The Excavation of a 17th-century Pottery Site at Cove, E. Hampshire

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SUMMARY: Excavations adjacent to the M3 motorway at Sandy Lane, Minley Road, Cove, Hants: (GR SU 846569) were undertaken in April 1972 to explore indications of a kiln structure, as well as pottery sherd, noted during the roadway building. No kiln or other structures were discovered, but a ditch was excavated which was filled with a large amount of whole and broken pottery, dating from probably the second quarter of the 17th century.

THE SITE

THE SITE LIES WITHIN AN AREA which the recent work of Mr. Felix Holling has shown to have been a scene of almost continuous industrial activity by potters from the medieval period up till the present day. The Pottery probably obtained much of its clay from a site or sites within the outcrop of the Reading Beds, a white-firing clay, about 6 or 7 miles to the south or south east. Fuel, in the form of either peat or small timber, would have been readily available.

THE EXCAVATION

In 1971, construction work for the M3 at Sandy Lane, Cove, E. Hants. (GR SU 846569) revealed patches of burnt bricks and clay, and scatters as well as localized dumps of pottery, suggesting the presence of a Pottery works in the immediate area. In April 1972 an excavation was undertaken by the writer adjacent to the M3 near where the pottery and burning was observed, on land due to be developed for housing. Although a resistivity survey of the area proved inconclusive, an area totalling 400 sq. metres was stripped down to the natural of soft grey sand (see plan, FIG. 1).

2 Holling, ibid., p. 63. For further discussion about the extent and development of the industry as a whole, see ibid., 59-88.
3 The excavation was undertaken with a generous grant from the Department of the Environment, which was administered by the Society for Post-Medieval Archaeology and the Guildford Museum, on whose behalf the excavation was undertaken. Thanks are due to the land agent of the Ministry of Defence, owner of the land, for permission to excavate. The writer also wishes to thank Mr. F. Holling and Mr. R. Hunt for generous help with administration and practical help and advice both before and during the course of the excavation; Mr. T. Clark for undertaking a preliminary magnetometer survey of the site, and various members of Farnham Art College, amongst others, who helped on the excavation. The analysis of the finds and the writing of this report have been made possible by the tenure by the writer of a Research Fellowship in the History of Ceramics at the West Surrey College of Art, Farnham, as well as by storage and working facilities provided by Felix Holling at the Guildford Museum. I am grateful to Miss Claudia White for help with typing the MS.
4 The finds are deposited in the Guildford Museum, Castle Arch, Guildford.
MINLEY ROAD
HAMPSHIRE
1972

FIG. 1
Minley Road, Cove. Location map.
Nothing, however, was discovered of any kiln structure or burnt floors in the area excavated. The topsoil, about 0.5 m. in depth, had been extensively ploughed, and from it were recovered many small shreds of pottery of the 17th to the 19th centuries. It was afterwards learned from local sources that a concentration of burnt and glazed bricks probably representing a kiln had been observed during the construction of the motorway underneath its present line (marked on plan, Fig. 1). An extension of the trench to the east, however, located a former drainage ditch cut into the natural sand, which provided a large group of complete and fragmentary pottery vessels, some of them wasters. The ditch was sectioned by this extended easterly trench, and its filling proved to be a homogeneous wet black silty sand with much organic material, into which had been thrown the pottery vessels and sherds. The ditch was a wide U-shape, 1.0 m. or a little over in depth and between 1.5 and 2.0 m. in width at the top. Finds from the topsoil covering the true silt filling of the ditch were kept separate, and afterwards discarded. The trench was extended along the line of the ditch to the north, away from the motorway, for a length of about 8 m. The ditch appeared to carry on to the south underneath the motorway bank. Another group of finds, much smaller than that from the ditch, was recovered from the side of the M3 ditch, but all the vessels from this (with the exception of the tall candlestick, no. 114) duplicated those types found in the ditch. The pottery finds described below were all recovered from the homogeneous filling of the ditch below the topsoil, and are therefore treated as a single "closed" group of finds.

THE FINDS

Two series of finds from other contemporary pottery-making sites in the area have already been published. The description of the present series of ceramic types follows in many respects that set out in these two articles, although the order of treatment is to some extent modified.

The various vessels described below represent in all probability an almost complete range produced in the Pottery. They were all, with one exception (no. 41), found associated in the silt filling of the ditch, and can therefore be taken to be a more or less contemporary group. It seems from the lack of variation within the types that they were all produced within a single generation—though this does not mean to say that the working life of the Pottery itself was not of longer duration.

