

# The excavation of a Romano-British site at Moraunt Drive, Middleton-on-Sea, West Sussex, 1992

by Luke Barber

with contributions by

John Cooper

David Goode

Pat Hinton

Robin Holgate

Wendy Wood

*Rescue excavations by the Field Archaeology Unit, University College London, revealed part of a Romano-British farmstead with occupation spanning the 1st to 4th centuries. One probable rectangular post-hole building was recognized as well as numerous other post-holes, pits, ditches and stake-holes. Economic data from the Romano-British features suggest a mixed agricultural regime. Although no prehistoric features were located, the presence of a little unabraded pottery suggests an Iron Age site may lie in the vicinity.*

## INTRODUCTION

The site at Middleton is situated on the West Sussex coastal plain at NGR SU 97010061. It is located on slightly raised ground at approximately 5 m OD (Fig. 1). The topographical setting of the site is similar to that of the nearby Iron Age settlement at North Bersted (Bedwin & Pitts 1978). The underlying geology of the immediate area consists of a typically orange-brown Brickearth (Hodgson 1967), although in some of the original assessment trenches irregular grey areas with a high organic content were also noted (for example Trench B: Fig. 2).

The area around the excavations is predominantly occupied by residential housing. Houses fronting Moraunt Drive border the site to the west, while Marlow Close with its associated housing, lies to the south. The area to the north and east were undeveloped at the time of the excavations (Fig. 2).

The area in the vicinity of the site is fairly rich in archaeological remains. Middle Bronze Age pottery was found in the 1980s prior to residential development at SU 968005 and a Bronze Age bucket urn was located during the extension of Priestley Way at SU 96990047 (Wedmore 1982). When a number of houses were proposed for the area of the site, Mark Taylor, County Archaeologist for West Sussex, required an archaeological assessment to be undertaken prior to the commencement of this development. As a result, the Field Archaeology Unit, University College London, was commissioned by Beazer Homes (Southern) Ltd to undertake these and subsequent archaeological works before

construction started. The assessment took the form of six machine excavated trial trenches giving a 2% sample of the site. The specification for this work, and the subsequent larger excavations, was provided by Mark Taylor. Funding for all the archaeological work was provided by Beazer Homes (Southern) Ltd.

## THE ASSESSMENT EXCAVATIONS

The six trial trenches (Fig. 2 A–F) were dug at the end of October 1992 in order to ascertain the presence or absence, character, extent, condition and date of archaeological remains on the site. Unfortunately owing to adverse weather conditions, all the assessment trenches flooded with 50 mm of water before detailed sample excavation and recording could take place. It was, however, clear that archaeological remains were present.

### TRENCH A (Fig. 2 only)

This 14 x 1.5 m trench revealed two archaeological features cutting the Brickearth. The first was a roughly circular area of dark grey silt clay with a diameter of c. 410 mm (Context 2). This feature, which may have represented a post-hole or a natural variation in the Brickearth, was located 300 mm from the north-west end of the trench. The second feature consisted of an ill-defined, but steep-sided ditch (?) running obliquely across the trench in an east–west direction (Context 3). It was located between 9.2 and 10.8 m from the trench's north-west end. The fill, of medium to dark grey brown silt clay, yielded a single sherd of 16th- to 17th-

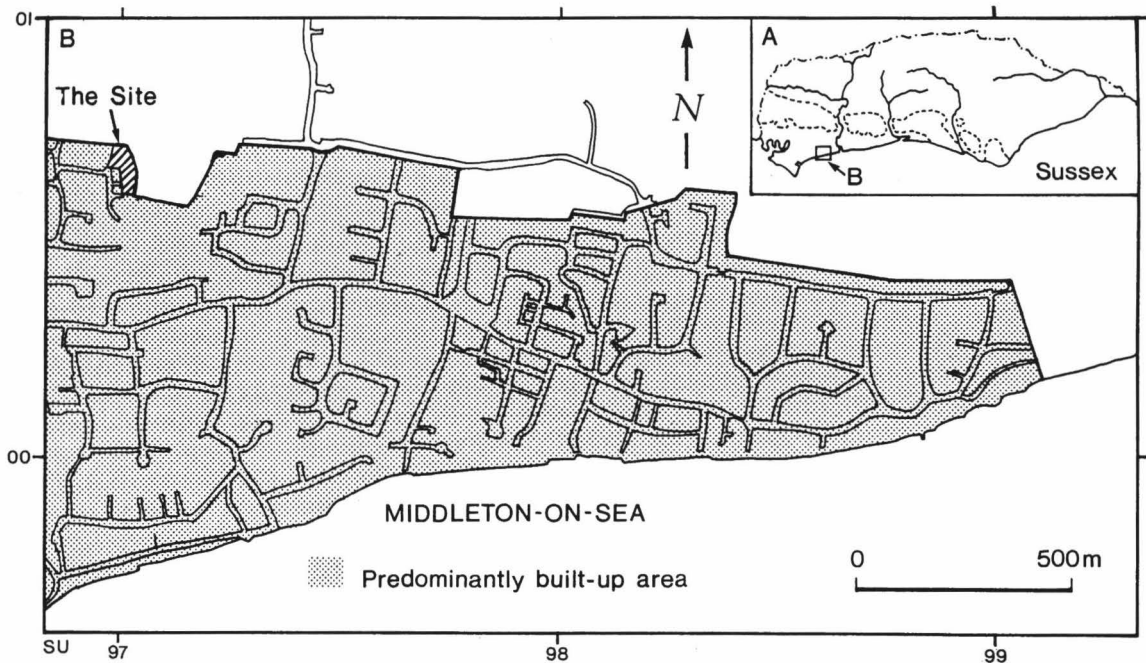


Fig. 1. Moraunt Drive, Middleton-on-Sea. Site location.

century pottery. Neither feature in Trench A could be fully investigated owing to flooding.

#### TRENCH B (Fig. 2 only)

This 16 x 1.5 m trench revealed a single feature cutting the Brickearth below 500–600 mm of overburden. This appeared to be a 530 mm wide ditch running at a right angle to the trench 1.9 m from its southern end (Context 3). The fill (Context 2), of light orange/brown silt clay, was only partly investigated owing to flooding and yielded no finds. It is possible that this ditch was of a similar date to that in Trench A.

#### TRENCHES C–E (Fig. 2 only)

These trenches revealed natural Brickearth below 400–600 cm of overburden. All were archaeologically sterile.

#### TRENCH F (Fig. 2)

Before its extension, Trench F was an east–west trench measuring 12 x 1.5 metres. The Brickearth was found to lie between 400–450 mm below the ground surface at this point. Cutting the Brickearth were a number of features, mainly consisting of small post-holes containing small quantities of Romano-British pottery. Owing to flooding, only an

initial rough plan could be made of the exposed features (Contexts 2–15) and few could be sampled by excavation before the trench was backfilled.

#### THE AREA EXCAVATION: METHODS

Following the findings in assessment Trench F, Beazer Homes (Southern) Ltd agreed to fund rescue excavations of the area likely to produce archaeological remains. This work was undertaken by the Field Archaeology Unit over a four-day period in early November 1992.

Trench F was re-excavated and an area around the original trench was opened by machine (*see* Fig. 2 for trench size). After machining, the surface of the Brickearth was cleaned by hand in order to locate the archaeological features. Once cleaned, the larger features were individually numbered and most were subsequently subjected to a 50% excavated sample in an attempt to ascertain their nature, retrieve dating evidence, and where appropriate, environmental samples (Contexts 118, 128, 131, 145 & 152 *see below*). All numbered features (mainly comprising cuts, fills and cuts and fills) were described on context record forms which form part of the site archive. A few of the minor features were also numbered in the field, particularly if they were

sampled by excavation (for example stake-holes 16–19: Fig. 3). Owing to the quantity of small features and the limited time available, most were not numbered or investigated. All excavated features had their section drawn at a scale of 1:10 (a selection of these appear on Figs 4 & 5). All features (including unexcavated examples) were planned to a scale of 1:20 (Fig. 3). The finds from the site along with the archive will be housed at Littlehampton Museum (Acc. No. A1881).

#### THE AREA EXCAVATION: RESULTS (Figs 3, 4 & 5)

The removal of the top-soil (Context 1) from the extended trench exposed a densely-packed area of well in excess of 200 features (Fig. 3). Most of these consisted of pits, post-holes, ditches and numerous stake-holes/root-holes dating to the Romano-British period. Unfortunately, the relative chronology of most of these features was almost impossible to ascertain as even where they inter-cut, their fills were usually identical. The finds from certain features helped little in securing phasing as most consisted of small abraded coarse pottery body-sherds.

