up to 1993 were published in 1995 (Fitzpatrick *et al.* 1995).

The prehistoric settlement called Dunston Park was the subject of two stages of excavation in 1989 and 1991 and was shown to date to the Early Iron Age (c. 7th century BC). The interpretation in the publication report of the 1989 season supersedes that given by Lobb and Rose (1996: 82; *cf.* Champion *et al.* 1995: 46-7). After the completion of a watching brief on the associated length of distributor road in 1992, the excavation report was published in 1995 (Fitzpatrick *et al.* 1995).

In view of the uncertainty as to when development would proceed in the area of Cooper's Farm in the

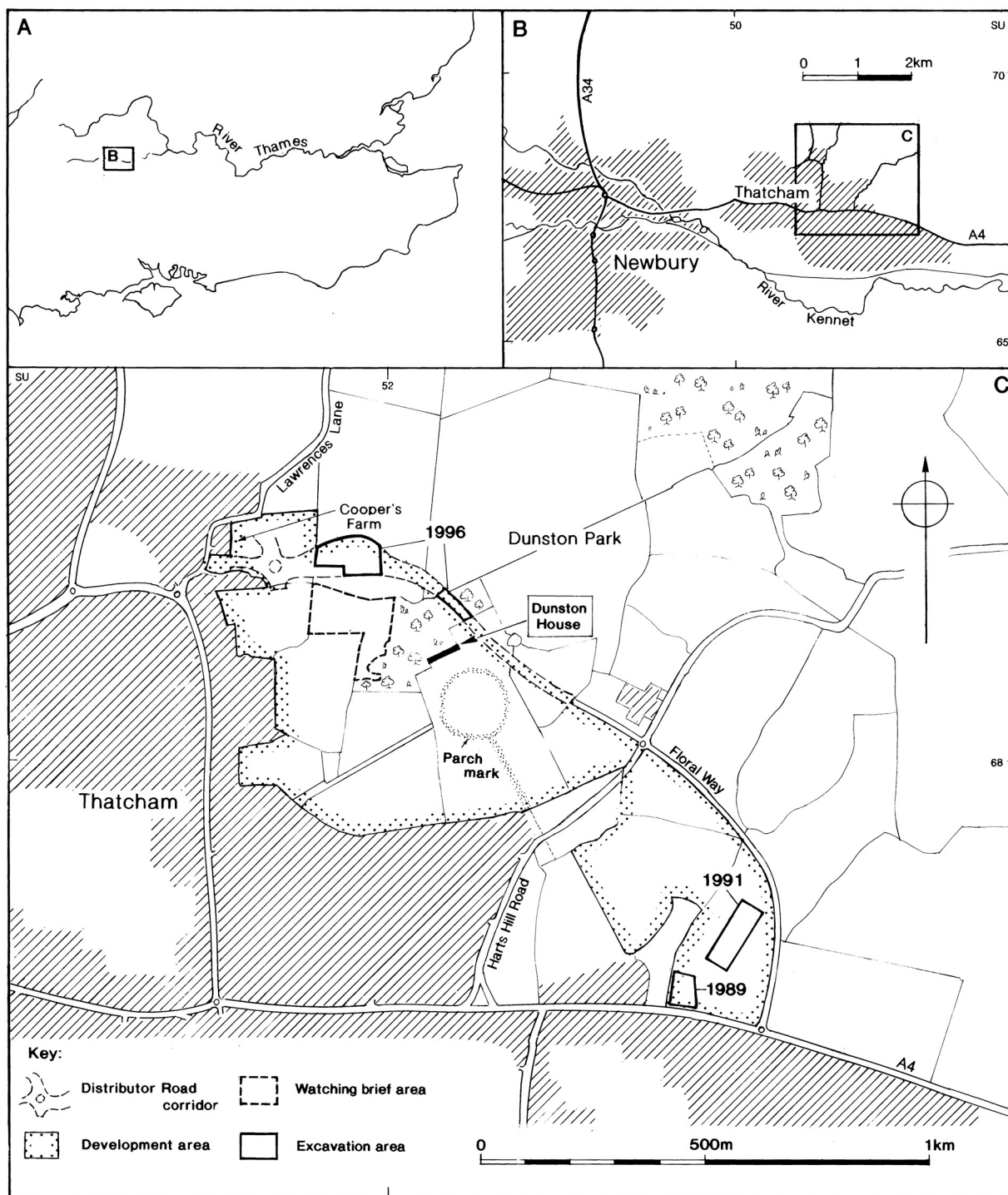


Figure 1. The location of Dunston Park and the principal archaeological excavations 1989-99

©Crown copyright Wessex Archaeology 100028190

north-west of the development, the opportunity was taken to publish the evidence for the early ironworking pit 661 as an appendix to that report (Fitzpatrick 1995). It was shown there that again the remains dated to the Early Iron Age rather than the Late Bronze Age as first thought (Lobb and Rose 1996: 68-9, 81, though suggested to be Iron Age on p. 84), but it still represents some of the earliest

evidence for ironworking in Wessex and the Thames Valley.

The present report considers the works undertaken since 1993 and is the final publication relating to the housing development. In addition to those works set out in the Section 52 agreement - a watching brief over the construction of the road where it passed through Dunston Plantation, and a watching brief in

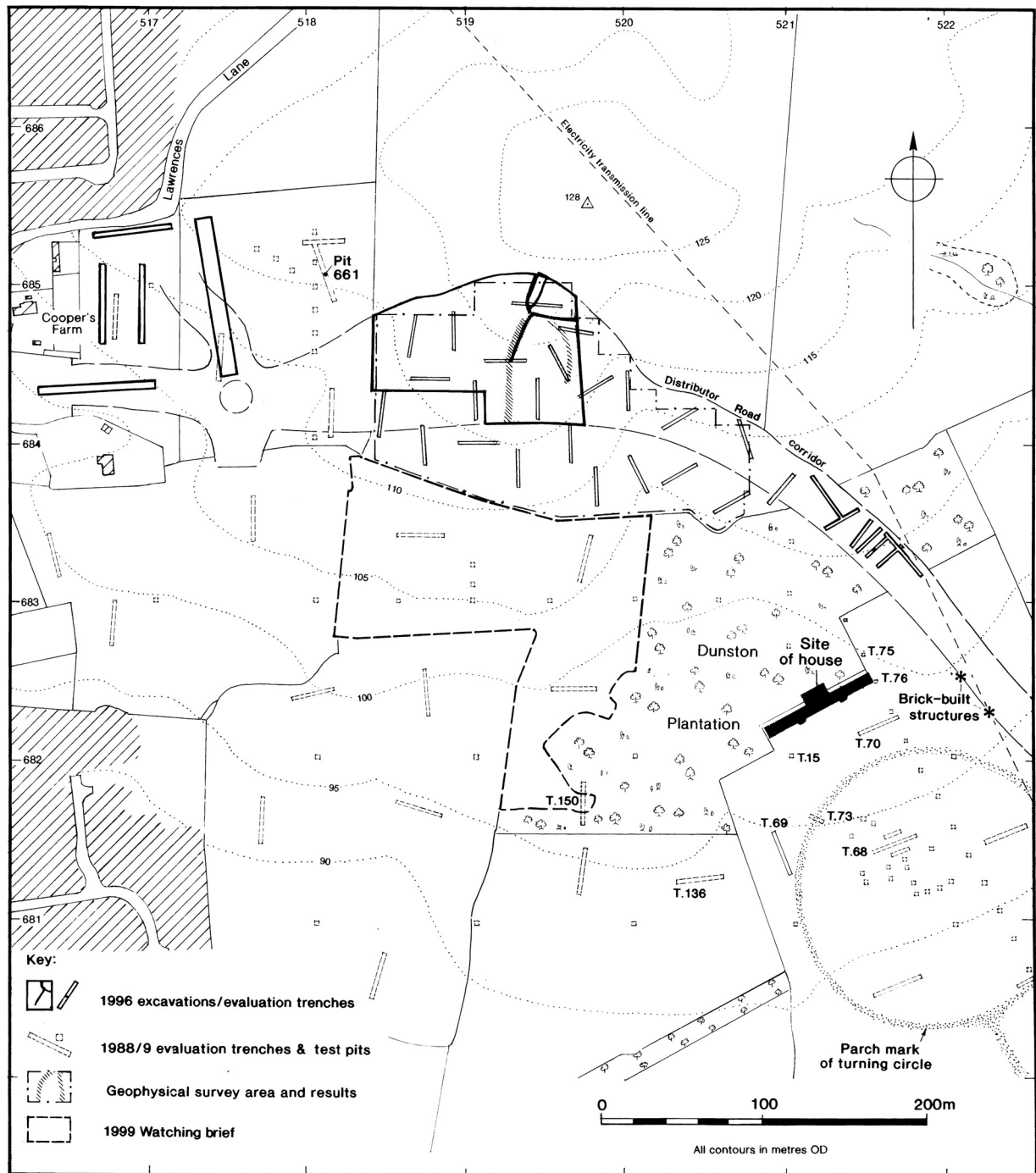


Figure 2. The location of the 1996 geophysical survey, evaluation trenches and excavation area
©Crown copyright Wessex Archaeology 100028190

the field to the west of it - further investigations were undertaken in 1996 as a result of the decision to alter the route of the main distributor road, which runs along the northern boundary of the development, from that for which planning permission had been given in 1989. The site of Dunston House was also confirmed in a watching brief in the winter of 1996-7, while the last stage of the watching brief was completed in the summer of 1999 (Figure 2).

COOPER'S FARM Introduction

As part of the programme of archaeological works agreed in 1989, early in 1996 five machine-cut trenches were excavated to the west of the site of the Early Iron Age pit with metalworking evidence. No archaeological features or finds were recorded (Wessex Archaeology 1996b), nor were any seen in the watching brief over the field to the west of Dunston Plantation during 1998-9. However, further

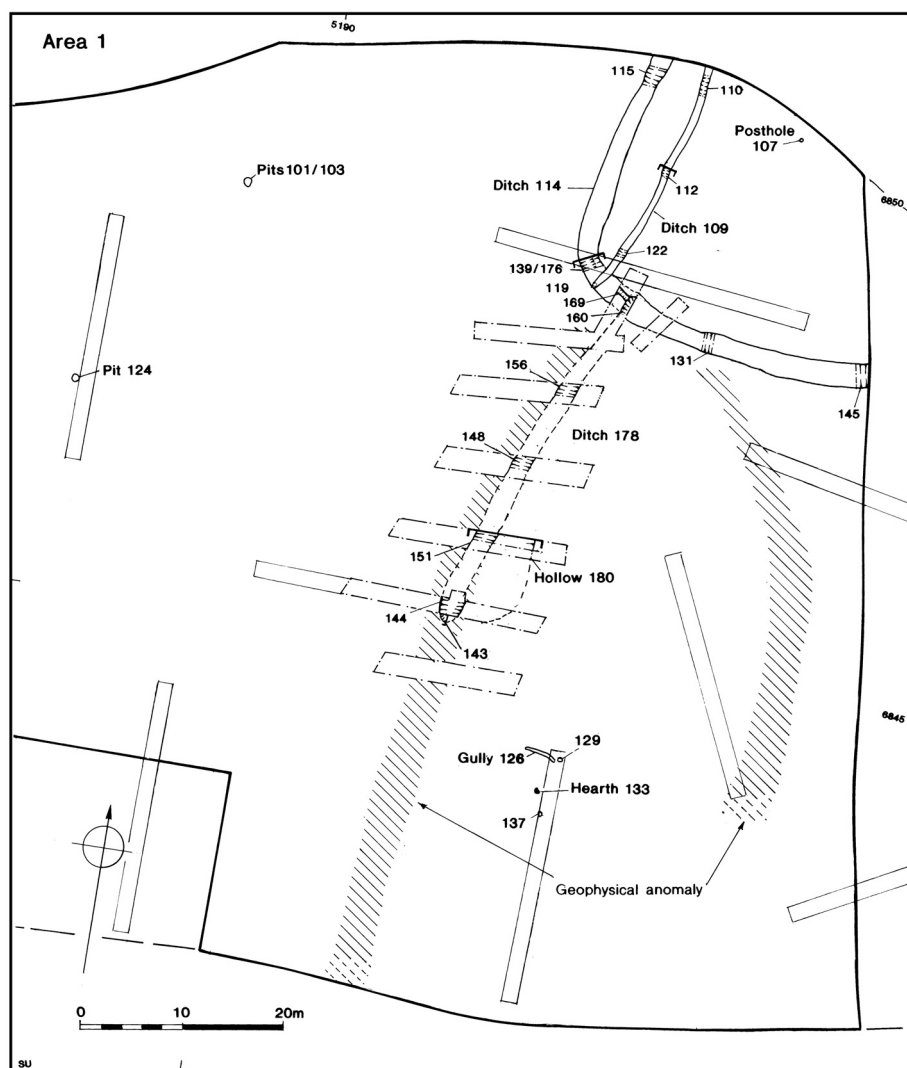


Figure 3. Plan of eastern part of Area 1

works were undertaken immediately to the east of pit 661 later in 1996.

In that year, an application was made to alter the agreed route of the main distributor road for the development into an area that had not been evaluated in 1988-9. A watching brief on the route of the distributor road, which is called Floral Way, where it ran through the Plantation had previously been specified in the Section 52 agreement. The layout of the estate as mapped by Rocque in 1761 shows a network of plots extending beyond Dunston House across the new route of the road. An evaluation of the new route - by a 4% sample as opposed to the 0.75% sample of the earlier work - by a walkover survey, a geophysical survey, and trial trenching was undertaken in July 1996 (Wessex Archaeology 1996a) (Figure 2). On the basis of the results of the evaluation further archaeological works were required as a condition of planning permission and the excavations was undertaken in the autumn of that year.

The site

The revised route of Floral Way extended for approximately 1km from what was then its western end (SU 525 680) to Lawrences Lane (SU 517 685). Apart from the Plantation, which is on a river terrace, the area lies between 104m and 123m AOD on a fairly steep, undulating south facing slope over looking Thatcham and, further to the south, the valley of the Kennet. The solid geology is mapped as Eocene London Clay with a cap of Bagshot Beds on the higher ground to the north, which rises to a small knoll at 128m OD.

The evaluation

A preliminary geophysical survey using magnetometry along the line of Floral Way indicated a number of linear anomalies, possibly forming an enclosure at SU 5195 6845 (Figure 2). A smaller area was then selected for resistivity survey in an unsuccessful attempt to clarify the nature of the anomalies. A 4% sample of the route corridor and associated areas of cut ground was then examined by mechanically excavated trial trenches. Twenty-three trenches each 25m long were excavated. The six

evaluation trenches in the Plantation were not excavated at this stage (Figures 2 and 5).

Only a small number of features were found; two ditches and a possible hearth, all of which lay close to the activity indicated by the geophysical surveys (Figure 3). The line of the easternmost of the ditches as suggested by the geophysical survey was not, however, confirmed by the trial trenching, though it is possible that the anomalies relate to the planting in the 18th century park.

One of the ditches (178) appeared to be the same feature as one of the geophysical anomalies. It contained both Early Iron Age pottery with iron-working slag, and some Romano-British pottery which was considered intrusive. In conjunction with the nearby Early Iron Age pit (661) containing metalworking debris, this evidence suggested that the area had the potential to yield further evidence for early ironworking, and possibly associated settlement. Consequently the excavation of 0.94ha centred on the ditches located in the evaluation and extended towards Cooper's Farm in case further evidence for early ironworking should exist, was a condition of Planning Permission. A survey of the earthworks within the plantation was also to be undertaken and a watching brief was maintained during the building of the new road where it passed through the Plantation.