FABRICS

The types below are described, as in Holling's articles, by their form. Vessels of the same form were, however, made in two basic types of fabric: (a) fine un-

4 By Felix Holling, prior to the time of the excavation.
5 P. Holling, op. cit. (hereafter referred to as Holling (1)), and F. Holling, "Seventeenth-century pottery from Ash, Surrey", Post-Medieval Archaeology, iii (1969), 18-30 (hereafter referred to as Holling (2)). See also for parallel finds from Warwickshire: Paul Woodfield, "Yellow-glazed wares of the 17th century", Trans. Birmingham Arch. Soc., 87 (1963-4), 78-87. Perhaps the largest published group of finds of white-ware pottery from the early 17th-century kilns in the area has been recovered from excavations at Basing House, Hampshire. See Stephen Moorhouse, "Finds from Basing House, Hampshire, c. 1560-1645", part 1, Post-Medieval Archaeology, iv (1970), 31-91. All of the basic types described below are represented in one form or another in the collection from this site, although many of these vessels are probably not from the particular kiln at Minley Road, Cove. Of particular interest is the fact that this material is dateable to a period before 1645: see discussion below, p. 185.
tempered off-white or pale creamy-buff fabric; and (b) a fine red-brown fabric, also untempered. The proportion of white to red fabric vessels was about 6 to 1 over most of the range of forms. The colour of some of the white ware vessels showed a marked tendency towards pink or buff, and that of some of the red ware vessels towards the same colour. These variations are probably due, though, to differences in particular batches of clay used.\(^6\)

**GLAZES**

Three different types of lead glazes were used: yellow (plain lead glaze), green (lead glaze with the addition of copper), and mottled brown (with the addition of manganese or iron). Most of the different forms of vessel were glazed in either yellow and green glazes, in roughly equal proportions; on some, especially the pippins, the glaze colour showed wide variations between yellow and green. Brown glazes were for the most part restricted to the mugs, although small numbers of most of the different types of vessel forms were also glazed in this colour. The same glazes were also used on the red ware vessels, giving various shades of orange, khaki and brown. The variations of glaze types are described in detail under the descriptions of the individual forms.

It seems that the potters had all three types of glaze available at the same time, and used them in combination, as well as singly, on the same vessel quite freely to achieve in some cases quite remarkable decorative effects. This is most noticeable among the mugs which, although they are for the most part glazed brown on both sides, show on some of the vessels all possible combinations of two or all of the three colours, producing as a result some very attractive vessels. The same decorative use of glaze is shown on the vessel made in imitation of a masked 'Bellarmine'-type salt-glazed stoneware jug (no. 118). The speckled brown manganese glaze on this vessel is quite remarkably similar to a true stoneware salt-glaze.

The glazes used for most of these vessels were probably fritted in a separate kiln, and then ground to a powder, mixed with water, and applied as a thin liquid slip to the vessel by dipping or pouring. No archaeological evidence of any frit or fritting kilns were found, but the evenness of the glazes on most of the vessels would seem to suggest that these processes were used. Recent work on ceramic material in the S.E. of England has suggested that the technique of fritting glazes was probably introduced into England—possibly from France—with the change-over from medieval types (which were without exception in England glazed by the application of a powder) to the early post-medieval types called 'Tudor green', in the middle or later part of the 15th century. The recent excavations of some of this material at a kiln in Farnborough by Mr. F. Holling would seem to support this hypothesis. The 17th-century ceramic industry at Cove (as at other sites in the area) is thus continuing a tradition which it might not be too inaccurate to say was introduced and perfected a century and a half before, only a little distance away.

**DESCRIPTION OF THE POTTERY**

The vessels discussed below are described by their form, the most complete

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\(^6\) In the descriptions below, the vessels drawn and discussed are in an off-white fabric, unless otherwise stated.
examples of all variations of which have been illustrated in Figs. 3–11, and numbered 1–128. The names of vessel types, which in the past have reflected function rather than shape, are kept merely for convenience, and do not determine the basic classification below, which has been kept to its simplest.\footnote{The terms ‘plate’, ‘dish’, ‘bowl’, ‘cup’, ‘mug’ and others are precisely defined by Brian Bloice and Graham Dawson in: B. J. Bloice, ‘Norfolk House, Lambeth, excavations at a Delftware Kiln site, 1968’, Post-Medieval Archaeology, v (1971), 121 ff. These definitions however apply only to tin-glazed earthenwares; the shapes of hand-thrown vessels of earlier periods should not it is felt be as closely defined or restricted.}

The commonest types of vessels, making up the bulk (approx. 95 per cent) of the contents of the ditch, are as follows:

- Platters and plates,
- Bowls (including porringers, skillets and dishes),
- Cups and mugs,
- Pipkins,
- Domestic vessels (chamber pots).

