

# Excavations at The Churchill Hospital, 1971: Interim Report

By C. J. YOUNG

IN spring 1971, the House Governor of the Churchill Hospital invited the Oxford Archaeological Excavation Committee to undertake work on the known Roman kiln site in the hospital grounds in advance of development of the site. After a preliminary magnetometer survey of the site, carried out by Dr. Martin Aitken and the staff of the Oxford University Research Laboratory for Archaeology and the History of Art, and a two week trial excavation at Easter, a summer season of seven weeks was directed by Mr. T. G. Hassall, the Director of the Excavation Committee, and the present writer. The excavation was financed by the Committee. This report is intended to summarize the results of the 1971 excavation since final publication will take some time to prepare because of the great quantity of material found. A small quantity of pottery is published here to illustrate the major products of the site.

Our thanks go first to the Churchill Hospital and the Regional Blood Transfusion Unit for their tolerance and very willing assistance throughout the excavation. In particular we owe much to Messrs. T. Harvey and I. Orger of the Churchill, and to Dr. J. Grant and Mr. P. Collins of the Transfusion Unit. Many members of the Churchill staff assisted the actual work of the excavation and our thanks go to them and to all the other volunteers. My own thanks go especially to Mr. Hassall who organized and administered the excavation in the midst of his numerous other duties, to Mr. H. Richmond who acted as surveyor to the excavation, to Mrs. T. Dickinson, Miss E. Leedham-Green, Mrs. J. Young, Mr. S. Johnson, site supervisors, and to Mr. P. Kenrick, finds assistant and site photographer.

## THE SITE (FIG. 1)

The site lies in the south-east corner of the hospital grounds bounded to the north by the Haemophilia Unit and to the west by the Regional Blood Transfusion Unit. At present it is a fairly level plateau bounded on the south-east by the small but deep Lye Valley here forming a small gorge. The site is principally rough grassland and orchard and was used until recently as a market garden and orchard for the hospital. The north-east corner of the site is now covered by the hospital rubbish dump.

Geologically the site is formed of sand containing rafts of calcareous grit, overlying the Oxford clay. Less than 200 metres to the north these strata are capped by the Corallian Rag which provides a source of building stone.

The Churchill kiln site lies in the middle of the northern production area of the Oxford region Roman pottery industry, lying 650 metres south of the site at

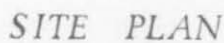


FIG. 1

the Nuffield Orthopaedic Centre,<sup>1</sup> 850 metres north-east of the site at Oxford School,<sup>2</sup> 1,800 metres north of the site at Between Towns Road, Cowley,<sup>3</sup> and about 400 metres south-west of the site at Harry Bear's Pit.<sup>4</sup> The road from Dorchester to Alchester runs within 1,000 metres of the Churchill and a spur road possibly leading to its general area was noted in 1957.<sup>5</sup> Surface indications of the Churchill site were first noticed at the end of the 19th century.<sup>6</sup> Kilns were discovered here in 1953 (totally destroyed),<sup>7</sup> in 1955<sup>8</sup> (re-excavated last year as F.305) and in 1962 (totally destroyed).<sup>9</sup> The site was thus known as a large kiln site of the Oxfordshire potteries, apparently of late 3rd and 4th century date. The purpose of the 1971 excavations was to investigate as large an area as possible in an attempt to recover information on the organization and structures of one of the kiln sites of the very important late Roman pottery industry of this region.

### THE EXCAVATION

An area of 2,000 square metres was totally excavated and was planned and recorded by the metric co-ordination method. Two phases of potting activity were discovered. In addition finds of Beaker period flints and of samian pottery indicate prehistoric and earlier Roman occupation in the general area of the site though no features could be attributed to these phases.

#### PHASE I (PLS. II, A, III, A, B ; FIGS. 1-3)

First phase structures comprised a circular stone building, a square stone structure, and possibly a well, grouped to the south-east of four kilns.

The circular building, F.403 (PL. II, A; FIG. 2), which was 9.5 metres in diameter, had been badly damaged by robbing, nearly all the western half having disappeared.<sup>10</sup> The shallow depth of topsoil meant also that, as with all the other structures, its floor levels and superstructure had been virtually destroyed by ploughing. The surviving wall footings were 0.50 to 0.75 metres in width, formed of small pitched limestone stones set directly onto the natural sand. Where the footings had disappeared their path could be traced by a streak of lighter yellow sand. In one or two places a second course of stones laid flat survived. Within the footings were six post-holes. Two of these, F.420 and F.423, were set close against the wall so that the wall footings were carried round them. The remaining post-holes were set out in two pairs ; one, F.418 and F.419, on the south side of the building, the other, F.421 and F.422, on the north-west side, facing towards the kilns.

<sup>1</sup> *Oxoniensis*, xxviii (1963), 92; xxix/xxx (1964-5), 191.

<sup>2</sup> *Ibid.*, xxxv (1970), 104.

<sup>3</sup> *Ibid.*, vi (1941), 9-21.

<sup>4</sup> *Berks, Bucks and Oxon Archaeological Journal*, iv (1898), 19.

<sup>5</sup> *Oxoniensis*, xxiv (1959), 103-5.

<sup>6</sup> *Berks, Bucks and Oxon Archaeological Journal*, iv (1898), 19.

<sup>7</sup> *Oxoniensis*, xvii/xviii (1952-3), 224-6.

<sup>8</sup> *Ibid.*, xx (1955), 90.

<sup>9</sup> Information from Mr. R. Dyke.

<sup>10</sup> Local informants suggest that this area was used as a source to supply stone for rock gardens before the Second World War.

