

THE FOURTH-CENTURY ROMANO-BRITISH POTTERY KILNS AT OVERWEY, TILFORD

BY

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IN the Society's *Survey of the Prehistory of the Farnham District*, p. 224, appears a short note on a Romano-British pottery kiln found in a trial trench made in 1937 at Overwey, Tilford, and on pp. 247-9 there is a description of some of the pottery found in the trench. The site lay forgotten throughout the war, but it has since come into the hands of Major C. W. De Roemer, a member of the Society, who was anxious to revive interest in it. A trench was dug at the beginning of 1947 by Major A. G. Wade, producing a large quantity of pottery sherds and the remains of an oven, and as a result of these finds Major De Roemer invited the writer to organize a full-scale excavation of the whole site.

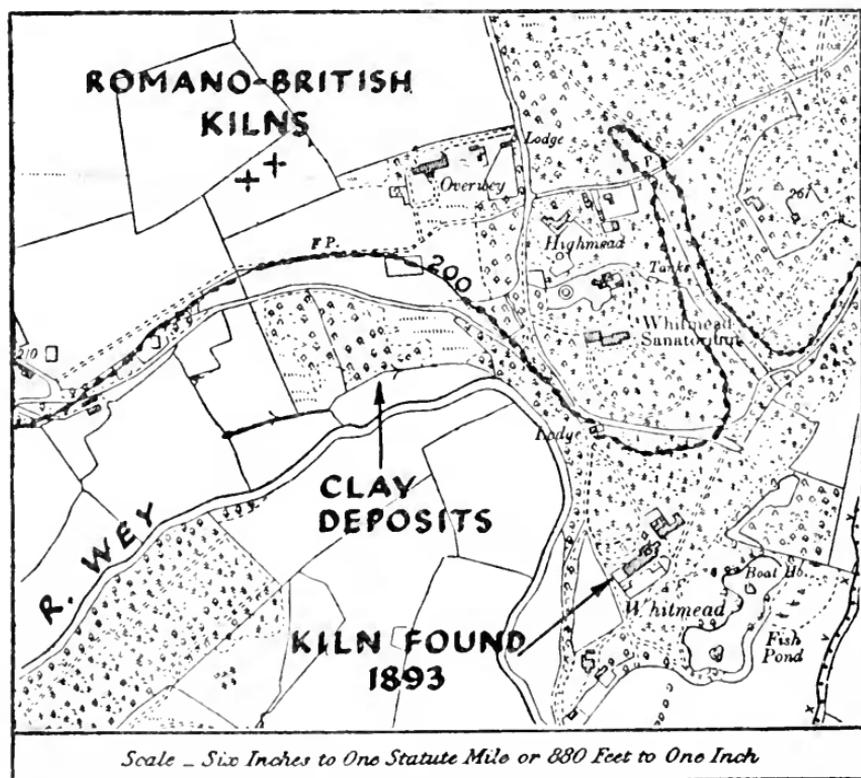
Work was begun by members of the Society in May, 1947, and continued during week-ends until May, 1948. About half-way through this period, the excavators were reinforced by parties of children from Sheephatch School, Tilford, who, under the able leadership of Mr. H. J. Grant, not only did the bulk of the heavy work on site B, but continued after the termination of the main excavation with the digging of trial trenches and the filling of trenches no longer required.

The writer is indebted to many people for kindness and generosity since the excavation began. Firstly we must thank Major and Mrs. De Roemer, who not only allowed us every facility for the work, but provided the diggers with refreshments on a great number of occasions. Special thanks are due to the volunteers, both members of the Society and others, who gave so freely of their spare time to work on the site and who are too numerous to mention individually. The writer gratefully acknowledges the help of Mr. Donovan Box, Mr. F. Clark and Mr. P. R. Stuart, who photographed the site; of Mr. Lowther, Major Wade and Mr. Sheppard Frere, all of whom visited the site and gave much helpful advice; and of the members of the staff of the Natural History Department of the British Museum who examined the charcoal and animal remains. Without the interest of Mr. R. V. Gould, Headmaster of Sheephatch School, and the unfailing energy of Mr. Grant and his boys and girls, the complete excavation of the site would have been impossible. Repairs to some of the pottery were very finely executed by Mr. David Baker.

The site of the kilns is in a rough field sloping down to the River Wey on the southern edge of the level plateau of Folkestone

sands, extending northward from the river to the range of green-sand hills of which Crooksbury Hill forms the highest point hereabouts. The plateau is sparsely populated and thickly wooded to the present day, and must have been extremely remote in Roman times. The site is situated in the grounds of the house "Overwey," in Tilford parish, half a mile N.E. of the village, and is to be found on O.S. 6-inch Sheet, Surrey XXX S.E., the National Grid Reference being 880440.

The three kilns excavated were found to occupy two distinct sites, immediately at the top of the slope on either side of a broad gully or hollow running down the side of the plateau in the direction of the river, 1,100 feet away. This hollow disappears half-way across the field below, but an old inhabitant of the village stated that sixty years ago, when this lower field was cultivated for hops, the workers obtained water from a spring issuing from the bank between the two fields at a point in the centre of the hollow¹. This



[This map is reproduced from the Ordnance Survey Map, with the sanction of the Controller of H.M. Stationery Office.]

FIG. 1.—THE SITE OF THE KILNS.

¹ Information kindly supplied by Miss Maud, who lives in a house adjoining the site, and was told about the former existence of the stream by her gardener, a former labourer.

spring has now disappeared, but it is probable that the hollow was formed by it and that in Roman times the water flowed from higher up the slope, providing a reason for the grouping of the kilns round the hollow. Trial trenches were cut across this hollow in an attempt to discover whether there were remains of clay-puddling floors beside the former course of this stream, but the hollow was found to be filled with top soil for a depth of as much as 2 feet 6 inches, below which the yellow sand subsoil was badly discoloured, and no remains, apart from a few worn pottery sherds, were to be found.

It thus seems that the site had the advantage of a convenient water supply, and timber for firing the kilns would have been abundant in the area; but suitable deposits of clay, the essential raw material of pottery making, appear at first sight to be absent. The geological map shows that the nearest recognized deposits of the local gault clay lie two and a half miles to the north, under the southern slope of the Hog's Back. The gault also occurs at a roughly equal distance to the west in the Frensham district, but it seems most unlikely that clay would have been brought so far, connection with the Frensham deposits being further hindered by the intervening River Wey. It was therefore decided that during the excavations search should be made for hitherto unsuspected deposits in the vicinity of the kilns, and the investigation

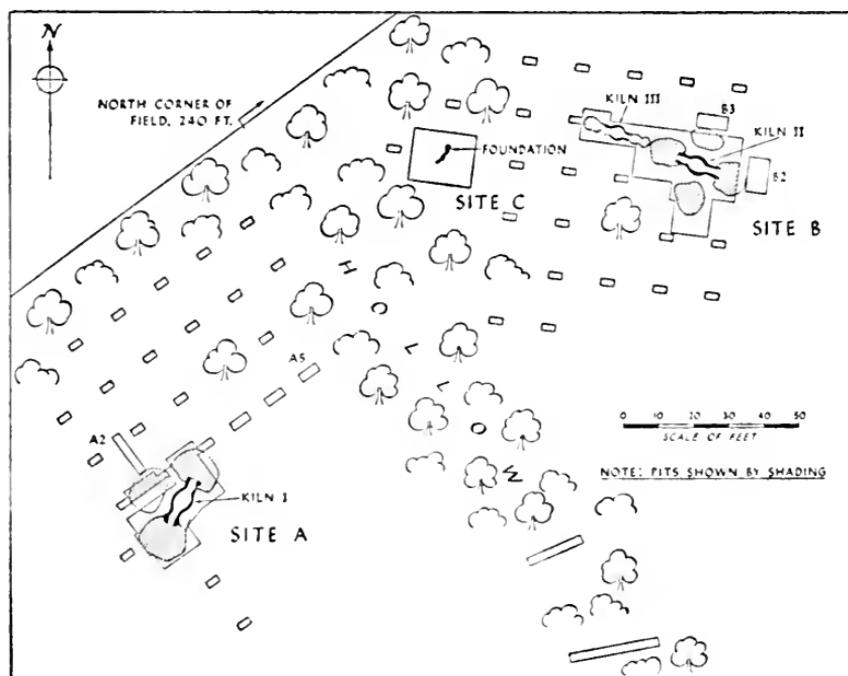


FIG. 2.—GENERAL PLAN OF SITE SHOWING LAYOUT OF TRENCHES.

was rewarded by the discovery, 300 yards away, of pockets of grey clay in the alluvium close to the river. It appears that these small deposits were found and used by the potters, possibly explaining the predominance among their products of grey wares, which modern potters find impossible to reproduce with the normal gault.

SITE A.

This site was chosen as the field of operations for the first trenches for two main reasons: it appeared to be the point where the 1937 trench had encountered remains of a kiln, and the amount of burnt sand and wasters showing on the surface indicated that better results would be obtained here than elsewhere.

To begin with, a narrow trench was cut roughly along the contour of the hill, which by good fortune intercepted both pit *Ia* and pit *Ic*. It was assumed that a kiln would be attached to one or both of these pits, and accordingly trenches were put off at right angles from the approximate centre of pit *Ic*. Trench *A2* revealed nothing except the tip of the pit, but a trench opposite this encountered the masonry of the western furnace of kiln *I*, and the further excavation of the site was a fairly straightforward matter of clearing the kiln, pit *Ib*, and as much as was practicable in the time of the remainder of pits *Ia* and *Ic*.

Kiln I.

When clearing was begun, it was expected that this kiln would assume the usual form of Romano-British pottery kilns—a circular firing chamber covered by the remains of a perforated clay floor on which the pottery was placed, and connected by a narrow furnace-tunnel with a single stoking-pit. The kiln seemed at first to be following this arrangement, for after the furnace found in the trial trench had been partly cleared, stoke-pit *Ib* was found to be connected with it, and in the opposite direction the walls of the furnace broadened into what was apparently a firing chamber. Further excavation, however, revealed that at its N.E. end the chamber narrowed to form a projection connected with pit *Ia* in an exactly similar manner to that in which the furnace was joined to pit *Ib*. Both the openings were on the same level, rendering it unlikely that one of them acted as a chimney, and the only reasonable conclusion that could be drawn was that the kiln had two furnaces, connected with separate stoke-pits. Apart from this, the kiln was found to be completely lacking in any remains or indications of the normal perforated floor covering the firing chamber, and it was obvious that this kiln was the first recognized example of a type unique to the Farnham area of Britain. A discussion of the distribution, and probable method of working of these kilns, will be found on p. 42. The broad part of the kiln was later found to be almost certainly the oven, and will be called by that term throughout this report.

