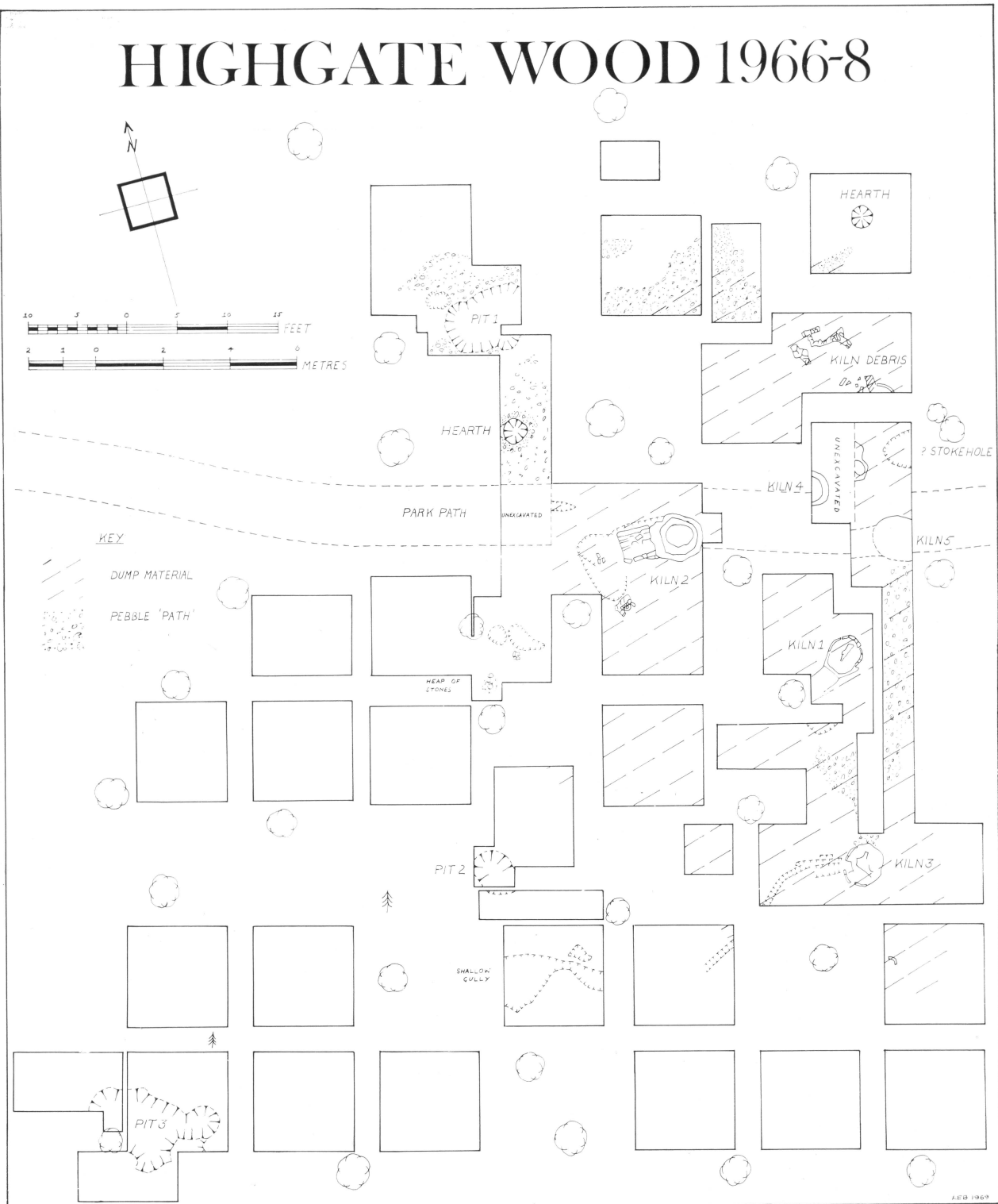


HIGHGATE WOOD 1966-8



Early Roman Pottery Factory in N. London

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*Photographs by
Bernard Brandham*