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## CIRCULAR STRUCTURE F.403

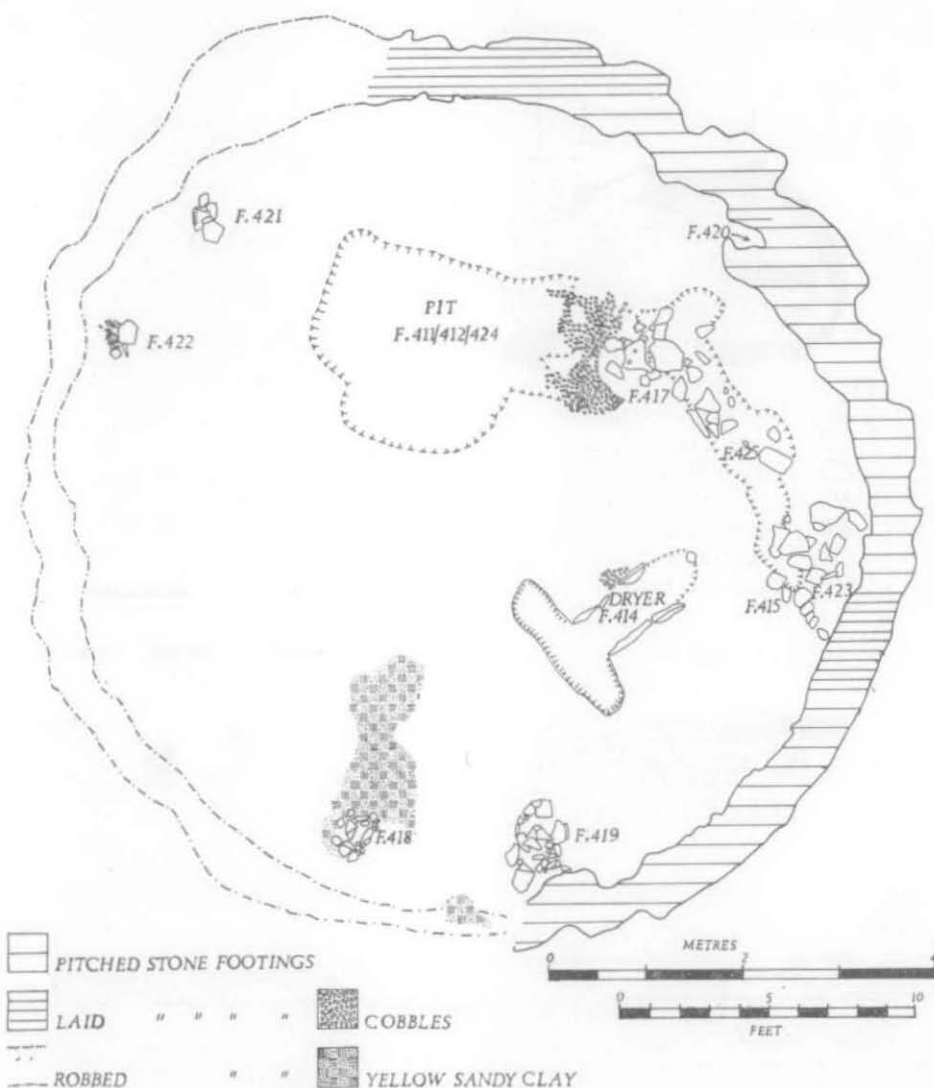


FIG. 2

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KILN F. 307

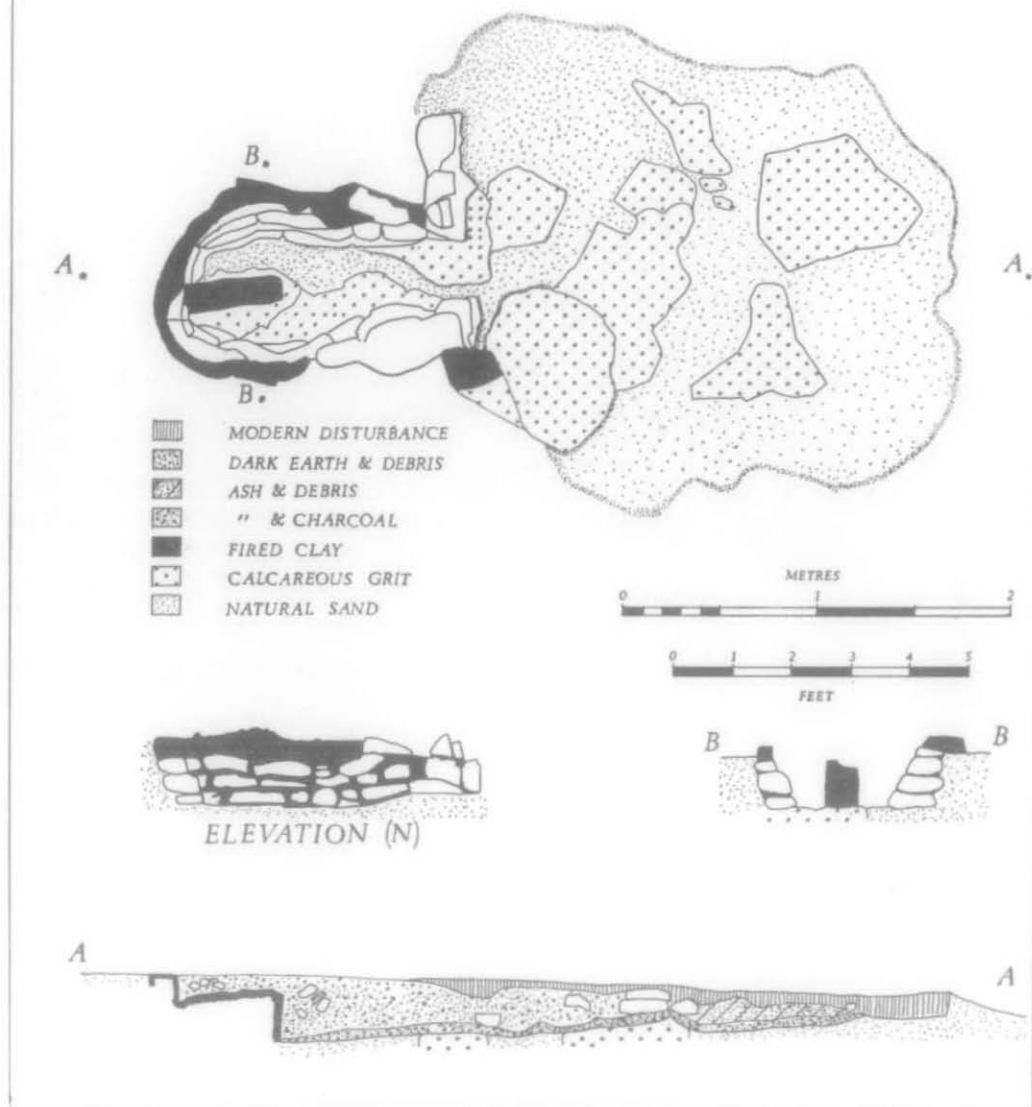


FIG. 3

Reconstruction of this building is problematic.<sup>11</sup> The footings were sufficient for a dwarf stone wall which could have supported a timber superstructure. There was, however, no trace of a central support and this raises the question of the nature of the roofing of the building. One possibility could have been a central support resting on some sort of heel stone subsequently ploughed or robbed out. This seems unlikely since the builders of the structure were obviously not averse to the use of post-holes. Perhaps more likely is the possibility that the structure was roofed without any central support at all. Buildings of this size with single-span roofs are not unknown. At Cadbury-Camelot wooden huts up to 10.5 metres across seem to have had no central support<sup>12</sup> and it has recently been suggested that the hut at Little Woodbury was roofed in a similar fashion.<sup>13</sup>

Possible positions for doorways are indicated by the two pairs of post-holes. One pair could have supported a doorway facing south, the other one facing north-west towards the kilns. The purpose of the remaining post-holes is not apparent but they could possibly have been part of some internal fitting of the building. A number of other features were found inside the building. F.411, F.412 and F.424 form a pit complex which must have preceded the building since F.424 was partially sealed by a patch of the structure's floor. The fill of all three was homogeneous and together they form an irregular excavation, perhaps an attempted clay pit, about 2.6 metres by 2.05 metres in dimension and up to 1.8 metres deep. The pits had been filled mainly with sand containing a little pottery of first phase types and also two layers of stone, possibly an attempt to stabilize the fill. To the east of this feature and running into it was a long shallow gully, F.416/F.425, with a sandy fill containing much stone and some traces of burning. This was perhaps a wash channel and its fill an attempt to level it before the building was put up. These features seem to have preceded the building but not by more than a very short period since they contained the same pottery types as the building itself.

Traces of the floor of the structure were found in two places only, where it had been protected by subsidence into the features just discussed, and up against one of the large stones of F.414. The rest of it had been removed, probably by ploughing. The floor had been made of small stone cobbles set into sand which had been made up slightly to provide a level floor on the sloping natural ground surface. Patches of sandy clay found in the southern half of the building were perhaps part of this make-up. Set into the floor was a T-shaped trough, F.414, filled with sand and traces of burning. The sides of the leg of the T had been revetted with pitched stone slabs which also showed signs of burning. The stone revetting, if any, of the cross arm had been removed. T-shaped structures of this type, though normally very much larger, have been found on several kiln sites, including Hartshill,<sup>14</sup> and another bigger one belonging to the second phase was found just to the south of the circular building under discussion (see below,

<sup>11</sup> I am indebted to Mr. C. R. Musson for discussing this structure with me.

<sup>12</sup> *Antiquity*, XLVI (1972), 35, fig. 1.

<sup>13</sup> C. R. Musson, 'House Plans and Prehistory', *Current Archaeology*, 21 (July 1970), 271-3.

<sup>14</sup> *Journal of Roman Studies*, LVI (1966), 206.

p. 18). They seem to have been used as pottery dryers for drying out green pots before they were put in the kiln and it is probable that F.414 was intended for this.

The dryer is the only evidence for the function of the building. The bases of other internal fittings are possibly represented by the area of stonework, F.415, against the wall footings east of the dryer, and by the small patch of stones, F.417, adjacent to the larger surviving patch of floor, although most of the stones here are part of the fill of the earlier gully, F.416/F.425. The dryer does suggest some connection with the manufacture of pottery and the position of the north-west doorway, facing towards the kilns, also suggests some link with them. Pottery from the building is sparse but was all of first phase types and contained a proportion of underfired mortaria, again suggesting some connection with the working of the potters on this site. It seems most likely that this circular building was some sort of workshop belonging to the first phase of pottery manufacture on the site.

