

A ROMANO-BRITISH POTTERY KILN AT SPRINGWOOD, GERRARDS CROSS

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The site of a Romano-British kiln was disturbed by landscape gardening. Subsequent rescue excavation revealed most of an up-draught kiln with a permanent vented floor, accompanied by pottery of the second century AD. The stokehole flue was located but remained unexcavated.

Introduction

A large quantity of pottery sherds were discovered by Miss Katharine Barb during landscape gardening at Springwood, Hedgerley Lane, Gerrards Cross in November 1979.

Visits to the site by the authors, together with a proton magnetometer survey, indicated the presence of a Romano-British pottery kiln. Continuing landscaping and tree-planting threatened the site with further disturbance and a small-scale rescue excavation was undertaken, with publication of an interim report (Stainton and Stanley 1980).

The Site

The site (NGR SU 99238750) lies to the north of Hedgerley lane, Gerrards Cross, just above the 80 m contour (Fig. 1) and about 60 m south and west of a previously located kiln at 'Polkerris' (Rouse 1951). The site is on the Harefield terrace—a spread of coarse, sub-angular flint gravel, with some quartzite and sandstone (Hare 1947). Since its deposition the Harefield terrace has been subjected to dissection by the Alderbourne valley system, now dry above Fulmer. The Reading Beds outcrop on the sides of the valley and clay from these strata provided one of the raw materials for the kiln.

The name 'Springwood' derives from a spring where water, having percolated down through the gravel on the higher ground to the east of Springwood, is thrown out by the impermeable clay layers in the Reading Beds.

The junction is marked by a show of water in the sides of Hedgerley Lane after rain and a slightly lush vegetation. A stream runs through Springwood, forming a pond in the garden.

A magnetometer survey had shown two areas of marked anomalies (Fig. 2). An area disturbed by a tree-planting hole and adjacent to one of these anomalies was available for excavation.

The Excavation

The area excavated measured 1.9 m × 1.2 m. Between 100 and 200 mm below the present ground surface the wall of an almost perfectly circular kiln was exposed. The wall was about 100 mm thick and had been made by lining the sides of the circular hole with clay (Fig. 3). The clay lining had baked red on the outside, the inner 30 mm being dark grey. The oven-chamber was filled with black loam (Fig. 3), which appeared to include debris from a nearby kiln or kilns, comprising many waste sherds, some very weathered, and pieces of baked clay with twig impressions. The average size of the sherds gradually increased towards the kiln floor.

On the north-east edge of the oven-chamber there was a mass of broken clay, which probably represented part of the clay dome of the kiln, and may have fallen into the oven-chamber largely intact. More of it formed a shattered layer across the centre of the kiln.