THE Highgate Wood site was discovered in 1962 during an archaeological field survey of open spaces in north-west London undertaken by one of the authors. A dense scatter of Roman pottery fragments was observed lying on the surface of the ground on the ridge at the northern end of the wood. (TQ 28/25 8905).¹

As a result of this discovery a trial trench was excavated by the authors during the summer of 1966. A large quantity of Roman pottery was found including a number of obvious wasters which suggested the presence of pottery kilns. This assumption was supported by the finding of pieces of baked-clay and fire-bar fragments which might have come from dismantled kilns. Further excavation was then planned and two seasons' work have so far been undertaken.

Highgate Wood is a remaining portion of the ancient Middlesex Forest and, so far as is known, has never been cleared of trees. It is clearly marked on both J. Rocque's map "The Environs of London" (1769) and on J. Cary's map "Middlesex" (1787). The 70 acres which form the Wood now belong to the Corporation of London. They were given to the Corporation by the Ecclesiastical Commissioners in 1886 "for the use and recreation of the public forever."²

According to the Geological Survey map the site lies on London clay.³ This is complicated by the presence of deposits of sand and gravel which cut into the clay at the north of the site and probably represent outwash from the glacier which reached as far south as Muswell Hill during the Pleistocene period. The ridge represents the north-eastern extremity of the high ground which runs from Hampstead to Muswell Hill and it stands about 350' above Ordnance Datum.

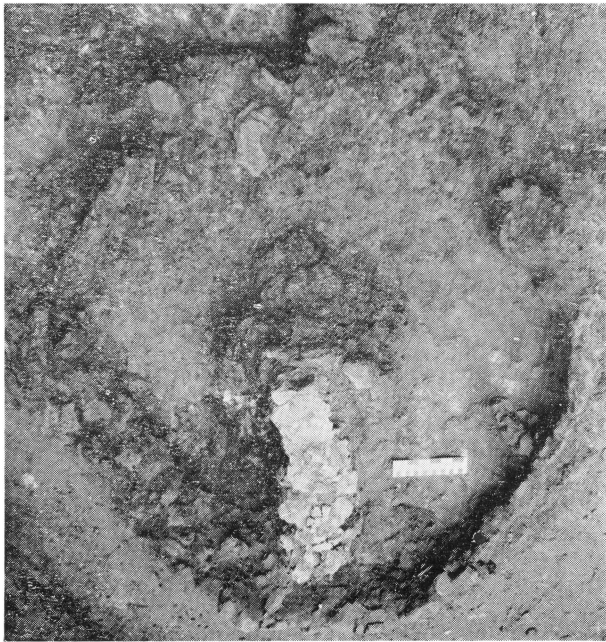
2. *Finds and Communications: Local Evidence.* The site lies 5½ miles north-west of the Roman City of London, well within an area bounded on the west by Watling Street and on the east by Ermine Street

which has been conspicuous for its lack of evidence of occupation during the Roman period.⁴

Very little material has been recorded from the Hampstead and Highgate area. The most significant exceptions include a cremation burial from "one of the Well Walks" in Hampstead found in 1774⁵ and an early 3rd century coin hoard from Cranley Gardens, Muswell Hill found in 1928⁶. A Roman pot containing 3rd century coins was recorded during 19th century building operations in Shepherds Hill Road, Highgate⁷.

A number of roads have been suggested as running to the north-west from London in the area between the Watling and Ermine Streets. None of these roads have been definitely proved. Two roads are mentioned by the *Viatores*⁸. One (Route 167) is supposed to go from the City through Hampstead to Golders Green and on to St. Albans. Another is said to run from London northwards through Muswell Hill to Stevenage (Route 220). Had these roads existed, Route 167 would have passed just under two miles to the west of the site, and Route 220 at just over one mile to the east⁹.

