

Transactions  
Volume 28 1977



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**London & Middlesex Archaeological Society**

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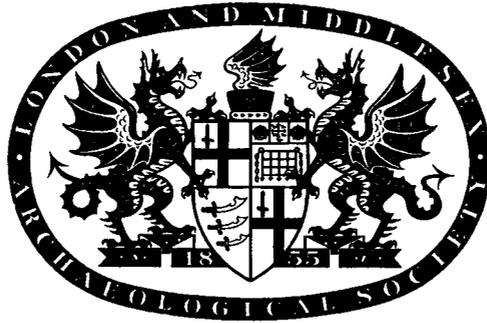
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**Editors' Note:**

The Editors will be glad to consider papers for publication. New contributors should obtain a copy of 'Notes for Contributors' from the Editor before submitting a paper.

K. Jones

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*Transactions of the*  
*London & Middlesex*  
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*incorporating the*  
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*Bishopsgate Institute, Bishopsgate, London E.C.2*

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*The Society and Editors are extremely grateful to the Museum of London for help with the publication of several papers in this volume.*

# London & Middlesex Archaeological Society

*incorporating Middlesex Local History Council*

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# London & Middlesex Archaeological Society

*incorporating Middlesex Local History Council*

121st ANNUAL REPORT OF THE COUNCIL FOR THE YEAR ENDING  
30th SEPTEMBER 1976.

There were sixteen meetings of the Society, including the following lectures: 22nd October: *The Search for the Mary Rose: a Tudor ship sunk in the Solent, 1545* by Mrs. M. Rule, F.S.A.; 19th November: *There was no road to Petra* by Mrs. Hellings-Jackson; 10th December: *Excavations at Baynard's Castle* by P. R. V. Marsden, F.S.A.; 21st January: *Richard Whittington: the man and the myth* by Mrs. C. M. Barron, M.A., Ph.D., F.S.A. (the George Eades Memorial Lecture); 18th February: Annual General Meeting and Presidential Address *Archaeology in Greater London*; 20th March: *Sir Bulstrode Whitelocke, 1605-1675* by Miss R. Spalding (a joint meeting with the Historical Society of the City Literary Institute); 24th March: *London Costume in the reign of James I* by J. L. Nevinson, M.A., F.S.A.; 28th April: *Shepherd's London—four artists and their view of the Metropolis 1800-1860* by J. F. C. Phillips; 29th September: *Historians of Middlesex* by J. D. Lee, F.L.A. Visits were made on 4th October: West Drayton Local History Exhibition; 18th October: St. Katharine Docks; 3rd December: Vintners' Hall; 13th December: The Library, St. Paul's Cathedral; 28th February: British Museum, Assyrian Galleries; 10th April: Enfield and district; 26th June: Avebury and Devizes.

Two successful conferences were held. The Local History Conference on 15th November was addressed by L. M. Munby on *Reminiscences of an Editor* and N. Falk on the Brunel Exhibition Project; on 27th March the Archaeological Conference included lectures on the Bronze Age in the Thames Valley, environmental archaeology, and excavations in Westminster, the City and Putney.

Due to a fire which damaged the Church of St. Andrew Undershaft the annual Stowe Commemoration Service was cancelled. The Pepys Commemoration Service was held at St. Olave, Hart Street, on 27th May; the address was given by F. E. Cleary, M.B.E., F.A.I., F.R.I.C.S.

Volume 26 of Transactions was published in January. The first of the Society's Special Papers: *The Archaeology of the London area: current knowledge and problems*, appeared in March. Three numbers of the News-letter were issued.

All the Committees have been very active. The Youth Section has been reformed with a small but growing membership.

Total membership at 30th September 1976 was 735, made up as follows: Honorary Members 10; Life Members 67; Annual Members 614; Student Members 33; Junior Members 11. In addition there were 40 Affiliated Societies.

Due to the increasing amount of funds held by the Society as grants towards archaeological excavation from the Department of the Environment and other bodies, the setting up of a Company Limited by Guarantee to handle these funds was considered, and at a Special General Meeting held on 7th July the Council was authorized to seek incorporation of such a company.

Inflation continues to have serious implications for the Society particularly in regard to the cost of publication, and the deficit of £53 for the year must be seen as a reasonable outcome at a time when costs are rising so rapidly. An adjustment has been made in these accounts to correct the mis-allocation of publication grants for the year to 30th September 1975.

The Council wishes to record its sincere thanks to the Honorary Officers for their work during the year.

By direction of the Council.

W. J. SMITH, M.A., F.R.Hist.S.,  
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Honorary Secretary.



**LONDON & MIDDLESEX ARCHAEOLOGICAL SOCIETY**  
**INCOME AND EXPENDITURE ACCOUNT for the year ended 30th September, 1976**

1974/75	Expenditure		1975/76		1974/75		Income		1975/76	
	£	£	£	£	£	£	£	£	£	£
4,906	Publications:				1,758	Subscriptions				1,982
—	Transactions volume 26	6,311			40	Income tax reclaimed on Deeds of Covenant				79
333	Special paper No. 1	921			742	Income from investments and bank deposit				1,234
—	Newsletter	387		7,619	142	Sales of publications				306
5,239	Lectures and visits	—	104			Donations and grants:				
109	Conferences—grant expended	120				Corporation of London—				
105	Commemorative services	14			105	Conferences			120	
53	Committees:					Museum of London—				
102	Archaeological research	74			906	Publications			1,689	
64	Local History	14			3,035	Miscellaneous—publications			2,796	
48	Library	—	88		2	—general			5	
50	Rent	—	39		—				—	4,610
341	Postage, printing and stationery	200	50		4,048				—	—
9	Subscriptions and donations	11	200		6,730					8,211
53	Sundry expenses	11								
8	Depreciation of equipment	8								53
6,181		8,264								
549	Surplus	—								
£6,730		£8,264			£6,730					£8,264

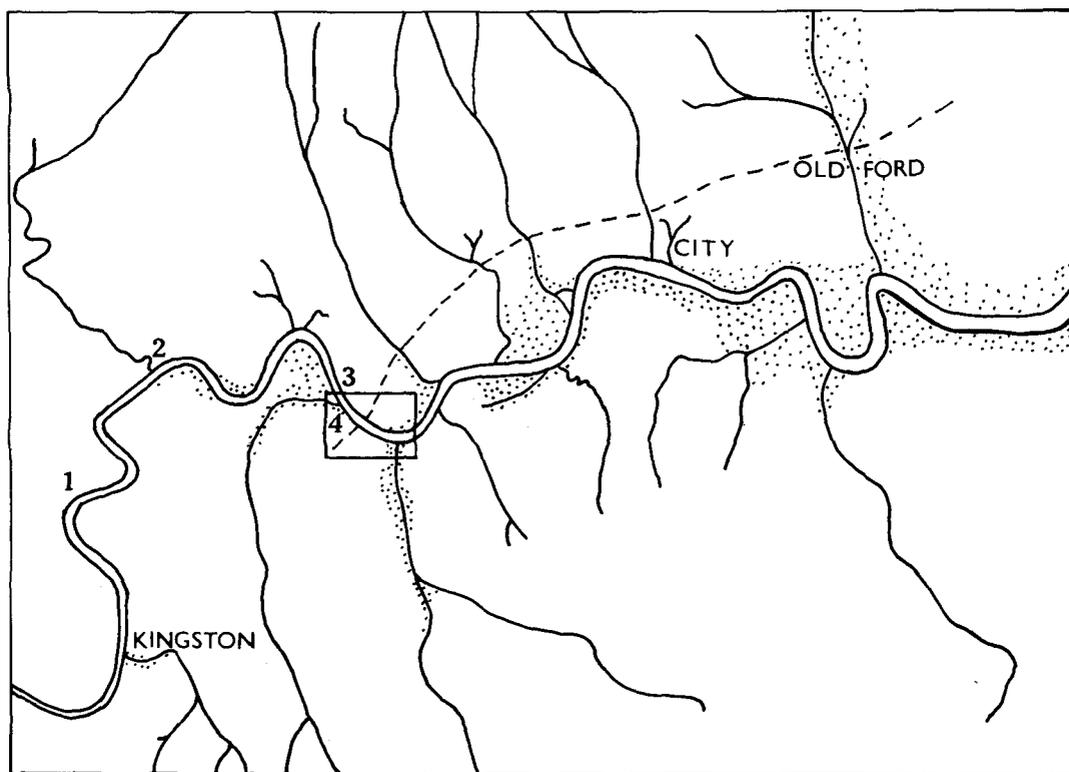
**LONDON & MIDDLESEX ARCHAEOLOGICAL SOCIETY**  
**ARCHAEOLOGICAL PROJECTS ACCOUNT for the year ended 30th September, 1976**

	£	£	£	£
<b>Expenditure</b>				
Balance brought forward from last year:				
Enfield		822		
Excavations and services:				
Bow	350			783
Enfield	196			739
Environmental service	4,114			6,624
Inner London Unit	27,009			1,319
Shadwell	593			2,021
Staines	7,986			280
		40,248		16,159
Southwark Unit Interim Management Committee		36,984		
Excavation grants:				
Acton	96			3,375
Less: refund re Brockley Hill	6			300
		90		12,236
Publication of research paper				
Grants transferred to the Society's Income and Expenditure Account		280		2,000
Closing balances:				4,000
Acton	783			21,911
Enfield	104			
Highgate	560			
Inner London Unit	6,571			
Shadwell	726			
		8,744		14,200
Balance brought forward from last year:				
Acton				11,200
Environmental service				3,000
Inner London Unit				14,200
Inner London Unit				11,200
Staines				3,000
Post excavation work				14,200
Grants for excavations and services:				
Department of the Environment:				
Enfield—post excavation work				560
Inner London Unit				822
Staines				32,591
Post excavation work				33
London Boroughs—Inner London Unit				16
Greater London Council—Inner London Unit				74
Museum of London—post excavation work, Highgate				802
Enfield—advances recovered				£87,168
Southwark Unit Interim Management Committee				
Conference surplus				
Insurance scheme				
Charged in the Society's Income and Expenditure Account				
Closing balance—due for work in Staines				
		£87,168		£87,168

# EXCAVATION OF A NEOLITHIC SITE AT SEFTON STREET, PUTNEY, LONDON

S. E. WARREN

*An exploratory excavation in Putney (Fig. 1), at 38-46 Sefton Street (TQ232760), revealed below modern building rubble and earlier plough soil, an undisturbed Neolithic layer containing remains of occupation, and a channel of the same period. Many flint artifacts were found in association with shell, and grit tempered coarse potsherds. The ceramic material belongs to a period, from early to late Neolithic. There are examples of flint artifacts covering a period from Mesolithic to Late Neolithic. Two hearths and many "pot boilers" were found, but no floor plan of any structure could be identified, although postholes did exist.*



1 TWICKENHAM 2 BRENTFORD 3 FULHAM 4 PUTNEY - - - TRACKWAY

Fig. 1 Sefton Street, Putney: Location map

## 1. INTRODUCTION

The site at Sefton Street (Fig. 2), is situated near the south bank of Beverley Brook, near to its confluence with the River Thames; Putney Common lies a little to the west of Sefton Street, and the southerly aspect rises up onto the Putney Heath — Wimbledon Common plateau, a mile away.

In 1969 the Wandsworth Borough Council invited the Wandsworth Historical Society to carry out an exploratory excavation on this site, which had been bombed during the Second World War. The aim of the excavation, was to try to define the extent of field scatter of the Romano-British settlement at Putney and, as many flint artifacts had been found in the past on Putney and Barnes Commons, to watch for signs of prehistoric settlement.

## 2. GEOLOGY

The suggestion that the Thames river frontage between Beverley Brook and the River Wandle was habitable in prehistoric times, can be supported geologically by the identification of a deep layer of alluvial sand and gravel abutting the Thames between these two points. This alluvium has been observed to a depth of at least 8m in an excavation trench in the Lower Richmond Road (TQ237758). The steep slope up from the Thames, although embanked, is a natural one and would afford high, flood free land within 45m of the waters edge. The London Clay under the sand and gravel, is deep enough below ground level not to impede the natural drainage of the land, and it would therefore tend to be free of marsh (Fig. 2)

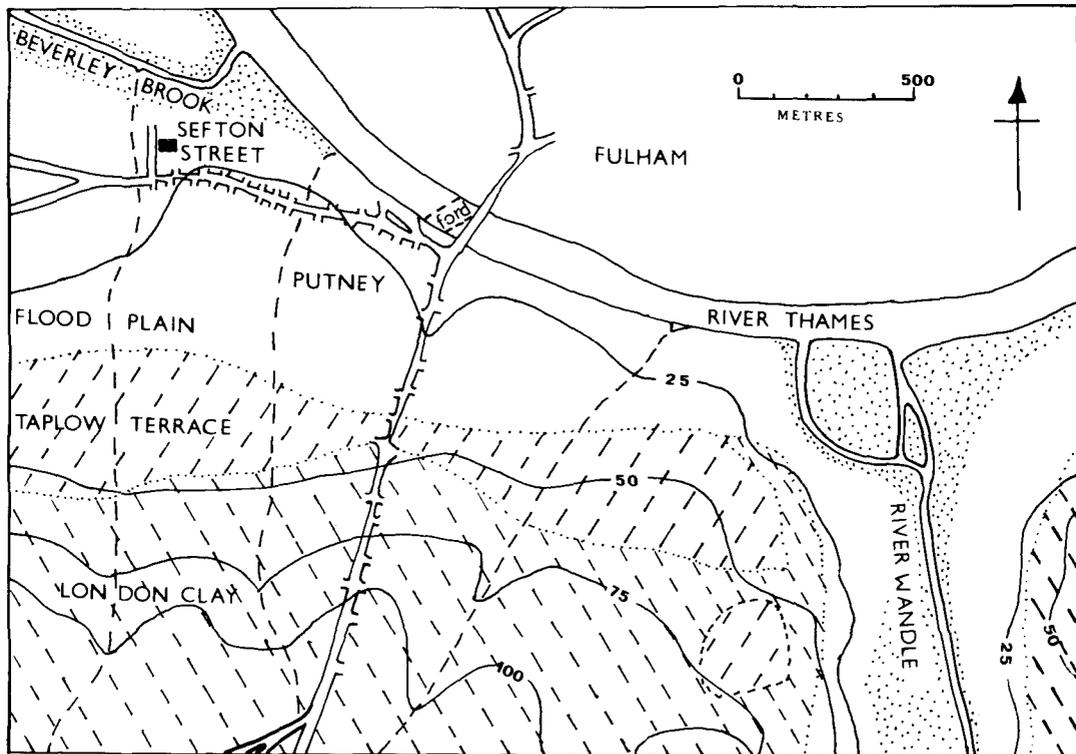


Fig. 2 Sefton Street, Putney: Location map for site (contours in feet)

### 3. THE EXCAVATION

(Figs. 3 and 4)

The overall area of the site was 544.50 square metres, of which 168.50 were excavated.

Phase 1 saw the opening of 5 trenches; the size of trenches A-D being each 3m x 3m, and trench E 3m x 2m. These were all excavated down to the natural sand. Bomb damage had obliterated most of the stratification in trenches A-C, whilst trench E had been disturbed by the introduction of a drain-pipe along its south side. The pottery scatter was mainly medieval to modern with 2 Roman potsherds, but the discovery of a rimsherd of Ebbsfleet pottery and a small wallsherd of Grooved Ware coupled with many flint artifacts prompted an investigation on a larger scale.

Phase 2, 1970/71, four trenches were opened, F and G both being 4.75m x 2.75m; H, initially 7.30m x 4.50m, was reduced to 4.50m x 2.40m, because of a bomb crater found at one end; and J 11.0m x 8.25m.

TRENCHES F & G. There were no features in either of these trenches, and the only point to note was that 27%(10) of all flint cores were found in trench G.

TRENCH H. In this trench were found 20%(8) of all cores; 62%(20) of all Neolithic potsherds; 48%(4.763Kgs) of all fire crazed flints, and 33% more flint artifacts per square metre than any other trench. In the floor level of layer 4, a channel ran SE-NW across the trench (Fig. 2), and contained some organic fill; it had been recut twice and from the grey silt found at the bottom, it would appear to be a drainage channel. There was a hearth within 0.65m of the west side of the channel.

TRENCH J. The channel found in trench H continued across this trench in the same SE-NW direction. There were remains of a hearth near to the west edge of the channel. A thin spread of postholes mostly from 50 and 90mm in diameter were found in this trench, contemporary with the layer 4 floor level. They were situated mainly to the east of the channel.

STRATIFICATION. Approximately 1 metre below the present surface lay a ground level of Neolithic date. Only 0.15m of Neolithic material above this level remained undisturbed, as farming activity from medieval times onward had ploughed up and dug over the upper 0.85m. Although much disturbed the upper section can be roughly divided into layers according to the age of the pottery waste introduced into different levels.

Layer 1.(100mm). Building rubble from bombed houses.

2.(250mm). Dark soil, containing 16-19th century artifacts. Flint 34%

3.(500mm). Orange sand, containing 14-16th century artifacts. Flint 38%

4.(150mm). Yellow sand, containing Neolithic flint artifacts and potsherds only. Flint 28%

HEARTHES. There were 2 hearths; one in trench H and one in trench J. Trench H hearth consisted of burnt gravel and sand 50mm thick, and was surrounded by many fire crazed flints. Close to the south side of this were found 5 cores. Trench J hearth was made of gravel and 6 pieces of sarsen stone.

FIRE CRAZED FLINTS. Many fire crazed pebbles were found scattered over the site; nearly 98% being bleached 'pot boilers', while the other 2% were less crazed and red in colour. The total weight from trenches F, G, H & J, was 9.81 kgms; of this total 4.74 kgms was found in trench H, of which 1.02 kgms had been dumped into the channel in the trench.

The weight varied considerably from trench to trench: — (F) 33.91 grms per sqr metre; (G) 126.59 grms per sqr metre; (H) 424.72 grms per sqr metre; (J) 33.91 grms per sqr metre. It will be noted that trench H contains 55% of all fire crazed flints.

### 4. FLINT INDUSTRY

As to be expected, the majority of the flint used was of river pebble origin, accounting for 70% of the whole, and the remainder were from nodular flints. There was little discrimination in use between the two sources of flint material. The colour of the flint can be divided into four categories:-

Dark grey to light grey	80%
Orange	16%
Opaque brown	3%
Honey	1%

The honey coloured flint appears to have been used for the more delicately made implements, but of the other colours there was no discrimination.

Flint assemblage. The total number of worked flint pieces was 2486, of which 8% were finished tools. The assemblage can be broken down as follows:-

Primary flakes without retouch	1748
Snapped blade ends	325
Cores	38
Utilized blades	175
Tools	200

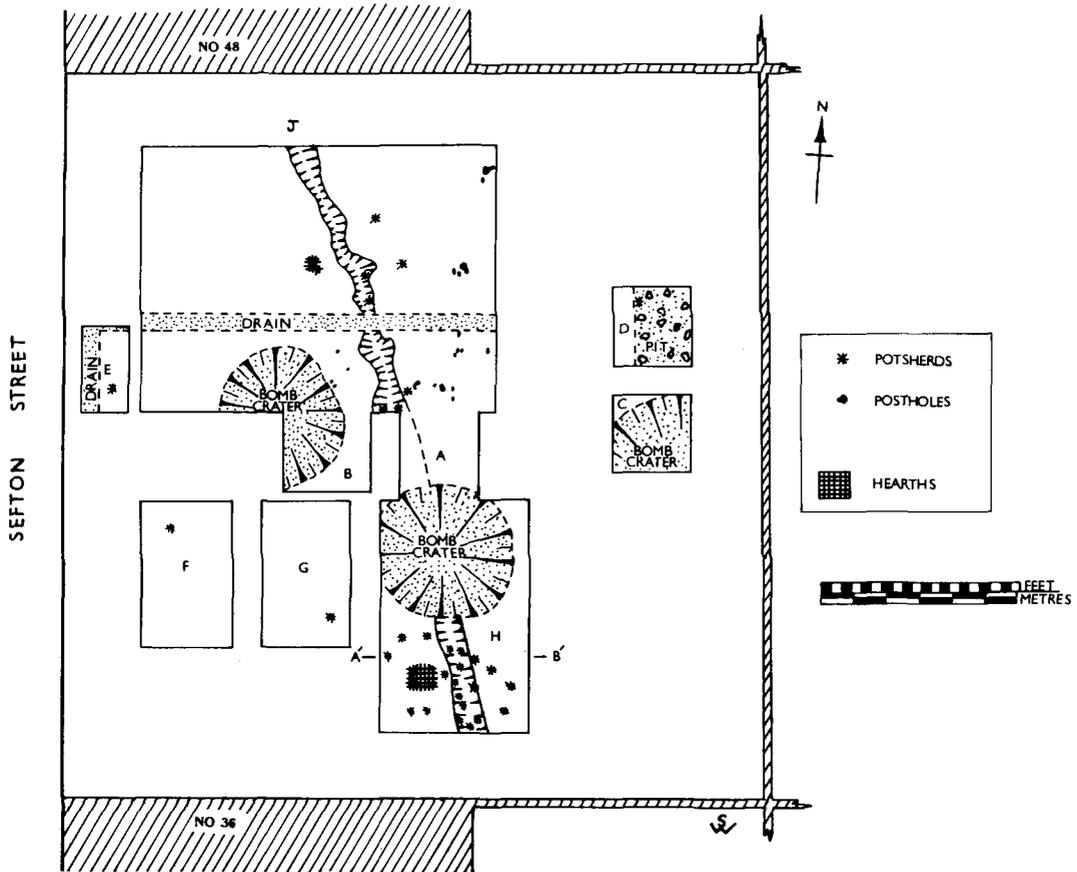


Fig. 3 Sefton Street, Putney: Site plan

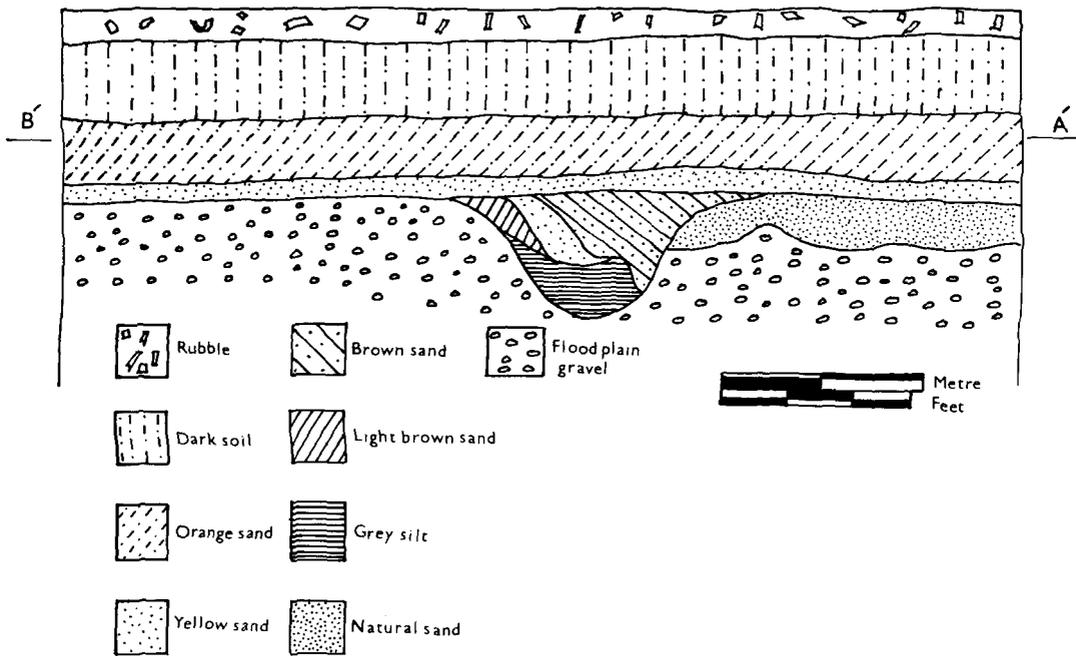


Fig. 4 Sefton Street, Putney: Section A-B

The flint tools can be subdivided as follows:-

Scrapers	68
Blades	42
Knives	6
Axes	4
Saws	22
Arrowheads	58

(Fig. 5 Nos. 1-23; Fig. 6 Nos. 24-54; Fig. 7 Nos. 55-72; Fig. 8 Nos. 73-93; Fig. 9 Nos. 94-120).

*Cores.* Thirty eight cores were found, one being typically Mesolithic in profile (No. 1).

CLASSIFICATION

A. One platform	1. Flakes removed all round	9
	2. Flakes removed part way round	15
B. Two platforms	1. Parallel platforms (No. 2)	1
	2. One platform at oblique angle	2
	3. Platforms at right angles	2
C. Three or more platforms		—
D. Keeled	Flakes struck from 2 directions	—
E. Keeled	One or more platforms	8

Seven of these cores had been retouched for use as scrapers and a further six adapted for use as spurred implements. Fifty per cent of all cores were found within trenches G and H.

*Flakes.* Many flakes show signs of secondary working (Nos. 3-10), and it would be quite reasonable to assume that others could have been used without recourse to retouch. Blunting of varying degrees, by removal of small spalls from one edge of some flake blades is noticeable, and in some cases this backing technique is applied to the entire length of the blade (Nos. 11-12). The average length of these

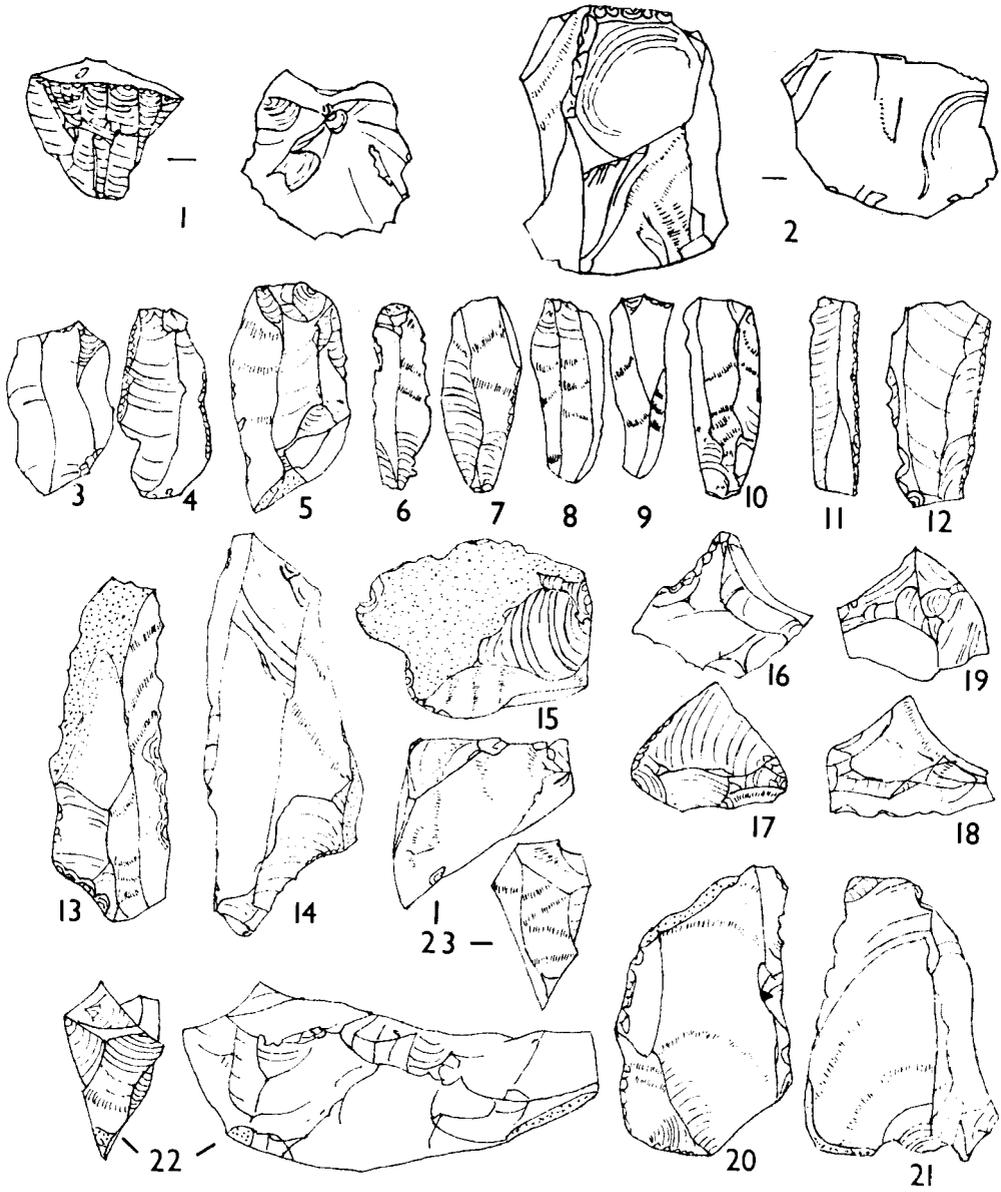


Fig. 5 Sefton Street, Putney: Flints Nos. 1-23 (2/3)

blades is 33mm. Some larger flakes could have been used as single blade sickles (Nos. 13-14). The two illustrated have tangs at one end; No. 13 has been retouched to a slightly concave cutting edge and No. 14 is very thin in section needing the minimal amount of retouch to produce a very sharp cutting edge. Some flake blades seem to be of very shoddy workmanship but this could represent an implement being casually struck for a specific purpose and then discarded after use (No. 15).

*Spurred flakes.* These unusual flakes are thin and nearly as broad as they are long. Each blade rises to a point at the middle of its upper edge; the ridge up to the point on one side is sharp, while the other ridge is blunted, either by backing (Nos. 16, 18-19), or snapping (No. 17). Some pressure flaking is apparent on the sides of all of them. These implements could have been used as harpoon barbs.

*Blunt back knives.* There seem to be two types of these; one being oblong in outline, usually with a naturally blunt back and thin in section (Nos. 20-21). The other is wedge shaped in section and much more massive in bulk; the shapes vary considerably; of the two illustrated (Nos. 22-23), one has an elongated convex cutting edge and wide back (No. 22), and the other has a shorter, pointed, and slightly concave cutting edge with the same wide back.

*Blade segments.* These square ended snapped blades (Nos. 24-31), are thin in section and could have been used in series of two or three, butted together to form composite knives or sickles. A possible example of a composite knife consisting of two prepared pieces butted together, forming a convex blade, with diagonal snappings at the terminal ends of the cutting edge is illustrated (Nos. 27-28).

*Microliths.* There are a small number of microliths of late Mesolithic date, with well controlled secondary working (Nos. 32-34). Some microblades and rods were also found (Nos. 35-36).

*Saw blades.* The cutting edge of these blades does not usually exceed 30mm in length, the majority being between 20-25mm. In most cases a terminal tooth or wedge, larger than the rest on the blade acts as a stop to the length of the sawing action, while others have a notch removed at both ends. Five main categories are recognisable:-

- A. With an elongated tooth or wedge at both ends (No. 38).
- B. With an elongated tooth or wedge at the front end (No. 39).
- C. With an elongated tooth or wedge at the back end (Nos. 37, 41-42, 48).
- D. With incised ends in the central portion of a larger blade (Nos. 40, 44, 46).
- E. Without stops (Nos. 43, 45, 47). Some blades have thin upper edges and others have tangs, as if a handle was to be fixed; others have been backed to allow them to be used without a handle.

*Awls.* These have all been utilized from waste material, one being the distal end of a snapped blade waster (No. 49). They vary both in size and shape, some being made on flat flakes (Nos. 50-54), while others are fabricated from larger pieces of flint, and trimmed to points, with either rounded or more often D shaped sections (Nos. 55-58).

*Flake-scrapers.* There are convex ended scrapers, both long (Nos. 59-63), and short (Nos. 64-67), plus straight ended scrapers, long (Nos. 68, 71-72), and short (Nos. 75-77). There are also examples of narrow rounded ended (Nos. 69-70), concave (No. 73), and pointed (No. 74) scrapers. There are only three side scrapers, two utilized from thermal flakes and one made on a prepared flake. Scrapers of a thick heavy form consist of narrow round ended (No. 83), spurred (Nos. 81-82, 85), and straight ended (Nos. 78, 84) types. There are also 19 small scrapers of Beaker type (Nos. 86-93).

#### CLASSIFICATION

A. End scrapers	1. Long	20
	2. Short	35
B. Double ended scrapers	1. Long	2
	2. Short	—
C. Disc		—
D. Side scrapers	1. Long	2
	2. Short	1
E. On broken flakes		6
F. Hollow scrapers		2
		—
		68

*Leaf-shaped arrowheads.* There are two types of leaf-arrowhead present.

Class A is bifacially retouched with shallow pressure flaking reaching nearly to the centre. There are

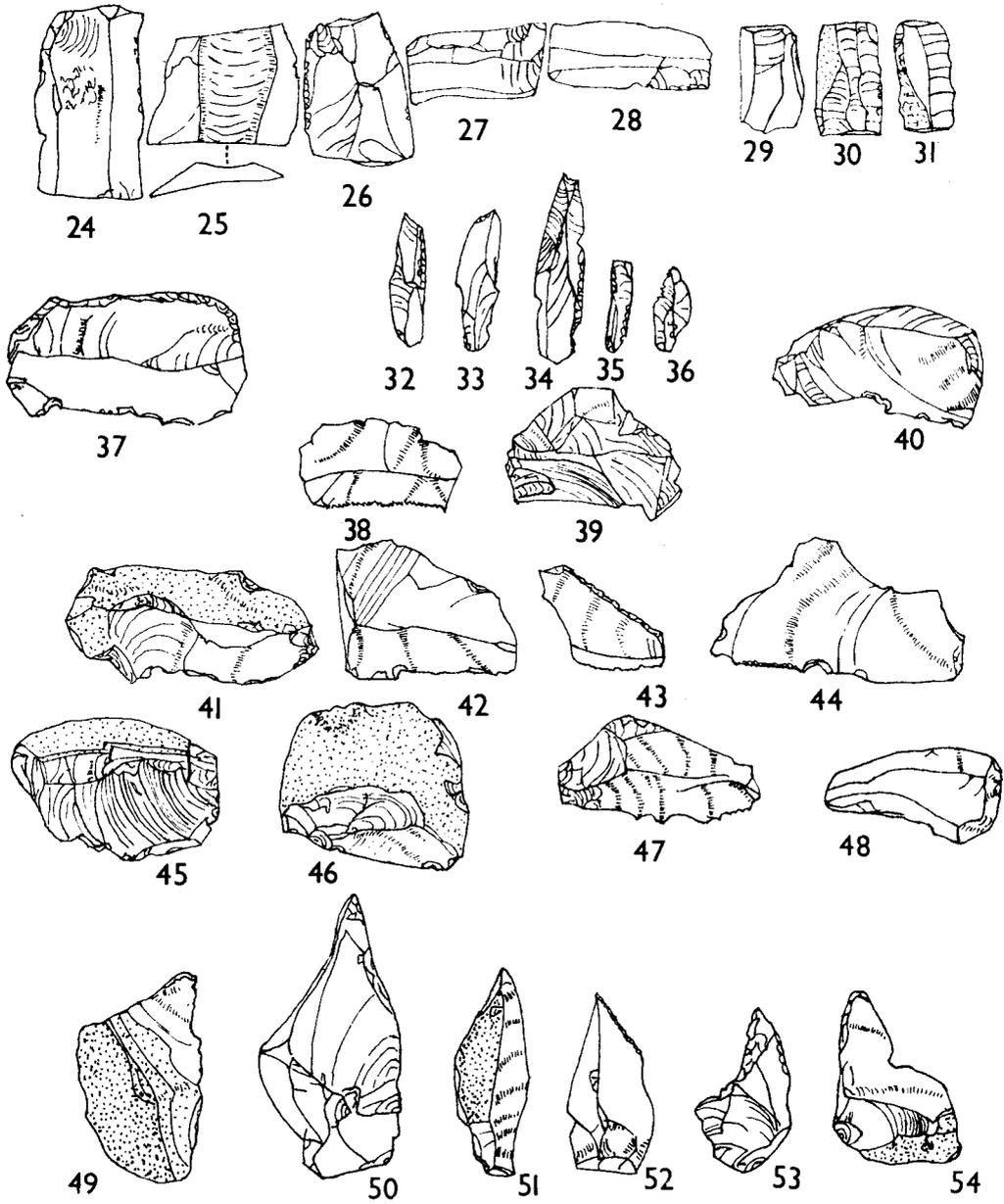


Fig. 6 Sefton Street, Putney: Flints Nos. 24-54 (2/3)

only two of this class (Nos. 94-95).