PLATE I



Photo: Donovan Box

PLATE IA. KILN I FROM THE S.W.

Pit 1b in foreground; pit 1a on left showing section of black filling. The ranging pole stands in Pit 1a and on the further side of this the stones blocking the small oven (B) can be seen.



Photo: Donovan Box

PLATE IB. KILN I FROM THE N.E.

Pit 1a in foreground; pit 1b behind kiln; the ranging pole stands in pit 1a. Note the course of stones capping the S.E. kiln wall.

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Photo: Donovan Box

PLATE II.A. SITE B FROM THE W.

Kiln III in foreground; kiln II at rear. Note the double stoke-pit (IIIa) on the further side of kiln III.



Photo: Donovan Box

PLATE II.B. SITE B FROM THE E.

Kiln II in foreground; kiln III at rear. The ranging pole stands in pit IIc, the dense black filling of which is shown in section.

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The walls of both furnaces of the kiln consisted of large sandstone and ironstone blocks mortared with clay, and originally covered with a baked clay facing; but where the walls opened out into the oven, they were formed of almost pure red puddled clay, baked to a blue or sometimes yellow colour on the surface. The use of masonry was probably confined to the furnaces because of the extra wear they suffered through the stoking of the fires. The floor, of strongly baked clay throughout, was laterally almost level, forming a sharp angle with the steeply sloping walls of the oven, but longitudinally was slightly hollow in the centre of the chamber and in the furnaces (see section A-A¹).

The walls and floor of the kiln had clearly been built against the sides and bottom of a carefully shaped trench in the natural sand subsoil, the top of the oven wall, with a mean height of 18 inches, being level with the subsoil surface. The kiln had been built in a slight dip in the ground, with the fortunate result that charcoal-impregnated sand, similar to that filling the pits, had accumulated over it to a minimum depth of 1 foot, and protected it from damage by subsequent ploughing. Thus it seems probable that the height of the walls had not been appreciably reduced since the kilns were in use, for the kiln showed no sign of having been violently destroyed at the end of its life.

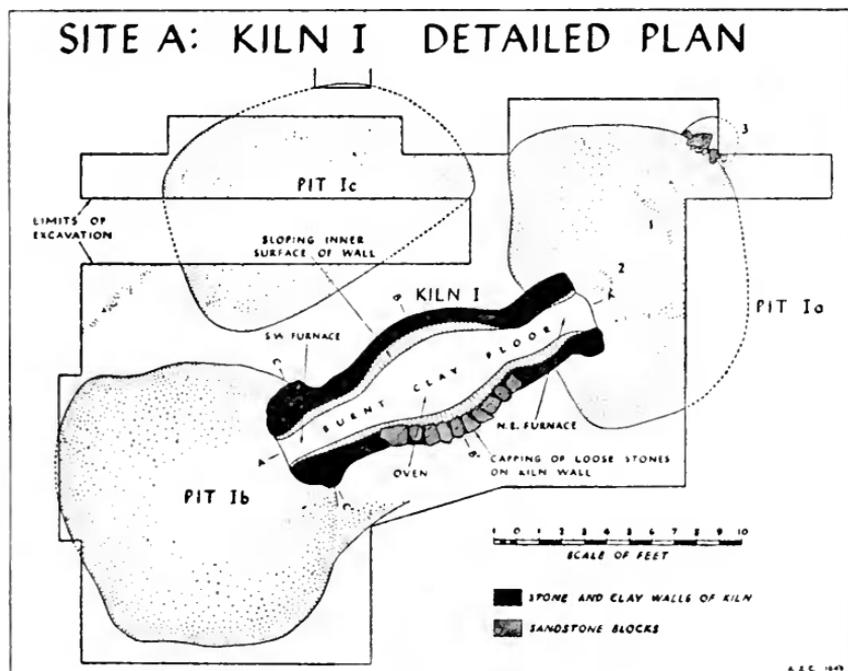


FIG. 3.

The kiln was filled with a mass of unbaked and partly baked red clay, especially solid in the S.W. furnace, mixed with small quantities of sand and many sherds of pottery, some of the vessels being almost complete. At the sides the filling was level with the top of the clay walls, but sagged an average of 8 inches toward the centre, and was separated from the burnt sand layer covering it by a layer of burnt sandstone and clay blocks fallen from the sides of the kiln. The division between the kiln filling and the burnt sand was found to be very clean and the red clay was packed solidly into the kiln up to the mouths of the furnaces, where it ended abruptly on a line with the ends of the walls—a feature not so marked in the N.E. furnace, which had apparently been disturbed and damaged by the excavators in 1937—and gave way immediately to the black pit fillings. The freedom of this kiln from disturbance was well demonstrated by a single course of large sandstone blocks capping the eastern wall of the oven. These were laid without any clay binding, but were neatly arranged and all declined *c.* 10° from the horizontal toward the centre of the kiln; they projected well above the red kiln filling into the overlying burnt sand, and the stones found lying on the top of the filling probably represented a similar course along the western kiln wall. This feature will be noticed later in connection with the method of working the kilns.

The lack of a perforated clay floor covering the central oven has already been mentioned, and indeed the layout of the oven rendered it almost impossible for one to have been used: the maximum width between the two walls was 4 feet 4 inches; there was no indication of a central support in the middle of the floor, and it therefore appears that such a floor if used in this kiln would have had an unsupported span of over four feet, and, unless exceptionally massive, would have collapsed under a normal load of pottery. The furnace walls were roughly vertical, and generally showed no sign of converging toward the top, or of being arched, although they remained to a height of as much as 2 feet 6 inches.

The kiln had obviously been in use for several years, as was evidenced by a number of repairs which had been carried out. Sections cut through the floor revealed hard blue layers, similar to the floor and wall surfaces, alternating with softer yellow and red clay layers, each blue layer representing the surface of a former floor. Three reconstructions were counted in the S.W. furnace, two in the N.W. furnace, and one in the oven, where wear had been apparently less than in the furnaces. The walls showed no sign of having been resurfaced in this manner, but very thick sherds, probably pieces of broken storage jars, were embedded in them in places, especially near the tops and at corners more than usually exposed to damage. Relative to the walls, the floor was thin, and the heat of the fire had caused the sand beneath it to be burnt to a dark red colour; the oven walls, on the

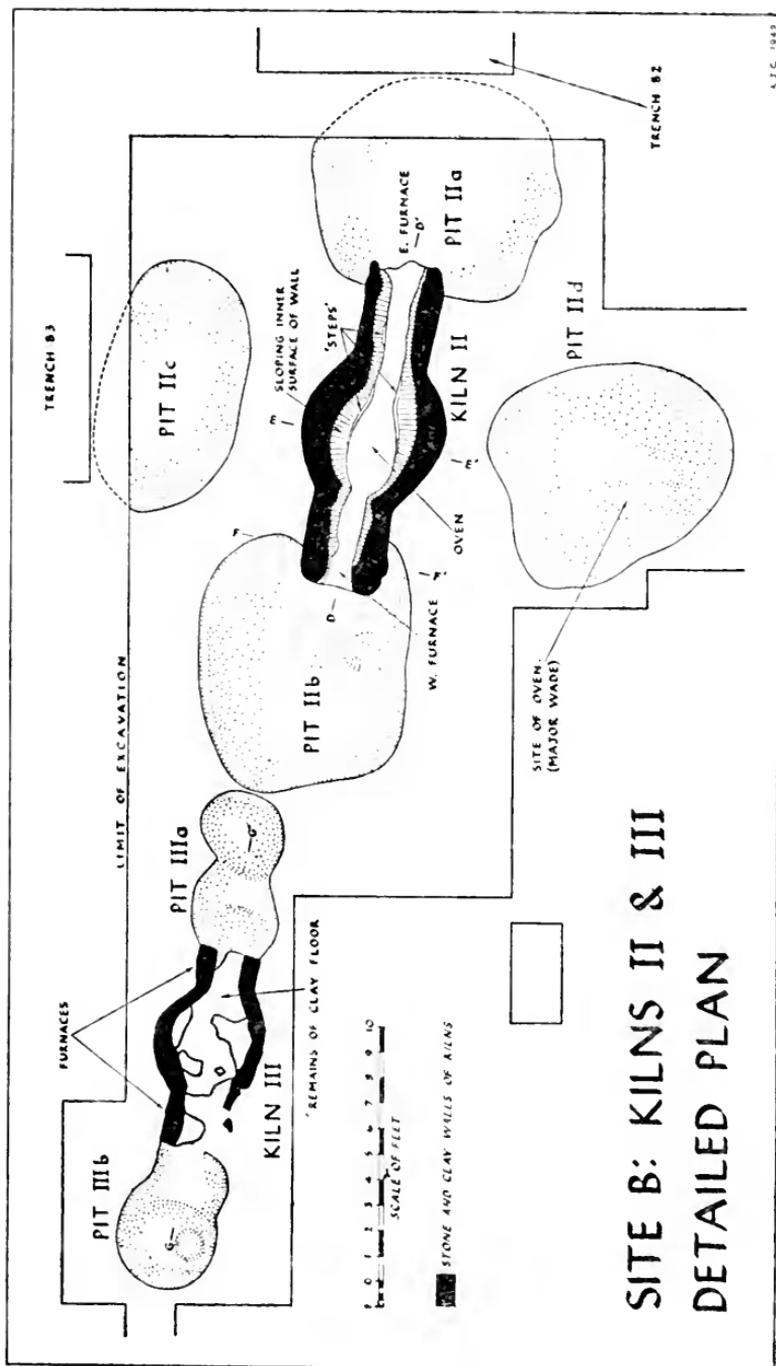


FIG. 4.

other hand, being so much thicker, consisted, for the greater part of their thickness, of raw pink clay in a plastic condition, and were fired blue for a thickness of little more than 1 inch.