Despite the confusing jumble of pits and post-holes, one probable structure, represented by a roughly rectangular setting of post-holes, was located (Fig. 3, Contexts 74–84, 88(?), 91, 92, 95, 97, 100, 125, 133, 148 & 159–62). Only some of these post-holes were excavated (for example Figs 4 & 5, Sections 5, 6, 15, 16, 28 & 32), but taken as a whole appear to represent a timber building measuring some 7.5 by 3 m. Many of the building's post-holes were inter-cutting and presumably represent the insertion of replacement timbers. For example, Context 88 cut 95, but was subsequently cut by 89 (Fig. 3). However, when others were sectioned (Fig. 4, Sections 6 & 15) the similarity of their stone-free medium brown grey silt-clay fills made phasing impossible.

An alternative eastern end to this building, (or potentially a later extension), was marked by a line of inter-cutting post-holes (Fig. 3, Contexts 141–4). If this was the case then the lack of a post-hole in the south-east corner is somewhat surprising. It is likely, however, that if a post-hole existed at this point it was not recognized as it would have been cut through the fill of 145 (see below) rather than through the Brickearth.

Post-holes 148 and 159–62 overlay a series of large inter-cutting pits (Fig. 3, Contexts 146, 149 & 150 and Fig. 5, Section 28). The south and south-

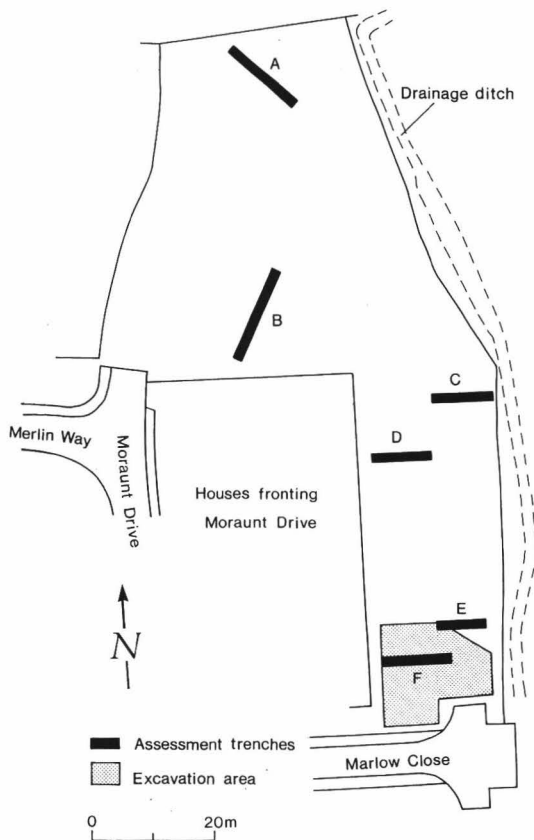


Fig. 2. Moraunt Drive, Middleton-on-Sea. Trench location plan.

east sides of these features were not traced with certainty and it is possible they were related in some way to another large feature to the south-east (Fig. 3 145/147). The fills of 150 (Contexts 151–5, Fig. 5, Section 28) were generally all of dark grey/brown silt-clays but varied from each other in lithic and charcoal inclusions. With the limited time available it was not possible to trace the southern extent of these pits or the full plan of the large feature to the south-east (145). A slot was, however, excavated through the latter which defined part of its northern edge (Figs 3 & 5, Section 42). The southern edge to this feature (145) lay outside the excavated area.

A small test pit, excavated from the base of the slot, revealed the bottom of 145 (Fig. 5, Section 42). The fill of dark grey silt-clay contained relatively high quantities of pottery and Bognor Rock fragments. It is possible this feature represented an infilled pond.

Although the exact relationship was unclear, the

MORAUNT DRIVE, Middleton-on-Sea

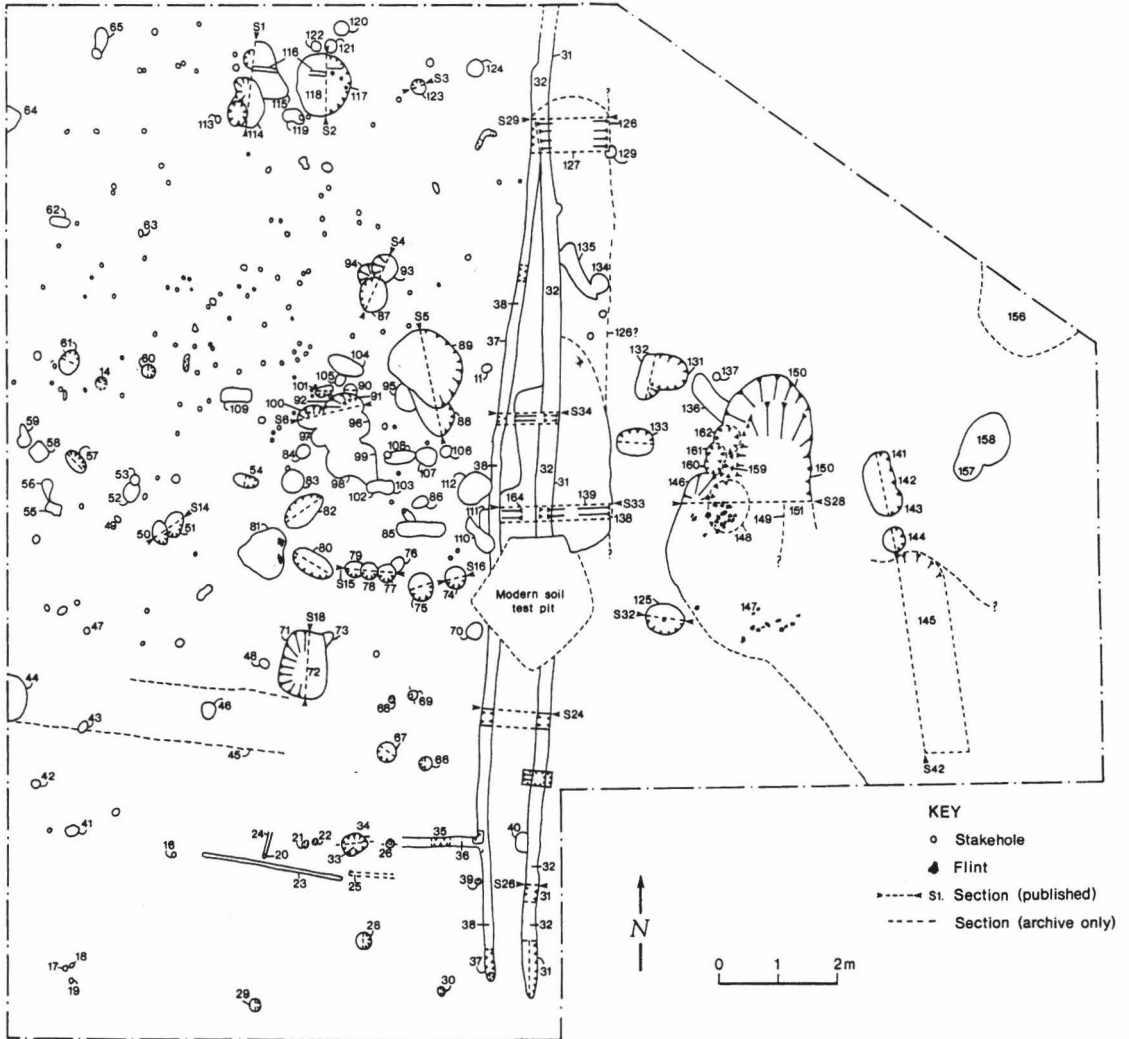


Fig. 3. Moraunt Drive, Middleton-on-Sea. Post-excavation plan of Trench F.