The other major structure of this period was a stone platform 7 metres wide and 8 metres long, to the south-east of the circular building. This feature, F.107/108, will be described fully in the final report. There was no evidence that it had ever been more than a rough platform with a kerb wall. The deposit of pottery mixed with blue clay which covered the platform suggests that it was some kind of dumping area, perhaps built on this solid base so that the waste could be cleared away periodically. A similar but much smaller structure was found at Cowley.<sup>15</sup>

Between the platform and the circular building was a stone-built well. Its overall diameter was 1.4 metres, its internal diameter 0.7 metres, and its depth 1.65 metres. The present water table was reached at the depth of about 1 metre though it fluctuated somewhat as a result of rainfall. The date of the well is not certain. The main bulk of its fill was attributable to the second phase, though there was a fair amount of first phase pottery. There was very little pottery from its construction trench and what there was was not dateable. However the position of the well is far more suitable to the workshop area of the first phase than to the firing area of the second phase. It is also clear that the well was deliberately filled during the second phase, having by then ceased to be of use, though its filling may have been precipitated because a human skull and the front half of a sheep had been dropped into it. It seems possible that the well was constructed as a water source for the first phase workshop and then remained open until it was deliberately filled during the second phase.

During the first phase this part of the site was drained by a ditch system (see FIG. 1), running into a sump on the southern edge of the site which lay partly outside the excavated area. On the upper part of the plateau the ditches were little more than wide, very shallow gullies but further down the slope they had been dug out into a truncated V-shape, presumably partly to cope with the greater flow of water in this area and partly as a result of the frequent cleaning out that must have been necessary because the subsoil was sandy. The ditches contained first phase pottery, and one of them, after it had silted up, had been sealed by the second phase kiln, F.101/102 (see below, p. 19, and FIG. 4).

<sup>15</sup> *Oxoniensis*, vi (1941), 13.



North-west of the workshop area lay four kilns. These were in a row and were all aligned on a north-west to south-east axis with their stokeholes lying on the downhill south-eastern side of the kilns. Despite considerable variation in size, all the kilns had been designed in the same way and one is described here in advance of the final report to illustrate the type.

This kiln, F.307 (PL. III, A, B ; FIG. 3) survived up to the Roman ground surface. The furnace chamber and stokehole were relatively well preserved but little remained of the pottery oven and nothing remained of its floor. The overall length of the kiln was 1.68 metres and its greatest width 1.1 metres. The furnace chamber had been constructed by digging a pit into the natural sand and as much use as possible had been made of the natural calcareous grit to provide a firm base. The furnace chamber walls were constructed of stone bedded in clay and had been laid directly against the edge of the pit. There was no foundation trench as such.

Support for the oven floor was provided by a tongue pedestal projecting from the back of the kiln. This was 0.49 metres in length and constructed of clay. Its smoothed top surface survived in one small patch and this gives the height of the furnace chamber. The top of the stone wall was about the same height and was capped by a clay wall around most of its circuit. This was slightly set back from the inner edge of the stone wall to give a narrow ledge which must have acted as additional support for the oven floor. Nothing survived of the floor itself but slight traces in the other kilns of this period suggest that it was of the permanent vent-hole type.

The walls of the oven survived to a height of 0.05 metres only. It had been constructed out of clay reinforced by sherds of pottery and lumps of kiln debris. It is, of course, not possible to determine the height of the pottery chamber or the way in which it was roofed though fragments of 'dome' plates were found in the kiln. The surviving portions of the wall extended over the whole of the stone sub-structure of the kiln, suggesting that there was no real flue between the furnace chamber and the stokehole.

As in the kiln itself, the builders had in the stokehole made as much use as possible of the rafts of calcareous grit to provide a firm footing and foundation. The revetting south of the kiln mouth had been formed by making use of a large block of calcareous grit in its natural position. Similarly the floor of the stokehole also consisted largely of this stone, providing a firm footing. These natural rafts possibly account for the shallow depth of the kiln and stokehole. The stokehole is sub-rectangular, 2.4 metres by 2.4 metres, and its total depth below the Roman ground level was only 0.25 metres. On either side of the kiln mouth the side of the stokehole was revetted, on the south by the use of an existing raft of calcareous grit and on the north by a wing wall built out from the kiln structure. The other edges of the stokehole were unrevetted.

The lowest fill of both stokehole and furnace chamber was a layer of charcoal and ash, presumably the remains of the last firing. After this the kiln had obviously been used as a dump. The stokehole had been filled with a mixed layer of ash and debris and the kiln itself had been filled with a layer of dark earth



containing much kiln debris, tumble and pottery, which had extended into the stokehole also. The uppermost layers of the stokehole had been disturbed fairly recently, perhaps in connexion with the planting of the orchard which occupied this part of the site.

As stated above all four kilns of this phase were of the same type. It is not likely that they were all in use at the same time since each, as it went out of use, seems to have been used as a dump for the waste of its successor. It is certain though that all the kilns belonged to the first phase. Their layout is obviously deliberate, for their design is the same and the pottery types from them are identical. It would seem that the four kilns were constructed and used successively by the potters who worked in the workshop area to the south-east.

The first phase features seem therefore to be the remains of a workshop complex, comprising the workshop itself with ancillary structures in one area and with the firing area placed well away from the working area. The plan of the complex suggests that it was well organized and laid out, and the extreme scarcity of waste dumps, especially when compared with the waste tips of the second phase, also suggests a relatively well organized and controlled production unit. It is not certain that the whole of the complex has been discovered but it seems unlikely that much belonging to it would have been outside the area investigated. On the north the kilns were bounded by a palisade trench, apparently dating to this phase. The kiln found in 1953 to the south of those dug in 1971 was producing pottery types not found in this phase. The structures associated with the kilns seem not to have extended as far south as the edge of the excavated area. Other parts of this workshop complex might have existed in the area of the hospital rubbish dump which is not now available for excavation.

The dating of this phase and indeed the attribution of structures to it depends on the large quantity of pottery found in the kilns and on top of the stone platform. The major types produced in this phase are discussed further below, p. 21. Of these, the orange cooking pots are the type with the shortest life (FIG. 5, nos. 6, 11-12) and these seem dateable to the second half of the 3rd century (see below, p. 23). Sherds of red colour-coated ware from this phase also imply a date after A.D. 250. The mortarium types include type A which date from A.D. 250 to A.D. 400 as well as the type B examples which seem to be 3rd century types. A date in the second half of the 3rd century seems to fit the evidence and this is perhaps supported by a coin of Gallienus from the kiln, F.311.<sup>16</sup>

#### PHASE II (PLS. II, B, IV, A, B ; FIGS. I, 4)

In addition to the features already mentioned, two other structures and a considerable area of pottery tipping were found in the southern part of the site. These features seem to have been contemporaneous, for all contained the same range of pottery types, differing from that of the first phase. The pottery tips and one of the structures—a T-shaped pottery dryer—will be discussed fully in the final report. The tips were all shallow and are probably the remains of a series of waste heaps scattered around the kiln F.101/102 which was being

<sup>16</sup> I am indebted to Mr. D. R. Walker for identifying the coins.