The excavation

P.A. Harding

Methods

Wessex Archaeology's standard excavation and recording methods were used but any features that were considered to be certainly or possibly associated with ironworking were sampled for ironworking debris. Smaller features were 'whole earth' sampled, that is to say all the soil from them was kept, while larger features such as ditches had 40 litre bulk samples taken from them, which were sub-sampled for palaeo-environmental remains. The excavation area was called Area 1 with individual contexts prefixed by 100. The trenches across the low earthworks in the Plantation were excavated immediately after work on Area 1 was completed as by then the dense summer vegetation had died back.

The trenches were located to examine a possible entrance in the substantial bank and ditch which marked the northern extent of the plantation (Trench 4), and two low terrace features (Trenches 2-3). Two additional trenches (5-6) were subsequently excavated (Figure 5). Contexts from these trenches were prefixed by 200, 300 etc. as appropriate.

Results

Area 1 (Figure 3)

The removal of 0.25 – 0.30m of topsoil and disturbed subsoil revealed a clean subsoil horizon of yellow brown silty clay. This varied across the site, in places being distinctly silty but elsewhere including more

clay with a marked blocky structure. Tertiary gravels were more conspicuous towards the base of the slope on the south and also formed a distinct band along the west edge of the trench. Areas with periglacial polygons, where underlying clay has been forced up through the silty deposits, were also apparent. This complicated geology made some archaeological features difficult to define at this level.

The ditch (114) identified by geophysical survey whose suggested line had not been confirmed by the evaluation trenches was seen to turn at an angle. The second ditch (178) was very difficult to observe and its course was eventually only determined by systematic machine trenching.

Residual material, including pottery and iron slag (121), which could not be related to any obvious cut archaeological features, occurred across the site in the top of the subsoil. Although it was often difficult to distinguish the larger archaeological features, smaller features such as the posthole (107), the gully (126) and the hearth (133) were readily identified, which suggests that the rarity of cut features is genuine.

The archaeological features are described in three groups below; ditches, pits and a hearth and related features. A single small isolated post-hole (107) was identified in the north-east of the trench. It seems likely that all of the features, including the small number of undated ones, should be attributed to the Early Iron Age (7th century BC).

Ditches (Figures 3-4)

Three linear ditches were found in the north-eastern part of the excavation area. One ditch showed signs of having been recut.

Ditch 114 (sections 115, 139/176, 131 and 145) formed two sides of an enclosed area of approximately 625m² in the north-east corner of the excavation area. It ran southwards from the crest of the hill before turning towards the head of a small valley to the east. On average the ditch was 2.11m wide and 0.71m deep, with sloping sides and a slightly rounded base. Section 131 was unusual in being markedly 'v' shaped. The fill was a stony yellow-brown silty clay that became less stony towards the base. Burnt flint and pottery were recovered from most of the sections, especially cut 115, which also contained slag. In the only section where a primary fill could be identified, 115, the one sherd was Early Iron Age in date. Early Iron Age and Late Iron Age/Romano-British occurred together in the secondary fills here, and in the secondary and tertiary fills in most of the other sections.

In section 139/176 it appeared that ditch 114 was the recut of an earlier ditch. The base of this earlier ditch, 177 (sections 176 and 169), was approximately 0.36m wide and 0.08 m deep below the base of ditch 114 and was filled with dark orange-brown clayey silt (142) (Figure 4).

Ditch 109 (sections 110, 112, 122 and 119) ran southwards approximately 5m to the east and parallel

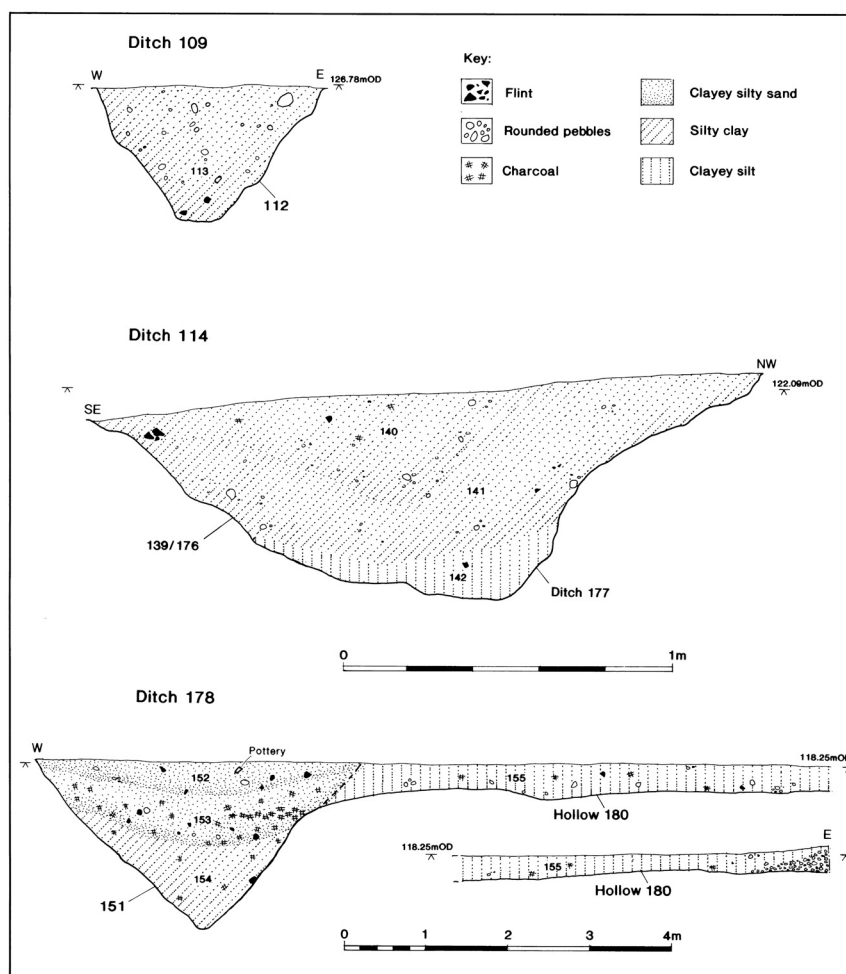


Figure 4. Sections of ditches 109, 114 and 178/hollow 180 in Area 1

with the western side of ditch 114 before its terminal cut through the southern arm of ditch 114. On average it was 0.86m wide and 0.36m deep and was filled with yellow-brown silty clay. Early Iron Age pottery, burnt flint and slag were recovered, with larger quantities excavated from the northern sections.

Ditch 178 (sections 144, 151, 148, 156 and 160) ran south-west from ditch 114 for approximately 36m. What appears to have been the southern terminal was examined next to section 143. The ditch was approximately 1.8m wide and 1.05m deep with steep sloping sides and a narrow rounded base. It contained an orange-brown silty clay primary fill overlain by dark grey-brown clay silt secondary fill which contained most of the artefacts with charcoal, especially in section 151. The tertiary silting was characterised by dark grey-brown stony silty sand. No stratigraphical relationships with ditch 114 could be established with certainty although it can be said that the latter did not cut ditch 178, which at this point appeared to have a butt end, and so is presumably later. Early Iron Age and Late Iron Age/Romano-British pottery occurred together in many contexts but is unclear whether ditch 178 is an Early Iron Age feature which was recut in the Romano-British period

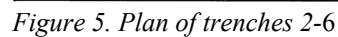
or a Romano-British ditch incorporating earlier material.

Adjacent and to the east of section 151 lay a broad ill-defined hollow (180), which was approximately 12m north-south, 5m east-west and was 0.15m deep (Figure 4). It contained a dark grey-brown clayey silt that contained Early Iron Age pottery, charcoal and burnt flint. No stratigraphic relationships with ditch 178 could be established with certainty, but it appeared that the ditch was later.

Pits

To the west of the ditches three shallow pits, 101, 103 and 124, were excavated. Pit 101 was 0.6m in diameter, 0.18m deep, with sloping sides and a rounded base. It was cut by pit 103, which was 0.24m in diameter and 0.16m deep. Pit 124 measured 0.55m across and was 0.11m deep with sloping sides and a flat base. All were filled with yellow-brown silty clay with charcoal flecks. Only pit 124 contained pottery, which was of Early Iron Age date.

Two shallow, undated, scoops 137 and 171 were found. Both contained small quantities of burnt flint, and in 171, fired clay also. It seems likely that these features are also of Early Iron Age date.



An area of burning, interpreted as a hearth (133), was identified in evaluation Trench 13. The excavation showed it be an irregular oval, 1.3m long, 1m wide, and 0.1m deep. It was filled with orange-grey clayey sand, charcoal, burnt flint and burnt clay fragments. There was, however, nothing to indicate that the material had been burnt *in situ*.

This trench was 35m long north-west to south-east, 1.8m wide, and was located across the slight earthworks in the eastern part of Dunston Park

Approximately 17m north-west of bank 210 was a terrace or lynchet (209), which was 1.1m high and aligned east-west. The terrace ran west for approximately 35m before it became indistinct and turned north-west along a tree-lined avenue. Post-medieval sherds of glazed red ware were sealed beneath the terrace or lynchet in a grey-brown silty clay horizon that sealed a ditch (203). This feature was aligned north-east to south-west and was on average 0.86m wide and 0.49m deep (Figures 5 and 6). It had steeply sloping sides and a narrow, flat base. It was filled with dark grey-brown mottled silty clay with both Iron Age and Romano-British pottery.

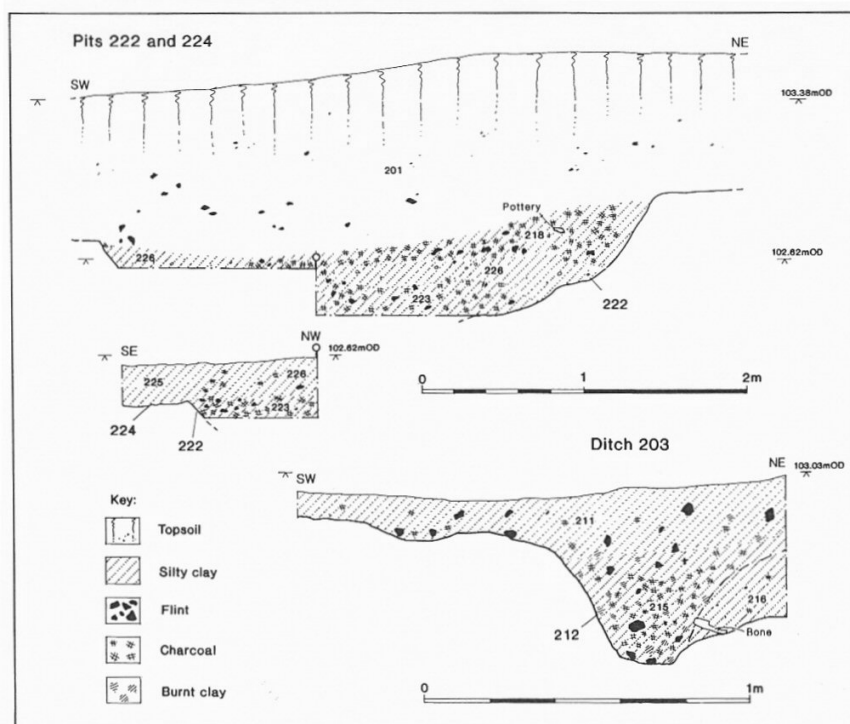


Figure 6. Sections of pits 222 and 224, and ditch 20 in trench 2

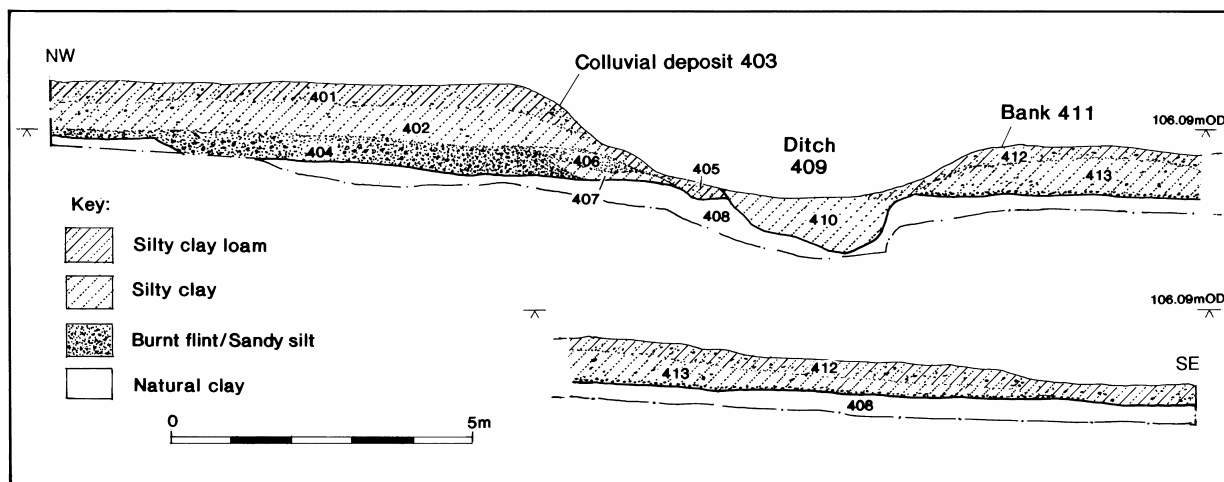


Figure 7. West-facing section trench 4 showing burnt mound 404

bone, fired clay, slag and charcoal. A dark orange-brown silty clay lay at the base

Two extensions from the original layout of Trench 2 were mechanically excavated across the corridor of Floral Way to the north-west of ditch 203. The first extension revealed a shallow, sub-circular pit (219), 1m in diameter and 0.14m deep, which was filled with dark grey-brown silty clay. It contained pottery, charcoal and a spindle whorl and was overlain by clean orange-brown silty clay.

Two interconnecting pits, (222 and 224), were identified in the second extension (Figures 5 and 6). Both were sealed beneath approximately 0.85m of soil, part of terrace or lynchet 209. Pit 224 was cut 0.6m into the natural subsoil, and appeared to cut pit

222 which was excavated to 0.74m below the surface of the subsoil.

Both these pits contained dark grey-brown compact silty clay although pit 222 contained charcoal rich lenses of material which thinned to the west. Iron Age pottery, Romano British pottery and a fragment of a rotary quern were found.

The subsequent watching brief identified a well-preserved charcoal spread (227), approximately 0.6m in diameter and 0.25m deep, located between pit 219 and pits 222 and 224. It lay within an area of dark grey brown silty clay, the extent of which could not be established.

Trench 3 (Figure 5)

This trench was 22.5m long and 1.6m wide and was dug across the width of the route corridor. No archaeological features were observed.

Trench 4 (Figures 5 and 7)

This trench was 30m long and 1.6m wide, and was excavated to the north-west from Trench 3 across a substantial bank and ditch which formed the northern boundary of Dunston Park Plantation. The trench was sited to examine a possible entrance in the bank and ditch. The section showed that these earthworks and colluvial deposits and/or a positive lynchet have heavily modified the natural slope of the hillside.

The undated bank (411) was approximately 0.8m high at the front and 14m wide and was comprised of yellow-brown silty clay. It faced a ditch on the north side (409) which was 3m across and 0.9m deep, and was filled with a homogeneous, organic, grey-brown silty clay. Despite the gap in bank 411, there was no sign of a causeway or other access across the ditch at this point and it is likely that the main purpose of the ditch was to carry water (Brown, below).