Class B has retouch at the edges and points of triangular and leaf-shaped flakes. There are 27 of this class, most showing the minimum of retouch (Nos. 96-103).

*Transverse arrowheads and derivative forms.* There are 36 of these and can be classified as follows:-

A. Square ends.	Base half of apex. (Nos. 104-105, 109)	11
B. Square ends.	Base more than half of apex. (Nos. 106-108)	9
C. Triangular	1. Long (No. 110)	5
	2. Short (No. 111)	4
D. Triangular.	Elongated apex. (No. 112)	1
E. Triangular.	Elongated curved apex. (Nos. 113-115)	6

*Spurred implements.* While examining flint cores for secondary working, it was noticed that six of them had been utilized as spurred implements, five had squared tips 2mm across, and one worked to a 110 degree point (No. 116). Two more had been worked on pebbles, and one on a flake (No. 117).

*Axes.* There were four small axes in various stages of manufacture (Nos. 118-119), one with pressure flaking completely covering both sides. There was no sign of polishing on any of them.

*Fabricators.* One complete fabricator was found (No. 120), and two broken pieces of flint could represent the tips of two others.

*Hammerstones.* There are 11 hammerstones roughly shaped from river pebbles and varying in size from 114 x 110 x 75mm to 45 x 35 x 34mm.

## POTTERY

The total assemblage consists of 34 sherds of plain pottery, 27 being grit-tempered and 7 shell-tempered. The colour of the grit-tempered ware varies between reddish brown and black; the shell-tempered ware between reddish brown and light brown. Thickness differs slightly, the grit ware from 5 to 12mm, and the shell ware 4 to 9mm. There are only two rimsherds, both of simple upright form, all the rest of the sherds being fragmentary wallsherds, too small for any assessment to be made of pottery shape. The paucity of the collection of sherds, and the smallness of their size does not allow enough scope for further analysis. This pottery seems to have an affinity with the early Neolithic Windmill Hill ware<sup>1</sup> but, like many other potsherds found near the Thames, contains an unusually high amount of sand. Dr. Isabel Smith, when commenting on the Neolithic pottery found at Twickenham, noted that it appeared to be early but did not fit into any established type and could represent a local form, and in fact, parallels have been found on excavations from Kingston to Putney, suggesting a fabric peculiar to the area bordering the Thames.

There are two later, decorated sherds, one being a piece of Ebbsfleet rim, with corded impressions on the outside extending over to the extremity of the incurve of the rim. There are fingernail impressions along this extremity, and the inside of the rim has incised slashes diagonally inscribed. The other piece is a small wallsherd of grooved ware. This late Neolithic type is quite rare in the London area, mostly being found in the Thames.

Number of potsherds in each layer:-

Layer 2.	Early Neolithic	1
3.	Early Neolithic	8
	Ebbsfleet	1
	Grooved Ware	1
4.	Early Neolithic	23
		—
		34

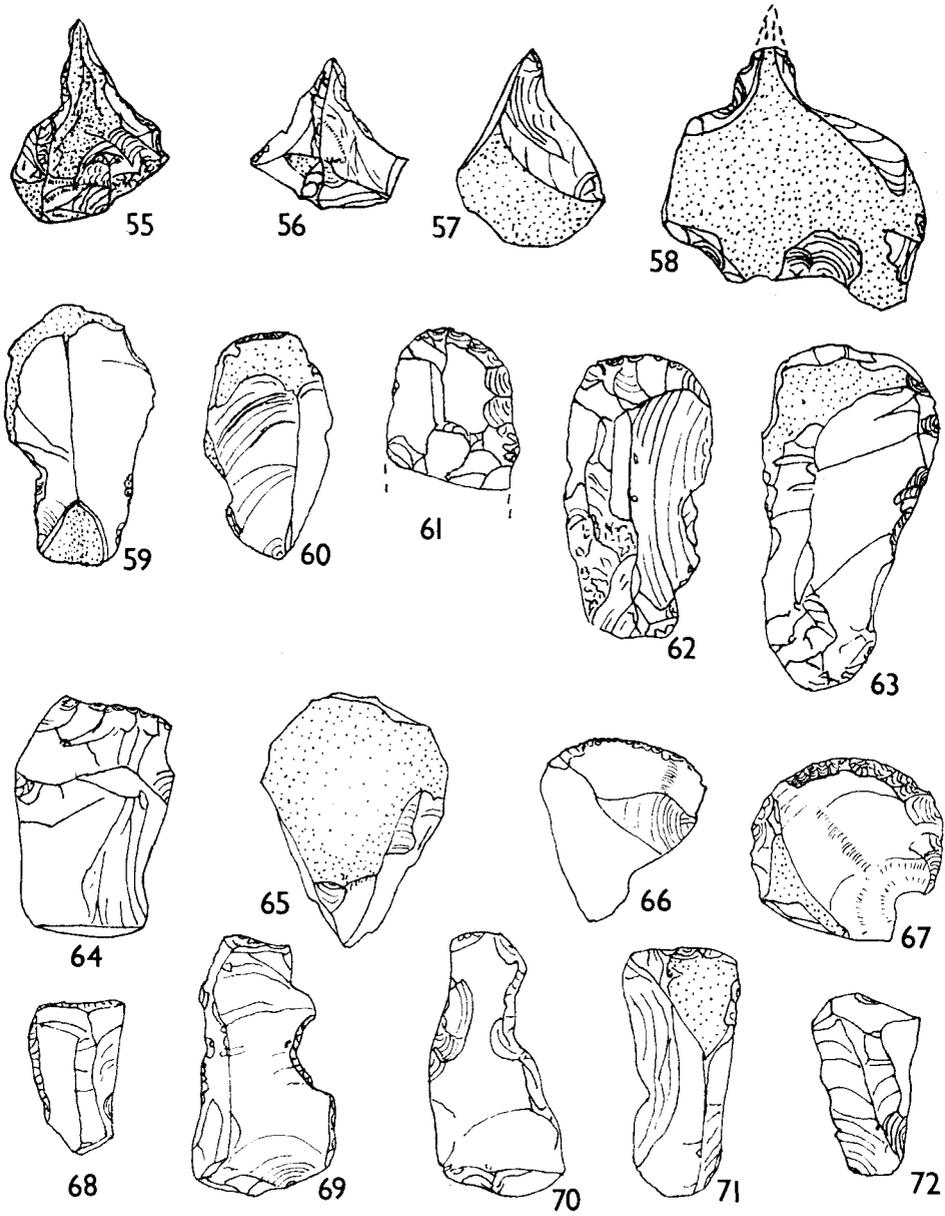


Fig. 7 Sefton Street, Putney: Flints Nos. 55-72 (2/3)

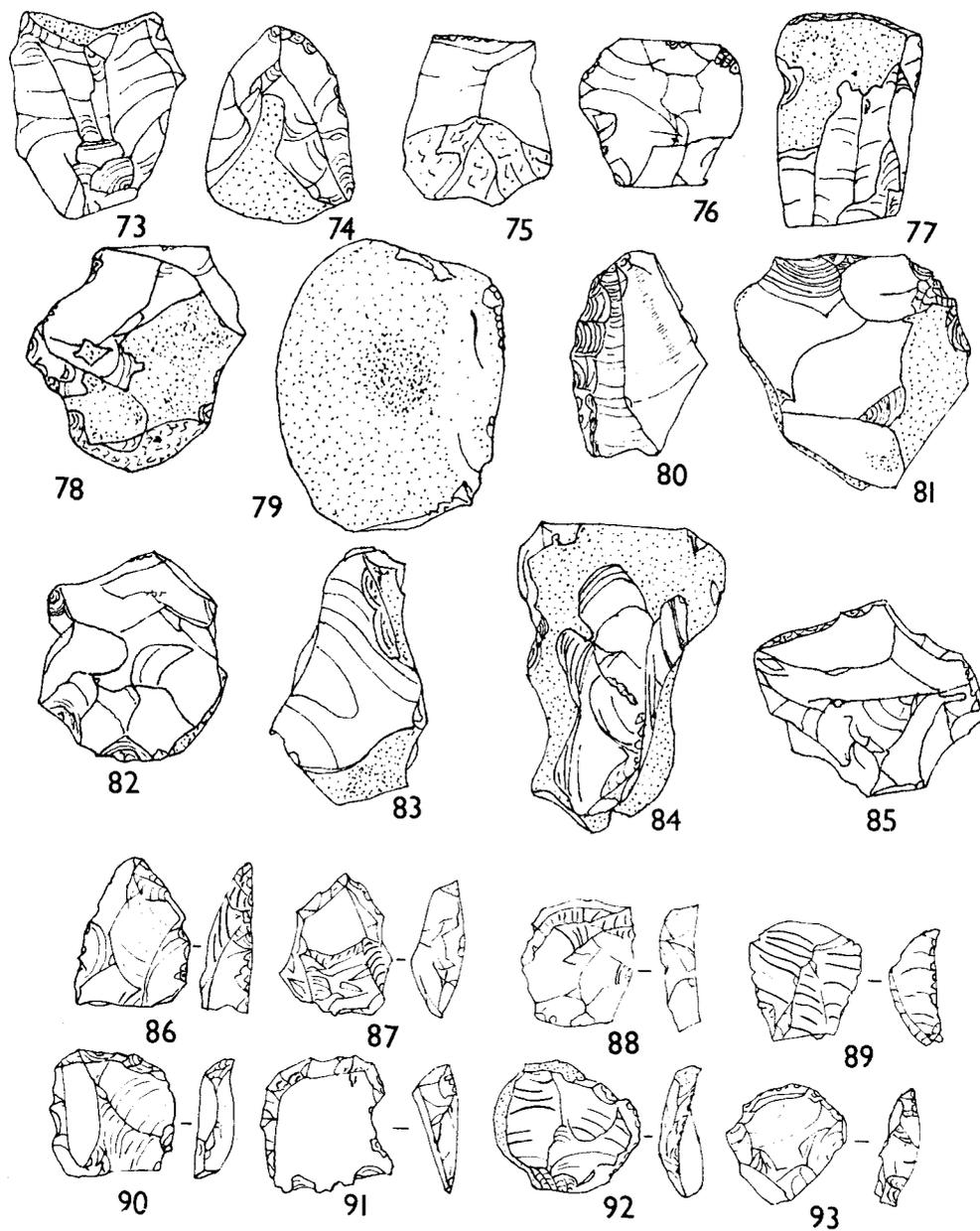


Fig. 8 Sefton Street, Putney: Flints Nos. 73-93 (2/3)

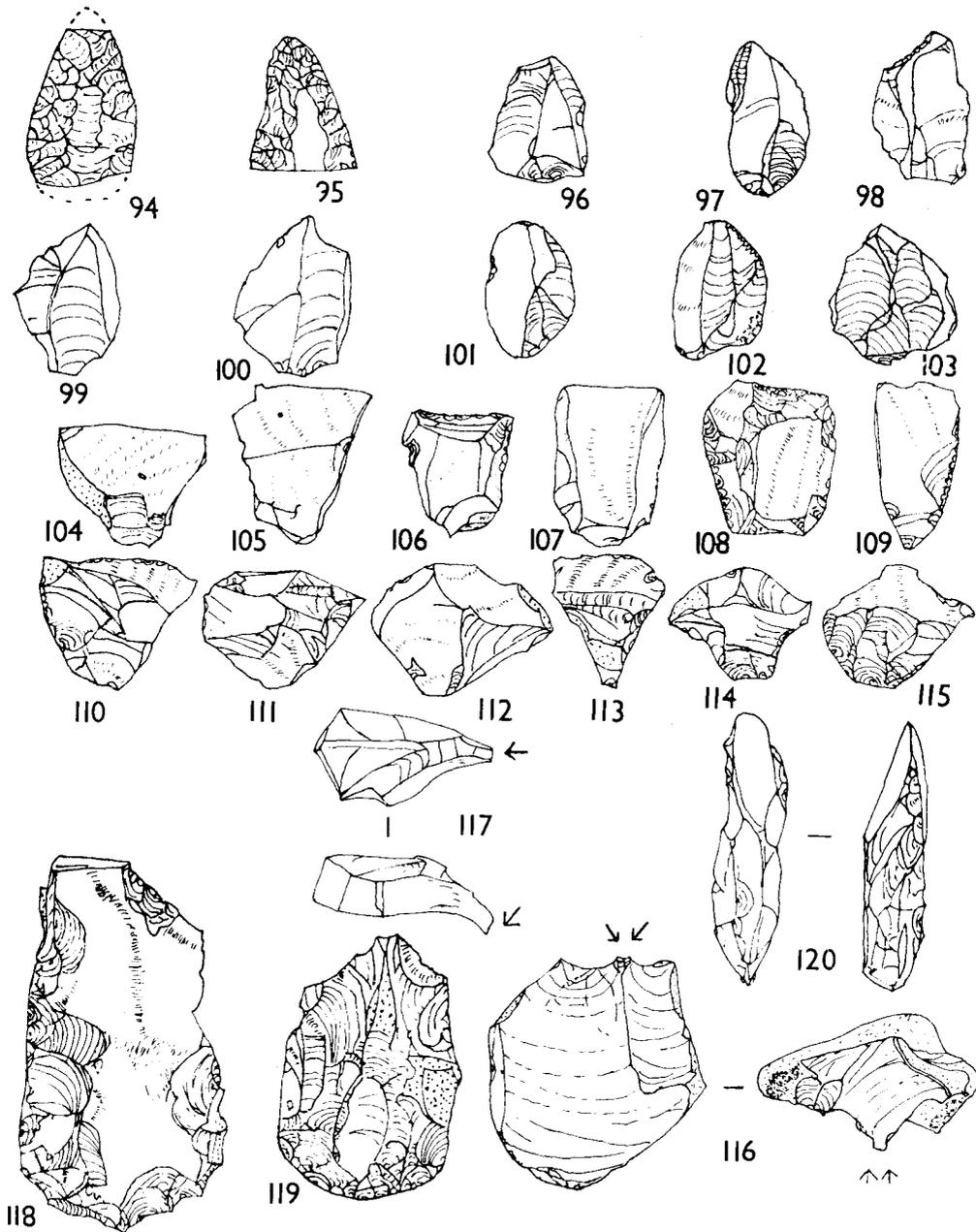


Fig. 9 Sefton Street, Putney: Flints Nos. 94-120 (2/3)

## 6. CONCLUSION

The flint artifacts found in this small area of excavation covers a time scale from Mesolithic to the Beaker period. Evidence for Mesolithic occupation cannot be assumed from the meagre assemblage of this date, as the flints discovered need only represent a field scatter in a district well known for random surface finds. There is more concrete evidence for occupation in Neolithic times, as the vast majority of artifacts are of this period. The plain pottery could be contemporaneous with the Windmill Hill Culture, as also could many of the flint artifacts. The volume of finds in trenches G, and more especially H, with the evidence of its hearth, flint cores, the pot boilers dumped in the channel and the high percentage of early Neolithic potsherds, point to habitation, most likely of an early Neolithic date. How long habitation persisted here it is impossible to assert, but from the evidence of pottery of Ebbsfleet and Grooved Ware types, plus the existence of flint tools from the late Neolithic and Beaker period, it would seem that the area was used, even if not permanently occupied, throughout the whole of the Neolithic period.

In the wider aspect, evidence of Neolithic artifacts found along the banks of tributaries of the Thames at Kingston<sup>2</sup>, Twickenham<sup>3</sup>, Brentford<sup>4</sup> and Fulham<sup>5</sup>, as well as Putney could indicate the existence of early settlements a little way inland from the river, rather than on its banks, so as to minimize the possibility of the inhabitants being imposed upon by transitory groups moving up and down the Thames.

1. A. Keiller *Windmill Hill and Avebury 1925-1939* (Oxford, 1965) 43-84.
2. *Kingston Geological Society Review* 1 (1968) No. 1.
3. S. Sandford *Excavation in Church Street Twickenham* (1969) 19-20.
4. R. Canham 'Excavations at Brentford' *London Archaeol.* 1 No. 13 (1971) 291-295.
5. K. Whitehouse, personal communication.

## ACKNOWLEDGEMENTS

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Thanks are also due to Pamela Greenwood, Nicholas Farrant, and Scott McCracken for their help; and special thanks are due to Pat Loobey who spent many hours helping with this report. Finally my thanks to Hugh Chapman for his valuable and much needed help and advice while writing this report.

# EXCAVATIONS AT ANGEL COURT, WALBROOK, 1974

T. RICHARD BLURTON

Finds research co-ordinated by MICHAEL RHODES

*Excavations carried out at Angel Court located a small eastern branch of the Walbrook stream. The Roman sequence recorded was similar to that found by Professor Grimes at the Bucklersbury House site at Walbrook in 1951-54. This sequence showed the build up of deposits on the sides of the Walbrook and the way in which the rise in the water table was contained by the building of timber revetments. It also partially supported the numismatic sequence from the excavations at Bucklersbury House, discussed by Merrifield. The possible supports for a timber footbridge were also excavated and gravel tracks along the south bank of the stream were recorded.*

*The medieval deposits were small, and the only feature excavated was a ditch, for which there is evidence in the early 14th century.*

## I INTRODUCTION AND ACKNOWLEDGEMENTS

Angel Court (Fig. 1) was selected for excavation in the hope of throwing more light on the northern part of the Walbrook in Roman times. In the past, the course of the stream had been presumed to run through the north-eastern sector of the site<sup>1</sup>. This presumption was proved to be correct. The excavation also confirmed that for the Walbrook, in the northern part of the City, the pattern that Grimes had found further south<sup>2</sup> and the dating sequence that Merrifield established from the coin evidence<sup>3</sup>, was substantially the same. This pattern was that the stream was not very wide — in the case of this tributary only about 1m; that the stream-bed was continually rising in the deposits of its own silts, perhaps due to the rise in the water-table; that attempts were made to control these rises and consequent floodings, by timber revetments; and finally that the coin evidence from the stream-bed itself ended in *c.* AD 150 (see Coin Report, p. 57), with a possible change in the character of the early occupation on the stream's bank.

The valley of the Walbrook cuts through the fluvial gravels of the Flood Plain Terrace of the Thames. The deepest deposit in Trench A (Fig. 2, layer (27)) was most probably the familiar brickearth, which occurs in pockets all over the gravel plateau of the river terrace. This gravel was only seen in the base of Trench D (Fig. 3, layer (38)).

The parts of the site investigated were — Trench A (controlled excavation) and Area B and Trenches C-H (observations during building work). The excavations took place during February and March 1974, and were carried out by a team from the Department of Urban Archaeology. The supervisor was Mark Guterres. His assistant was David Jones. This report is compiled from the records of the former.

Thanks are due to the Clothworkers Company, the owners of the site; Fitzroy Robinson and Partners, the architects; and Sir Robert McAlpine and Sons, the contractors.

(The complete archival report is lodged in the Department of Urban Archaeology, Museum of London.)

## II HISTORICAL SURVEY

BY TONY DYSON

The Walbrook, a generic term for a network of convergent south-bound streams, one of which formed the principal feature of the present excavation, dominated the early topography and habitation of the area north of Lothbury and Throgmorton Street. The Angel Court tributary, originating beyond London Wall north of Winchester House, flowed south-west to meet the main stream, flowing due south from the present Finsbury Circus, some 100 feet to the west of the site. In the medieval period it first appears in 1311<sup>4</sup> and was usually referred to, like other such tributaries, as the Walbrook or *cursus rivuli de Walbroke*. But in a deed of 1335 it appears as *le Mordyche*, the northern bound of a property which extended south as far as Broad (now Throgmorton) Street<sup>5</sup>, while six years later a tenement immediately to the east was similarly delimited by the term *Mora*<sup>6</sup>. The *Mora* (whence Moorfields and Moorgate) was primarily the large swamp north of the City wall, but there is evidence that in the medieval period it extended considerably farther south into the central northern sector of the City<sup>7</sup>. One of the most interesting features of the present site is that it marked a limit of the marsh as late as the 14th century.

Although Roman structures in this area are far from numerous, they are sufficient and of a nature to suggest that the land was adequately drained or controlled during the occupation<sup>8</sup>. There are several instances of Roman revetting of the Walbrook streams<sup>9</sup>, in addition to the provision of culverts which admitted the water through the wall on its way to the Thames<sup>10</sup>. During the post-Roman period the neglected revetments and culverts collapsed and became blocked, and thereafter no comprehensive area drainage seems to have been undertaken until the 15th and 16th centuries<sup>11</sup>. The consequently unattractive nature of this land is reflected in the unusually large size of many of the tenements. William King who died shortly before 1396 appears to have held most of the land between Coleman Street and the Walbrook<sup>12</sup>. The same is true of the parishes, particularly St. Stephen's and St. Peter le Poer.

Doubtless because of the unreliability and cheapness of the ground, much of the area was moreover occupied by extensive gardens. That of the house of the abbots of Rewley (de Regali Loco, Oxon) stretched, by the late 14th century, from Coleman Street to the boundary of the parishes of St. Stephen and St. Bartholomew the Less (or by the Exchange), just west of the Angel Court site<sup>13</sup>. In 1370 the abbot of Rewley complained that in wet weather water from the adjoining tenement of Thomas of Salisbury came into his land for want of a gutter<sup>14</sup>. This evidence gives some indication of the prevailing conditions, and also of the differing attitudes to them on the part of lay and clerical owners. From 1287 until the mid-14th century reference to ditches and streams as property bounds are common, and it is significant that thereafter they cease to serve this purpose. After 1412 there is no further mention of the Angel Court tributary<sup>15</sup>. By the 16th century, when large scale drainage schemes were underway, Thomas Cromwell laid out a large garden, later of the Drapers' Company, which, together with the Carpenters' garden further north, occupied the whole area of the former *Mora* between London Wall and the Angel Court site.

The area of the excavation itself falls just inside the small rectangular enclave, 100 feet from east to west, which forms the northern edge of the parish of St. Bartholomew by the Exchange. Although large scale and well documented developments took place to the west, north and east, from 1287 the site was in the hands of small private owners and tenants, and a variety of trades were practised there. The tenorial descent is: 1287 William le Slepere

(tanner) to Walter Hauteyn (mercator)<sup>16</sup>; 1325 Thomas Hauteyn to Adam de Salesbury (pepperers)<sup>17</sup>; 1327 Salesbury to William Tithinglamb (poulterer)<sup>18</sup>; 1355 Tithinglamb to John of Chichester (goldsmith)<sup>19</sup>; *ante* 1381 Chichester to Thomas Barton (goldsmith)<sup>20</sup>; *ante* 1491 Thomas, then Andrew Windsor<sup>21</sup>; 1491 Windsor to Thomas Morys (grocer)<sup>22</sup>; 1494 Morys to Thomason, Williamson and others<sup>23</sup>. Thereafter the tenure is uncertain, but in 1543 this land, together with the Rewley garden to the west was in the possession of Sir Robert Rich. By 1518 the land to the east, consisting of a large messuage with a garden, was bequeathed to the Grocers' Company<sup>24</sup>, and beyond that again, west of the former precinct of Austin Friars, a large area of land which also included the garden north of the Angel Court site was granted to the Drapers' Company by the Crown in 1543<sup>25</sup>. The Drapers' lands had previously belonged to Thomas Cromwell who had used his position to encroach on his neighbours' property<sup>26</sup>.

For the next 250 years the basic topography of the area remained largely unchanged. The small garden at the south-west corner of the Drapers' garden remained intact until the early 18th century, a surviving remnant of the Rewley Estate. In 1694 it became the subject of a parish boundary dispute between St. Stephen's and St. Bartholomew's<sup>27</sup> which may well have arisen from some previous adjustment of the main course of the Walbrook, a natural boundary feature, on the part of Rewley. By the 1670s a large house, occupied by the Royal Africa Company until its removal to Leadenhall in 1678, stood at the north end of the Grocers' land on Warneford Court, and by 1746 both these features were either destroyed or cut back to make way for the new thoroughfare which linked the northern ends of Angel and Cophall Courts. Along the north side of this new extension six street numbers were assigned to a range of buildings covering the archaeological site. Finally, in 1876 work began on Throgmorton Avenue which runs from London Wall, through the eastern edge of Drapers' garden to emerge on Throgmorton Street just east of Warneford Court. At the same time a western spur was run through the southern edge of Drapers' garden, and immediately north of the Angel Court site, towards Cophall Buildings.

### III THE EXCAVATION

#### i) — Trench A (Figs. 1 and 2) and Area B (Fig. 1)

Trench A was situated in the north-east corner of the site, at basement level (OD +10.30m) and against the northern edge of the 19th century building which faced on to Throgmorton Avenue. It was 10.72 m long and between 2.00m and 1.08m wide. The variation in width was due to the fact that along the western side there was a series of concrete stanchions intruding into the trench, and furthermore these concrete stanchions (layer 8) had destroyed in the section the important deposits across the actual stream-bed.

Area B lay to the west of Trench A. Observation was maintained consistently throughout February and March 1974. All archaeological deposits were sited at a depth below +9.89m OD. Heavy machinery destroyed the evidence immediately beneath the basement.

#### DESCRIPTION

##### TRENCH A

Although not certain, it is likely that the natural brickearth (Fig. 2, layer (27), OD +6.90m) was reached in the greater part of the trench. Stratigraphically the first feature is the streamlet in its original form (28) and its fill. Above this were found various layers of silting (20a b and c), (9) and (7). Although excavated as one layer, it is quite clear now that though this process of silting up produced an identical type of deposit, the deposition of layer (20) took place over many years, interrupted

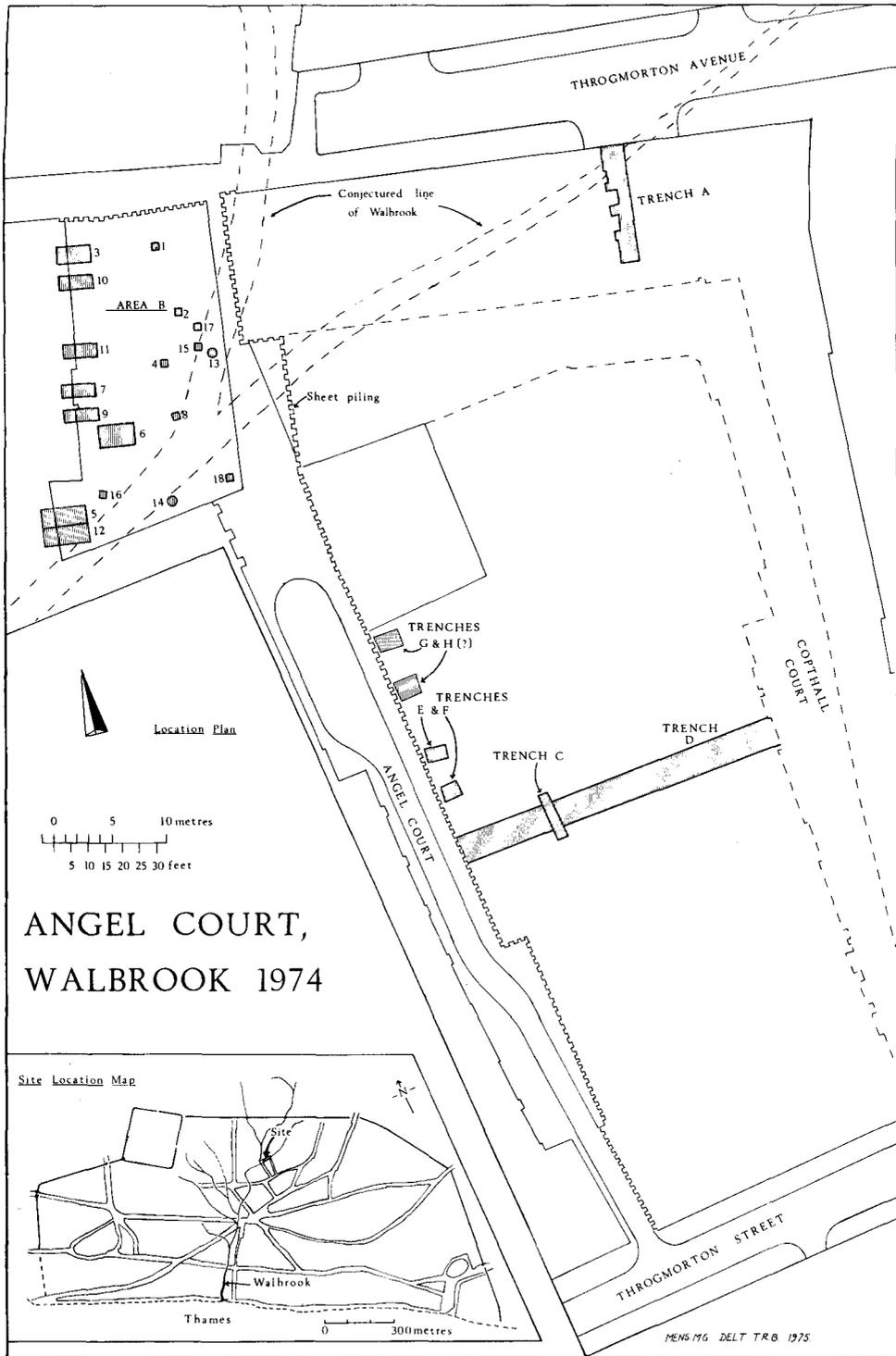


Fig. 1. Angel Court: Location map and site plan

periodically by the laying down of dumped deposits (see Fig. 2). The division of layer (20) into three parts, a, b, and c is therefore a post-excitation division. In amongst this black silt were found two phases of upright timbers and horizontal planks, in the form of revetments — (24iii and iv). Amongst these were some very small timbers, (24i), on the north side of the gulley, and one or two large upright timbers (in 24ii). To the south of (20c) was a large dump of clay, layer (16), and between this and the timbers of (24iv) was the gravel layer (32). On the north bank of the streamlet, the equivalent of layer (16) was layer (31) (not shown in Fig. 2, because of the modern disturbance in the eastern section). In this layer were a number of post-holes. Between the various phases of the deposition of layer (20), different interleaving deposits accumulated to the south. These layers are (26), (15), (13) and (11) — all of them of gravel. To the south of the earliest of these gravel dumps, layer (26), and cutting through it, was a ditch, (18), which also cut through (16). Just to the south of (18) was a tree-stump surrounded by a deposit of peaty humus. It had grown from the level of the natural brickearth, and was eventually covered by (15). Layer (18) in its turn, was covered by the next gravel layer, (15). Cut into (15) at the southern end of the section, was a layer of peaty deposit, (19), while lying in the top of (15) at the other end of the section was a tiled surface. Immediately above it was another gravel layer, (13a), similar to (15) and (26). This included the gravel lenses (14) and (13b). Above (13a) were the already mentioned layers of silt (9) and (7), and the gravel deposit (11). All these three layers were cut into by a ditch (12) which fanned out as it approached the western section.

First noticed in layer (3), but fully excavated in layer (5) was a barrel (10) (not in Fig. 2), made of 16 wooden staves. No hoops or a bottom to it were found, though the area beneath the staves contained decayed wood. The diameter was 0.40m. A few nails came from the interior, and there was some iron-staining in the decayed wood beneath the staves, though there was no other indication of how it was held together. Layer (6) from inside the barrel was very similar to layer (4). Layer (4) was a dump of brown garden soil stretching the whole length of the trench. Layer (2) was of a very similar composition, while (3) was a mixed layer of brick chips, brown earth and charcoal. Layers (8) and (1) were modern disturbances.

#### AREA B

In Area B, Trenches 3, 5, 7, 9, 10, 11 and 12 all produced quantities of grey silt. Trenches 12 and 16 also produced deposits of gravel.

#### INTERPRETATION

Roman stream revetments, dumping and footbridge.

The most important aspect of the excavations at Angel Court, after establishing the existence and position of a branch of the Walbrook, was the elucidation of the phases of the flooding, revetting and dumping throughout the Roman period. Six layers of stream silt ( (7), (9), (20a b and c) and (28) ) (see Fig. 2) and five layers of dumping, one of clay and four of gravel ( (16), (26), (15), (13a) and (11) ) and two phases of timber revetments were excavated. The pottery from these provides a chronology for the phases of silting in the stream, probably due to a rise in the water-table, or in the Thames, and the attempts which were made to contain the stream and consolidate the banks.

The suggested sequence of events is as follows —

#### PHASE I

This consisted of the streamlet in its first stage, layer 28, and dated to the 1st or early 2nd centuries AD (p. 50). Due to the rise in the water-table, or because the stream suddenly had to carry more water for some reason, it overflowed and laid down the first deposit of stream silt, layer (20c). This date of the 1st or early 2nd century AD marks, then, the beginning of the rise in the stream level. To counter this rise, the first revetment (24iv), was apparently installed with layer (16) dumped behind it, to hold it in position. A gravel track, layer (26), was then laid on top.

The revetment (24iv) was made up of stakes and planks, and the only recorded lengths of the stakes were 1.40m and 1.20m. Obviously, if layer (16) is a dump, any dates deduced from its contents can only give a *terminus post quem* for layers (20c) and (26) and not a date for the first phase of the canalization. Material from layer (16) gives a date of early/middle 2nd century AD (p. 50), while the dates for layers (20c) and (26) are similar (p. 51 and 50). All three contexts are, therefore, roughly contemporary. Presumably as soon as the flooding became a danger, layer (16) was laid down and the gravel path, layer (26) immediately laid on top. Firm paths of gravel in this swampy area would always have been a necessity.

Layer (16) also contained a large quantity of painted wall-plaster, and some burnt clay, presumably waste material from a building destroyed by fire, perhaps the fire that devastated London in the reign of Hadrian, dated to AD 125-130<sup>28</sup>. This would agree with the dating evidence from the pottery (p. 50). On the northern bank, a similar dump to layer (16) was recorded, layer (31) (not shown in Fig. 2 because of the modern disturbance in the eastern section). Layer (32) must have been dumped at the same time, though there is no dating evidence. The puzzlingly small feature (24i) most probably fits into the first phase, if this small plank and its equally small stakes are regarded as a step down to one of the early stream channels — either (28) or (20c). The small planks in (24ii) could also be seen as a second step (for the large timbers, see Phase II). The post-holes in (24ii) may also belong to this stage, on account of their size (24i) and (most of) (24ii) would never have been adequate for water retaining and unnecessary since the northern side of the stream was steeper than the southern at this point. Steps like those used in terraced gardens would seem to be the closest parallel.

#### PHASE II

This phase shows the continuing rise in the water level represented by the silt, layer (20b), which covered (32) and was encroaching on layer (26); the timber group (24iii); the gravel layer (15); and possible evidence for a footbridge. Between Phases I and II was (18), a ditch in the middle of the trench, whose fill is dated to the Antonine period (see p. 50). The position of the Angel Court tributary of the Walbrook is so close that the ditch must have run into it and it may confidently be suggested that in antiquity this whole area was probably covered with similar small drainage channels.

Why the revetting in this second phase appears in the middle of the stream, is not clear. Perhaps the strength of the stream was underestimated and an attempt was made to contain it within the previous banks, unsuccessfully, since the dumping of gravel had to continue to the south of the revetments — layer (15). In the top of this layer was found a roughly tiled surface, which was most probably placed there to strengthen the edge of the stream. The dates for the two layers (20b) and (15) are late 2nd — early 3rd centuries AD (p. 51). In at least two of the revetments, there were a number of large vertical timbers (marked ‘s’ in Fig. 2), which are inexplicably large if regarded as merely parts of the revetments. It is, however, possible that they formed vertical supports for a timber footbridge. This would at least explain why in (24ii) there are two large timbers and practically nothing else.