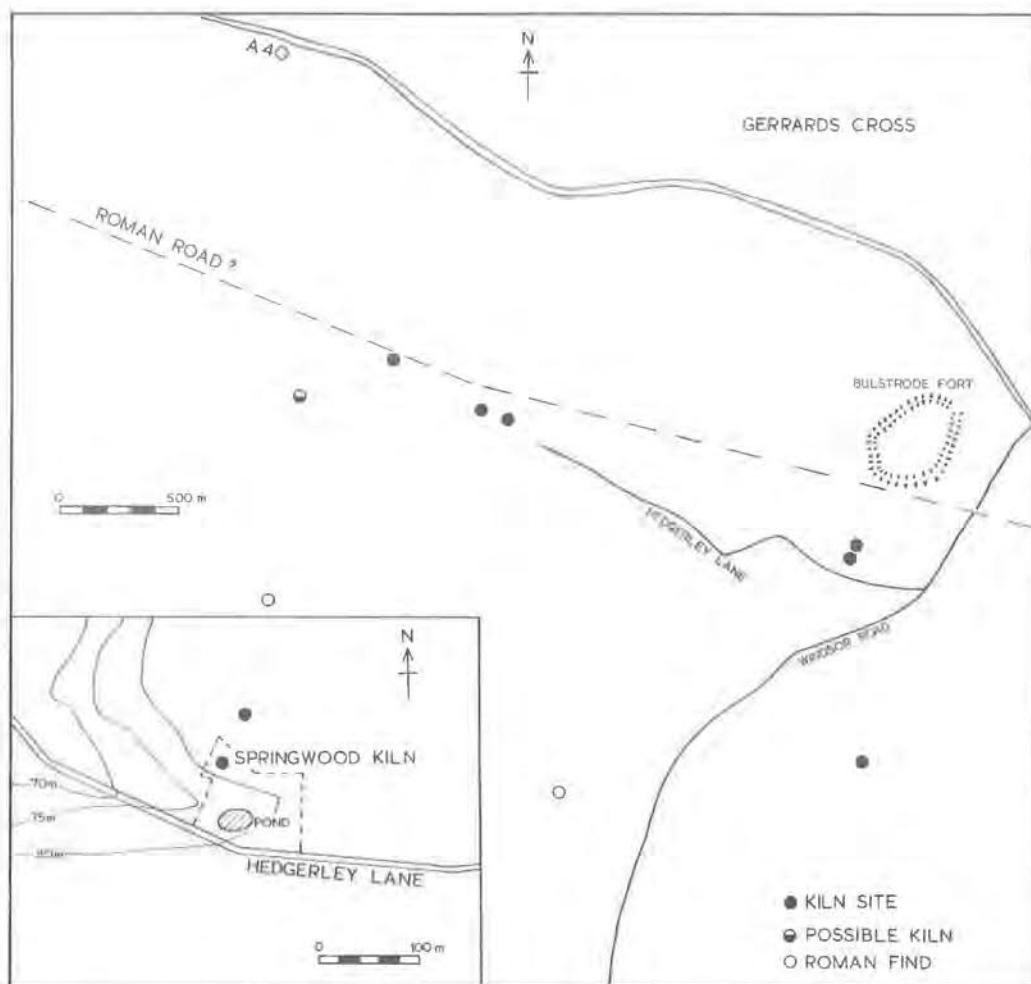


Fig. 1. Site location.

Upon removal of this layer a curved kiln-bar of baked clay (300 mm long, cross-section 8×5 mm) was discovered against the oven-chamber wall.

The baked clay oven-chamber floor of the kiln, diameter 1.4 m, was intact. As the surface of the floor was cleared, groups of large sherds wedged vertically into five peripheral vents were uncovered. Later investigation from below the floor revealed a sixth vent (Fig. 4). The apparently deliberate positioning of the sherds in the vents suggests an attempt to reduce the flow of heat into the oven chamber.

Four small circular holes were found in the centre of the oven-chamber floor (Fig. 4, a-d). Two of these were covered by individual large sherds, though this may not be significant in view of the large number of sherds scattered on the oven-chamber floor. Additional draught for the kiln was provided by a small upward sloping vent in the side of the oven-chamber wall above vent 4 (e in Fig 4). Because of the restricted area of the excavation the outlet of this vent was not found.

The oven-chamber floor was about 100 mm thick. The pieces of floor removed showed the

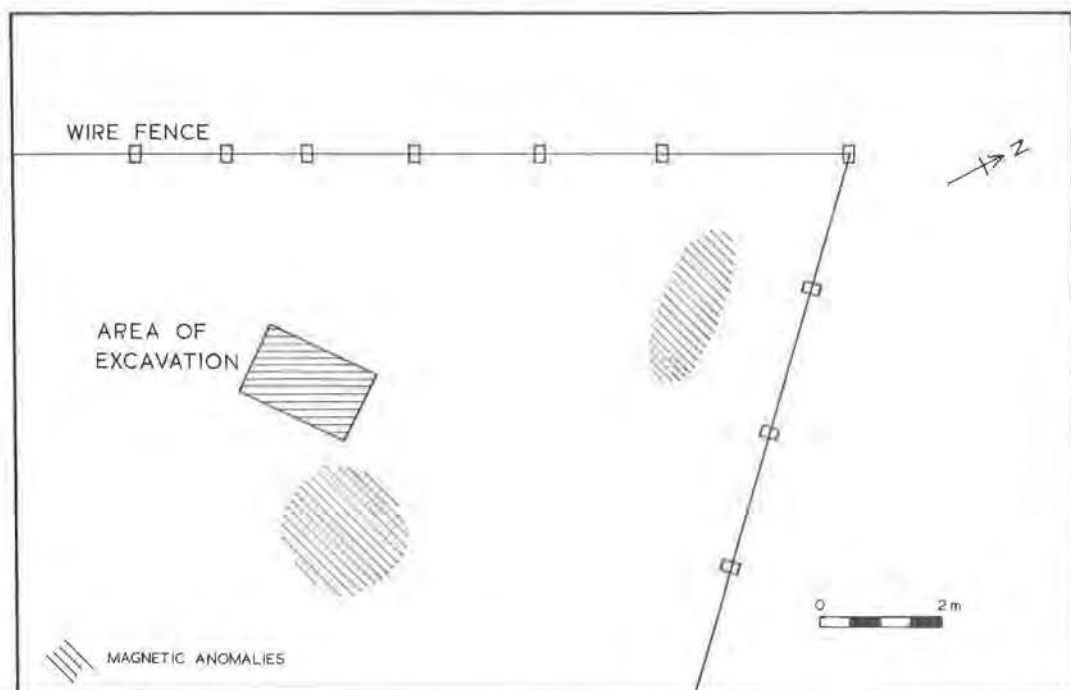


Fig. 2. Location of excavation.

imprints of the short wooden poles on which the clay was originally supported. These poles were spaced 70–80 mm apart and were 20–25 mm in diameter. Several pieces remained as charcoal.