Particularly noticeable in the S.W. furnace was a spreading out of the top of the wall over the sloping sides of pit *Ib* adjacent to the furnace, a device which must have been intended to prevent the loose sand from blocking the furnace mouth and interfering with stoking (see section C-C¹).

The Pits.

Three large pits, *Ia*, *Ib*, and *Ic*, were found and excavated on this site, pits *Ia* and *Ib* being stoke-pits connected with the two furnaces of the kiln. All of the pits were filled with a remarkably homogeneous filling of sand burnt black and mixed with charcoal, most of which was in minute fragments, and pottery sherds from cast-away wasters. The outline of the pits was extremely easy to establish, as their black contents contrasted sharply with the yellow sand of the subsoil. Although careful search was made, no sign of any revetments of wood or other materials to retain the sides of the pits could be found, in spite of the fact that the sides were very steep, in pit *Ic* sometimes vertical, and the sand into which they were cut was extremely fluid. Indeed, after excavation, the sides collapsed almost immediately, which strongly suggests that very little time could have elapsed between the kilns becoming disused and the filling of the pits with the blackened sand.

Pit *Ia*, the N.E. stoke-pit, provided the most interest. The trial trench of 1937 had cut through its filling to encounter the furnace, as mentioned before, but this trench missed three almost complete vessels, two of them in a small depression (No. 2) dug into the pit floor. A bowl (No. 24 in pottery description), perfect except for a crack in the side, was found lying at the bottom of this depression in a large piece of the side of a jar (No. 55) which must have acted as a kind of saucer to retain liquid leaking from the bowl. A mass of sandstone blocks at the top of the northern side of the pit was found on removal to be blocking the loose filling of what appeared to be a small oven (3 in Plan) cut into the sand and containing two sherds of a rough type of pottery and a small amount of charcoal. These two small details probably represent domestic activities of the potters, and the bowl in the depression would almost certainly have been placed in position after the kiln had ceased to operate, for if a stoker had been working in the pit after it had been deposited it would not have escaped being crushed. Depression I, a small sharply cut hole, contained no objects of interest and was probably the work of the 1937 excavators. On the northern side of this pit, where the ground is already beginning to slope down to the hollow, there had been little disturbance, and the Roman soil level was found 2 feet below the surface, beneath a scatter of 9 inches of the black pit-

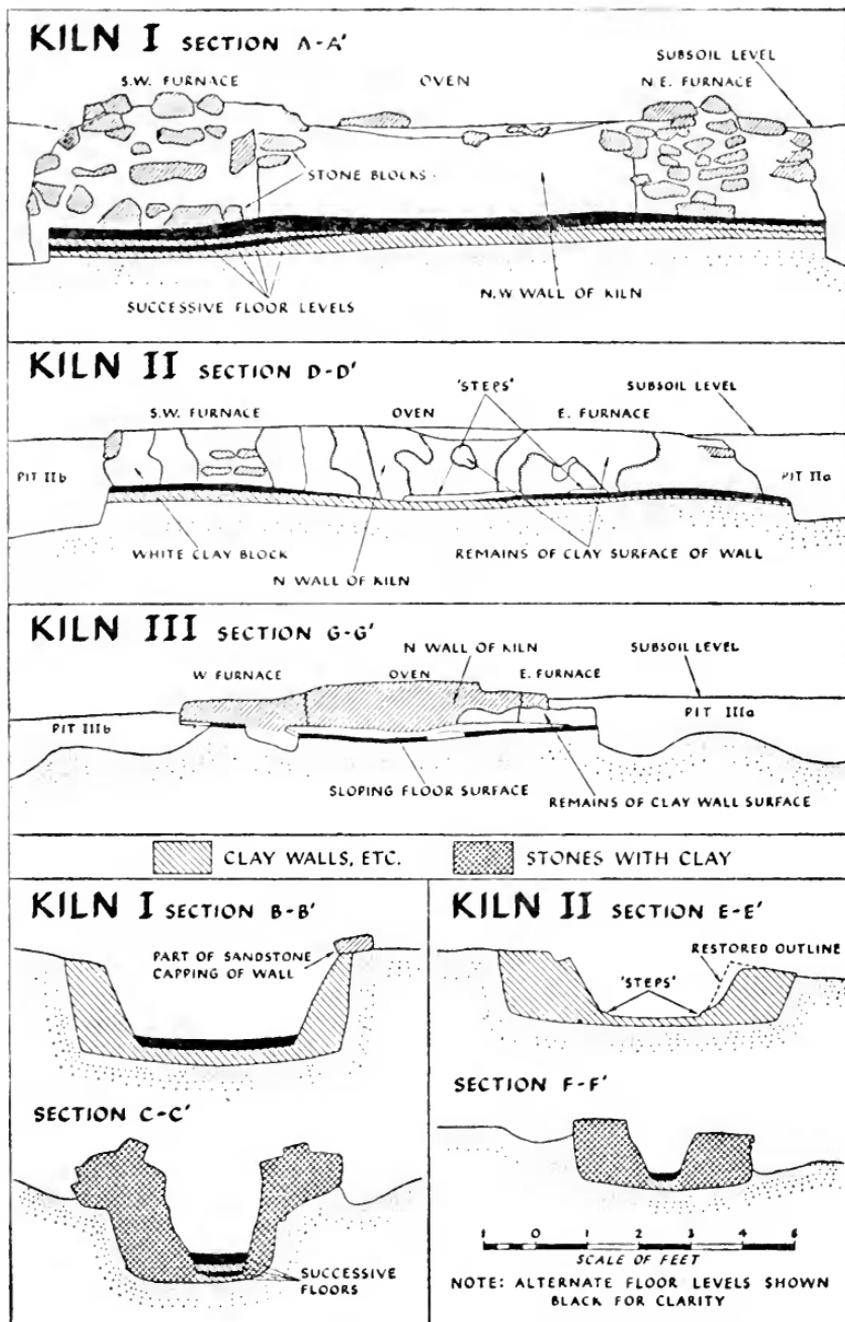


FIG. 5.—SECTIONS.

filling. The greatest depth of pit Ia below the Roman level was 3 feet 3 inches; below the present level, 5 feet 3 inches, a considerable depth which made the complete clearance of the pit impracticable in the time available, as was also the case with pit Ic. A small barbed and tanged flint arrowhead, of Bronze Age type, was found on the subsoil surface close to the S.E. edge of the pit.

Pit Ib, the S.W. stoke-pit, was entirely cleared, and presented no remarkable features. The sides sloped at about 45°, and access to the pit was apparently gained by a rather more gentle slope close to the S. side of the furnace. The filling was evenly black, except that a very slightly lighter layer, 1 foot thick, covered the pit bottom, and had a scatter of small sand-stones on its surface around the furnace mouth: this seems to have constituted the level of accumulated filling when the kiln was abandoned, and before the pit was filled up with the normal black sand. A section of this pit close to its S.W. side revealed furrow-marks in the form of regularly spaced V-shaped pockets of yellow sand dragged into the black filling from outside the pit by the ploughshare. The tips of two of these furrows were at the abnormal depth of 1 foot 3 inches, and it is obvious that a considerable accumulation of top soil must have taken place since they were made: it is just possible that these are the marks of the plough used by the Romano-British inhabitants after pottery production had ceased and the site had been levelled, a hypothesis which will be considered below.

Pit Ic, although two-thirds cleared, was found to have no connection with kiln I, although it approached as close as 2 feet 6 inches to the oven, nor did it appear to act as a stoke-pit for any other kiln. The filling was of the normal burnt sand with the usual proportion of sherds, the only notable feature being a considerable quantity of baked clay lumps close to the floor in the western corner. The sides of this pit were unusually steep and actually overhung on the S.W. side, the greatest depth being 5 feet 3 inches from the present surface. The only reasonable explanation of this isolated pit, and another in an exactly similar situation on site B, is that it would probably have been used to supply sand for covering the pottery after it had been loaded into the oven of the kiln.

SITE B.

This site was 140 feet from site A, in an exactly similar position at the top of the slope, but on the opposite side of the hollow. A considerable amount of burnt sand and wasters was noticeable in rabbit-burrows, especially in the neighbourhood of a slight hump in the ground close to where a trial hole dug by Major Wade in January, 1947, had unearthed the remains of a small oven.

Trenches soon encountered the pits associated with kiln II, and the actual kiln was found to lie beneath the slight hump already mentioned. It became obvious as the work proceeded

that the scale of this site was altogether smaller than Site A, and that since the kiln had not been built in a slight hollow, the height of its walls had been badly reduced by ploughing.

Kiln II.

This kiln, although closely similar in design, was smaller than kiln I, the total length being 13 feet, as opposed to 15 feet 2 inches and the length and maximum breadth of the oven 4 feet \times 3 feet, as opposed to 6 feet 9 inches \times 4 feet 4 inches in kiln I; the walls of the oven were, however, more massive, and had a thickness of as much as 18 inches in places (see section E-E¹).

When the top soil, about 9 inches in depth, had been removed from the kiln, the whole of the filling and the tops of the walls were found to have been flattened and scored with parallel grooves by ploughing, and it was clear that only the lower part of this kiln would be preserved intact. Clearing was easy, the filling consisting mainly of a soft, grey-black burnt sand, similar to that contained in the pits, but not so dark. Pink, unbaked clay was present in this filling, but in isolated lumps only. As in kiln I, the furnace walls had been reinforced with stone, while the oven walls were largely of clay. The floor, which dipped markedly in the centre of the oven, was in good condition, but the burnt blue clay surface of the walls had weathered badly, exposing the soft, unfired interior in large patches. The W. furnace was well preserved, and the clay roughly plastered over the stones at the ends of the walls was deeply marked all over with finger-prints, which unfortunately crumbled away as the kiln dried out. The N. wall was terminated with a large smooth, soft block, apparently formed of some kind of clay, a curious substance also used sparingly in the furnaces of kiln I. The E. furnace had suffered in the same way as the N.E. furnace of kiln I, and the ends of the walls, especially on the N. side, were badly battered and reduced in height.