#### PHASE III

This consists of layers (20a) and (13a) and the lenses within (13a), (13b) and (14). The same process of silting up is in evidence again here. The stream silts were deposited over layer (15). These in their turn were covered by the gravel deposit, (13), again presumably

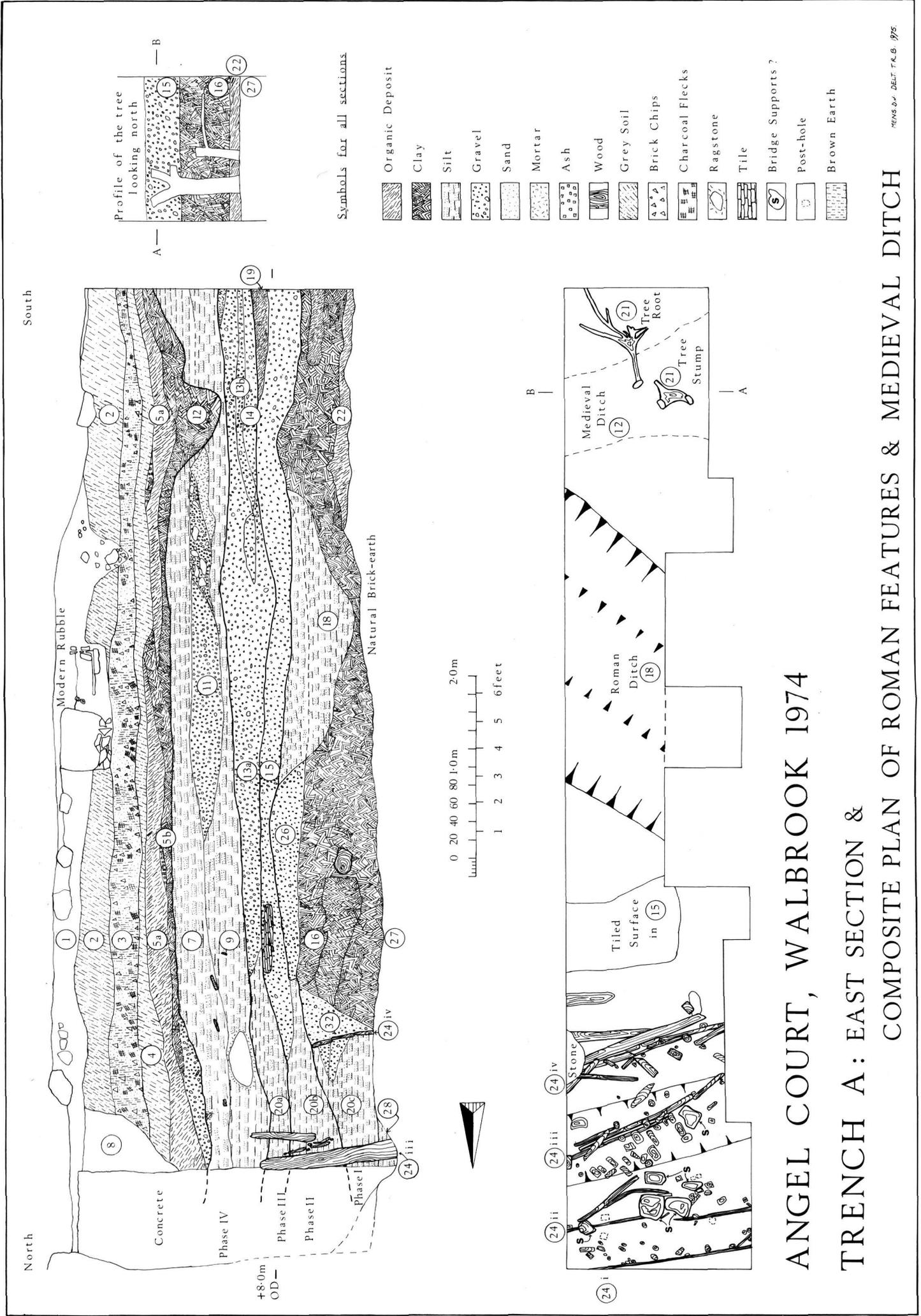
designed to constrain the stream silts. These two layers are dated to the middle/late 3rd centuries AD (p. 51). They show the last attempt to keep the stream within its original course, and the way in which the timbers of the foregoing phase were covered with silt.

#### PHASE IV

While this layer does present some interpretative problems, the section clearly shows two deposits of stream silt, layers (9) and (7) stretching the entire length of the trench, and between them a gravel deposit, layer (II), perhaps a pathway, cutting into the top of layer (9). Layer (7) is cut by the medieval ditch (12). Layers (9) and (11) are dated to at least the late 4th century AD on coin evidence (p. 57), and the pottery from layer (7) gives a similar date (p. 51). There is one sherd of possible Saxon pottery from layer (7) (p. 80). This, taken with the extremely small area excavated (10 x 2m) must throw some doubt on the late Roman dating for layer (7).

The problem arises from explaining the presence of such large expanses of water-borne silt (layers 9 and 7) in a stream which was never much more than 2m wide. There are two theories, both of them unsatisfactory in certain respects. It is possible to argue that these large layers could only have been deposited there if the stream had been stopped or diverted above Angel Court. In the medieval period a stream (called the Moorditch) was certainly in existence in this general position in the 14th century, but since there were no silt deposits in the post-Roman layers on site it had presumably shifted from its original course. Instead, artificially dumped levelling layers might be expected and on site a large number of cattle horns (p. 90) was, in fact, found in layer 9. The second theory, which has held the field in the past<sup>29</sup>, is that these layers of silt were deposited because the stream flowed less swiftly and thus did not carry its silt load in suspension to the Thames, but shedded it much higher upstream. This could only have happened if the profile of the stream had changed from a swift, down-cutting torrent, to a lazy trickle winding its way through a marsh (a sequence suggested by Grimes at Bucklersbury House<sup>30</sup>) — and medieval documentary sources stress the wet and generally swampy nature of this area of the City. This change of profile could only come about if either the stream had reached its maturity or if the level of the water table had risen dramatically. It is known that there was a rise in the level of the Thames<sup>31</sup> in the Roman period which would not only have caused the general water-table to rise with it, but would also have had a specific effect on the streams which ran into it. But it is uncertain that so small a rise in the river level would have had such considerable consequences so far upstream of the tributaries.

It is possible to suggest that farther downstream there was some impediment to the flow of water, causing it to pond up so that sediment in suspension was deposited to form silt, as seen in layers (7) and (9). A water mill with a pond behind it is a possibility since mill stones from water mills are known from the Walbrook valley, particularly from the Bucklersbury House site<sup>32</sup>. But there is no direct support on site for this interpretation which could hardly explain the known deposition of silt all over the Walbrook valley. The sitings of water-borne silts when plotted on a map, as by Merrifield<sup>33</sup>, are so widespread that they can only be explained by a natural cause such as a rise in the water table, but despite their number only Professor Grimes' work at Bucklersbury House, apart from the present site, has recorded the successive depositions of the silt layers. However, at Bucklersbury House, further downstream than Angel Court, and thus closer to the original rise in the level of the Thames, it is known that the stream did flood continuously and that the banks were constantly being



ANGEL COURT, WALBROOK 1974  
 TRENCH A: EAST SECTION &  
 COMPOSITE PLAN OF ROMAN FEATURES & MEDIEVAL DITCH

Fig. 2. Angel Court: Trench A section and plan

revetted and rebuilt<sup>34</sup>. It was doubtless due to the rise of the water table that it was necessary to rebuild the floor of the Mithraeum nine times, and thus to raise it by over 1m, within a century and a half<sup>35</sup>. This compares with a water level rise at Angel Court, farther upstream, of considerably less than 1m. A further piece of evidence to support this interpretation comes from the Roman City Wall, to the north of Angel Court where it is recorded<sup>36</sup> that a new culvert was cut through the wall 5ft above the level of the original channel. Neither of these cuttings is dated, but the conclusion that to the north of the Angel Court the water table was rising in the later Roman period is hard to escape.

In conclusion it seems most likely that despite the difficulty of explaining the large quantities of silt from so small a watercourse, they must be viewed as flood plain deposits caused by a stream continuously rising and cutting new beds for itself through previously deposited silts. The gravel dump (layer 11) was obviously an attempt at containing the stream in the manner previously used, but within a few years the whole area was flooded again, for the pottery from all three layers has been dated to the late 4th century. It should, however, be noted that the topography of the Walbrook stream, particularly in the late Roman period, is still largely unknown, and awaits further fieldwork.

Area B, where the builder's excavations were observed also clearly lay well within the flood-plain of the Walbrook, as silt and gravels were seen — the latter particularly in the south-west corner of the area. This agrees with Merrifield's suggested course for the stream<sup>37</sup>. In the observation at B17 dark grey clay, mixed with wood and tiles was recorded. Presumably this is another area of bank-side dumping, and recalls other similar deposits, e.g., layers (16) and (26) in Trench A (Fig. 2)<sup>38</sup>.

#### MEDIEVAL LAYERS

Most medieval deposits appear to have been removed at some later date, so that in section layer (7), which is probably late Roman in date, comes directly beneath layers (5) and (12), which are dated by pottery to the late 12th or early 13th centuries (p. 86). Layer 5, like the earlier Roman deposit, layer (9), contained a large quantity of horn-cores. As in the previous case, this must represent the debris from a slaughterer or horn-carver. Goat horn-cores were present as well as those of cattle (p. 95). The deposition of silt also stops sometime within this period, since there was none above layer (7). This is presumably due to the diversion of the stream elsewhere<sup>39</sup>. Layer (12) was clearly a ditch, and is most probably another drainage channel. It widened out as it approached the west section (Fig. 2), which may indicate its imminent juncture with a larger channel, or indeed with the main stream of the Walbrook. Until it was systematically drained in the 16th century, the whole area was criss-crossed with channels and trenches to drain the marsh. It is not clear why the ditch should be filled with clay, but this may only be a confusion in the recording terminology. The barrel excavated from layer (5) was made up of 16 wooden staves, and the pottery inside was dated to the first half of the 14th century AD (p. 86). This fill was described at the time of excavation as being similar to layer (4) which is now known to be contemporary. There is no clue to the origins or reasons for the dumping of either layers (3) or (4), but (3) has a very similar date to that already given for layers (4) and (5) (p. 86) though it must be emphasised that the dates here are often spread over a century or more. Layer (2) was thought to be the same layer as was noticed elsewhere over the area of the Angel Court redevelopment, such as D (2) and the top layer in Trench F.

ii) — Trenches C-H (Figs. 1, 3 and 4).

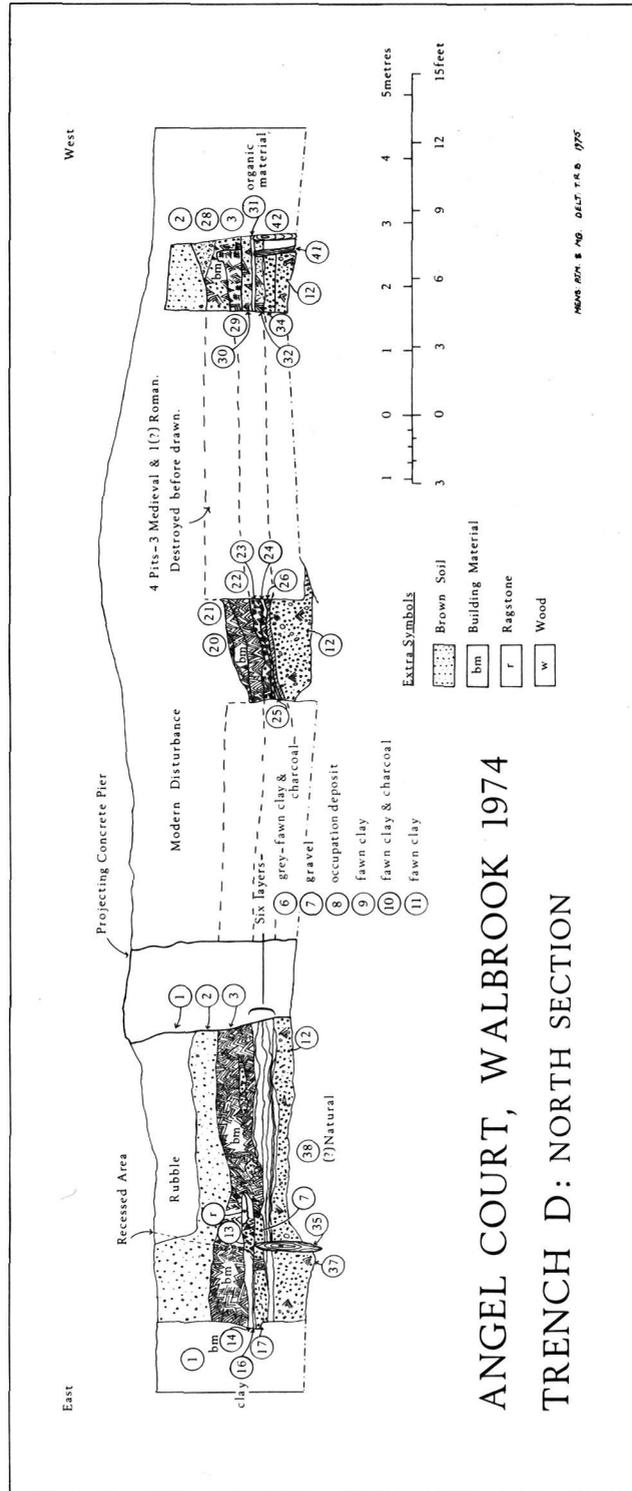


Fig. 3. Angel Court: Trench D section

## INTRODUCTION

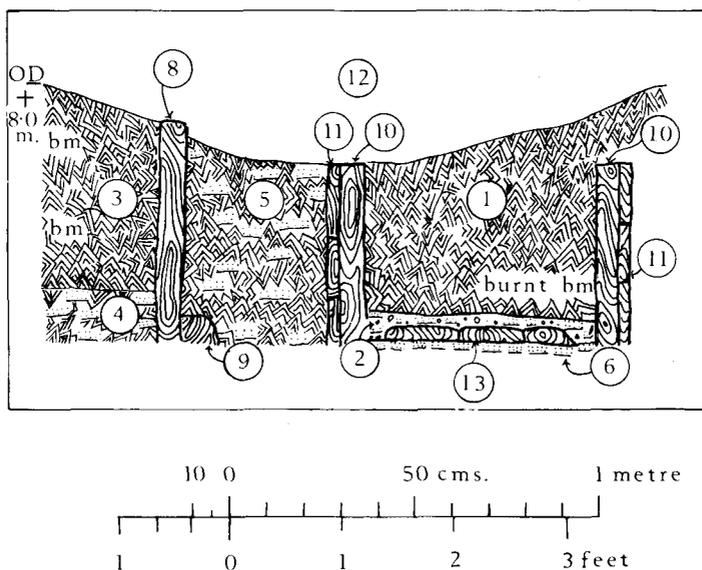
At the same time as controlled work was in progress at Trench A, observations were also made at the other, mechanically excavated, trenches C-H on other parts of the Angel Court site. Where it was possible, section drawings were made. In the description that follows, the only entries included are for layers or structures which are not represented in section drawings.

## DESCRIPTION

- C — On top of the natural gravel was recorded a Roman deposit, 1.0m thick, of mixed gravel and clay. In this was a revetment-like structure of wood — horizontal planks running east-west, with periodic vertical timbers on the north side of them. Unstratified Roman finds were collected. Above these Roman layers was a deposit of dark soil into which a chalk and mortar wall had been built. This was presumed to be medieval.
- D — An almost complete amphora was found in a section propped up against a horizontal and a vertical timber. Additional information to the section includes —
- 3 — tile, charcoal and mortar flecks.
  - 7 — a hard gravel surface.
  - 13 — grey clay and gravel.
  - 14 — mortary rubble and gravel.
  - 16 — fawn brick-earth.
  - 17 — packed gravel surface — very similar to layer (7).
  - 23 — hard fawn brick-earth with gravel and charcoal flecks.
  - 24 — orange/fawn brick-earth.
  - 25 — black occupation deposit.
  - 26 — dark brown peaty deposit.
  - 31 — black occupation deposit.
- E — In the eastern section a barrel-pit was recorded, above which was a chalk wall of presumably medieval date. In construction it was similar to the wall observed in Trench C. It ran in a north-south direction. Immediately above this wall was a deposit of modern rubble.
- F — Beneath the top layer (black soil and modern building material) was a layer of reddish brown brick-earth. This overlay a floor surface of *opus signinum*, approximately 0.15m thick. The layer beneath this floor was a deposit of gravel mixed with mortar, and was 0.25m thick. This lay above typical Walbrook silts. Set into the top of this layer was a group of large squared timbers of unknown length.
- G and H — Various layers of building material, with wall-plaster particularly prominent, lay above layers of gravel.

## INTERPRETATION

Unlike Trench A and Area B, Trenches C-H produced some evidence of habitation, especially in Trenches D, E and F. The timber structure seen in Trench C was clearly a drainage channel<sup>40</sup>. Running the length of the section of Trench D for almost 17m were floor and occupation deposits of various kinds, some of them recorded as “clay”, though they were most probably brick-earth. At the east end were a group of timbers and some ragstone, which may have been the supports for a wall, with floor surfaces running on either side. Layer (13), which appears stratigraphically above the timber group, was presumably the last floor level. Layers (3), (20) and (21), which were again most probably brick-earth rather than clay, represented the destruction of these sizeable structures by fire, with traces of tile, mortar and charcoal. Layer (2) contained medieval pottery. As there was no controlled excavation in this trench, there is no reliable dating evidence.



## ANGEL COURT, WALBROOK 1974

### TRENCH E: SOUTH SECTION

MENS. M9. DELT. TR.B. 1975.

Fig. 4. Angel Court: Trench E section

Trench F also showed signs of habitation, and a similar sequence to Trench D just to the south (Fig 1). One layer corresponds to layer (3) in Trench D, the destruction layer. This may also correspond to the layers which are mentioned in Trench E, layers (1) and (3). Again, as in Trench D, this destruction layer lies above the floor levels in Trench F, as one would expect, while D (12) (the gravel base for the floor) lines up with a similar layer in Trench F. The silt deposits and timbers in Trench F did not apparently continue in Trench D. Again there is a lack of dating material for the whole trench.

Trench E clearly showed a timber drainage gully of the Roman period, similar to the one observed in Trench C<sup>41</sup>. If, as seems likely, a tributary of the Walbrook ran through Area B, this gully would certainly have run directly into it. It may well have been a gutter for the large building shown in the section of Trench D. The planks in the bottom of the channel may either have been collapsed walls, similar to the ones still *in situ*, or may perhaps have been the remains of a timbered floor to the gully. Timbers (8) and (9) were most probably stakes for a building, the destruction debris from which may be layers (3) and (1). Between this layer in F and E (1) and (3) there is 1m difference in height above OD. This disparity is best explained by the likelihood of the ground sloping away towards the stream in the south-west corner of Area B.

The building debris mentioned in Trenches G and H may be the same as the “D3, E3 and 1, and the 2nd layer of F” layer mentioned above.

In Trenches C-H, evidence of houses was observed. As previously stated, there was no dating evidence, so that the only guide is by comparison with other, similar, deposits from the Walbrook valley. Even here the evidence is far from conclusive, but it does seem that private domestic occupation on a large scale, as suggested by Merrifield<sup>42</sup>, rather than the commercial and possibly votive activity that characterised the earlier period<sup>43</sup> — was more prevalent in the late 2nd and early 3rd centuries. One might, therefore, very tentatively suggest that the floors and occupation deposits noticed in Trenches D and F, and the drainage channels in Trenches E and C belong to this period.

#### IV DISCUSSION

The excavations at Angel Court established the course of a feeder of the main Walbrook stream, and showed, as did the only other known section across any part of the Walbrook<sup>44</sup>, that the stream was in existence for most of the Roman period. It confirmed that it was necessary torevet the banks of the stream, even though this was only a tributary, and also that the system of revetted and banked channels, which must have been a prominent feature of this area in the Roman period, eventually fell into neglect and decay, when the stream finally flooded. The revetting was undertaken more than once because of flooding and the consequent quantity of silt deposited. The excavations also produced a chronology for the silting up of the stream-bed, but whether this silting was due to the rise in the water-level of the Thames, causing the streams which ran into it to flow less rapidly, and thus deposit much of their water-borne silt, or whether it was caused by the deposition of refuse in the stream itself is still not completely clear. It seems likely that both factors contributed to this effect.

The observations in Trenches C-H produced some evidence for structures of a very substantial size (the 17m long section of Trench D picked up Roman floors along much of its length) and by comparison with other evidence from the Walbrook valley these floors at Angel Court have tentatively been dated to the early 3rd century. Thus the picture of the valley, as suggested by Merrifield<sup>45</sup> would appear to hold true, namely that in this later period the central area of the Roman city, despite its drainage problems, was an area of considerable building.

The work carried out by Professor Grimes at Bucklersbury House<sup>46</sup>, showed for the first time the true width of the stream and its sequence, continually recutting its bed in its accumulated silts, while the banks were simultaneously and artificially raised. This sequence was confirmed at Angel Court, though on a much smaller scale. The phasing of the build-up of silt in some parts of the Walbrook complex is now known, though the difficult question of what happened to the stream in the post-Roman period still remains. Merrifield's deductions from the numismatic evidence from the lower Walbrook<sup>47</sup> is only partly confirmed at Angel Court. Here, although the coins from the stream-bed (only five of them) stop around AD 150 (p. 57), as was the case further downstream<sup>48</sup>, the pottery from the stream-bed does continue until the middle or late 3rd century AD (see p. 52). The disparity between these dates is surprising, but this may be due to the excavation of layer (20) as one archaeological deposit. However, both layers (20b and 20c) are later than the date suggested either by the coins from these layers (p. 57) or those from Bucklersbury House<sup>49</sup>. Thus, although the processes of flooding, dumping and revetting are the same at both sites, the dating sequence appears to be different, and the stream at Angel Court was still canalized at a time when further downstream the main course of the Walbrook had already broken its banks.

Although the excavation at Angel Court answered some questions, it also posed several more. Perhaps the most important of these is to explain the great quantities of silt which accumulated in the later Roman period on the stream bank (p. 20) and how these deposits are connected, both in date and origin with those recorded at Bucklersbury House. Further fieldwork on sites on, or near the Walbrook will be of great value to help our understanding of this complex of streams, its growth and decay, and also the relationship between the stream and the Thames (p. 20). The Walbrook must take a prominent position in any discussion on the growth of Roman London, and although our knowledge is increasing, there still remains much that is uncertain.

## NOTES

1. R. Merrifield *The Roman City of London* (London 1965), map in end paper.
2. W. F. Grimes *The Excavation of Roman and Medieval London* (London 1968) 92-8.
3. R. Merrifield 'Coins of the Bed of the Walbrook and their Significance' *Antiq. J.* 42 (1962) 38-52.
4. Corporation of London Record Office, Hustings Roll 39 (118).
5. *Ibid.* 62(119).
6. *Ibid.* 68(24).
7. *Victoria County History (V.C.H.)* (London) i. 77-8.
8. R. Merrifield *The Roman City of London* (London 1965) gazetteer Nos. 133-45, 158-9.
9. *Ibid.* Nos. 139, 142, 158-9.
10. *Ibid.* W30, p. 86-9; *V.C.H.*, i. 77-8.
11. H. A. Harben *A dictionary of London* (London 1918) 421, 423.
12. Hustings Roll 124 (72).
13. *Cf. ibid.*; Parish Book of St. Stephen Coleman Street (Guildhall Library Ms 4456) p. 156.
14. *The Assize of nuisance 1301-1431* ed. H. M. Chew (London Record Society vol. 10) (London 1973) No. 570.
15. Hustings Roll 141 (20).
16. *Ibid.* 17 (47, 50).
17. *Ibid.* 54 (83).
18. *Ibid.* 55 (88).
19. *Ibid.* 82 (15).
20. *Ibid.* 141 (20).
21. *Ibid.* 219 (19).
22. *Ibid.*
23. *Ibid.* 221 (27). Other Hustings deeds relating to this small enclave of property are: 56 (47-8); 69 (56).
24. Grocers' Company, Register of . . . lands, rents and tenements (Guildhall Library Ms 11616) f. 14.
25. *Letters and papers of Henry VIII*, xvii (i). 527-8 (no. 16).
26. For the comic but chastening experience of John Stow's father see *Survey of London*, ed. C. L. Kingsford (Oxford 1908) (reprinted 1971) i. 179.
27. Parish Book of St. Stephen's p. 35.
28. Merrifield *op. cit.* (in note 1) 46 and Fig. 10. If the Angel Court dating is correct, it would fit well with Dunning's distribution map of burnt samian from the Hadrianic period.
29. *Ibid.* 93.
30. *Ibid.* 87.
31. *Ibid.* and G. Willcox 'Problems and Possible Conclusions . . . the Thames in the London Region' *Trans. London Middlesex Archaeol. Soc.* 26 (1975) 285 ff.
32. E.g. Museum of London Accession Nos. 20637; 20639.
33. Merrifield *op. cit.* (in Note 1) map and gazetteer.
34. Grimes *op. cit.* (in Note 2) 93.
35. Merrifield *op. cit.* (in Note 1) 62-63 and Grimes *op. cit.* (in Note 2) 98 ff.
36. *Royal Commission for Historical Monuments London III Roman* (1928) 87-89. See also Merrifield *op. cit.* (in Note 1) 89 and Gazetteer No. W30.
37. Merrifield *op. cit.* (in Note 1) map.
38. *Ibid.* 94.
39. *Ibid.* 85. Unlike the stream at Angel Court, the main stream does appear to have survived into the Middle Ages.
40. Cf. W. F. Grimes 'Excavations in the City of London' in *Recent Archaeological Excavations in Britain* ed. R. L. S. Bruce-Mitford (1956) 122. Also see Grimes *op. cit.* (in Note 2) 96 and Pl. 31.
41. *Ibid.*
42. Merrifield *op. cit.* (in Note 1) 47, 48 and 94.
43. *Ibid.* 47 and 93.
44. Grimes *op. cit.* (in Note 2) Fig. 23 a and b.
45. Merrifield *op. cit.* (in Note 1) 47, 48 and 94.
46. Grimes *op. cit.* (in Note 2) 92-117.
47. Merrifield *op. cit.* (in Note 3).
48. *Ibid.*
49. *Ibid.*

## ACKNOWLEDGEMENTS

The author would like to thank Jamie Muir for his valuable suggestions during the preparation of the report, and Ralph Merrifield, who provided photographs for study from his own collection. Finally, a word of thanks to those members of the Departments of Urban Archaeology and Roman and Medieval Antiquities in the Museum of London, who gave freely of their time and good advice and to Diana Twells of the D.U.A. who typed the manuscript.

V THE FINDS

BY MICHAEL RHODES

With contributions by Hugh Chapman, Juliet Clutton-Brock and Phillip Armitage, Brian Hartley and Brenda Dickinson, Frank Jenkins, Joan Liversidge, Ralph Merrifield, Clive Orton and John Thornton, and notes supplied by Leo Biek, Geoff Dannell, Francis Dimes, John Evans, J. S. Gask, D. B. Harden, Mark Hassall, M. R. Hull, David Sherlock, the late John Waterer, A. C. Wheeler and D. F. Williams.

In common with other sites near the course of the Walbrook stream, the Angel Court excavations produced an abundance of Roman finds. They were examined as dating evidence, as indications of how the site was used and for their intrinsic interest. The preservation of most objects was extremely good and both wood and leather items, including a total of 33 leather shoes, were found on the lower, waterlogged deposits of Trench A and in the builders' trenches of Area B.

The dating rests almost entirely upon the pottery and coins. An examination of these clearly indicated that most groups from the observation of builders' trenches (*i.e.*, Area B and Trenches C to H) are heavily contaminated (and, thus, not useable for dating). It was noted, however, that comparatively few finds are of 1st century date indicating little use of the area until the 2nd century. Some of these groups contain only Roman material and account of this has been taken in the interpretation of the site.

Whilst the controlled excavation of Trench A produced mainly well-stratified groups, many of the Roman finds are not closely datable owing to a high proportion of residual material in the Roman strata. For this reason where an object has come from a layer dated, for example, *c.* AD 140-160, the phrase "not later than *c.* AD 160" has been used to summarize the dating evidence. The medieval layers in this trench produced far less residual material and the objects contained within them are assumed to have been discarded or lost at roughly the same date as their deposition.

Most finds from Trench A have been studied. The principal exceptions are the many small fragments of Roman brick, tile and building stone, together with some small quantities of oyster shells from Layers 3, 4 and 9. Only those finds of intrinsic interest have been examined from the other Areas.

Unfortunately a changing pattern of site-use cannot be inferred from the finds. Fragments of wall plaster in the presence of burnt clay (see Liversidge pp. 74-79) indicate there were substantial buildings in the area before *c.* AD 120-160 and many small, personal objects of female use (*e.g.*, Nos. 426, 427, 430, 435) may also indicate domestic utilisation of the area. The ceramic figurines (Nos. 403 and 404), the face-mask jars (Nos. 95, 113, 117, 382-3) and triple ring vase (No. 384) possibly all have a religious significance, but their presence by no means shows the area had a specifically religious function since such objects could equally have been used in, for example, a household shrine. The military presence in London is illustrated by the iron socketed ballista (No. 447) and a scabbard slide (No. 479). In addition four other objects (Nos. 481, 487, 488 and 527) might conceivably be from military tents. Roman industry is represented by copper scrap (Nos. 432 and 434), unfinished iron objects (Nos. 439 and 440, possibly also No. 450 and some of the Type 2 nails) and a large quantity of horn cores from Layer 9 (see Clutton-Brock and Armitage, pp. 90-93). Medieval horn cores, also indicative of horn-working, were found in Layer 5 (see p. 95) and Layer 2 produced four notable 14th-15th century crucibles (Nos. 601-4). The other medieval finds are in no way remarkable.

After an explanation of the methods used to study the pottery, the reports are grouped in three main sections dealing with the Roman, Saxon and Medieval periods. The bone reports are added as appendices.

Each individually-described object and pot-form is given a Catalogue Number and these are also used for the illustrations. A Museum of London group-accession number, prefixed by the letters E.R. is given with the Layer of Context Number of each group of finds. Accession Numbers of individual finds are given in brackets. These are in two parts, the first half being the E.R. number of the group to which each belongs. Where finds are catalogued by layer, a probable date for the deposit is given in italics at the top of the group.

(All the finds, with the exception of the animal remains (see p. 88) are now in the Museum of London).

## ROMAN

### INTRODUCTION TO THE POTTERY REPORTS

BY CLIVE ORTON

Apart from the samian, which has been treated separately, the pottery has been studied, described and illustrated according to a code of practice explained below. For ease of reference, the report is, however, split into the major historic periods, as are the other finds.

#### CONVENTIONS

Fabric description is based on visual and tactile examination of surfaces and fresh breaks, both at 'life-size' and 20x (area) magnification. A magnet is used to identify inclusions of iron ore and dilute hydrochloric acid to identify limestone, shell, etc. (see below). The following characteristics are recorded: colour, hardness, feel, visual texture, inclusions, surface (treatment, slip and glaze, if any).

(i) *colour*: Munsell colour names are used. The colour of the core is always given, followed by the colour of the margin(s) (if different from the core) and the surface(s) (if different from the margins). Mixed colours are indicated by a solidus (/) — e.g., 'red/brown', while partial colours (e.g., a core that fades out in places) are enclosed in brackets — e.g., '(grey) core, red margins' means that the grey core fades out in places, leaving an entirely red section.

(ii) *hardness*: terms used are:

- soft: can be scratched with a fingernail,
- hard: cannot be scratched with a fingernail,
- very hard: cannot be scratched with a knife,
- fairly hard: fabrics on the hard-soft border,

and refer to the section — the surfaces are described separately if necessary.

(iii) *feel*: basic terms used are:

- harsh: feels abrasive to the finger,
- rough: irregularities can be felt,
- smooth: irregularities cannot be felt,

two other terms which can be used are soapy and powdery. All refer to a surface in its basic state (e.g., without burnishing, which is described separately).

(iv) *visual texture*: terms used to describe a freshly broken section are:

- smooth: flat or slightly curved; no visible irregularities
- finely irregular: small, closely-spaced irregularities
- irregular: larger, more widely-spaced irregularities
- hackly: large and generally angular irregularities
- laminated: 'stepped' effect.

Descriptions are as seen by the unaided eye: for smooth fabrics, it is useful to add the texture as seen at 20x magnification (e.g., 'smooth; irregular under lens').

(iv) *inclusions*: identification is based on Peacock's algorithm (Peacock, 1975). Colour is also given when necessary — Munsell colour names are used, plus the terms clear (i.e., transparent, no intrinsic colour) and colourless (transparent or translucent, taking up colour of clay matrix to some extent).

Frequency of inclusions is indicated on a three point scale — abundant, moderate or sparse.

Size of inclusions: the terms used are based on the U.S.D.A. standard sizes for sand grains (Limbrely, 1975, 260) and are as follows:

very fine: up to 0.1mm

fine: 0.1 to 0.25mm

medium: 0.25 to 0.5mm

coarse: 0.5 to 1.0mm

very coarse: larger than 1.0mm

Coarser inclusions are given to the nearest mm. The predominant size range is given: ranges in which lesser proportions are present are shown in brackets.

Sorting: indicates the homogeneity (in size) of the inclusions. Well-sorted grains are all about the same size, ill-assorted grains are not.

Rounding: terms used are:

angular: convex shape, sharp corners

sub-angular: convex shape, rounded-off corners

rounded: convex shape, no corners

irregular: convex/concave shape

flat: two-dimensional shape.

(vi) *surface treatment*: terms used are:

wiped, smoothed, burnished, knife-trimmed, fingered, turning marks.

(vii) *glaze*: the extent, colour and finish are described.

Terms used for extent are: all-over, areas, zones (i.e., areas with horizontal upper and lower edges), patches, streaks, runs, dribbles, spots.

Colour: the *apparent* colour is given (i.e., as actually seen), except that obviously clear glazes are described as clear. Colourants in the glaze, and effects of inclusions in the clay, are described where possible.

Finish as seen at 20x is preferred to an unaided description. Terms in use are: lustrous, glossy, dull, sparse, pitted, crazed, smoothed, thick, thin: others may be needed.

(viii) *slip*: the convention is used that large zones of slip are a fabric characteristic but details are dealt with as decoration. Terms used are:

(extent): zone (and location on vessel); see decoration.

(finish): continuous, sparse, smooth, lumpy, thick, thin, micaceous, iron-rich.

Each recognised fabric is given a fabric code, which is used for sorting and cataloguing sherds. Reference specimens are kept in the Fabric Type Series and reference definitions in the Fabric Description Index (Rhodes, 1977). The pottery is recorded in Pottery Summary Sheets, on which it is listed by context, fabric code and vessel form. Quantities are recorded in terms of number of sherds, rim- and base-equivalents (Orton, 1975), number of vessels (implicitly, and as far as it is possible to do so) and (but not for this site) weight. Internal and external parallels for vessel form and decoration type are also given, while type examples of both fabric and form are indicated. Drawings of type examples are kept in a Pattern Book. The record can be sorted to provide statistical and other information as required. The basic but unpublished record thus consists of (i) Fabric Descriptions; drawings of forms and decoration (common to all sites) and (ii) Pottery Summary Sheets (unique to each site).

Following the recommendations of the Ancient Monuments Board Committee for Rescue Archaeology (1975), this record is seen as the *Level 3 Report*. The *Level 4 Report* (published here) contains (i) a description of the methods employed (see above), (ii) generalised descriptions of fabric groups, which can correspond to other known wares or homogeneous groupings of fabrics of unknown source, known collectively as Common Names. It is these groupings, and not the individual fabrics, which form the basis of the Level 4 Report, (iii) specific descriptions of particularly interesting fabrics, fabric groups, (iv) pottery illustrations and table relating them to the fabric descriptions ( (ii) above), (v) discussion of dating and sources of pottery, and other points of interest. In general, there are no individual descriptions of illustrated sherds, since illustrations can easily be linked to the general descriptions, which contain at least as much information about individual sherds as conventional pottery descriptions. Descriptions of individual sherds are, however, available on request, as is a more detailed discussion of the methods employed and their problems.

Pottery was recovered from this site under a variety of conditions. The level of detail of the record is intended to match the likely reliability of the pottery as evidence. Even in the most carefully excavated contexts, the problem of residuality remains. In this report, if a group of pottery from a context is published, then it is *all* published (except for Roman pottery from medieval contexts) and questions of residuality discussed. It is impossible at this stage to come to conclusions about the life-spans of fabrics or forms.

## ROMAN POTTERY (EXCLUDING SAMIAN)

BY CLIVE ORTON

The main groups of Roman pottery are from Trench A, Layers 16 (E.R. 1587), 18 (E.R. 1588-90), 20 (E.R. 1592), 9 (E.R. 1582) and 7 (E.R. 1581). There are smaller amounts from Trench A, Layers 28 (E.R. 1596), 22 (E.R. 1593), 32 (E.R. 1597), 26 (E.R. 1595), 15 (E.R. 1586), 19 (E.R. 1591), 13 (E.R. 1585) and 11 (E.R. 1583). Only the former groups are large enough for a statistical treatment, and are referred to as the Statistical Sequence. The problem of Layer 20, which is really three layers but was excavated as one, is discussed below. To cause the least confusion, the place of Layer 20 in the sequence is that of its *highest* constituent layer.

Sherds of particular interest from the other trenches are described and discussed after the discussion of the pottery from Trench A.