These forms are common probably to most other kilns with a large output which were in operation in the early 17th century, and are of course very common associated together in contemporary domestic deposits. Besides these basic forms, a large variety of miscellaneous forms represented amongst the material recovered by a single or only a few examples testify to the wide range of products of this kiln, as well as to the skill and inventiveness of the potters as craftsmen. (This wide variety of output is also an indication of the flexibility of the market for such products, and of the fact that by the early 17th century some at least of probably all the types of vessels in common domestic use were manufactured of glazed earthenware.) These forms consist of the following types:

- Dripping pans
- Butter pots
- Costrels
- Chafing dishes
- Money boxes
- "Fuming pots"
- Condiment dishes
- Candlesticks
- Flasks or flagons (of ‘Bellarmine’ type)
- Spinning top (? or lamp)
- Pedestal dishes
- Lids
- ‘Marbles’

\textit{Platters and plates}

A large number of sherds of vessels of this type were recovered, and must have been a staple product of the Pottery. All these vessels have flat bases with sloping sides and wide flanged rims with a variety of different shapes (rounded, beaded or folded). They range in size from very large (diam. 42 cm.) such as no. 1, to very small saucers (diam. 14–4 cm.), no. 8. Fig. 2 gives the frequencies of measurable rim diameter (to the nearest cm.) for a total of 152 rims of yellow glazed plates, and 87 green glazed plates. This shows the majority to have a rim diameter of between 30 and 34 cm., with another peak around 24 cm. All the vessels of this class are glazed either green or yellow on the upper side only, with odd spots and patches of sometimes both colours together on the outer edge of the rim and the underside. The proportion of
green to yellow glazed vessels is approximately equal. One platter with a speckled brown glaze and off-white fabric was recovered, similar in size and type to no. 3. The runs and inclusions in the glazes of many of these vessels, especially the brown glazed platter, indicate that they were usually, if not invariably, fired in an upright position, standing on the rim.

The bases of the plates are usually trimmed with a knife after removal from the wheel. The edges of the rims are finished in a variety of ways. They are always thickened, occasionally becoming bifid, or rolled or folded over, as in nos. 3 and 4. A small number of these vessels (about 20 per cent of the total) show a simple form of decoration, which consists of zig-zag or criss-cross lines incised around the rim with a single sharp or blunt instrument, as in nos. 10–11, or more rarely as vertical lines incised with a comb (single sherd only), as in no. 9. One rim sherd (not illustrated) of green glazed ware has decoration of zig-zag incised lines with a notched rouletted decoration around the edge of the rim. Another rim sherd (no. 13) has a unique decoration of zig-zag lines incised with a blunt tool with an applied stamped motif in the spaces. Simple applied stamps were used to decorate some of the drinking vessels (nos. 62 and 68), but this is the only example on a plate.

Vessels of this type also occur in a red-firing clay (approx. 10 per cent of the total), with both yellow lead glazes, producing orange wares, and green glazes, producing either khaki or dark brown wares. The same decorative motifs occur also on vessels in this fabric.

Bowls and dishes

Several quite clearly defined types of open table vessels are represented. These may be described as follows:

(a) porringer; without handles
    with single horizontal handles  nos. 14–16
    ditto, with internal lid seating  17–21
    28
(a) Porringer. This is a very common shape found in a variety of forms on most if not all of the contemporary kiln sites in the area, and in most excavated domestic deposits of the period. Most of the vessels in this class have pronounced ridges on the upper part of the body, possibly to help with the attachment of the handle. Most of those found were too fragmentary to indicate the presence of handles, but enough remains of the large vessels nos. 14-16 to show that they have none. Nos. 19-21 are complete enough to show that they have only one loop handle. All the porringer are glazed on the interior only (with occasional splashes and patches on the exterior and base) with either green or yellow glaze, in approximately equal proportions. Nos. 20 and 21 however, are glazed with a speckled brown glaze on both surfaces and have a pinkish-buff fabric; a few other bowls, not illustrated, have a speckled brown glaze on the interior only in similar fashion to the yellow and green glazed vessels. No. 20 is remarkable in that it is very finely potted, as well as specially glazed on both surfaces.

Kiln scars on many of the vessels show that they have been fired in the same batch as other vessels with different colour glazes as well as others made from red- and pink-firing clays. No. 14 (glazed yellow internally) has on the base a kiln scar of a narrow-rimmed red-firing vessel glazed green; no. 15 (also glazed yellow internally) has patches of green glaze on the interior and exterior and a kiln scar on the rim caused by a white-firing vessel glazed brown; and no. 18 has a similar kiln scar on the handle. Many of these vessels thus show evidence of having been stacked against and on top of each other. The brown-glazed porringer, no. 21, however, has the clear scars of a trivet on the base, and the remains probably of another fused to the bottom of the interior. This is the only vessel found which shows any evidence of the use of kiln furniture.

The smaller vessel no. 28, which has a rim formed for an internal lid seating, is included under this heading in that it also has a horizontal loop handle.

(b) Flanged bowls (? stool pans), nos. 22-27. Vessels of this type form a conspicuous part of the output of the Pottery, and show common characteristic features throughout the range of sizes produced. They are all very thinly potted, and have a marked flanged rim moulded at the outer edge. All of them, indeed, could have been made by the same potter. Some vessels of this larger three sizes (nos. 22-24) have two opposed handles, applied in a similar manner to those on the chamber pots (no. 96). The rim of no. 23 is decorated with a wavy line scratched with a multi-pronged instrument, and is the only decorated example. These vessels are glazed green or yellow, in roughly equal proportions, all over the interior surface, and often in runs and patches on the exterior.