An interesting detail was the appearance of slight "steps" at the junction of the walls with the floor at the E. end of the oven (see plan and section E-E¹). These may have had some use in supporting the pottery load, although that on the N. side was seen to reappear in the E. furnace, where such an explanation could hardly apply. It was also noticed that at the point of junction of the oven with the W. furnace, both walls projected sharply inward to form a narrow opening that did not appear to be repeated at the opposite end of the oven, although it is doubtful whether this had any significance.

In common with kiln I, the oven walls sloped steeply, while the furnace walls seemed to have originally been more or less vertical, and once again showed no sign of having been arched over. The floor, 2 inches thick, had not been remade in the oven but had been resurfaced once in each of the furnaces, which explains the relatively low level of the floor in the oven itself. Large sherds of

pottery had been used to strengthen the walls in places, and their fabric contained several neatly squared baked clay slabs, $1\frac{1}{2}$ inches thick, and resembling bricks. These, before being incorporated in the walls, would probably have been intended as supports for the pottery load, for no other signs of a brick industry were found on the site.

The Pits.

These were smaller in size and shallower than the pits on site A. They were, however, equally featureless, showing no signs of any attempt at lining or revetment of the sides, and contained an exactly similar black filling of burnt sand and sherds, presenting a perfectly even appearance from top to bottom of the pits, with no signs of stratification. On this site, as mentioned before, the plough had shorn away the upper levels, and the fillings of the pits were not joined by an overall black layer as in site A.

Pit IIa constituted the E. stoke-pit of kiln II, and was completely cleared except at its eastern end. It had a maximum depth below the surface of 2 feet 6 inches with sides sloping at about 45° , and a broad, flat floor. No continuation of the pit was found in trench B2.

Pit IIb was the counterpart of pit IIa for the W. furnace; the whole filling was removed, and the pit found to have a depth of 2 feet 6 inches. Two shallow depressions cut in its floor in front of the furnace were probably connected with some stoking operation. The clearing of this pit led to the discovery of pit IIIa, the E. stoke-pit of kiln III.

Pit IIc, 3 feet deep, had no connection with any kiln, and with its relatively steep sides and its position close alongside kiln II corresponded exactly with pit Ic on site A. It will be remembered that pit Ic was thought to be a quarry to provide material to cover the pottery loads, and there is nothing to suggest any other role for pit IIc. Trench B3, cut with the object of finding something to explain the presence of this pit, drew a complete blank.

Pit II*d*, although it occupied a position corresponding to that of pit IIc on the other side of the kiln, filled a more definite function, for in it Major Wade found an oven when cutting his trial hole prior to the main excavation, and he has very kindly supplied the writer with notes on its structure. It consisted of large ironstone slabs, each about 1 foot square and 2 inches thick, packed together upright and at right angles to the sides of the excavated hole in which they stood; a length of about 2 feet of this walling remained, and no clay whatever had been used in its construction. The depression in which this oven had obviously stood was in the bottom of pit II*d* and is shown in the site plan, and its position, together with its wide divergence from the usual kiln plan, tempts one to suggest that it was used as a domestic oven. Major Wade, however, states that this could hardly have been so, owing to the fact that the surrounding sand had been baked hard for a thickness

of as much as 1 foot from the outside of the oven wall, which indicates that a very fierce heat must have been used, fiercer, indeed, than seems to have been used in the normal kilns. It would appear, therefore, that we have here some special kind of small kiln for the firing or drying of pottery. The maximum depth of pit *IId* was 2 feet 9 inches.

Kiln III.

This was the smallest of the three normal kilns and certainly the most fragmentary, and the pottery found associated with it suggests that it was used exclusively for the production of the finer types of wares made at Overwey. Although similar to kilns I and II in general layout, this kiln differed from them in several respects, and it is advisable to consider the kiln and its stoke-pits as a whole.

The walls, which nowhere remained to a height greater than 1 foot, consisted throughout of small sandstone slabs laid horizontally and bound together with only a minimum of clay. The slabs had originally been faced with a thin layer of burnt blue clay internally, as was evidenced by a few remaining patches. The floor was nowhere more than 1 inch thick and was broken away in large patches, revealing the underlying sand subsoil, which had been burnt red to a depth of 2 inches below the floor. The W. end of the S. wall had been completely destroyed, but as this kiln was standing entirely above the subsoil level it was very fortunate that so much of it survived. The floor sagged slightly between the two furnaces in common with the floors of the other kilns, and it was also observed to dip as much as 3 inches between the sides of the oven, which was exceptionally large in proportion to the size of the furnaces.

The stoke-pits were also unusual. Instead of the normal large, round excavations, they consisted of two holes, 2 feet 6 inches deep, with diameters nowhere greater than 4 feet, joined to the furnace mouths by similar but considerably shallower extensions. That this arrangement was intentional is proved by the remarkable similarity of the two stoke-pits, although the meaning of it is a debatable point. All that can be definitely said is that while the stoker must have worked in the stoke-pits themselves when firing the other two kilns, he must have stood outside the pits to operate this kiln.

The slight construction and lack of restorations to the floor indicate that this kiln was abandoned early. Its approximate alignment with kiln II and the remarkably close gap between pits *IIf* and *IIIa* strongly suggests that both kilns were in operation at the same time. Careful probing of the surrounding ground revealed no signs of pits similar to *IIf* adjacent to kiln III.

TRIAL TRENCHES.

Two groups of trial trenches, each 2 ft. × 4 ft., laid out on a grid of 15 feet squares, were based on sites A and B, with the object of picking up any further remains of kilns or of dwellings, working floors, etc. Special attention was paid to the hollow in whose protection it was considered that the potters would have built their huts, but, apart from a considerable accumulation of burnt sand from the kilns, nothing was found except at site C. Here a trench cut across what appeared to be a foundation consisting of large sandstone slabs associated with several pieces of pottery, including a fragment of Samian ware. Sheephatch School removed a large area of the top soil here, but the results were disappointing. The stones were laid directly upon the subsoil, and no other remains accompanied them. The presence of the Samian ware, however, suggests that they represented vestiges of a small-scale earlier settlement of the site, probably between A.D. 50 and 138, which has been attested by certain pieces of pottery found with the kilns (see pottery report). A coin of Gratian, in good condition, was found in the soil taken from trench A5, and appeared to have been lying on, or slightly below, the Roman surface level at a depth of c. 18 inches. The two trenches put across the lower part of the hollow have already been described.

DESTRUCTION OF THE SITE.

Several pieces of evidence seem to permit us to think that the kilns, after a long period of use, were peacefully dismantled and the pits levelled by the potters or other Romano-British people who had succeeded them, presumably in order that the site could be turned over to agriculture. The absence of stratification in the pit fillings and the steepness of the pit sides renders it almost certain that they were filled quickly and immediately they had ceased to be used, for a certain amount of silting would have taken place if the process had lasted even so short a time as a week. Furthermore, we have the neatness with which kiln I was dismantled and its clay filling packed inside it; and the deep plough-marks across the top of the filling of pit *Ib*. The blackened sand would have been lying in great heaps in the vicinity of the kilns, and apart from providing the obvious material for levelling the site, would have produced one of the richest soils imaginable. A possible reason for such a change in use of the site is discussed in the conclusion.

OPERATION AND DISTRIBUTION OF THE KILNS.

The method of operating the kilns is the most important question which has arisen out of the excavation, but the clues available do not allow us to come to anything but provisional conclusions which may well have to be revised when other kilns of this type have been scientifically excavated.

In none of the kilns was there found the slightest remnant of the usual perforated clay floor which, in normal kilns, was placed over the firing chamber, providing a base for the oven containing the pottery, the heat being introduced through the perforations or vents in the floor. This oven usually consisted of a dome of alternate layers of clay and straw, probably supported on a framework of boughs, and covered on the outside with earth or sods to retain the heat; the whole thing would have been built up round the pottery load and destroyed after each firing. The Overwey kilns, although they lacked this floor, were provided with an unusually level clay floor to what is normally the bottom of the firing chamber, and it seems that the pottery was actually placed on this floor or perhaps raised a few inches on bricks such as were found in kiln II, in order to allow the heat to circulate beneath them. This suggestion is supported by the finding in kiln I of a complete jar standing upright on the floor, while many others were scattered about over the floor surface. Such an arrangement would also explain the need for furnaces at opposite ends of the oven, for if only one were used, as in the normal type of kiln, the heat would have by-passed pottery close to the floor at the rear of the oven, causing very uneven firing of the load. With two furnaces, however, such "blind" spots would have been effectively overcome and the potters would have stood some chance of achieving the beautifully even firing which is typical of Overwey wares. The oven would, of course, still have to be domed over and irregular slabs of burnt clay, covered with straw-impressions, were found here as at more normal sites, indicating that this was actually done.

Sand seems to have been used exclusively for covering the dome, as is suggested by the masses of burnt sand filling all the pits. The sand excavated from the stoke-pits would have been used at first, and when this was exhausted, special quarries like pits Ic and IIc would have been excavated. The furnaces showed no sign of permanent roofs, and it is probable that these too would have been specially built for each firing, so that they could be removed to allow easy access to the load when firing was completed. With two furnaces, a wind blowing consistently in one direction would have caused trouble and the kilns, or at least kiln I, were sunk deeply in the ground to avoid this, the necessary draught probably being provided by a chimney in the top of the dome. The course of loosely laid stones capping the S.E. wall of kiln I appeared to represent the remains of a footing for the sides of the dome.

Four large iron nails, apparently of a square-headed type, were found in the pit-fillings on both sites A and B, showing that the workers made use of reasonably well-constructed wooden articles, possibly small carts or frameworks for potters' wheels.

The distribution of this type of kiln is almost certainly limited to the Farnham area. A good many kilns have been found in this

district, but it is unfortunate that few of them have been excavated sufficiently thoroughly for an accurate idea of their form to be gained. A kiln excavated at Snailslynch by Major Wade, and described and illustrated by him in *Ant. Journ.*, VIII, January, 1928, was closely similar to the Overwey type, with the remains of its last load standing on the floor exactly as has been surmised for the Overwey kilns, but in Major Wade's opinion the opening opposite the first furnace constituted a flue leading to a chimney. In the light of the Overwey evidence, however, I am inclined to the belief that this flue was more likely a second furnace and that in the Snailslynch kiln we have a counterpart of those at Overwey. It is noteworthy that the pottery produced at Snailslynch is more closely similar to Overwey wares than that of any other Farnham kiln.