It has also been suggested that "Maiden Lane," which ran from London to Highgate in the Medieval period, may have had a more ancient origin¹⁰. This road still marks the boundary between the parishes of St. Pancras and Islington. Camden stated that it was open in 1300 but "refused of wayfaring men and carriers by reason of the deepness and dirtie passage in the winter season." Maiden Lane might have formed the first part of the road known as the



KILN No. 1.—Looking north-east after clearance of furnace

“Great North Road” which passes within half a mile west of the site¹¹.

3. *The Excavation (See plan) A. Kilns.* Five kilns have been definitely located, two in 1967 and three in 1968. They shared the following characteristics: the flue entrances were orientated to the south-west; the furnace walls and pedestals were constructed of baked clay; and the kilns were built on top of the clay sub-soil.

Kiln 1. (See above). The remains of this kiln were overlaid by rubbish dump material and the remaining structural features consisted of the furnace walls and pedestal.

The furnace was oval with a diameter of 3½ft. from north-west to south-east, and just under 4ft. from south-west to north-east. The only exception to the oval shape was a straightening of the wall at the flue entrance. It was much obscured by what appeared to be a fall of oven walling, which overlay an infilling of more fragmented burnt clay, earth and broken pottery. There was some burnt matter—including charcoal—in the area close to the flue. The infilling was on average some 4ins. deep and rested on the floor of the furnace.

The furnace walling was composed in part of teeth-like segments, and in part of larger sections, of burnt clay. The walls remained to an average height of 6ins. above the level of the floor: in general the wall thickness was between 1½ins. and 2ins.

The clay pedestal was of the tongue type and was a hard burnt grey on the top and reddish in the cen-

tre. Although the floor of the kiln followed the natural slope down towards the south, the top of the pedestal was on a horizontal plane—and therefore rising in relation to the front of the kiln.

The floor of the kiln was composed of burnt clay with pebbles which overlaid the natural yellow clay. A thin layer of black burnt material lying on the floor did not extend to the back of the kiln. Apart from the effects produced by burning, the texture of the floor inside the kiln appeared to be identical with the natural outside.

The flue was much flattened and covered by lumps of red to yellow clay. It was about 2ft. long and 2ft. wide. A section through it showed a red baked hard clay layer which was presumably the original wall and cover, overlying a darker area.

No proof was obtained of any reconstruction of this kiln but indirect evidence may be implied in the lack of symmetry of its parts. Firstly the pedestal was not quite on the same alignment as the entrance of the flue to the furnace: the former sloped towards the eastern half of that junction. Secondly the flue did not enter the kiln on a straight line but veered in at a more westerly angle. Another point of interest was that the pedestal in sectioning was shown to contain an underfired pottery rim in its structure. This may suggest that Kiln 1 was not the first on the site.

Kiln 2. (See right). This kiln was largely covered by the park path and its top lay from 4ins. to 9ins. below the modern ground surface. The overall length of furnace and flue was 8ft. 9ins.; the furnace had an external diameter of about 5ft. and the length of the flue was 3ft. 7ins., with an external width of 3ft. 6ins.

The furnace wall, 4ins.-7ins. thick, was constructed of reddish burnt clay. The kiln lay across the slope of the hill and to counteract this a few inches of the clay sub-soil had been removed on the north side to receive the furnace wall. This had not been necessary on the south side where the wall rested directly on the natural clay. Dark earth containing flecks of reddish burnt matter had been banked up around the outside of the furnace, no doubt to act as a support. Kiln 5 had been treated in a similar way. This earth bank was absent in the north-west sector and had perhaps been removed to facilitate repair work. A series of holes in the top of the furnace wall may have held light wooden supports for the kiln dome.