A deposit of heavily compacted burnt flint (404), 0.44m thick, extended beyond the ditch for at least 9m. This material, which also contained charcoal, was heavily fragmented, angular and largely unweathered. During the watching brief maintained over the road building the deposit was shown to be approximately 5m wide and burnt flints were also noted within the Plantation. The flattened upper surface of the deposit probably results from subsequent ploughing which also caused colluvial deposits to form (403). These deposits stand 1m higher than the north side of the ditch but the lynchet-like profile has been greatly exaggerated by the cutting of the ditch. Although the flints were not seen in the face of ditch 409 in the evaluation trench, during the watching brief the flints did appear to be present in the northern face of the ditch, suggesting that the deposit is earlier than the ditch. Scattered fragments of burnt flint were also observed in the southern face of the ditch.

The hypothesis that the burnt flints are part of a burnt mound of Bronze Age date appears to be borne out by the radiocarbon determination, albeit from mixed charcoal, of 1380-910 cal. BC (RCD-3331; 2910±80 BP).

Trenches 5 and 6 (Figure 5)

Two additional trenches, each 20m long, were excavated across the road corridor to establish if further features associated with those identified in Trench 2 existed to the north. No archaeological features were observed.

THE FINDS**Object of copper alloy**

A.P. Fitzpatrick

The central loop from a brooch spring was found in the secondary fill (153) of ditch 178 in section 151. The spring is broken where the pin begins to expand. Although it is possible that the fragment is from a

brooch of late Hallstatt type of 6th or 5th century BC date, these are very rare in Britain (Hull and Hawkes 1987: 54-67, pl. 21, 2347, 4570 (Group LX), 4282bis, Group L) and it is more likely that the fragment comes from a brooch of Late Iron Age or Roman type, such as a Nauheim derivative.

Ironworking residues

Peter Crew

Just over 1kg of material thought to be slag, from a range of contexts, was recovered. In addition, the residues from 12 palaeo-environmental samples were submitted for the identification of possible micro-residues from ironworking. The materials were examined visually, sorted into type and weighed. This preparatory work was carried out by Sheila Rawson and Ian Devine (Table 1).

The bulk samples consisted of both slag (639gr) and a variety of ironstone concretions (377gr). Because of the difficulty of distinguishing between the slags and ironstone, four samples were cut on a diamond saw, polished and examined with a metallographic microscope to confirm their character.

Slags

These are almost all of amorphous shape, with an external coating of mid to dark brown concretion and secondary corrosion products. In fresh section the slags are black in colour, vesicular and with a vitreous texture. Most pieces are rather dense and some are strongly magnetic.

The sectioned pieces are of two types. The slag cake from ditch 212 (Trench 2) and the amorphous slag from ditch 110 (Area 1) both have a large proportion of massive globular wüstite and are strongly magnetic. These are typical iron smithing slags and the former sample is most probably part of a smithing hearth cake, which would have accumulated in the hearth just below the air inlet. The slags from ditches 115 and 214 consist of fayalite laths in a glassy matrix and are non-magnetic.

Vitrified ?hearth lining

One piece of highly vitrified clay, 24mm thick and with a flat cooling surface, came from ditch 114, section 145. The degree of vitrification indicates that this material was held at a high temperature for some time and it probably derives from the lining of a smithing hearth, near the air inlet.

Ironstone concretions

These vary in character and superficially some can be difficult to distinguish from the slags. At one extreme they consist of small pieces of sand/gravel concretion, with rounded quartz fragments cemented together with thin films of iron compounds. The majority of the pieces consist of larger rounded (up to 5mm) stone nodules and angular flint fragments, cemented together and thickly coated with iron compounds. The iron concretions are very dark brown to black in colour, not dissimilar to high manganese bog iron ores which occur in other parts of Britain, but in this locality the colour is more likely due to other factors.

<i>Feature</i>	<i>Section</i>	<i>Context</i>	<i>Sample</i>	<i>Pieces</i>	<i>Slag (gr)</i>	<i>Ironstone (gr)</i>	<i>Micro- residues</i>	<i>Comment</i>
109	110	111		4	104			slag, magnetic
109	110	111	5006			9.5		
114	115	116		13		290		
114	115	116		3	70			slag, non-magnetic
114	115	118		1		22		
-	-	121		4		45		
114	131	132		1	11			slag, slightly magnetic
137	-	138	5005	1		2.5		
114	145	146		1	45			heavily vitrified clay, flat surface, 24 mm thick
114	145	147	5011	2		8		?fine grained stone
178	151	153	5009	1	0.6		++	fuel ash slag, scale etc.
178	1003	1002		1	35			slag (evaluation)
203	212	211		1	126			part of dense slag cake, 26 mm thick, flat top, magnetic
203	212	213		8	217			slag, some magnetic
219	-	221		1	30			slag
TOTAL				40	638.6	377		

Table 1: Ironworking residues

Micro-residues

The flotation samples were sieved to three size-fractions, greater than 2mm, between 2mm and 1mm and less than 1mm. The bulk of the samples consisted of rounded quartz fragments and angular flint. A small quantity of each sample, generally less than 0.5%, was magnetic, consisting of tiny fragments of burnt stone and iron-rich flint. Three samples, from pit 101 and ditch 178 (sample 5009), and also layer 404 in the Bronze Age burnt mound, had a higher proportion of magnetic material, up to 3.5% of the sample weight. Both pit 101 and layer 404 had a very small number of tiny fragments of hammer scale and amorphous fragments of slag, which is presumably intrusive in layer 404. Sample 5009 had a larger quantity of hammer scale, slag spheres and amorphous slag fragments, but the total weight of this material was less than 1gr and only constitutes some 0.1% of the bulk weight of the sample. Micro-residues are very friable and all of the recovered fragments were from the smaller fractions of the samples.

Discussion

Although most of the bulk slags are not diagnostic, the wüstite-rich slag cake, the highly vitrified lining, the rare pieces of hammer scale and the slag spheres all indicate that iron smithing was carried out. The quantity of slag recovered could have been produced in a few small smithing operations, but the variety of contexts in which this material was found suggests that it is all residual and presumably originated from a focus of ironworking elsewhere on the site. As with Pit 661 immediately to the west (Fitzpatrick 1995), this small collection of material is a useful addition to the growing evidence for ironworking in this area during the Early Iron Age as well as in the Later Iron Age and Romano-British periods.

The presence of the ironstone concretions is of some interest. This material presumably derives from the local greensand formations, though more detailed work is necessary both to confirm its occurrence and character. Some of the ironstone concretions seem to have an iron content high enough for the material to

Feature/ Description	Burnt Flint (Wt.)	Fired Clay	Pottery EIA	Pottery LIA/RB	Other
<i>Area 1</i>					
?Pit 101	48				
Ditch 109	1650		71/283		
Ditch 114 (upper)	1889	6/91	48/231	75/476	clay ?spindle whorl
Ditch 114 (secondary)	394	2/4	6/11	2/8	
Ditch 114 (primary)	190		1/7		
Ditch 114 (evaluation)	64		3/5	3/13	
Pit 124	8		7/23		
Curvilinear feature 126	32		3/11		
?Pit 129			1/1		
Hearth 133	537	59/242	1/5	1/5	
Feature 137	98				
Ditch 143	62		5/29	12/75	
Ditch 178 (upper)	2176	2/24	26/128	4/59	
Ditch 178 (secondary)	486		2/6	4/26	Copper alloy brooch
Ditch 178 (primary)	660	4/202	2/6	33/153	
Ditch 178 (evaluation)	74		42/359		
Hollow 180	653				
Feature 171	8	1/64			
<i>Trench 2</i>					
Ditch 203 (upper)	4050	17/106	34/247	51/547	
?Pit 219 (primary)	1700		2/6	2/9	clay spindle whorl
Pit 222 (upper)	1486	3/56	96/573	29/387	Quern fragment
Pit 224	156		4/19		
<i>Trench 4</i>					
Burnt mound 404	2680				
TOTALS	19101	94/789	354/2031	216/1758	

Table 2: Finds from stratified contexts (number/weight in grammes)

be usable for smelting, with some preliminary cleaning and concentration. However, the small quantity and the character of the slags recovered does not (yet) support this possibility.

During the 1988 evaluation some 1,236gr of material identified as 'ironstone' was recorded from Pit 661 but discarded before detailed examination. The superficial similarity of the slag and ironstones from the current project suggests either that some of the earlier finds may, in fact, have been slag or that

potentially smeltable ironstones may be more commonly available in this area than is presently realised.

Burnt Flint

Natasha Hutcheson

Just over 19kg of burnt flint was recovered from stratified contexts (Table 2), including the compacted deposit 404 in Trench 4 which is interpreted as a burnt mound. Apart from deposit 404, no discrete concentrations were observed but a connection with

Fabric type	No. sherds	Weight (gr)	% by number	% by weight
Flint-tempered				
F1	3	23	0.7	1.0
F2	17	73	4.1	3.0
F3	26	98	6.2	4.1
F4	22	111	5.3	4.6
F5	64	311	15.3	12.9
F6	9	43	2.2	1.8
F7	27	219	6.5	9.1
F8	6	25	1.4	1.0
F9	9	52	2.2	2.2
Sub-total	183	955	43.9	39.7
Sandy				
Q1	3	16	0.7	0.7
Q2	49	282	11.7	11.7
Q3	11	70	2.6	2.9
Q4	1	8	0.2	0.3
Q5	17	104	4.1	4.3
Q6	13	89	3.1	3.7
Q7	37	148	8.8	6.2
Sub-total	131	717	31.2	29.8
Organic				
V1	104	735	24.9	30.5
TOTAL	418	2407	-	-

Table 3: Pottery fabric totals (prehistoric)

Flint-tempered fabrics (Group F)

- F1 Very coarse, flint-tempered; common angular flint <4mm.
 F2 Moderately coarse flint-gritted; rare to sparse subangular flint <2mm; moderate to common quartz 0.5mm.
 F3 Very coarse, flint-tempered; abundant (sub)angular flint <3mm.
 F4 Flint-gritted; sparse to moderate subangular flint <3mm; sparse to moderate red iron oxides.
 F5 Coarse, flint-tempered; moderate to common (sub)angular flint <5mm; moderate quartz <1mm; sparse red iron oxides.
 F6 Coarse, flint-gritted; sparse subangular flint <2mm; sparse to moderate quartz <0.25mm; moderate glauconite.
 F7 Very coarse, flint-tempered; moderate angular flint <7mm; sparse quartz <1.5mm; sparse iron oxides.
 F8 Moderately coarse clay matrix; moderate, poorly-sorted, subangular flint <4mm; moderate to common probable glauconite <0.5mm; sparse iron oxides <1mm.
 F9 Moderately coarse clay matrix; sparse, poorly sorted, angular flint <4mm; sparse subrounded quartz <0.5mm; sparse iron oxides.

Quartz sand fabrics (Group Q)

- Q1 Moderately fine, micaceous sandy; moderate quartz <0.25mm; rare subangular flint <1.5mm; sparse iron oxides.

- Q2 Very fine, silty; rare quartz <1 mm; subangular flint <1.5mm; carbonaceous material; iron oxides.
 Q3 Sandy; common quartz <1mm; moderate to common glauconite <1mm.
 Q4 Moderately fine sandy; rare to sparse subangular flint <1mm; rare quartz <0.25mm; carbonaceous material, mica, iron oxides.
 Q5 Coarse sandy; common quartz <1mm; detrital material <10mm (flint or other pebbles).
 Q6 Moderately coarse clay matrix; moderate to common, well sorted subrounded quartz <0.5mm; rare subangular flint <2mm; sparse probable glauconite <0.25mm; sparse iron oxides.
 Q7 Moderately fine clay matrix; moderate, well sorted subrounded quartz <0.25mm; moderate probable glauconite <0.25mm; sparse iron oxides.
 Q8 Fine, micaceous clay matrix; moderate, well sorted, subrounded quartz <0.125mm; sparse iron oxides.

Organic-tempered fabric (Group V)

- V1 Fine, micaceous clay matrix; sparse to moderate organic material (grass/straw?) <5mm; rare to sparse angular flint <4mm.

metalworking might be postulated for the material found in Iron Age contexts, as in most cases those contexts containing relatively large quantities of burnt flint also contain slag (ditches 109, 114, and 203, pit 219, though not ditch 178 or pit 222).

Pottery

Lorraine Mephram

The pottery assemblage recovered from both the evaluation and excavation amounts to 708 sherds (4,691gr). The main components of this assemblage are Early Iron Age and Late Iron Age/Romano-British, with small quantities of ?Middle Bronze Age and post-medieval material. Post-medieval pottery (seven sherds: 64gr) is not included in this discussion.

The prehistoric pottery has been analysed as far as possible within the framework of the existing type series for fabrics and vessel forms, which were established for the pottery from previous stages of work at Dunston Park (Morris and Mephram 1995; Morris 1995). The same analytical methods have been followed here (PCRG 1997).

The general condition of the prehistoric assemblage is poor; the sherds are small and abraded (mean sherd weight 5.7gr). Conjoining sherds are scarce and there are no reconstructable profiles.

Fabrics

The existing fabric series comprises 12 fabrics in two groups: flint-tempered (fabrics F1 - F7) and sandy (fabrics Q1 - Q5). The assemblage discussed here has extended this fabric series by the addition of six 'new' fabrics: two flint-tempered, three sandy and one organic-tempered. The fabric series is presented below, with full descriptions of the additional fabrics only, supplemented by summary descriptions of the existing fabrics. Fabric totals are presented in Table 3.

Following Barrett's classification (1980), these 18 fabrics may be subdivided into 'coarsewares' and 'finewares'. The 'finewares' comprise all the sandy fabrics and the organic-tempered fabric, while most of the flint-tempered or flint-gritted fabrics may be defined as 'coarsewares'; fabrics F2 and F4, however, could fit within either group.

Petrological examination of six fabric samples from the previously published assemblage suggested that most if not all of the assemblage could have been made using resources (clays and inclusions) which were locally available, i.e. within a 10km radius of the site. Possible exceptions are the fabrics containing glauconite (F6, F8, Q3, Q6, Q7), for which a more regional production was suggested, although glauconitic sand is found in some of the local Reading Beds.

Vessel Forms

Diagnostic material is particularly scarce amongst the prehistoric assemblage, and is restricted to five rims and ten decorated sherds. One of the rims is too small to assign to any particular vessel form. The other four, although small, all appear to derive from vessels

of similar form, i.e. small, slack-shouldered jars with short upright, rounded or thickened rims and no neck zone (Morris and Mephram 1995, jar type 3). These vessels occur in fabrics Q2, Q5 and V1 (two examples). In addition, decorated sherds in fabric Q2 indicate the presence of one possible carinated bowl (Figure 8, 1) and one furrowed bowl (*ibid.*, bowl type 7), also presumed to be carinated, although the length of the neck is unknown (Figure 8, 2). The latter vessel appears to have been 'red-finished' (see below).

Surface treatment and decoration

Very few of the sherds show any signs of surface treatment, although post-depositional abrasion may have removed this evidence in some cases. Burnishing was not observed on any sherds but, as noted above, one furrowed bowl in fabric Q2 retains a red-slipped finish. This technique, sometimes termed 'haematite-coating', is perhaps more correctly described as 'red-finishing', and may be achieved by any one of several methods (Middleton 1978). Samples from the previously published assemblage from Dunston Park had either been coated with slip or the colouration resulted from the oxidation of a ferruginous clay body (Morris and Mephram 1995: 80; BM Lab. Rep. 5184, held in project archive). Apart from the furrowed bowl, only seven other sherds, six in fabric Q2 and one in fabric F4, are decorated. The sherds in fabric Q2 probably all derive from the same vessel, which may be another carinated bowl, with impressed dots and small 'pin-pricks' respectively on either side of the carination (Figure 8, 1). The remaining sherd, in fabric F4, is a tiny body sherd with parallel incised lines, possibly part of a hatched panel.