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KILN F101/102

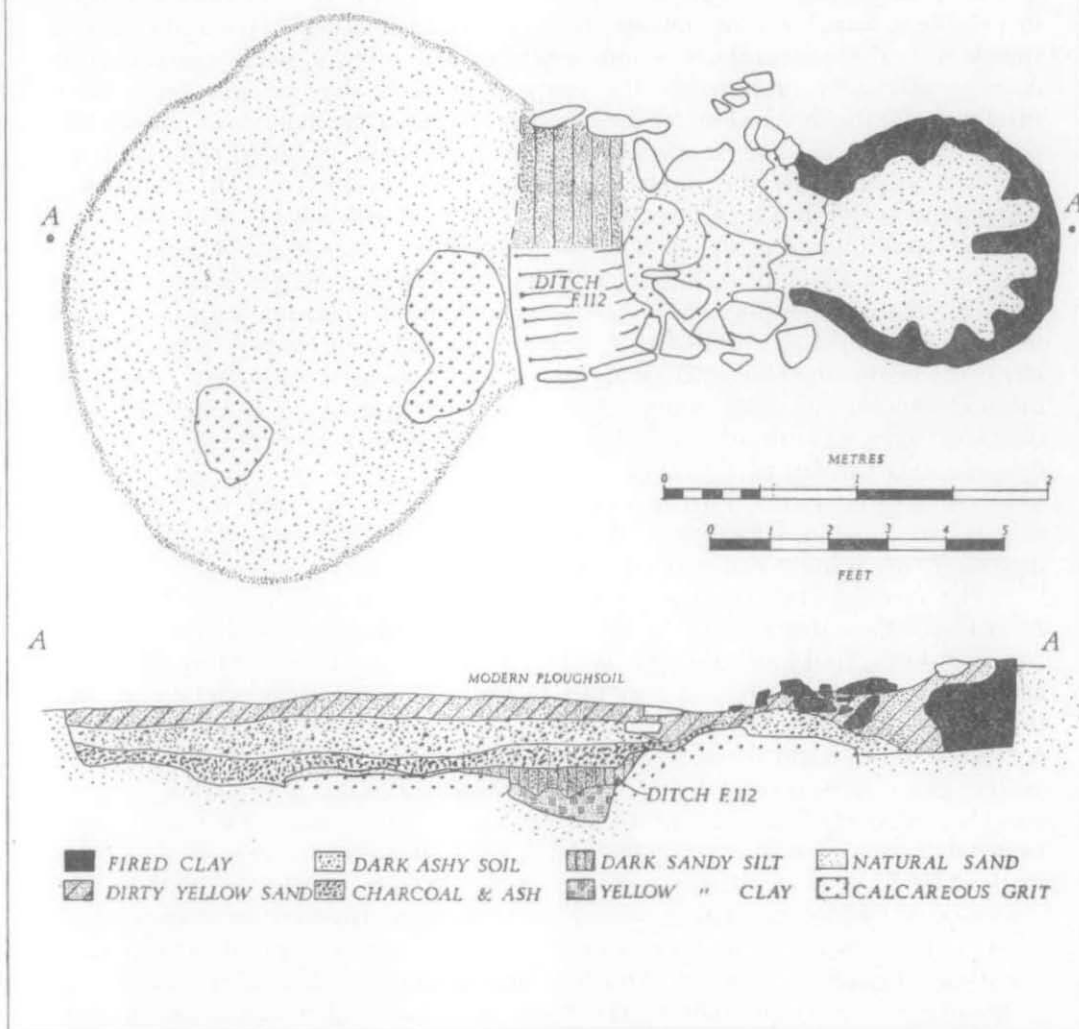


FIG. 4

worked at this period. The dryer, F.202 (PL. II, B) was built of stone and contained considerable quantities of ash and charcoal and also some pottery. No trace of its floor remained.

The kiln (PL. IV, A, B ; FIG. 4) was of the standard updraught type and, unlike the first phase kilns, but in common with most kilns in the Oxford region, it was built mainly of clay. The overall length of kiln and stokehole was 5.15

metres. The kiln itself was 1.4 metres long and 1.3 metres wide and the flue was about a metre in length. The stokehole was an irregular oval hollow, up to 0.49 metres deep, and was not aligned on the same axis as the kiln. Once again as much use as possible had been made of the natural rafts of calcareous grit to provide a firm basis for the structure and a firm footing in the rather damp stokehole. The base of the stokehole was filled with a black, waterlogged deposit of charcoaly ash, presumably the remains of successive firings. This layer extended into the flue and under the outer revetment of the flue sides. Above this was a less dense ashy layer, containing charcoal which extended right into the kiln and was possibly the result of dumping from elsewhere. The uppermost layer of the stokehole fill consisted of dirty yellow sand with patches of black ash.

Between the kiln proper and the stokehole there was a flue. This had been constructed by digging a channel into the natural sand and revetting it with pitched slabs of limestone which had been packed into position with clay, some of it still plastic though reddened by heat. This and the evidence of the bottom ash layer of the stokehole extending under the revetment suggests a rebuild of the flue structure at some point. The wide outer part of the flue showed considerable signs of burning which had reddened the silty sand fill of the earlier drainage ditch sealed by this kiln. This portion of the flue perhaps acted as the 'firebox' of the kiln. The narrowness of the inner flue and the additional constriction here provided by a lump of calcareous grit would have greatly increased the draught through the kiln during firing.

The furnace chamber itself had been built into a pit dug into the sand. After it had been dug its sides had been plastered with a thick wall of clay which had then been fired hard, though small patches on the exterior surface and right at the base of the wall were still slightly plastic. This fired clay wall was red on the outside and grey on its interior face. The floor of the furnace chamber consisted of the natural sand reddened by heat. Support for the floor of the pottery chamber was provided by a central tongue pedestal and a series of small corbels projecting from the upper part of the furnace wall. The base of the pedestal showed much wear. This method of support is otherwise unknown in the Oxford region and the only parallel in Roman Britain seems to be the colour-coated kiln excavated by Mrs. K. F. Hartley at Hartshill in Warwickshire where a similar arrangement was found.<sup>17</sup> No trace of the floor of the oven chamber itself remained in position though a large quantity of kiln debris was found in the upper layers of the kiln where it seemed to have fallen as the derelict kiln gradually filled up with soil. Material from this layer suggests that the oven floor was of the permanent vent-hole type.

The material from the stokehole fill, from the well fill and from the pottery tips around the kiln had been used principally for the production of mortaria and parchment wares, though some reduced grey wares were also being produced in the vicinity. The colour of the kiln wall suggests that the last firing had been a reducing one. The extent of the wear to the base of the pedestal—the result

<sup>17</sup> Mrs. Hartley kindly informed me of this in advance of publication.

of cleaning the kiln out—and the evidence for rebuilding in the flue suggests that it was in use for a number of firings.

It is obvious that much more remains to be found of structures pertaining to this phase. So far only the firing area has been investigated. It is clear from the plethora of tipping around the kiln that work at this period was far more untidy and presumably less tightly organized than in the first phase. This is perhaps supported by the diversification of the potters into the production of small quantities of coarse wares in addition to their main products (see below). The pottery types of this phase are those current in the Oxford region from A.D. 250 onwards. The absence of first phase types would suggest some lapse of time between the two phases, as would the siting of the kiln F.101/102 across the silt-filled ditch of the first phase. Some idea of the extent of the interval is given by the find of a coin of Valens (A.D. 368–374) in one of the pottery tips. This could suggest a date in the last quarter of the 4th century for this second phase of activity.

### THE FINDS

A very large quantity of material was recovered and it has not yet been possible to process more than a very small proportion of this. It is, however, undesirable that even an interim kiln report should appear without any discussion of the products of the site. The intention of this section is to illustrate the main types produced on the site in the two phases of activity. For the first phase a small type series of forms has been prepared. For the second phase it has been decided to publish the contents of the well which held a large number of near-complete vessels and had apparently been filled very rapidly once the filling process had begun. All other finds, including the human and animal bone from the well, have been held over for the final report.

My most grateful thanks go to Mrs. G. Beard who drew the bulk of the pottery with great speed, and also to Miss G. Bryning, Mrs. M. Marsh and Mr. P. Kenrick who drew the remaining vessels. Mr. Kenrick was of the greatest possible assistance in the sorting of the pottery and the preparation of this finds report; responsibility for its arrangement, conclusions and errors is mine. Both the type series for the first phase and the material from the well is arranged according to the types of fabric made on the site and is divided up by form within this primary grouping. Pots with numbers prefixed by P are from the main type series for the site. Numbers prefixed by F refer to the features in which the pottery was found. Where large numbers of illustrated vessels are made in the same fabric it has seemed adequate to prefix such groups by a general description of the fabric and its variations and to omit individual descriptions for each pot unless there is some feature worthy of special comment.