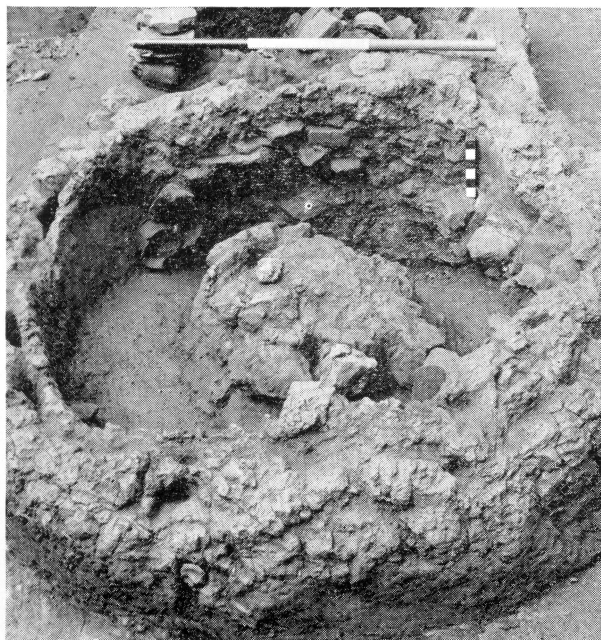
The top of the furnace wall and pedestal had a weathered appearance, suggesting that when the kiln had gone out of use it had been simply abandoned and not covered with factory debris. Excavation showed that the furnace chamber was filled with a densely packed mixture of dark earth, red and grey burnt clay, firebar fragments and a few small sherds. This represented the final disintegration of the kiln structure after abandonment, with some accumulation from the surrounding areas of rubbish. At the bottom

of the furnace was an ashy layer which contained some large fragments of pottery, probably relics of the last firing.

The primary furnace lining of hard grey fired clay 2ins. thick was generally well preserved and in places the marks left by the potter in smoothing the inside surface could be seen. On the east side two thinner re-linings survived. The furnace had been re-floored once.

The oval pedestal was 2ft. across the base from north to south and 2ft. 5ins. from east to west, and was 1ft. 2ins. high. It was mainly composed of a mass of clay, burnt to a hard grey surface, merging on the inside to reddish brown and yellow. Smoothing marks could be plainly seen on the outside in places where it was well preserved. A layer of hard black earth had been added to the top, and on this again was a layer of nodular reddish burnt clay. A section through the pedestal revealed a layer of burnt clay running beneath it. This showed that the furnace had been fired before the pedestal had been constructed, presumably to harden and consolidate the structure.

The stub of one firebar remained in its original position on the east side of the furnace where it had been let into the highest surviving portion of the lining. The lining clay had been moulded around the base of the firebar to hold it in position. One or two other places which had been treated in this way could be seen along the north circumference and presumably marked the seating of other firebars. During the excavation of the furnace, some pieces



KILN No. 2—Looking west after clearance of furnace

of baked clay with carefully curved surfaces were found, which may also have belonged to firebar supports. One such piece was still in position on the west side of the furnace. Some pieces of baked clay and tile had been set into the clay of the flue arch and would have acted as supports on the north side.