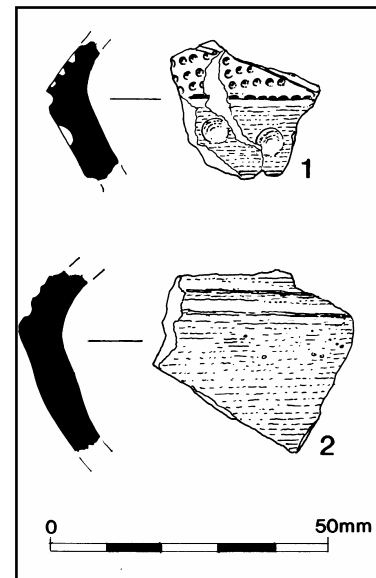


Figure 8. Early Iron Age pottery from Area 1, pit 124

1. Decorated body sherds from carinated bowl, fabric Q2. Context 125, pit 124, PRN 143
2. Body sherd from furrowed bowl, fabric Q2. Context 125, pit 124, PRN 144

Discussion

The three sherds in the coarse flint-tempered fabric F1, although undiagnostic, are likely to derive from Deverel-Rimbury style vessels of Middle Bronze Age date. Apart from these sherds, all of the prehistoric pottery recovered is of Early Iron Age date.

The Early Iron Age assemblage discussed here complements and extends the range of pottery already published from Dunston Park, and is consistent with the date of 7th century BC proposed for the latter assemblage, although it should be observed that the pottery discussed here is much less distinctive in character, with fewer diagnostic pieces. It is not necessary here to reiterate the full range of comparable assemblages, but in the local context parallels may be found amongst other assemblages from the Kennet Valley such as Aldermaston and Knight's Farm (Bradley *et al.* 1980), Field Farm (Mephram 1992) and Wickhams Field, Theale (Laidlaw 1996). Further afield this site may be seen in the context of the widespread and now well published distribution of post-Deverel-Rimbury assemblages in the lower Thames region (e.g. Barrett 1980).

Most of the evidence cited previously to support the close dating of 7th century BC or slightly later, i.e. the presence of long-necked and round-bodied bowls and the absence of biconical bowls, is lacking here, and the only closely datable vessels are the 'red-finished' furrowed bowl, and the decorated carinated bowl. An interesting addition to the published assemblage is the presence of sherds in the organic-tempered fabric V1. Sparsely organic-tempered fabrics such as this are known, although not closely dated, from other Iron Age sites in Berkshire, such as Riseley Farm, Swallowfield (Lobb and Morris 1991-3), Thames Valley Park, Reading (Mephram 1997, fabric G1) and Wickhams Field, Theale (Laidlaw 1996, fabric Q13).

Early Iron Age pottery

The Early Iron Age pottery occurred in features across Trenches 1 and 2, mainly in ditches but also in pits, the gully and the hearth (Table 2). Sherds constitute

the only dating evidence from ditch 109, pit 124, gully 126, pit 129 and pit 224. In all these cases the quantity of sherds in each feature is small: 86 sherds altogether, of which 71 come from ditch 109. Only one feature (pit 222) produced more than 500gr in weight – and the condition of the sherds is poor; mean sherd weight overall is 5.7gr (3.9gr from features containing only Early Iron Age pottery). The majority of the Early Iron Age pottery occurred as residual or redeposited sherds in the fills of ditches 178 and 203, and pit 222, associated with Late Iron Age/Romano-British pottery.

The lack of diagnostic material means that little can be made of the potential differential distribution of vessel forms. It may be noted, however, that pit 124 contained two of the three decorated vessels (Figure 8); the third came from a natural feature, also in Area 1.

Late Iron Age/Romano-British pottery

The Late Iron Age/Romano-British pottery falls into five broad fabric groups: sandy greywares, oxidised sandy fabrics, flint-tempered fabrics, grog-tempered fabrics, and one calcareous fabric (Table 4). For the purposes of this discussion, no attempt has been made to break down these groups any further, apart from the identification of one fabric of known type: the flint-tempered fabric known as Silchester ware (Charles 1979).

Apart from the calcareous group, which is represented by a single sherd, the other four groups all include fabrics of more than one type and/or source. Potential sources for the sandy wares include the Oxfordshire kilns and the Alice Holt kilns on the Surrey/Hampshire border; more locally, small-scale production of greywares is attested at Hamstead Marshall to the west of Newbury (Rashbrook 1983).

As with the prehistoric pottery, diagnostic material is scarce, but recognisable vessel forms include bead-rimmed jars, necked jars, possibly cordoned, and one pedestal-based jar, all types deriving from the native Iron Age ceramic tradition in the area.

Fabric type	No. sherds	Weight (gr)	% by number	% by weight
Calcareous	1	80	0.4	3.6
Silchester ware	45	289	15.9	13.0
Other flint-temp.	84	407	29.7	18.3
Grog-tempered	78	929	27.5	41.9
Sandy greywares	68	472	24	21.3
Oxidised sandy	7	43	2.5	1.9
TOTAL	283	2220	-	-

Table 4: Pottery fabric totals (Late Iron Age/Romano-British)

These forms, together with the presence of Silchester ware, suggest a date range possibly beginning in the immediate pre- or post-Conquest period and extending no later than the beginning of the 2nd century AD. A very similar range of fabrics and forms has been observed in early Romano-British phases at, for example, Thames Valley Park, Reading (Mephams 1997), Wickhams Field, Theale (Laidlaw 1996) and Upton Nervet (Manning 1974).

The distribution of Late Iron Age/Romano-British pottery across the site was more restricted than the Early Iron Age pottery, sherds occurring in just seven features (Table 2). Half of the total number of sherds (126) derived from the upper fills of ditches 114 and 203, with smaller quantities in lower fills and in other features. The overwhelming majority (94% by weight) came from just four features (ditches 114, 178 and 203, pit 222), with very small quantities in three other features (Table 2). Overall condition is only slightly better than for the Early Iron Age pottery (mean sherd weight 8.1gr).

Fired Clay

Natasha Hutcheson

In total 94 fragments of fired clay (789gr) was recovered (Table 2), excluding the heavily vitrified piece of possible hearth lining from ditch 114 (Table 1). Of this total, 80 fragments are featureless and of unknown function; these came from both Early Iron Age and Late Iron Age/Romano-British contexts. The majority of these fragments are in a moderately fine sandy clay, with rare to sparse coarse quartz and flint inclusions.

One group of fired clay, from the possible Early Iron Age hearth 133, appears to have been burnt, and it is probable that these fragments originated from an oven or hearth structure.

The only complete object of fired clay found is a spherical spindle whorl, 37mm in diameter (weight 35gr). It was recovered from Late Iron Age/Romano-British pit 219, but as the whorl is made from an organically-tempered fabric corresponding to Early Iron Age pottery fabric V1 (see above), it may be residual in this context.

Eight fragments of fired clay have visible surfaces surviving, and three fragments, two from Area 1 (ditches 144, section 131 and ditch 178, section 148 respectively) and one from Trench 2 (pit 222), show signs of either perforations or wattle marks. The fragment from ditch 114, section 131 may be part of a spindle whorl. All 11 fragments came from Late Iron Age/Romano-British contexts.

Stone

Natasha Hutcheson

Part of a greensand quern stone (weighing 1,200gr) was found in Late Iron Age/Romano-British pit 222. This appears to represent approximately 20% of the upper stone of a rotary quern. The nearest outcrops of greensand from which the stone may have come are c. 12km to the south or 30km to the north.

Charred plant remains

Alan J. Clapham

Introduction

Three samples, from pits 101 (sample 5001) (undated but thought to be of Early Iron Age date) and 124 (sample 5003) (Early Iron Age), and ditch 178 (section 151, context 153, sample 5009) (containing both Early Iron Age and Late Iron Age/Romano-British pottery) were examined. The samples were processed using the standard Wessex Archaeology flotation method and fractionated through 4mm and 2mm meshes. All three samples were analysed in their entirety (Table 5) and the plant remains identified using a stereo-microscope with magnification from x8 to x56. All critical taxa were compared with modern reference material kindly provided by the Pitt-Rivers Laboratory, University of Cambridge and all nomenclature follows Stace (1987).

Preservation of the plant remains was in general poor, preventing in some cases identification of species. Sample (5001) at first appeared to contain thousands of fragments of indeterminate cereal grain (approximately 50% of the sample) but on closer examination these were found to be fragments of vitrified charcoal and charcoal which had the vesicular appearance of cereal fragments. This suggests that at least part of the charcoal present in the sample had been subjected to very high temperatures.

Results

Three of the taxa from pit 101 can be said to be indicative of woodland or hedge bank environments. These are lesser celandine (*Ranunculus ficaria*), hazel (*Corylus avellana*) and three-nerved sandwort (*Moehringia trinerva*), whilst fairy flax (*Linum catharticum*) is indicative of dry calcareous or sandy soils. As the majority of the remains belong to three-veined sandwort it is tempting to suggest that this assemblage is representative of a woodland environment. The charcoal consisted entirely of oak, and Gale proposes below that the character of the growth rings suggest the possibility of coppicing which sits well with the charred plant remains.

Pit 124 contained few taxa. Although the hazel nutshell may represent the gathering of a wild food, as all the associated charcoal is of hazel it suggests that the nutshells may still have been on the branch, though Gale (below) suggests that this is unlikely to be the case. The dock fruit (*Rumex* sp.) may be of local origin and can be representative of a variety of environment types.

The sample from section 151 of ditch 178 was the richest sample of the three. Crops included spelt wheat (*Triticum spelta*) and barley (*Hordeum* sp.). Some of the other species can be classified as agricultural weeds, although some species can be found in woodlands, such as hazel, wood club-rush (*Scirpus sylvaticus*) and elderberry (*Sambucus nigra*). The most common non-cereal taxa was hawthorn (*Crataegus monogyna*) represented by berries both mature and immature, half stones and stone fragments,

Context	102	125	153
Feature	101	124	151
Sample	5001	5003	5009
Volume (ml)	300	70	160
Species			
<i>Triticum spelta</i> glume base			1
<i>Triticum spelta</i> glume fragment			1
<i>Triticum</i> sp. Grain		3	3
<i>Triticum</i> sp. glume base			2
<i>Hordeum</i> sp. Grain			2+2f
<i>Hordeum</i> sp. Rachis fragment			2
Cerealina indet.		11f	146f
<i>Ranunculus</i> a/r/b			1
<i>Ranunculus ficaria</i> tuber	2+1f		
<i>Corylus avellana</i> Nutshell	2f	12f	Lf
Chenopodiaceae inlet.			3
<i>Moehringia trinerva</i>	42		
<i>Persicaria maculosa</i>			6
<i>Polygonum aviculare</i>			2+1f
<i>Rumex acetosella</i>			5
<i>Rumex</i> sp.		1	
Polygonaceae indet.			6
<i>Potentilla</i> sp.			1
<i>Crataegus monogyna</i> berries			5
<i>C. monogyna</i> immature berries			7
<i>C. monogyna</i> stones (halves)			25
<i>C. monogyna</i> stone fragments			111f
<i>C. monogyna</i> stalks			17+3f
<i>C. monogyna</i> seed fragments			2
Rosaceae prickles			26
<i>Vicia/Lathyrus</i> sp.			5f
<i>Trifolium/Medicago</i> spp.			21
<i>Linum catharticum</i> capsules	3+2f		
<i>Lithospermum arvense</i>			1
<i>Plantago lanceolata</i>			2
<i>Sambucus nigra</i>			3+7f
<i>Tripleurospermum inodorum</i>			1
<i>Luzula</i> spp.		8	8

Table 5, part 1, Charred plant remains (F = fragment)

Context	102	125	153
Feature	101	124	151
Sample	5001	5003	5009
Volume (ml)	300	70	160
<i>Eleocharis</i> sp.		1	1
<i>Isolepis setacea</i>		1	1
<i>Scirpus sylvaticus</i>		2	2
<i>Carex muricata</i> agg.			2
<i>Carex nigra</i>			2
<i>Carex</i> sp. Biconvex			22
<i>Cyperaceae</i> indet.			1+3f
<i>Festuca</i> sp.			1
<i>Poa</i> sp.		2	2
<i>Bromus/Avena</i> sp.			1
<i>Danthonia decumbens</i>			1
Large Poaceae indet.			3
1 <i>Parenechyma</i> indet.	1f	1f	
<i>Cenococcum geophilum</i> sclerotia	20		27

Table 5, part 2, Charred plant remains (F = fragment)

berry stalks and seed fragments. Prickles that could be from either bramble (*Rubus fruticosus* agg.) or rose (*Rosa* spp.) were also present. Other taxa such as the sedges (*Carex* spp.) and the spike rush (*Eleocharis* sp.) are more indicative of damper conditions.

The charcoal consisted predominately of oak and hazel, but maple, ash and members of the Pomoideae were present though the hawthorn berries suggests that the charcoal is of hawthorn.

Discussion

With the exception of that from ditch 178, the samples were not particularly rich in plant remains and in general economic species were poorly represented. Pit 101 contained charcoal that was highly vitrified or fragments that were vesicular in appearance. This could be due to either exposure to high temperatures as Gale suggests below, or if the wood present in the samples for charred plant remains (which is less than 2mm) was of roundwood, vitrification could have occurred at lower temperatures (Hather *pers. comm.*).

As the majority of the charcoal consisted of heartwood, this suggests that high temperatures were involved. Although the presence of fairy flax suggests a more open environment, most of the seeds seem to represent a woodland habitat, especially the presence of three-nerved sandwort, which is usually indicative of damp woodland.

Pit 124 contained few plant remains and was dominated by fragments of hazel nutshells, which may

again suggest a woodland habitat. The fragments of cereal grains could represent farming but this cannot be ascertained from the small numbers.

In ditch 178 the most common identifiable finds were hawthorn berries. These were considered small in size; approximately 5mm in length and 3mm in breadth. This may indicate that the fruits were immature when they were charred or that shrinkage occurred when exposed to fire. If shrinkage did occur it could have been in the range of 40% (Gale below) in which case mature fruits would be represented, but if shrinkage did not occur, or not to as great an extent, then immature fruits would be present giving an approximate time of year that they were exposed to fire. According to Stace (1997), the size of these fruits is outside the normal range of fruit size, although, he has indicated that some fruits could be as small as 6 mm in length. Seeds of hawthorne, sloe (*Prunus spinosa*), field maple (*Acer campestre*) and purging buckthorn (*Rhamnus cathartica*) were found. Greig has identified hawthorn fruits of similar size in a waterlogged ditch at Alcester, Warwickshire dated to the Iron Age (Greig 1993).

In sample 5009 seeds of the last three species were not found, although the charcoal of field maple and possibly of sloe were present (Gale below). From the dimensions given above it may be suggested that the time of the charring at Dunston Park may have been in late May or early June.

As the charcoal from the ditch is of oak, hazel, maple and Pomoideae (perhaps hawthorn) and the majority of it is roundwood, it is possible that the charred materials are from a hedge. Other species that support this interpretation include seeds of woody species such as elder, the Rosaceae prickles, and the hazel nutshell fragments. The presence of indicators of damper ground can be explained by water in the ditch and the hedge providing extra shelter, which allowed these species to thrive. The presence of the economic species and associated weeds suggests that these are representative of plants growing at the edge of the field close to the hedge.