### PHASE I

#### MORTARIA

Ideally the fabric used for the mortaria was hard, sandy and cream or off-white in colour. In fact there were numerous variations on this and almost all of these seem to have been marketable. Frequently it is soft and sandy to the touch and often it

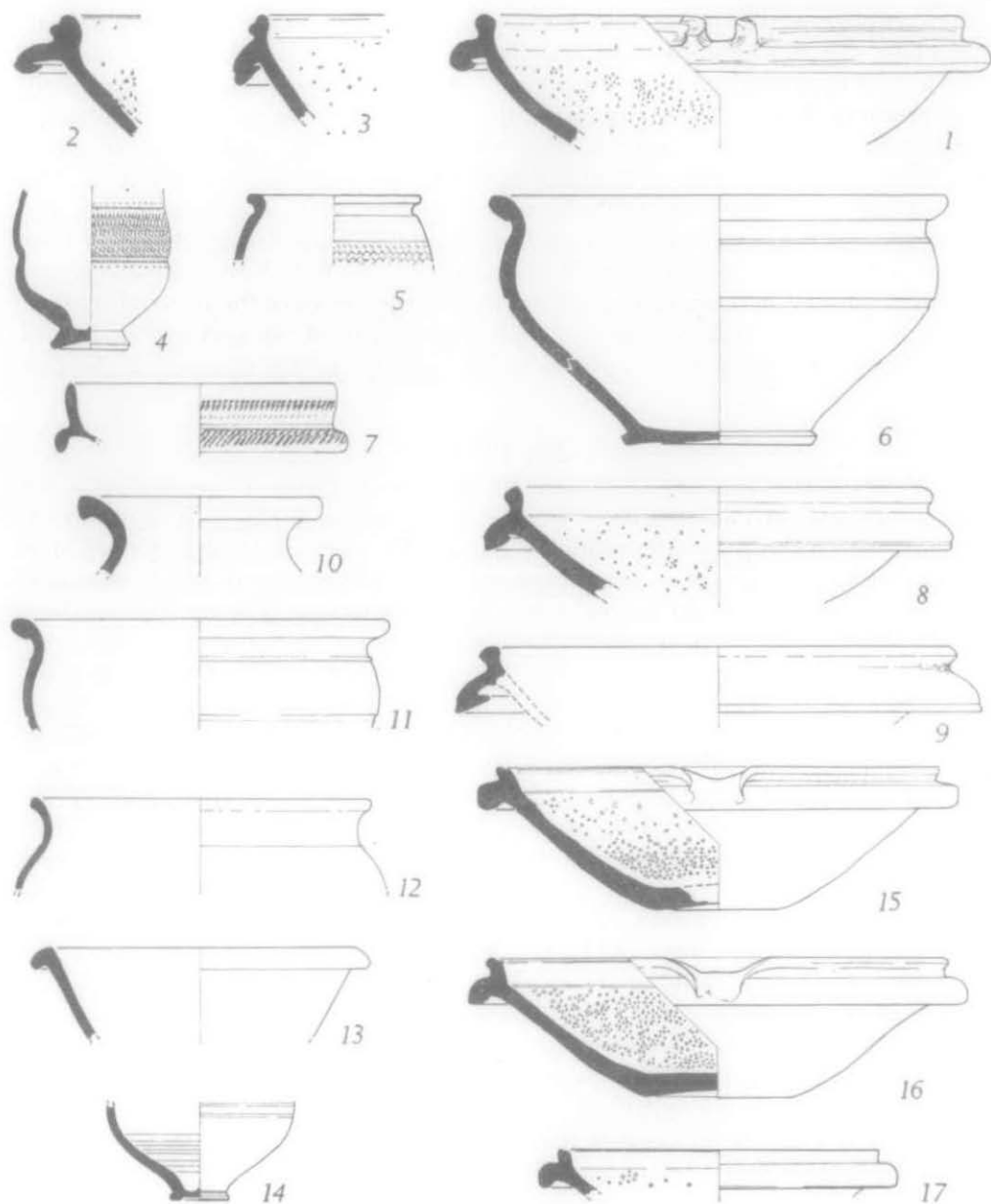


FIG. 5  
Churchill Hospital, Oxford : coarse pottery 1-17 ( $\frac{1}{2}$ ).

fires to an off-white colour with orange or pink core. Sometimes the surface too can be pink or orange in colour and occasionally there was an attempt to coat the flange or the inside of the bowl with an orange slip. Finds suggest that the first phase potters may have achieved more consistent firing results than their successors. The most distinctive feature of any Oxford mortarium is the gritting which can be red, pink, white, grey or black in colour. It is always translucent and it always sparkles if caught by the light.

Mortaria types of the first phase include the ubiquitous Oxford late Roman type (see below, Nos. 15-29), made from A.D. 250 onwards. Other types from this phase are rather less common. There are two main variants of Type B. Both have a substantial rim and a broader flange than the Type A mortar (see below, p. 25). B i has a slightly curved horizontal flange hooked back at the tip. B ii has a hooked flange depressed at a sharp angle to the rim. On both varieties the rim and the flange can be grooved. The spout is formed by turning the rim out over the flange.

## FIG. 5

1. U/S ; P 17 ; B i mortar with standard spout and hooked horizontal flange.

2. Topsoil ; P18 ; B i mortar with grooved flange tip and grooved rim.

Diameter : 22 cms.

3. Topsoil ; P19 ; B ii mortar, grooved on flange tip and on rim.

Diameter : 23 cms.

See also No. 8.

## ORANGE 'CHURCHILL' WARE

This fabric is sandy and fairly soft. Its normal colour is orange but it can vary to red and sometimes has a grey core. Reduced wasters are grey. It was used to make wide-mouthed jars, beakers, flagons and flanged bowls. Rouletting was frequently used on the flanged bowls and beakers. The fabric seems to have been made only at the Churchill in the Oxford region. It provides the best dating evidence for the first phase as it seems to have been made for only a short period. Orange wide-mouthed jars, probably from the Churchill site, have been found at Shakenoak in a layer dating to the second half of the 3rd century.<sup>18</sup>

4. F306/10 ; P63 ; Body of beaker with constriction above and below decorative zone of rouletting.

5. U/S : P32 ; Rim and body sherd of beaker ; rouletted decoration.

6. F.306/2 ; P64a and b ; Wide mouthed jar with folded rim and girth groove. This is the standard jar type in this fabric and the most common 'Churchill' orange form.

7. F.306/10 ; P120 ; Flanged bowl imitating Dragendorff 38, a form made in red colour-coat ware at other kilns in the area. Rouletted on body and flange.

See also nos. 10-13.

## FINE CREAM WARE

This has a hard very fine white or cream fabric with very smooth surfaces. It was used almost entirely for jugs or flagons, and also for beakers and small flanged bowls. Forms of decoration used are rouletted and painted bands. It has not yet been possible to restore drawable examples.

See below no. 14.

## PHASE II

As stated above, the fill of the well, F.207, has been selected to illustrate the products of this phase. The nature of the well's fill has been discussed above, p. 16. All the remaining pottery, except for no. 39, comes from the well. All the rim sherds have

<sup>18</sup> A. C. C. Brodribb, A. R. Hands, D. R. Walker, *Excavations at Shakenoak*, II (1971), Fig. 36, nos. 309-315.