Mr. W. F. Grimes, in his extremely valuable classification of Romano-British pottery kilns,¹ bases his Type VII, the horizontal-draught kiln, entirely upon the evidence of the Snailslynch kiln, but it now seems that the characteristics of this type should be modified to accord with the Overwey findings.

Less than half a mile from the Overwey site, a Roman kiln was found at "Whitmead" in 1893, and was described as being "floored with Roman tiles."² It was destroyed, and in the absence of any detailed description of the kiln or of the pottery, it is impossible to say whether it represents an expansion of the Overwey industry, although its proximity renders this very likely.

THE POTTERY.

In describing the pottery, care has been taken to include a representative selection of both the normal products of the kilns, and the rare forms, of which in many cases only one or two examples were found.

The most common Overwey product was the hard, light grey ware *cooking jar* with horizontally striated outer surface, a typical 4th-century type whose prevalence allows us to date the kilns with confidence to that century. It was found in greatest numbers in kiln I, which seems to have been almost entirely devoted to it, especially towards the end of its existence. It was found in quantity in association with kiln II, although the last load contained mainly "fine" wares; kiln III, however, contained only a few sherds, for this small kiln seems to have been used almost exclusively for the manufacture of "fine" pottery.

Other forms include all the remaining types except the large storage jars, and consisted mainly of jars and bowls in "fine" ware—smooth grey paste with a coating of slip on the rim and shoulder. Many of the most carefully made vessels, especially from kiln II, were "fumed," giving the surface of the pot a black colour, and the slip coating a very shiny black finish. Apart from these, and

¹ Grimes, *Y Cymmrodor*, XLI (1929).

² *S.A.C.*, XIII (1895), p. 151; and *Preh. Farnh.* (1939), p. 224.

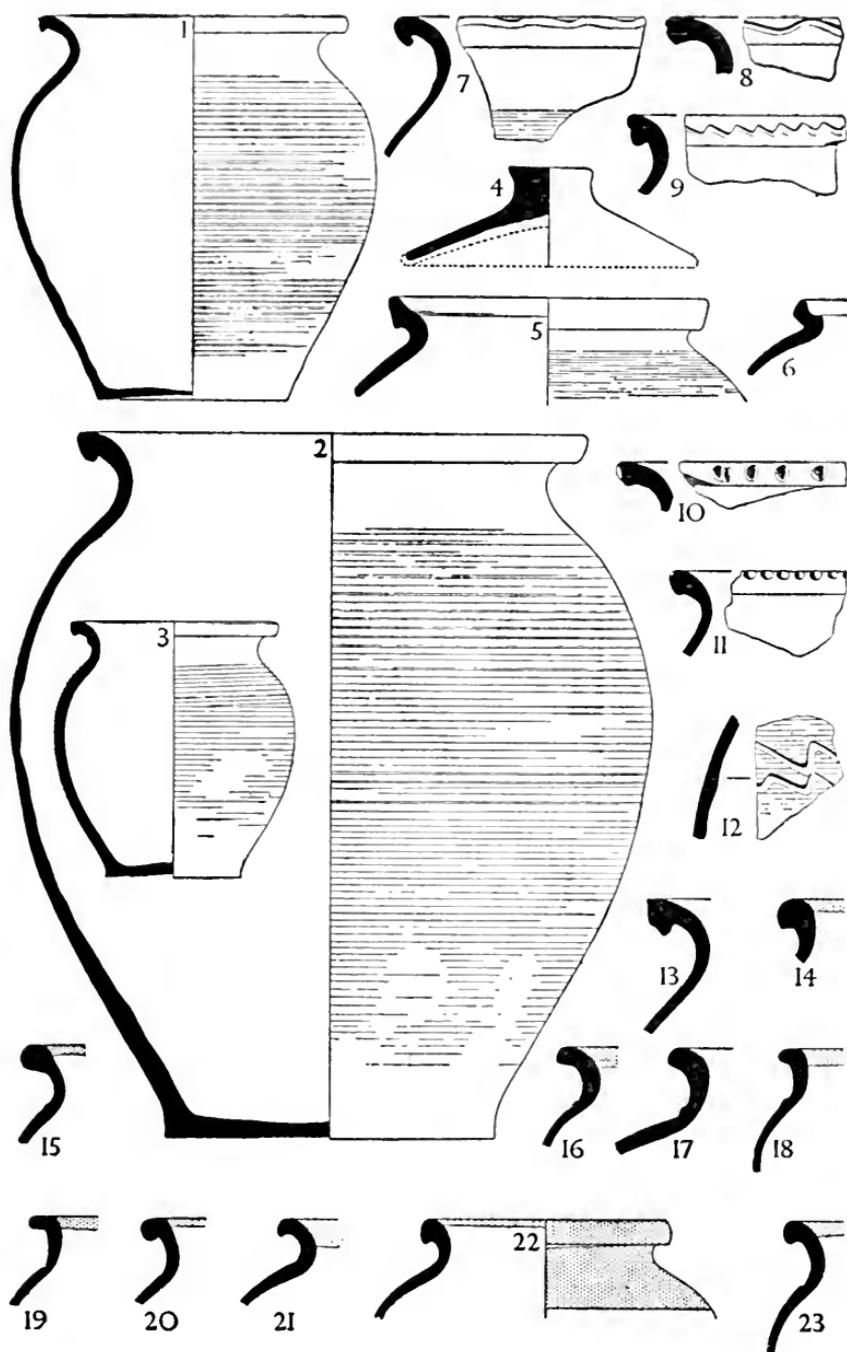


FIG. 6.—COARSE STRIATED COOKING JARS AND MISCELLANEOUS JARS.

underfired examples which ranged in colour from pink to buff, the ware was invariably grey and the slip used of a white or creamy colour.

The majority of the big *storage jars* were made of a buff paste, a colour which seems to have been intentional, and is probably due to the use of a different mixture of clay in their production. An analysis of the relative frequency over the whole site of striated cooking jars, miscellaneous wares, and storage jars, gave the approximate result 6 : 3 : 1 respectively.

Good 4th-century *red colour coated ware* was rare at the site, hardly more than half a dozen pieces being found, and was probably imported from elsewhere. A single sherd of real Samian found in trench C was probably a relic of the scant early occupation of the area.

Jars and Bowls.

1-3. Three examples of the hard, sandy, light grey ware cooking jars. The rim is always undercut, and the body covered with horizontal striations executed with a comb, apparently to enable the vessels to be picked up easily with wet hands. The type is common throughout the south in the 4th century, especially its latter half. Cf. *Lockleys*,¹ Welwyn, Fig. 12, 1, dated c. A.D. 340; *Park Street*,² near St. Albans, Fig. 20, 8, in a group containing other vessels strikingly similar to Overway types, dated second half of 4th century. The three vessels figured were found in the lower part of the filling of the oven of Kiln I.

5-13. Variants of the same type, including most of the decorated pieces present among the great amount of this ware which was absolutely plain. Except in the case of 12, the decoration was confined to the rim, and consisted of a roughly executed wavy line or row of notches. Slip was never used on this class of ware.

1. An example of the normal size; almost complete.

2. Largest example found; reconstructed diagrammatically from fragments.

3. One of the smallest of this type.

4. Lid, from which the underside and outer edge have flaked away; underfired. Only two lid fragments were found.

5, 6. Two of the few examples with lid groove. Diam. of 6, 4.8 in.

7. Large jar with shallow wavy line on edge of rim; diam. 9.6 in.

8. Another large example, with wavy groove on outside of widely splayed rim; diam. c. 11 in.

9. Similar to 8, but with a zig-zag groove; diam. 7.8 in.

10. Widely splayed rim similar to 8, but decorated with impressions possibly made with the flat end of a stick; diam. 8.4 in.

11. Decorated in a similar manner to 10. The impressions are shallower, and made along the top edge of the rim; diam. 7.6 in.

12. The only example of this type found with decoration on the body; two very shallow wavy lines superimposed upon the normal horizontal combing.

13. Variant of the normal undecorated type, with lower edge of rim bevelled; diam. 9.7 in.

14-26 are miscellaneous jars and bowls which do not appear to fall into the category of main products of the kilns. None was found in abundance, and some are represented by only one example. The rims and shoulders of all examples, except 17, which is not contemporary with the kilns, were coated or intended to be coated with slip.

¹ The Roman Villa at Lockleys, Welwyn, *Ant. Journ.*, XVIII (Oct. 1938).

² The Roman Villa at Park Street, near St. Alban's, Hertfordshire, *Arch. Journ.*, CII (1945).