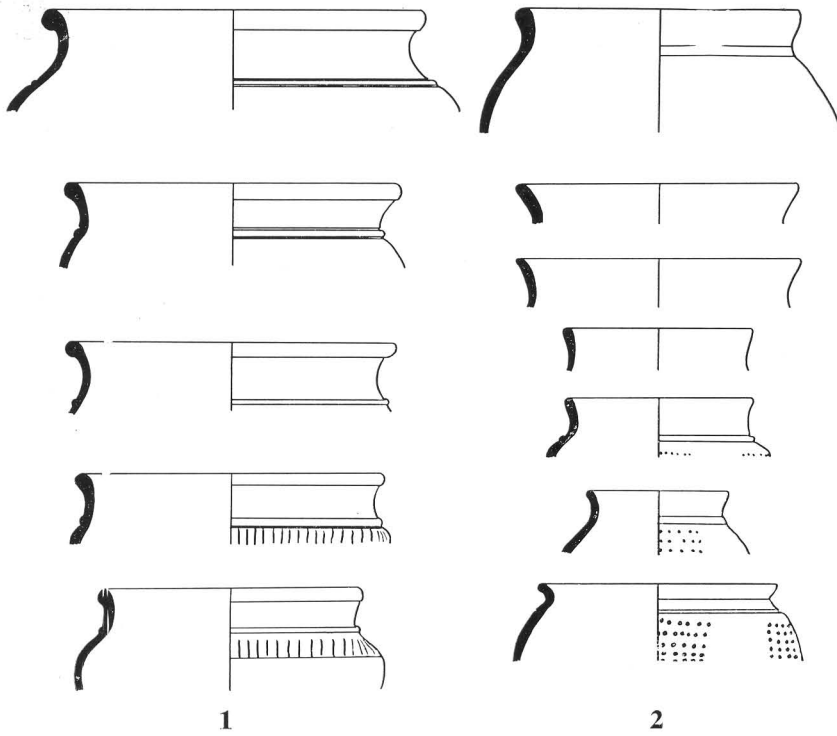
The flue was crudely arched in tile, without mortar. The tiles were much broken, obviously re-used, and consisted mainly of building tiles with a few roofing and flue tiles. The floor of the flue had been excavated a few inches only into the natural clay and the height of the flue at its best preserved point above this was 1ft. Along the north side of the flue large lumps of hard fired red clay had been set in the sub-soil to act as foundation, and on the south side a line of firebars had been used in the same way.

Excavation of the flue showed that the original blocking of the flue arch, designed to produce a reducing atmosphere in the kiln, was still in position. This consisted of pieces of grey and brown burnt clay, brown and grey earth, pieces of yellow clay and some firebar fragments. After the abandonment of the kiln, dark matter from the neighbouring ash and pottery dumps began to find its way into the flue; the central portion of the flue collapsed inwards, and the fallen tiles were covered by a further accumulation of dark dump material with a few small sherds. Some lumps of reddish burnt clay represented slippage into the collapsed flue of material from the furnace wall¹².

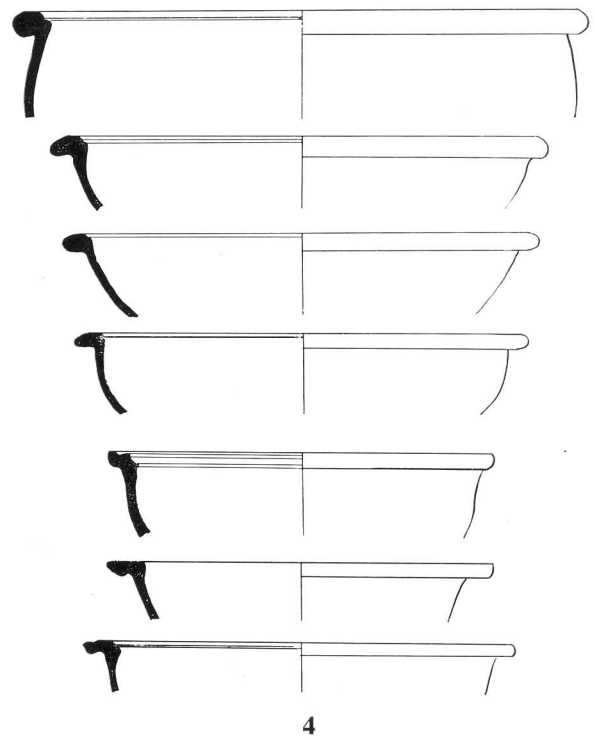
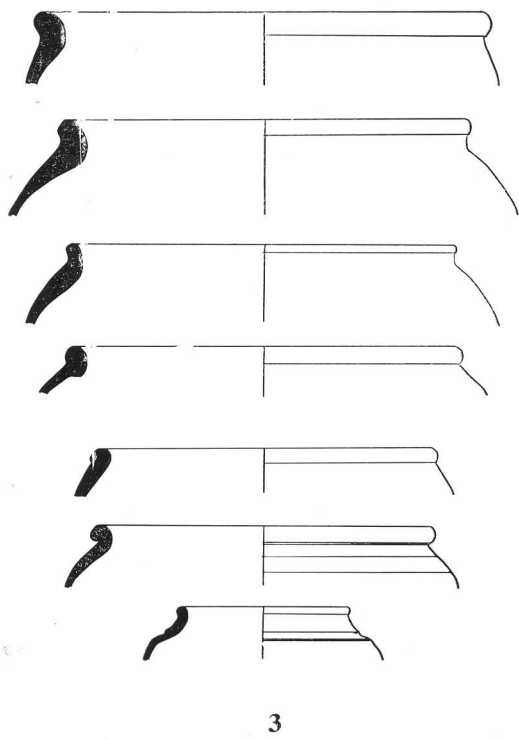
Kiln 3. (See p. 43). The remains of this kiln, in common with Kiln 1, lay under, and surrounded by, dump material. The oven furnace was more rounded in appearance than that of Kiln 1 and had a diameter of approximately 4ft. It contained a mass of burnt clay, kiln furniture and broken pottery in a black greasy deposit.