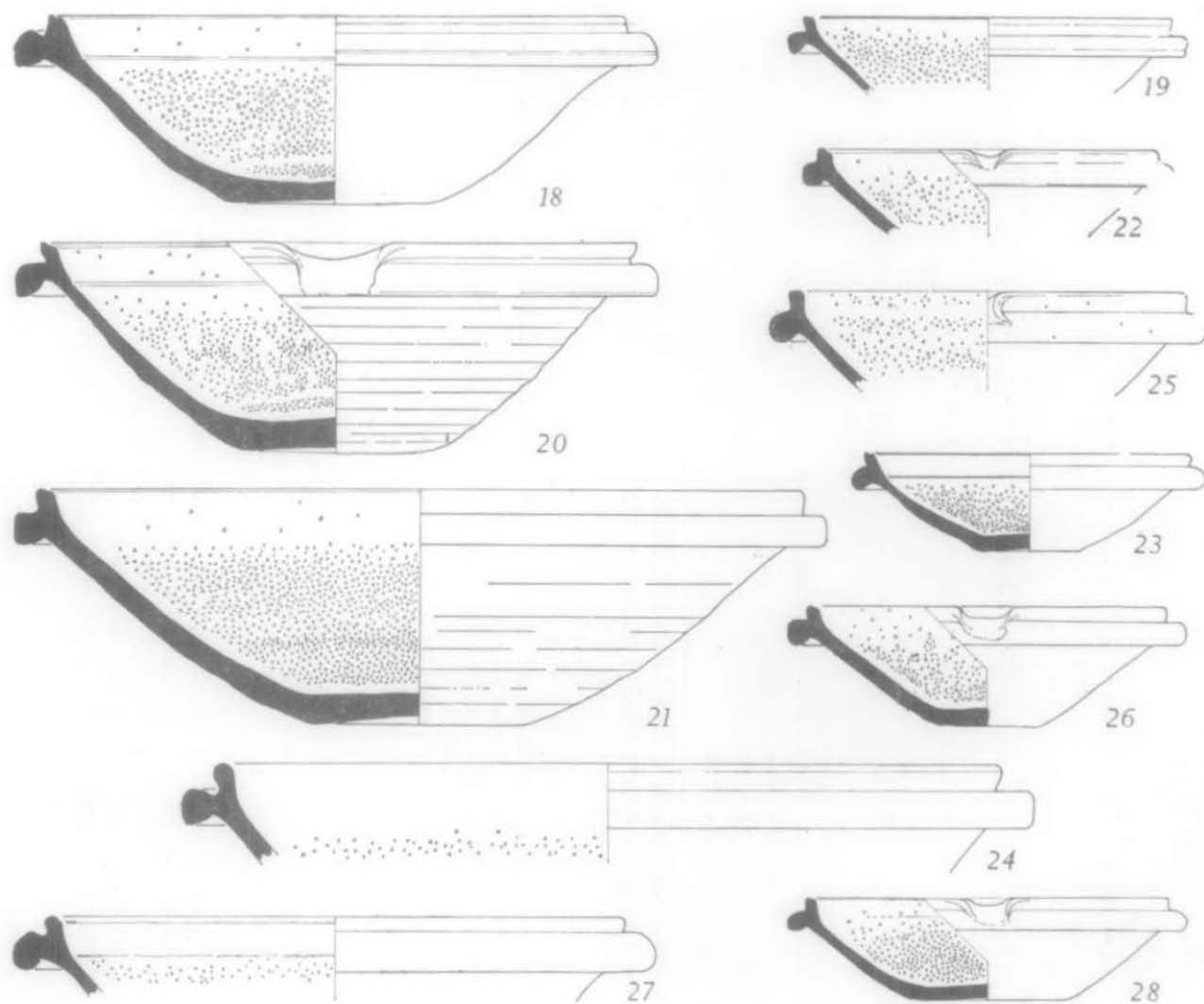


FIG. 6

Churchill Hospital, Oxford : coarse pottery 18-28 (†).



been listed though this is not a secure indication of how many vessels are present. Counts of body sherds have not been entered unless for some reason they seem to indicate the number of vessels present.

## PHASE I POTTERY

Nearly all the sherds of Phase I pottery are small and abraded. If the well is first phase (as argued above) these date from its early use. Otherwise they are residual material which has got into the well in Phase II.

8. B ii mortarium with depressed hooked flange grooved at tip and plain rim.
9. P.174 ; B mortarium.  
3 other rim fragments of B mortaria.
10. P.129 ; large narrow-mouthed jar in orange 'Churchill' ware.
11. Wide-mouthed jar in orange 'Churchill' ware.  
13 other rim fragments of this form.
12. P.128 ; rim of wide-mouthed jar in orange 'Churchill' ware.  
1 other example of this form.
13. P.130 ; pie dish in orange 'Churchill' ware.  
2 other examples of this form.  
1 beaker as no. 5 in orange 'Churchill' ware.
14. Base of flagon in fine cream ware.  
Neck and 2 handle fragments of fine cream ware flagons.

## MORTARIA

Apart from the few type B sherds already mentioned all the mortaria in this deposit are of Type A, the standard late Roman product of the Oxford region. Of particular interest is the fact that all the variations shown here come out of the same deposit and must be contemporary with each other. This shows the futility of trying to divide up this particular type chronologically on a typological basis. The fabric of this ware was discussed above. The basic features of type A are a small bead rim and a squat narrow flange folded close up against the body of the vessel. The spout is invariably formed by squashing the bead rim out over the flange. The various sub-types are described separately below but it should be noted that the types merge into one another and there is no clear-cut division between them.

*Type A i.* This sub-type has a broad flange, curving downwards and outwards at a fairly sharp angle, folded over tightly but not right back to the wall of the bowl.

15. P.159 ; standard form of this type.
16. P.160 ; as 15 but with out-turned rim tip.
17. P.161 ; as 15 but with grooved rim.  
7 complete sections and 45 rim and flange sherds not illustrated.

*Type A ia.* This variety is similar to A i but has a groove on the outer edge of the flange.

## FIG. 6

18. P.162 ; Large size of this type. Grooved on rim top and on rim exterior.
19. P.163 ; small size of this type. Grooved on rim top.  
14 examples not illustrated.

*Type A ii.* This sub-type has a triangular flange. The top of it is normally flat and the outer surface is vertical, with the underside sloping steeply upwards to the vessel wall.

20. P.164 ; top of the rim out-turned and grooved.  
4 other examples not illustrated.

*Type A iii.* This type has a square flange. The angles are well defined and the underside is normally horizontal.

21. P.165 ; large size, plain rim.
22. P.166 ; small size, grooved rim.  
4 other examples as 21 not illustrated.

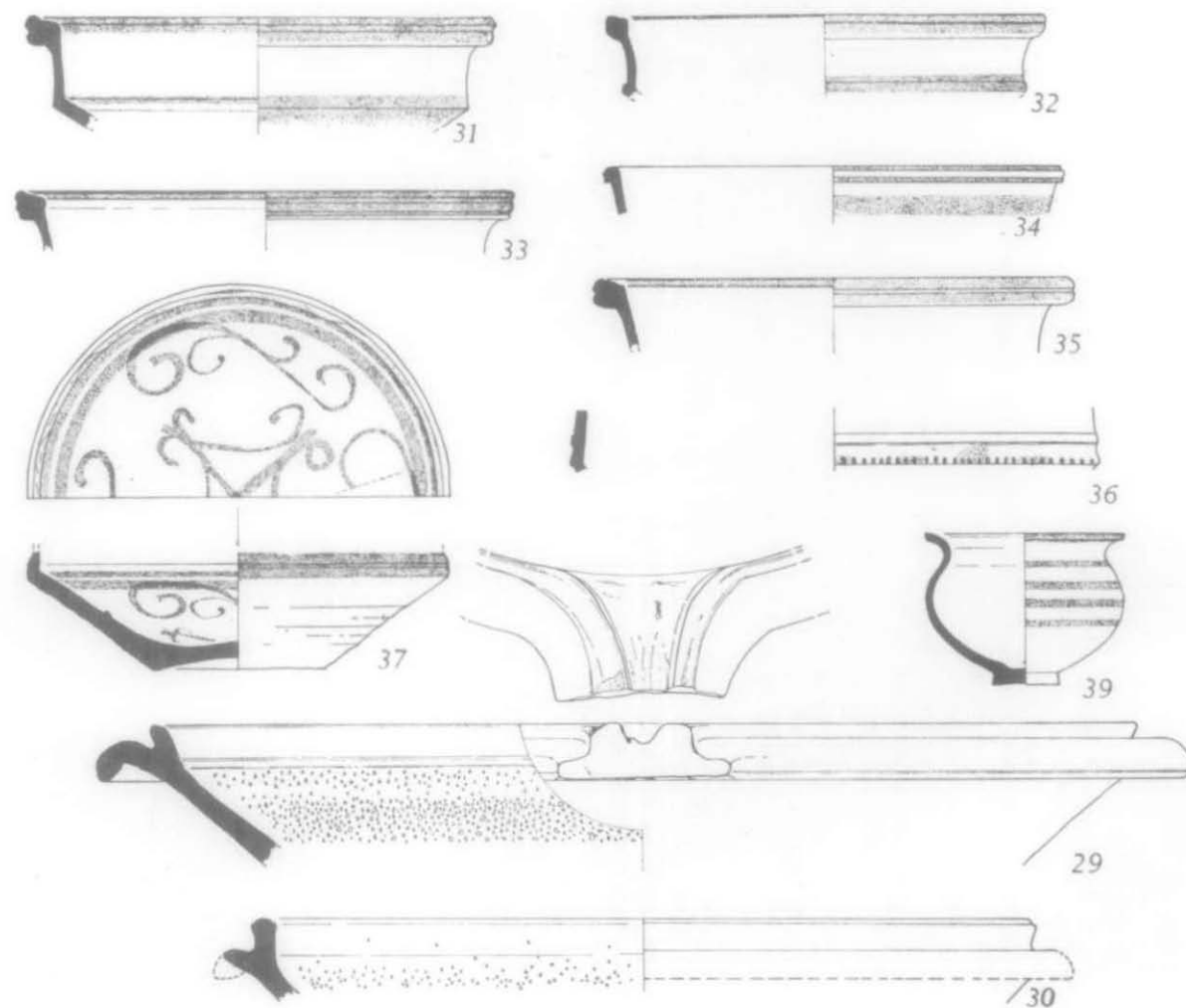


FIG. 7

Churchill Hospital, Oxford : coarse pottery 29-37, 39 ( $\frac{1}{4}$ ).