Underneath the floor there was a bowl-like furnace chamber, the walls of which had been smoothly formed of clay, now baked hard and cracked. The furnace chamber had an average diameter of 0.7 m, considerably less than that of the oven-chamber, and it curved to a maximum depth of 0.63 m below the kiln floor (Fig. 4). The flues to the vents were almost circular in section and smoothly lined with clay. Vents 2, 3, and 6 opened from the upper half of the furnace wall, 4 and 5 from the base of the furnace chamber creating in effect two free-standing pilasters between them. Vent number 1 was located directly above the stoke-hole.

There was very little ash in the furnace chamber, only a few cm of completely dry, blackened earth containing sherds and pieces of charcoal.

The hot gases entered the furnace chamber via a large flue on the north-east of the kiln. The flue had an arched roof and vertical sides, 0.45 m high, and was connected to the furnace chamber about 100 mm above the chamber floor. The stoke-hole flue was filled with earth and reddish clay and remains unexcavated. The direction of the stoke-hole itself was indicated but because of the restricted area available it could not be located or excavated.

The Finds

The Pottery

by Pauline and Stanley Cauvain

The Fabric

In total 31.3 kg of pottery was recovered from the kiln and adjacent areas. No whole pots were recovered. Many of the sherds showed lamination fractures and signs of weathering. A few had deformed during firing.

Two pottery fabrics were present, essentially similar to one another. Both are fairly homo-