Its walls were constructed of segments of clay surviving to between 9ins. and 1ft. in height: these had been set in a hard but fairly liquid state. This was shown by finger smoothings which went round the walls across the segments. The walls were hard and dark on the inside surface, softer and redder on the outside. They were cut into the natural clay quite markedly at the north of the kiln, but less at the south where they were heavily backed and leant outwards. This feature would again conform with the requirements of the ground surface which sloped away towards the south. An irregular lumpy area forming the back portion of the wall (opposite to the flue entrance) was noticed. On excavation it was shown to be a "false wall" probably blocking an opening left at the early stages of firing to allow a through draught to build up, and then blocked with clay.

The central pedestal survived to some 6ins. at its highest point. In section, the top levels were grey clay covering redder, softer clay with a few pebbles. Below this was a more solid core composed of re-used slab of fashioned clay and two pieces of tile. "Wings"



The main categories of rim sherds from Highgate, which are referred to on page 44. (4)



came out from the sides of the pedestal, resting on the floor and pointing to the back of the kiln. These were composed of firebars and fashioned clay plates: they were moulded into position.

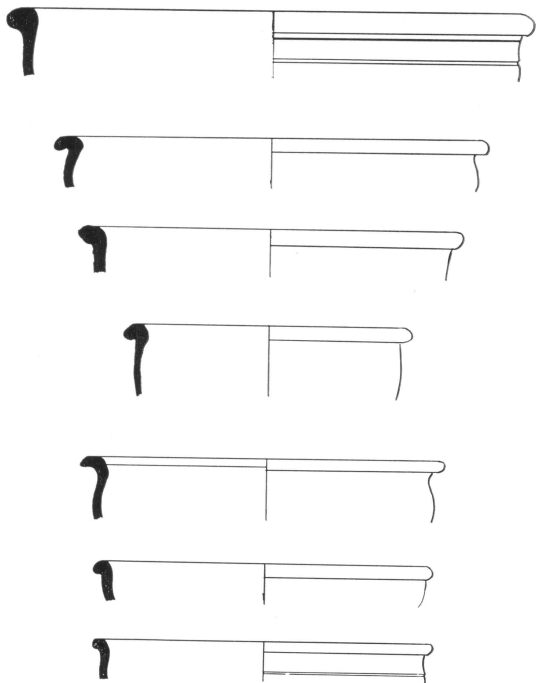
As with the other small kiln (Kiln 1) evidence for successive phases is only tentative. A few sherds were found under the "false wall," and in the east of the kiln the reddish clay of the furnace floor overlay a small area containing burnt matter. However, the 1½ ins. of walls underneath this floor were softish and red and did not appear to have been exposed to much direct heat.

Although the flue entrance which was 1ft. 3ins. wide was clearly defined, no positive indication of its structure remained. Evidence was limited to a dark area containing burnt matter stretching away from the entrance some 3ft. to the south-west.