*Type A iv.* This variant has a rounded flange, similar to A iii but without the well defined angles.

23. P.167 ; small size, plain rim.

24. P.168 ; large size, grooved rim.

25. P.169 ; plain rim. The fabric of this pot has a large amount of mortarium grit scattered through it.

16 other examples as 23 not illustrated.

*Type A i/iv.* This variant has an elongated round flange.

26. P.170 ; small size, plain rim.

27. P.171 ; large size, internally grooved rim.

13 other examples of this type not illustrated.

*Type A v.* This variety has a broad flange which is unfolded and sometimes has a downturned tip. It is generally found only in the smaller type A mortaria.

28. P.172 ; grooved rim.

8 other examples of this type not illustrated.

#### FIG. 7

30. Type A mortarium with broken flange ; double grooved rim.

6 other type A mortaria.

29. Large mortaria with broad flange which is slightly hooked. It has an elaborate spout more reminiscent of the 2nd century than the 4th.

If the vessel is not residual, its flange type must be due to the necessity to supply a strong handle for lifting the mortarium when full.

#### PARCHMENT WARE

Parchment ware is one of the well-known categories of Oxford region pottery which were traded very widely in southern Britain after A.D. 250. The fabric is soft and sandy though good examples can be hard-fired. It frequently contains a fair amount of black and red temper. Its colour ideally is white or cream and, like the mortaria, it is frequently fired with a pink or orange core. The surfaces of the vessels are normally smoothed over as a base for the red-painted decoration which characterizes this ware. If it has not been smoothed the surface feels sandy. The most common form is the wall-sided bowl with an out-turned rim and a carination marked by a moulding. Both the moulding and the rim are normally painted red. The inside of the bottom of the bowl is painted with a pattern, normally geometric in design, though this has frequently gone because of the fugitive character of the paint. Other forms, far less common, include platters<sup>19</sup> and small globular jars.

#### Standard bowl form

31. P.132 ; single grooved rim, red paint on top and exterior of rim, and on exterior and interior of carination.

32. P.133 ; moulded on carination. Red paint on rim and on exterior of carination.

33. P.134 ; double grooved rim with inward sloping top. Red paint on rim.

34. P.135 ; variant form with grooved rim. Red paint on rim and band of red paint on exterior wall.

35. P.85 ; double groove on top of rim, single groove on outer face of rim.

36. Wall sherd with slashed moulding on carination. Red paint on carination.

37. P.112 ; base of standard bowl form, grooved on carination. Red paint on carination and internal pattern of scrolls surrounding cruciform motif.

Sherds of 7 other vessels not illustrated.

Base of small globular jar. A complete example from one of the pottery tips is drawn to illustrate the type.

39. Small globular jar with bands of red paint on rim and body from F.105.

<sup>19</sup> *Oxoniensia*, xvii/xviii (1952-3), Fig. 45, no. 5.

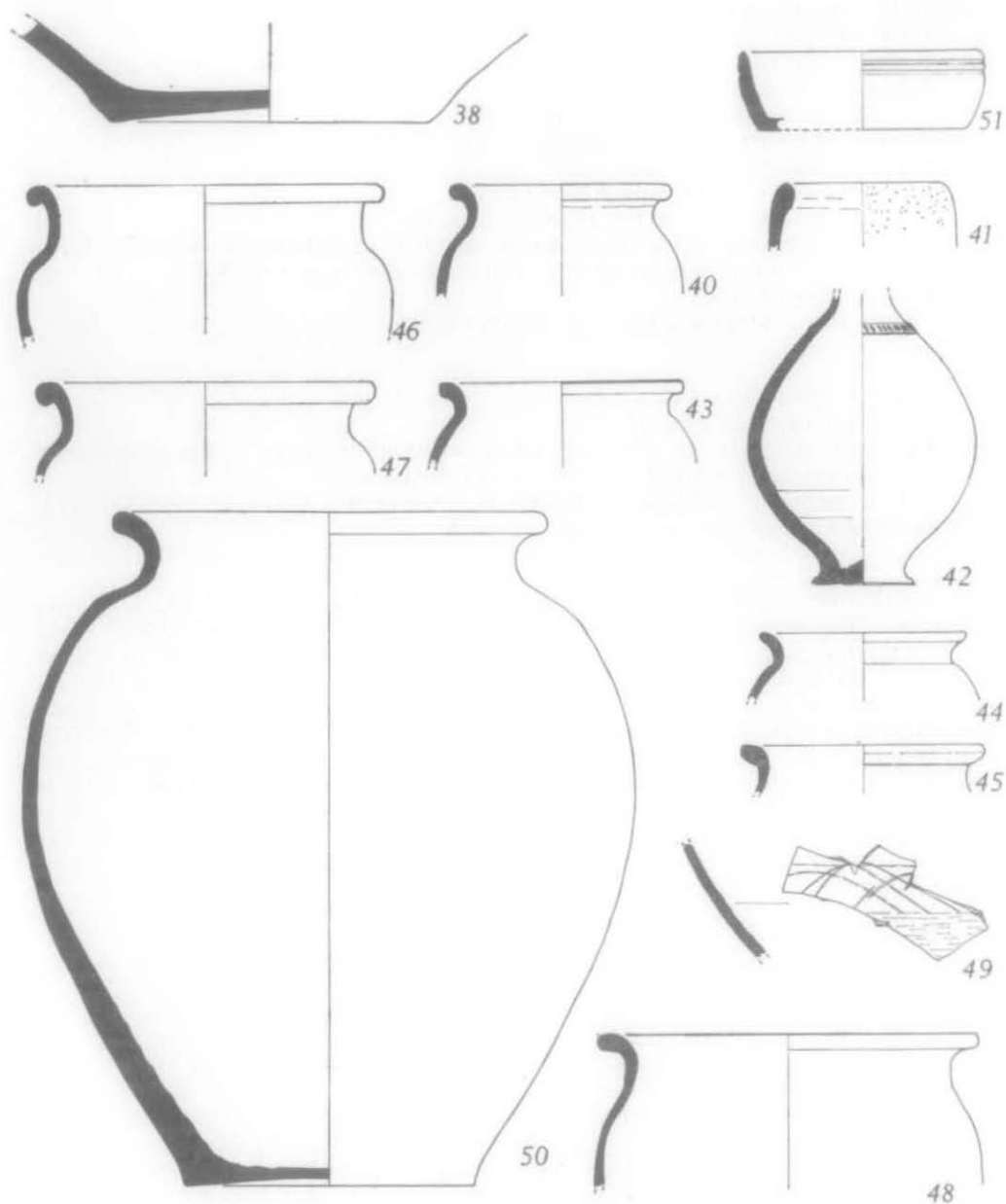


FIG. 8

Churchill Hospital, Oxford : coarse pottery 38, 40-50 ( $\frac{1}{4}$ ).

FIG. 8

38. P.137 ; base of very large standard bowl.  
1 example not illustrated.

## COARSE CREAM WARE

This fabric is very sandy, containing varying quantities of black and red inclusions. In colour it is cream or buff but can fire with a pinkish tinge. It was used for making tall wide-mouthed jars, trefoil lip jugs and crucibles.

- P.140 ; rim fragment of trefoil lip jug. Not illustrated.  
40. Wide mouthed jar with traces of red paint over rim. The fabric has fired to a pinkish colour.  
41. P.139 ; crucible rim.<sup>20</sup>

## COARSE CREAM GRITTED WARE

This ware is soft containing large particles of black and red sand, mortarium grits and large opaque red inclusions. It fires cream or white with an occasional pinkish tinge.

42. P.141 ; ovoid jug with slashed cordon on the neck and traces of red paint on the cordon.

## BURNT WHITE WARE

This fabric is hard and sandy and shows considerable variation of colour. The basic colour is off-white but shades of grey or orange can be found on the same vessel. The surface seems frequently to be blackened patchily, as if by fire.

43. P.156 ; jar with everted square cut rim.  
44. P.157 ; jar with everted folded rim.  
45. P.158 ; jar with everted rim.