### GENERAL DESCRIPTIONS OF MAIN FABRIC RANGES

The bulk (nearly 80%) of the pottery belongs to relatively few main classes: the rest belong to a wide range of fabrics. The main ranges are:

#### AMPHORAE

Three basic divisions are recognised (i) 'pink' fabrics: hard; smooth fracture: pink or reddish yellow section; moderate inclusions of fine white mica, sparse fine to very fine quartz and iron ore; smooth surfaces; thin-walled; turning marks on interior (ii) 'brown' and 'grey' fabrics in wide range of colour, nature and frequency and size of inclusions (which may include quartz, limestone iron ore, black and white mica and, less frequently, feldspar, pink 'volcanic' and crystalline inclusions), (iii) 'red' fabrics, with a similar variety of inclusions, often slipped. Of these, (ii) and (iii) are distinguished from (i) by the iron rich (and often lime-rich) nature of the clay itself. The colour of (i) and (ii) is often altered by contact with the soil; (iii) does not seem to be so vulnerable. Where forms are identifiable, sherds of (ii) belong to globular forms (e.g. Dressel 20) and are probably S. Spanish (e.g., No. 147), while those of (iii) seem to have more cylindrical shapes and may be Italian (e.g., No. 1). (See Callender 1965, 45-6).

#### BLACK-BURNISHED WARE, TYPE 1 (BB1)

The definition follows Farrar's (1973, 84). Hard black or dark grey fabric, occasionally with brown margins; hackly fractures and 'granular' appearance. Abundant coarse white and colourless quartz, moderate coarse clear quartz, sparse very fine black iron ore and sometimes sparse limestone or red iron ore inclusions. No true turning marks, but fingering impressions and wipe-marks, indicating that the vessels are handmade. Surfaces are generally black; burnished with short strokes, giving a 'facetted' appearance. The burnishing covers the exterior of cooking-pots (except for a reserved zone below the shoulder) and interior of rim, down to junction with shoulder; interiors and rims of bowls and dishes. There is scribed decoration — lattices on the reserved zone of cooking-pots (but overlapping the burnishing), intersecting arcs ('arcades') on the exteriors of bowls and dishes, and loops on the underside of dishes. A minority have a patchy slip.

The most common vessel forms are cooking-pots (40%) (Nos. 64-6, 151-7, 172-3, 175-6, of which No. 64 has a beaded rim), flanged bowls (25%) (Nos. 68, 159-64, 333-5), and dishes with simple rims (20%) (Nos. 69, 167-70, 336). Other forms represented are handled jars (or jar-like beakers) (Nos. 158, 332), bowls and dishes with incipient flanges (Nos. 67, 165-6). *Note*: the following terms are used to describe lattice decoration:

acute (lines nearer to vertical than to horizontal)

obtuse (lines nearer to horizontal than vertical)

oblique (lines in one direction nearer to horizontal, others nearer to vertical)

right (lines at equal angles to vertical and horizontal).

The source of BB1 has been discussed by Farrar (1973, 86-97), where he argues for a primary production centre in Dorset.

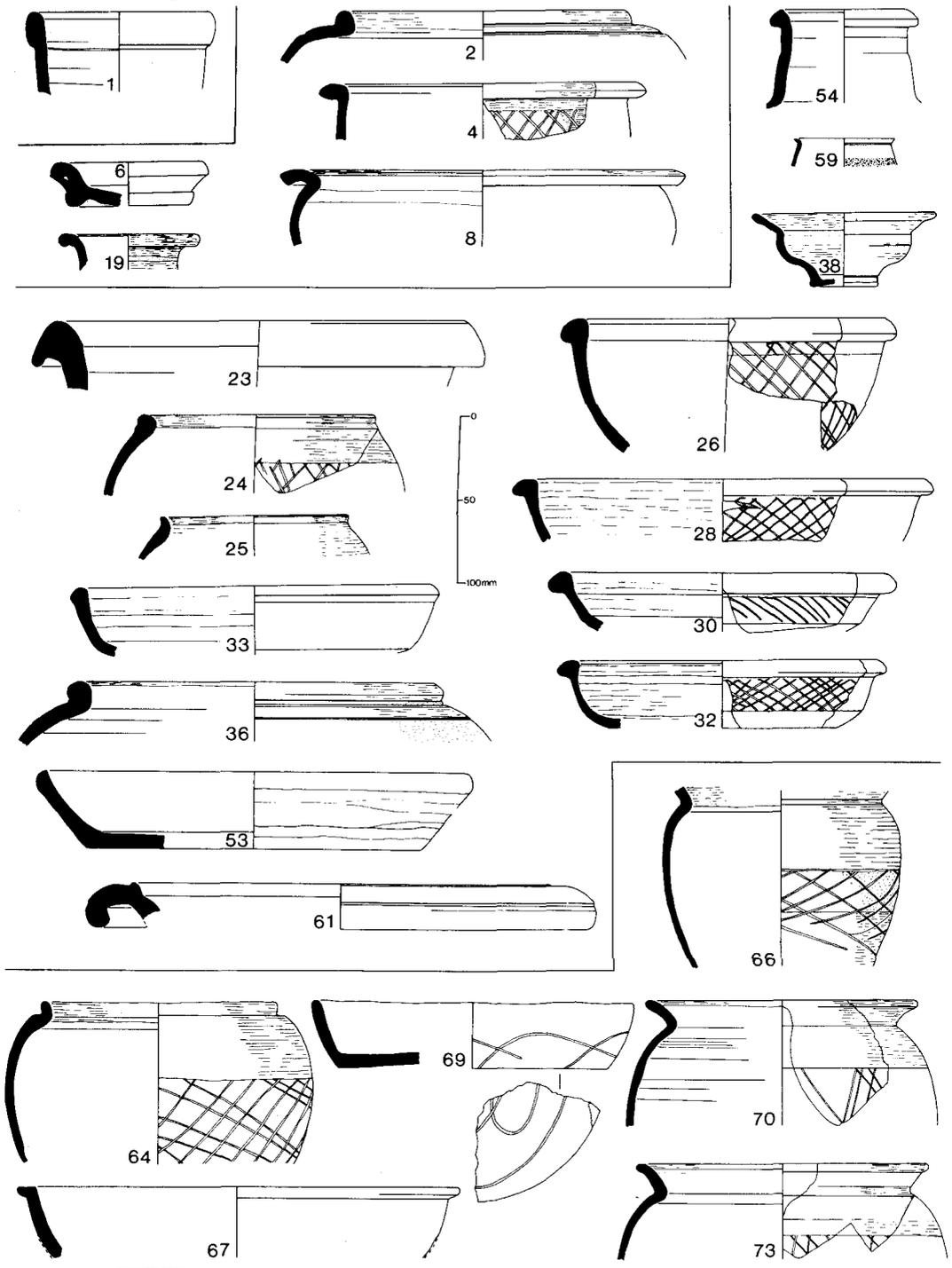


Fig. 5. Angel Court: Roman pottery Nos. 1 — 73 (¼)

## BLACK-BURNISHED WARE, TYPE 2 (BB2)

There are problems with this definition, as the term can be used to describe both a general stylistic/decorative tradition and a specific ware. An attempt is made here to define it in the narrow sense, again following Farrar (1973, 84). Even so, some vessels may not fall strictly into the BB2 category, while others in BB2 style will be found elsewhere (e.g. under Alice Holt/Farnham). The fabric is similar to BB1 but the quartz inclusions are finer (up to medium size), while the black iron ore can be coarser (up to fine size). Core colour is grey or dark grey rather than black, and the margins are often 'brown' (i.e., hue 5YR-10YR, value 5 or less, chroma 3 or more). Turning marks are apparent, particularly on the interior of cooking-pots, and all vessels are wheel-thrown. Burnishing is more even, often of a 'silky' quality, and is found on the whole exterior of cooking pots (except for central reserved zone), but extends only a short way (*c.* 5mm) over rim on to interior. Slip, generally black, is more common than on BB1. Scribed lattice decoration is found on bowls and dishes as well as cooking-pots, but the arcade decoration is not found.

The most common vessel forms are bowls and/or dishes with moulded rims (70%) (Nos. 4, 26-32, 82-84, 88-90) and cooking pots (25%) (Nos. 24-25, 70, 73-75, 77). There is also one dish with a plain rim (No. 33).

Farrar argues (1973, 97-102) for a decentralised production in the Thames Estuary/Colchester area. Possible kiln sites suggested by him include Cooling, Chalk, Joyden's Wood and Greenhithe to the south of the Estuary, and Mucking and Colchester to the north.

## ALICE HOLT/FARNHAM WARES

These fabrics are hard with an irregular or finely irregular fracture, sometimes tending to laminar. The usual colouring is grey or light grey with darker grey surfaces, but dark grey margins are fairly common and brownish margins can occur. Surfaces can be 'silvery' — this is probably a result of the waterlogged conditions in which the sherds were found. A minority have a uniform grey fabric. The characteristic inclusions are abundant clear and colourless quartz, up to fine size (with a minority of medium-sized grains in some bowls and dishes), sparse very fine rounded black iron ore and sparse very fine white mica (up to moderate frequency in some examples). There is a tendency for the quartz grains to fall out of the fracture, leaving a pitted appearance. A minority of sherds have rather less abundant fine quartz, usually associated with a light grey core and darker margins. They are here called Alice Holt 2. Slip — usually grey but sometimes white or black — is fairly common but in a minority. Burnishing is very common, and can lead to a slip-like effect on the surface. The term slip is restricted to cases where there are clear indications of a thin layer of finer clay on the surface. All versions are wheel-thrown.

A wide range of forms is represented: cooking pots (40%) (Nos. 72, 76, 78, 174, 207-8, 218, 223, 225, 227, 346-7), flanged bowls (20%) (Nos. 181-2, 184, 211, 216-7, 219, 221, 338, 345, 349-50), bowls/dishes with incipient flange (15%) (Nos. 185-9, 353), flagons (15%) (No. 204), bowls/dishes with moulded rim (5%) (Nos. 85/178, 215, 226), jars (5%) (197, 210, 224, 348, 351) and one simple dish (No. 194). Those in the minority fabric (see above) are Nos. 210-1, 223-4, 226, 345, 351, 353.

Types of decoration represented include: scribed-lattice (*cf.* No. 70), scribed arcade (e.g., No. 181), scribing on interior of bowls (No. 182), incised wavy lines (Nos. 208, 210), horizontal grooving (Nos. 215, 219), scribed horizontal and wavy lines (No. 225 — not illustrated).

These fabrics have been paralleled in general terms with those produced in the Alice Holt/Farnham complex (see Wade and Lowther, 1949; Clark, 1950; Bennett, *et. al.*, 1963 and Day and Dormer, 1971), but attributions to individual kilns have not been attempted.

## HIGHGATE AND SIMILAR WARES

These fabrics are hard with a fairly smooth fracture, appearing irregular or finely irregular at 20x. The usual colour is dark grey throughout, but the range is from grey to very dark grey; brown cores also occur, sometimes partially — they therefore probably indicate differences in firing conditions. The inclusions are abundant very fine colourless quartz, often ranging up to fine size, sparse fine white mica and very fine black iron ore. Burnishing somewhere on the vessel is almost universal, and slip, usually dark grey, is also very common. About half of the slipped sherds have a metallic appearance, sometimes called 'graphite-surfaced', but more likely to be a product of the waterlogged conditions. All fabrics are wheel-thrown.

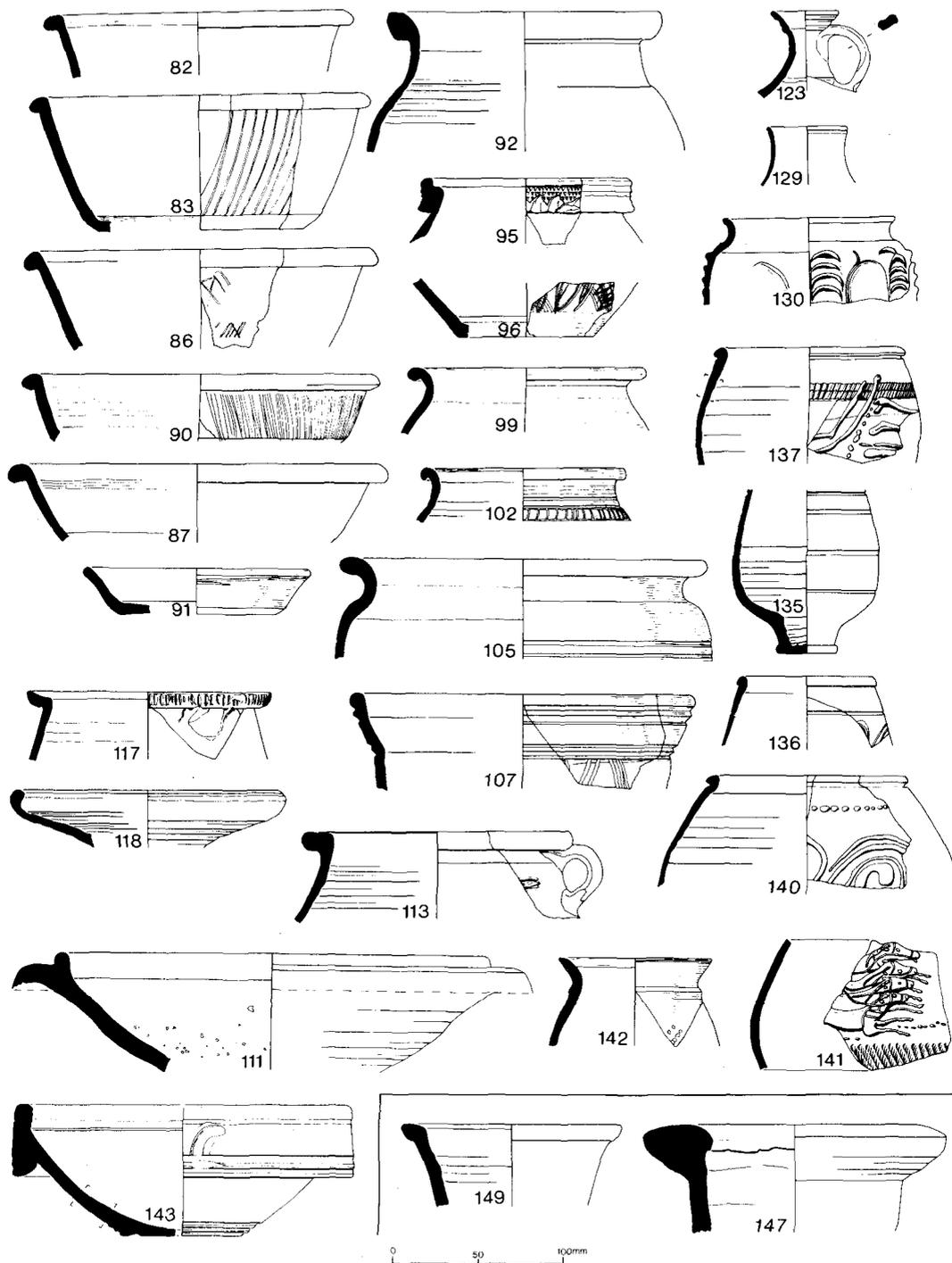


Fig 6. Angel Court: Roman pottery Nos. 82-149 (1/4)

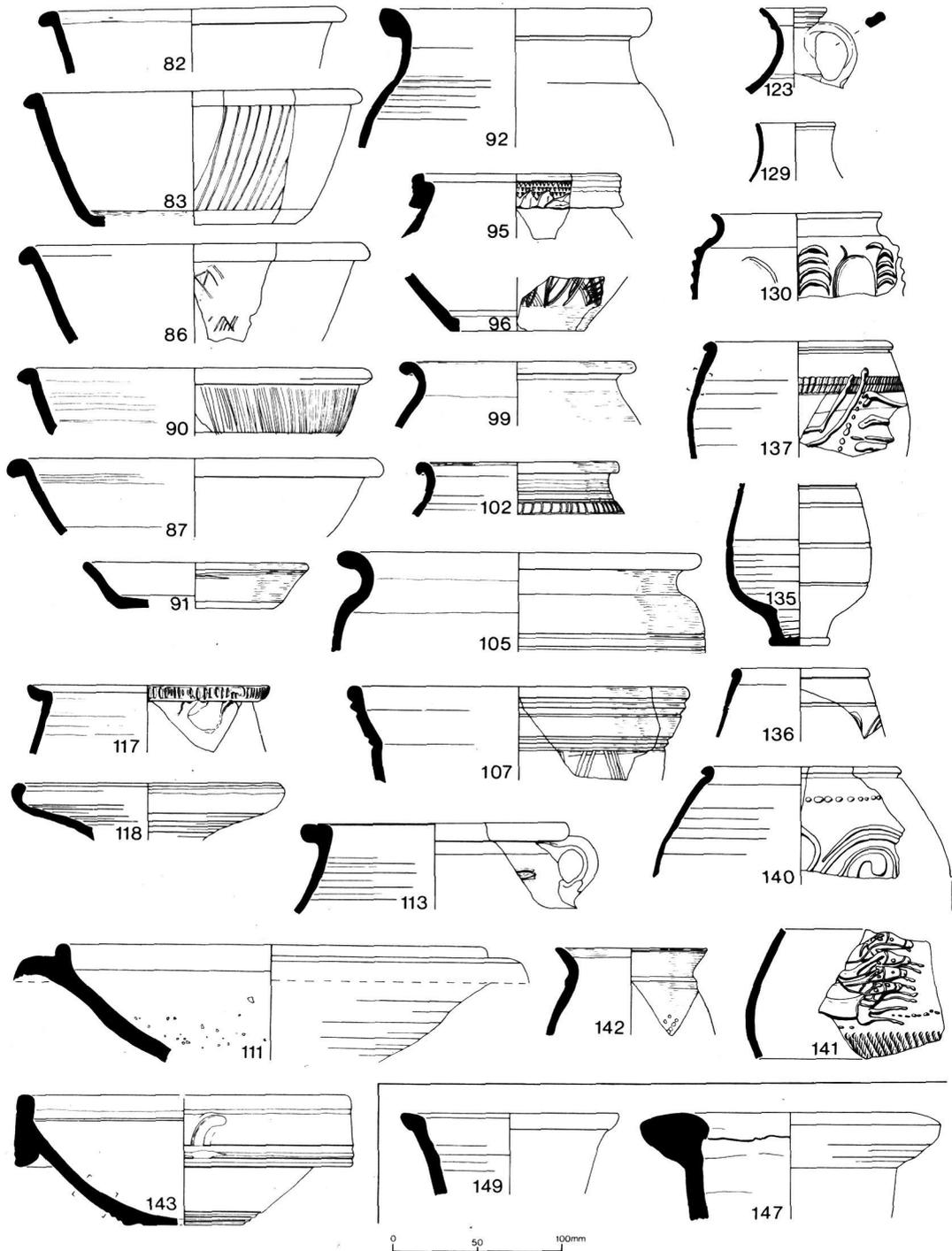


Fig 6. Angel Court: Roman pottery Nos. 82-149 (1/4)

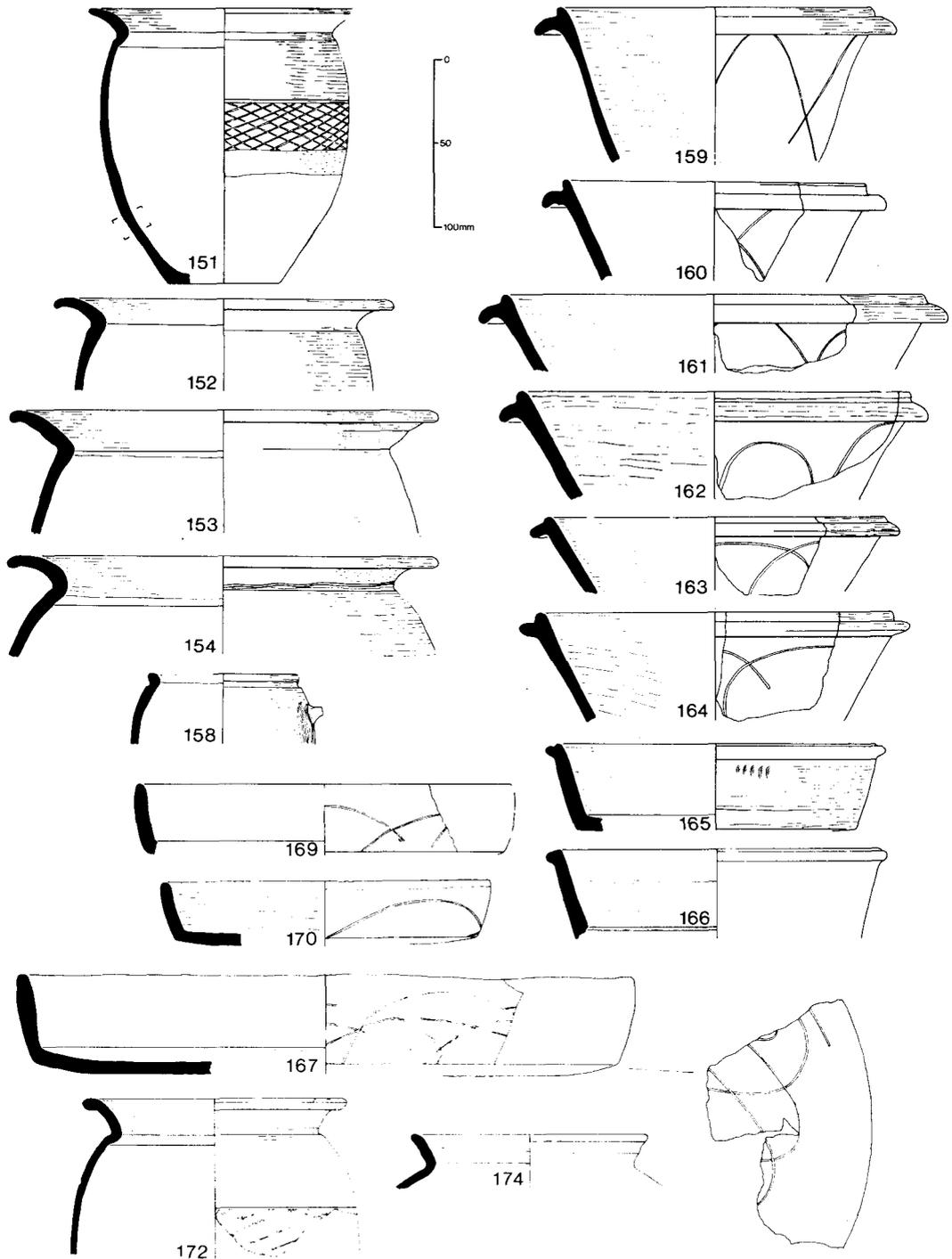


Fig. 7. Angel Court: Roman pottery Nos. 151 — 174 (1/4)

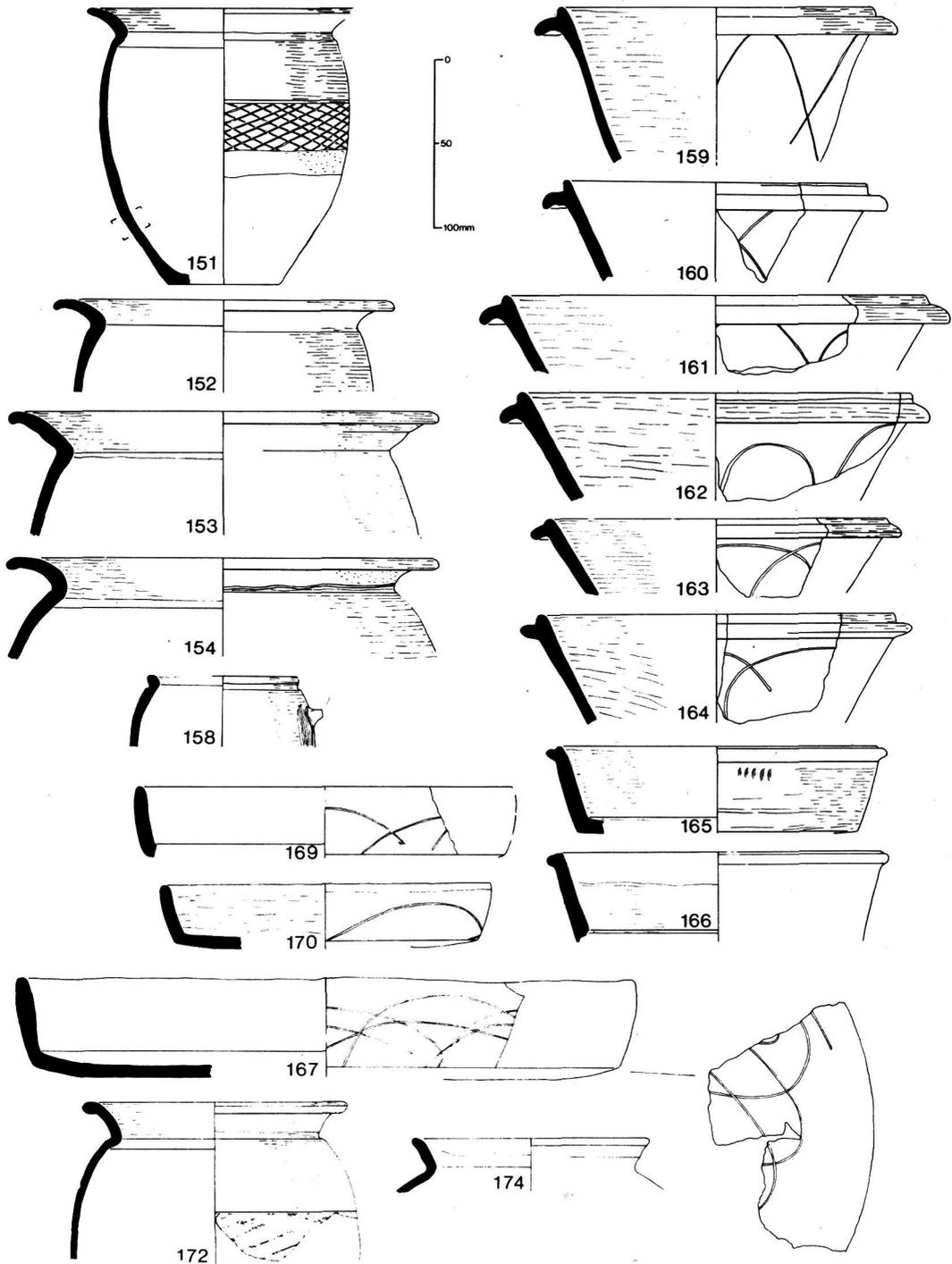


Fig. 7. Angel Court: Roman pottery Nos. 151 — 174 (¼)

Only three vessel forms are common in these fabrics — jars (40%) (Nos. 42-3, 49, 102-3, 203), jar-like beakers (20%) (Nos. 39-41, 104), and bowls (25%) (Nos. 8, 38). The other (unburnished) sherds seem to be from lids (Nos. 44 and possibly 45).

The most common type of decoration is panels of dots *en barbotine* (not in any illustrated sherds — cf. No. 20), sometimes in association with cordons.

These fabrics appear similar to the products of phases III and IV at Highgate (Brown and Sheldon, 1974) and the forms are generally similar. However, sherds from Southwark which are all visually 'Highgate' have been divided by McKenna (*pers. comm.*) into distinct groups on the basis of microscopic characteristics. Because of this and the possible itinerant lifestyle of the 'Highgate' potters, it is safer to talk of a 'Highgate tradition' (SLAEC, 1978).

#### OTHER GREY SANDY FABRICS

Since the sources of these fabrics have not been identified, they have been divided arbitrarily into coarse, medium, fine and very fine sandy fabric groups.

##### (a) *coarse*

A wide range of fabrics, mostly sandy with sparse black iron ore and white mica, but some have moderate iron ore or mica (see also 'miscellaneous inclusions'). Some are wheel-thrown and some hand-made.

##### (b) *medium*

There is one distinctive range of fabrics, which resemble BB2 (q.v.), and which is here given the temporary name Roman Grey Medium Sandy 1. They differ from BB2 in representing forms not generally found in BB2 — jars, including beaded-rim (Nos. 5, 92-7, 195), lids (Nos. 7, 35), bowls/dishes (Nos. 34, 98, 146) and a lamp (No. 6, see Coarse-ware Ceramic Lamps). The possibility that they represent the earlier products of the kilns that later produced BB2 is an interesting line of thought.

No pattern or grouping is obviously apparent in the other fabrics.

A wide range of forms is represented: jars (Nos. 36, 99-100, 196, 199-200, 344), cooking-pots (Nos. 71, 79-81, 101, 177, 198), flanged bowls (Nos. 179-80, 339-40, 343), bowls with moulded rims (Nos. 86-7), dishes with incipient flange (Nos. 190, 202, 342) and dishes with simple rims (Nos. 91, 191, 193).

##### (c) *fine and very fine*

A range of grey fine- and very fine-sandy fabrics, some similar to Highgate and some to the finer Alice Holt/Farnham fabrics and all wheel-thrown.

Small quantities of a wide range of forms are represented: flagons (Nos. 212, 228), beakers (Nos. 205-6), jars (Nos. 105, 209, 213-4, 225), cooking-pot (No. 106), bowl (No. 222), dish (No. 220), lids (Nos. 46-7).

*Note:* as these "other" categories do not form homogeneous fabric groups, no percentage figures for each form have been given.

#### PORTCHESTER 'D' WARE

These fabrics are hard but rather friable, with an irregular fracture. There are three main colour variants: (i) red to yellowish red section, with grey core in thicker parts, (ii) reddish yellow, sometimes with light or very pale brown margins, (iii) light grey core, very pale brown margins, core or margins fading out in places. All have abundant fine to coarse inclusions — mostly clear, colourless or reddish quartz — with sparse medium red iron ore, very fine black iron ore, and white mica. Surfaces are hard, rough and feel "sandy", but (i) has a very pale brown slip covering the inclusions on both surfaces. All versions are wheel-thrown.

The "standard" vessel form is a cooking-pot with everted (often undercut) rim (Nos. 108, 229-33, 354-5): the only other form represented here is the flanged bowl (No. 234). The only type of decoration is an extensive zone of horizontal rilling (e.g., No. 229).

This ware was called Porchester 'D' by Fulford (1975a, 299). The most likely sources are the Overwey kilns (Clark, 1950), but the attribution is not yet certain.

#### BROCKLEY HILL AND SIMILAR WARES

These fabrics too are hard but rather friable with a finely irregular fracture. At 20x magnification the irregularities appear lens shaped, aligned in the direction of turning of the vessel. The colour is generally a rather "muddy" — very pale brown and/or light grey, but reddish yellow cores or margins

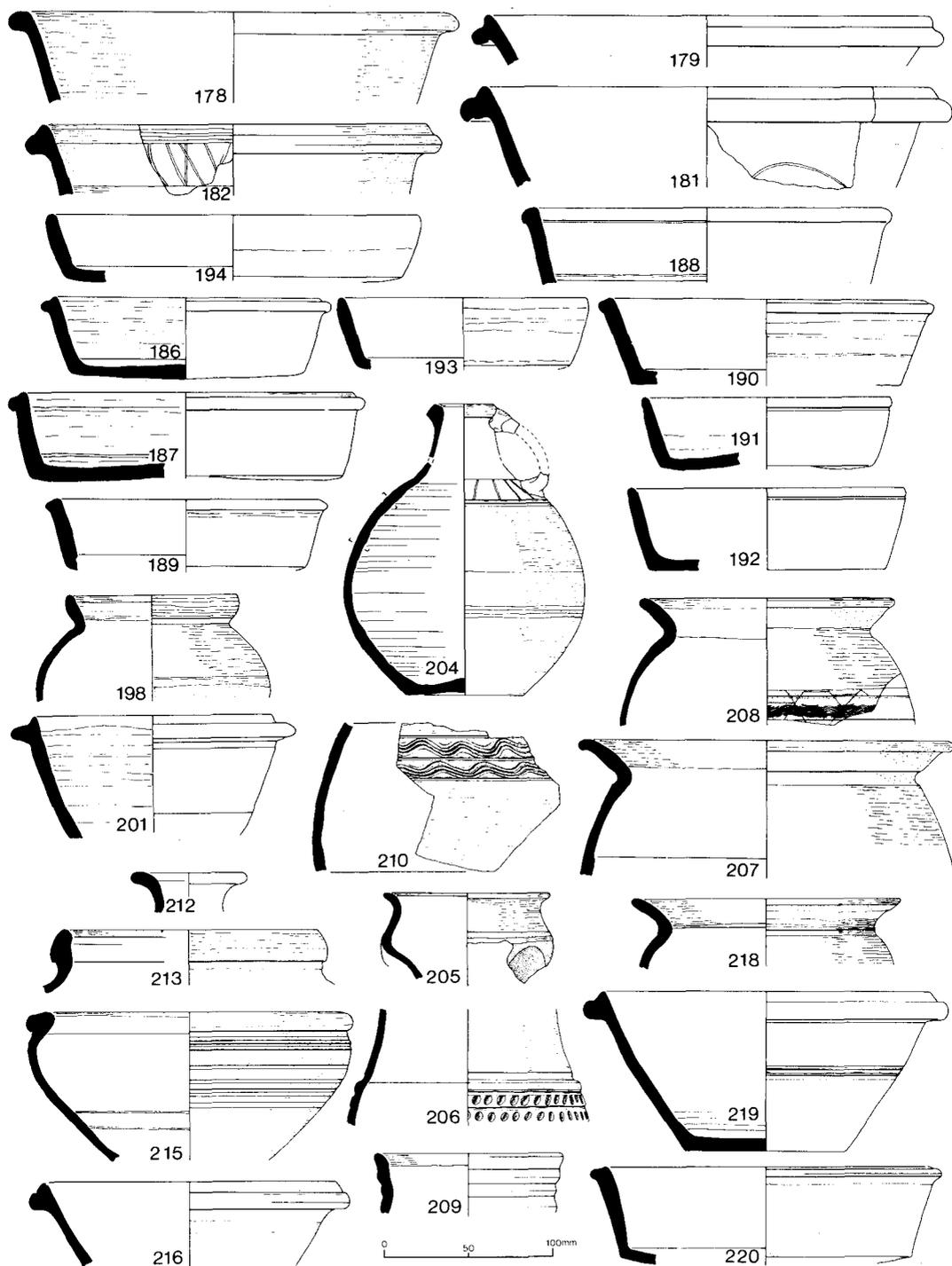


Fig. 8. Angel Court: Roman pottery Nos. 178 — 220 (¼)

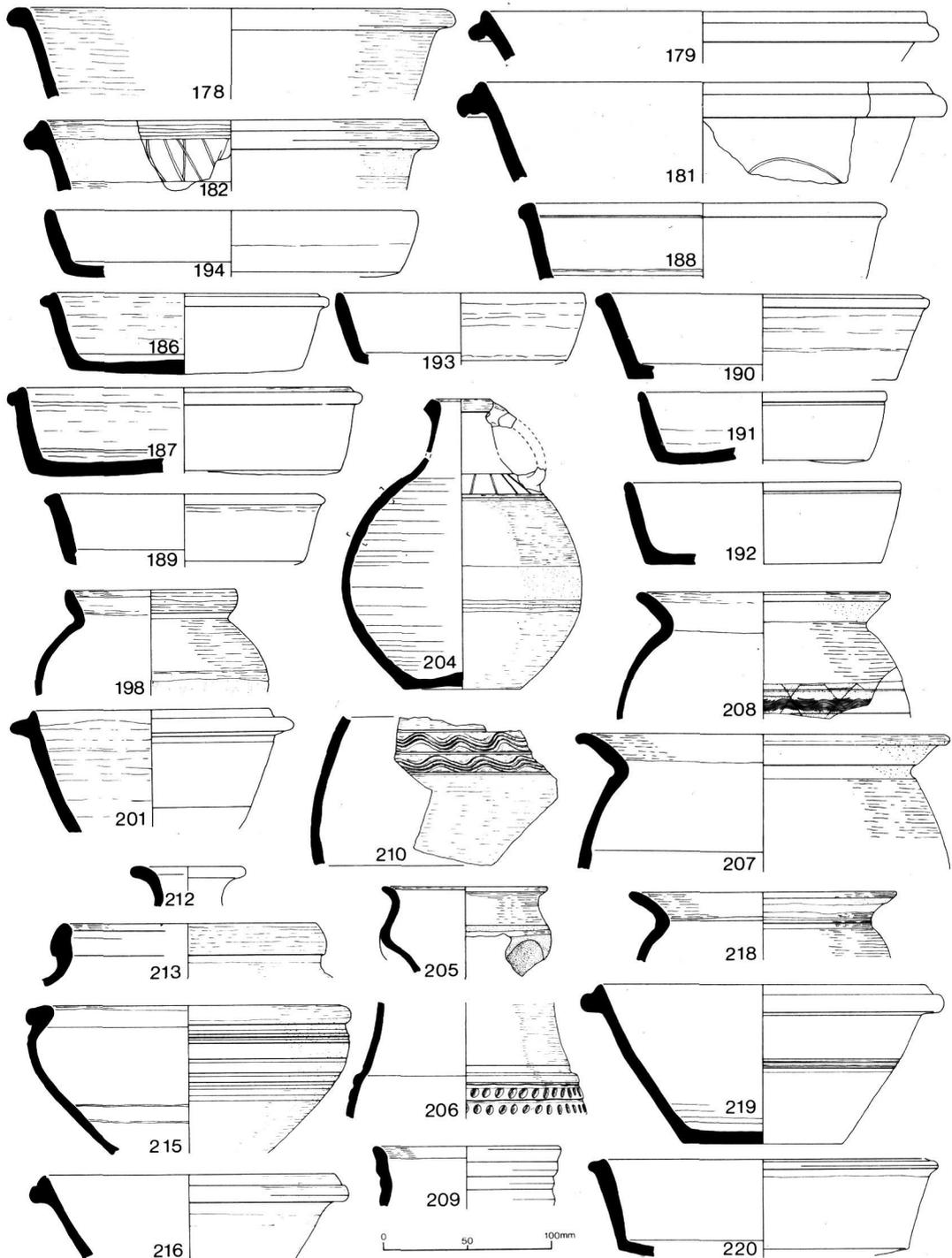


Fig. 8. Angel Court: Roman pottery Nos. 178 — 220 (¼)

occur, and even red cores on occasions. The surfaces are basically the same colour, but patches of grey, brown or yellow occur frequently — probably firing effects rather than a slip or colour-wash. Inclusions are abundant fine to medium colourless and white quartz, moderate clear quartz, sparse coarse red iron ore and occasional very fine black iron ore and white mica. The mortaria tend to have rather coarser (i.e., medium to coarse) quartz, and a small minority are slightly finer. Surfaces are hard and rough, sometimes with evidence of trimming, smoothing or slight burnishing on the exterior. All are wheel-thrown.