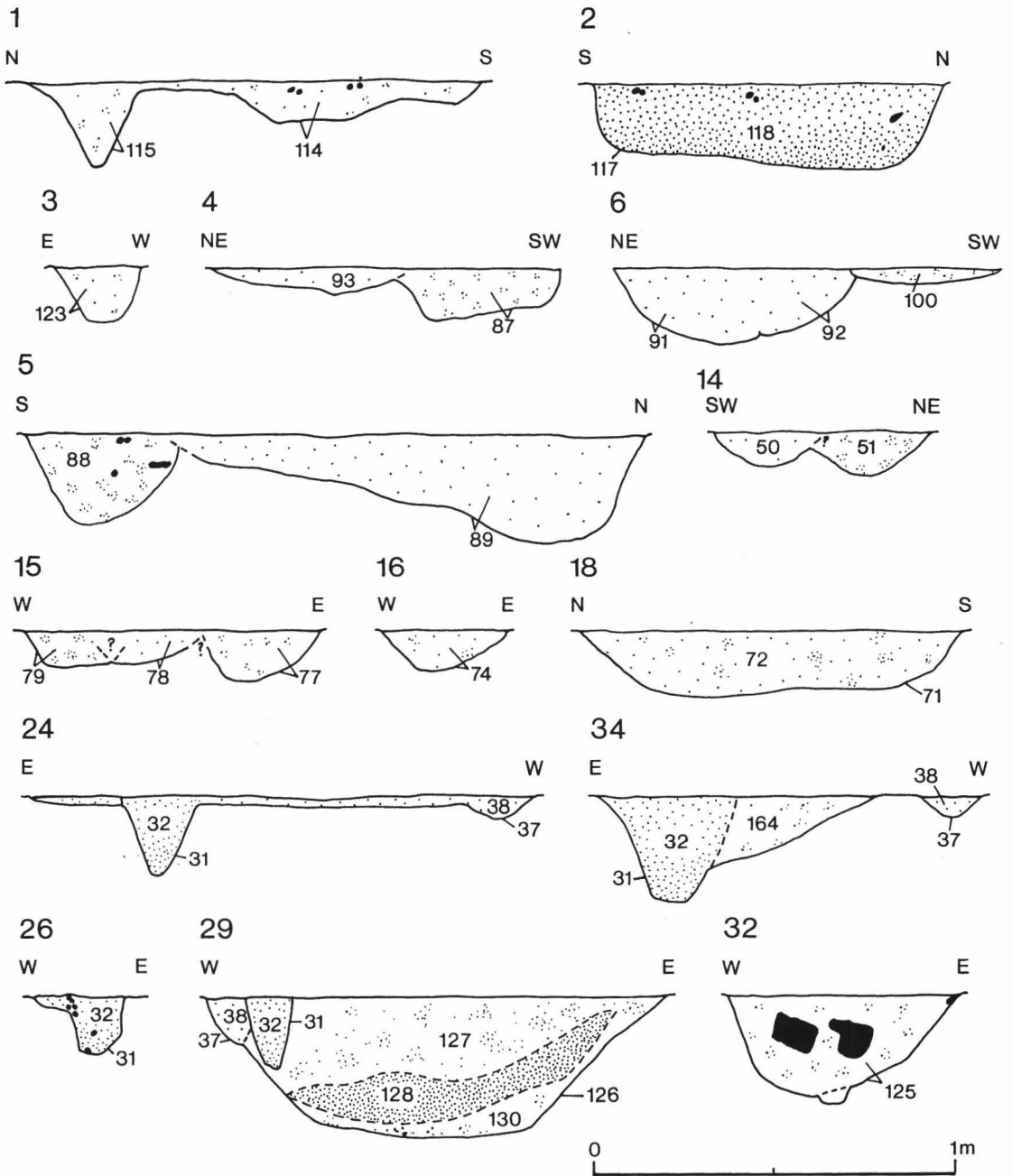


Fig. 4. Trench F: Sections.

lack of post-holes in the central section of the rectangular building suggested that a north-south ditch (Context 126) had subsequently been cut through the area, eradicating the earlier post-holes. The ditch contained three fills (127, 128 & 130, Fig.

4, Section 29). Although the central fill (128) was a distinctive dark grey-black charcoal rich silt-clay, the upper fill (127) consisted of redeposited Brickearth. This unfortunately prevented the ditch's entire course from being traced without full excavation.

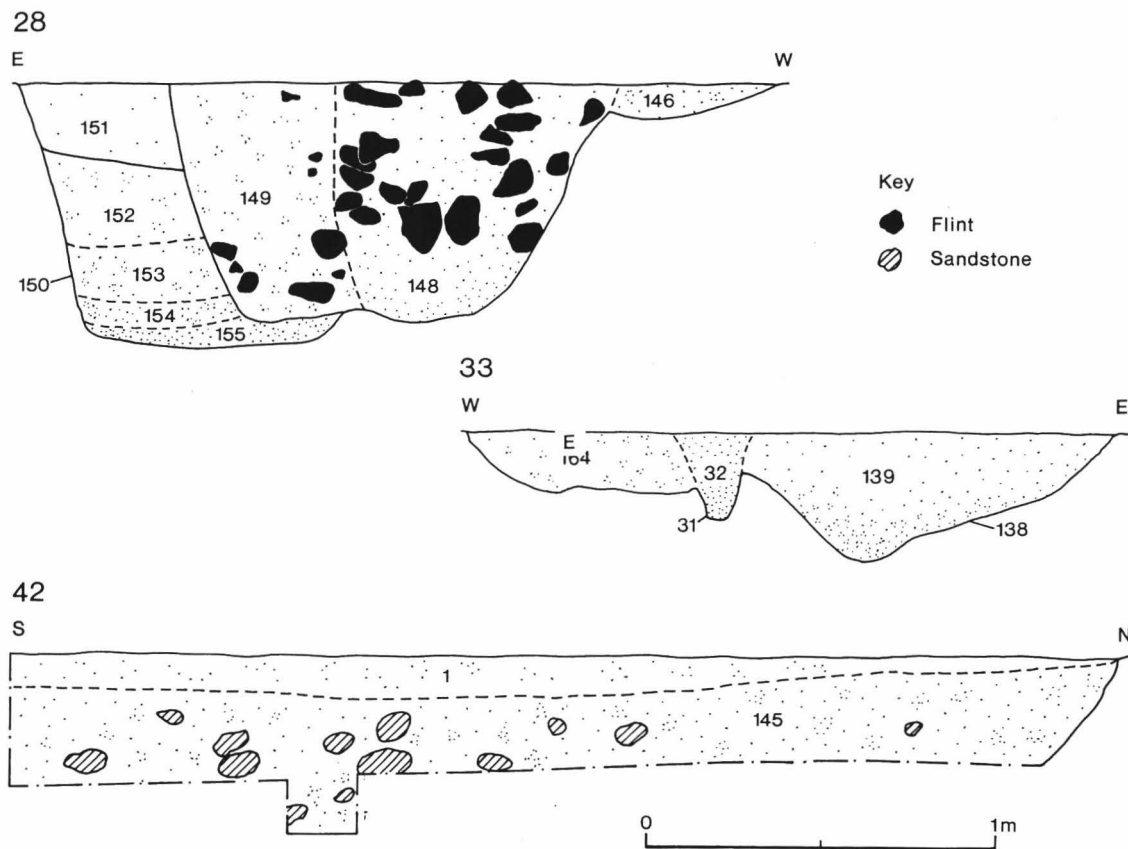


Fig. 5. Trench F: Sections.

However, it is likely that a feature sectioned to the south (Fig. 3, Context 138/139 and Fig. 5, Section 33) was part of the same ditch. The relationship of ditch 126/138 to a further cut (164, Figs 4 & 5, Sections 33 & 34) was not clear. To the south, the course of ditch 126/138 had been cut by a recent soil test pit. Beyond this point the ditch's course was not traced. It is possible this ditch represented a field boundary which was connected to an indistinct and unexcavated east-west ditch which lay to the west (Fig. 3, Context 45).

Cutting 126 was a narrow steep-sided slot (Fig. 3, Context 37, (fill 38)) which had subsequently been replaced by a similar feature (Fig. 3, Context 31, (fill 32) and Figs 4 & 5, Sections 24, 26, 29, 33 & 34). Both slots terminated before the southern trench edge although the earlier of the two (37), had an off-set slot (36) close to its southern terminal (Fig. 3). It is possible these features represented foundation trenches for fence lines which replaced

the earlier ditched boundary.

To the west a number of shallow beam slots/plank stains were located (Contexts 23, 24, 25, and to the north, Context 116, Fig. 3). Their exact function remains unclear.

A number of small pits/large post-holes were also located during the excavations. For example, Contexts 71 (fill 72), 117 (fill 118), 89, 114, 115, and 131. The low quantities of finds from these features suggests that rubbish disposal may not have been their primary function. Although most of these features were sectioned (Fig. 4, Sections 1, 2, 5 & 18), some remained unexcavated (for example Contexts 44 & 156).

The majority of the remaining features consisted of numerous small post-holes and stake-holes conforming to no obvious plan. (For example, Contexts 26, 28, 50, 51, 66, 87, 93, 94, 110, 114, 123, 124, 157 & 158 on Fig. 3 and Sections 3, 4 & 14 on Fig. 4). Stake-holes were found almost exclusively

to the west of ditch 126. Many of these were not numbered; they may have been the result of tree-root activity. However, the few that were excavated

(Fig. 3, Contexts 16–19 & 30) all appeared to be shallow (most were less than 80 mm deep), straight-sided, and of probable man-made origin.