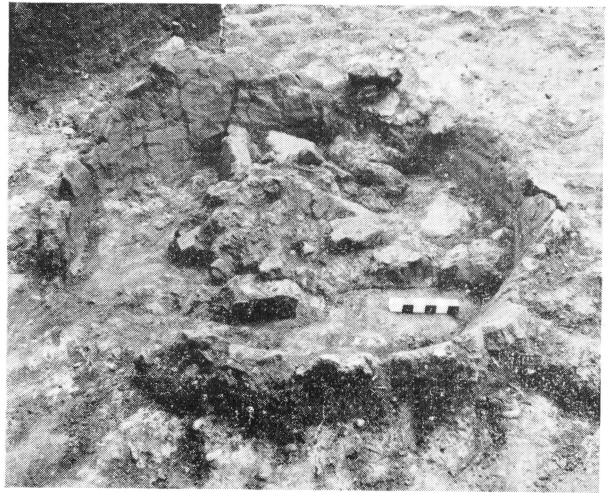
A further feature related to the kiln was a gully cut into the clay to the north of the flue entrance and curling away round the flue to the south west: this presumably had a drainage function.

The external bank which supported the kiln walls contained small sherds of beaker and jar forms dissimilar to the mass of sherds inside the kiln and in the flue area which were largely bowls and lids. This points to activity on the site before the construction of Kiln 3.

Holes were visible cut in the natural clay around the kiln: there were indications of one row in the



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KILN No. 3—Looking north-east after clearance of furnace

north and south and possibly three in the east. No convincing pattern was noticed but it is possible that they were holes for stakes used as a framework for the dome structure.

Kilns 4 and 5. It is planned to excavate these kilns this year.

B. Other Features. Three pits, presumably dug for clay extraction, have been discovered in the west portion of the excavated area. They had been filled up with layers of grey and yellow clay and grey and black earth. Close to the bottom of Pit 2 was a group of six waster vessels, most of which were complete. A layer of black soil which formed part of the filling of Pit 3 also held a substantial quantity of densely packed pottery fragments.

Excavation showed that the area close to the kilns in the east portion of the site was covered with a layer of very dark earth, resting on the natural clay, and containing a large number of pottery fragments sometimes very tightly packed together, lumps of burnt clay and firebar fragments. This must indicate the area in which debris from the kilns, rejected pottery, and ash had been dumped. Mixed with this was a certain amount of domestic rubbish—many fragments of imported Samian Ware, some mortarium sherds and other wares not made at Highgate, bronze brooches, and fragments of glass vessels.

Skirting the rubbish dump on the north of the site was an irregular floor or path of rammed pebbles which rested directly on the sub-soil. This had probably been laid down to facilitate movement on the clayey surface, which rapidly becomes unpleasant in wet weather.

.....4 *The Highgate Pottery and its dating* A. *The Pottery.* Over two tons of pottery have been recov-

ered. The sherds from six areas of the site have been examined and a detailed analysis of methods and results will appear in Part II.

From the sample worked on it would appear that the following main categories of vessel were manufactured at Highgate. (See pp. 42-43). The table is based on 2,221 rim sherds from these six areas: allowance has been made where possible for sherds belonging to the same vessel.

Category	Total Rims	
	No.	%
1. Shouldered jars with everted rims	948	42
2. Beakers	520	23
3. Neckless jars with bead rims	204	10
4. Bowls/Dishes with horizontal grooved rims	353	16
5. Bowls/Dishes without grooved rims	196	9

The normal fabric is grey in colour with a hard and slightly sandy feel. This fabric appears in the good quality wares which form the major part of the Highgate output. A significant departure from the normal fabric occurs in many of the examples of categories three and five: still greyish in colour it has a gritty, rough look, a soapy feel, and is light in weight.

Decoration occurs mainly on categories one and two. A white to grey slip is common on both. Category one jars sometimes have burnished line decorations on the shoulder below a cordon, and the category two beakers have zones of applied dots.