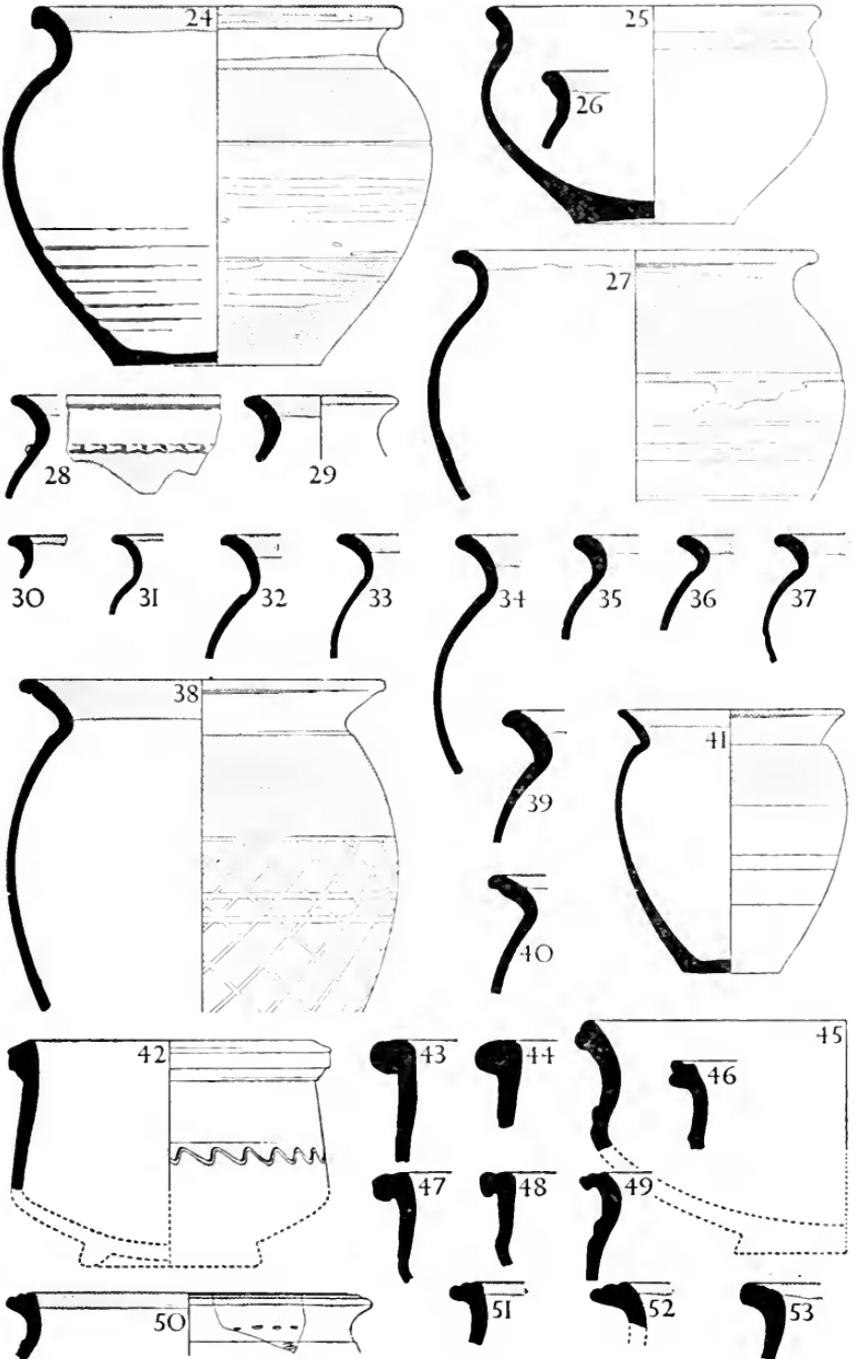


FIG. 7.—JARS AND BOWLS.

14. Light grey ware with white slip; diam. 6.4 in.

15. Rather soft light grey ware with white slip; slight cordon at base of neck; diam. 7.6 in. *Cf. Lockleys*, Fig. 15, 5, dated mid 4th century.

16. Very hard dark brown ware with grey core. An overfired example on which the slip has been burnt to a green-grey colour. Diam. 7.2 in.

17. Large, globular jar in coarse light grey ware, diam. 5.4 in. Exactly similar to a jar from Ewell Council School (Frere, *S.A.C.*, XLVIII, Fig. 5, 9) dated to the Hadrianic period. An early intrusion in this case.

18. Smooth, light grey-buff ware with fumed surface and slip. The lower edge of the slip band on the shoulder is marked by a groove, a very common feature at Overwey; diam. 6.4 in.

19. Similar to 18, and possibly made at the same time, both being from kiln II; diam. 6.2 in.

20. Rather soft, gritty buff ware with grey core; white slip fumed black in places; diam. 6.6 in. Variants of this type—*e.g.*, 23 and 24—are fairly common, especially in pit 1a.

21. Smooth light grey ware with white slip; diam. 4 in.

22. Smooth dark grey ware with white slip; a fairly common type.

23. Dark grey ware with light grey slip; diam. 7.2 in.

24. Bowl in smooth, soft dark brown ware, with fumed surface, and bands of shiny black slip on rim and shoulder, and extending upward from the base. The rough band round the middle of the body, separated from the upper slip band by a groove, and from the lower by a deeply burnished line, has three irregular burnished lines round its centre. The slip bands also appear to have been burnished after firing. This vessel, a slightly cracked waster, was found almost complete, lying in a piece of the side of a large jar (No. 55), inside a small depression at the bottom of pit 1a. (see p. 33).

25. A most exceptional bowl in rather coarse and very flaky orange-pink ware, badly overfired, also from the bottom of pit 1a. Probably intended to be decorated with slip, but thrown out after the first firing.

26. Soft orange-buff ware with cream slip; diam. 7 in. The only sherd found of a type similar to 25.

27-41. Recurved and sharply everted rims, together with intermediate forms which are difficult to assign definitely to either type. Although the arrangement here suggests an evolutionary sequence, it seems certain that all these forms were in production at the same time. These rims were found always to be coated with slip on the rim and shoulder, the lower edge of the band on the shoulder generally being marked by a shallow horizontal groove. The paste was smooth and grey in most cases, although a buff ware was sometimes used for the recurved-rim type. It is interesting to note that in no case did the everted rims have a diameter greater than that of the body of the pot, as is the usual tendency of this type in the 4th century.

27. Recurved-rim jar, of which large numbers were found; white slip roughly applied to rim and shoulder, and narrow burnished lines on lower part of body.

28. The same type, but with cordon at base of neck, decorated with rouletted notches; diam. 6.6 in. The only example found with this form of decoration.

35. One of a few examples with surface and slip fumed black, the slip being very shiny, and perhaps burnished after firing; diam. 6.2 in.

37. An example with the exceptional feature of two girth grooves below the shoulder, the upper one being very deep; diam. 5.6 in.

38. Large jar in hard, light grey ware, with white slip on rim and shoulder; right-angled burnished trellis design on lower part of body, with two horizontal lines running through it. Only two jars bearing this decoration were found, both in kiln II. *Cf. Lockleys*, Fig. 10, 23, dated A.D. 300-340. The wide angle of the trellis is characteristic of the 4th century.

40. An example lacking the usual offset between the shoulder and rim; diam. 6.2 in.

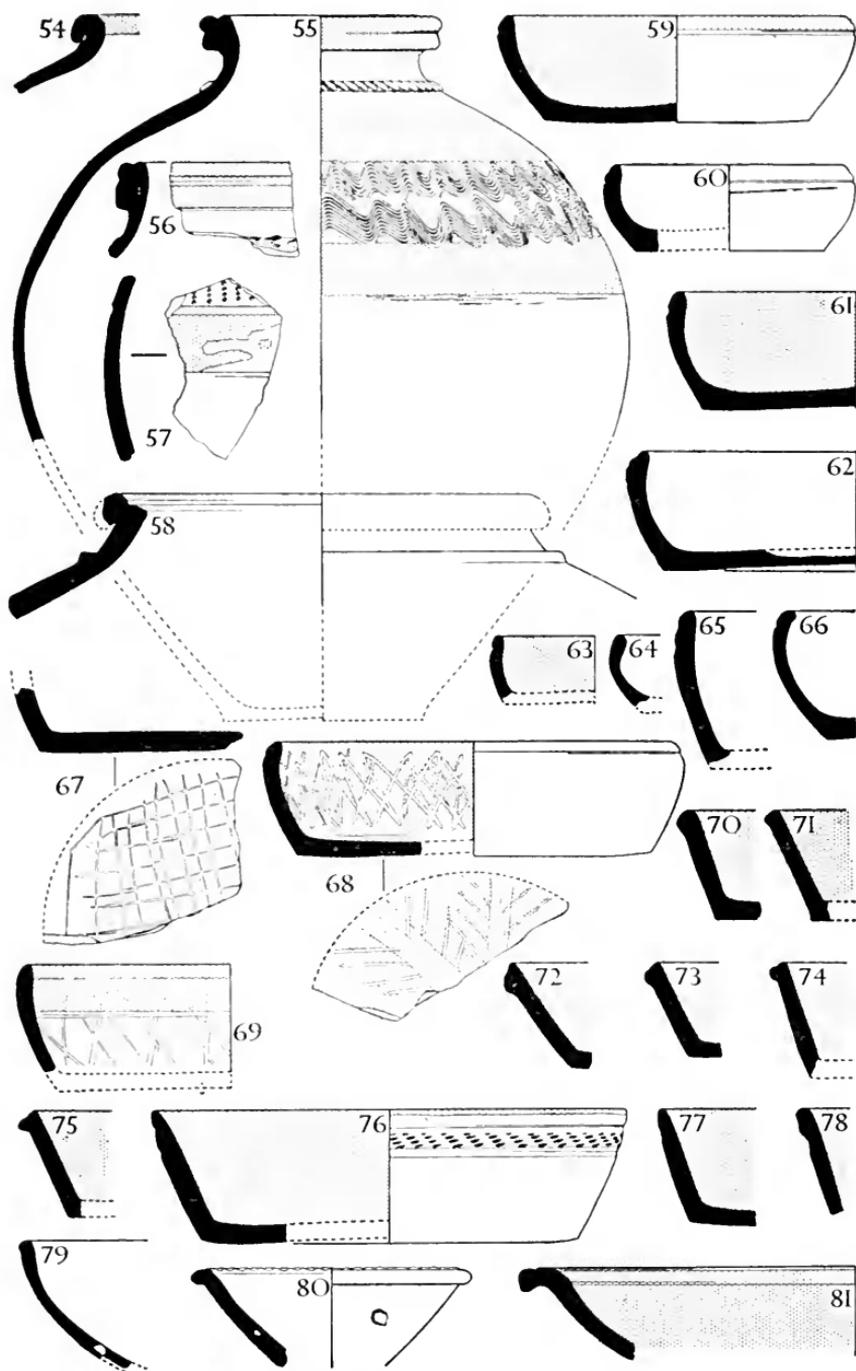


FIG. 8.—NARROW-NECKED JARS AND DISHES.

41. A small and almost complete everted-rim jar in light grey ware, with disintegrated white slip on rim and shoulder. This vessel was over-fired on one side, with the result that it has become distorted, and the slip burnt black on that side.