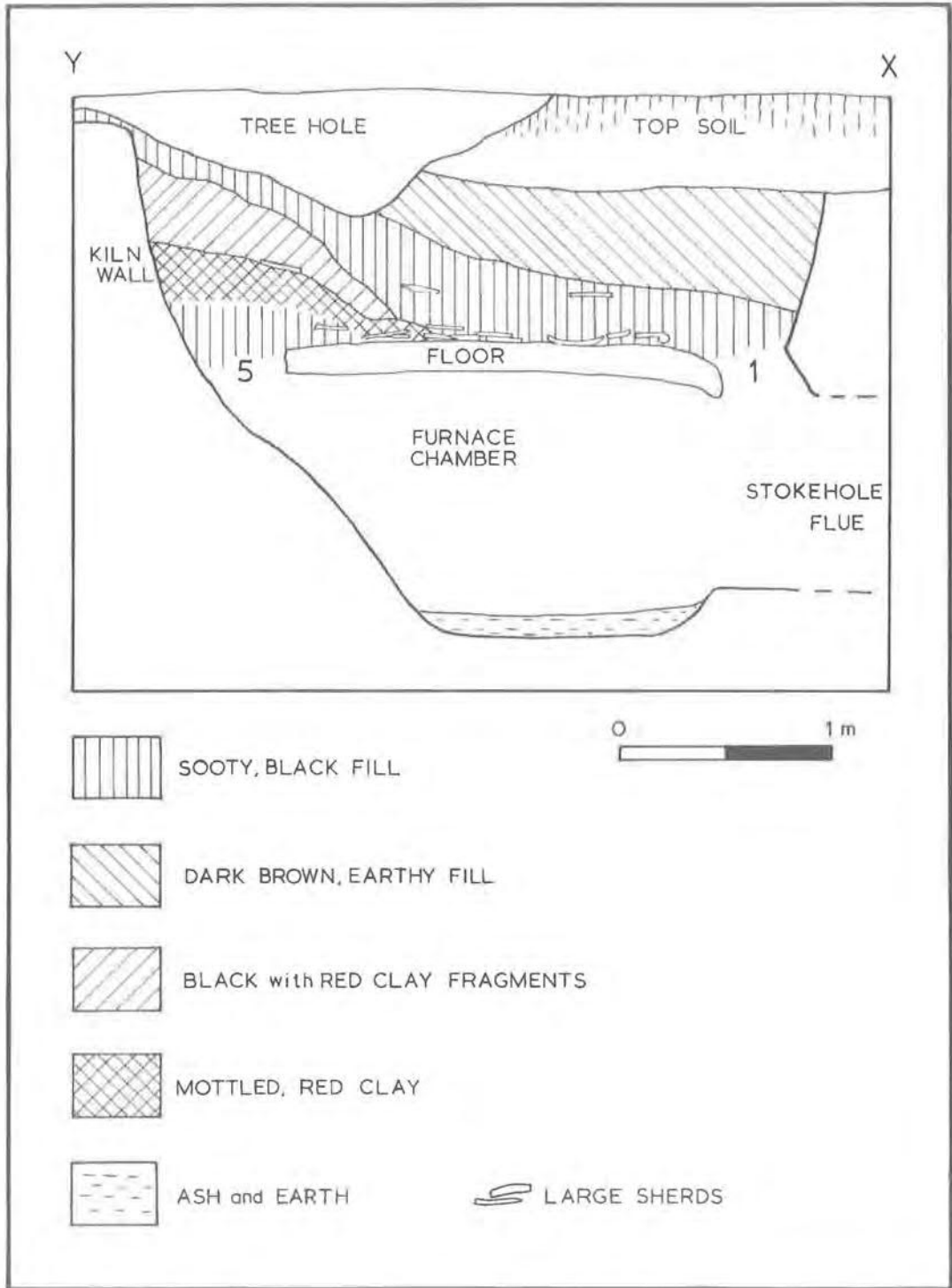


Fig. 3. Kiln section.