The most common vessels form is the flagon (70%) (Nos. 9-10, 54-5, 109-10, 237); others are mortaria (15%) (Nos. 14, 51, 111), reeded-rim bowl (Nos. 11-13) and simple dish (No. 53). The trituration grits in the mortaria are of white, red or black flint. This fabric and the basic forms of flagon, mortarium and reeded-rim bowl can all be paralleled at Brockley Hill (Castle and Warbis, 1974, Richardson, 1948, and others), but other kilns in the area, e.g., Radlett, Brickett Wood, (Verulamium Museum, 1976), cannot be completely ruled out.

#### OXFORD WHITE WARE

A hard fabric with finely irregular fracture and a slightly rough feel. The colour is generally very pale brown to light grey, sometimes with reddish yellow surface patches; a minority have reddish yellow or light red core. Inclusions are moderate very fine colourless quartz (with occasional fine and medium grains), sparse medium red iron ore (and possibly grog), very fine black iron ore and white mica.

All the vessels represented appear to be mortaria (Nos. 239-41, 356-7). The trituration grits consist of colourless, red and grey rounded quartzite. All forms are of the angular-flanged type produced at the Churchill Hospital kilns north of Oxford (Young, 1973, 109).

#### MUCHHADHAM WARE

A rather varied range of fabrics, which are nevertheless very similar visually, especially when examined microscopically (20x). All are hard with a finely irregular fracture and slightly rough feel (except where burnished). There are four broad groupings:

(i) with abundant very fine colourless quartz (some fine grains), moderate white quartz and (rounded) black iron ore, sparse white mica and occasionally red grog inclusions. Generally red throughout, sometimes with grey core or interior margin. Probably slipped and certainly burnished (it can be difficult to distinguish between slip and the effect of burnishing) on the exterior of closed vessels and both surfaces of open vessels. Burnishing is usually horizontal, except on the flagon necks where it is vertical.

The forms represented are flagon (No. 243), jars (Nos. 244-5, 359) and bowl (No. 246). Decoration, other than burnishing, consists of incised arcades (No. 243) and bosses (No. 247).

(ii) similar to (i), but with less (= sparse) black iron ore. Surfaces can be reddish yellow rather than red, and occasionally greyish. The forms represented are bowls (Nos. 248-9).

(iii) similar to (i), plus sparse coarse red iron ore inclusions. The burnishing is generally less even, and the colouring is generally red/grey. The only recognisable forms are angular-shouldered flagons (Nos. 115-6).

(iv) generally similar, but more micaceous, fabrics. Black iron ore varies from sparse to moderate. Few forms are recognisable: dish (No. 118) and lid are represented.

#### OTHER BROWN SANDY FABRICS

A varied range of fabrics, mostly represented by only one or two sherds. Texture ranges from coarse, through medium, to fine and very fine. Some may be oxidised variants of usually reduced (grey) fabrics.

Forms represented are: flagons (Nos. 112, 250), face-mask jars (Nos. 113, 117) and other jars (Nos. 235-6, 251), cooking-pot (No. 63), flanged bowl (No. 360), bowl (No. 361), lid (No. 56) and triple ring vase (No. 252). One of the jars — No. 251 — is of ‘‘Romano-Saxon’’ type.

#### SHELLY FABRICS

The majority of the shelly sherds belong to a clearly defined category (here called ‘‘Late Roman Shelly Ware’’): soft fabric with irregular fracture and soapy feel; black core, brown margins and black, grey, brownish or pale red surfaces (frequently mixed). As well as abundant shelly inclusions — mostly smaller than 1mm, but some up to 5mm in length — there is sparse medium black iron ore and very fine white mica. Surfaces are smooth and show signs of turning; some also have fine rilling. The surface

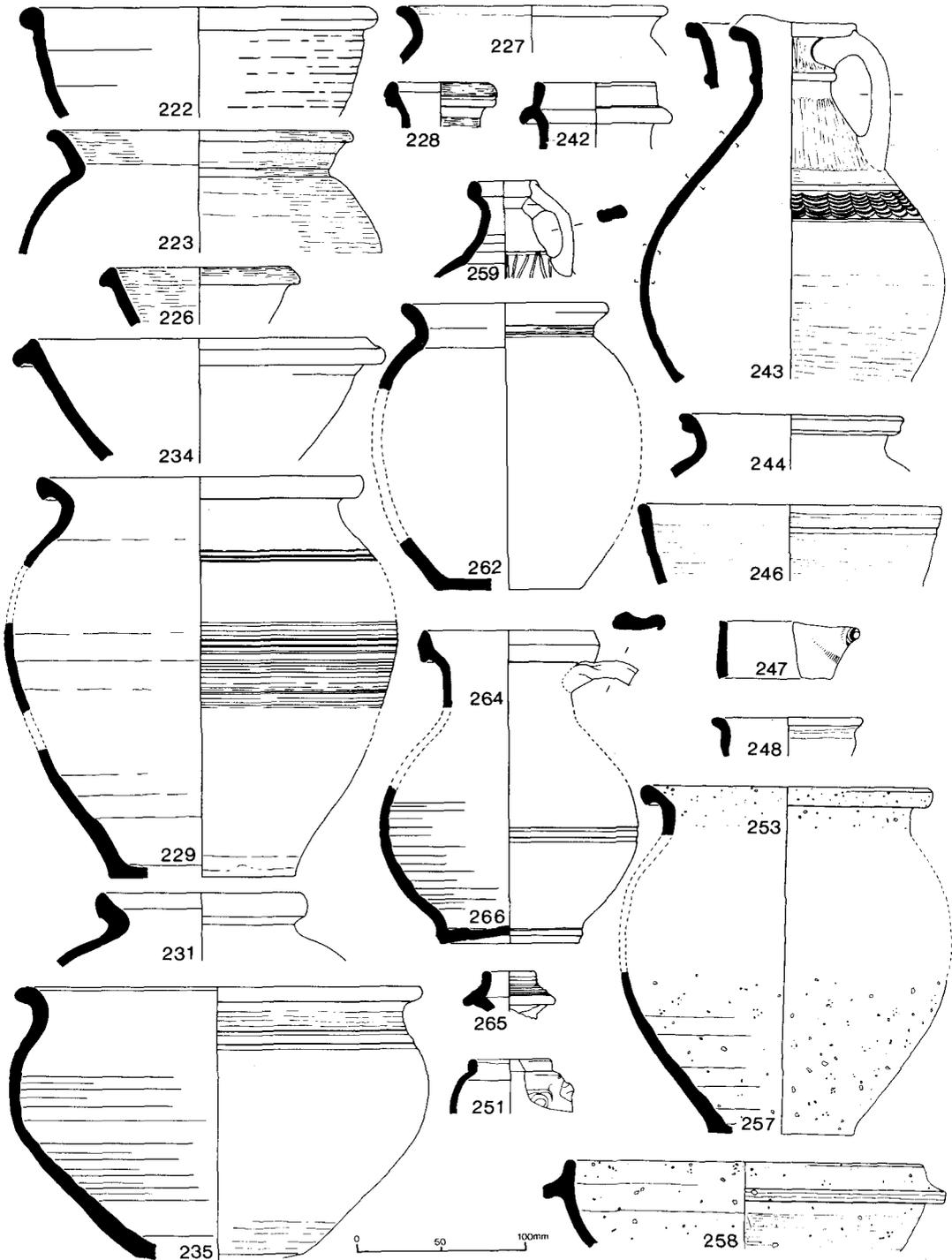


Fig. 9. Angel Court: Roman pottery Nos. 222 — 266 (¼)

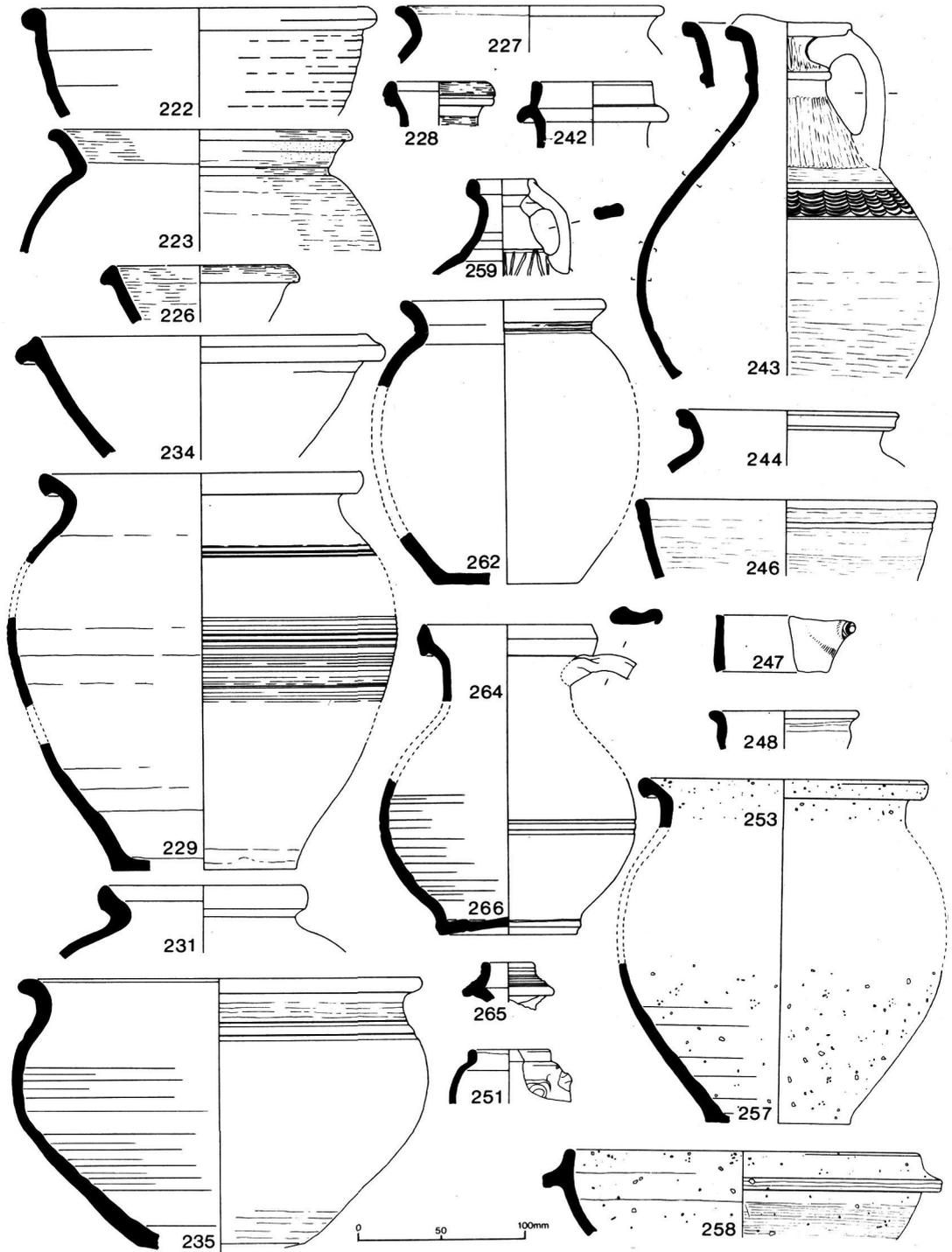


Fig. 9. Angel Court: Roman pottery Nos. 222 — 266 (¼)

colour may be due to slip in some cases. Jar forms predominate (Nos. 253-7, 363-4), but bowls (No. 258) are also found. These fabrics have recently been discussed by Sanders (1973). There are also a few sherds in shelly/sandy fabrics.

#### FABRICS WITH 'MISCELLANEOUS' INCLUSIONS

These are fabrics with moderate or abundant tempering of inclusions other than the usual "sand" (i.e., quartz *plus* lesser amounts of fine black iron ore and white mica). Micaceous colour-coated fabrics are not listed here.

The most common 'miscellaneous' inclusion here is grog, which occurs moderately in conjunction with sand — there are no heavily grogged fabrics. The only recognisable forms are cooking-pots (Nos. 262, 352) and a flanged bowl (No. 201).

Black and/or red iron ore inclusions are also common within this category, usually in association with sand but occasionally with organic inclusions (see below). Fabrics with black iron ore exceed those with red iron ore. Forms in the former include cooking-pots (Nos. 260, 365) and bowl (No. 366), while flagons (Nos. 264-6) are represented in the latter.

Less common are fabrics with organic inclusions, limestone or flint. Forms in these fabrics are bowl (No. 367), flagon (No. 259), and none recognised with flint.

Two unusual fabrics are (i) organic, grog, iron ore, fossil limestone and sandy inclusions, black slipped and burnished exterior (possibly Patchgrove ware). (ii) rim sherd of Mayen ware, type 1. Probably from very large jar or deep bowl (No. 368). Very hard, stoneware-like fabric with hackly fracture, but smooth between the inclusions. 'Lumpy' feel. Light grey (2.5Y7/2) throughout. Common well-sorted grey and white quartzite (*c.* 0.5mm) and coarse (up to 3mm) pink/grey volcanic inclusions; also sparse medium black and red iron ore. Horizontal and obtuse grooving on exterior. For reference to fabric see Fulford and Bird (1975, 171), but there is no parallel there or at Trier (J. Bird, personal communication). Possibly similar to Alzei type 25 (Unversagt, 1916, 31-6), but not very close.

#### MICA-DUSTED FABRICS

These come in a wide range of "sandy" fabrics. Most common are very fine-sandy fabrics, including a beaker (No. 122), a ring-neck flagon (No. 123) and an unusual basket-like handle, set transversely above a bowl rim (No. 124). Fine-sandy fabrics include sherds of an indented beaker (No. 120) and a bag-shaped beaker (No. 121), while dishes (Nos. 15, 57) are represented in medium-sandy fabrics. Coarse-sandy fabrics are rare.

#### WHITE-SLIPPED FABRICS

A small quantity of 'brown' sandy fabrics, coarse, medium, fine or very fine. The only recognisable forms are a dish (No. 58) in medium-sandy fabric, and beaker (No. 125), flagon (No. 126) and reeded-rim bowl (No. 127) — all in very fine-sandy fabrics.

#### OXFORDSHIRE RED COLOUR-COATED WARE

The 'standard' fabric is hard with a smooth fracture, finely irregular under the lens. Section colour ranges from red to yellowish red, the core often being slightly redder than the margins. A minority have grey or light grey cores. The visible inclusions are moderate fine white mica and sparse very coarse limestone (chalk?) and red iron ore, but the texture suggests the presence of abundant sub-visible inclusions. Open vessels and necked bowls have a micaceous red colour-coat on both surfaces, which feel smooth. Other (closed) vessels have colour-coat (reddish brown in a minority of cases) only on the exterior and over the rim; the rest of the interior surface is the same colour as the margin and feels slightly rough. All versions are wheel-thrown. These fabrics are particularly vulnerable to discolouration from the soil. Burning can result in a pink slip, as well as more obvious effects.

Over 80% of the vessels are bowls or dishes of various forms — imitation Dr. 36s (Nos. 273-7, 369) and Dr. 38s (Nos. 278-9, 370-2) (30%), necked bowls (Nos. 280-5, 373) (15%), wall-sided (Nos. 286-96) and full-bellied bowls (Nos. 374-7) (20%), flanged bowl (No. 297) (5%) and dishes with simple rims ('dog dishes') (Nos. 298-9) (5%). Other forms are flagons (Nos. 242, 268, 358) (10%), jars (Nos. 270-1) (5%) and mortaria (Nos. 300-1) (5%). The main types of decoration found on bowls here are various types of stamps, usually associated with cordons (Nos. 281-4, 287-8, 291-2, 296). There is also white slip decoration (e.g. Nos. 276, 286, 295), rouletting on bowls (No. 373), and applied decoration on beakers (No. 269).

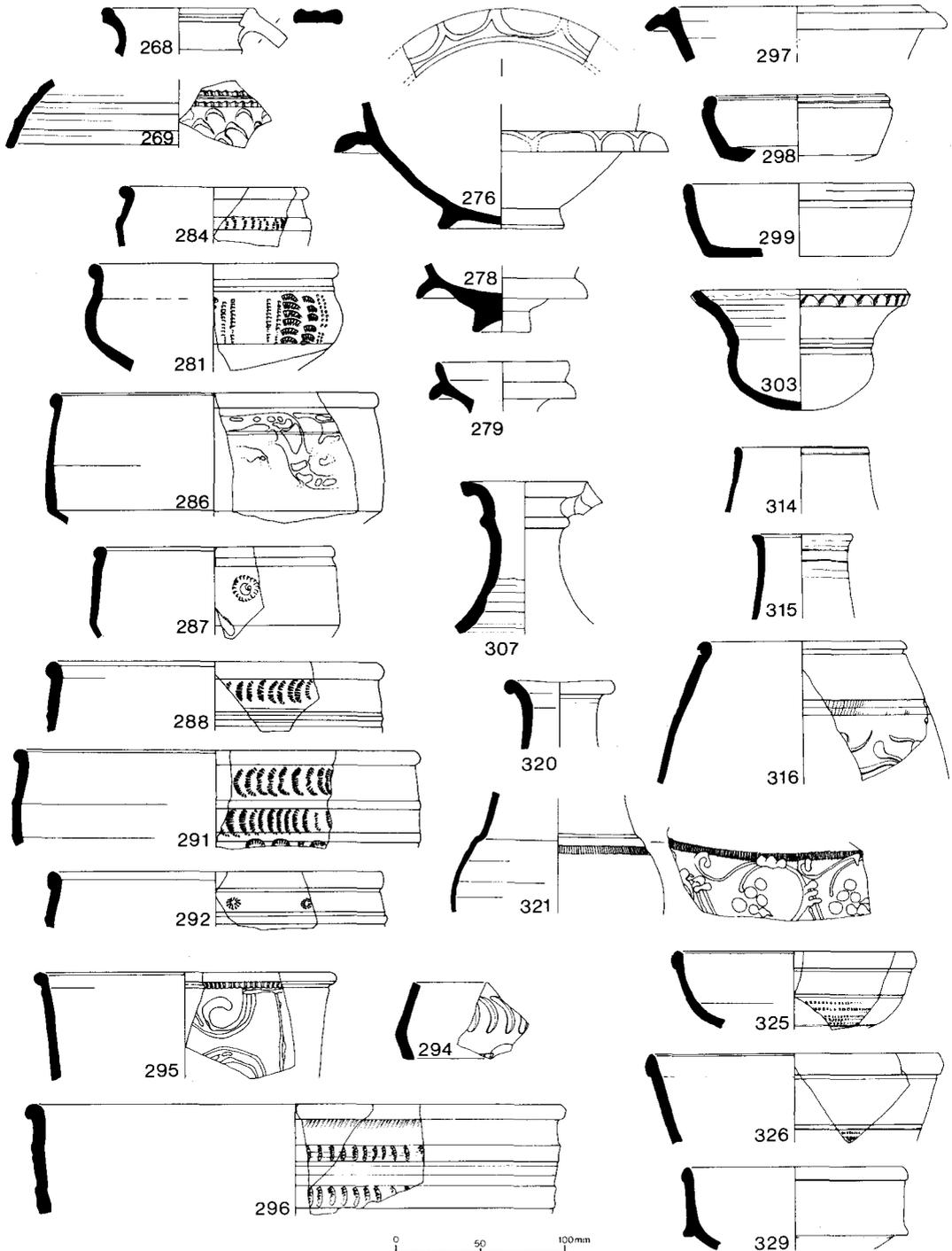


Fig. 10. Angel Court: Roman pottery Nos. 268 — 329 (¼)

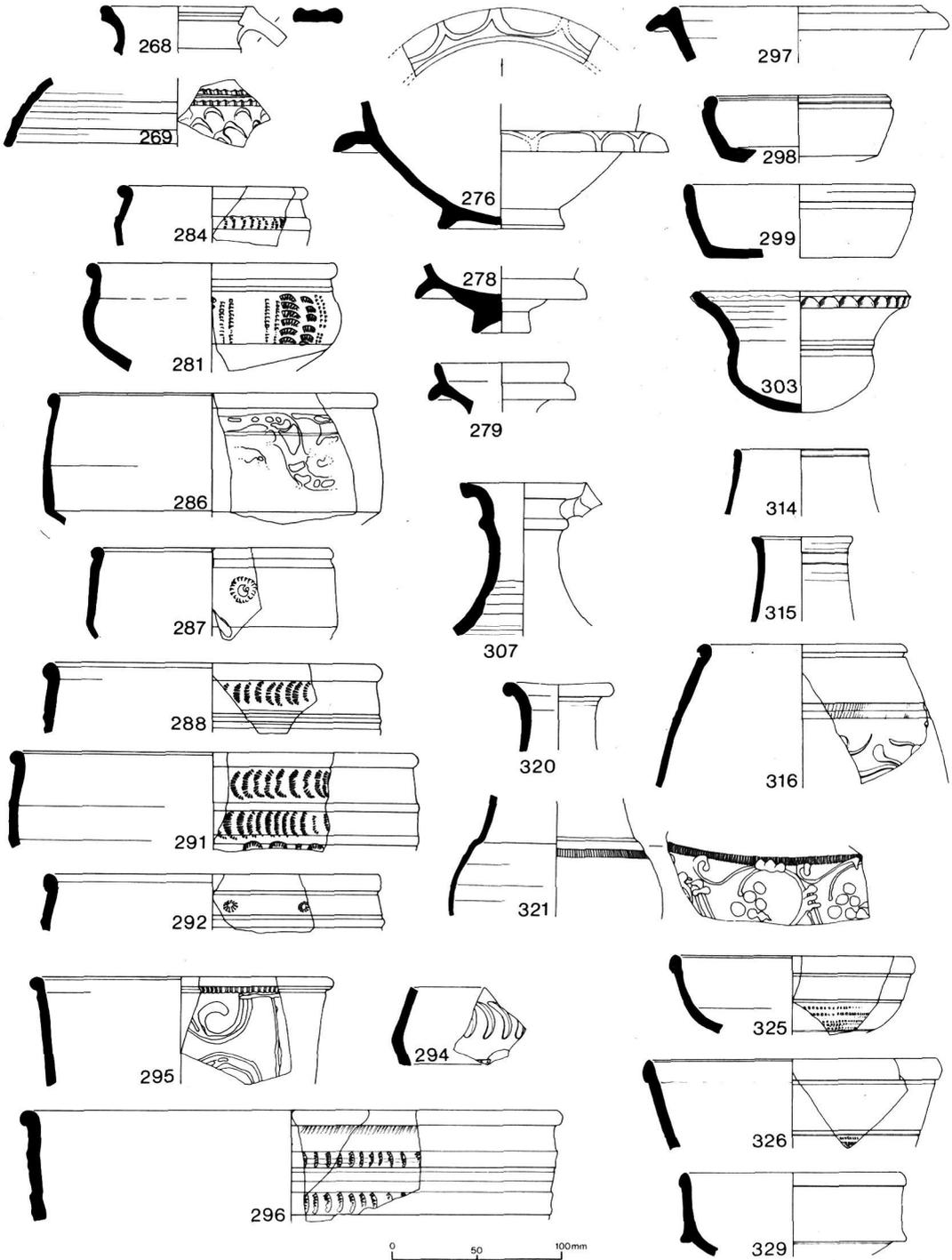


Fig. 10. Angel Court: Roman pottery Nos. 268 — 329 (¼)

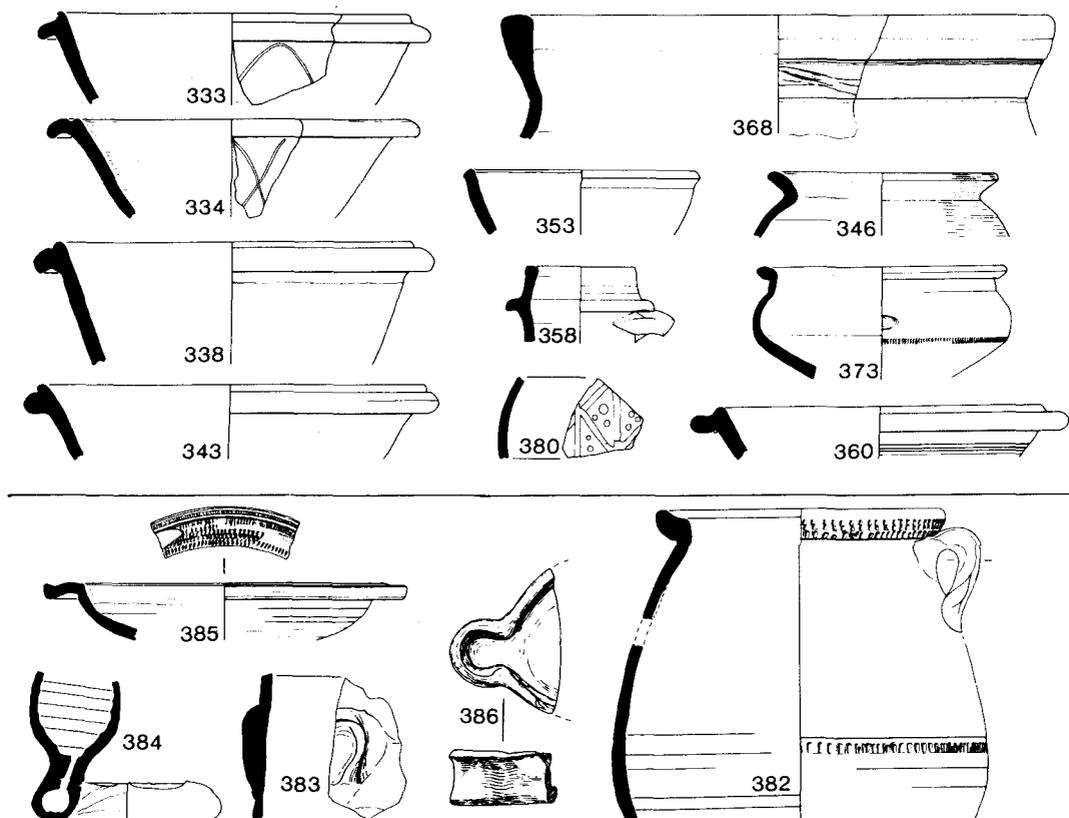


Fig. 11. Angel Court: Roman pottery Nos. 333 — 386 (¼)

A related fabric is Oxfordshire White Colour-coated Ware, which differ only in having a thin white slip. Forms represented are flagon (No. 302), tazza (No. 303) and mortarium (No. 304).

#### NENE VALLEY AND COLCHESTER COLOUR-COATED WARES

It was found difficult to distinguish between these two sources. There were three fabric colours — 'white', 'yellow' and 'red', of which the first two are probably Nene Valley and the last Colchester, but some overlap is likely.

(i) 'white' and 'yellow': hard, smooth fabrics, with a fracture appearing irregular at 20x. Section colour is white, or reddish yellow (some with light grey patches). The majority have moderate colourless quartz inclusions, mostly very fine but some fine or even medium, with sparse very fine white mica and medium or finer red and black iron ore. There are also small irregular voids in the fabric. A few sherds have additional sparse fine red quartz or more frequent colourless quartz. The slip, which covers both surfaces, is generally dark or very dark brown or grey, or rather lighter (reddish brown to brown) on the 'yellow' fabrics. It sometimes lightens to reddish yellow near the base, and appears to have been applied by dipping inverted vessels in the slip (Hartley, 1960, 18-19). It contains visible particles of black iron ore, and varies in finish from matt to slightly 'metallic'.

The great majority (about 95%) of the sherds are from closed vessels — flagons (25%) (Nos. 307, 379), beakers (70%) (Nos. 130-2, 134-8, 140, 312-5) and jars (Nos. 318-9) — minority forms are "Castor box" and lid (Nos. 133, 139) Dr. 38 (No. 310) and flanged bowl (No. 309). Similar forms were found at Water Newton C and Sibson B kilns (see Hartley, 1960).

(ii) 'red': these fall into two groups, both similar in texture to the above. The first contains moderate very fine black iron ore, and is red in colour with dark reddish brown slip on both surfaces. Forms represented are barbotine beaker (No. 141) and flagon (No. 320). The second differs from the

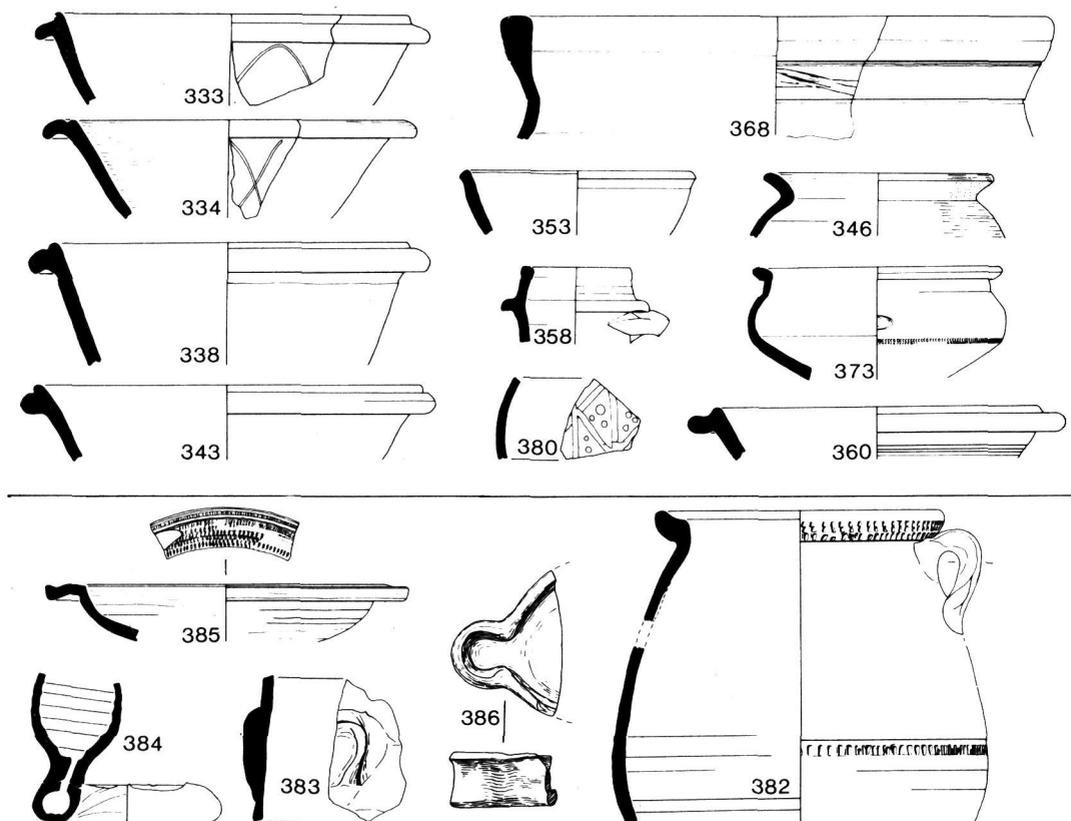


Fig. 11. Angel Court: Roman pottery Nos. 333 — 386 (1/4)

A related fabric is Oxfordshire White Colour-coated Ware, which differ only in having a thin white slip. Forms represented are flagon (No. 302), tazza (No. 303) and mortarium (No. 304).

#### NENE VALLEY AND COLCHESTER COLOUR-COATED WARES

It was found difficult to distinguish between these two sources. There were three fabric colours — 'white', 'yellow' and 'red', of which the first two are probably Nene Valley and the last Colchester, but some overlap is likely.

(i) 'white' and 'yellow': hard, smooth fabrics, with a fracture appearing irregular at 20x. Section colour is white, or reddish yellow (some with light grey patches). The majority have moderate colourless quartz inclusions, mostly very fine but some fine or even medium, with sparse very fine white mica and medium or finer red and black iron ore. There are also small irregular voids in the fabric. A few sherds have additional sparse fine red quartz or more frequent colourless quartz. The slip, which covers both surfaces, is generally dark or very dark brown or grey, or rather lighter (reddish brown to brown) on the 'yellow' fabrics. It sometimes lightens to reddish yellow near the base, and appears to have been applied by dipping inverted vessels in the slip (Hartley, 1960, 18-19). It contains visible particles of black iron ore, and varies in finish from matt to slightly 'metallic'.

The great majority (about 95%) of the sherds are from closed vessels — flagons (25%) (Nos. 307, 379), beakers (70%) (Nos. 130-2, 134-8, 140, 312-5) and jars (Nos. 318-9) — minority forms are "Castor box" and lid (Nos. 133, 139) Dr. 38 (No. 310) and flanged bowl (No. 309). Similar forms were found at Water Newton C and Sibson B kilns (see Hartley, 1960).

(ii) 'red': these fall into two groups, both similar in texture to the above. The first contains moderate very fine black iron ore, and is red in colour with dark reddish brown slip on both surfaces. Forms represented are barbotine beaker (No. 141) and flagon (No. 320). The second differs from the

'white/yellow' group only in colour, which is light red with reddish brown to nearly black slip. The only forms represented are beakers (Nos. 321-2).

Various forms of barbotine dominate the decoration: both natural scenes (e.g., Nos. 137, 141) and scrolls (e.g., Nos. 136, 140) are represented. Another type of applied decoration is scales applied to folder beaker (No. 130). Other types represented are horizontal grooving (No. 135) and painted decoration (No. 321). Rouletting is common, usually in association with other types of decoration (as on No. 321).

#### OTHER COLOUR-COATED FABRICS

Included in this group are (i) body sherd of beaker (No. 17). Hard smooth reddish yellow fabric with sparse very fine white mica, black iron ore and red inclusions. Weak red external and red/dark reddish brown internal slip. Rusticated decoration. Central Gaulish colour-coat, possibly 'black samian'.

(ii) rim sherd of beaker (No. 60). Hard smooth reddish yellow fabric with sparse very fine limestone, white mica and red iron ore inclusions. Red external and dark reddish brown slip. Imported colour-coat, unknown source.

(iii) rim sherd of beaker (No. 59). Hard smooth white fabric with sparse very fine colourless quartz and white mica inclusions. Very dark brown slip and rough-cast decoration. Late 1st/early 2nd century, imported.

(iv) Oxfordshire parchment ware. Eight sherds including the base of a standard bowl (No. 378).

(v) various micaceous colour-coats, generally similar to, but not, Oxfordshire colour-coats. Recognisable forms are a jar (No. 305) and Dr. 38 (No. 306).