## THE FINDS

**THE POTTERY** By Luke Barber (incorporating comments by Sue Hamilton, Malcolm Lyne and Valery Rigby)

### Introduction

The excavations produced a relatively small quantity of pottery: 323 sherds weighing 3520 g. With the exception of a few prehistoric and post-Roman sherds, the vast majority of the assemblage is of Romano-British date (97% of the assemblage by sherd count).

The aim of this report is twofold: firstly to provide a date range for the excavated features/occupation of the site, and secondly, to illustrate the range of fabrics and forms present.

Unfortunately, the majority of the sherds are small and undiagnostic, often having suffered badly in the acidic ground conditions. Despite the small size of the assemblage, however, there is a diverse range of fabric types although no large sealed groups are present. For this reason the assemblage has been taken as a whole in order to study the ceramic types in use on the site generally.

The sherds from each context were divided subjectively into fabric groups based on a visual examination of their inclusions, texture, hardness and colour. The sherds in each group were counted and weighed per context and the information recorded on pottery summary sheets (these form part of the Archive). The data was fully quantified for both sherd count and sherd weight. However, owing to the presence of large sherds of an internally thumbled storage vessel (Fabric 2), sherd weight percentages were found to be misleading. For this reason all percentages used in this report are based entirely on sherd count. Where possible, sources of production have been suggested for the fabric groups, but in most cases a number of production sites are likely to have produced wares in each group. Owing to the small quantity of post-Roman and prehistoric pottery these sherds were not given fabric group numbers and are treated separately. All sherds, unless otherwise stated, are from Trench F.

**THE PREHISTORIC POTTERY** (incorporating comments by Sue Hamilton)

Only 5 sherds (1.2% of the total assemblage) of prehistoric pottery were recovered during the excavations. All five sherds are small and three are abraded. All are residual, although their presence suggests prehistoric activity/occupation in the near vicinity.

Two body-sherds are in a fine to medium moderately tempered flint fabric with black cores and dull orange surfaces (Contexts 72 & 159). These sherds are attributed to the Late Bronze Age or Early Iron Age period. The remaining three sherds are all small rim sherds dating to the Later Mid-Iron Age or Late Iron Age. Two of these are in a black, fine to medium, abundantly flint tempered fabric (up to 40% tempering, with flint up to c. 1.5 mm). Both these sherds are from barrel-shaped saucepan type pots with simple rounded out-turned rims, and date to the later Middle Iron Age (Contexts 131 & 72). Both show some signs of exterior burnishing. The remaining sherd (Context 110) is from a Late Iron Age shouldered

bowl. It is handmade in a black fabric tempered with moderate quantities of medium to coarse quartz sand, with occasional iron ore and calcined flint inclusions to 1 mm.

### THE POST-ROMAN POTTERY

Four sherds of medieval pottery were located (1.2% of the total assemblage). All were small and abraded and may be seen as potentially intrusive. Two fabric types are present. The first (represented by three sherds) is a very coarse multi-gritted ware with abundant tempering of sub-angular and sub-rounded grits (quartz sand, haematite, flint) to c. 1 mm (some inclusions are up to 4 mm). The sherds are either dull orange or grey depending on firing conditions. A date range of the 11th to 13th centuries is possible, although with no diagnostic sherds it is difficult to be certain (Contexts 72, 75 & 127). The second fabric type is represented by a single oxidized fine sand-tempered ware jug body sherd with external dull green glaze (Context 1). This is likely to date to the 13th or 14th centuries.

A single sherd of internally green glazed earthenware dating to the 16th or 17th centuries was located in Trench A context 3.

**THE ROMANO-BRITISH POTTERY** (incorporating comments by Malcolm Lyne and Valery Rigby)

The Romano-British pottery from the site belongs predominantly to the 1st and 2nd centuries AD, although some material present suggests a possible continuance of occupation/activity into the 4th century. Unfortunately, the general lack of fine wares from the excavations greatly inhibits a more precise dating. Whether the absence of products from the New Forest and Oxford industries is indicative of the site's true date range, or is the result of the small excavated sample/type of site cannot be ascertained. The vast majority of sherds are local coarse wares, which, when coupled with the generally small sherd size, make precise dating virtually impossible as many of the forms are standard and continued in use for a long period.

Although a small sample, the fabrics are fairly diverse/numerous. However, the grey and black sandy wares predominate. Much of the material appears to have come from the Hardham area (M. Lyne pers. comm.) and this accounts for much of the material in Fabric groups 1, 4 and 5. Unfortunately, little has been published on this 'industry' and little is known at present about its forms and fabrics. Hard-fired sandy grey wares, probably from the Rowlands Castle kiln, are fairly numerous (Fabric groups 2 & 17), although very little material attributable to the Alice Holt/Farnham industry is present (Fabric 3). Sources for the other local material are either unknown or poorly represented, although products from Chichester and the Wiggonholt area are likely.

### The Fabric Groups

*Group 1: Fine to medium sandy grey wares (24.8% of assemblage)*

This is the single largest fabric group. The wares are tempered with fine and medium sand giving a rough surface. Most sherds contain occasional to sparse brown/black iron ore inclusions to 1 mm. A few sherds also contain some off-white clay pellets. Colours vary from very light grey to dark grey throughout. A

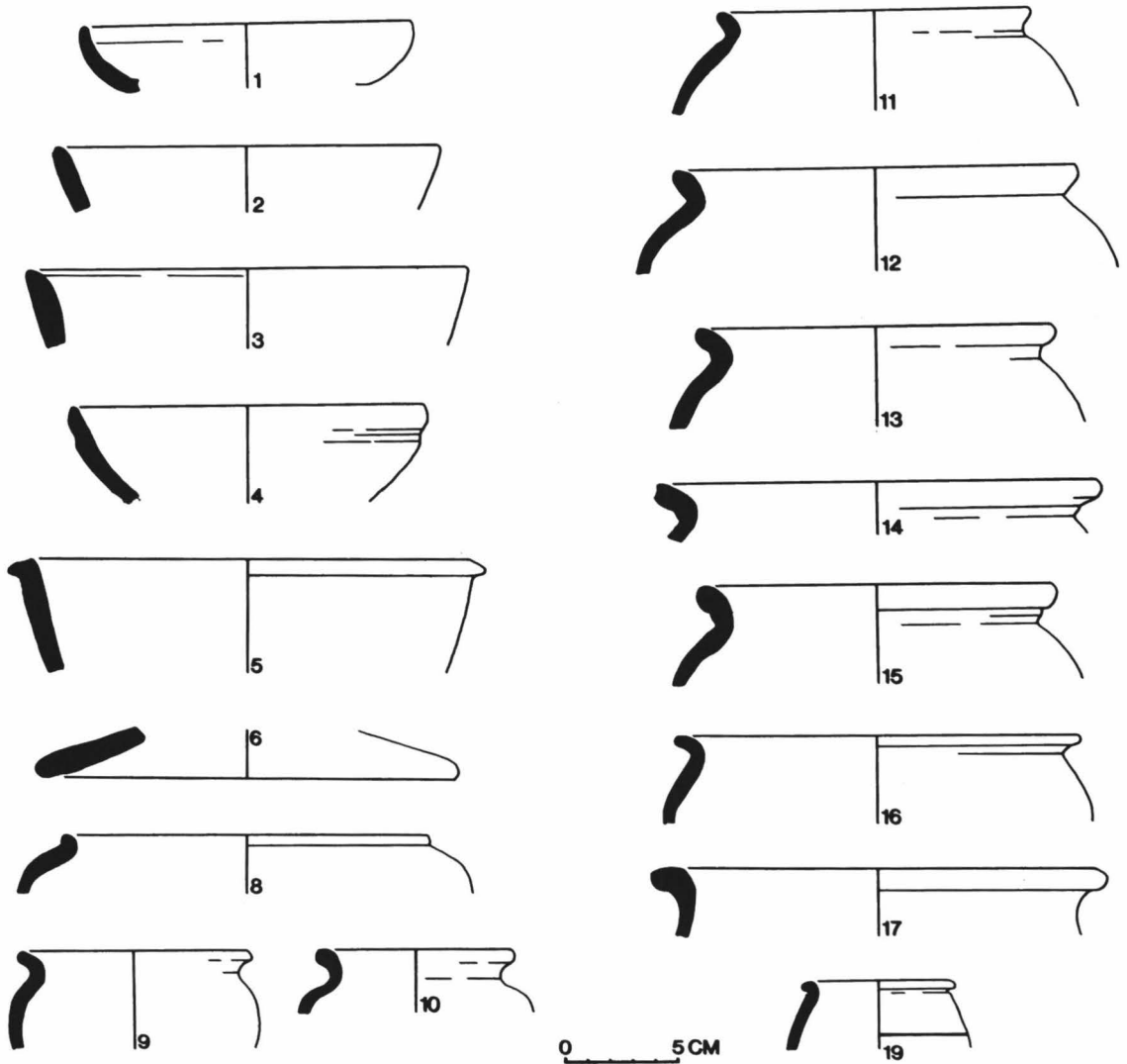


Fig. 6. Moraunt Drive, Middleton-on-Sea. The pottery.

single sherd (Context 131) has an oxidized orange surface similar to that found on material from Rowlands Castle. This sherd may be an unusually low-fired product from this source or an attempt by more local potters to produce a similar decorative effect. Undoubtedly, the source for much of the material in group 1 is the Hardham area.