Conclusion

The samples yielded very little in the way of plant remains and were mainly dominated by charcoal, complementing that reported on by Gale (below). The charcoal within sample 5001 appeared to have been exposed to high temperatures that may have been associated with ironworking as this sample also contained hammer scale. The plant remains in ditch 178 suggest that there may be the remains of a hedge, and the survival of a large number of seeds both of economic and wild species indicate that high temperatures were not involved. The presence of wheat, barley and indeterminate cereal remains along with associated segetal weeds suggests that the hedge may have bordered an arable field. The evidence for hedges, grassland and arable land from Cooper's Farm is more substantial and diverse than that from the contemporary settlement at Dunston Park, c. 1km to the south-east (Clapham 1995).

Charcoal

Rowena Gale

Charcoal was examined from the same samples as those for the charred plant remains. As ironsmithing had taken place in the vicinity, as indicated by slag and hammer scale, the charcoal could represent fuel used in ironworking, albeit redeposited.

Materials and methods

The samples were processed by flotation and the charcoal separated from the charred plant remains using 2mm and 4mm wire meshes. The samples from pits 101 and 124 were sub-sampled by 50%. The material from the sample from burnt mound 404 is reported on with the radiocarbon determination.

The charcoal was prepared for examination using standard methods. The fragments from each sample were fractured to expose fresh transverse surfaces and sorted into groups based on the anatomical features observed using a x20 hand lens. Representative fragments from each group were selected for further examination under high magnification. Freshly fractured surfaces were prepared in the transverse, tangential and radial planes. The fragments were supported in sand and examined using a Labophot incident-light microscope at magnifications of up to x400. The anatomical structure was matched to reference material.

Where appropriate the maturity (i.e. sapwood/heartwood) of the wood was assessed and the number of growth rings recorded. It should be noted that the measurements of stem diameters are from charred material; when living, these stems may have been up to 40% wider.

Results

The contexts and taxa identified are summarised in Table 6. The anatomical structure of the charcoal was consistent with the taxa (or groups of taxa) given in the list below, although the anatomical similarity of some species and/or genera makes it difficult to distinguish between them with any certainty, e.g. members of the Pomoideae. Classification is according to *Flora Europaea* (Tutin *et al.* 1964-80).

Aceraceae. *Acer* sp., maple

Betulaceae. *Betula* sp., birch

Corylaceae. *Corylus* sp., hazel

Fagaceae. *Quercus* sp., oak

Oleaceae. *Fraxinus* sp., ash

Rosaceae.

Pomoideae: *Crataegus* sp., hawthorn; *Malus* sp., apple; *Pyrus* sp., pear; *Sorbus* sp., rowan, service tree and whitebeam. These genera are anatomically similar.

Environmental evidence

The site lies on sands and gravels on the upland edge of the Kennet Valley within the catchment area of the Thames, although at some distance from the river. Although the charcoal samples were relatively large, a fairly narrow range of taxa was identified. In the pit samples this almost certainly reflected the preference

Feature	Context	Sample	<i>Acer</i>	<i>Betula</i>	<i>Corylus</i>	<i>Fraxinus</i>	Pomoideae	<i>Quercus</i>
Pit 101	102	5001	-	-	-	-	-	6s, 97h
Pit 124	125	5003	-		118	-	-	-
Ditch 151	153	5009	3	-	32r	1	2	54s, 1h

Key: r: roundwood (<20 mm); s: sapwood; h: heartwood. The number of fragments identified is indicated.

Table 6: Charcoal

for oak (*Quercus*) and hazel (*Corylus*) as fuel sought and selected for particular usage (see below). The complete range of taxa identified from these features included oak, hazel, maple (*Acer*) and hawthorn type (Pomoideae). These taxa are characteristic of well drained soils and were probably common in this environment. Wide inner growth rings observed in the oak and hazel roundwood (pit 101 and ditch 178) suggest that these may have grown as coppice (Morgan 1982).

Use of woodland resources

Although it can be fairly confidently assumed that the charcoal deposited in the pits represented fuel debris, the type of hearth, i.e. domestic and/or industrial, from which it originated is unknown, although it is clear that smithing was carried out at the site.

Metalsmithing requires the use of charcoal to obtain sufficiently high temperatures. The denser woods, particularly when heartwood is present, are the most energy efficient and, for this, oak has been the most commonly used wood in southern Britain (Edlin 1949; Howkins 1994). The diameters of the roundwood can vary with the process, e.g. for smithing, narrower roundwood might be preferred (J. Cowgill *pers. comm.*).

Appertaining to this, the mono-specific deposits of oak and hazel charcoal in the pits may be of significance, particularly since the oak included a high proportion of heartwood. In addition, the inclusion of large lumps of heat-distorted charcoal tends to strengthen this possible association with the iron industry. Fuel debris from domestic hearths usually includes firewood collected from a wider variety of taxa.

The hazel nutshells in pit 124 are also of interest. They may have arrived independently of the charcoal. But if their origin and point of charring was synonymous with that of the hazel charcoal, i.e. as a result of burning hazel branches with attached nuts, this would preclude the origin of the fuel wood as charcoal fuel (and hence smithing fuel): charcoal production involves the use of billets of wood cut from roundwood/ cordwood. Alternatively, the dense wood of the nutshells may have been considered a potentially useful fuel and have been included with the charcoal at some point during the smithing process.

RADIOCARBON DETERMINATION

A single determination 2910±80 BP 1380-900 cal BC 95% (RCD-3331) ($\delta^{13}\text{C}_{\text{‰}}$ -28.2) was obtained from the mixed charcoal within the matrix of burnt flint deposit 414 in Trench 4 (sample 5002). The sample contained a large quantity of very fragmented charcoal identified by Rowena Gale as being from oak sapwood and heartwood, and short-lived species; birch, hazel (*Corylus*), and member(s) of the Pomoideae (hawthorn etc.), that should provide a secure date.

The result has been calibrated using the maximum intercept method (Stuiver and Reimer 1986) with the data sets from Stuiver and Pearson (1986) and Pearson and Stuiver (1986). The calibrated date range is quoted with the two end points rounded outwards to 10 years (Mook 1986).

The Middle to Late Bronze Age date is consistent with those from other burnt mounds (Buckley 1990).

DISCUSSION

Bronze Age

The Bronze Age burnt mound at Dunston Plantation lies close to the springline, a source that was later used to supply the water gardens of Dunston House and the later fishpond. The siting of the mound close to water is typical of the few burnt mounds that have been examined by excavation in Berkshire such as Anslow's Cottages, Burghfield (Butterworth and Lobb 1992: 90, figure 29). A low density scatter of burnt flint was recorded from the test pits excavated in the field to the south of Dunston House in the 1998 evaluation, and a small pit, perhaps of Early Bronze Age date, was also found in Trench 68 (Figure 2). The few sherds of Deverel-Rimbury type found in the current work further suggest Bronze Age activity in the immediate area, and this forms part of a widespread distribution in the Kennet valley (Lobb and Rose 1996: 63).

Early Iron Age

The pottery and metalworking debris in Area 1 suggest occupation in the near vicinity. Although it was often difficult to distinguish archaeological features, smaller features such as the posthole (107), the gully (126) and the hearth (133) were readily identified, which suggests that the rarity of features is genuine. All the ditches were first dug in the Early Iron Age and appear to converge at the angle of ditch 114, although stratigraphic relationships were difficult to determine.

Ditch 109, which is securely dated to the Early Iron Age, cut ditch 114 which itself may have been recut. Ditch 178 was reworked or recut in the Late Iron Age/Romano-British period and the pottery from ditch 114 shows that it too was open in this period.

Ditch 114 is the most substantial of the ditches and it is possible that this was an enclosure or compound associated with a settlement. Ditch 109 might be an internal feature but is perhaps more likely to be associated with ditch 178, both being boundaries associated with a gateway or entrance through ditch 114.

Early Iron Age activity is less well represented elsewhere but though modest, the evidence from Trenches 1 and 2 helps complement the round-house c. 1km to the south-east at Dunston Park, and more particularly the evidence for early ironworking found in pit 661, 20m to the west of Area 1. Pottery of Late Bronze Age/Early Iron Age date was also found in a feature in 1988 evaluation Trench 136 to the south of Dunston Plantation.

A large enough area of the enclosure formed by ditch 114 was excavated to suggest that if it was part of a settlement, either the focus of that settlement lay elsewhere, or that it was short-lived. The principal interest in the excavations lies in what further evidence they can provide for early ironworking to support that found in pit 661. In particular, the sampling for microscopic remains of metalworking, charred plant remains and charcoal complement the manually retrieved evidence from pit 661.

Although the shallow pits or scoops 101 and 124 in Area 1 are in the same size range as the bases of the non-slag tapping furnaces found at the broadly contemporary ironworking site at Brooklands, Weybridge, Surrey (Hanworth and Tomalin 1977: 15-22, Table 3), neither of the pits showed evidence of having been heated, nor did they contain ironworking residues or fired clay. Pit 101 did, however, contain a quantity of charcoal from oak heartwood that had been heated to very high temperatures, and also hammer scale.

The majority of ironworking residues in Area 1 come from ditches 109 and 114, which are certainly or probably Early Iron Age in date. The wüstite-rich slag cake, the highly vitrified lining, the rare pieces of hammer scale and the slag spheres all indicate that iron smithing was carried out. The fired clay from hearth 133 appears to have been burnt, and may derive from the superstructure of a hearth. The piece of highly vitrified clay from ditch 114, section 145, probably derives from the lining of a smithing hearth.

The purpose of the 3m long gully 126 is not clear, but it does recall the two curvilinear stains noted at Brooklands, Weybridge. One of these (feature 130) was also 3m long, the other (feature 247) 1.5m long and both about 150mm wide. Both the stains were suggested to be have been created by the tapping of hot molten slag, even though the Brookland furnaces do not appear to have been slag tapping ones (Cleere 1972; 1977), and no tap slag was found at Dunston Park.

Although each individual category of evidence is slight, and much of it is likely to be residual, the

variety of it is consistent with smithing having been undertaken in the immediate vicinity, perhaps close to a settlement. It was suggested previously that such a settlement might lie on the westernmost spur of the ridge, and with which the enclosure represented by ditch 114 might be associated. If the north-south ditch 178 was contemporary with the enclosure, the burning of the hedge that presumably stood next to it might have been caused by one of the fires or hearths made by the smiths. The charred plant remains from ditch 178 include spelt wheat and barley, as well as weeds of arable suggesting that cultivation took place nearby, as do the colluvial deposits next to pit 661 (Fitzpatrick 1995: 89).

The evidence from Trench 2 is more fragmentary; intercutting pits and some ditches, and again there is evidence for both Early Iron Age and Romano-British activity. There are some hints that in both periods a settlement lies nearby; the spindle whorl from pit 219 may, on the basis of its fabric, be Early Iron Age, while the rotary quern is most likely to be Romano-British. Ironworking may have been carried out in both periods, which would add to the impression of extensive, but not necessarily intensive, ironworking at Dunston Park in the Early Iron Age. The apparent accessibility of ironstone concretions, presumably from the local greensand formations, the ready availability of water and presumably also wood for fuel are likely to have been the determining factors in this.

Romano-British

The small amount of evidence from Trench 2 and the pottery found in features in Area 1 that were certainly or probably first excavated in the Early Iron Age, both suggest a Late Iron Age/Romano-British settlement nearby. Very little evidence for this period has been recorded during the whole programme of works at Dunston Park (Fitzpatrick *et al.* 1995: 77), but several certain or probable Romano-British settlements were identified in the Lower Kennet Valley survey (Lobb and Rose 1996: 86-92, fig. 17) and a roadside settlement, perhaps a 'small town', is known c. 1 km to the south-west at Thatcham Newtown (Harris 1937; Lobb and Rose 1996; Mortimer 1999).

DUNSTON HOUSE AND PARK

Historical evidence

The name

The name Dunston ultimately derives from the Old English *stan* or stone. In 1547 two spellings were used to describe a field north of Thatcham; *Dunstanefield* and *Dunstonefield*, both presumably meaning a field on a stony slope or hill (Gelling 1973: 190). By 1603 the name had changed to Dunstone Field and by 1671 to Dunston Field (Tubb 1991: 83). Dunston House and Dunston Park were both built and named in 1722. The house was demolished in 1798 and by 1817 the field name Dunston Field had reappeared. With the 'e' having been dropped from Dunstone, the name was referred to as 'Donstan' on the Tithe Award 1841 (Gelling 1973: 190) and thereafter increasingly often as 'Dunstan', which appears in several new house or place names in the late 19th and early 20th centuries.

Dunston Park

In 1720, the Crown commissioners sold the manor of Thatcham to the Duke of Chandos, who sold it that

same year to Brigadier-General Richard Waring on his retirement from the army (Barfield 1901: 330-3). Brigadier-General Waring soon emparked an area to the north of the town of Thatcham and, in 1722, built a residence known as Dunston House for himself, his wife Alice, and their children, only two of whom, Frances and William survived (Jamison 1923: 313). The house was described by John Rocque as being a 'very magnificent mansion', one of the most magnificent in the county, with stone at the corners and around the windows. Dunston Park is one of several parks such as Inkpen House and Sandford Priors near Greenham, that were created around Newbury in the early 18th century, and which formed part of a much wider fashion (Williamson 1995).

The house and park are shown by John Rocque in his *Topographical Map of the County of Berkshire*, published in 1761 (Figure 9), and which is likely to be accurate in its broad outline, though too much emphasis should not be placed on minor details (Laxton 1976). Rocque showed the house with formal

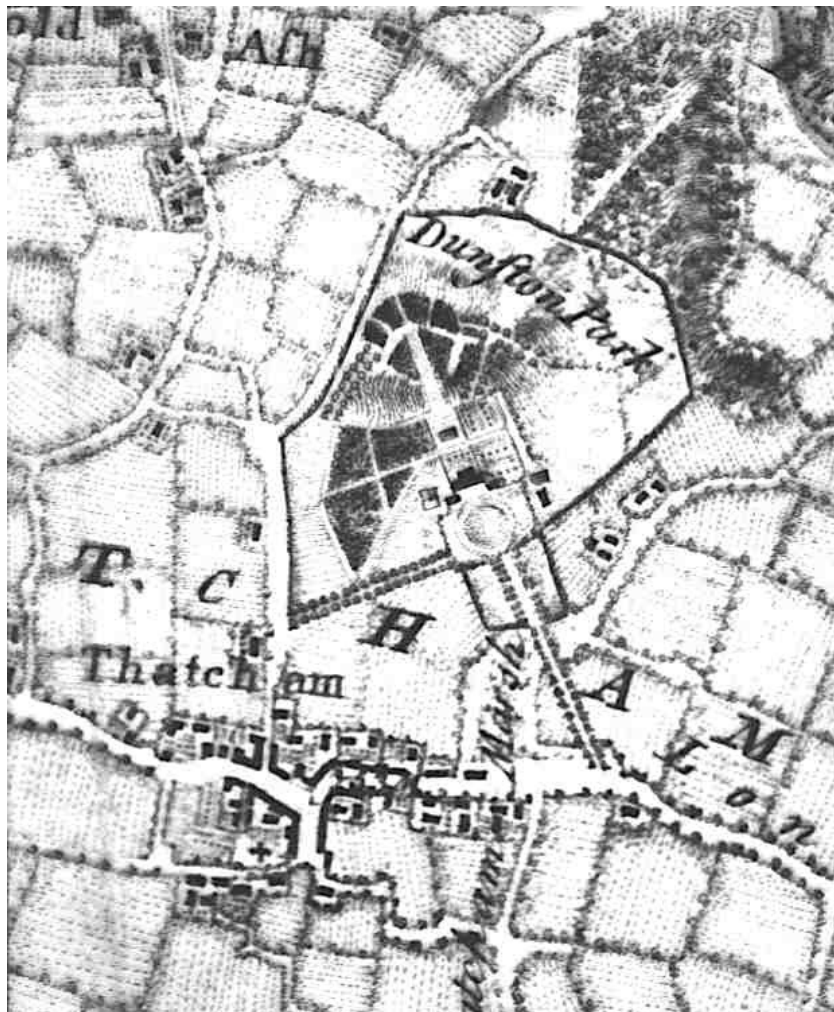


Figure 9. Dunston House and Park as shown on John Rocque's *A Topographical Map of Berkshire*, 1761. By courtesy of the Berkshire Record Office

compartmentalised gardens lying to the rear and with a cruciform arrangement of interlocking gardens to the west of the house complemented by what appears to be an open area to the east of it. Two principal avenues or driveways are shown leading through the newly created landscape park, one from the south, the other from the west, before converging at a turning circle in front of the house. As with other contemporary parks, Dunston may have been bounded by pleached lime (the park was stocked with deer), and the avenues were probably of lime. The earthwork survey suggests that water was an important element of the pleasure gardens (Brown, below) while leading up the hill to the north was a fan-shaped feature, probably a series of drives or promenades through a plantation of small trees or shrubs, from the top of which two smaller avenues led down slope and to the east and west. The prime published source of information about Dunston House is Barfield's 1901 *Thatcham, Berkshire and its Manors*, which relates that at least some of trees in the park were planted according to the lines of one of the

battles in which Brigadier-General Waring had fought, reflecting the involvement of the owner in the design of the park. In 1798 the park was estimated as being 130 acres, with several plots of adjacent land amounting to about a further 40 acres.