Vessels of this shape have been noted by Holling as coming from the Farm-
borough kilns, in the late 16th century, and it is therefore interesting to record these from a context of the early 17th century.

(c) Skillets or ladles, nos. 29–33. Only a few sherds of these were recovered. These vessels are glazed internally with either yellow or green glaze, and have three types of near-horizontal handles, as illustrated. Nos. 29 and 31 (and probably no. 30) have simple short pulled handles attached to the body, no. 32 has the longer flattened pulled handle attached to the rim, and no. 33 has a short tubular handle similar in form to those attached to the smaller pipkins (e.g. nos. 92 and 93).
FIG. 4

Minley Road, Dove. Porringers (14–21, 28), flanged bowls (22–27), skillets or ladles (29–32). Scale: 1⁄4.
Wide bowls and pans (nos. 34–39). Vessels of this type were made in a wide range of sizes, six of which are illustrated. All have simple flanged and downturned rims, and are glazed on the inside only with either yellow or green glaze in roughly equal proportions.

Tall bowls (nos. 40–43). Vessels of various shapes and sizes. Nos. 41 and 43 are unique, nos. 40 and 42 are represented by only a few examples each, though this type includes vessels with both green and yellow glazes on the interior only. No. 41 is unusual in having notched rouletted decoration around the rim and body, and is glazed green on the interior, with a kiln scar and two patches of brown glaze on the exterior. No. 43 (also glazed green on the interior) is also unusual in having a large horizontal loop handle.

Dishes (nos. 44–52). These are of varying sizes, and have rims with a slight moulding (nos. 44–46), or with no moulding (nos. 47–52). All forms (except no. 52) are represented by several examples, and are glazed either yellow and green on the inside of the vessel only. No. 44 is unusual in having rouletted notched decoration around the outside of the rim; no. 52, a unique vessel, has been shaped after throwing to give an uneven lobate form, and has a rouletted notched decoration around the top of the rim.

**Cups and mugs**

A quite sizeable proportion (about a quarter) of the total number of finds consisted of high quality drinking vessels of two main types, with three other types represented by single vessels only. All these vessels are thrown very skilfully, in many cases with quite complex stamped and incised designs, and for the most part glazed with a glossy dark brown often speckled glaze on both the interior and exterior. A few of the vessels recovered showed between them almost all possible combinations of two of the three standard glazes (brown, yellow and green) on the interior and exterior, producing as a result some quite remarkably decorative vessels. The great majority of these vessels are of off-white or pale buff fabric, but a few are of a dark red and brown fabric.

**Type I** (nos. 53–63). Approximately 60 vessels recovered; these are globular or barrel-shaped vessels with a small pedestal foot and single handles. All vessels of this type have two or three raised cordons around the shoulder (possibly to facilitate the fixing of the handle), except for one vessel, no. 57. Where present, decoration on these vessels consists of a few incised lines only, in various different patterns. All are glazed both internally and externally with speckled brown or slightly yellowish-brown lead-manganese glaze—except for one nearly complete vessel and sherds of others with green glaze on the interior and brown on the exterior, and a sherd of another vessel with yellow glaze on the interior and brown on the exterior. Three vessels of this type are in red fabric with dark brown glaze.

The shape of these mugs is remarkably similar to many of the tin-glazed earthenware vessels produced in Southwark in the early 17th century, three dated examples
FIG. 5
Minley Road, Cove. Wide bowls or pans (34-39), tall bowls (40-43). Scale: 1.
FIG. 6
Minley Road, Cove. Small dishes (44–52), drinking vessels (53–58). Scale: 1.
of which are illustrated (nos. 128–130).9 Another mug of this type (very probably from the Minley Road kiln) has been recovered from an early 17th-century context in Dover, and others also from Basing House (predating 1645).10

Type 2 (nos. 64–66). The vessel of this type, called ‘encrusted ware’,11 is also of globular form, and represented by only two sherds. It is decorated on the exterior with chippings of crushed flint covered with brown glaze, and has a short neck and well marked shoulder. Several lids (five in number, of which two, nos. 64–5, are illustrated) with similar crushed flint decoration on the upper surface, and with either brown or green glazes, were also recovered. The form and decoration of these suggests that they must have formed covers to the drinking vessels of this type. These covers were thrown upside down on a wheel, with knob handles (now missing) applied separately after removal.

A number of other vessels of this type have been recovered, notably in several contexts in London.12 One similar vessel, from an unpublished 17th-century group from Oxford,13 with alternating vertical bands and patches of applied crushed flint and with green glaze on both interior and exterior, is illustrated for comparison (no. 131).