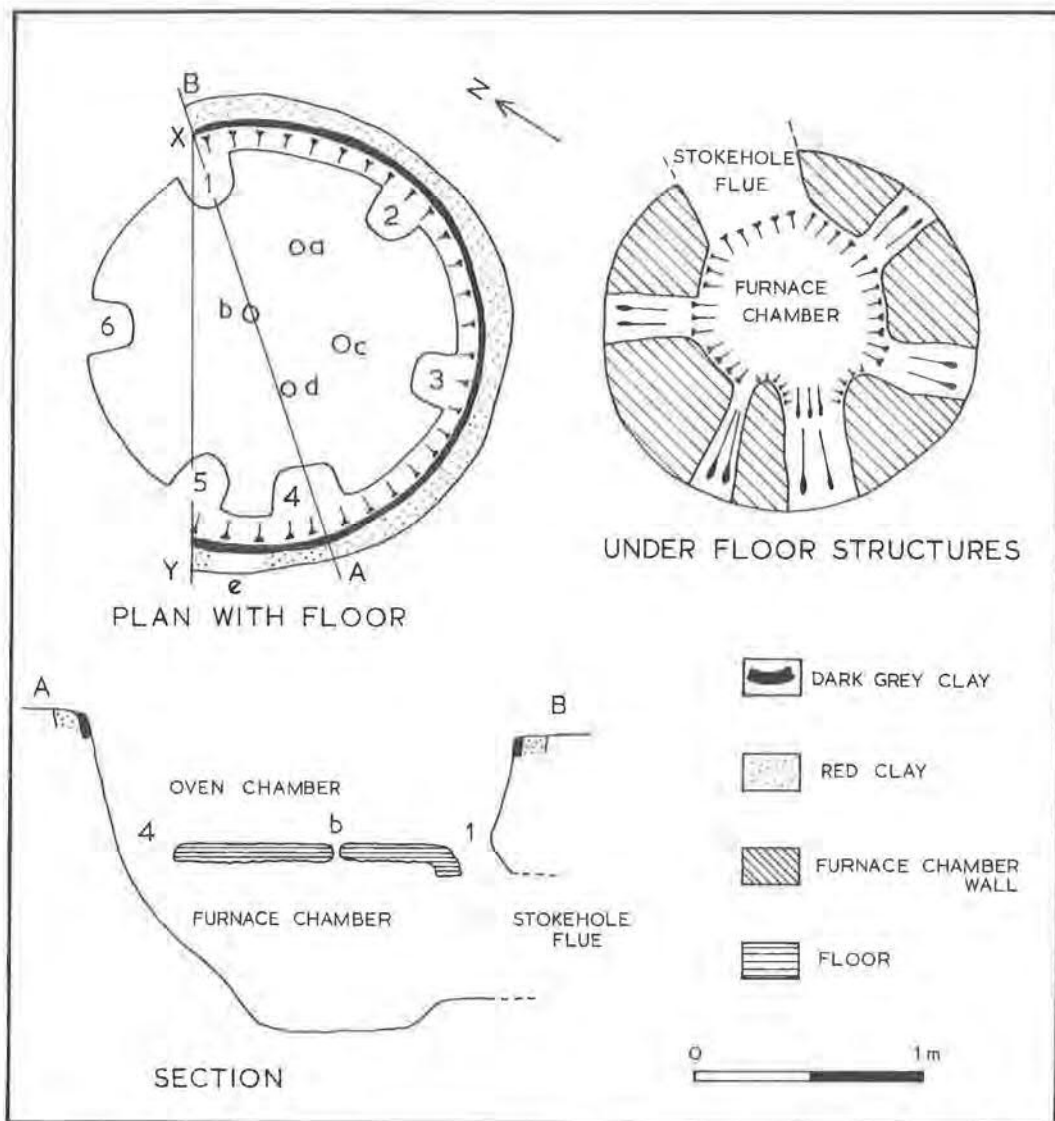


Fig. 4. Kiln construction.

geneous, with a sandy texture derived from the presence of large quantities of quartz grains. The size and quantity of the quartz grains vary from fabric to fabric, and can be used to separate them into two broad groups.

The first group is the harder of the two with a distinctly sandy texture, and is characterized by the presence of substantial quantities of quartz grains less than 0.5 mm in diameter.

About 80% of the sherds recovered were in this fabric.

The second fabric is softer than the first and is characterized by the presence of fewer quartz grains between 0.5 and 1 mm in diameter. The remaining 20% of the sherds were in this group.

The quartz grains varied in colour from black to milky-white and translucent in both fabrics.

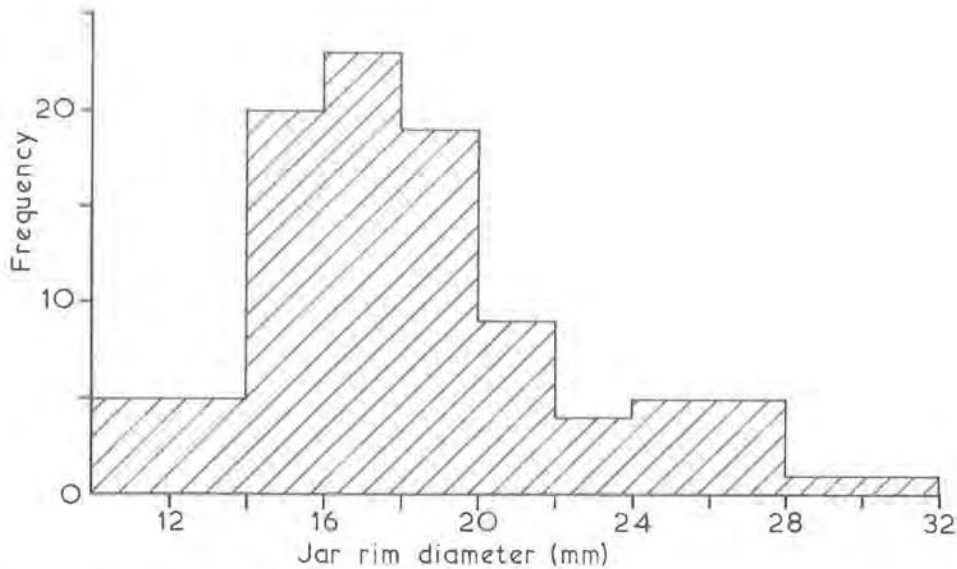


Fig. 5. Jar rim diameters.

In the softer of the two fabrics occasional small pieces of ironstone and a hard sandy material, probably 'grog' (ground pot), were also present. Small pieces of flint were occasionally also present in the softer fabric, and often sherds had small holes with sharp edges indicating the site of stones that had been displaced.

Fabric colour varied from buff through to grey and black, the variation resulting from different firing conditions within the kiln.

The Types of Pottery Produced

Jars were the principal form present (120 examples), some of the narrow-mouthed form. Jars represented about 85% of the rim forms recovered. The mean rim diameter for this group was 183 mm, with a residual standard deviation of 42 mm (Fig. 5). The proportion of hard to soft fabrics was similar to that for all sherds, being 77% to 23% respectively. Some jars were decorated and a few examples were covered in a white slip. Rim forms varied from simple, plain rims (Fig. 6.4) through to beaded (Fig. 6.11).

About 8% of the rims (12 examples) were from bowls with distinctive rim forms. This

group included three rim forms, flat-rimmed, rolled, and plain, each represented by 4 examples. There were examples of both flattened and rolled rim forms with a cavity running through the rim (Fig. 7.27-8). The hard fabric was represented by 9 examples and the soft by 3.

There were a few examples of cooking pot rims. Other forms worthy of note included a single example of a plate (Fig. 7.31) and a lid (Fig. 7.32). Unfortunately the latter was too small to make a full reconstruction possible.