The house is also shown schematically on John Willis's 1768 *Map of the Country 10 miles round Newbury* (Figure 10), and in more detail in a painting to which Barfield ascribed a date of c. 1798, but which for reasons adduced below, may be slightly earlier. The painting also includes a somewhat limited perspective of the park in which figures promenade and a shepherdess attends her flock. What may be a conifer stands in isolation (Figure 11). The painting, which was published by Barfield (1901: pl. II), was then in the possession of the family of a Mrs Charles Wheeler of Thatcham, and the painting had been with the family for upwards of a century. One of Mrs Wheeler's ancestors was a servant in the establishment of Sir John Croft, the last owner of Dunston House. It has not been possible to trace the current whereabouts of the painting.

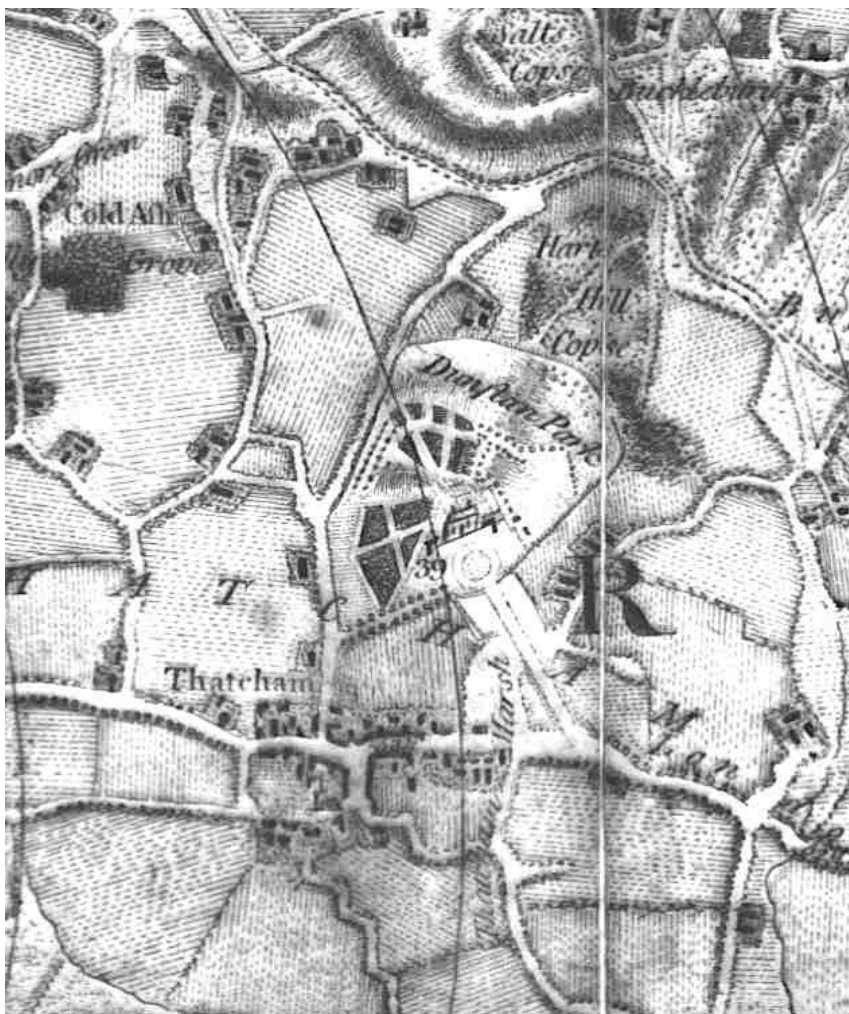


Figure 10. Dunston House and Park as shown on John Willis's *Map of the Country 10 miles round Newbury* 1768.
By courtesy of the Berkshire Record Office

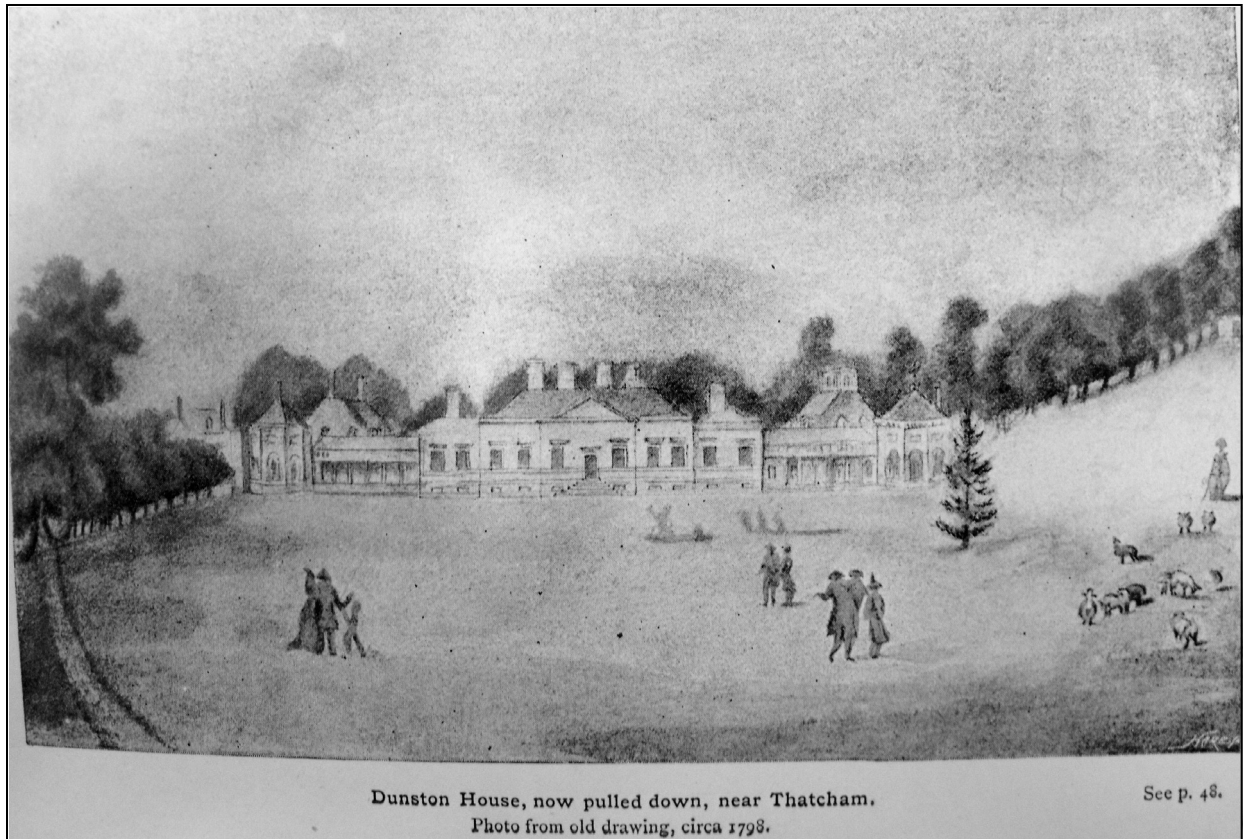


Figure 11. *Dunston House, c. 1798. Anonymous painting from Barfield's 1901 Thatcham, Berkshire and its Manors. By courtesy of Berkshire Record Office.*

Dunston House

Brigadier-General Waring died in 1737, leaving the manor of Thatcham to his son William Ball Waring. The General was buried alongside his wife Alice, who had died in 1730, in Thatcham church. When William Waring died in 1746 the estate passed to his sister Frances who was married to Sir Archer Croft. Thereafter the estate remained in the Croft family until 1798 when, following the death of Sir John Croft without an heir, it was auctioned (Jamison 1923: 313; Barfield 1901: 330-3). A brief description of all the property offered for sale was given by Barfield as Appendix LXXXVIII but the full details of the copy estimate of Sir John's estate and the auction catalogue relating to Dunston House, both of which are held in the Berkshire Country Record Office (BRO D/EMt E2 and BRO D/EBX E6 respectively), are given below. The auction was held on the 9th and 10th of October 1798:

'Dunston House is a capital mansion with convenient offices, substantially built with brick and covered with lead. The house consists of an entrance, servants hall and saloon, dining and drawing rooms, library and many good chambers, with dressing rooms, laundry, brew office and stabling for twenty horses, coach houses with sleeping rooms. Chambers over

them, a cow hall at a distance, a good walled garden, bowling green, shrubbery lawn in front, park inclosed with a pale, at a good distance from the Turnpike road, 13 miles from Reading, 4 from Newbury and 53 from London.

The situation is exceedingly pleasant, in a good part of the County, well adapted for sporting.'

(Copy estimate of the late Sir John Crofts' Estate, 1798).

The auction catalogue is reproduced in Figure 12, details of the coppice lands are given on page 5 of the catalogue. Despite apparently being in a state of good repair Dunston House was not sold and was subsequently pulled down. Before then, however, many of the fixtures and fittings were removed. Much of the oak flooring was sold to be re-used in the house of Lord Carrington who was then building his house at Wycombe. A Mr Tull of Crookham bought some of the bricks and Dutch tiles, while a Mr Barfield also purchased glazed bricks for the Congregational Church then about to be built. There was also much good lead on the house. The land of the estate was sold on in separate lots (Barfield 1901: 333; Brown 1914: 11). Dunston Park was in existence as a country house, gardens and landscape park for just 76 years.

(4)

Brought forward £. s. d.
239 9 1

DUNSTON MANSION HOUSE,
IS AN UNIFORM STONE AND BRICK STRUCTURE,
The Roof entirely covered with Lead,
Very substantially erected in a modern Stile, and judiciously placed to a South Aspect;
CONTAINING ON THE
UPPER STORY—Six Servants Rooms. \

SECOND STORY—Nine good Bed Chambers and suitable Dressing Rooms.

PRINCIPAL STORY—*A Suite of elegant lofty Apartments, well proportioned,*
CONSISTING OF

A State Bed Chamber and Dressing Room,	
A Saloon - - - - -	32 by 29,
A Drawing Room - - -	36 25,
A Dining Parlour - - -	29 21,
A Library - - - - -	21 18,
A Breakfast Parlour -	26 22.

PRINCIPAL AND SECONDARY STAIR CASES.
The Secondary Stair Case is built of Stone with Iron Guard Railing.
A large Entrance Hall.
The Domestic Offices are very commodious, well adapted to their respective Purposes, and consist of
A Housekeeper's Room,
Butler's and Footman's Pantries,
Servants Hall,
A spacious and lofty Kitchen, with Scullery, Larder, Pantry, and Cook's Room,
A Gardener's Room,
Excellent Wine, Ale, and Beer Cellars.
The Detached Offices are Brick built, of uniform Elevation, and have the Appearance of Wings to the Mansion.
ON THE WEST SIDE IS
A complete Laundry, Wash House, Bake House, Brew House, Dairy, Peat House, and good Lodging Rooms.
ON THE EAST SIDE,
Coach Houses for Six Carriages, Stabling for Twenty-three Horses, Granary, Lofts, and Lodging Rooms for Men Servants.
A Coach Yard.
A capital Dove House.
The extensive Plantations, Pleasure Grounds, Vistas, and Woods, tastefully disposed.
Lawn, Terrace,
AND
Two capital Fish Ponds, abundantly stored,
And walled Kitchen Garden.
The Park Lawn, Dog Kennel Meadow, Lucern, and Long Walk, containing One Hundred and Fifty-eight Acres Three Roods and Three Perches;
In Hand, estimated yearly Value — — — — 175 0 0

New Plan.	A. R. P.
Scite of Mansion House, Offices, Court Yards,	
Pleasure Grounds, Fish Ponds, Shrubbery	
Walks, Gardens, and Orchard	17 2 24
Long Walk	1 3 12
Lucern Meadow	6 0 24
Lawn	19 0 25
Dog Kennel Meadow	1 1 36
The Park	130 0 26
Acres	176 1 27

Carried forward £. 414 9 1

Figure 12. The 1798 auction catalogue for Dunston House.

By courtesy of Berkshire Record Office (BRO D/EBX E6).

Rocque's map published in 1761 and the 18th century painting are in broad agreement about the layout of the house although much of the ground floor is not visible in the painting, being obscured by the rolling parkland in the foreground. The fan-shaped arrangement of avenues leading up the hill is clearly visible and it is possible that buildings, perhaps temples, are shown at the head of them. The curving pathway in the painting is probably the turning circle shown by Rocque. He also showed two buildings slightly in advance of the wings of the house and these are presumably the detached offices. Rocque shows structures to the west of and behind the house. That shown to the west may be the walled kitchen garden. Two buildings that Rocque showed standing to the east of the house are not within the vista depicted in the painting but they may be represented by the brick-built features observed in the watching brief (below) (Figure 2).

After 1798

Following the sale of the estate and the demolition of the house, it appears that a plantation was established on the westerly formal gardens, whilst those to the north became part of an arable field. The plantation is shown on the Ordnance Survey Map 1st edition 25" series (Sheet XXXV.15) of 1880, which also shows the two drives and the remnants of the turning circle (Figure 2). By 1900 the drives still survived but there were only vestigial traces of the turning circle. Despite this, the south-western drive leading from Park Lane and which was known as The Avenue, remained more or less complete in the 1920s. Although many trees were felled in the 1930s, remnants of the drive survived until the current development. The other drive, which in recent memory is recalled to have been lined with elms (Stocker 1989: 10), was from the south-east starting close to the site of the modern cemetery on the Reading Road (the modern A4). The drives, the turning circle, and another indeterminate feature to the east of it, are visible on aerial photographs (e.g. Tubb 1991: pl. on p. 140, and NMR 4555/01 dated 6 September 1989). The turning circle could also be seen on the ground as a parch mark. Lombardy Poplars, a species that was introduced into England in 1758 are also recalled as having stood in the park land while what were thought to be the remains of rectangular flower beds were visible on the west side of the drive which leads towards the Reading Road (Stocker 1989: 10).