Type 3 (nos. 67–82 and 84). Approximately 70 vessels recovered. These are vessels with straight, slightly outward-sloping sides, in widely varying sizes, usually with expanding feet or bases of 3–4 raised cordons or tiers. There are invariably also three or four raised cordons a little below the rim of these vessels. The handles of these mugs vary in: (a) size; (b) shape (flattened strap handles or rounded rod handles); (c) number (up to three in number on some of the larger vessels—e.g. nos. 67–8 and 72); and (d) place of fixture on the body (compare nos. 68, 70 and 73). A number of handles were recovered with ornamental projections fixed on the upper edges, a series of forms of which are illustrated, nos. 78–82. Most of the handles are decorated at the lower junction with a single deep finger-impressed hollow. Decoration is very varied, consisting of permutations of triple or quadruple combed lines and single

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9 All three are from the Victoria and Albert Museum, London. I am particularly grateful to Mr. R. Charleston for permission to illustrate these vessels. The decoration on these mugs has been omitted on the drawings, since photographs of all of them have been published elsewhere. No. 128 (V. & A., C 271-1918) is inscribed and dated 'Elizabeth Broddelehou 1628', and illustrated in John Bedford, Delfware (1966), p. 25, and in F. H. Garner, English Delfware, p. 6 and pl. 6. No. 129 (V. & A., 839/1901) is inscribed and dated 'William and Elizabeth Burgess 24 August 1631' and dated 1632 below the handle, and illustrated in Geoffrey Wills, English Pottery and Porcelain (1969), p. 36, fig. 31, and in H. Tait, 'Southwark (alias Lambeth) Delfware and the Potter Christian Wilhelm', The Connoisseur, Aug. 1966, p. 18, fig. 7. No. 130 is inscribed and dated 'Anna Chapman Anno 1642', and illustrated in John Bedford, op. cit., pl. 25, and in F. H. Garner, op. cit., pl. 8A and p. 12. Two other dated mugs of the same form are illustrated in H. Tait (ibid.): one dated 'Mrs. Mary Hooper 1652' (Private Collection) and the other, 'John Potten and Susanna 1613' (Pitrewlliam Museum, Glasther Coll., no. 1935).

10 D. C. Mynard, 'A group of post medieval pottery from Dover', Post-Medieval Archaeology, iii (1969), 40, fig. 12, no. 26. Also S. Moorhouse, op. cit., p. 12, fig. 12, nos. 72–82; red ware vessels with combed patterns and stamped designs are also illustrated, nos. 173–7, fig. 17, p. 69. Several others have been recovered from the St. Nicholas Almshouses excavations at Bristol from a context dating to between 1652 and 1656: K. Barrett, 'The Excavation of a Medieval Bastion at St. Nicholas's Almshouses, Bristol', Medieval Archaeology, viii (1964), 184–212.

11 In Philip Mayes, 'A 17th Century Kiln Site at Pottersbury, Northants.', Post-Medieval Archaeology, ii (1968), 77, and fig. 15, no. 12 and 13. Further examples are also drawn, and the type discussed, in S. Moorhouse, op. cit., 55–6, and fig. 12, nos. 90–4.

12 Material in Guildhall Museum, London.

13 Excavated in Logic Lane, 1961. I am grateful to David Hinton, lately of the Ashmolean Museum, for permission to include this vessel. The small amount of associated material is all early 17th century.
FIG. 8

Minley Road, Cove. Straight-sided drinking vessels (77–82, 84), straight-sided, inward sloping vessel (83), pipkins (86–89). Scale: ¼.
incised lines in vertical criss-cross or zig-zag patterns around the rim of the body, as well as stamped rosettes. Most vessels are glazed with a glossy dark brown slightly speckled manganese glaze, a smaller proportion with a yellowish-brown glaze. Six vessels are glazed green on the interior and brown on the exterior, one glazed green on both the interior and exterior (no. 77), two glazed yellow on the interior and brown on the exterior, and one glazed green on the exterior and yellow on the interior. Four of the vessels recovered are of red fabric, with brown glaze on both sides.

Type 4 (no. 83). Single vessel only with straight inward-sloping sides, single handle, incised grooves around the body and with overall brown glaze. The shape of this vessel has parallels with a number of date tin-glazed vessels with painted decoration, the forms of two of which are illustrated (nos. 132–3). ¹⁴

Type 5 (no. 85). Base of single vessel only, with a splayed notched foot, glazed with dark brown glaze on both sides. Decoration on this vessel consists of vertical combed lines with rows of sets of four stamped impressions, made probably with the end of the same instrument.