## GREY COARSE WARES

Three fabrics could be distinguished:

- (1) A hard fired sandy ware, normally light grey in colour and sometimes showing traces of burnishing.  
(2) This fabric is sandy, with no large grits of temper. The body of the fabric is dirty white or light grey in colour but the surface is black.  
(3) This fabric is similar to 1 above. The only difference is that it fires to give a sandwich effect, often with grey surfaces and a grey core sandwiched by red layers. This could just be the result of firing conditions.
46. P.145 ; wide mouthed jar in coarse grey ware (1). Its surface has an external orange/black burnish and it could be a misfired example of orange 'Churchill' ware.  
47. P.146 ; wide mouthed jar with rolled rim in coarse grey ware (1). Traces of burnish on surface.  
1 other example not illustrated.  
48. P.147 ; wide mouthed jar in coarse grey ware (1) with traces of burnish on shoulder.  
3 other examples, one a waster, not illustrated.  
49. P.148 ; sherd of jar with burnished wavy line decoration in coarse grey ware (1). At least 4 other vessels and probably more represented by body sherds.  
50. P.149 ; large wasted storage jar in grey coarse ware (1).  
The base of another not illustrated.  
51. Dog bowl with double groove and cordon below rim in grey coarse ware (1).

<sup>20</sup> For a complete example see *Oxoniensia*, VI (1941), Fig. 4, no. 22.

## FIG. 9

52. P.142a ; bulbous beaker with incised decoration in grey coarse ware (2).  
 53. P.142b ; base of beaker, form as last, in grey coarse ware (2).  
 54. P.143 ; wide mouthed jar with everted square cut rim in coarse grey ware (2).  
 At least two other jars in this fabric represented.  
 55. Pie dish in coarse grey ware (2).  
 1 other not illustrated.  
 56. P.144 ; shallow straight sided dish or lid in coarse grey ware (2).  
 A few sherds of coarse grey ware (3) were found. None is worth illustrating but one was a waster, suggesting that this fabric too was made on the site.

## CALCITE AND SHELL GRITTED WARES

A few sherds in these fabrics were found. It is not clear whether these were made on the site or imported.

57. P.155 ; everted rim of jar in hard sandy fabric, heavily tempered with grog, quartzite and other inclusions.  
 5 calcite gritted storage jar sherds not illustrated.  
 58. P.154 ; everted rim of jar in very coarse soft fabric, heavily tempered with shell.  
 1 other example not illustrated.

## WARES NOT MADE ON THE SITE

Two body sherds of red colour-coat ware. Not illustrated.

P.152 ; rim of wide mouthed jar in black-burnished ware. Not illustrated.

P.153 ; lattice decorated sherd of black-burnished ware jar. Not illustrated.

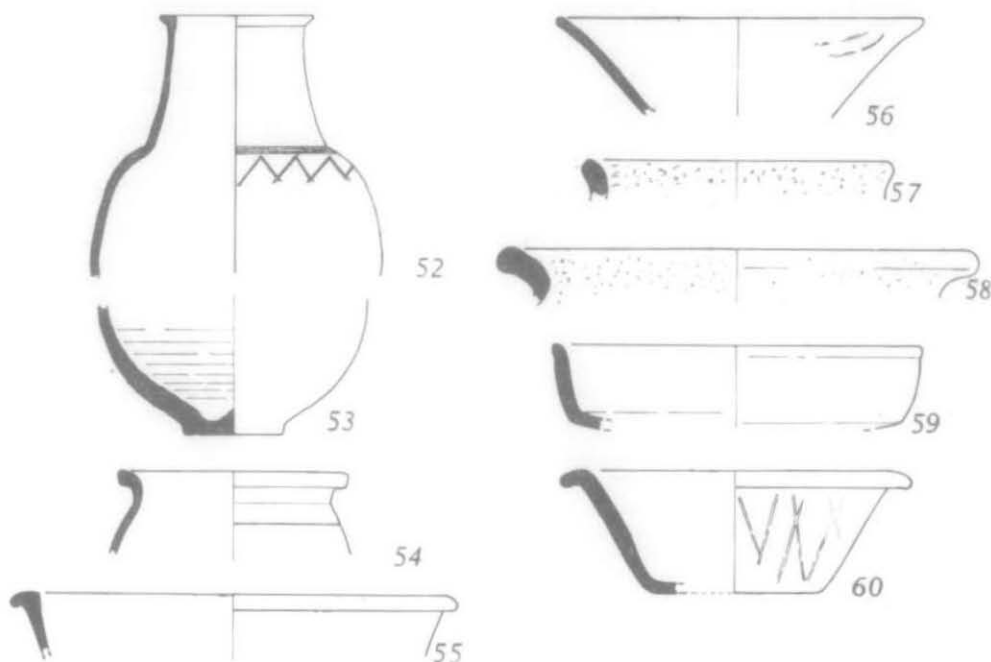


FIG. 9

Churchill Hospital, Oxford : coarse pottery 52-60 ( $\frac{1}{2}$ ).

59. P.150 ; dog bowl in black-burnished ware, grooved below rim.  
1 other not illustrated.
60. P.151 ; pie dish in black-burnished ware with external decoration of burnished lines.

### CONCLUSIONS

The results here published are, of course, provisional only as further work is planned on the site. Only a small part of the total available area has so far been investigated. It is clear though that the two phases of activity are associated with the period of greatest activity of the Oxford region Roman pottery industry, A.D. 250-400, and that both phases were primarily concerned with the production of mortaria in large quantities, though other wares were produced also.

The particular importance of the Churchill site lies in the fact that it is the only kiln site of the many in the Oxford region which has undergone area excavation on a large scale. This has already justified itself in the evidence it has produced for the organization of one of these sites. It is only by such excavation that any light will be cast on the production side of the very important late Roman pottery industry of the Oxford region.

*The Society is grateful to the Department of the Environment for a publication grant for this article.*



PLATE II



A. Churchill Hospital, Oxford : F.403, circular building.



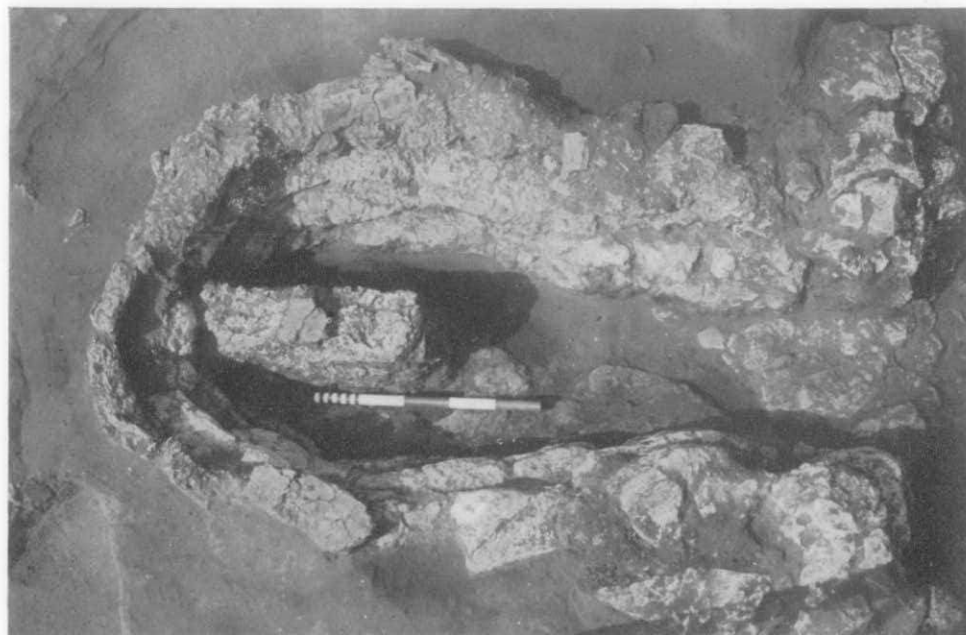
B. Churchill Hospital, Oxford : F.202, second phase pottery dryer.

*Photos: P. M. Kenrick*

PLATE III



A. Churchill Hospital, Oxford : F.307, general view of kiln from south-east.



B. Churchill Hospital, Oxford : F.307, furnace chamber of kiln.

*Photos : P. M. Kenrick*

PLATE IV



A. Churchill Hospital, Oxford : F.101/102, general view of kiln from south-east.



B. Churchill Hospital, Oxford : F.101/102, furnace chamber of kiln showing tongue-pedestal and corbel supports.

*Photos: P. M. Kenrick*