By 1913 the existing triangular earthwork in the Plantation was recorded on the 6" series as being an 'old fish pond'. This is probably one of the original garden ponds but within living memory a steam engine was used to pump water to it, so it may have been considerably altered. However, other original elements of the gardens, some of which are comparatively slight, do survive. Elsewhere, few elements of the park seem to have survived into the late 20th century. Only the northern boundary of the plantation and perhaps the field boundary running

north-east from the Plantation from near to the fish pond seem likely to have originated as one of the park land drives or avenues.

Archaeological evidence

The 1988-9 evaluation

Terraces which are probably to be associated with mount and garden areas were recorded in the 1988-9 evaluation, suggesting that the remains of the house lay immediately to the south of Dunston Park Plantation, with the rest extending into it. Large quantities of brick rubble were found in 'robber' or demolition trenches in evaluation test pits 75 and 76 (Figure 2), suggesting that the dismantling of the house was thorough. A worked and faced architectural stone, perhaps one of the corner or decorative ones mentioned by Rocque, was found in Trench 70. Five features were found in Trench 69 to the south of the plantation and some of these contained 18th century pottery. All of the features were sealed by a layer of clay which was also found in Trenches 15 and 73. The features and layer of clay are likely to be related to the house or gardens. The serpentine-like bank and ditch to the south, probably a channel associated with the gardens was also sectioned by a mechanically excavated trench (Trench 150). The bank was shown to be 1m high and made from clay, and the ditch 0.75m deep. At the time no further archaeological work was recommended on the likely site of the house.

The 1996 watching brief

A.D. Crockett and A.P. Fitzpatrick

During house building in December 1996 the site of Dunston House was confirmed (Figure 2) and, thanks to the generosity of the developers, the opportunity was taken to record much of the western section of the central part of the house and a fragment of the western wing in a limited watching brief. The eastern section of the central part of the house may already have been destroyed as builders had observed substantial brick footings there but, sadly, the presence of new foundations and stockpiles in that area and the general conditions of the site made it impossible to undertake an exhaustive search.

As recorded (Figure 13), the exposed part of the ground plan measured c. 27m south-west to north-east and 12m south-east to north-west, and comprised a combination of extant brick footings and demolition trenches that were loosely filled with brick rubble. No contemporary floor surfaces or related features survived, with the exception of a single brick-lined fireplace on the rear (north-western) wall of the western section.

Where sufficient brick courses survived, internal and external facing could be identified as English Bond (or possibly its variant, English Cross Bond), comprising alternate courses of headers and stretchers. This is considered a particularly strong form of construction, eliminating vertical straight joints within the wall, although it is considerably more expensive in

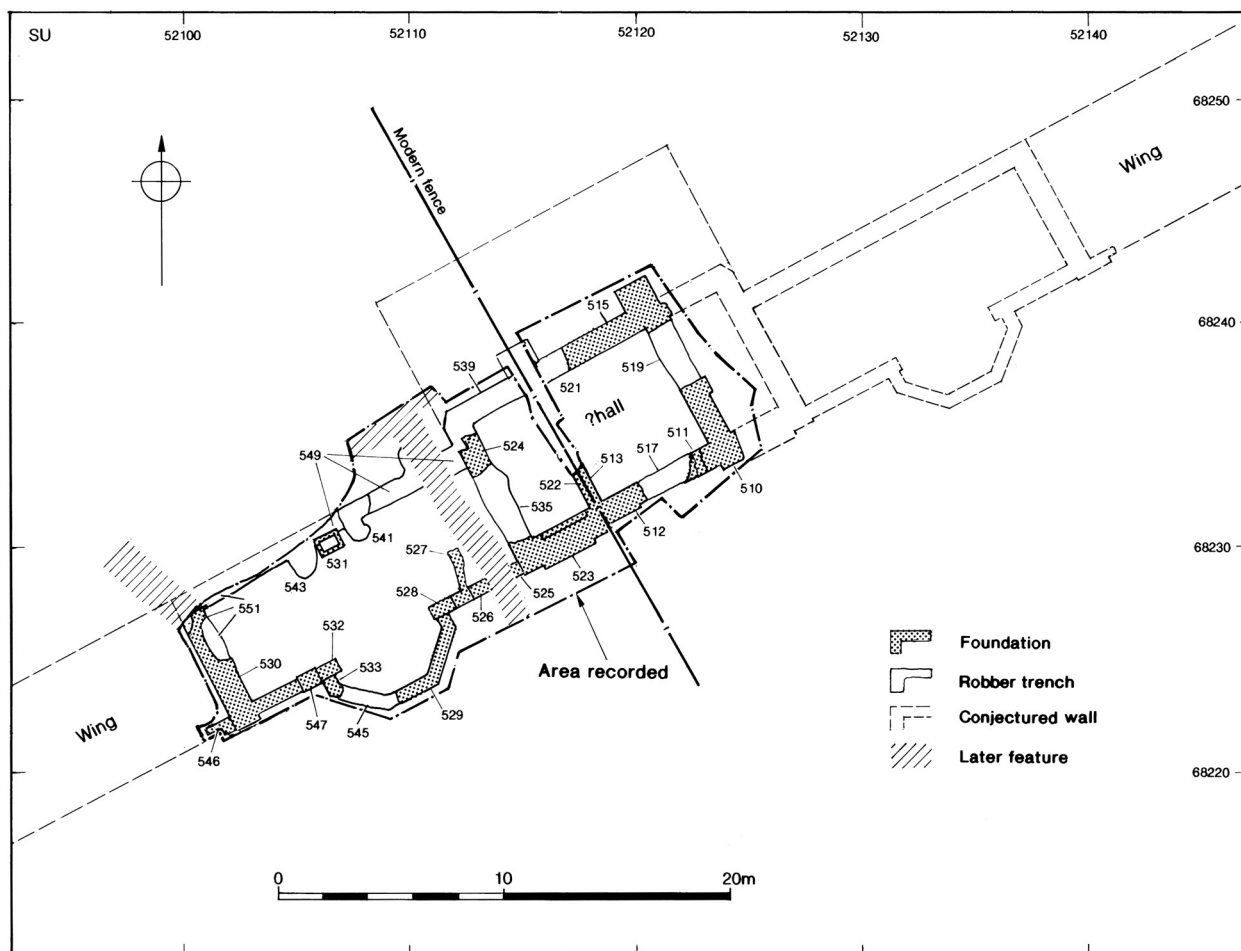


Figure 13. Part of the plan of Dunston House, as recorded in 1996-7

materials than other forms of bonding (Brunskill 1990: 87-8).

The central part of the house included a room that measured *c.* 8.3m by 5.7m internally, and it is most likely that this represented the entrance hall. The walls were usually 2½ or 4½ stretchers wide, therefore allowing for alternate headers and stretchers on either face of each course. The internal fabric of the wall largely comprised stretchers laid perpendicular to the line of the wall, although occasionally irregular brick batts were used to infill.

All external walls were at least 4½ stretchers wide, increasing to 5½ and then 6½ stretchers in a stepped effect towards the south-west corner on the south-east wall. The rear (i.e. north-western) wall was stepped back by an additional *c.* 1.5m and at the north-east corner of the main house a feature, perhaps a fireplace, was bonded with the northern face of wall 515. An internal wall (513/522) which was 0.57 m wide (2½ stretchers) sub-divided the western part of the room. Demolition and robbing (517) had removed any traces of a matching wall in the eastern part. Wall 510 to the east was 1.06m wide (4½ stretchers). No clear evidence for doorways was recorded, but is possible that what have been called robber trenches in the south-eastern wall (517), the south-western wall (535)

and the north-eastern wall (519) may indicate the positions of them. The slight widening of the south western wall 523 may indicate the position of a window in the main facade.

As surviving, the western part of the house measured *c.* 14.5m south-west to north-east and *c.* 5m south-east to north-west, butting up against the south-west wall of what has been interpreted as the central part of the house. Butted against the central section of the south-east (front) wall was a window bay that measured *c.* 6.5m by 2.5m.

The south-east front wall and the bay were both 2½ stretchers wide, whilst the south-west end wall was 4½ stretchers wide. Insufficient evidence was recorded to determine the width of the north-west, or rear, wall, but the width of the demolition/robber trench (531/539) would suggest that it was the same width as the front of the house.

One internal division was noted, an irregular, angled section of wall (527) that appeared to originate as a section of blocking within an earlier opening (between wall sections 526 and 528) in the front wall to the north-east of the bay. It is possible that this earlier opening was a window that was replaced by the window bay. Wall 527 projected approximately halfway across the wing. It appears to be paired by a

similar section of blocking (wall 547) within an earlier opening (between wall sections 532 and 530) to the materials than other forms of bonding (Brunskill 1990: 87-8). south-west of the bay. The two openings were both c. 0.8 - 0.9m wide.

Other features included a brick-lined and floored feature (531), located centrally against the internal face of rear wall 549, measuring 1.1m south-west to north-east by 0.86m south-east to north-west. There was no evidence for burning to suggest that this was a hearth but this is the most likely explanation. The two irregular demolition/robbing features (541 and 543) filled with a dark humic material containing brick rubble and sited either side of the feature may represent chimney buttresses. These two features cut through wall 549.

At the south-western corner of the wing was an additional length of walling (wall 546), which extended parallel to the front of the house. Modern building activity, including terracing for an access road, precluded any further investigation of this wall, or any features beyond. Wall 546 was three stretchers wide and so appears to differ from the other walls, though as only a short length was observed too much emphasis should not be placed on this observation.

An irregular south-east to north-west aligned ditch (537) filled with a dark humic material containing brick rubble and root material cut through walls 525 and 526 to the south-east and Trench 549 to the north-west. This ditch, in turn, was cut to the north-west by the southern edge of a very large relatively modern south-west to north-east aligned ditch which followed the southern edge of the Plantation immediately to the north. This feature was extant as an earthwork immediately prior to the current phase of modern building activity. It seems likely that it was a continuation of the meandering embanked ditch to the west and if it continued to the east, it seems likely that it will have destroyed at least parts of the main house.

Discussion

It was not possible to recover the complete plan of Dunston House in the watching brief. However, the location of those foundations that were recorded suggests that the site of the house and wings was preserved as a small enclosure on the south of Dunston Plantation until the 1990s. The position of the western detached office also seems likely to be marked by a step in the line of the southern boundary of the plantation (Figure 2). Although the house appears to have been thoroughly demolished in 1798, those wall footings that were not removed in the 18th century are substantial enough for them to survive in places within the modern development.

The depth of the central part of the house to the north is not known with certainty. Only feature 515, which may be a fireplace, appears to continue into the Plantation. However, Rocque shows the central part of the house as being deeper than the wings (Figure 9) and on this basis the house may be at least as deep

again with parts of it surviving within the Plantation. The window bay that was recorded does not appear to be shown on the 18th century painting but if the bays were later additions, as is possible, the painting may be earlier than the date of c. 1798 ascribed to it by Barfield (1911).

Approximately 100m south of the plantation two arcs of bricks, which appeared to belong to a circle, was observed in the easement for the new distributor road (Figure 2). Although they might relate to one of the apparently octagonal buildings shown on the 18th century painting, perhaps the dovecote, which the auction catalogue states to have stood to the east of the house (Figure 11), the diameter (c. 40m) would be very large. It is perhaps more likely that the features are associated with those buildings shown to the south-east of the house by Rocque (Figure 9).

Earthwork survey

Graham Brown

An earthwork survey was carried out by the (then) Royal Commission on the Historic Monuments of England (RCHME) in January 1997. The survey was carried out by Graham Brown and Nikki Smith using a TC2000 Total Station to establish a control framework and the modern geographical detail such as field boundaries. The earthworks were surveyed using taped offsets from the control framework.

The survey

The garden earthworks are contained within a small plantation (3 hectares) to the north of the site of Dunston House (Figures 2 and 14). In the north the boundary is marked by a drainage ditch 6m wide and up to 1.5m deep, which was sectioned by Trench 4. This ditch continues east where it was truncated by the new distributor road, but skirts around the northern and eastern sides of the plantation beyond the road. On the western side a recently erected wire fence forms the boundary of the earthworks. Beyond this fence-line is a pasture field with further slight earthworks. This pasture field was part of the plantation in the late 19th century. The southern boundary is less well defined as the recent building work has encroached upon the boundary here.

The most dominant feature on the site is a terrace-way approximately 7m wide which extends along the northern side of the plantation for approximately 90m. At the north-western corner the terrace is cut by a water channel which provided water from the ditch on the northern perimeter to the triangular ponded area. The terrace continues south for approximately 105m before turning east. At this point it is truncated before continuing for approximately 120m. Although this terrace is up to 3m high, it was constructed by digging into the natural slope of the hill. A slight depression along its course may have been a conduit between the triangular pond area and the lower pond in the south. A small channel is also evident on this terrace which provided water from the upper to the lower garden.

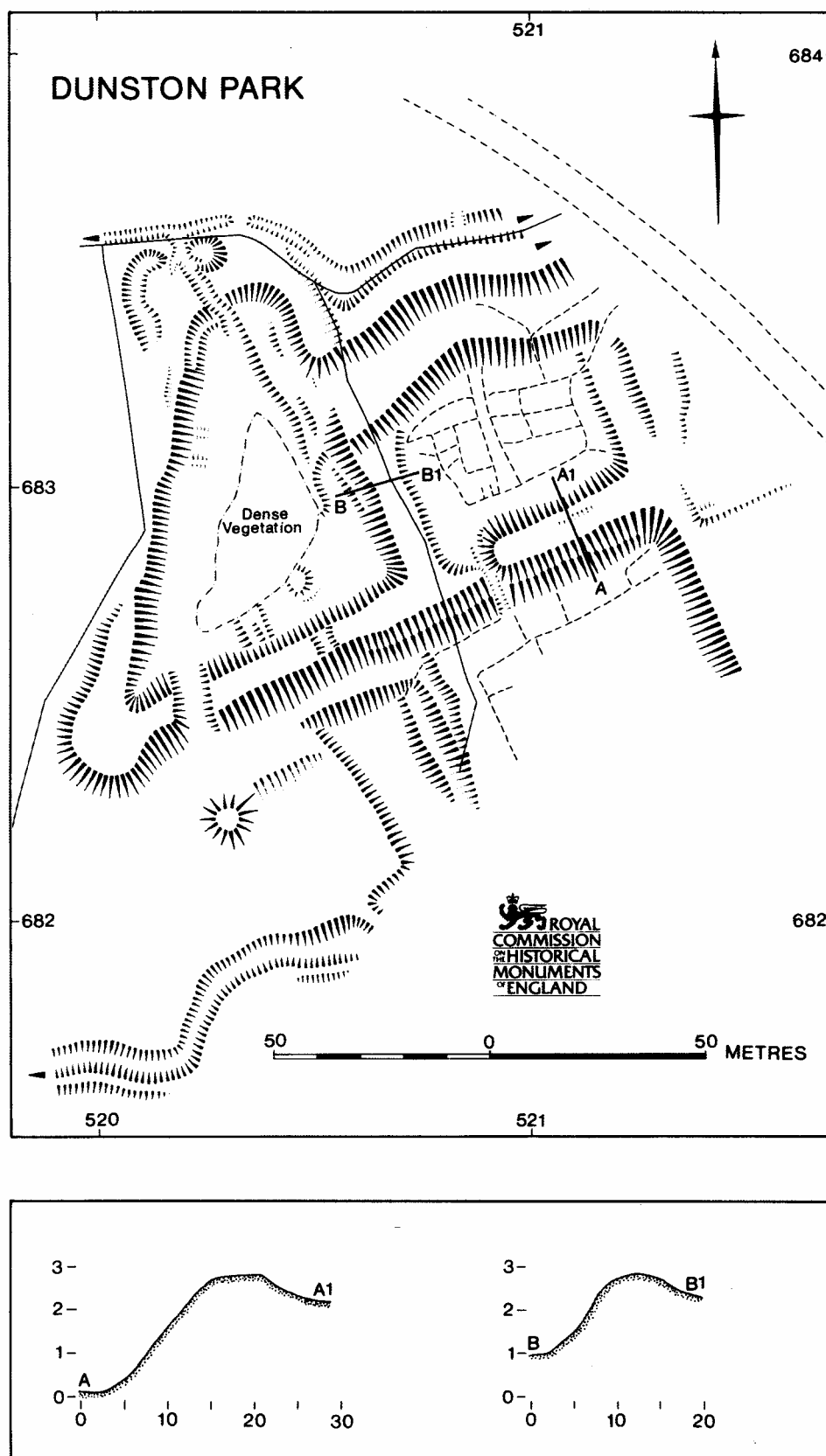


Figure 14. Earthwork survey of the surviving elements of the formal garden of Dunston House. Royal Commission on the Historic Monuments of England (RCHME) (now English Heritage) in January 1997. Crown copyright reserved.