Pipkins (nos. 86–95)

Vessels of this type constitute a major item of output of the pottery, and fall into two main types: (a) those with an external lid seating (nos. 86–89); and (b) those with an internal lid seating (nos. 90–93, and perhaps 94–5). All these vessels have three applied feet, and a long hollow tubular handle which sometimes has a circle of deep finger impressions around its attachment with the body (e.g. nos. 89 and 91). Most vessels of this type have ribbing around the upper part of the body. In few cases, however, is this feature particularly marked, and in some instances is almost entirely absent. This feature is taken by Holling to be diagnostic for the determination of stages of development of these vessels in time— as is the slightly sagging profile of the larger vessels (e.g. nos. 86 and 89). Most of the pipkins are of white firing clay; 15 per cent (by estimation) are of red fabric. The sherds recovered are glazed green and yellow in approximately equal proportions, with many showing intermediate colours, and some (e.g. no. 86) with marked greenish brown (khaki) colouration to the glaze. The red fabric pipkins are glazed similarly, the clear yellow glaze giving bright orange, and green glaze giving a dark khaki colour. Most vessels show evidence in the form of kiln scars and glaze runs and spots of having been fired in an inverted position, in many cases with other vessels of different colour glaze and fabric.

Chamber pots

These vessels also comprise a major part of the output of the Pottery, and are of one type and size only (no. 96). They have a bulbous body, and a curved out-
Minley Road, Cove. Pipkins (91-93), chamber pot (96), dripping pan (97), butter pot (98-101), costrel (102), chafing dishes (103-110), money box (111), fluming pot (112), condiment dish (113).

Scale: \( \frac{1}{2} \).
sloping rim with a marked raised cordon below. A thick strap handle is attached and smoothed to the top of the rim and to the body, onto which it is pressed with a single central finger impression. Most of these vessels are of off-white fabric with a few turned a pinkish-buff colour; those made with red firing clay form about 10 per cent of the total. All the vessels recovered are glazed internally only with either green or yellow glaze in roughly equal proportions, with intermediate colours such as very pale green and khaki. Kiln scars on several of both the red and white-firing vessels show that both types have been fired together in the same kiln load; a patch of brown speckled glaze on the vessel illustrated shows that it has probably been fired in the same kiln as some of the drinking vessels. The shape of these vessels is common on other contemporary sites in the W. Surrey-E. Hants. area, and vessels of similar shape are commonly found in domestic deposits of the early 17th century, particularly in London. Two such vessels from London, from a group dated 1620–50, have been published, as well as two others from a group of the same date from Dover.

**Miscellaneous types**

**Dripping pans (no. 97)**

Very few sherds recovered; the one illustrated is of red fabric with orange (plain lead) glaze on the interior and spots of khaki green glaze on the interior. The large tubular handle is attached to the overturned rim and side of the long side of the pan, of which a length of 19 cm. remains.

**Butter pots (nos. 98–101)**

Parts of only three vessels were recovered, together with three lids (two of which are illustrated, nos. 98–99). These conform to the earlier of the types described by Holling in being without glaze, and in having deep corrugations on the interior. Another type (no. 101), of which the base only was recovered, is glazed on the exterior with a thin yellow glaze (and with a kiln scar near the base), and has no internal corrugations. This could, however, be the base of a tall jug.

**Costrel (no. 102)**

One complete neck (illustrated) was recovered, as well as a few fragments of handles, with either green or yellow glaze on the exterior. These costrels are of a type illustrated by Holling, with the body and neck thrown on a wheel in one operation, rather than the neck inserted into the side of the vessel which has been thrown as a closed and flattened hollow (a method common in the case of costrels made in the 16th century).

16 Holling (1), 79–80 and fig. 5.
18 D. C. Mynard, *op. cit.*, fig. 14, no. 44.
19 Holling (1), 77–8 and fig. 4.
20 Holling (1), 79 and fig. 4.
Chafing dishes (nos. 103-110)

Only a few incomplete vessels were found, showing a variety of forms of both the base and the rims, as well as of the supporting knobs. The base of the vessel illustrated as no. 103, which has green glaze on the interior, has a triangular hole cut into the pedestal foot, with a separate central applied base for the bowl pierced with several large holes. A pedestal foot of a smaller chafing dish is illustrated as no. 104. The vessel no. 105 is of fine pinkish-buff fabric with thick glossy dark brown glaze over all of the interior and exterior, and is obviously a very decorative product of high quality. It consists of a bowl pierced at the bottom, at the base of which the pedestal foot was applied as a separate operation, and which was itself pierced with a triangular hole. The side of the bowl has two horizontal rows of holes, and the pedestal foot one row. A single horizontal loop handle (now missing) and three knobs are applied to the side and rim.
Nos. 106-110 represent a series of knob attachments on the rims of the chafing dishes, in one case (no. 109) with a vertical handle attached. The simple pulled lug, no. 110, has been found to be more common on vessels from the early phases of the industry.\textsuperscript{11}

Money boxes (no. 111)

Represented by one complete vessel only (an overfired waster), with green glaze, double knobs and pronounced foot, and a narrow diagonal slot. A large number of money boxes have been found, for instance, in excavations in London, ranging in date from the 15th to the 17th century, but their typology has yet to be defined clearly.