Forms recognized include jars, dishes and bowls. Catalogue nos: 1, 3, 4, 15, 16.

*Group 2: Hard-fired fine to medium sandy grey wares (16.1% of assemblage)*

This group is distinct from Group 1 due to its high firing temperature giving a very hard fabric with hacky fracture. Tempering is similar to that of Group 1 but some calcined flint

inclusions to 3 mm are occasionally present. Surfaces are slightly rough but generally, unlike Group 1, do not lose surface sand grains when touched. Colours usually range from off-white/light grey, to medium grey, occasionally with dull red margins. Some examples have a very thin orange outer surface which appears similar to a light wash. This orange decoration occasionally appears in lines where the surface has been burnished. Most of this group is attributable to the Rowlands Castle Kilns.

Forms recognized include storage jars, jars and lids. Catalogue nos: 5, 7, 9, 13, 14.

*Group 3: Lower-fired fine sandy grey wares (1.9% of assemblage)*

This group consists of a small number of soft, predominantly



fine sand-tempered wares. Certainly some, if not all are from the Alice Holt/Farnham industry. The ware is not usually rough to the touch and is often slightly powdery with a smooth fracture. Inclusions of flint and grey clay pellets (?) to 0.5 mm are occasionally present, but never in any quantity. Colours vary from light to medium grey.

Of the sherds present, few are diagnostic although jars are present. Catalogue no.: 17.

*Group 4: Oxidized fine to coarse sandy wares (10.5% of assemblage)*

This group is similar to group 1 in respect of the tempering agent and hardness, although some sherds contain a noticeable number of coarse milky sub-rounded quartz inclusions to 1.5 mm on their surfaces and there is a tendency for the iron ore inclusions to reach 3 mm occasionally. Some sherds contain very occasional flint inclusions. Core colours range from light grey to black, although some dull orange and buff cores are present. Surfaces are almost exclusively dull oranges, reds or browns. Some Hardham products fall within this group.

Recognized forms include jars, lids, bowls/dishes and flagons(?). Catalogue no.: 6.

*Group 5 Black fine to medium sandy wares (18.9% of assemblage)*

This group, which is the second largest, consists of medium- to hard-fired sandy wares with some sherds containing occasional brown/black iron ore inclusions to 1 mm (these are difficult to see in the reduced fabric). Some sherds do not contain iron ore inclusions and their tempering is exclusively of milky quartz sand. It is possible these are local imitations of BB1. Core colours are usually light grey to black. Margins are occasionally dull orange, but external surfaces are always very dark grey/black.

Forms recognized include jars and dishes, some with simple burnished line decoration. Some of the sherds with iron ore inclusions are Hardham products. Catalogue nos: 2, 8, 11, 12.

*Group 6: Fine sandy reduced ware (0.6% of assemblage)*

A very small group, probably a sub-group of Group 5. Tempering is predominantly of fine sand, although a little medium sand is present with very occasional grog/iron ore inclusions to 0.5 mm and milky quartz to 1 mm. Of the very small number of sherds present the fabric is usually dull orange with black outer surfaces and can be attributed to Hardham.

Form recognized: jars.

*Group 7: Very fine grey sandy ware with moderate iron ore inclusions (0.9% of assemblage)*

Another small group of sparse, very fine sand-tempered wares with moderate brown and dark grey (iron ore?) inclusions to 2 mm. Some sherds contain very occasional white inclusions (chalk/clay pellets?) and mica. Some of this group are probably Hardham fine wares. Core colours are usually light grey with buff grey or light grey surfaces. It seems this group is very closely linked to Group 9.

Forms recognized include dishes and beakers. Catalogue no.: 19.

*Group 8: Gritted silty wares (0.9% of assemblage)*

A fairly soft silty/powdery fabric with sparse/moderate angular to sub-angular clear and opaque quartz inclusions to 2 mm. These inclusions are mainly on the surface of the sherds. Very occasional mica flecks and dull red grog/iron ore inclusions

are also present. Core colour is a dull pink orange with buff margins and surfaces.

Forms recognized: flagons (?), Context 145. Possibly either a Southern British or North Gaulish fabric.

*Group 9: Sparse very fine sand/silty fine wares (8% of assemblage)*

A broad group encompassing many fine ware variants probably from various sources, although most are likely to be local. Most of the sherds are small and have suffered badly in the acidic burial conditions: some of the sherds in this group may originally have been colour-coated. Sherds are usually medium fired, thin walled and powdery to the touch. Inclusions include sparse fine sand, occasionally sparse grog/iron ore (?) to 3 mm and some mica. Colours are variable but are usually cream, buff or dull orange. Within this group are 1st-2nd century Hardham/Wiggonholt flagon sherds (Context 72 & 139). Some sherds could be of North Gaulish origin.

Unfortunately, no diagnostic rim sherds were located in this group, but flagons and beakers seem to be present. Catalogue no.: 18.

*Group 10: Samian (4.3% of assemblage)*

The excavation yielded a total of 14 sherds of Samian. Virtually all of this material is too small and eroded to classify with any certainty. All, however, appear to be of Central Gaulish origin and of 2nd-century date. Contexts producing Samian: 1, 128, 141, 145 & 151. Of these context 145 produced the largest group (9 sherds). Forms recognized: Dr 31?, Dr 33 and Dr 37.

*Group 11: Colour-coated wares (0.6% of assemblage)*

Only two small sherds are present. One is in a very fine off-white fabric with occasional grog inclusions to 2 mm (most are less than 0.5 mm) with a dull brown/orange all-over colour coat. The exterior surface is finely rusticated. It is likely this sherd is from a Rhenish or Bordeaux region 2nd-century beaker. The other sherd in this group is possibly a Hardham white ware (Context 151).

*Group 12: Oxidized medium sandy wares with flint and chalk (4.6% of assemblage)*

This is a small but distinctive group similar to group 4. Tempering consists of fine and medium sand with occasional chalk inclusions and/or calcined flint to 2 mm. Very occasionally some sherds show orange/brown iron ore inclusions between 0.5-2 mm. Core colours are light grey to dull orange. Surfaces are dull buff to bright orange. Probably a 1st- or 2nd-century fabric.

Forms include jars and dishes.

*Group 13: East Sussex Ware (0.6% of assemblage)*

Only two sherds of this distinctive grog-tempered fabric are present. The fabric has been described in detail elsewhere (Green 1976; 1980).

Forms uncertain.

*Group 14: Grog and sand-tempered ware (0.9% of assemblage)*

A rather ill-defined group which includes an apparently handmade vessel. The tempering consists of fine to medium sand with moderate to abundant inclusions of grog (?) to 2 mm. These inclusions are grey on the interior of the sherds, but are fired to a dull orange on the surface (it is possible they are iron ore). Fabric colour is predominantly a dull orange although light grey patches are also present. This is possibly a

1st-century fabric.

Recognized forms: jars.

*Group 15: Fine sand- and shale-tempered ware (0.9% of assemblage)*

A small but very distinct group of sherds tempered with sparse fine sand and abundant grey sub-angular to sub-rounded laminar shale (?) to 2 mm. Fabric colour is light grey throughout. This fabric is not local and could be from either Brittany, West Normandy or Devon/Cornwall. The only distinctive sherds are from jars (one a globular cordoned jar: Context 72). Catalogue no.: 10.

*Group 16: Fine to medium sandy pink/buff ware (0.3% of assemblage)*

A single sherd in this fabric is present. Tempering is of abundant but mainly fine sand with occasional red/orange grog/iron ore inclusions to 1 mm. Colour is quite distinctive, being a pink buff. A local fabric, possibly from Wiggoholt or Chichester.

*Group 17: Hard fired medium sandy grey ware with moderate chalk and iron ore inclusions (1.9% of assemblage)*

This is without doubt a variant fabric of Group 2 as all details are identical except that this group has moderate inclusions of chalk to 3 mm and/or black iron ore (?) inclusions to 2 mm. Other details as Group 2. Probably a Rowlands Castle product but a coarser variant.