Two further terraces are located in the northern garden area. The first lies approximately 1m below the northern terrace and is 60m long and up to 12m wide. The second extends in a north-south direction from the northern to the southern terrace. On the eastern side of this is a sub-rectangular garden with a series of water channels 0.5m wide and up to 0.2m deep. Two of these channels effectively form a causeway 3m wide in the centre of the garden. Water was provided to this area by two channels leading from the upper terrace. This garden is the highest one on the site. On the western side the large triangular ponded area lies approximately 2.5m below the easterly garden; much of this area is covered by dense vegetation and therefore a detailed survey and interpretation was not possible here. However, on the southern side a cutting through the terrace provides access between the northern and southern elements of the site. This cutting is not depicted on a map of 1913 (OS Third Edition map), possibly due to the scale of the map. Slight earthworks to the west and the bank on the south would suggest that this area was sub-divided in some way.

On the south-eastern side of the terrace-way is a sub-rectangular garden measuring at least 60m x 35m which has been truncated on the southern side by the housing development. This garden lies approximately 2m below the upper garden. Cutting through the terrace is a channel that drained water from the upper to the lower garden. Within the rectangular garden are a series of channels of similar dimensions to those on the upper garden.

Water from the two easterly gardens drained into a sub-rectangular pond to the west of the lower garden. This probably drained into the meandering embanked ditch to the south. What may have been the same ditch was observed during a watching brief to the east and it seems likely that it would have cut through the site of Dunston House. It is possible therefore that this feature was either reworked at a later date, or is not contemporary with the gardens.

To the west of the pond, on higher ground, is a relatively flat area with a sub-circular mound, possibly a garden feature such as a mount, approximately 12m in diameter and 2.5m high.

Interpretation

The park at Dunston was established in the first half of the 18th century at a time when landscape parks were being created encapsulating the natural landscape. The park covered an area of 130 acres and extended across rising ground to the north of Thatcham with the house lying to the south. An indication of the importance of the landowner can also be seen by the formal avenues shown by Rocque (Figure 9), particularly the one to the south-east, which cut across the landscape to the Reading road (the present A4). To the north, on higher ground a number of trees were planted and for the most part the park was enclosed in a tree-belt.

The formal gardens are depicted on Rocque's map as four compartments that are bisected by terraces. The earthwork evidence would suggest that water was a major feature in these gardens, which presumably include the two fish ponds mentioned in the sale catalogue. The two easterly gardens comprised a number of compartments separated from one another by water channels: the water presumably being provided from spring-lines on the hill to the north. The westerly triangular area was possibly a pond, or series of ponds, with water being provided from the north. Excess water and drainage was possibly through a conduit in the terrace. The terraces around the gardens would have provided an opportunity to promenade with a possible mount in the south.

Conclusion

The historic, cartographic and archaeological evidence is in broad agreement as to the house and the park. With the exception of the earthworks of the garden and a few field boundaries which appear to follow elements of the park, few immediately obvious traces of the park appear to survive but, as other recent surveys have shown (Pattison 1998), further work in those areas of the park that lie outwith the modern Dunston Park housing development may well yield further evidence. Some portions of the house may originally have lain within the Plantation but how much of them survived the thorough demolition at the end of the 18th century remains uncertain. While most of the site of Dunston House now lies beneath modern development, the size of those foundations which were recorded is such as to suggest that large portions of them may still survive, and may at some future date be available for the further study the house and park deserve.

ARCHIVE

The complete project archive together with a microfilm copy of the paper elements of it has been deposited with Newbury District Museum, The Wharf, Newbury, Berkshire RG14 5AS under the project codes W1614 (Cooper's Farm 1996 trenching), W2098 (distributor road evaluation) and W2512 (distributor road excavations, and watching briefs). Further microfilm copies are held by the National Archaeological Record (together with the master copy), and Wessex Archaeology.

ACKNOWLEDGMENTS

The programme of archaeological works was supported throughout by Trencherwood Homes Limited, now part of David Wilson Homes, and thanks are due to Tim Blythe, Design Manager, and Anthony George, Land Manager, for their continual help. Thanks are also due to Peter Fasham, Principal Archaeologist Babbie Public Services Division, acting on behalf of Berkshire County Council, and to Paul Cannon of Newbury District Museum for their assistance. Peter Crew kindly commented on the draft text relating to Cooper's Farm and Paul Cannon and Tony Higgot of Newbury District Museum and Phil

Andrews commented on the text relating to Dunston Park and House.

The excavations at Cooper's Farm and Dunston Plantation were supervised by Phil Harding who was assisted by Angela Batt, Peter Higgins, Natasha Hutcheson, Emma Loader, and Jo McDermott. The geophysical survey was undertaken by Stratscan. Andrew Crockett and Richard Conolly undertook the recording of Dunston House. Adrian Chadwick, A.P. Fitzpatrick, Kevin Ritchie, and Jamie Wright undertook the watching brief. Sarah F. Wyles processed the environmental samples and the work was co-ordinated by Michael J. Allen. The illustrations are by S.E. James. A.P. Fitzpatrick managed the project for Wessex Archaeology.

BIBLIOGRAPHY

Maps and other historic documents

John Rocque 1761, *A Topographical Map of the County of Berkshire*. (Sheet 4).

John Willis 1768, *Map of the Country 10 miles round Newbury*.

Ordnance Survey 1880, 1st edition 25" series (Sheet XXXV.15).

Ordnance Survey 1913, 3rd edition 6" series (Sheet XXXV.SE)

Dunston Park Auction List 1798 (BRO D/EBX E6).

Mount Papers 1798, *Copy Estimate of the Late Sir John Croft's Estate at Thatcham ec. ec. in the County of Berks* (BRO D/EMt E2).

Other publications

Barfield, S., (ed. Parker, J.), 1901, *Thatcham, Berkshire and its Manors*, 2 vols. Oxford and London : Parker.

Barrett, J.C. 1980. The pottery of the Later Bronze Age in lowland Britain, *Proc. Prehist. Soc.* 46: 297-319.

Bradley, R., Lobb, S., Richards, J. and Robinson, M. 1980. Two Late Bronze Age settlements on the Kennet gravels: excavations at Aldermaston Wharf and Knight's Farm, Burghfield, Berkshire, *Proc. Prehist. Soc.* 46: 217-95.

Brown, T.H. 1914. *Notes on the History of Thatcham, Thatcham*.

Brunskill, R.W. 1990. *Brick Building in Britain*, London: Gollanz.

Buckley, V. 1990. *Burnt Offerings: international contributions to burnt mound archaeology*, Dublin: Wordwell.

Butterworth, C.A. and Lobb, S.J. 1992. *Excavations in the Burghfield Area, Berkshire. Developments in the Bronze Age and Saxon Landscapes*, Salisbury: Wessex Archaeol. Rep. 1: 5-72.

Champion, T., Shennan, S. and Cuming, P. 1995. *Planning for the Past, Volume 3: decision making*

and field methods in archaeological evaluation, Southampton and London: University of Southampton and English Heritage.

Charles, D. 1979. *Aspects of the Chronology and Distribution of Silchester Ware Roman Pottery*, Reading, Univ. Reading, Unpubl. B.A. diss.

Clapham, A.J. 1995. Plant remains, in Fitzpatrick *et al.* 1995: 84-5.

Cleere, H.F. 1972. The classification of early iron-smelting furnaces, *Antiq. J.* 52: 8-23.

Cleere, H.F. 1977. Comments on the iron-working activities, in Hanworth, R. and Tomalin, D.J. 1977. *Brooklands, Weybridge: the excavation of an Iron Age and medieval site 1964-5 and 1970-1*, Surrey Archaeol. Soc. Res. Vol. 4: 19-22.

Edlin, H. L., 1949. *Woodland crafts in Britain*, London: Batsford.

Fitzpatrick, A.P. 1995. Appendix: an Early Iron Age (7th century BC) pit with ironworking debris from Cooper's Farm, Dunston Park, in Fitzpatrick *et al.* 1995: 89-92.

Fitzpatrick, A.P., Barnes, I. and Cleal, R.M.J. 1995. An Early Iron Age settlement at Dunston Park, Thatcham, in Barnes, I., Boismier, W.A., Cleal, R.M.J., Fitzpatrick, A.P. and Roberts, M.R. *Early Settlement in Berkshire. Mesolithic-Roman Occupation in the Thames and Kennet valleys*, Salisbury: Wessex Archaeol. Rep. 6: 64-92.

Gelling, M. 1973. *The Place Names of Berkshire: part I*, Cambridge: Cambridge University Press/English Place-Name Society Vol. 49.

Greig, J.R.A. 1993. A possible hedgerow flora of Iron Age date from Alcester, Warwickshire, *Circaea*, 11 (1), 1994: 7-16.

Hanworth, R. and Tomalin, D.J. 1977. *Brooklands, Weybridge: the excavation of an Iron Age and medieval site 1964-5 and 1970-1*, Surrey Archaeol. Soc. Res. Vol. 4.

Howkins, C. 1994. *Trees, Herbs and Charcoal Burners*, London: Howkins.

Harris, W.E. 1937. A Romano-British Settlement at Thatcham, Newtown, *Trans. Newbury District Field Club* 7(2), 1934-7: 219-55.

Hull, M.R. and Hawkes, C.F.C. 1987. *Corpus of Ancient Brooches in Britain: pre-Roman bow brooches*, Oxford: Brit. Archaeol. Rep. Brit. Ser 168.

Jamison, C. 1923, Reading Hundred, in Page, W. and Ditchfield, P.H., (eds), *The Victoria History of the County of Berkshire, Vol. 3*, London: 277-384.

Laidlaw, M. 1996. Pottery, 142-50, in Crockett, A., Iron Age to Saxon settlement at Wickhams Field, near Reading, Berkshire: excavations on the site of the M4 Granada Reading Motorway Service Area,

- in Andrews, P. and Crockett, A. *Three Excavations along the Thames and its Tributaries, 1994: Neolithic to Saxon settlement and burial in the Thames, Colne, and Kennet Valleys*, Salisbury: Wessex Archaeol. Rep. 10: 112-70.
- Laxton, P. 1976. The geodetic and topographical evaluation of English county maps, 1740-1840, *Cartographic J.* 12: 37-54.
- Lobb, S.J. and Morris, E.L. 1991-3, Investigation of Bronze Age and Iron Age features at Riseley Farm, Swallowfield, *Berkshire Archaeological Journal* 74, 1991-3: 37-68.
- Lobb S.J. and Rose, P.G. 1996. *Archaeological Survey of the Lower Kennet Valley, Berkshire*, Salisbury: Wessex Archaeol. Rep. 9.
- Manning, W.H., 1974. Excavations on Late Iron Age, Roman and Saxon sites at Ufton Nervet, Berkshire, 1961-3, *Berkshire Archaeol. J.* 67: 1-61
- Mephams, L. 1992. Pottery, in *Butterworth. and Lobb 1992*: 40-8.
- Mephams, L. 1997. Iron Age and Romano-British pottery, in Barnes, I., Butterworth, C.A., Hawkes, J.W. and Smith, L., *Excavations at Thames Valley Park, Reading 1986-1988*, Salisbury: Wessex Archaeol. Rep. 14: 48-66.
- Middleton, A.P. 1978. Technological investigation of the coatings on some 'haematite-coated' pottery from southern England, *Archaeometry* 29: 250-61.
- Mook, W.G. 1986. Business meeting: recommendations/resolutions adopted at the twelfth International Radiocarbon Conference, *Radiocarbon* 28: 799.
- Morgan, R.A. 1982. *Tree Ring studies in the Somerset Levels: the examination of modern hazel growth in Bradfield Woods, Suffolk and its implications for the prehistoric data*, London: Anc. Monuments Lab. Rep. 3830.
- Morris, E.L. 1995. Pottery, in Fitzpatrick 1995: 91-2.
- Morris, E.L. and Mephams, L.N. 1995. Pottery, in Fitzpatrick *et al.* 1995: 77-84.
- Mortimer, S. 1999. *Excavations at Thatcham Northern Distributor Road, Berkshire*, Oxford: Oxford Archaeol. Unit Occas. Pap. 3.
- Pattison, P. (ed.) 1998. *There by Design. Field Archaeology in Parks and Gardens*, Oxford: Brit. Archaeol. Rep. Brit. Ser. 268.
- PCRG 1997. *The Study of Later Prehistoric Pottery: general policies and guidelines for analysis and publication*, Salisbury: Prehist. Ceramic Res. Grp. Occas. Papers 1/2 (revised edition).
- Pearson, G.W. and Stuiver, M., 1986. High-precision calibration of the radiocarbon timescale, 500-2500 BC, *Radiocarbon* 28: 839-62.
- Rashbrook, C. 1983. *A Discussion of the Pottery found at Hamstead Marshall, near Newbury, Berkshire*, Reading: Reading, Univ. Unpubl. B.A. diss.
- Stace, C. 1997. *New Flora of the British Isles*, second edition, Cambridge: Cambridge University Press.
- Stocker, A.W.G. 1989. I remember when, Newbury: *The Advertiser* [Newbury], May 23, 1989: 10-11.
- Stuiver, M. and Pearson, G. W. 1986. High-Precision Calibration of the Radiocarbon Time-scale, AD 1950-6000 BC, *Radiocarbon* 28: 805-38.
- Stuiver, M. and Reimer, P.J. 1986. A computer program for radiocarbon age calculation, *Radiocarbon* 28: 1022-30.
- Tubb, R.B. 1991. *Thatcham Road Names*, Thatcham: Henwide Worthy
- Tutin, T.G., Heywood, V.H. *et al.* 1964-80. *Flora Europaea* 1-5, Cambridge: Cambridge University Press.
- Wessex Archaeology. 1989. *Dunston Park, Thatcham, Berkshire: archaeological evaluation 1988/89*, Salisbury: unpublished client report.
- Wessex Archaeology. 1996a. *Dunston Park Distributor Road, Thatcham, Berkshire: archaeological Desk-based Assessment and Field Evaluation*, Salisbury: unpublished client report no. 42098a.
- Wessex Archaeology. 1996b. *Cooper's Farm, Dunston Park, Thatcham, Berkshire: archaeological investigations*, Salisbury: unpublished client report no. 41614.1.
- Williamson, T. 1995. *Polite Landscapes: gardens and society in eighteenth century England*, Gloucester: Alan Sutton.