?Fuming pot (no. 112)

Single sherd, glazed yellow on the exterior, shaped like a fuming pot, although there are no pierced holes in the small sherd remaining.

Condiment dishes (no. 113)

These are double bowls, joined with an applied strip of clay and with a single vertical loop handle attached at the join. Three out of five vessels excavated are glazed green on the interior and most of the exterior, one is glazed yellow, and the fifth has no glaze and a decoration of criss-cross incised lines around the exterior of the vessel (not illustrated).

Candlesticks (nos. 114-117)

Examples of two main types\textsuperscript{12} were recovered: (a) three with pedestal feet and one or more tiers (nos. 114-116); (b) those with a flat based tray. Sherds of about ten of the former type were found, the only complete example being the three-tiered candlestick no. 114. These were made probably in a number of separate parts, the candle-sockets thrown on a wheel upside down and plugged into the body, and the interior of the open pedestal feet pared and trimmed with a knife. All these were glazed yellow on the exterior. Only one partially complete example of the latter type was recovered (no. 117), and was thrown on the wheel in one operation, possibly with a handle applied to the edge of the tray, and is of red-firing fabric with orange glaze.

Jug or flagon ('Bellarminian' copy) (no. 118)

The vessel illustrated was one of two\textsuperscript{13} necks of jugs with applied face mask of 'Bellarminian' type recovered from the site. It has a hard pale grey-buff fabric, and is covered on the exterior with speckled brown glaze which is visually almost identical with the typical speckled salt glaze on true stoneware vessels. There seems little doubt that vessels of this type were being produced in direct imitation of the imported German stoneware vessels, which were not made in England in true salt-

\textsuperscript{11} Ibid.

\textsuperscript{12} See also Holling (1), 81 and fig. 5.

\textsuperscript{13} The other was removed from storage on the site during the course of the excavation.
glaze stone until half a century later at Fulham. Only two other examples of lead-glazed earthenware copies of these flagons have been found in England.

*Spinning top (or lamp) (no. 119)*

Only one example was found, glazed green on the exterior and dark brown on the interior, and with marked ridges on the upper part. No other examples of tops made in earthenware are known to the writer.

*Pedestal dishes (nos. 120–122)*

Bases of nine vessels were recovered of possibly standing dishes or cups of uncertain form. Two of these are glazed green, and the rest brown, on the exterior. The base is hollowed out with a knife after removal from the wheel.

*Lids (nos. 123–128)*

Sherds of a number of different types, as illustrated, all of which, except no. 125, are represented by one sherd only. No. 123 (a waster) has a thick loop handle attached to the edge, and is glazed on both sides with yellowish-green glaze with brown patches on the underside. Nos. 124 and 125 are unglazed. No. 126 is unglazed and has a light red fabric. No. 127 is a specialized and probably unique product, made apparently in imitation of a crown. It has a decoration of a zig-zag incised line and many impressed-ring and dot stamped circles on the exterior, with similar motifs incised and stamped on the upper domed surface of the crown. The top edge of the outer ‘flange’ (which is applied separately) is cut to form a somewhat irregular outline. Again there appear to be no parallels for this piece. No. 128 is a knob probably from another elaborate lid or cover, possibly from a large posset pot.

**DATING**

It has been concluded above that the pottery finds from the site are from a single ‘closed’ group and are therefore of roughly similar date. There is no internal dating evidence for these finds, but a fairly accurate date range can be derived from the several parallels of their forms with other more readily dateable ceramic items. The most reliable is the remarkable parallelism in shape between the mugs and cups produced on this site (which formed a fairly specialized and important item of manufacture) and the dated vessels of very similar shape produced in Southwark and/or Lambeth in decorated tin-glazed earthenware. The vessels of this type drawn above (nos. 128–130, 131–3) range in date from 1628 to 1642, and the similarities in shape would suggest that the pottery from the Minley Road site was all manufactured during the second quarter of the 17th century. Tin-glazed mugs of a later date are somewhat squatter and more bulbous, and if, as seems likely, the

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54 See Lorna Weatherill and Rhoda Edwards, 'Pottery Making in London and Whitehaven in the Late 17th Century', *Post Medieval Archaeology*, v (1971), 175 ff., and also for further references.

55 A complete jug in the British Museum, from London, glazed brown, no. C23. This has three medallions with the arms of the Earls of Dorset, probably that of Edward Sackville, created KG in 1625 and who died in 1632. Another, glazed dark green, with face mask and medallion with the date of 1674, is illustrated in *Proc. Soc. Antiquaries*, 2nd ser. xv (1895), 77–8.