42-53. Vertical-sided bowls with knobbed, undercut and reeded rims. All these types were rare at Overwey, and one at least (46) was probably made elsewhere. Excepting the distinctive types 43, 44 and 50-53, the ware was generally grey-buff and coarse and sandy in texture.

42. Crudely moulded rim, and inscribed zig-zag on side. Probably a rude imitation of Samian form Ludowici Sh.

43. Rather smooth and soft buff-grey ware with signs of burnishing on rim; diam. *c.* 11 in.

44. Smooth, soft orange-pink ware; diam. *c.* 11 in.

45. Sandy, buff-grey ware, probably based on a vessel similar to 46.

46. Soft white paste with red slip; diam. 8.8 in. An importation, possibly from the New Forest, which would have been used as a pattern for vessels such as 45. A bowl almost identical in ware and form is figured in *Richborough 2*,¹ Fig. XXXI, 162. A common 4th-century type also found at Silchester and Chatley Farm.

47. Coarse buff-grey ware with two slight offsets on side; diam. 11.4 in.

48. Sandy bright pink ware; diam. 9.6 in.

49. Coarse cream-grey ware with reeded rim; diam. 7.4 in. *Cf. Richborough I*, Pl. XXIX, 130, for a similar vessel, but without reeded rim, dated mid 4th century.

50. Small sherd of reeded-rim bowl in smooth, dark grey ware with white slip on rim. Decorated with a rough line of small incisions on neck, and similar incisions in groups of three on cordon at base of neck.

51. Similar to 50, but without incisions; diam. 8 in.

52. Smooth, light grey ware, white slip; diam. *c.* 12 in.

53. Smooth paste, cream slip on rim and shoulder; diam. *c.* 9 in. *Cf. Chatley Farm, Cobham, S.A.C. I*, Fig. 7, 28, found in a 4th-century context.

Large, narrow-necked Jars.

54. Plain, rolled-over rim with white slip; diam. 5 in.

55. Light grey ware with cordon at base of neck decorated with rouletted notches, and a double band of combed waves on shoulder; white slip on rim and on body above and below the decoration. Reconstructed from pieces of two examples: rim and neck from kiln III, body found with 24 at bottom of pit Ia. An attractive and very distinctive Farnham type made in small numbers at Overwey, and also found at Alice Holt Forest, "Six Bells" pit, and Kingsley, Hants (*Preh. Farnh.*,² R115, R130). Sherds of this kind were found in the 4th-century bath-house at Chatley Farm, Cobham, which ceased to be used *c.* A.D. 360 (*S.A.C.*, I, Fig. 7, 31).

56. Similar to 55, but with V-shaped impressions on cordon; diam. 6 in.

57. Piece of body of the same type, but with decoration on shoulder consisting of vertical lines of impressed dots.

58. Light grey ware; lid groove and upstanding cordon on shoulder. An exceptional type to which the writer can find no parallel, and perhaps dating back to the earlier settlement of the site. From kiln III.

Dishes and Flanged Bowls.

59-66. Dishes with curved sides, generally with a single groove dividing the rim from the body. These were very common in kilns I and II, and are of a late type, frequently found with 4th-century pottery. At Overwey they are either made of a coarse, sandy ware without slip, or of smooth, usually light grey ware, carefully burnished all over and coated with polished slip over the

¹ Society of Antiquaries: *Excavation of the Roman Fort at Richborough, Kent* (1926-1932).

² S.A.S.: *Survey of the Prehistory of the Farnham District* (1939).

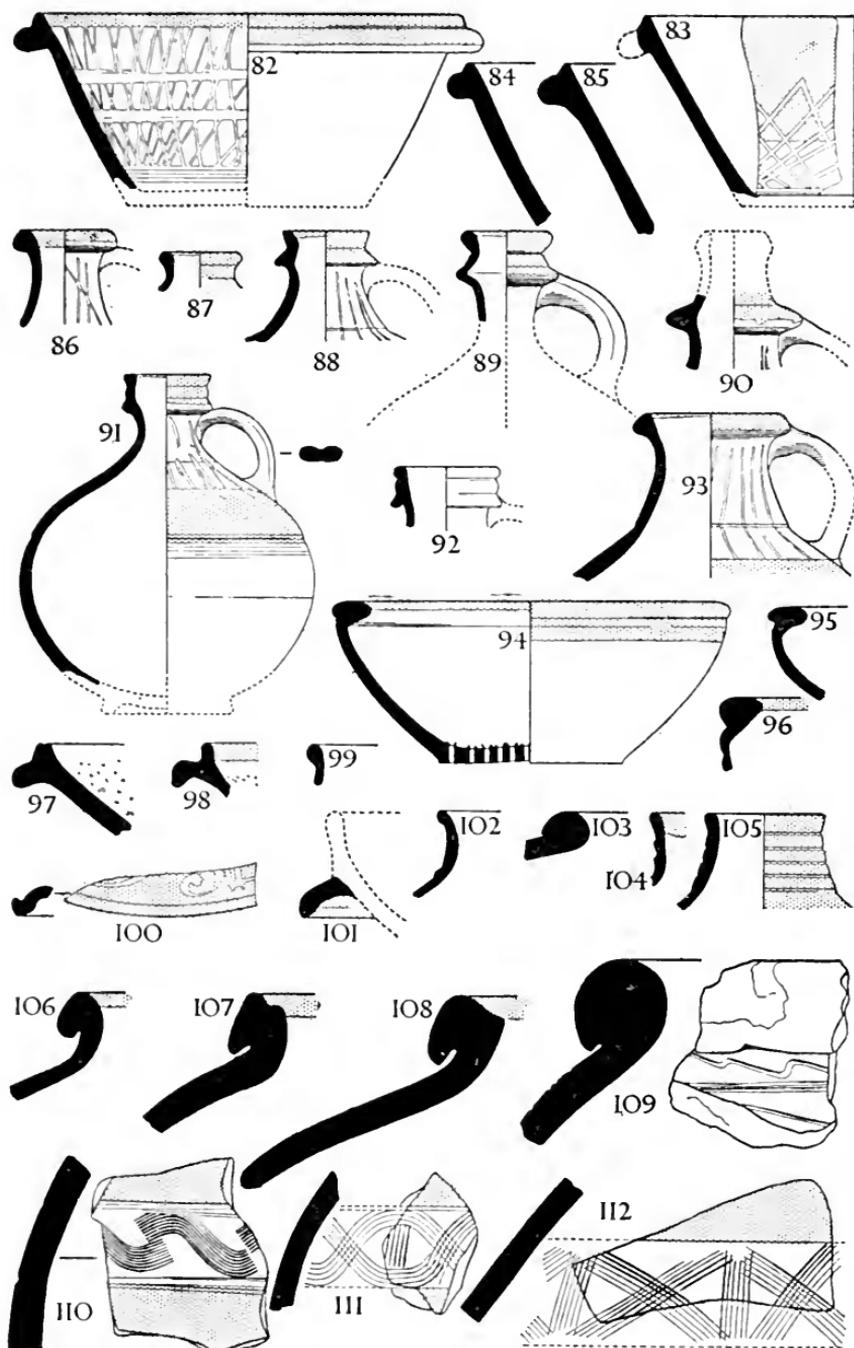


FIG. 9.—FLANGED BOWLS, FLASKS AND STORAGE JARS.

whole of the inside. This latter type was often fumed black, and sometimes decorated with burnished patterns internally.

59. Smooth ware fumed black. A curious feature, found on many other examples, is a single irregular zig-zag line burnished on the underside of the base. An alternative to this was a rough cross, and these marks may have been used to differentiate the products of two workers.

60. Coarse buff ware.

61. Smooth, orange-pink ware with white slip.

62. Large example in very coarse grey ware; three grooves below rim.

63. Light grey ware, fumed.

64. Coarse, orange-pink ware, no groove below rim; diam. 6 in.

65. Sandy cream-coloured ware, two grooves below rim; diam. 9 in.

66. Underfired, grey-pink ware; diam. c. 7 in.

67-69. Examples with internal burnished lines, probably in imitation of basket-work (*cf.* flanged bowls, 82-3). 68-9 are closely paralleled by *Park Street*, Fig. 20, 4, dated second half of 4th century, and less particularly by *Lockleys*, Fig. 9, 5, dated A.D. 325-330.

67. Light grey ware base with trellis pattern.

68. Light grey ware with surface and internal slip fumed black; two irregular superimposed zig-zag lines on side, giving a "trellis" effect, and the base decorated with a herring-bone pattern radiating from the centre.

69. Similar to 68, but horizontal burnished line divides trellis pattern from band of dark grey slip extending upward to rim.

70-75. Shallow versions of the common 4th-century straight-sided flanged bowl (*cf.* 82-5). All the examples figured are in rather soft buff or grey ware, burnished over the whole of the outside, and coated with smooth slip internally, and with the exception of 72 were fumed to a shiny black finish. Diameters ranged from 7.8 in. to 9.2 in.

76-81. Miscellaneous dishes.

76. Grey ware with fumed outer surface and internal slip; zone of comb-impressed decoration between grooves below rim.

77. Similar to 76 but undecorated; diam. 7.8 in.

78. Buff ware with fumed black surface and slip; diam. 7 in.

79. Soft orange-pink ware; diam. 7.8 in. Imitation of Samian form 31.

80. Sandy buff-grey ware; cordon on inside of rim decorated with rouletted notches. Possibly a pedestalled cup.

81. Soft grey-buff ware with fumed black surface and internal slip. Possibly a lid, but disposition of slip renders this unlikely, and more probably an imitation of Samian form 35.

82-85. Straight-sided flanged bowls typical of the 4th century, especially its earlier half. These vessels were either in a coarse, undecorated ware, or in smooth ware burnished all over, with a band of slip covering the rim only. Those with internal trellis decoration were found only in kiln II.

82. Grey-black ware with fumed surface and slip on rim. Irregular internal trellis of burnished lines, crossed by two horizontal bands, apparently imitating basket-work in the same manner as the dishes 67-69. A very similar vessel is figured in *Park Street*, Fig. 20, 1, where it is assigned to the second half of the 4th century.

83. Light grey ware with white slip on rim; similar to 82, but without horizontal bands, and trellis largely confined to lower part of side.