(vi) decorated body sherd (No. 380). Hard smooth fabric with abundant very fine quartz and moderate fine white mica and black iron ore inclusions. Light/dark grey core, yellowish red margins, very pale brown surfaces with worn grey slip (?). Decorated in white slip. Possibly New Forest.

#### 'FINE' FABRICS

These are fabrics with sparse or no visible inclusions. Most are mortaria — from Colchester (Nos. 143-4), Hartshill-Mancetter (No. 323), Nene Valley (No. 362) and two unidentified (Nos. 21, 61). There are also sherds of eggshell ware (No. 16), the rim of a London ware flagon (No. 19) (see Marsh and Tyers, 1976, Nos. 136-8), fine grey fabric in shapes similar to those found at Highgate (Nos. 20, 142), and a fine reddish yellow/white fabric (No. 22).

#### 'RHENISH' COLOUR-COATED WARE

A hard very smooth fabric with smooth fracture. Probably has red core, grey margins with light red patches, though on some the core fades out and on others the patches. No visible inclusions. Glossy black slip with rouletting and/or white painted decoration. Only small sherds present, probably from beakers. Similar fabrics were made in the Rhineland and at Lezoux (Brewster, 1972). These appear to belong to the former.

#### ARGONNE WARE

A hard fabric with smooth fracture showing very finely irregular at 20x. The section is red. Inclusions are sparse very fine quartz and black and red iron ore, with sparse to moderate very fine white mica: fine irregular voids are common on some sherds. Both surfaces are slipped — generally in a shiny red but a minority are reddish-yellow. The source is Argonne in north-east Gaul (Chenet, 1941).

#### THE MORTARIA

This paragraph brings together information scattered throughout the preceding section, for ease of reference. The overwhelming majority of the mortaria are in Oxfordshire white ware (Nos. 239-41, 356-7): minority fabrics are Brockley Hill (Nos. 14, 51, 111), Oxfordshire colour-coats (Nos. 300-1, 304), Colchester (Nos. 143-4), Hartshill-Mancetter (No. 323) and Nene Valley (No. 362).

#### STATISTICAL SUMMARY

Figure 12 shows the number of sherds and vessel-equivalents (Orton 1975) in each context of the Statistical Sequence. The body of the table shows the percentage of each layer group that belongs to each main fabric group: brackets indicate unhomogeneous 'other' categories (e.g. 'other grey sandy'). The 'Nene Valley' row includes sherds which may be from Colchester (see above). Layers not shown in Figure 12 are listed below:

Trench A, Layer 28 (E.R. 1596): one amphora rim.

Trench A, Layer 22 (E.R. 1593): one sherd Highgate, one Brockley Hill.

Layer (Trench A) and ER Nos.

fabric group	16 (ER 1583)	18 (ER 1588-90)	20 (ER 1592)	9 (ER 1582)	7 (ER 1581)
Amphorae	7	7	5	7	4
BB1	1	3	10	13	5
BB2	2	16	12	—	—
Alice Holt/Farnham	—	—	6	14	—
Highgate	11	24	3	—	—
Grey Medium Sandy I	11	2	3	—	—
(other grey sandy)	6	5	10	—	—
Portchester 'D'	—	—	—	—	—
Brockley Hill	33	21	—	14	9
Hadham	—	—	6	5	5
Oxford White	—	—	5	1	1
(other brown sandy)	12	—	—	6	3
Late Roman Shelly	—	9	8	4	4
(other shelly)	—	—	—	1	4
(misc. inclusions)	—	2	—	—	—
(mica-dusted)	7	1	2	4	5
(white-slipped)	—	6	4	1	—
Oxford Red CC	—	—	5	—	—
Oxford White CC	—	—	—	—	—
Nene Valley CC	1	—	—	10	16
Colchester CC	—	—	19	1	—
Rhenish CC	—	—	1	7	—
(other CC)	1	—	1	—	—
Argonne	—	2	1	—	—
(misc. fine fabrics)	6	1	—	2	—
total	94	234	432	871	182
	3.7	4.75	19.1	42.6	4.1

Fig. 12. Quantities of Roman pottery in each layer of the Statistical Sequence, broken down (in percentage terms) into main fabric groups:

Trench A, Layer 32 (E.R. 1597): one base in fine fabric.

Trench A, Layer 26 (E.R. 1595): three sherds of amphora.

Trench A, Layer 15 (E.R. 1586): one rim Brockley Hill and one other brown sandy, one sherd with grog and iron inclusions, three white-slipped.

Trench A, Layer 19 (E.R. 1591): one sherd Highgate, one Brockley Hill.

Trench A, Layer 13 (E.R. 1585): two sherds amphora, one BB1, two BB2, three Alice Holt/Farnham, one Highgate, one Grey Medium Sandy 1, one other grey sandy, three other brown sandy, one Oxfordshire White Ware, two white-slipped.

Trench A, Layer 11 (E.R. 1583): two bases and three body sherds Oxfordshire Red Colour-coat (and possibly two rims and one body sherd), one sherd Oxfordshire White Colour-coat, one Hadham.

Figure 13 shows (i) the Figures on which illustrated sherds can be found, (ii) the fabric groups of numbered sherds (so that the fabric descriptions of illustrated sherds can easily be found), (iii) internal parallels of form (F) or decoration (D) to unillustrated sherds, and (iv) external parallels.

Fig. 13 (below). List of all numbered sherds, with Figure nos. of illustrated sherds, Layer and ER Nos., fabric group, internal and external parallels

No.	Fig.	Trench A fabric group	internal parallel	external parallel
Layer 28 (ER 1596)				
1	5	amphora	—	—
Layer 16 (ER 1587)				
2	5	grey coarse sandy	—	—
3	—	grey coarse sandy	—	—
4	5	BB2	—	—
5	—	grey medium sandy 1	—	—
6	5	grey medium sandy 1	—	Frere (1972), Fig. 142, No. 8 . . . . .
7	—	grey medium sandy 1	—	—
8	5	Highgate	—	—
9	—	Brockley Hill	—	Castle and Warbis (1973) No. 56
10	—	Brockley Hill	—	—
11	—	Brockley Hill	—	Castle and Warbis (1973) Nos. 50-2
12	—	Brockley Hill	—	Castle and Warbis (1973) Nos. 50-2
13	—	Brockley Hill	—	Castle and Warbis (1973) Nos. 50-2
14	—	Brockley Hill	—	Gillam (1970) No. 243
15	—	mica-dusted	—	—
16	—	misc. fine fabric	—	—
17	—	other colour-coat	—	—
18	—	Nene Valley CC?	—	—
19	5	misc. fine fabrics	—	Marsh and Tyers (1976) Nos. 136-8
20	—	misc. fine fabrics	—	—
21	—	misc. fine fabrics	—	Gillam (1970) No. 257
Layer 32 (ER 1597)				
22	—	misc. fine fabrics	—	—
Layer 18 (ER 1588-90)				
23	5	amphora	—	—
24	5	BB2	—	Frere (1972) No. 851
25	5	BB2	—	—
26	5	BB2	—	Frere (1972) No. 974
27	—	BB2	No. 26(F)	—
28	5	BB2	—	Frere (1972) No. 973
29	—	BB2	No. 28(F)	—
30	5	BB2	—	Frere (1972) No. 983
31	—	BB2	No. 30(F)	—
32	5	BB2	—	Frere (1972) No. 969
33	5	BB2	—	—
34	—	grey medium sandy 1	Nos. 26, 32(F)	—
35	—	grey medium sandy 1	—	—
36	5	grey medium sandy	—	—
37	—	Highgate	—	—
38	5	Highgate	—	—

No.	Fig.	fabric group	internal parallel	external parallel
39	—	Highgate	—	—
40	—	Highgate	Nos. 142(F), 39(D)	—
41	—	Highgate	No. 142(F)	—
42	—	Highgate	Nos. 102(F), 39(D)	—
43	—	Highgate	No. 102(F)	—
44	—	Highgate	—	—
45	—	Highgate	—	—
46	—	grey fine sandy	—	—
47	—	grey fine sandy	No. 46(F)	—
48	—	grey very fine sandy	—	—
49	—	Highgate	No. 102(F)	—
50	—	grey very fine sandy	—	—
51	—	Brockley Hill	—	Gillam (1970) No. 243
52	—	Brockley Hill	—	—
53	5	Brockley Hill	—	Frere (1972) No. 740
54	5	Brockley Hill	—	Frere Nos. 577-8
55	—	Brockley Hill	—	—
56	—	brown fine sandy	—	—
57	—	mica-dusted	—	—
58	—	white-slipped	—	—
59	5	other colour-coat	—	Cunliffe (1971) Nos. 265-6
60	—	other colour-coat	—	—
61	5	misc. fine fabric	—	Gillam (1970) No. 254
Layer 15 (ER 1586)				
62	—	Brockley Hill	—	—
63	—	brown medium sandy	No. 70(F)	—
Layer 20 (ER 1592)				
64	5	BB1	—	Gillam (1970) No. 118
65	—	BB1	No. 172(F)	—
66	5	BB1	—	—
67	5	BB1	—	—
68	—	BB1	No. 162(F)	—
69	5	BB1	—	Gillam (1970) No. 329
70	5	BB2	—	Gillam (1970) Nos. 139(F), 144(D)
71	—	grey medium sandy	No. 70(F)	—
72	—	Alice Holt/Farnham	No. 70(F)	—
73	5	BB2	—	Gillam (1970) No. 138
74	—	BB2	No. 73(F)	—
75	—	BB2	—	—
76	—	Alice Holt/Farnham	No. 218(F)	—
77	—	BB2	—	—
78	—	Alice Holt/Farnham	—	—
79	—	grey medium sandy	—	—
80	—	grey medium sandy	—	—
81	—	grey medium sandy	—	—
82	6	BB2	—	Gillam (1970) No. 226
83	6	BB2	—	Gillam (1970) No. 222
84	—	BB2	No. 83(F)	—
85	—	Alice Holt/Farnham	—	—
86	6	grey medium sandy	—	Frere (1972) No. 1082
87	6	grey medium sandy	—	—
88	—	BB2	Nos. 87(F), 4(D)	—
89	—	BB2	No. 87(F)	—
90	6	BB2	—	—
91	6	grey medium sandy	—	—
92	6	grey medium sandy 1	—	—
93	—	grey medium sandy 1	No. 213(F)	—
94	—	grey medium sandy 1	—	—
95	6	grey medium sandy 1	—	Frere (1972) No. 1152(D)
96	6	grey medium sandy 1	—	—
97	—	grey medium sandy 1	—	Philp (1973)
98	—	grey medium sandy 1	—	—
99	6	grey medium sandy	—	Brown and Sheldon (1974) No. 50

No.	Fig.	fabric group	internal parallel	external parallel
100	—	grey medium sandy	—	—
101	—	grey medium sandy	No. 262(F)	—
102	6	Highgate	—	Brown and Sheldon (1974) Nos. 49-50
103	—	Highgate	No. 42(F)	—
104	—	Highgate	No. 142(F)	—
105	6	grey fine sandy	—	—
106	—	grey fine sandy	No. 70(F)	—
107	6	grey very fine sandy	—	Frere (1972) No. 946
108	—	Portchester 'D'	No. 233(F)	—
109	—	Brockley Hill	—	—
110	—	Brockley Hill	—	—
111	6	Brockley Hill	—	—
112	—	brown medium sandy	—	—
113	6	brown medium sandy	—	—
114	—	brown medium sandy	—	—
115	—	Much Hadham	—	—
116	—	Much Hadham	No. 115(F)	—
117	6	brown very fine sandy	—	—
118	6	Much Hadham	—	—
119	—	misc. inclusions	—	—
120	—	mica-dusted	—	—
121	—	mica-dusted	No. 59(F)	—
122	—	mica-dusted	—	—
123	6	mica-dusted	—	—
124	—	mica-dusted	—	—
125	—	white-slipped	—	—
126	—	white-slipped	—	—
127	—	white-slipped	—	—
128	—	other colour-coat	—	—
129	6	other colour-coat	—	—
130	6	Nene Valley C.C.	—	Gillam (1970) No. 93
131	—	Nene Valley C.C.	No. 137(F)	—
132	—	Nene Valley C.C.	—	—
133	—	Nene Valley C.C.	—	—
134	—	Nene Valley C.C.	No. 140(F)	—
135	6	Nene Valley C.C.	—	Gillam (1970) No. 83
136	6	Nene Valley C.C.	—	—
137	6	Nene Valley C.C.	—	Gillam (1970) No. 89(F)
138	—	Nene Valley C.C.	Nos. 137, 140(D)	—
139	—	Nene Valley C.C.	—	—
140	6	Nene Valley C.C.	—	—
141	6	Colchester C.C.	—	Swan (1975), Pl. 19(D)
142	6	misc. fine fabric	—	Brown and Sheldon (1974) No. 88
143	6	misc. fine fabric	—	Cunliffe (1971) No. 294 Frere (1972) No. 1069 Gillam (1970) No. 261? Chenet (1941) No. 320
144	—	misc. fine fabric	—	—
145	—	Argonne	—	—
Layer 13 (ER 1585)				
146	—	grey medium sandy 1	—	—
Layer 9 (ER 1582)				
147	6	amphora	—	—
148	—	amphora	—	—
149	6	amphora	No. 147(F)	—
150	—	amphora	—	—
151	7	BB1	—	Gillam (1970) No. 147
152	7	BB1	—	—
153	7	BB1	—	Gillam (1970) No. 148
154	7	BB1	—	Cunliffe (1971) No. 385
155	—	BB1	No. 172(F)	—
156	—	BB1	No. 172(F)	—
157	—	BB1	No. 172(F)	—
158	7	BB1	—	Cunliffe (1971) No. 263(F) Gillam (1970) Nos. 64-5

No.	Fig.	fabric group	internal parallel	external parallel
159	7	BB1	—	Frere (1972) No. 1126
160	7	BB1	No. 159(D)	Gillam (1970) No. 229
161	7	BB1	No. 159(D)	Gillam (1970) No. 228
162	7	BB1	—	—
163	7	BB1	No. 159(D)	—
164	7	BB1	—	Frere (1972) No. 1110
165	7	BB1	—	Frere (1972) Nos. 345, 1287, Neal (1974) Nos. 282-3
166	7	BB1	—	—
167	7	BB1	—	—
168	—	BB1	No. 167(F)	—
169	7	BB1	—	Gillam (1970) No. 329
170	7	BB1	—	—
171	—	grey coarse sandy	—	—
172	7	BB1	—	Gillam (1970) Nos. 146, 148
173	—	BB1	No. 172(F)	—
174	7	Alice Holt/Farnham	—	—
175	—	BB1	No. 174(F)	—
176	—	BB1	No. 152(F)	—
177	—	grey medium sandy	—	—
178	8	Alice Holt/Farnham	—	—
179	8	grey medium sandy	—	—
180	—	grey medium sandy	—	—
181	8	Alice Holt/Farnham	—	—
182	8	Alice Holt/Farnham	—	Frere (1972) No. 1256
183	—	grey coarse sandy	No. 219(F)	—
184	—	Alice Holt/Farnham	No. 234(F)	—
185	—	Alice Holt/Farnham	No. 187(F)	—
186	8	Alice Holt/Farnham	—	—
187	8	Alice Holt/Farnham	—	—
188	8	Alice Holt/Farnham	—	—
189	8	Alice Holt/Farnham	—	—
190	8	grey medium sandy	—	—
191	8	grey medium sandy	—	Gillam (1970) No. 319, Frere (1972) Nos. 995, 1265-6
192	8	grey coarse sandy	—	—
193	8	grey medium sandy	—	—
194	8	Alice Holt/Farnham	—	—
195	—	grey medium sandy	—	—
196	—	grey medium sandy	—	—
197	—	Alice Holt/Farnham	—	—
198	8	grey medium sandy	—	—
199	—	grey medium sandy	—	—
200	—	grey medium sandy	—	—
201	8	grey medium sandy	—	—
202	—	grey medium sandy	No. 190(F)	—
203	—	Highgate	—	—
204	8	Alice Holt/Farnham	—	—
205	8	grey fine sandy	—	Gillam (1970) No. 92
206	8	grey fine sandy	—	—
207	8	Alice Holt/Farnham	—	Gillam (1970) No. 148
208	8	Alice Holt/Farnham	—	—
209	8	grey fine sandy	—	Clark (1950) No. 105
210	8	Alice Holt/Farnham	—	—
211	—	Alice Holt/Farnham	—	—
212	8	grey fine sandy	—	—
213	8	grey fine sandy	—	—
214	—	grey fine sandy	Nos. 157(F), 332(F)	—
215	8	Alice Holt/Farnham	—	Clark (1950), No. 94
216	8	Alice Holt/Farnham	—	Cunliffe (1971) No. 343
217	—	Alice Holt/Farnham	No. 219(F)	—
218	8	Alice Holt/Farnham	—	—

No.	Fig.	fabric group	internal parallel	external parallel
219	8	Alice Holt/Farnham	—	—
220	8	grey fine sandy	—	—
221	—	Alice Holt/Farnham	—	—
222	9	grey fine sandy	—	—
223	9	Alice Holt/Farnham	—	Gillam (1970) No. 146
224	—	Alice Holt/Farnham	—	—
225	—	grey fine sandy	—	—
226	9	Alice Holt/Farnham	—	—
227	9	Alice Holt/Farnham	—	—
228	9	grey very fine sandy	—	—
229	9	Portchester 'D'	—	Clark (1950) No. 1
230	—	Portchester 'D'	No. 229(F)	—
231	9	Portchester 'D'	—	Clark (1950) No. 6
232	—	Portchester 'D'	—	—
233	—	Portchester 'D'	—	—
234	9	Portchester 'D'	—	—
235	9	brown coarse sandy	—	—
236	—	brown coarse sandy	—	—
237	—	Brockley Hill	—	—
238	—	brown medium sandy	—	—
239	—	Oxford White Ware	—	Young (1972) Nos. 15-28
240	—	Oxford White Ware	—	Young (1972) No. 29
241	—	Oxford White Ware	—	—
242	9	Oxford Red C.C.	—	—
243	9	Much Hadham	—	—
244	9	Much Hadham	—	—
245	—	Much Hadham	No. 244(F)	—
246	9	Much Hadham	—	—
247	9	Much Hadham	—	—
248	9	Much Hadham	—	—
249	—	Much Hadham	—	—
250	—	brown very fine sandy	—	—
251	9	brown very fine sandy	—	—
252	—	brown very fine sandy	—	—
253	9	Late Roman Shelly	—	Sanders (1973) No. 3
254	—	Late Roman Shelly	No. 253(F)	—
255	—	Late Roman Shelly	No. 253(F)	—
256	—	Late Roman Shelly	No. 253(F)	—
257	9	Late Roman Shelly	—	—
258	—	Late Roman Shelly	—	Sanders (1973) No. 4
259	9	misc. inclusions	—	Fulford (1975) 95, No. 20.4(F)
260	—	misc. inclusions	No. 172(D)	—
261	—	misc. inclusions	—	—
262	9	misc. inclusions	—	—
263	—	misc. inclusions	—	—
264	9	misc. inclusions	—	—
265	9	misc. inclusions	—	Fulford (1975) 51, No. 26(F)
266	9	misc. inclusions	—	—
267	—	misc. inclusions	—	—
268	10	Oxford Red C.C.	—	—
269	10	Oxford Red C.C.	—	Young (1973) No. 25(F)
270	—	Oxford Red C.C.	—	Young (1973) No. 22(F)
271	—	Oxford Red C.C.	—	—
272	—	Oxford Red C.C.	—	—
273	—	Oxford Red C.C.	—	Drag. 36
274	—	Oxford Red C.C.	—	Drag. 36
275	—	Oxford Red C.C.	—	Drag. 36, Young (1973) No. 29
276	10	Oxford Red C.C.	—	Drag. 38
277	—	Oxford Red C.C.	—	Drag. 38, Young (1973) No. 30
278	10	Oxford Red C.C.	—	Drag. 38
279	10	Oxford Red C.C.	No. 278(F)	Drag. 38
280	—	Oxford Red C.C.	—	Young (1973) No. 34
281	10	Oxford Red C.C.	—	—
282	—	Oxford Red C.C.	No. 281(F)	—

No.	Fig.	fabric group	internal parallel	external parallel
283	—	Oxford Red C.C.	—	—
284	10	Oxford Red C.C.	No. 281(F)	—
285	—	Oxford Red C.C.	—	—
286	10	Oxford Red C.C.	—	—
287	10	Oxford Red C.C.	No. 286(F)	—
288	10	Oxford Red C.C.	No. 286(F)	—
289	—	Oxford Red C.C.	No. 286(F)	—
290	—	Oxford Red C.C.	No. 286(F)	—
291	10	Oxford Red C.C.	No. 286(F)	—
292	10	Oxford Red C.C.	No. 286(F)	—
293	—	Oxford Red C.C.	No. 286(F)	—
294	10	Oxford Red C.C.	No. 286(F)	—
295	10	Oxford Red C.C.	—	—
296	10	Oxford Red C.C.	No. 295(F)	—
297	10	Oxford Red C.C.	—	Young (1973) No. 37
298	10	Oxford Red C.C.	—	Young (1973) No. 36
299	10	Oxford Red C.C.	—	Young (1973) No. 36
300	—	Oxford Red C.C.	—	Drag 45; Young (1973) No. 19
301	—	Oxford Red C.C.	—	Young (1973) No. 14
302	—	Oxford White C.C.	—	—
303	10	Oxford White C.C.	—	Young (1973) No. 12
304	—	Oxford White C.C.	—	—
305	—	other colour-coat	—	—
306	—	other colour-coat	—	Drag. 38
307	10	Nene Valley C.C.	—	—
308	—	Nene Valley C.C.	—	Hartley (1960) Fig. 4.3
309	—	Nene Valley C.C.	No. 297(F)	—
310	—	Nene Valley C.C.	—	Drag. 38
311	—	Nene Valley C.C.	—	Hartley (1960) Fig. 4.18
312	—	Nene Valley C.C.	No. 136(F)	—
313	—	Nene Valley C.C.	No. 129(F)	—
314	10	Nene Valley C.C.	—	—
315	10	Nene Valley C.C.	—	—
316	10	Colchester C.C.	—	Gillam (1970) No. 89
317	—	Colchester C.C.?	—	—
318	—	Nene Valley C.C.	—	—
319	—	Nene Valley C.C.	—	—
320	10	Colchester C.C.	—	—
321	10	Colchester C.C.	—	Hartley (1960) Fig. 4.6
322	—	Colchester C.C.	—	—
323	—	Hartshill-Mancetter Mortarium	—	—
324	—	Argonne	—	Chenet (1943) No. 335a b
325	10	Argonne	—	Chenet (1943) No. 157(D)
326	10	Argonne	No. 325	Chenet (1943) No. 320(F)
327	10	Argonne	—	Chenet (1943) No. 140(D), No. 320(F)
328	10	Argonne	—	Chenet (1943) No. 2(D)
329	10	Argonne	—	Chenet (1943) No. 32 ic
330	—	Argonne	—	Chenet (1943) No. 32Gb
331	—	Argonne	—	Chenet (1943) No. 328b
Layer 7 (ER 1581)				
332	—	BB1	No. 158(F)	—
333	11	BB1	—	—
334	11	BB1	—	—
335	—	BB1	No. 181(F)	—
336	—	BB1	No. 169(F)	—
337	—	grey coarse sandy	—	—
338	11	Alice Holt/Farnham	—	—
339	—	grey medium sandy	No. 338(F)	—
340	—	grey medium sandy	—	—
341	—	Alice Holt/Farnham	No. 188(F)	—
342	—	grey medium sandy	No. 186(F)	—
343	11	grey medium sandy	—	—
344	—	grey medium sandy	—	—

No.	Fig.	fabric group	internal parallel	external parallel
345	—	Alice Holt/Farnham	No. 216(F)	—
346	11	Alice Holt/Farnham	—	—
347	—	Alice Holt/Farnham	—	—
348	—	Alice Holt/Farnham	No. 209(F)	—
349	—	Alice Holt/Farnham	No. 219(F)	—
350	—	Alice Holt/Farnham	No. 216(F)	—
351	—	Alice Holt/Farnham	—	—
352	—	misc. inclusions	No. 229(F)	—
353	11	Alice Holt/Farnham	—	—
354	—	Portchester 'D'	—	—
355	—	Portchester 'D'	—	—
356	—	Oxford White Ware	No. 239(F)	Young (1972), Type A
357	—	Oxford White Ware	No. 240(F)	Young (1972), large Type A
358	11	Oxford Red C.C.	—	—
359	—	Much Hadham	No. 244(F)	—
360	11	brown very fine sandy	—	—
361	—	brown very fine sandy	—	—
362	—	misc. fine fabrics	—	—
363	—	Late Roman Shelly	No. 256(F)	—
364	—	Late Roman Shelly	No. 253(F)	—
365	—	misc. inclusions	No. 218(F)	—
366	—	misc. inclusions	No. 215(F)	—
367	—	misc. inclusions	—	—
368	11	misc. inclusions	—	Unversagt (1916) No. 25?
369	—	Oxford Red C.C.	—	Drag. 36
370	—	Oxford Red C.C.	—	Drag. 38; Young (1973) No. 30
371	—	Oxford Red C.C.	—	Drag. 38; Young (1973) No. 30
372	—	Oxford Red C.C.	—	Drag. 38
373	11	Oxford Red C.C.	—	—
374	—	Oxford Red C.C.	—	—
375	—	Oxford Red C.C.	No. 374(F)	—
376	—	Oxford Red C.C.	No. 374(F)	—
377	—	Oxford Red C.C.	No. 374(F)	—
378	—	other colour-coat	—	Young (1973) No. 21
379	—	Nene Valley C.C.	—	—
380	11	other colour-coat	—	Fulford (1975) 81, No. 73(D)
381	—	Argonne	—	Chenet (1943) No. 328a-b.

## DISCUSSION OF TRENCH A

The amphora rim from Layer 28 (No. 1) cannot be closely dated, but is most likely to be of 1st century date. The two sherds from Layer 22 would fit best into the first half of the 2nd century (see Layer 16 below).

The earliest group of any size comes from Layer 16 (but see discussion on Layer 20, below). The samian is of Trajanic and Hadrianic date, while the mortaria (Nos. 14, 21) are 2nd century types — Gillam (1970) Nos. 243, 247. Phase III at Highgate (see No. 8) has been provisionally dated to *c.* AD 100-140 (Brown and Sheldon, 1974, 228-30) and the BB2 bowls (e.g. No. 4) with moulded rim and scribed decoration are thought to start *c.* AD 120 in the London area (SLAEC 1978) and *c.* AD 130 at Verulamium (Frere, 1972, Nos. 706-23). Reeded-rim bowls (e.g. Nos. 11-13) are dated *c.* AD 80-130 in Gillam and *c.* AD 75-160 at Verulamium (Frere, Nos. 332-43, 503-15, 669-82, 926-41), where the hooked flange seems relatively late, *c.* AD 130-150. This dating would not be unusual for the ring-neck flagon (e.g. Nos. 9, 10) (Castle and Warbis, 1973, 100). Overall, a date in the second quarter of the 2nd century seems most likely for Layer 16.

Layer 32 contains no closely datable pottery, and Layer 26 only three sherds of Dressel 20 amphora (1st-2nd century) and one sherd of Trajanic samian. The latter comes between Layers 16 and 18 (q.v.) in the sequence.

The next 'large' group is from Layer 18. The samian here is probably Antonine. The BB2 types (Nos. 24-33) can be matched as a group with forms from deposits dating to *c.* AD 155/160 at Verulamium (Frere, 1972, Nos. 851, 969-74, 983) although there are similarities with others (*ibid.*, Nos. 715-21) from deposits of *c.* AD 130-150. They can also be paralleled at Fishbourne (Cunliffe,

1971, types 218-9), with dating *c.* AD 130-200. The Brockley Hill sherds (e.g. Nos. 53, 54) can be paralleled to sherds from mid-2nd century deposits at Verulamium (Frere, Nos. 577-8, 740). The lack of Nene Valley colour-coats, thought to start *c.* AD 150 (Swan, 1975, 16) is probably significant. A date of *c.* AD 140-160 seems most likely.

Next in the sequence, Layer 15 contains only Hadrianic samian. One coarse ware rim (No. 63) has a late 2nd to mid-3rd century parallel in Gillam (1970). Bearing in mind the evidence from Layer 20 (see below), a date in the first half of the 3rd century is most likely, but a late 2nd century date cannot be ruled out.

Layer 20 is a problem, as it is really three layers — 20A, B and C — from which the finds have been mixed. The latest pottery, including No. 66 (Farrar (1973, 77)) consider the obtuse lattice to date to *c.* AD 250+, No. 68 (flanged bowls seem to start *c.* AD 270/80 in this region (Frere, Nos. 1101-3)) and No. 135 (parallels in Gillam are dated to *c.* AD 250+ and *c.* AD 260+), taken together with the relative rarity of flanged bowls (1% of the pottery, compared with 10% in A9), suggests a late 3rd century date for the latest of these layers, Layer 20A.

Any of the other pottery could be residual in Layer 20A, but it is likely that some is from Layer 20B or C. On this assumption, one could assign Layer 20C to the first half of the 2nd century but later than Layer 16, *c.* AD 125-150, from Nos. 102-4 (Highgate phase III) and the mica-dusted sherds, Nos. 120-4; and Layer 20B to the late 2nd or first half of the 3rd century, from Nos. 70-4 (parallels dated to *c.* AD 180-250 in Gillam), Nos. 82-9 (late 2nd century parallels in Gillam, individual parallels of *c.* AD 175-275 in Frere), and the samian, *c.* AD 180-200.

The pottery from Layer 19 would all (one sherd of samian and two of coarse ware) fit into the first half of the 2nd century, but stratigraphically it must be later than Layer 15, probably early 3rd century.

The gravel deposit Layer 13 seems to be close to Layer 20A in date, with no flanged bowls or Alice Holt fabrics. The single sherd of Oxfordshire White Ware may be later than Layer 20A, but mortaria in this fabric were in production by the middle of the 3rd century (Young, 1973, 109).

The most precise dating for Layer 9 is provided by eight coins, the latest of which is dated to AD 364+. In general, the pottery has a late 3rd to 4th century date, but there are relatively few positively late 4th century forms — possible examples are No. 215 (*c.* AD 350+ at Verulamium) and No. 265 (*c.* AD 370-410+ at Verulamium) (see Frere for both). Other parallels given in Fig. 13 to Verulamium (Frere, 1972), Fishbourne (Cunliffe, 1971) and Gillam (1970) are of rather earlier date, e.g., *c.* AD 290-370 for cooking-pots Nos. 105, 107-8, 177, while the flanged bowls are best paralleled *as a group* by vessels of *c.* AD 310-315 at Verulamium (Frere Nos. 1162-74). The incipient-flanged bowls and dishes (Nos. 165-6, 185-90) can be matched from a wide range of context dates, e.g., *c.* AD 85-105 (Frere No. 345), *c.* AD 320-350 (Neal (1974) Nos. 282-3) and *c.* AD 375+ (Frere No. 1287).

Among the Oxfordshire Colour-coats, none conflicts with the coin dating, the rosette-stamped vessels (Nos. 287, 292) in particular being produced from the middle decades of the 4th century onwards (C. J. Young, *pers. comm.*).

There is also a proportion of 3rd century pottery — e.g., No. 158 and some of the Nene Valley colour-coats — Nos. 308, 316, for example.

Overall, it would be possible to see Layer 9 as a gradual accumulation following Layers 20A and B (late 3rd century) and terminating *c.* AD 370, with a small proportion of earlier material. Alternatively, the material may have accumulated elsewhere and have been dumped here all at once. The difficulty of detecting individual layers in such deposits (cf. Layer 20) allows the possibility of more than one such dumping in the late 3rd, or 4th century.

The pottery from Layers 11 and 7 is very similar to that from Layer 9, but more broken (see Fig. 12) and more worn. A late characteristic is the "oval" flange of No. 333 — late 4th century at Verulamium (Frere Nos. 1248-55).

The discussion of Layers 9 and 7 is complicated by the presence of a possible Saxon sherd (No. 550 — q.v.) and two medieval sherds in Layer 7, and one medieval sherd in Layer 9. The medieval pottery, which appears to be of 13th century or later date, is later than that in Layer 5=12 (the lowest medieval layer) and is therefore likely to be intrusive (otherwise Layers 9 to A5=12 contain almost entirely very residual pottery). The possible Saxon sherd is more problematic. Taken at face value, it could mean that Layer 7 is, in fact, a silt deposit of middle or late Saxon date containing over 99% residual Roman pottery. Similar groups of pottery — with a very small Saxon or early medieval proportion and a very

high Roman proportion (presumed residual) occur in the City and Southwark, and are always difficult to interpret. Alternatively, the Saxon ground surface could have been at (or above, if erosion has occurred) the top of Layer 7, and the sherd deposited there, later working down into Layer 7 (e.g., through worm action). Neither explanation carries overwhelming force.

#### SUMMARY OF DATING FOR TRENCH A

Layer 28 (E.R. 1596): 1st — early 2nd century

Layer 22 (ER 1593): first half of 2nd century

Layer 16 (ER 1587): } *c.* AD 125-50

Layer 32 (ER 1597): }

Layer 20C (part of ER 1592): 2nd century, later than Layer 16

Layer 26 (ER 1595): no independent date, but between Layers 16 and 18

Layer 18 (ER 1588-90): *c.* AD 140-60

Layer 20B (part of ER 1592): late 2nd to mid-3rd century

Layer 15 (ER 1586): probably *c.* AD 200-50, possibly late 2nd century

Layer 20A (part of ER 1592): late 3rd century

Layer 19 (ER 1591): no independent date, but between Layers 15 and 13

Layer 13 (ER 1585) late 3rd century

Layer 9 (ER 1582): *c.* AD 370; possibly accumulation from late 3rd century onwards

Layer 11 (ER 1583): no independent date, but between Layers 9 and 7

Layer 7 (ER 1581): *either c.* AD 370-410 or mid/late Saxon.

Despite the problems of residuality, there are very clear trends apparent in the proportions of pottery from different production centres present in each context of the Statistical Sequence. The data are shown in Fig. 12 (q.v.). The vessel-equivalent figures are believed to give the most reliable estimate of proportions, because of the "small sample" nature of the site. They have the added advantage of reducing the apparent effect of residuality (because the residual sherds are usually smaller). In reading this table, it should be noted that the proportions of colour-coated fabrics may be understated, because a serious shortage of rims compared to bases suggests differential retrieval. These rims are more fragile than the bases, break into smaller pieces and may be more easily missed in excavation. Because the quantities involved are relatively small, the percentages shown should be treated with caution. Clear contrasts are apparent, for example, between basically 2nd century fabrics (e.g., Highgate, Brockley Hill, Grey Medium Sandy 1, which have high percentages in Layers 16 and 18, low in Layer 9 and 7) and mainly 4th century types (e.g., Alice Holt/Farnham, Portchester 'D', Oxfordshire colour-coats, which have low percentage in Layers 16 and 18, and high percentages in Layers 9 and 7). An interesting point is the concentration of "miscellaneous inclusions" (e.g., grog, iron ore, limestone) in the 4th century contexts.

It would be possible to prepare similar figures on, for example, vessel form, from the data on the Pottery Summary Sheets.

#### ROMAN POTTERY FROM THE OTHER TRENCHES

(Fig. 11, Nos. 382-386)

Roman pottery was recovered from the other trenches (B-F, particularly B), but under conditions which make it virtually useless. Most is best thought of as unstratified, and even in Trench D, where a stratigraphic sequence was observed, little information could be gleaned. The pottery from Trench D (only) was recorded on pottery summary sheets, although the top Roman layer of this sequence, Layer 3, contained pottery of 1st to 4th century date.

However, some of this pottery is of intrinsic interest and is described below.

382 Probable face-mask jar: collared rim and small strap handle. One rim/handle sherd and three body sherds, probably from the same vessel. Brockley Hill fabric with patchy reddish yellow exterior. Rouletting on rim, and single row of crude rouletting on body. From Trench E, Layers 1 and 7 (illustrated).

383 Face-mask jar: body sherd. Hard, irregular fracture.

Red section, core grey in thicker parts, yellowish red surfaces. Moderate clear and colourless quartz, up to coarse size, and very fine black iron ore and other, fine, black inclusions (basic igneous?), also moderate very fine mica. Turning marks on interior with some smoothing; applied ear on exterior, with much fingering. From Trench B, Context 12 (illustrated).