56 See notes 9 and 14 above.
Minley Road, Cove. Mugs and cups of similar form from Southwark and/or Lambeth. Scale: 4.

fashions in shapes spread quickly from the London to the rural centres of manufacture, then the vessels from the Minley Road kiln are not likely to be later in date than 1650. Vessels of this type were recovered from the St. Nicholas' Almshouses site at Bristol from a dump discarded at some date between 1652 and 1666, providing additional confirmation of the dates suggested above. Although no general systematic work has been done on the post-medieval pottery of London, material of similar type to that from the Minley Road kiln seems to be associated in groups also of around the period 1620–1650. A number of finds of similar types to those from this kiln site are also represented in the large group of pottery from Dover Castle, associated with fine tin-glazed earthenwares, slip wares and imported vessels, as well as clay pipes, which is also dated by the author to around the second quarter of the 17th century, as well as being represented in the large group from Basing House, dateable to before 1645. This is also the general date range suggested by Holling for the nearest parallels to the pottery from this site from other sites in the area, in particular that at Hawley.

CONCLUSIONS

As has been demonstrated, the output of this kiln is remarkable as much for the range of products as for the skill with which many of them were obviously made.

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57 K. J. Barton, op. cit. (note 10). The writer has not, however, examined this material personally.
58 Excavated groups in Guildhall Museum (Excavation Register). See also the published chamber pots from London, note 17.
60 Holling (4), 69–70.
The use of the different colour glazes to produce some interesting decorative effects (in the case particularly of the drinking vessels, as well as the more specialized products such as chafing dishes, the decorated lid, the spinning top and the 'Bellarmine' copy) also indicates that one or several potters of some skill must have worked in this Pottery. What internal dating evidence it is possible to find suggests that the Pottery does not seem likely to have worked for more than a generation. It therefore seems not unreasonable to suggest that the enterprise was set up by, and died with, one or two families who had learned their skills in another Pottery nearby. These potters set out to take advantage of local availability of clay and fuel to produce various types of ware which although they included forms not hitherto found on any other nearby kiln site, nevertheless followed in the main a tradition common to the area.

Perhaps the most important reason for the setting up of the Pottery at Sandy Lane—as indeed in other nearby centres—given the presence of an adequate supply of fuel and raw materials, must have been the very large capacity of the London market. Early 17th-century London has been described as 'the most populous, the most rapidly growing, the wealthiest and the most compact' of all the centres of consumption in the country. The most recent estimates of the population growth of London in the 17th century suggest that between 1605 and 1655 the population of London more than doubled—an enormous increase which must have had a profound effect on a large number of basic industries. Fisher shows how the growth of the London market gave a definite stimulus to English agriculture, and the same stimulus must have been felt by the manufacturers of basic household goods of which pottery was one of the most common items.

Except for the importation in relatively small quantities of specialized decorative pottery from most of the European countries, the London market was supplied, at least in the early 17th century, almost solely by the pottery-making centres of: (a) Harlow, Essex (coarse red ware, some of it with slip trailed decoration); (b) Wrotham, Kent (black glazed ware and complex slip ware); (c) W. Surrey/E. Hants. (green, brown and yellow glazed white and some red ware); (d) Southwark and Lambeth (plain and decorated tin-glazed wares, as well as coarse red wares); and (e) a few local centres of manufacture in N. and S. London. A complete study of all these centres of production which supplied the London market in the medieval and post-medieval periods has yet to be made, but the above list gives some idea of the degree of specialization of products in the early 17th century which such a large


39 The estimated increase in population for the City, Liberties and Outparishes (derived by calculation from Bills of Mortality, etc.) is from 184,000 in 1605 to 426,000 in 1665 (lowest estimate)—and rather more than doubling in size in the 50 years between 1605 and 1655. See J. J. Sutherland, 'When was the Great Plague? Mortality in London, 1563 to 1665', in D. V. Glass and B. Revelle (eds.), Population and Social Change (1972), 287–319, esp. table 6, p. 310.

38 F. J. Fisher, op. cit. (note 31).

40 For the effect of the growth of this market on the scale of manufacture of fine pottery (tin-glazed wares), see the discussion in L. Weatherill and R. Edwards, op. cit. (note 24), 178–81. The glass industry was also a major beneficiary of this increase in the size of the market: between 1590 and 1640 the industry expanded enormously in both degree of technical development and scale of output (the second in part the consequence of the first), making London by far the largest centre in England for the manufacture of glass of all kinds. See Eleanor S. Godfrey, The Development of English Glassmaking, 1540–1640, unpublished Ph.D. thesis, University of Chicago, 1937.

market could induce—a situation paralleled also in the specialization in food production during the same period.\textsuperscript{36}

Although it is possible, however, to put forward the fact of the great growth of the market in London as a primary reason for the establishment and broad viability of the ceramic industry in W. Surrey and E. Hants., the products of this industry as a whole reached many if not most of the market centres of the south of England, as far apart as Bristol, Oxford, Norwich and Dover (with the notable exception of Southampton, whose needs were supplied in the main by imported pottery). The writer’s brief acquaintance with the Surrey/Hants. white wares from many of these towns suggests that this industry was of considerable importance in the economy of the south of England as a whole, and can indeed be described as an industrial centre of far larger proportions than has hitherto been realized.

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