84. Buff ware with white slip on rim; internal trellis similar to 82, but more open, and crossed by only one horizontal band; diam. 8.6 in.

85. Rather coarse, dark grey ware, undecorated.

86-93. Flasks and jugs. The necks of these vessels appear always to have been ornamented with roughly applied vertical burnished lines, similarly to examples in an early 4th-century context from No. 1 Kiln, Sloden Inclosure (*New Forest*,¹ Pl. XVIII).

86. Soft light grey ware, white slip on rim; handle missing.

87. Light grey ware, coated with white slip; probably upper part of flask similar to 90.

¹ Heywood Summer: *Excavations in New Forest Roman Pottery Sites* (1927).

88. Orange-buff ware, white slip on rim; handle missing.
 89. Grey ware, cream slip on rim.
 90. Light grey ware with white slip; possible reconstruction shown. A late 3rd- and 4th-century type.
 91. Dark grey ware with white slip on rim and shoulder, the lower edge of the latter band being marked by a heavily tooled groove; burnished zone extending upward from the base. The most complete flask found.
 92. A similar vessel, but larger, in orange-pink ware that has not undergone the second, or "slip," firing.
 93. Jug reconstructed from fragments of two vessels; white slip on rim and shoulder. The joining of the handle to the rim is a practice typical of the 4th century.

Miscellaneous Types.

94-5. Strainers in grey ware with fumed black surface and slip on rim, the whole of the outside and base being burnished; the holes are clean and round, at an average interval of $\frac{1}{4}$ inch, and punctured from the outside; incurved rim to prevent the spilling of liquid. An unusual type, of which several examples were found here. Two closely similar bowls in *Richborough 3*, Pl. XLI, 341-2, were probably of this type, although their bases were missing. One is dated mid 4th century, the other was found in a pit filled in c. A.D. 400.

96. A variant of the type in underfired orange-pink ware with white slip; diam. 7.6 in.

97, 98. Two of the only three mortaria rims found at Overwey. The rarity of this type suggests that it is an importation to the site, and its remarkable similarity to 4th-century examples from *Richborough* renders it almost certain that both sites were supplied with mortaria by the same kilns. 97 is in grey-white ware, with a lid groove, and bears signs of a white slip coating; diam. c. 10 in. Cf. *Richborough 3*, Pl. XLI, 360. 98 is one of two very similar sherds in red-grey clay with light buff slip, identical in treatment with *Richborough 1*, Pl. XXVIII, 102, dated mid 4th century.

99-101. Examples of the few pieces found of the common 4th-century red colour coated ware. These, too, have remarkably close parallels at *Richborough*, and were probably not made at Overwey. (See also 46.)

99. Small bowl in soft orange-pink paste with grey core and smooth, dark red slip on surface; diam. 6.4 in. Cf. *Richborough 1*, Pl. XXVIII, 113.

100. Similar ware to above; diam. 12.6 in. Small rim sherd with a pattern of alternating scrolls and lines of white paint, in imitation of the barbotine decoration on Samian form 36. Cf. *Richborough 2*, Pl. XXXII, 175.

101. Dark blue clay coated with bright red slip; flange from bowl derivative from Samian form 38, of which two examples were found. Exactly similar in paste and form to *Richborough 1*, Pl. XXVIII, 112, but without pattern in white paint. Dated mid 4th century.

102-3. Rims of a cordoned pot and a bead-rim jar, both in a distinctive coarse, gritty ware, belonging to types common in the period A.D. 50-100. From the lowest part of the filling of pit Ia. Together with 17 and 58 these sherds must represent intrusions from the scattered debris of an earlier settlement.

104-5. Orange-pink ware with cream slip. 104 is a jar, diam. 4 in., with two offsets on the neck, to which the writer can find no parallel. 105 seems to be a variant of the common 4th-century tall, narrow-necked jar, with the unique feature of regularly spaced grooves covering the neck. Cf. *Lockleys*, Fig. 12, 6, for an example with a strongly wheel-marked surface, dated early 4th century. The groove treatment on the Overwey sherd may be a development from the wheel-marking, and is probably rather later. A similarly decorated but much larger vessel was found at "Mavins" kiln (*Preh. Farnh.*, Fig. 104, R82.)

Large Storage Jars.

106-112. Sherds of massive jars, probably intended for storage purposes, and found in association with kilns I and II. They are all 4th-century types.

106-8. Smooth buff ware coated on rim and shoulder with cream slip; diams. respectively 7.6, 12, 13 in. 106 is unusually small, 107 and 108, with lid groove, being the more normal size. This type seems always to have been decorated on the lower part of the shoulder with a band of simple, incised comb pattern. The interior is often "clawed-out," a treatment which is obviously intended to produce a rough surface. This feature has a wide distribution in Surrey and Sussex, but more usually in vessels with rough rims like 109, and is discussed by Frere in *S.A.C.*, XLVIII, pp. 52-3. No. 107 is closely paralleled by a sherd from the Kingsley kiln (*Preh. Farnh.*, Fig. 108, R129), and rather similar jars, but with more upstanding rims, were found in the Snailslynch kiln (*ibid.*, Fig. 102, R53a and R53).

109. A large, coarse example, with a crudely executed incised decoration below the rim. This, and a similar rim with "cable" decoration, was found in pit 1b, and is typical of degenerate late 4th-century technique. Cf. *New Forest*, Pl. XVII, 10, from the 4th-century No. 1 kiln, Sloden Inclosure; Frere, *S.A.C.*, L, Fig. 8, 41, dated before A.D. 360; and *Preh. Farnh.*, Fig. 108, R127, from Kingsley kiln.

110-112. The more common forms of comb-decoration used on jars of types 106-8. Cf. *New Forest*, Pl. XXII, 22, from Black Heath Meadow, for a pattern similar to 111. The frequent use of flowing curves in these simple designs is typical of a resurgence of native Belgic feeling in decoration, which was general in the southern pottery industry during the 4th century, and has been noted particularly among the late New Forest kilns.

APPENDIX I

The coin found in trench A5 was kindly examined by Mr. A. W. G. Lowther-F.S.A., who reported on it as follows:—

3Æ of Gratian (A.D. 367-383).

Obv. Bust, diademed and draped, to r.

Ins. D N GRAT(IANUS) AVGG AVG

Rev. GLOR(IA ROMANORUM)

Emperor advancing or standing r., placing r. hand on head of kneeling captive, and holding labrum in left.

Lyons mint mark O | FII Type, Cohen 24.



APPENDIX II

ORGANIC REMAINS

These were kindly examined by members of the staff of the Natural History Department, British Museum, whose reports are embodied in the following notes.

Charcoal (examined by Mrs. F. L. Balfour-Browne).

All charcoal samples which were sufficiently large to be identified were found to be of either ash, birch, hazel or oak, all of which are to be found in the vicinity of the kilns at the present day. It is instructive to note the absence of the Scottish pine, which is now so abundant in the area, especially around Crooksbury Hill, and would almost certainly have been used by the potters if it had been available. Of the 25 identifiable charcoal samples examined, five were hazel, six ash, six oak, and eight birch, a result which seems to show that no special preference was shown toward any one of the four types, all of which were used in both kiln I and kiln II. No pieces large enough to be worth preserving could be found in association with kiln III.

Animal Remains (examined by Mr. J. E. King).

These consisted of two ox teeth, found at different levels on Site A, and an ox horn core fragment from the upper part of the filling of kiln II. The ox

would presumably have been kept not only to provide food, but also for the haulage of timber and for conveying the wares to the potters' scattered customers. The question of what animal was used by potters to transport their goods has always been a matter for conjecture, and Mr. Heywood Sumner suggested that the New Forest people employed donkeys for this work.

CONCLUSION.

Apart from a small amount of occupation *c.* A.D. 50-138, during which pottery may not have been made on the site, the period of activity of the Romano-British pottery kilns at Overwey was during the latter part of the 4th century A.D.

The only definitely dated object found was the coin of Gratian (A.D. 367-383) which, although of little significance alone, fits in well with the general picture obtained from the pottery. The kilns were apparently peacefully dismantled and filled in with the accumulation of burnt sand and wasters that lay around them, in order that the site could be used for agriculture. This change may have taken place after the fierce barbarian raids of *c.* A.D. 368, when widespread destruction of rural settlements in the south of Britain must have seriously affected the livelihood of the potters who served them. Little is so far known about the end suffered by 4th-century settlements in Surrey, but the recently excavated bath-house at Chatley Farm, Cobham, where much pottery of Overwey types was found, may have come to a violent end at this time.

If we may accept this mere hypothesis as true, the coin would have to be assigned to the agricultural period, and bearing in mind the fact that the kilns show signs of reconstruction, the west furnace floor of kiln I having been resurfaced three times, it would be reasonable to allow the site a period of activity of about five years, probably *c.* 363-8. There was no stratigraphical evidence of any period when the kilns may have been temporarily disused, and the identical nature of much of the pottery from kilns I and II renders it almost certain that sites A and B were operating at the same time. The remoteness of the site from the relatively thickly inhabited, but earlier, pottery-producing area at Farnham itself may indicate that the potters were forced to seek the security of a position well away from the main E.W. route, which must have provided a very easy road for invaders. The area certainly has no advantages over the Wreclesham plateau so far as clay supplies are concerned.

Was there any connection between the pottery industries at Overwey and in the New Forest? Many of the products of the two places are remarkably similar, but the absence from Overwey of such characteristic New Forest types as the purple-glazed "thumb-beakers," and rosette-stamped ware, seems to preclude any direct contact, and the similarity of other wares is probably due to competition in satisfying popular demand. Pottery was manufactured on a large scale at Alice Holt Forest, Hants, throughout

the Roman period from shortly after the conquest,¹ and it is probable that the whole group of Farnham kilns, including Overwey, and kilns producing the same wares at Farley Heath, Albury, all represent an eastward expansion of the Alice Holt industry. The organization and development of these southern potteries, and the method of operation of the curious two-furnace kilns, will become clearer when more sites have been excavated by modern methods.

¹ See A. G. Wade and A. W. G. Lowther, *Alice Holt Forest* (British Archaeology, 1949).