*Group 18: Amphorae (0.3% of assemblage).*

A single sherd, possibly from an amphora, was located in context 139. It is in a medium sand-tempered ware with dull red pellet inclusions (iron ore?) to 2 mm. Fabric colour is red/brown throughout.

**CATALOGUE (Fig. 6)**

- 1) Small curved walled platter. Fabric group 1. Similar examples from Fishbourne (*cf.* Type 3). Probably a Hardham imitation of a Gallo-Belgic platter. 1st century AD. Context 151.
- 2) Straight-sided dish with plain rim. Fabric group 5. Exterior partly burnished. Probably a local imitation of BB1. Context 145.
- 3) Straight-sided dish with tapering plain rim. Fabric group 1. Probably a Hardham product. 1st to early 3rd century. Context 145.
- 4) Small hemispherical bowl. Fabric group 1. Probably a late Hardham/Findon imitation. Late 3rd to 4th century. Context 145.
- 5) Bowl with small tapering horizontal rim. Fabric group 2. Possibly a Rowlands Castle product. Late 1st to early 2nd century. Context 88.
- 6) Lid with simple rim. Fabric group 4. Possibly a Hardham product. Context 145.
- 7) NOT ILLUSTRATED. Several sherds from an internally thumbled storage jar. Fabric group 2. A well-known form probably from Rowlands Castle (*cf.* Fishbourne type 391). 2nd–4th century. Context 145.
- 8) Bead rim jar. Fabric group 5 with very occasional flint inclusions to 1 mm. A common form (*cf.* Fishbourne type 166),

this example being probably a pre-Flavian Hardham product. Context 110.

9) Small jar with simple out-turned rim. Fabric group 2. Rowlands Castle. Context 145.

10) Small necked jar with thickened out-turned rim. Fabric group 15. Context 128.

11) Jar with small thickened everted rim. Fabric group 5. A Hardham product. 1st–2nd century. Context 145.

12) Jar with thickened everted rim. Fabric group 5. A Hardham product. 1st–2nd century. Context 145.

13) Necked jar with out-turned rim. Fabric group 2. Possibly a Rowlands Castle product but not highly fired. Context 151.

14) Jar with out-turned rim. Fabric group 2. Rowlands Castle (?) 1st century. Context 151.

15) Necked jar with thickened out-turned rim. Fabric group 1. Probably a Hardham product. Context 72.

16) Jar with everted rim. Fabric group 1. A Hardham variant. Late 1st to 2nd century. Context 145.

17) Large necked jar with thickened horizontal rim. Fabric group 3. An Alice Holt product. 2nd–3rd century. Context 145.

18) NOT ILLUSTRATED. Base sherd from a bowl or platter with moulded foot-ring. Fabric group 9. Fine grog-tempered ware with occasional orange inclusions to 1 mm. Light grey core with remains of dark grey/black surfaces. Rouletted circle of lines around interior above position of external foot-ring. A local copy of a Terra Nigra form. 1st–2nd century. Context 131.

19) Barrel-shaped Beaker. Fabric group 7. Possibly a Hardham product. May originally have been colour-coated. 2nd century. Context 91.

**Tile**

The excavations produced five fragments of Romano-British tile (Contexts 1, 131 & 145) in three fabric types. The quantity is obviously negligible (weighing a total of 540 g) and full details are included in the Archive. Tile types present include tegula and flat (one and three pieces respectively).

**Burnt clay**

In all, 198 fragments of burnt Brickearth were located during the excavations. Most were small fragments of fine textured, powdery clay with colours ranging from black and tan brown through to orange. All the pieces were irregular and contained no signs of wattle impressions, suggesting that most at least are probably not burnt daub. Inclusions of sparse fine sand and sparse iron oxides were noted in the burnt clay lumps, but these appeared to occur naturally in the Brickearth. A fully quantified list of burnt clay forms part of the Archive.

**Metalwork**

Only two iron nails and a single piece of pewter were found during the excavations. This lack of metalwork can be seen as a direct result of the acidic nature of the subsoil: the two nails

contain virtually no metal, and consist almost entirely of corrosion products (Contexts 128 & 145).

The pewter object appears to be part of a rectangular (30+ mm × 5 mm) decorative mount with a semi-circular cross-section. A circular fixing stud is located at one end on the flat reverse of the mount; the matching stud has broken off. The condition of this object is very poor: broken and twisted, with little of the original surface surviving (Context 139).

#### THE FLINTWORK By Robin Holgate

Only seven humanly struck flints and a single shattered piece were located during the excavations (Contexts, 1, 131, 32, 66, 142 & 145). All are undiagnostic hard hammer flakes with no signs of retouch with the one exception of a possible soft hammer flake of Mesolithic origin (Context 32). The shattered piece (Context 66) could be from knapping associated with flint wall construction.

#### GEOLOGICAL MATERIAL (incorporating comments by John Cooper, Booth Museum, Brighton)

The excavations only yielded nine pieces of stone other than flint (Table 1 microfiche). Of these, most are undoubtedly of local origin. The most common stone was Bognor Rock which occurs naturally in the London Clay around Bognor Regis. The single piece of chert is water-rounded and is likely to have been collected from the nearby beach. The only quern fragment located is of Upper Greensand (Context 159/162). The fragment is unfortunately rather undiagnostic although it appears to be part of the top stone of a rotary quern with a maximum thickness of 65 mm.

#### ANIMAL BONE By Wendy Wood

The bone assemblage from Middleton numbered only 62 fragments in all (Table 2 microfiche), the majority of which (96%) could be identified according to bone type and species. The assemblage consisted of a few fragmented weathered bones of stock farmyard species: Cow (*Bos taurus*), Sheep/Goat (*Ovis aries*/*Capra hircus*) and Pig (*Sus domesticus*). The low presence and fragility of bone is most likely due to the acidic nature of the soil.

The majority of fragments were of *Bos* (56 in all) with three fragments of *Ovis* and one of *Sus*. All specimens appeared to be adult, although too fragmentary for sexing.

A phalanx of *Bos* from context 151 (pit fill) showed the ossification of a sub-periosteal haematoma — probably the result of a blow. This specimen also displayed a single knife score. Similarly a radius of *Ovis* had been sawn obliquely through the shaft.

Several bones showed signs of gnawing by dogs (*Canis familiaris*). These were the radius of *Ovis*, phalanx of *Bos*, and a scapula of *Bos* from context 148.

The assemblage is too small to draw any accurate conclusions about animal husbandry on the site. Indirect evidence suggests that in addition to Cow, Sheep and Pig, Dog was also present. Farmyard species would have been exploited for their primary and secondary products, but on such little data it is not possible to say whether these animals were imported as joints of meat or truly present on the site, although the latter is likely.

#### CHARRED PLANT REMAINS By Pat Hinton

The samples had been wet-sieved (c. 1 mm mesh) on site and were received after drying. They were then sorted by stereomicroscope at 7–40X magnification when charcoal was

removed. The plant remains have been tabulated on Table 3 (microfiche).

The majority of the cereals are undoubtedly wheat but the incomplete and abraded condition of most makes closer identification difficult. However, on overall morphology, some have been identified as probable spelt (*Triticum spelta*) and glume bases characteristic of spelt confirm this.

The barley is identified as hulled barley (*Hordeum vulgare*) because of the slightly angular outline of most of the grains, but none is sufficiently well-preserved to study its symmetry and to consider whether 2- or 6-row forms are present.

The one oat grain is incomplete and retains no surface although there is a short length of the hilum discernible, but without the diagnostic floret base it cannot be said whether this is of a cultivated or wild species (Context 118).

The pea (*Pisum sativum*) is spherical and measures 4.9 mm in diameter (Context 128). No part of the testa remains but there is a slight impression at the position of the hilum. This is not complete, but the width suggests an oval outline which confirms the identification. In addition there are three half pulse seeds, i.e. cotyledons, 4.5, 4.9 and 5.0 mm in diameter, which could well be peas.

Three other half seeds in the same context (128) measuring 3.2, 3.4 and 3.7 mm, and one in Context 118, measuring 5.1 mm cannot be identified more closely than as vetch or vetchling (*Vicia* or *Lathyrus* spp.).

Pulses are found less frequently than cereals, possibly because they are less readily retrieved by flotation, possibly because they are not exposed to fire prior to cooking. A single pea has previously been recorded for Sussex, from an Iron Age pit at Bishopstone (Arthur 1977).

In addition, also in Contexts 118 and 128, are seeds of smooth tare *Vicia tetrasperma*, another member of the same family. This straggling plant has been a very serious cornfield weed in the past.