B. Provisional Dating. A comparison with pottery from stratified groups in London and the south of England would suggest a broad date range of between A.D.60 and 120¹³.

A general confirmation of this period comes from the Samian found in the dump and in the pits. Mr. B. R. Hartley of Leeds University examined the 80 Samian sherds found in 1967 and gave them a date range of from Nero to Hadrian (A.D. 54-138) with the weight firmly Neronian-Flavian (A.D. 54-98).

5. *Future work in Highgate Wood.* Much more work needs to be done on this site. Little evidence has been obtained as yet of the factory buildings and ancillary structures which one would expect to find near the kilns. There is also the prospect of a settlement. It is of interest that another pottery manufacturing site has been located in the Wood on high ground approximately one third of a mile due south of where we are working now¹⁴. From the surface

PLEASE NOTE. The article promised in the last number, by Ralph Merrifield on Folk-lore in London's Archaeology, has been held over to a subsequent issue as insufficient space is available.

scatter it would appear to be broadly contemporary with the factory now being excavated.

Acknowledgements: We would like to thank the Epping Forest and Open Spaces Committee of the Corporation of London and their staff in the Wood for their ready co-operation; the Horniman, London, and Guildhall Museums for practical help and advice: many experts have given freely of their time and knowledge both on and off the site. This work could not have been undertaken without the efforts of many volunteers on the site and many adult students at Camden Adult Institute and the City Literary Institute. The work during 1968 was aided by a grant from the Research Board of the University of Leicester.

PART II of this article will contain information about the methods used in the analysis of the pottery, and the results which have been obtained. It is hoped to include some notes on thin sectioning and on the experimental firing of Highgate clay.

REFERENCES

1. *T.B.A.O.G. Newsletter*, New Ser. 9 August 1962, 10, 15 March 1963, 8.
2. J. H. Lloyd, *History of Highgate* (1888). The handing over followed a local protest about the possible use of the land by the Ecclesiastical Commissioners, which was taken up by *The Times*, 11 September, 1884. A leader stated "there is nothing to prevent the owners from felling the fine masses of trees for timber and handing over the denuded ground to speculative builders."
3. *Geological Survey of England and Wales* (1920), Middx. sheet XII N.W. The western portion of the wood has been disturbed by gravel digging in the past and appears in some old maps as "Gravel Pit Wood." On the high ground to the south of the wood, deposits of Bagshot sand occur.
4. *O.S. Map of Roman Britain* (1956), 3rd edn., 12. The editors argue that "some kind of reserve attached to London seems to be indicated."
5. *Gentlemen's Magazine* (1776) 169. The drawings included with the description suggest a date of "about A.D. 100." See R. Smith, *Archaeologia* 68 (1916-17) 229.
6. *Num. Chron.* LX (1929) 315-7.
7. J.H. Lloyd, *History of Highgate* (1888).
8. The Viatores, *Roman Roads in the South East Midlands* (1964).
9. The evidence for these roads near to London is derived from Camden, *Brittania* ed. Gough, II (1806) 87; Norden *Speculum Britanniae* (1722-3) 15 and Maitland, *History of London I* (1756).
10. W. F. Grimes, *The Excavation of Roman and Medieval London* (1968) 43-45.
11. A. Stapleton, *London Lanes* (1930) 45-47.
12. During the 1968 season this kiln was consolidated and lifted by members of the Horniman Museum staff with a view to its display in the Museum.
13. See for London: R.C.H.M. *Roman London* (1928) 20-24 and 153-169, *Archaeologia* 66 (1914-15) 225-274 and *Arch. Journal* LXXXVII (1930) 250-252 and 287-288.
14. The first report of this site (TQ 28/348845) was made by F. B. Ryan to the London Museum in 1962. The area was "re-discovered" by R. Symberlist in December 1967. A resistivity survey is being conducted by the Hendon and District Archaeological Society.