Some 29 sherds were decorated. Although most decorated sherds could not be directly related to rim forms it is probable that the majority were from jars. The commonest form of decoration was a 'lattice' pattern (Fig. 7.38), which was contained between parallel lines deeply scored into the surface of the pot. In contrast to the parallel lines, the lattice pattern was only lightly scored into the surface, and often the sherd showed evidence of having been burnished after decoration. About 60% of the decorated sherds showed evidence of a lattice pattern.

The second commonest form of decoration

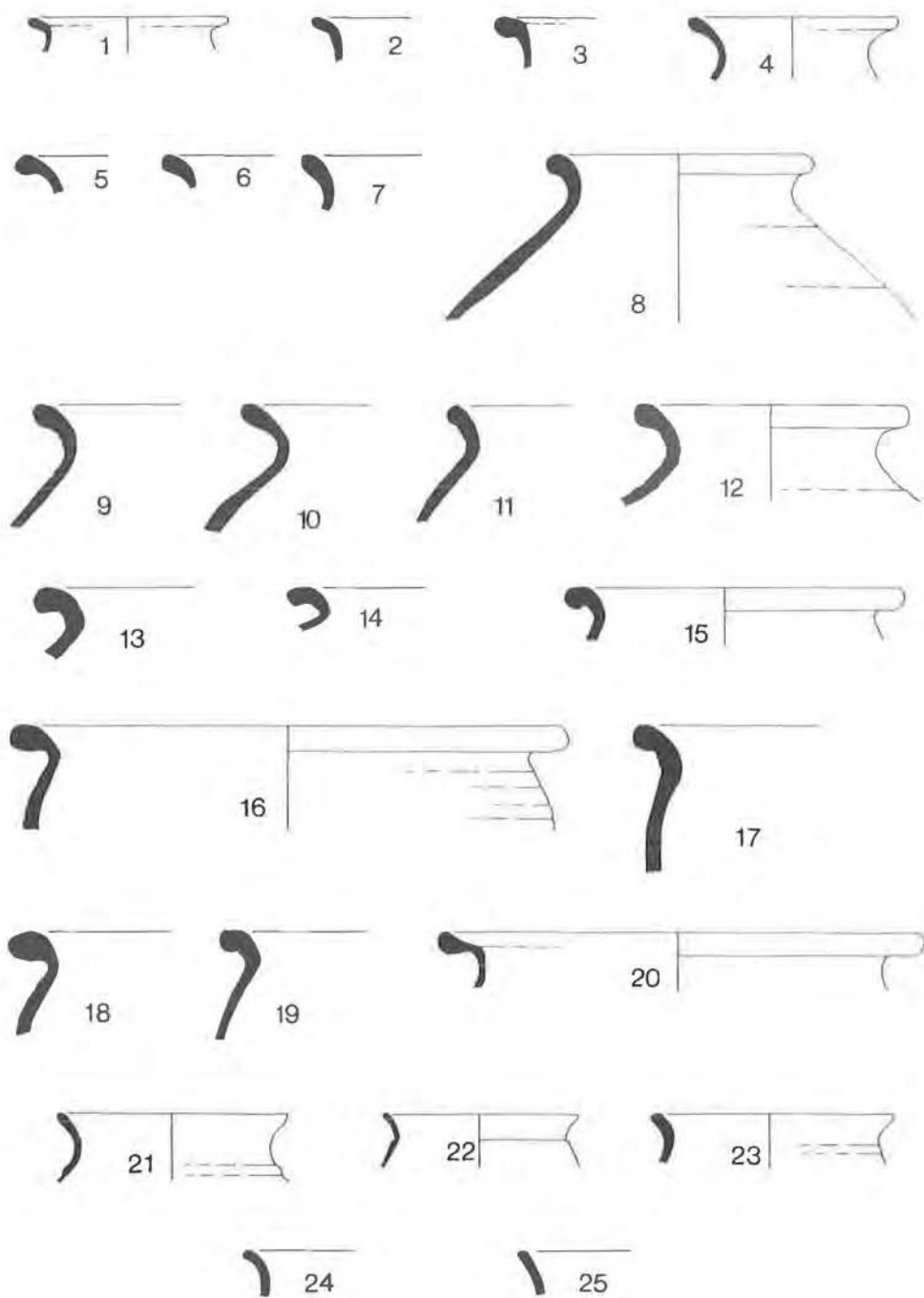


Fig. 6. The pottery (1:4).

consisted of variations on a wavy horizontal line and represented about 35% of the decorated sherds. Generally the wavy line was contained within plain, parallel, horizontal lines (Fig. 7.33).