The remaining seeds are difficult to classify. The one goosefoot (*Chenopodium* sp.) is probably a weed or ruderal, although the use of these plants as food is possible (Context 152). The probable *Sinapis* sp. seeds unfortunately are not firmly identified. Charlock (*S. arvensis*) has been a troublesome weed of arable crops but white mustard (*S. alba*) has a use as a spice, oil or fodder plant. Rye brome (*Bromus* sp.) is quite frequently associated with spelt, and although probably an impurity of the crop, the grains may well have been tolerated.

The fruit stone fragment of *Prunus* sp. is small, 5.2 × 3.4 × 2.3 mm, but its apparent slimness and suggestion of tapering at one end are perhaps more compatible with one of the primitive plums than with sloe (Context 128).

#### THE CHARCOAL By David Goode

The Middleton-on-Sea charcoal assemblage was very small; six contexts were submitted for analysis, representing a total mass of 10.47 grams. In a situation where such small quantities are available for interpretation it is difficult to attempt to describe palaeo-environments. In addition, any attempt to do so is limited by the lack of corresponding pollen and land molluscan studies. The charcoal recovered in this situation is best used to help characterize the condition, or character of each context. One context (128) had a total mass of 7.55 grams; much of this was material too small for analysis. It was decided to subsample this context by randomly removing approximately 15% by mass.

The range of 14 species recovered in the samples includes pine, maple, alder, birch, box, ash, holly, poplar/willow, oak,

lime and sweet chestnut and is summarized in Table 4 (microfiche). The variation present at the site is not unusual, and has been identified in the plant remains from other sites in Sussex (Cartwright 1985; Smyth & Jennings 1988; Scaife & Burrin 1985; Drewett 1989).

In addition, there was a total of 0.68 grams of unidentifiable charcoal recovered from Context 118. The pattern for the entire site suggests an environment dominated by *Fraxinus*, *Populus/salix*, and *Cornus*. The species *Ilex*, *Viburnum*, and *Castanea* also figure significantly in the percent of total mass.

Greater variation is shown in a study of the species distribution by context. In the summary below, the percentages given are representative of the percentage of the total context mass (including the mass of the unidentifiable material). In the case of Context 128, the percentage recorded represents the fraction of the sub-sample analysed.

*Context 78 'Post-hole fill' (total sample mass = 0.23 grams)*

A total of 0.23 grams of charcoal were submitted for analysis. One hundred percent of the charcoal was from a single species: *Fraxinus excelsior*. This supports the interpretation of Context 78 as a post-hole. The charcoal is likely to be the result of burning the end of the post prior to putting it in the hole. Charring of wood in this manner would help to prevent rotting and infestation of the post end. This is supported by the presence of cork and cork cambium on one charcoal fragment, suggesting that the bark was not removed from the post.

*Context 118 'Pit fill' (total sample mass = 1.95 grams)*

The sample was composed of charcoal, bone and mineral components. The charcoal component had a total mass of 0.54 grams. (The bone and mineral component weighed 1.41 grams.) There were seven identifiable charcoal fragments, representing three different species. *Cornus sanguinea* was the most common species, accounting for 22.2% of the total mass of charcoal. The other species represented were *Pinus sylvestris* (7.4%), and *Populus/Salix* type (3.7%). The unidentifiable collection represented 66.7%.

*Context 128 'Ditch fill' (total sample mass = 7.55 grams)*

The sample from context 128 was the largest presented for analysis. A sub-sample of 15.8% of the total sample was removed for identification. A total of eight species were identified, including sweet-chestnut (*Castanea sativa*). The sample was dominated by the presence of *Fraxinus* which represent 59.7% of the sub-sample mass. Other species identified include *Acer campestre* (4.2%), *Buxus sempervirens* (0.8%), *Cornus sanguinea* (10.9%), *Ilex aquifolium* (12.6%), *Prunus* type (0.8%), *Viburnum* type (7.6%), and *Castanea* (3.4%). The variation presented in this sample is analogous to the species variation found in the periphery of large woodlands. All the species recovered are shade intolerant, and most prefer

wet or chalky soils. This would support the context interpretation as a ditch fill. The sample is likely to be the result of the collection and burning of wood recovered in, and around a woodland. Unfortunately, attempts at describing the site's contemporary environment based on such a small amount of charcoal remains are not possible without additional data from pollen studies and molluscan analysis.

*Context 131 'Pit fill' (total sample mass = 0.24 grams)*

Four species were recovered from this context. These are *Acer campestre* (25%), *Alnus glutinosa* (20.8%), *Buxus sempervirens* (8.3%), and *Tillia cordata* (4.2%). Approximately 41.6% of the sample was unidentifiable.

*Context 145 'Fill of pond or natural hollow' (total sample mass = 0.44 grams)*

Ten fragments were large enough for identification of six different species. The total mass of unidentifiable/mineral component was 0.21 grams (47.7%). The most common charcoal was the *Populus/salix* type which represents 40.9% of the total sample; each of sweet chestnut (*Castanea sativa*), *Pinus sylvestris*, *Betula pendula*, *Fraxinus excelsior* and the *Quercus* type represent 2.3% of the total sample, respectively. The range of species recovered from this sample suggests that it is not a natural hollow. Few of the native trees in Britain contain enough resin to burn in a forest fire situation. In addition, much of the ground cover in English forests is too wet to burn as a ground or brush fire (Rackham 1993, 32). The dominance of the poplar/willow type would suggest that this hollow may have been a pond. However, Rackham (1993) implies that very few of the ponds or depressions in England were made by humans.

*Context 152 'Fill of large pit' (total sample mass = 0.06 grams)*

Three species were represented, including *Buxus sempervirens* (33.3%), *Ilex aquifolium* (16.7%), *Populus/salix* type (16.7%). The unidentifiable charcoal equalled 33.3% of the sample mass.

### Discussion

A great deal of species variation is present for such a small sample. Of particular interest is the quantity of *Buxus* and *Ilex* and the presence of *Viburnum*. Other charcoal reports for the West Sussex region show that *Populus/salix*, *Alnus* and *Quercus* dominate the samples. This is not reflected at the Middleton site. Differences in the composition of the charcoal samples may be the result of the small sample size, rather than of a conscious selection by the site inhabitants. Particular note should be made of the sweet chestnut charcoal recovered from two contexts. *Castanea sativa* was introduced by the Romans sometime in the 1st or early 2nd century AD. Recovery of sweet chestnut in Romano-British contexts of a similar age suggests that the tree was possibly introduced in the 1st century AD, rather than in the 2nd century.

## DISCUSSION

Although a number of Iron Age sites and find spots are known from the coastal plain, few have been found in the immediate vicinity of Middleton-on-Sea (Bedwin & Pitts 1978). Despite the lack of features dating to this period from the recent

excavations, the presence of small quantities of unabraded Later Middle and Late Iron Age sherds suggests that occupation during this period may have been situated close by. Similar pottery was found at the site of North Bersted (Bedwin & Pitts 1978). Some earlier activity in the area is suggested by the few pieces of flintwork and abraded Late

Bronze Age/Early Iron Age pottery sherds.

With the exception of two Romano-British pots found in the cliff at Middleton (Pitts 1979), little is known of this period in the area of the excavations. However, it is during this period that actual occupation within the excavated area started. Despite the fact that the pottery helps little in defining an absolute chronology of features, it does suggest that the main occupation spanned the 1st and 2nd centuries AD, with a continuation, perhaps less intensely, into the 4th century. It is possible that during the 3rd to 4th centuries a shift in the site's focus occurred, rendering the excavated area peripheral to the settlement. Unfortunately, the full extent of the occupation is not known, but it is likely the excavated features form a small part of a much larger site which probably extended under existing housing to the west and Marlowe Close to the south. The extent of the site to the east is unknown, although the evidence from the original assessment trenches suggests it did not extend much further to the north. Without a full plan of the entire settlement it is difficult to interpret the excavated features, as it is impossible to ascertain whether the excavations were at the nucleus or on the periphery of the overall site.

The clutter of pits, post-holes and stake-holes within Trench F hinders the identification of individual structures. One rectangular building, measuring *c.* 7.5 × 3 m, can be postulated however (*see above*). This find is of particular interest considering the lack of such structures on Romano-British rural sites in Sussex. The exact form of this building is impossible to reconstruct, although some observations may be made. The general lack of stone suggests that wattle and daub walling was used in this timber-framed structure. Unfortunately, no definite pieces of daub were found amongst the burnt clay. The negligible amount of tile suggests the roof was thatched. The virtual absence of nails can be seen as a direct result of the acidity of the Brickearth rather than as necessarily reflecting actual construction techniques. Most ironwork is likely to have decayed completely. The presence of replacement timber uprights shows the building to have been maintained for some time. It can probably be interpreted as either a small domestic farmstead or an agricultural out-building of some form.