## Note on face-mask jars

Five probable face-mask jars (Nos. 95, 113, 117, 382-3) are represented at Angel Court. Two (Nos. 113, 383) certainly have face-masks, while the other three have characteristics (rouletting on exterior of rim, small strap handle) which appear together on known face-masks jars (examples in the Museum of London collection) and not, so far as is known, on other forms. No. 95 is similar in shape (but not fabric) to Museum acc. no. 12395.

Although only a very small proportion of the total pottery from this site, these vessels, together with the triple ring vase No. 384, hint at a votive element in the silt deposits of Trench A, Layer 20 and Trench B, Context 12. The votive nature of some of the Walbrook finds has already been noted (Merrifield, 1965, 93).

- 384 Triple ring vase: hollow ring, with one vase and scars for two more, and smaller scar between two vases. A firing scar on the side of the vase suggests the presence of a small tazza-like attachment here (as, for example, on No. 581 at Southwark (SLAEC, 1978)). Hard; smooth fracture, finely irregular at 20x. Ring has grey core, red exterior margin, reddish yellow/brown exterior; vase has yellowish red section, reddish yellow exterior. Abundant very fine quartz and black iron ore and moderate mica. Turning marks on interior of vase. From Trench B, unstratified.
- 385 Dish with up-turned flanged rim, in London ware. Three rim sherds. Very hard; smooth fracture. Light grey core, yellowish red/reddish brown margins, black heavily burnished slipped surfaces. Sparse very fine clear quartz, black iron ore and white mica, also fine crack-like voids parallel to surfaces. Six or seven rows

of rouletting on upper surface of rim; apparently overlaid by burnishing. Possibly from nearby kilns (see Marsh and Tyers [1976] Nos. 141-6). From Trench B Layer 3 (illustrated).

## Coarse-ware ceramic lamps

6. Ceramic lamp: open type, no evidence for spout. Roman Grey Medium Sandy 1 fabric (q.v.). Exterior trimmed and smoothed, with traces of wear on foot-ring. Interior rough, with sooting at rim. Shape, size (and probably fabric) as Frere (1972), Fig. 142, No. 8, which is from a mid-2nd century deposit. From Trench A, Layer 16 (illustrated).
386. Ceramic lamp: spout of open type in hard very pale brown fabric. Abundant fine inclusions — clear, colourless and white quartz — with 'tail' of medium-sized grains. Also moderate medium red iron ore, sparse fine black iron ore and very fine white mica. Surfaces smoothed but not burnished. Heavily burnt and sooted, especially at rim. Shape (and probably fabric) as Frere (1972), Fig. 142, No. 6. Both burnt and unburnt examples have been found in the City (see Wheeler [1930] 69): burnt examples were considered to be lamps, and the unburnt lamp-stands. Wheeler showed a similar example from Aldersgate Street (*ibid.*, Pl. XXIX, No. 7) and listed others from St. Martin's-le-Grand, Moorgate Street, Fenchurch Street and Minories. The Verulamium lamp is from a mid-2nd century deposit: the other examples quoted are not from dated deposits. From Trench B, Context 7 (illustrated).
- For other ceramic vessels apparently used as lamps see Nos. 278-9 (Dr. 38 forms in Oxfordshire Red Colour-coat).

## SAMIAN

FROM NOTES BY G. B. DANNELL

Only those stratified groups which provide part of the prime dating evidence are included here. A list of the numbers of vessels represented of each form and source and date range has been prepared as has a catalogue by context group of all the samian not listed below. Copies of these are available on application to the Museum of London Department of Urban Archaeology.

The abbreviations CG, EG, SG and M de V stand for Central Gaul, East Gaul, South Gaul and Les Martres de Veyre (Central Gaul). The numbers given indicate the number of vessels represented.

(Fig. 14, Nos. 387-391)

Trench A, Layer 28, ER 1596. Hadrianic

Drag 33, CG, one, Hadrianic

Trench A, Layer 16, ER 1587. Hadrianic

Drag 18, SG, one, Flavian

Drag 18, M de V, two, Trajanic

Drag 18R, SG, one, Flavian

Drag 27, SG, four, Flavian

Drag 29, SG, one, Flavian (?)

Drag 30, SG, one, c. AD 65-80. Germanus style

Drag 33, CG, one, Trajanic/Hadrianic

Drag 33, SG, one, Vespasianic

Drag 33, M de V, one, Trajanic

Drag 36, SG, one, Flavian

Drag 36, M de V, one, Trajanic

Drag 37, SG, two, Flavian

387. Drag 37, CG, one, IOENALIS style, c.f. Stanfield & Simpson (1958, Pl. 35, 412 and 413). c. AD 100-120 (illustrated).

Curle 11, SG, one, Flavian

Ritt 8, SG, one, Nero/Vespasian

Chip, M de V, one, Trajanic

Trench A, Layer 26, ER 1595. AD 125-160

Drag 27, SG, one, Flavian

Drag 27, M de V, one, Trajanic

Trench A, Layer 18B, ER 1590. AD 145-160

Drag 18, SG, one, Flavian (burnt)

Drag 18/31, CG, one, Hadrianic/Antonine

Drag 27, CG, one, Antonine

Drag 46, SG, one Late 1st to early 2nd century

Trench A, Layer 18A, ER 1589. AD 145-160

Drag 18, SG, one, 1st century

Drag 18R, SG, one, 1st century

Drag 18/31, CG, six, Hadrianic/Antonine

Drag 18/31, EG, one, Hadrianic/Antonine

Drag 18/31, SG, one, 1st century

Drag 27, CG, five, Antonine

Drag 27, SG, one, 1st century

Drag 31, CG, one, Antonine

Drag 31R, CG, one, Late Antonine

Drag 35, SG, one, 1st century

Drag 37, CG, one, Hadrianic

388. (1589/238) Drag 37, CG, one, IOENALIS style, c.f. Stanfield and Simpson (1958, Pl. 35, 412 and 413). c. AD 100-120 (illustrated).

Drag 37, M de V, one, Trajanic

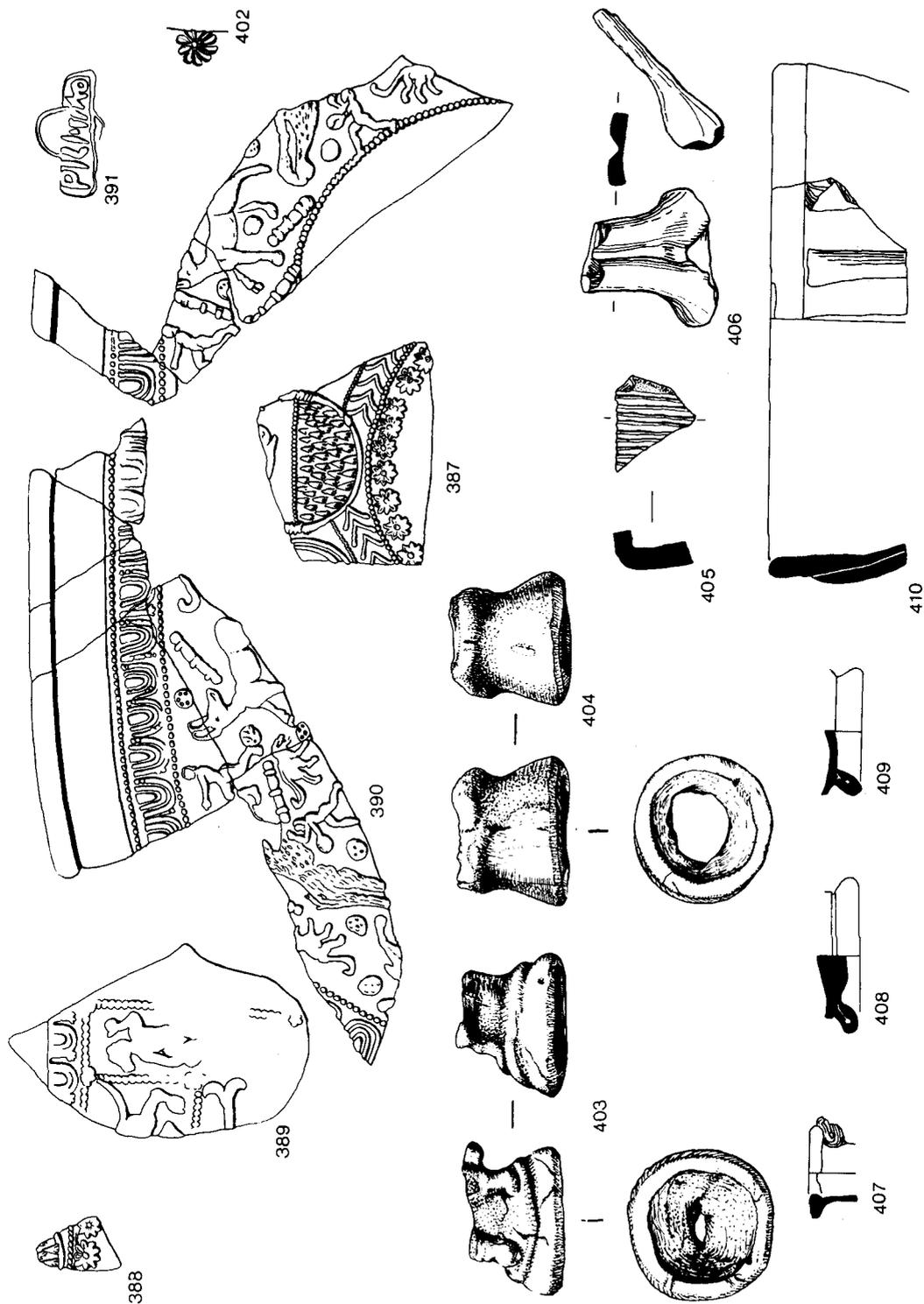


Fig. 14. Angel Court: Decorated samian Nos. 387 — 390 (1/2); samian stamps Nos. 391 — 402 (1/1); Roman ceramic figurines Nos. 403 — 404 (1/2); Roman glass Nos. 405 — 410 (1/2)

- Trench A, Layer 18, ER 1588. AD 145-160*  
 Drag 18, SG, one, Flavian/Trajanic  
 Drag 18/31R, M de V, one, Trajanic  
 Drag 33, SG, one, Flavian  
 Drag 37, SG, one, Flavian  
 chip, M de V, one, Trajanic
- Trench A, Layer 15, ER 1586. AD 150-250*  
 Drag 27, CG, one, Hadrianic
- Trench A, Layer 20, ER 1592. AD 120-250*  
 Drag 18/31, CG, two, Hadrianic/Antonine  
 Drag 30, CG, one, Antonine  
 Drag 31, CG, three, Late Antonine  
 Drag 31, SG (Montans), one, Antonine  
 Drag 31R, CG, one, Late Antonine  
 Drag 31R, EG, one, Late Antonine  
 Drag 31R without rouletting, EG, one, Late Antonine  
 Drag 32, EG, one, Late Antonine  
 Drag 33, CG, three, Antonine  
 Drag 33, CG, one, Antonine  
 Drag 33, CG, one, Late Antonine  
 Drag 36, CG, one, Antonine
389. (1592/242) Drag 37, CG (Lezoux), much abraded and partially covered by an indigo-coloured organic deposit. The ovolo is that given for DOCILIS cf. Stanfield and Simpson (1958, Fig. 24, 1) but the style is closer to the early work of SACER (*ibid.*, Pl. 84). *c.* AD 120-145 (illustrated).  
 Drag 37, CG, one, Antonine  
 Drag 37, CG, one, Late Antonine, DOECCVS style.
390. (1592/227), Drag 37, EG (La Madelaine), one, ALBILLVS style cf. Folzer (1913, Fig. 25) for the details. Most importantly the ovolo (detail 123) does have a tongue. It lies right. It ends in a rosette or a group of dots and is very faint. *c.* AD 125-150 (illustrated).  
 Drag 38, EG, two Late Antonine  
 Drag 43, CG, one, Late Antonine  
 Drag 45, CG, one, Late Antonine
391. (1592/251) Drag 46, EG, one, stamped PRI·IMō. Brenda Dickinson comments: *Premo 2a*, an East Gaulish potter, presumably working at one of the Argonne factories, since another of his stamps is from Reims. All the known examples of die 2a are from London, one on form 80. *c.* AD 150-200 (illustrated)  
 Drag 72, CG, one, Antonine  
 Drag 72, EG, one, Antonine  
 Drag 81, CG, one, Late Antonine

## SAMIAN STAMPS

BY B. R. HARTLEY AND BRENDA DICKENSON

- 392 (1601/250) Augustinus 7a, AVGVSTINVS, on form 31. Waiblingen-Bernstein and Rheinzabern (not attested at a pottery, but other stamps of the potter known there). The stamp, not recorded in dated contexts, was used on a variant of Ludowici form Tb. Since he began work at Waiblingen and one of his stamps occurs at Newstead, he is not likely to have worked in the 3rd century, but as he also made a form 32 a range *c.* AD 160-200 is possible. From Area B, Context 3.
- 393 (1598/270) Caletus 2a, CAL·ETIM, on form 33, who is known from a mould to be a Lezoux potter, but die 2a only appears on forms 31, 31R and 33. It turns up at Rainbridge, Catterick and Malton and there are many examples from Pudding Pan Rock, *c.* AD 160-200. From Area B, unstratified.
- 394 (1598/273) Celsianus 1a, CELJSAI·OF, on form 33. Known from Lezoux, as well as from Rainbridge, Binchester and Catterick. It is used on forms 31R, 79 and 80, *c.* AD 160-190. From Area B, unstratified.
- 395 (1610/247) Cerialis; 2a, CERJIALIS[FC, on form 15/17 or 18. An uncommon potter, whose stamps have generally been taken to be South Gaulish. However, several of the stamps recorded from London are burnt (perhaps in the Second Fire?) and he may have been one of the early potters of Les Martres-de-Veyre. Another stamp occurs at Watercreek. Late 1st or early 2nd century. From Area B, Context 12.
- 396 (1608/246) Dagodubnus ii la, DAGODV̄NVSF on form 33. The potter, who specialised in this form, worked at Rheinzabern in the late 2nd or 3rd century. From Area B, Context 10.
- 397 (1598/272) Flavius Germanus 9k, OF FGJER on form 18. He must have worked at La Graufesenque, but the only evidence is from C.I.L. There are stamps from Banassac, but 9k is presumably from La Grauf. It occurs at Brecon, Carmarthen and Nijmegen (Ulpia). His other stamps are quite popular at places like Butzbach, Cannstatt and the Saalburg, and there is no hint that he worked in the pre-Flavian period, 6. AD 70-100. From Area B, unstratified.
- 398 (1610/249) Lucundus ii 3a, OFJIVCVNDI on form 29 with no surviving decoration. Stamp attested at a pottery in La Graufesenque. Used mainly on form 29, the stamp occurs at Nijmegen (VN), Rottweil and probably at York. *c.* AD 65-85. From Area B, Context 12.
- 399 (1582/248) Matina 3e, MATINA on Curle 15, known at Rheinzabern. There are no satisfactorily dated sites for this particular stamp, but a similar one has been recorded twice at Niederbieber and also at Benwell. A date of *c.* AD 180-220 seems likely. From Trench A, Layer 9.
- 400 (1605/278) Monti . . . 6a, OFJMONTC on form 27g. La Graufesenque (not attested at a pottery but similar stamps known here). The stamp, presumably representing a partnership of potters whose full names are not known, is recorded from Chester, the Nijmegen fortress, Ribchester, Rottweil and York and, once, on form 29. *c.* AD 65-85. From Area B, Context 7.
- 401 (1610/245) Santianus 2a, SAN[TIA]NIO on form 31. Lezoux (attested at a pottery). The stamp also occurs at Corbridge. Santianus made forms 31R, 79 and 80 and so must have been working *c.* AD 150-190. From Area B, Context 12.
- 402 (1625/274) A rosette on form 33, not otherwise known, is presumably Central Gaulish and 2nd century. From Trench E, Layer 1 (illustrated Fig. 14). See also No. 391.

## CERAMIC FIGURINES

BY FRANK JENKINS

*(Fig. 14, Nos. 403-404)*

- 403 (1592/83) This is a rather badly moulded and distorted hollow plinth of a figurine of which only the feet of a human figure wearing boots, and a small piece of the hem of a garment seen as a small projection above the left foot, now survive. The clay is reddish in colour with a light grey core, and visually is typical of the fabrics of many clay statuettes made from the local clay at Trier (Augusta Treverorum) in Roman times in the potteries situated just outside the south gate of the city. The figurine was evidently made in the usual manner in a two-piece mould, front and rear, and the resultant casts were then luted together. The surface of the plinth has been roughly smoothed, presumably by the fingers in a not too successful attempt to obscure the vertical joints where the two halves were luted together before firing in the kiln. Unfortunately, as this example is too incomplete any identification of the subject it represents must be highly tentative. If the size, the style, the boots and the piece of the hem of the garment are any guide it is possible that in its complete state it was the figure of a man of stumpy, dwarf-like proportions, wearing a *cucullus* the everyday hooded cloak worn by the inhabitants of north-east Gaul. Figurines of hooded dwarfs, the so-called *genii cucullati* were a speciality of the figurine modellers of Trier where they appear to have been very popular. They were used as grave-goods and as offerings to the gods at the temples in that part of the Mosel valley. The makers used the local red clay as also white clay imported from elsewhere, probably from around Cologne. From the little evidence we have concerning the dating of these figurines a date in the first half of the 3rd century if not the last decade of the 2nd seems possible. See Krüger (1934, 137-139, 164-173, Figs. 34-37, Pls. 15-23), Gose (1975, 51-54, Pl. 35 Nos. 10-16), Hettner (1901, Pl. 11 and 13), Loescheke (1938, Pl. 21 No. 4). Also Jenkins (1953, 86-91, Pl. 1) which discusses the distribution and significance of the figurines of the *genius cucullatus* and illustrates a complete figurine found in a grave at Jagsthausen, Württemberg as also part of another found at Reculver. From Trench A, Layer 20 (illustrated).
- 404 (1582/215) This is a plinth in the form of a hollow reel having a concave profile. Plinths of this type frequently occur in the long series of figurines made at Trier, but as no trace of the figure survives it is quite impossible to say what type it was. It could have been a deity, such as Venus, Fortuna or Minerva, or a bust of some anonymous personage. The fracture scar on the top of the plinth suggests that it was not another *genius cucullatus*. The fabric is so similar to the one described above, that there seems to be strong reason for thinking that the two were made in the same general region, presumably at Trier. The presence of this plinth in a much later deposit must indicate that it is a rubbish survival for the manufacture of clay figurines at Trier seems to have ceased by the mid-3rd century. Residual in Trench A, Layer 9 (illustrated).

## GLASS

FROM NOTES BY DR. D. B. HARDEN

*(Fig. 14, Nos. 405-410)*

Many small fragments were recovered from the excavations but only those from vessels large enough to be drawn and identified are included in this report.

- 405 (1592/57) Part of the right-angled bend of a many-ribbed handle in colourless glass. The two ends of the handle would have joined the shoulder and the neck of a one or two-handled bottle. First half of 2nd century. From Trench A, Layer 20 (illustrated).
- 406 (1592/153) Bottom part of a two-ribbed, olive green handle, with part of attachment to body. This may come from a globular flask from which the handle splayed outwards at an angle, curving in again to meet the neck or rim. From Trench A, Layer 20, and therefore not later than c. AD 280 (illustrated).
- 407 (1582/16) Rim and top of neck of a green, one handled bottle, square in horizontal section. The handle is multi-ribbed and the rim folded upwards then inwards and pressed flat on top. Probably 2nd or 3rd century. From Trench A, Layer 9 (illustrated).
- 408 (1582/131) Complete folded base ring with tubular hollow in a greenish nearly colourless glass. Perhaps from a deep bowl but more probably from a bulbous flask or jug. Heavily strain-cracked. Possibly 4th century but more probably 3rd. From Trench A, Layer 9 (illustrated).
- 409 (1582/42) Small fragment of another similar base ring in a completely colourless glass. Date and provenance as for No. 408 (illustrated).
- 410 (1598/3) Fragment of rim and side of a bluish green pillar-moulded bowl with nearly vertical sides. The whole inside and the outside of the rim are wheel-polished and the remainder of the outside is fire-polished. Second half of 1st century. From Area B, unstratified (illustrated).

## COINS

BY RALPH MERRIFIELD

*Area A, Layer 20 Fill of Walbrook stream tributary*

- 411 (1592/28) 1st century, illegible *dupondius*. Orichalc 26mm. Very worn.  
 O Head l., apparently bare, not radiate.  
 R Seated figure l.  
 ? *Barbarous dupondius* of Claudius, CERES AVGVSTA type.
- 412 (1592/34) 1st century, illegible *dupondius*. Orichalc 26mm. Very worn.  
 O Head r., Vespasian (?)  
 R Standing figure l.
- 413 (1592/59) Hadrian, 1st bust, AD 117-122, *dupondius*. Orichalc 26mm. Very worn.  
 O Radiate bust of Hadrian r. Inscription illegible.  
 R Illegible.
- 414 (1592/32) Antonius Pius, *as*. Copper 26mm. Worn or battered.  
 O Laureate bust of Antoninus Pius r., inscription illegible.  
 R Standing figure l. Inscription illegible except for S.C.
- 415 (1592/31) Faustina 1, *as*, commemorative after her death in AD 141. Copper 26mm. (R.I.C. *Antoninus Pius* 1161). Rather worn and battered.  
 O DIVA FA[VSTINA] Bust of Faustina r.  
 R AETERNI[TAS] Pietas standing l. by altar, raising r. hand.
- Area A, Layer 9 Dumped deposit above Walbrook Stream Tributary*
- 416 (1582/87) Trajan, *sestertius*. Late bust (Hill, 1970, 11-13, type L iii) AD 107-117. Very worn.  
 O Laureate bust of Trajan r., inscription illegible.  
 R Standing female figure facing, holding cornucopiae in l. hand, inscription illegible.  
 ? Felicitas (cf. B.M.C. III, Pl. 37, 11).
- 417 (1582/88) *Barbarous radiate*, minim-size, AE 10mm, late 3rd century. Little-worn.  
 O Radiate head r., almost off flan.  
 R Helmeted male figure standing l., holding spear in l. hand. Mars or Virtus type.
- 418 (1582/89) House of Constantine, AE 17mm, AD

330-335. Corroded.

O Bust r., inscription illegible.

R Two soldiers facing each other, each holding spear and leaning on shield; two standards between them. [GLORIA EXERCITVS] type, but inscription illegible.

- 419 (1582/27) Magnentius or Decentius, AE 19mm, AD 351-353. Corroded.  
 O Bare-headed bust r. Inscription illegible.  
 R Two Victories facing each other, holding shield inscribed [VOT/V/] MVL [X] [VICTORIAE DD NN AVG ET CAE.] type but inscription illegible.  
 ? Mint-mark.
- 420 (1582/73) Valens, AE 17mm, AD 364-375. Corroded. Mint of Lyons.  
 O Bust draped r., pearl-diademed. DN V[ALENS P V AVG]  
 R Victory standing l., holding wreath and palm. [SECVRITAS REIPVBLICAE] type (illegible). OF — l in field. Mint-mark [L]VGP.
- 421 (1582/72) Valens, AE 17mm, AD 364-378. Corroded.  
 O Bust draped r., pearl-diademed. [DN VALEN]S PF [AVG]  
 R Emperor draped, with r. hand dragging captive r., and holding labarum in l. [GLORIA ROMANORVM] type (illegible). Mint-mark illegible.
- 422 (1582/90) House of Valentinian, AE 18mm, AD 364-378. Very corroded.  
 O Illegible through pitting.  
 R Illegible. Victory standing l. holding wreath and palm. [SECVRITAS REIPVBLICAE] type.
- 423 (1582/88) AE 14mm. Illegible.  
 ? Late 4th century.
- Unstratified*
- 424 (1627/29) Commodus, *sestertius*, c. AD 183-189. Worn and battered.  
 O [M] C[OMM]ODVS AN[TON . . .] Laureate head of Commodus r.  
 R Inscription illegible. Hercules standing facing, head r. From Trench C, Layer 1.

## COINS FROM THE FILL OF THE STREAM-BED (Nos. 411-415)

The normal pattern of coins from the Walbrook stream ends abruptly in the reign of Antonius Pius, with the issue of AD 155 (see Merrifield, 1962), probably because flooding of the banks made the stream inaccessible soon after that date. In this respect the coins from the bed of this small feeder of the Walbrook conform with the expected pattern, since they end with a coin of Antoninus Pius, not closely datable, and another in commemoration of his wife Faustina, issued after her death in AD 141.

It is, however, a very small sample — only five coins — of which three are of the second century. In the series of 167 coins recorded from the main stream-bed of the Walbrook at Bucklersbury House, only 55 were of the second century (34%), as against 112 (65%) of earlier date. The proportions are therefore significantly different. Moreover, both first-century coins from the stream-bed at Angel Court are worn to the extent that they cannot be identified with certainty, so that it seems unlikely that they found their way into the silt of the stream before the second century. On coin evidence alone, therefore, it might be suspected that occupation of the banks of this tributary began much later than those of the main stream of the Walbrook farther south, as might perhaps be expected, but that it was interrupted at about the same time. There are, however, remarkably few coins for a Walbrook site, so that any deductions from them can only be very tentative.

## COINS FROM DUMPED DEPOSIT(S) ABOVE STREAM (Nos. 415-423)

The coins range from a very worn coin of Trajan to issues of AD 364-378, indicating that the dumping continued until after AD 364, at the earliest. Five of the eight coins found in the dumped deposit belong to the second half of the 4th century, and at least three (probably four) of them are of the period after AD 364. If the deposit is homogenous, these coins should therefore give a satisfactory *terminus post quem*.

## COPPER ALLOY

BY HUGH CHAPMAN

(Fig. 15, Nos. 425-434)

425. (1592/30) Brooch, cast, with incised decoration on the bow. M. R. Hull makes the following comments: This example clearly belongs to a small group which forms my type 179 (see Hull, 1977), a rare variety of which this is only the fifth to be recorded. Brooches of this type have two parallel bows each of V-section, and an almost cylindrical head, housing a spring. The bars of the bow are hollow and the catch is transverse. This typical form occurs at Caister by Norwich (Hull, 1977, No. 6397), Westmorland (No. 6643) and Kirky Thore (No. 7598). A variant occurs at Great Chesters (No. 6645) in which the bow is a single bar, moulded on the top to appear as three parallel bars with no aperture between them. Behind the whole is made hollow, as a single bar.

This example is a somewhat similar variant in which the bow becomes single, but retains the single V shape while increasing the width. It is the first example to bear decoration. Probably late 2nd century. From Trench A, Layer 20 (illustrated).

426. (1601/2) Part of bracelet; made of a circular section iron core covered (except on the inside) by fine thin copper alloy strips. Three of the strips are decorated with fine oblique grooves. From Area B, Context 3 (illustrated).
427. (1582/22) Portion of ribbon strip bracelet with facets and grooves forming a lozenge pattern separated by transverse grooves from a second patterned zone of oblique side notches and central groove. From Trench A, Layer 9 (illustrated).
428. (1582/25) Circular finger (?) ring; much corroded.

From Trench A, Layer 9 (illustrated).

429. (1582/17) Oval penannular ring with circular section; perhaps a brooch. From Trench A, Layer 9 (illustrated).
430. (1598/161) Hair pin, shaft broken, knobbed head with transverse mouldings below. From Area B, unstratified (illustrated).
431. (1582/77) Key from rotary lock, *v.* London Museum (1930, 72). From Trench A, Layer 9 (illustrated).
432. (1610/19) Rim fragment of bowl or dish, probably straight sided. A sharp cut on the bottom edge indicates that the vessel was deliberately cut up for scrap. From Trench B, Context 12 (illustrated).
433. (1582/20) Fragment of sheet copper alloy with incised ring and dot decoration, and one large rivet(?) perforation. Perhaps part of vessel. From Trench A, Layer 9 (illustrated).
434. (1582/21) Strip of H-section bent into rough U-shape. Both ends have been cut off under heat; workshop scrap. From Trench A, Layer 9 (illustrated).

## LEAD AND LEAD ALLOYS

BY HUGH CHAPMAN

(Fig. 16, Nos. 435-436)

435. (1598/163) Cylindrical box; probably pewter though not analysed. The box has been flattened and both the base and (separate) lid are missing. There is a rebate for the lid and two parallel grooves run horizontally round the body, one about two thirds below the top, the other near the bottom. An irregular lattice pattern scratched with a fine point forms a secondary decoration in the band between the bottom of the lid rebate and the middle horizontal groove. From Area B, unstratified (illustrated).

Four other cylindrical pewter boxes of comparative size and with similar decoration and one lid are known from London, Museum of London Acc. Nos. 19279 (Walbrook, Bucklersbury House), 20839 (Walbrook, Bucklersbury House). *v.* Guildhall Museum (undated, 18 No. 2), 24766 (Thames, Public Cleansing Depot), 25421 (Thames, Blackfriars) and lid 21566 (Walbrook, Bank of England). In Britain the pewter series appear to be confined to London. Two cylindrical lead vessels are known from Newstead, *v.* Curle (1911, Pl. 54 Nos. 8, 10) but they are without rebates for lids and lack any horizontal decorative banding. A closer parallel is perhaps provided by the single complete silver cylindrical box in the hoard of silver plate from Traprain Law, *v.* Curle (1922, 77 No. 115 and Pl. 22) which, though it has a convex moulding a short distance below the rim and around the foot, clearly originally had a lid. The body is decorated with four bands of horizontal grooves. Fragments of four other cylindrical vessels also come from the same hoard, *v.* Curle (1922, 62-63, Nos. 92-95 and Pl. 25), but they appear to belong to a series of drinking vessels and were not lidded boxes.

The purpose of both the pewter and silver boxes is suggested by the dome-shaped toilet casket from the late 4th century treasure from the Esquiline Hill, Rome, *v.* British Museum (1977, 45 No. 89). Inside, the casket has four silver cylindrical lidded boxes located in holes cut in a raised floor. The boxes presumably held perfumes, essences and other toilet preparations belonging to Projecta, the lady named with her husband in an inscription on the lid of the large bridal casket in the same treasure.

In addition it might also be suggested that the cylindrical boxes of metal relate to a series of lathe-turned Roman circular wooden containers with lids known in the Roman world. There are several examples from London (Acc. Nos. 24052, 24489, and lids 19021, 19022, 24051) and on

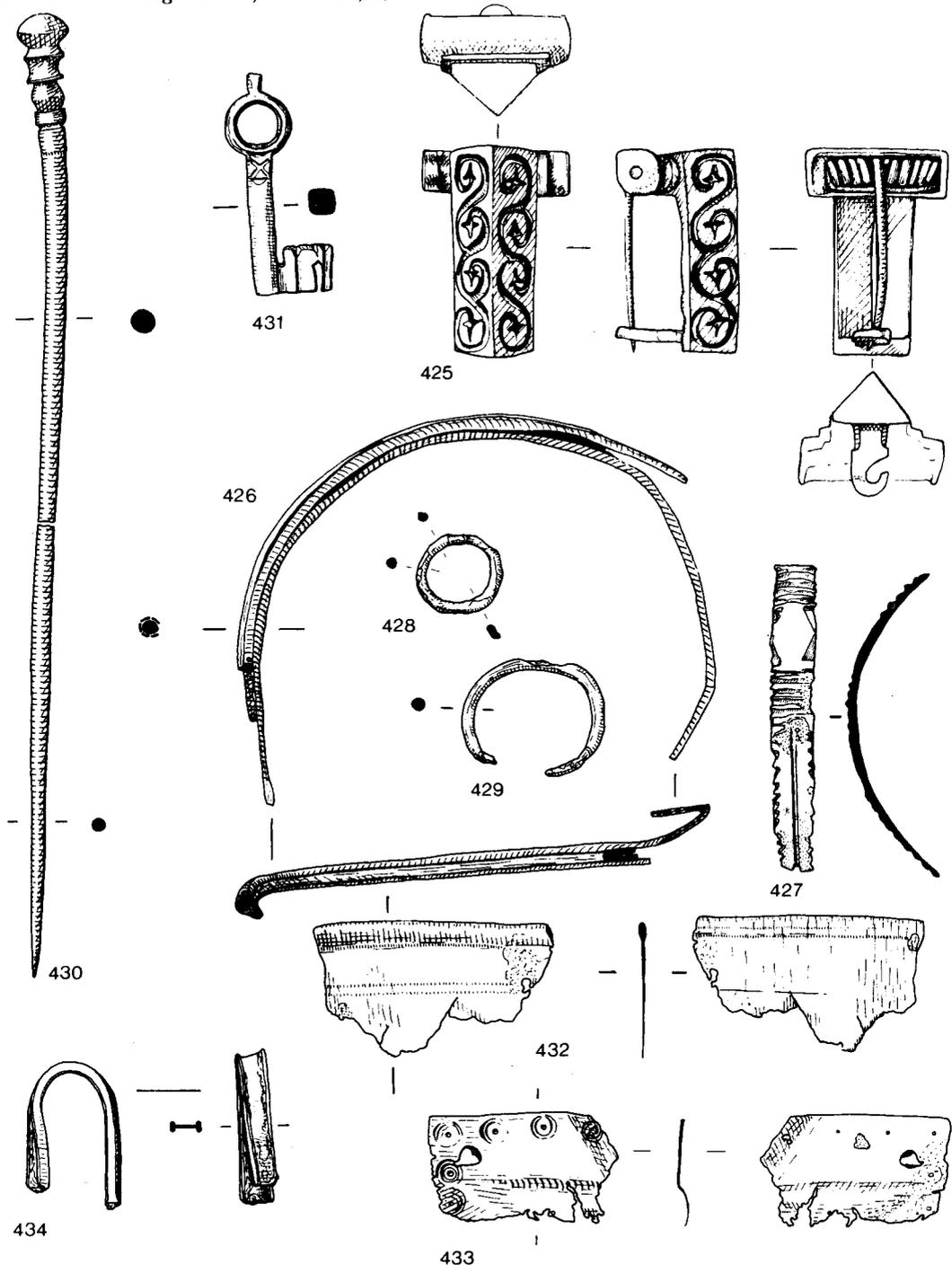


Fig. 15. Angel Court: Roman finds of copper alloy Nos. 425 — 434 (½, except Nos. 425 — 7 and 430 1/1)

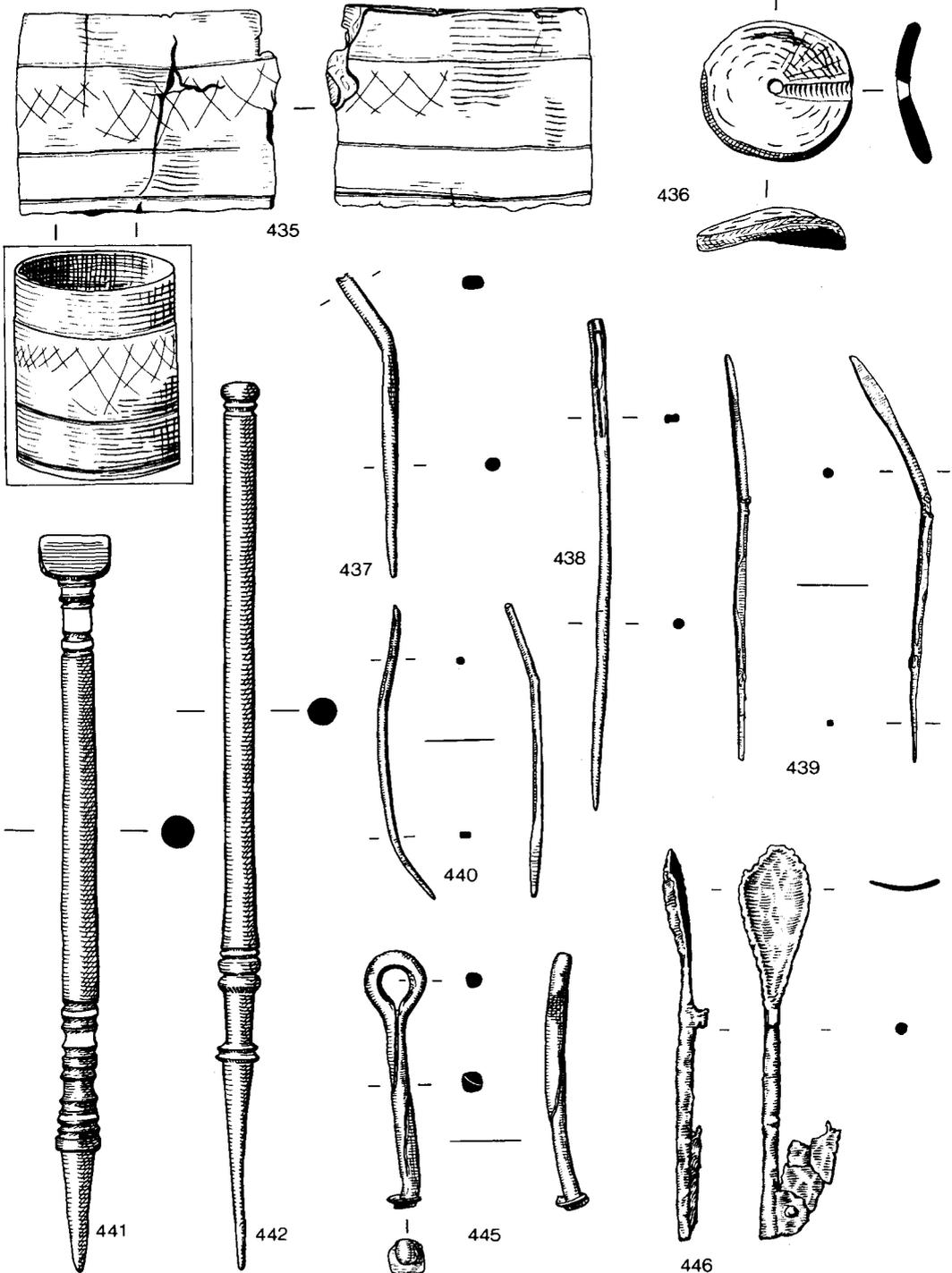


Fig. 16. Angel Court: Roman finds of lead and lead alloy Nos. 435 — 436 (½); Roman iron objects Nos. 437 — 446 (1/1, except Nos. 439 — 40, 445 — 6, ½)

examination one (24489) was found to contain a substance that proved to be lead carbonate surrounded by lead sulphide, perhaps a mixture of two cosmetic pastes.