An interesting pattern, definitely associated with jar forms, consisted of a series of parallel, horizontal lines scored into the surface of the pot and between them some faint, irregularly spaced vertical lines (Fig. 7.37). A few sherds exhibited a faint combed decoration in the form of 'zig-zags' (Fig. 7.36).

The Illustrated Pottery

The entries in the catalogue below are laid out in the following manner: type, diameter (d), fabric, colour.

1. Beaker or small jar, soft, buff.
2. Beaker or small jar, d. 130 mm, soft, buff with evidence of burnishing.
3. Jar, d. 130 mm, soft with occasional pieces of ironstone, grey.
4. Narrow-necked jar, hard, grey with some burnishing on the exterior.
5. Jar, d. 180 mm, hard with occasional large quartz grains, grey/brown.
6. Jar, d. 180 mm, soft with pieces of grog, red/buff.
7. Jar, d. 170 mm, hard, grey with white slip on the exterior.
8. Large jar with short neck, soft, grey/brown.
9. Jar, d. 270 mm, hard, buff.
10. Jar, d. 150 mm, hard, grey.
11. Jar with short neck, d. 190 mm, hard, black.
12. Jar, soft, light grey/buff.
13. Jar, d. 190 mm, hard, dark grey.
14. Jar, d. 200 mm, hard, grey.
15. Jar, hard, black.
16. Cooking pot with some body rilling, soft, brown/grey.
17. Cooking pot, d. 400 mm, hard, brown.
18. Jar with some body rilling, d. 280 mm, hard, brown/grey.
19. Jar, d. 200 mm, hard, brown/grey.
20. Jar with recessed rim, soft, buff with grey core.
21. Heavily burnished beaker, hard, grey.
22. Beaker, soft, buff with grey core.
23. Beaker with burnished exterior, soft, black.
24. Beaker, d. 180 mm, hard with some burnishing, brown.
25. Beaker, d. 150 mm, soft, grey, covered with a pinky/white slip.
26. Large bowl, hard, buff/brown with grey core.
27. Bowl with bead rim, soft, buff.
28. Small bowl with bead rim, soft, brown/buff.
29. Shallow bowl with plain rim, soft, grey/brown.
30. Shallow bowl with plain rim and some burnishing, hard, grey/brown.
31. Dish with some burnishing on the interior, soft, black.
32. Lid, hard, brown.
33. Hard, grey.
34. Soft with some grog, buff with grey core.
35. Soft, grey.
36. Hard, grey exterior, buff interior.
37. Hard, grey.
38. Jar, distorted due to cracking during firing, hard, grey.
39. Soft, buff.

The Charcoal

by D. F. Cutler

Underneath the oven-chamber floor and in the furnace chamber there were a number of pieces of charcoal, though insufficient to quantify the species present. The following species were represented: Oak (*Quercus* sp.); Birch (*Betula* sp.); Willow (*Salix* sp.); Family *Rosaceae*, subfamily *Pomoideae* which includes apple, pear, *Crataegus* sp., mountain ash, whitebeam, cotoneaster sp., and firethorn.

Discussion and Conclusions

The kiln at Springwood is well preserved, circular in shape with a single stoke-hole below the contemporary ground level. Probably the lining to the kiln was permanent though there is no detailed evidence as no sections of the lining were removed for examination. Internally the oven floor was raised and perforated, and supported by the wall of the small furnace chamber. The details of the kiln construction are similar to class F6 as defined by Swan (1984). The kiln was more sophisticated and better constructed than the kilns excavated at Fulmer (Tarrant and Sandford 1972) and Dukes Wood (Rouse 1941, Corder 1943), and better preserved. The other nearby group of kilns at Wapseys Wood, Hedgerley (Oakley *et al.* 1937, Jones 1963 and 1965) appear to fit into Swan's category F2. The main difference being F6 and F2 types is that F2 kilns show evidence for the use of temporary kiln-furniture at the bottom of the kiln to aid stacking and heat circulation, but none for a permanent, raised floor.