Just as this building replaced earlier features, it appears that once it went out of use, for whatever reason, other features were subsequently cut through its site. The Samian sherds from ditch 126 suggest

the building was abandoned before or during the 2nd century, although there is a danger of these sherds having been deposited at a later date, perhaps in the 3rd century. The ditch itself probably represents a combined field boundary and drainage ditch. Many such ditches were found at North Bersted (Bedwin & Pitts 1978, 310), although the Middleton example is later. After a period of use/silting, ditch 126 was deliberately backfilled with Brickearth, possibly with the material initially excavated during its construction. However, the line of this boundary was maintained by two sequential slots, both potentially fence lines. The reason why this boundary should have had its form changed in this way is not clear, although it could have been brought about by a change in land use. For example, a boundary formed by a shallow drainage ditch would facilitate arable cultivation, but an above ground boundary may have been subsequently needed to retain livestock. The presence of numerous stake-holes to the west of this boundary line is interesting, considering the virtual absence of them to the east. If many of these features were actually the result of tree-root activity, rather than being of anthropogenic origin, it is tempting to suggest that woodland/scrub existed to the west of ditch 126. Although the charcoal from 126 would tend to agree with this theory, without further environmental evidence no conclusive statements can be made on the area's vegetational cover.

From the limited data available, the occupation appears to have generally been of low status. The pottery assemblage shows a rather utilitarian range of local forms and fabrics with relatively few imports or fine wares. A peasant farmstead based on a mixed farming economy seems likely. Unfortunately the acidic subsoil meant few bones survived, although cattle and sheep are present in the assemblage. The quern fragment and the evidence from the charred plant remains strongly suggest the presence of arable cultivation, with crops including wheat, barley, pea and possibly oats. Any excess produce is likely to have found a market at Chichester.

### Acknowledgements

The author is grateful to Beazer Homes (Southern) Ltd for funding this project; to Mark Taylor and John Mills (West Sussex County Council) for comments during the excavations and to David Rudling for acting as Project Manager and commenting on the text for this report. Thanks must also be given to the specialists contributing written reports for

publication: Wendy Wood (bones), Pat Hinton (plant remains) and David Goode (charcoal), as well as to those who commented on some of the other material: Sue Hamilton, Malcolm Lyne and Valery Rigby (pottery); Robin Holgate (flintwork) and John

Cooper (geological material). The help of the excavation team, Chris Greatorex, Tessa Machling, Wendy Wood, Joan Lightening and Justin Russell is gratefully acknowledged, as is the illustration work carried out by Jane Russell (Figs 1–5).

**Author:** Luke Barber, Field Archaeology Unit, Institute of Archaeology, 31–34 Gordon Square, London WC1H 0PY.

## REFERENCES

- Arthur, J. R. B.** 1977. The plant remains, in M. Bell, Excavations at Bishopstone, *Sussex Archaeol. Collect.* **115**, 273–5.
- Bedwin, O. & Pitts, M.** 1978. The excavation of an Iron Age settlement at North Bersted, Bognor Regis, West Sussex 1975–76, *Sussex Archaeol. Collect.* **116**, 293–345.
- Cartwright, C. R.** 1985. The charcoal, in P. L. Drewett, The excavation of barrows V–IX at West Heath, Harting, 1980, *Sussex Archaeol. Collect.* **123**, 35–60.
- Cunliffe, B. W.** 1971. *Excavations at Fishbourne* Vol. II: *The Finds*, Soc. Antiq. Res. Rep. **27**. London.
- Drewett, P. L.** 1989. Anthropogenic soil erosion in prehistoric Sussex: excavation at West Heath and Ferring 1984, *Sussex Archaeol. Collect.* **127**, 11–29.
- Green, C. M.** 1976. The coarse pottery, in M.G. Bell, The excavation of an early Romano-British site and Pleistocene land forms at Newhaven, Sussex, *Sussex Archaeol. Collect.* **114**, 256–86.
- — 1980. Handmade pottery and society in Late Iron Age and Roman East Sussex, *Sussex Archaeol. Collect.* **118**, 69–86.
- Hodgson, J. M.** 1967. *Soils of the West Sussex Coastal Plain*, Soil Survey of Great Britain, England and Wales, Bulletin **3**. Harpenden: Agricultural Research Council.
- Pitts, M. W.** 1979. A gazetteer of Roman sites and finds on the West Sussex coastal plain west of the Arun, *Sussex Archaeol. Collect.* **117**, 63–83.
- Rackham, O.** 1993 *Trees and Woodland in the British Landscape*. London: Dent.
- Scaife, R. G. & Burrin, P. J.** 1985. The environmental impact of Prehistoric Man as recorded in the Upper Cuckmere Valley at Stream Farm, Chiddingly, *Sussex Archaeol. Collect.* **123**, 27–34.
- Smyth, C. & Jennings, S.** 1988. Mid to late Holocene forest composition and the effects of clearances in the Combe Haven Valley, East Sussex, *Sussex Archaeol. Collect.* **126**, 1–20.
- Wedmore, B.** 1982. A Bronze Age bucket urn from Middleton-on-Sea (SU 9699 0047), *Sussex Archaeol. Collect.* **120**, 209.

**Microfiche  
relating to this article  
are  
on following pages**



# The excavation of a Romano-British site at Moraunt Drive, Middleton-on-Sea, West Sussex, 1992

Luke Barber

Table 1. Geological material.

Stone Type	Contexts	No.	Weight (gm)
Iron-rich siliceous sandstone	1	1	25
Decayed Upper Greensand/Bognor Rock	131	1	15 g
Chert	89	1	45 g
Bognor Rock	143, 145	4	4610 g
Iron-rich fine sandstone	145	1	40 g
Upper Greensand	159/162	1	1230 g
<b>Total</b>		<b>9</b>	<b>5965 g</b>

Table 2. Animal bone: species list: no. of fragments. (Percentage of sample in brackets.)

Context	Bos	Ovi	Sus	Uni.	TOTAL
128	20	1	-	-	21
131	4	-	-	-	4
133	12	-	-	-	12
145	9	1	-	-	10
148	4	-	-	-	4
151	8	-	1	-	9
152	-	1	-	-	1
159-162	1	-	-	-	1
<b>No. of Fragments</b>	<b>58</b> (93.6%)	<b>3</b> (4.8%)	<b>1</b> (1.6%)	<b>0</b>	<b>62</b> (100%)

Table 4. Species represented by mass and mass percent.

Species	Total No.	Total mass	% of total mass
<i>Pinus</i>	3	0.05 grams	2.5
<i>Acer campestre</i>	4	0.11	5.5
<i>Alnus glutinosa</i>	2	0.05	2.5
<i>Betula pendula</i>	1	0.01	0.5
<i>Buxus sempervirens</i>	6	0.05	2.5
<i>Cornus sanguinea</i>	5	0.25	12.4
<i>Fraxinus excelsior</i>	17	0.95	47.3
<i>Ilex aquifolium</i>	3	0.16	8.0
<i>Populus/salix</i>	4	0.21	10.5
<i>Prunus</i> type	1	0.01	0.5
<i>Quercus</i> type	1	0.01	0.5
<i>Tilia cordata</i>	2	0.09	4.5
<i>Viburnum</i>	2	0.09	4.5
<i>Castanea sativa</i>	5	0.05	2.5
<b>TOTAL: 14 species</b>	<b>55</b>	<b>2.01 grams</b>	<b>100%</b>



Table 3. Charred plant remains.

Context	118	128	131	145	152
Sample weight (Kg)	11	12.75	4.5	2.25	4.75
<i>Triticum cf. spelta</i> L.	7	22	4		
Spelt wheat glume bases	2	1			1
<i>Triticum dicoccum/spelta</i>	8	9			
Emmer or Spelt wheat					
<i>Triticum</i> sp.	21++	10+	2		1
Undetermined wheat					
<i>Hordeum vulgare</i> L.	5+	6		1	
Hulled barley					
<i>Avena</i> sp.	1				
Oats					
<i>Cerealia</i> indet.	4+	14++	+	+	2+
Undifferentiated cereals					
<i>Sinapis arvensis/alba</i>	2				
Charlock or white mustard					
<i>Chenopodium</i> sp.					1
Goosefoot					
<i>Vicia tetrasperma</i> (L.) Schreber	24	14			
Smooth tare					
<i>Vicia/Lathyrus</i> sp.					
Vetch or vetchling	1	7			
<i>Pisum sativum</i> L.		1			
Field pea					
cf. <i>Pisum sativum</i>		3			
<i>Prunus</i> sp. endocarp fragment		1			
Sloe/Plum					
<i>Bromus</i> sp.					
Rye brome/Chess		6			

**KEY:**

+ = less than 10 fragments

++ = c. 50 fragments.