The pottery industry in the Chilterns was well established by the second quarter of the second century AD, as is evident from previously discovered kilns at Fulmer and Hedgerley. Clay, timber, and water would have been readily available. Distribution of the wares is likely to

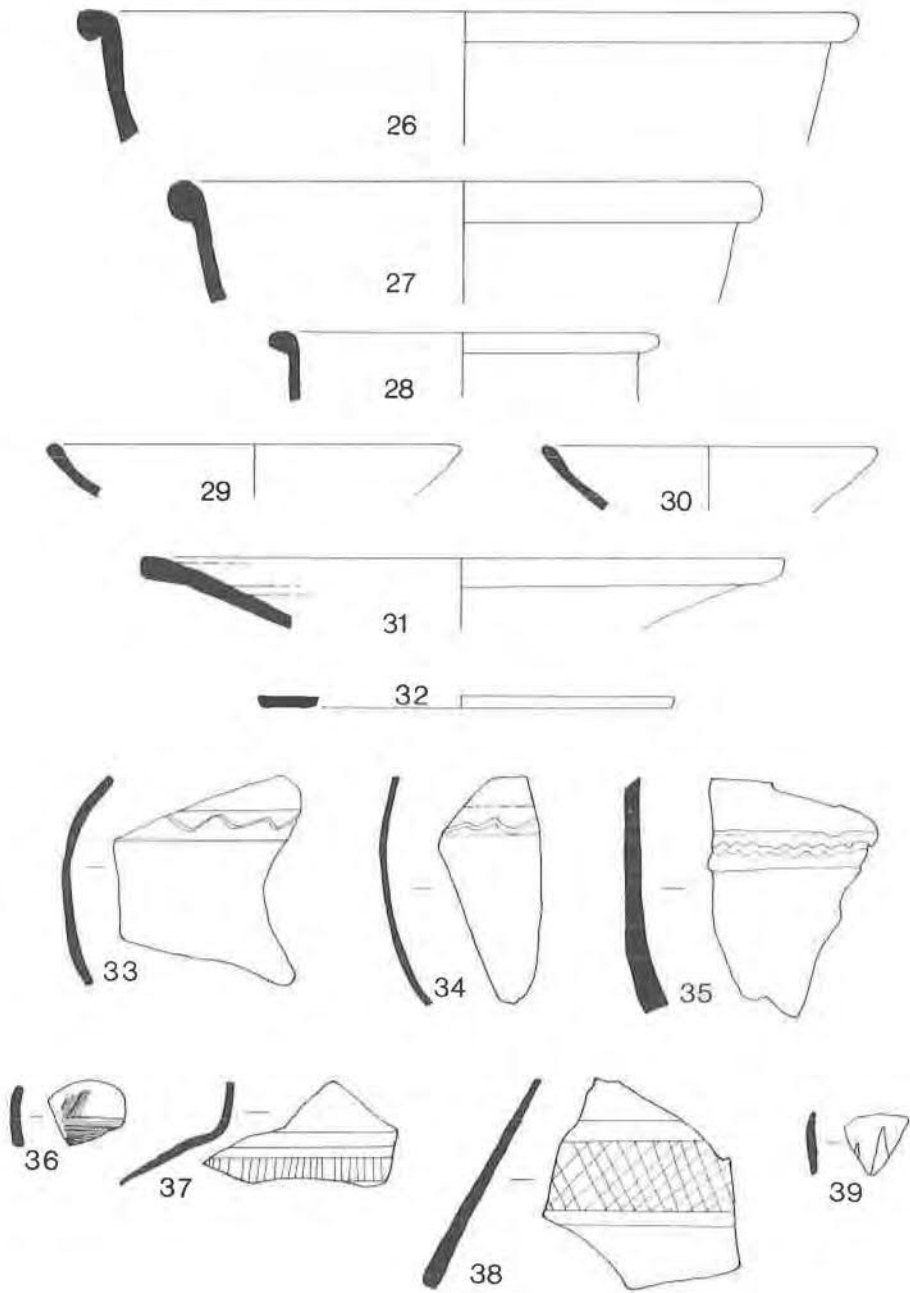


Fig. 7. Pottery decoration (1:4).

have been mostly local, though few local finds from Romano-British sites can be ascribed to any of the kilns.

Pottery from the kilns excavated at Hedgerley in 1935 (Oakley *et al.* 1935) and 1965 (Cauvain and Cauvain 1980) has been dated stylistically to the second quarter of the second century AD. The similarity of the products of the Springwood kiln to those from the Hedgerley kilns is striking, both in fabric and form. There are some small differences between Springwood and Hedgerley 1935—for example lids from Springwood are plain and there are no pie-dishes represented. However, the small differences in product groups may be the result of differential retrieval and may not necessarily indicate chronological differences.

In the absence of any firm dating evidence from any of the kilns it is reasonable to suggest that the kilns at Wapseys Wood and at Springwood are contemporary. By comparing the pottery styles it is possible to suggest a date range for the operation of the Springwood kiln between AD 125 and 175.

Acknowledgements

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