Though the Angel Court box is unstratified the majority of the pewter pieces from Roman London come from the stream bed of the Walbrook, usually the Bucklersbury House site or other sites which can be considered Walbrook deposits, and can be dated with some confidence to before *c.* AD 155, Merrifield (1962). In addition to the cylindrical boxes the range from London includes two plates (18220, 18221) *v.* Peal (1967, 21), a patera handle (19793), two spoons (19490, 20373) *v.* Guildhall Museum (undated, 18 Nos. 3-4) and a jug (10608). The dating of the bulk of the Roman pewter from London to before *c.* AD 155 and before the suggested date of *c.* AD 250 for the start of the pewter industry in Britain, Peal (1967), Liversidge (1968, 207), suggests that it is a special group. It is perhaps significant that the forms of many of the London pieces, notably the plates and boxes, are not found in the later pewter hoards. It seems likely that London for some reason was the centre or recipient of a pewter industry active before the middle of the 2nd century AD.

436 (1628/191) Circular disk with central hole and raised rim on one side. The object has been bent where a groove has been struck from the central hole to the rim. Perhaps a perforated weight or a loom weight rather than a spindle whorl, see Cunliffe (1971, 144 No. 8 and Fig. 66). From Trench F, Layer 5 (illustrated).

## IRON

BY HUGH CHAPMAN

(Fig. 16, Nos. 437-446)

- 437 (1592/60) Small needle, shaft bent, head broken at base of eye. From Trench A, Layer 20 and therefore not later than 3rd century (illustrated).
- 438 (1590/88) Needle; oblong eye. From Trench A, Layer 18b and therefore not later than *c.* AD 160 (illustrated).
- 439 (1592/65) Strip, pointed at one end, the other partly hammered to flat spatulate form. Perhaps an unfinished stylus or *ligula*. From Trench A, Layer 20 and therefore not later than 3rd century (illustrated).
- 440 (1592/92) As No. 439 (illustrated).
- 441 (1592/70) Stylus with five decorative bands of copper alloy. From Trench A, Layer 20 and therefore not later than 3rd century (illustrated).
- 442 (1598/67) Stylus. From Area B, unstratified (illustrated).
- 443 (1589/78) Fragment of stylus. From Trench A, Layer 18a and therefore not later than *c.* AD 160.
- 444 (1589/49) As No. 443.
- 445 (1592/64) Loop formed by a rod doubled back and ends twisted together. The two ends together form a hammered stud-end holding a small rectangular plate. Probably a swivel-link from an iron hanging lamp *v.* Price (1873, Pl. 11 No. 2) and Curle (1911, 307 and Pl. 79 Nos. 6 and 7). From Trench A, Layer 20, therefore not later than 3rd century (illustrated).
- 446 (1592/61) Spoon with folding knife blade. Mr. David Sherlock writes: "One of a small class of spoons from Roman Britain which may be called folding spoons. The type represented here does not have a handle hinged to the bowl, but a hinge for a blade at the other end. Part of the blade survives here. There is a bulge half-way along the handle which radiography has shown to be a repair where the handle broke in two. The bowls of these type have an elongated shape and a raised notch where they meet the handles. Two other examples of this type are known, one in copper alloy from London (M.o.L. Acc. No. 20086) and a second from Cow Roast Inn, Hertfordshire. For a fuller note *v.* Sherlock (1976, 250-255)." From Trench A,

Layer 20 and therefore not later than 3rd century (illustrated).

(Fig. 17, Nos. 447-456).

- 447 (1598/87) Socketed ballista or catapult bolt; common type, see e.g., Brailsford (1962, 6 Nos. B117-183 and Pl. 6). From Area B, unstratified (illustrated).
- 448 (1609/24) Twist-bit from auger with four-sided pyramid shaped butt for insertion into wooden handle or chuck; shaft twisted for boring. From Area B, Context 11 (illustrated).
- 449 (1605/41) Awl with characteristic heavy four-sided handle, see e.g., London Museum (1930, Pl. 32 Nos. 10 and 11). The junction of the base and shaft is decorated on each face with a repeated pattern of incised grooves. From Area B, Context 7 (illustrated).
- 450 (1605/50) Handle strap from wooden bucket. Perhaps not fully fashioned before being deliberately bent in two places. Two handle straps were fixed (usually rivetted or nailed) vertically opposite one another to the hoops binding the wooden body of the bucket. The ends of the carrying handle hooked through the two loops at the top, *v.* Neal (1974, 187 No. 673 and Fig. 79). From Area B, Context 7 (illustrated).
- 451 (1601/48) Rake tine; the thinner ends of the tines were hammered through a wooden rake head at regular intervals and then clouted over at the top to ensure they were fixed. The top is missing from this example. The curve of the tines pointed towards the user of the rake, *v.* Curle (1911, 283 and Pl. 61 No. 7). From Area B, Context 3 (illustrated).
- 452 (1587/74) Four-sided shaft, tapering, to a point; no proper head. From Trench A, Layer 16 and therefore not later than *c.* AD 120-40 (illustrated).
- 453 (1609/35) Fitting, one end beaten out and perforated with a circular hole. From Area B, Context 11 (illustrated).
- 454 (1592/69) Split-spike loop; a common structural fitting. From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
- 455 (1598/188) Split-spike loop. From Area B, unstratified (illustrated).
- 456 (1605/84) Rectangular plate; the four sides have been neatly bent over. An oblong (nail) hole has been roughly driven through the centre from below. Use uncertain. From Area B, Context 7 (illustrated).
- (Fig. 18, Nos. 457-464).
- 457 (1590/89) Fragment of iron sheet with rounded flange along one edge. From Trench A, Layer 18b and therefore not later than *c.* AD 145-60 (illustrated).
- 458 (1592/140, 1592/216-218) Four thin iron bars with rectangular sections, some bent; either scrap or

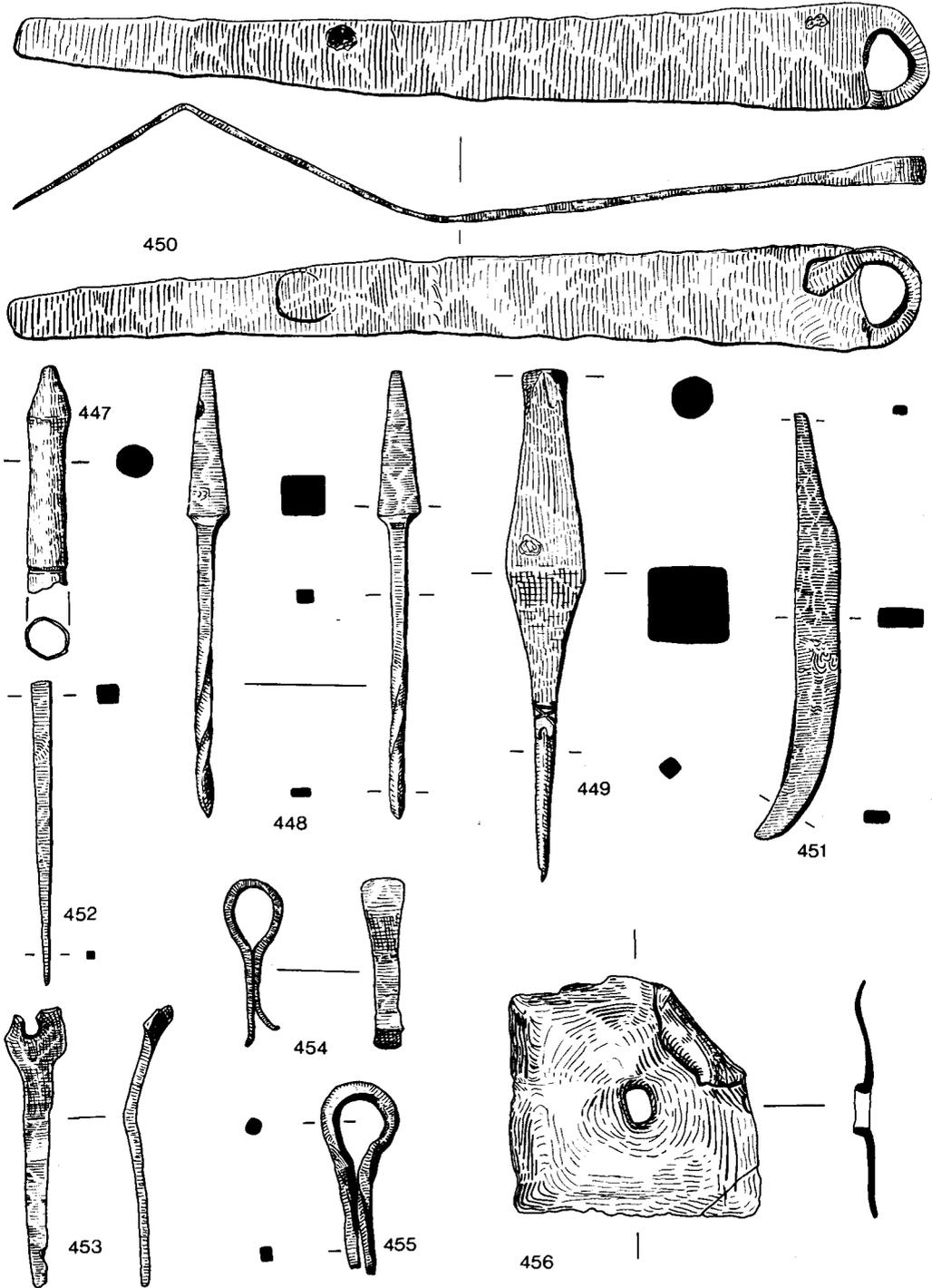


Fig. 17. Angel Court: Roman iron objects Nos. 447 — 456 (1/2)

- unfinished articles. From Trench A, Layer 20 and therefore not later than *c.* AD 280.
- 462 (1605/42) One thin iron bar, as above. From Area B, Context 7.
- 463 (1592/95) Thin bar, bent at two points and one end flattened; unfinished needle (?) From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
- 464 (1582/39) Curved strip of sheet iron, with rectangular side protrusion; purpose not clear. From Trench A, Layer 9 (illustrated).

## IRON NAILS

BY MICHAEL RHODES

(*Fig. 18, Nos. 465-469*).

164 iron nails were recovered from the Roman deposits in Trench A. 82 of these are from Layer 20; 30 are from the infill of the ditch (Layers 18 and 18B) and 24 come from Layer 16 which represents some of the earliest activity on the site. The few examples which were recovered from the other trenches are not discussed here. The nails are, in general, fairly well preserved, particularly where they come from waterlogged, silty layers and it has been possible to sort most of them into four types which are here described. Only 18 are so badly corroded as to prevent the recognition of their original shape.

*Type 1* (No. 465) Nails with square-sectioned shanks, tapering to a point and flat, oval or rounded heads.

In most examples the shanks stem from the centre of the heads, although 11 nails have shanks which appear to stem from one side. These examples have not been treated as a separate type as so many of them appear to have been damaged in antiquity.

Nails which fall into the category of *Type 1* represent by far the most common Roman variety in this country and are also the most frequently encountered type on this site with a total of 132 coming from layers 16, 20, 26, 18B, 15, 13, 7 and 9. They vary between 26 and 129mm in length, although about 80 per cent are between 42 and 76mm long. Cleere (1958, type 3) suggests that similar nails from Brading would be suitable for hanging tiles, joining smaller timbers and fixing hinges and other fittings.

It was decided to try to assess whether the Angel Court nails of this type could be further subdivided on the basis of their dimensions or whether there were any significant dimensional differences between nails from different deposits and of different dates of burial. To do this their dimensions were plotted as a scatter diagram in which each nail was represented as a point along a vertical axis showing maximum width of head and a horizontal axis showing the total length, measuring from the tops of the heads to the points. Measurements taken were accurate to the nearest mm and where this accuracy could not be achieved because the nail was damaged, the information was not recorded. Nails from different layers were represented by different symbols.

Whilst this diagram did show differences between various layer-groups of nails, it was not clear whether most of these were significant in view of the small size of most of the assemblages. It was, therefore, decided to publish here (*Fig. 19*) only a much simplified form of the original diagram.

Figure 19 illustrates the dimensional variations of *Type 1* nails, showing that about 65 per cent are between 43 and 73mm in total length and have heads between 11 and 15mm maximum width. It also indicates that all the nails from layer 16 (the earliest layer which produced nails being deposited about *c.* AD 120-140) fall within these limits. It would be most hazardous to infer anything from this, although it is worthy of note that at Inchtuthil, the Domitian legionary fortress where a very large hoard of iron nails was recovered, about 87 per cent of the specimens of this type fall within these dimensional limits (Angus, Brown and Cleere, 1962).

By far the widest variety of these nails come from Layer 20, but since 47 per cent of them come from this one context, very little significance may be attached to this information. About one third were perfectly straight, as if they had never been used, but most of the rest were twisted, bent or curved as if they had been extracted for re-use or reforging. A few were bent at right angles part way down the stem as if having been driven through a piece of wood their ends were flattened to improve the grip or for reasons of safety.

*Type 2* (Nos. 466 and 467). Headless spikes with square sections tapering to a point. Some of these may be *Type 1* nails which somehow lost their heads in antiquity. Some may be unfinished nails — their heads not yet having been beaten into shape, although all were bent. Some have clearly been used, their ends being rounded by hammer blows, and two from Layers 18 and 20 have small heads, possibly accidentally formed as they were driven home (e.g., No. 467). 16 examples come from layers 16, 20, 18, 15 and from context 24, a timber from one of the revetments from which the spike was removed.

Measurable examples are between 50 and 180mm in length.

*Type 3* (No. 468) Nails with square or round-sectioned shanks, tapering to a point, and large, circular, coned heads, which could have been formed either by casting or by forging, possibly using a countersunk punch.

2 examples come from layers 18 and 13, their shanks being 102 and 68mm long, respectively.

No parallels are known outside London, although at least 14 other examples have been recovered from the Walbrook stream, and are now in the Museum of London. These are, however, very varied in size and in the precise shape of their heads. Accession Nos. 1664, 1668, 13807, 19931, 19943 and A69 (see London Museum, 1930, 77) are considered to be closely similar and Nos. 1663, 13809, 16299, 16356, 19476, 19561, 19657, 19862 are of the same general type. The nail from layer 13 (No. 468) is the shortest example known. The longest is Accession No. 13807 which is 204mm long, and the average length is about 118mm. Whilst the decorative nature of the heads might suggest that they could have been used as door studs, their length would indicate that they were probably not used for this purpose. They could, however, have been used in carts or wagons.

*Type 4* (No. 469) Long nails with square shanks which taper to a point. The head of the only certain and apparently unused example from Layer 18 (180mm long) was probably formed by beating one end of the shank flat and then over at right angles. Another nail from Layer 16 (148mm long) which might be of the same type, but could possibly be considered as a heavily-made example of Type 1, may have been badly forged as the shank appears to have split along a line of weakness whilst being driven into the wood. This apparently prevented the nail from being hit home as the head has been beaten over as if to lessen the extent of its protrusion. Such nails would have been used for fixing structural timbers.

## BONE AND ANTLER

BY HUGH CHAPMAN

(Fig. 18, Nos. 470-479).

(All the bone objects were submitted to Dr. J. Clutton-Brock, British Museum (Natural History), for bone identification and her findings are included below).

- 470 (1592/56) Pin; hand cut, rough ovoid head. From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
- 471 (1592/63) Pin; hand cut, knobbed head. Date and provenance as for No. 470 (illustrated).
- 472 (1592/62) Pin; hand cut, head missing. Date and provenance as for No. 470 (illustrated).
- 473 (1582/13) Pin; hand cut, cuboid faceted-knob head, point missing. From Trench A, Layer 9 (illustrated).
- 474 (1589/81) Fragment of pin shaft. From Trench A, Layer 18a and therefore not later than *c.* AD 145-160.
- 475 (1598/162) As No. 473 but from Area B, unstratified.
- 476 (1614/86) As No. 473 but from Area B, Context 16.
- 477 (1628/192) Fragment of needle, flattened head pierced with single oblong hole. From Trench F, Layer 5 (illustrated).
- 478 (1592/66) Handle of antler; one-piece with roughly carved circular cross-section; remains of iron tang of

knife or tool in centre. From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).

- 479 (1582/23) Scabbard slide; bone, probably from metatarsal of ox. Small projecting tongues have broken off from each end. By comparison with two identical ivory examples from Syria, where one is carved in one-piece with a scabbard, the object can be identified as a suspension loop for a scabbard of a long sword. The example from Angel Court was bound in a vertical position to the outer wall of the scabbard by thongs or cords passing through the two small circular holes leaving the central oblong aperture for the wearer's belt or baldric. Other identical examples are known from Denmark (Vimose deposit), Bulgaria and in Britain from South Shields and a second example from London itself (Bank of England site, 1928-34; Mus. Acc. No. 13963). This later example is carved from ivory. The origin of these characteristic scabbard slides remains uncertain but their affinity to a series of western Asiatic and Chinese slides suggests an Asian connection, perhaps with a specific group of barbarian troops employed in the Roman army. For a fuller note *v.* Chapman (1976b). From Trench A, Layer 9 (illustrated).

## WOOD

BY HUGH CHAPMAN

(The wood identifications are by George Willcox, Department of Urban Archaeology. All the writing tablets were submitted to Mark Hassell to see if any writing could be deciphered, but this proved impossible).

(Fig. 18, No. 480).

- 480 (1592/6) Fragment of writing tablet; the total height survives, and about a third of the width. The leaf, recessed to receive wax on one side only, was either the first or last page of a document. It has cracked

across the middle on the line of the binding cord; no writing visible (unspecified soft wood). From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).

(Fig. 20, Nos. 481-490).

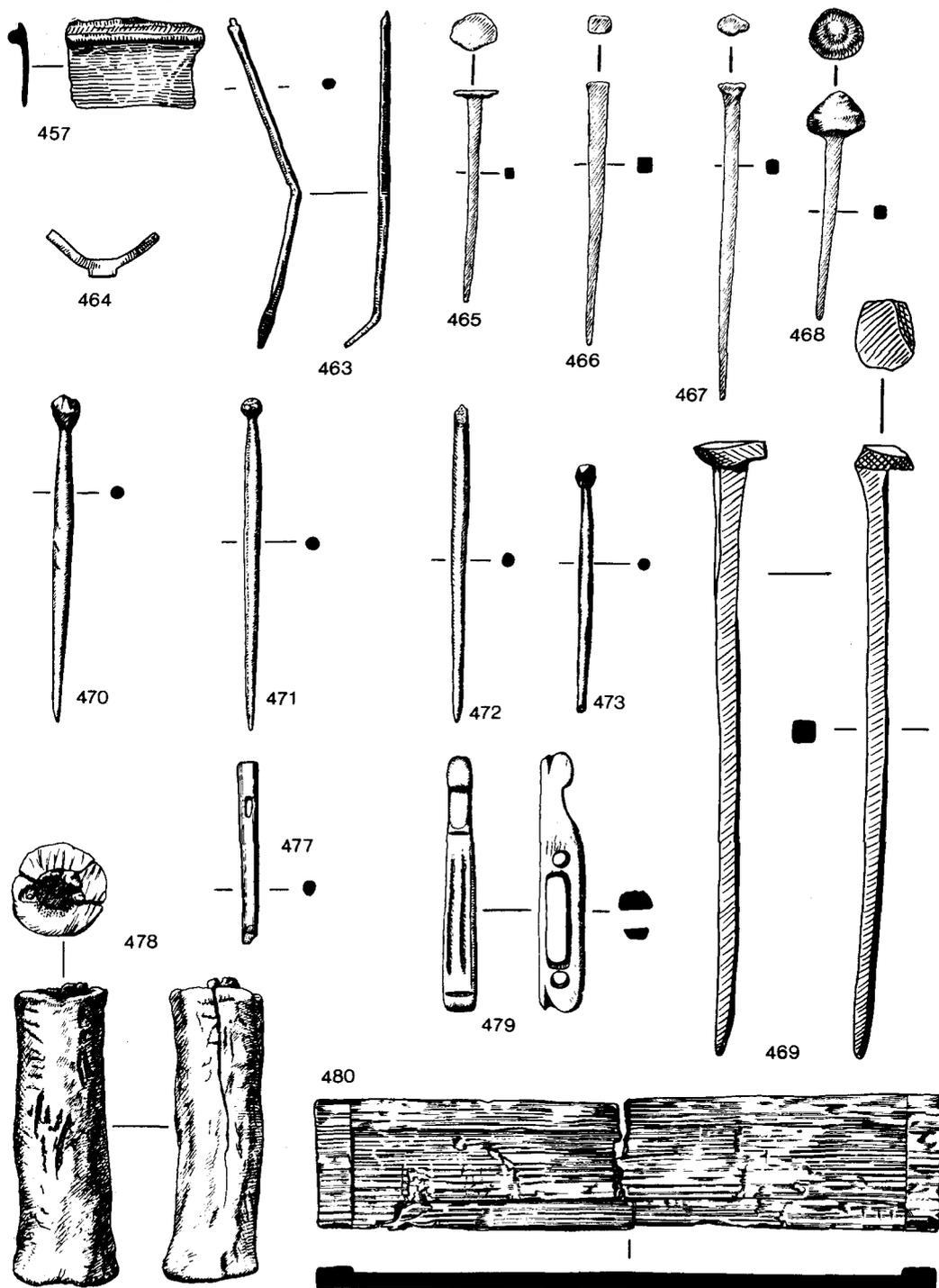


Fig. 18. Angel Court: Miscellaneous Roman finds Nos. 457 — 480 (½)

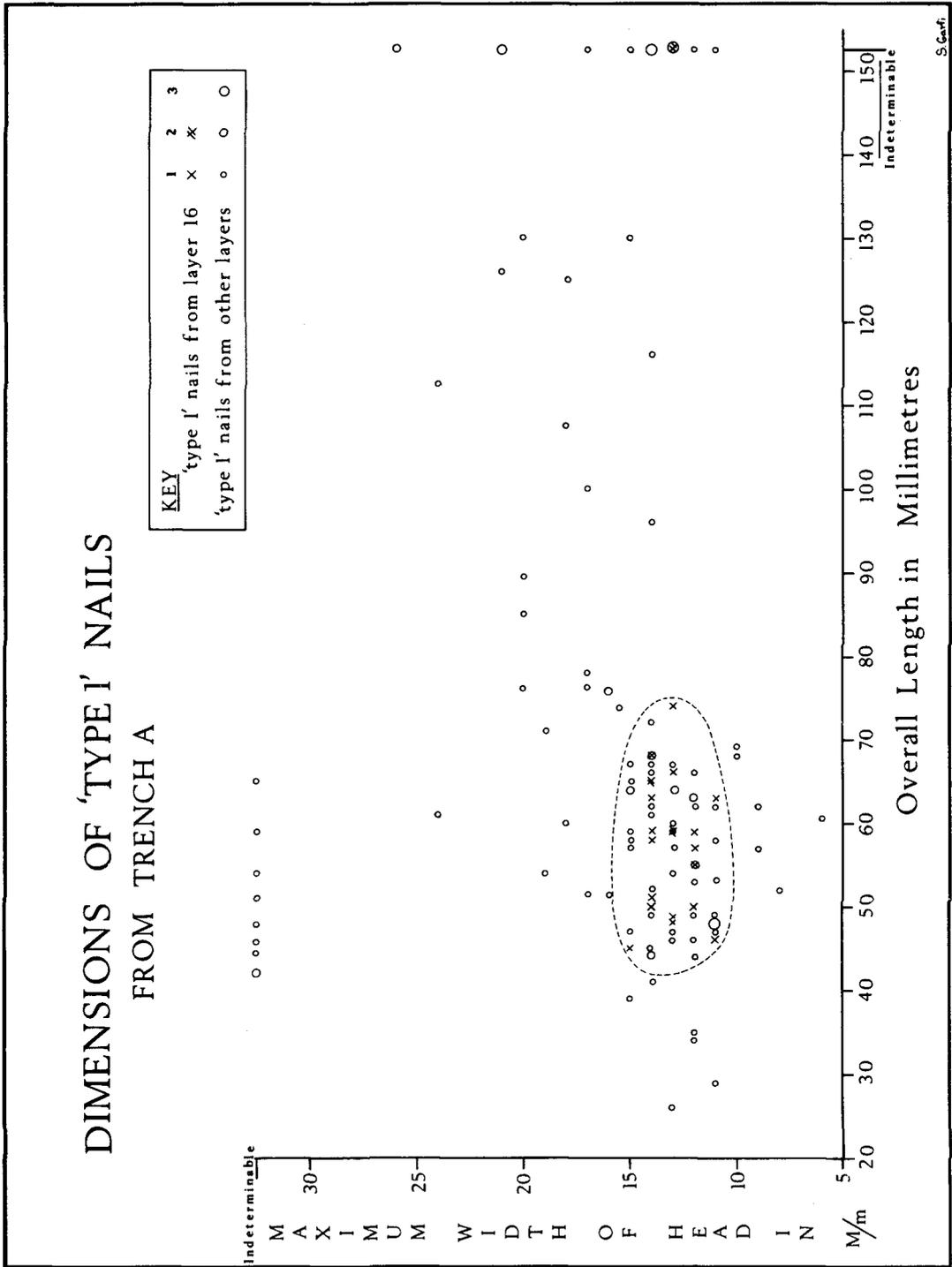


Fig. 19. Angel Court: Dimensions of Type 1 iron nails from Trench A

- 481 (1589/206) Fragment of writing tablet; two edges forming a corner and part of body; both sides recessed for wax and one has an incision indicating that this page had a wide horizontal groove cut across the middle. These grooves received the seal-impressions of persons called to witness the contents of the document; see Chapman (1976a, 66-68). Their names were written alongside the seal impressions and though there are traces of writing on this fragment they are unfortunately indecipherable (unspecified soft wood). From Trench A, Layer 18a and therefore not later than *c.* AD 145-160 (illustrated).
- 482 (1589/207) Fragment of writing tablet; edge and part of body, one side recessed for wax (unspecified soft wood). Date and provenance as for No. 481 (illustrated).
- 483 (1589/205) Fragment of writing tablet; edge and part of body; one side recessed for wax and with line of scratched writing (unspecified soft wood). Date and provenance as for No. 481 (illustrated).
- 484 (1590/168) Fragment of writing tablet; two edges forming a corner and part of body; both sides recessed for wax, one hinge hole (unspecified soft wood). From Trench A, Layer 18b and therefore not later than *c.* AD 145-160 (illustrated).
- 485 (1590/166) Fragment of writing tablet; two edges forming a corner and part of body; recessed on both sides; one hinge hole (unspecified soft wood). Date and provenance as for No. 484 (illustrated).
- 486 (1589/182) Fragment of writing tablet; corner; recessed on one side (unspecified soft wood). From Trench A, Layer 18a and therefore not later than *c.* AD 145-160 (illustrated).
- 487 (1592/175) Large circular spool or bobbin; lathe turned; use not clear. The absence of a central hole would preclude its use as a pulley or similar. Two similar bobbins are known from Newstead and also from Saalburg where it was suggested they were used for fastenings for tent doors, see Curle (1911, 311, Fig. 45.1). Perhaps a yo-yo, but the width of the central gap when compared with modern examples is wide. There are apparently no Roman representations of the game or examples known, but a claim has been put forward for a series of decorated ceramic spools from classical Greece to be identified as yo-yos, *v.* Gould (1975, 98 Figs. 58-59b). (wood, poplar or willow). From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
488. (1592/173) Rectangular fragment; one end broken; triangular section. Notch cut at an angle on one side. Perhaps head of tent-peg, *v.* Wild (1974), (wood, oak). Date and provenance as for No. 487 (illustrated).
489. (1590/185) Stave from small barrel or cask; with notch cut for disc base or top (unspecified soft wood). From Trench A, Layer 18b and therefore not later than *c.* AD 145-160 (illustrated).
490. (1589/169) Oblong piece of oak incised ]M[ on cross grain end face. The two long sides flanking the incised letter are split edges. It might be part of a wooden stamp for something like a tile (wood, oak). From Trench A, Layer 18a and therefore not later than *c.* AD 145-160 (illustrated).
- (Fig. 21, Nos. 491-492).
491. (1609/143) Bar, regularly fashioned with hexagonal section. A longitudinal straight groove or rebate has been carefully cut on each of two opposing sides. A small knob (or pivot?) protrudes from either end. The bar has been snapped, though not severed, in half

before being thrown away.

It is suggested that the piece is the vertical central bar of a window frame holding two panes of glass, one each fitting into the grooved rebate on either side and with the knobs at the two ends dowelled into either a wooden frame or a surround of different material. No wooden window frames are known from Britain, though they are mentioned as having been found at Pompeii, Mau (1907, 357). However, the dimensions (255 x 235mm) of a recently published complete pane of Roman window-glass from Garden Hill, Hartfield, *v.* Harden (1974) are sufficiently close to the length of the grooved rebate (300mm) of the Angel Court piece to make the suggestion plausible. Another complete pane of window-glass from Pompeii quoted by Harden, measured 330 x 270mm. An alternative suggestion might be that the piece is part of a panelled cupboard door or screen (unspecified soft wood). From Area B, Context 11 (illustrated).

492. (1598/197) Finial or baluster; lathe turned; one end broken, the other trimmed off with a knife. Purpose not certain, but perhaps a baluster from interior woodwork, or more likely a decorative finial from a vehicle or piece of furniture. It is too insubstantial to be the leg of anything but a child's stool or foot stool (wood not identified). From Area B, unstratified (illustrated).

#### LEATHER FOOTWEAR

BY J. H. THORNTON

(Fig. 21, Nos. 493-502).

*Trench A, Layer 16 c.* AD 120-140

493. (1587/116) Insole of nailed shoe. Right foot. Marginal indents on right side of toe-end following the ends of the toes; outside corner of seat worn or cut away. Deteriorated along outside and inside edges of forepart and waist; some delamination. Nail holes remain scattered in the forepart and set in line round the margin; there are circular depressions on the underside (flesh) where the nail heads resting on the original sole, now missing, have transmitted their pressure. The toe indents are a typical Roman feature. There is some undulation on the uppermost surface due either to the pressure of the foot in wear or to burial. Incisions on upper side may read VIII. Length: 205mm; width (across tread): 80mm (illustrated to show the grain surface of the up side).

*Trench A, Layer 18b c.* AD 145-160

494. (1590/114) Sole and insole of nailed shoe. Right foot. Both complete except for a few missing nails. *Sole:* the pattern is less curved than usual, the outside and inside edges being almost parallel. There were originally 37 nails: 25 round the margin, 6 in the tread, 1 in the waist and 5 in the seat; there are fewer along the inside waist than along the outside since the shoe sole is not subjected to so much wear here. About six nails are missing. On the flesh side the curved nail points are very prominent; their curvature indicates that they were turned by striking an iron last during shoemaking, see Thornton (1975). There are also a few smaller holes particularly at the toe and between the marginal nails and the actual edge suggesting that some repairs may have been carried out here to reunite upper and sole. *Insole:* roughly similar in shape to the sole but a rather more curved pattern and *c.* 10mm smaller all round. The nail holes correspond to those in the sole. The grain surface (uppermost) has developed many

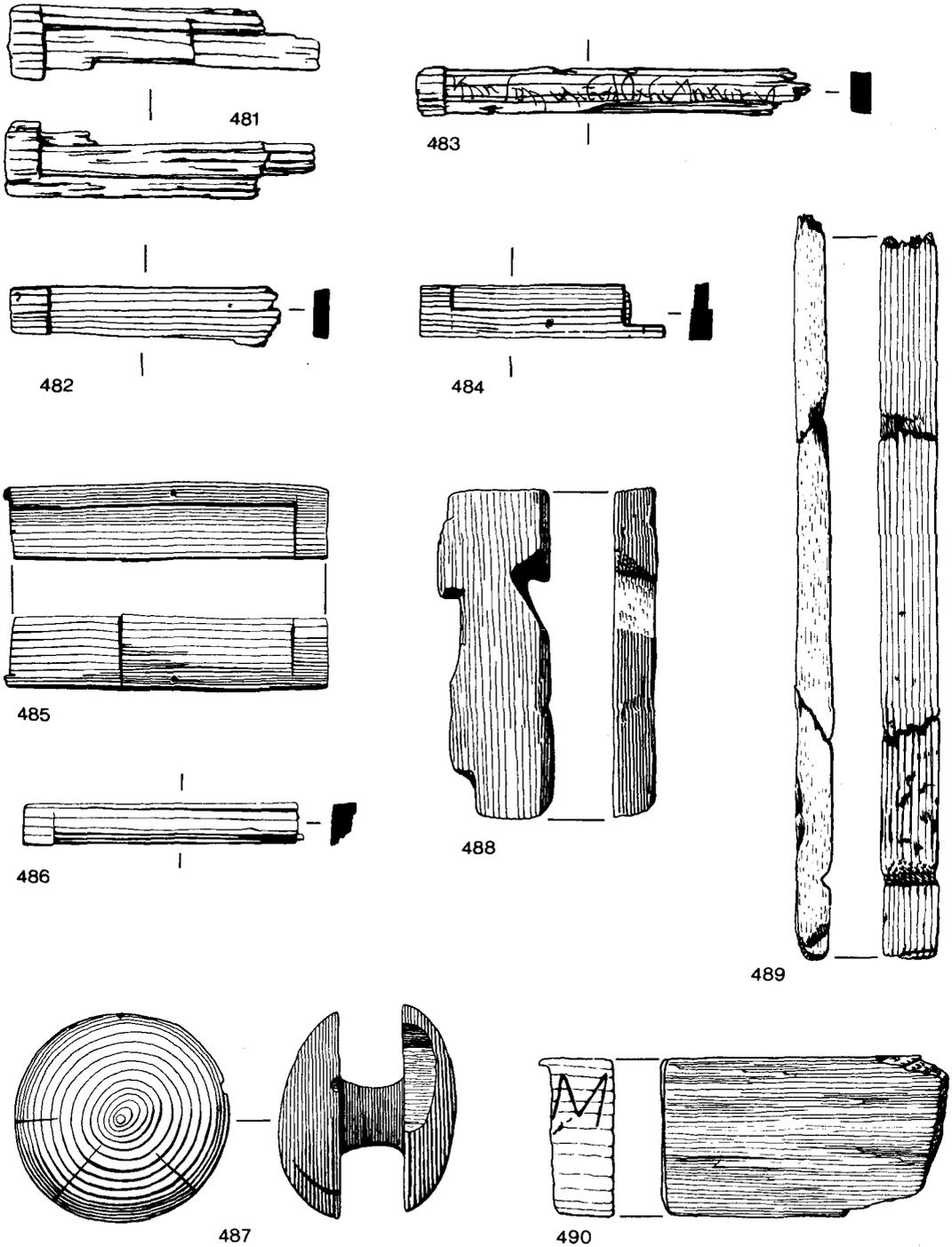


Fig. 20. Angel Court: Roman wooden objects Nos. 481 — 490 (1/2)

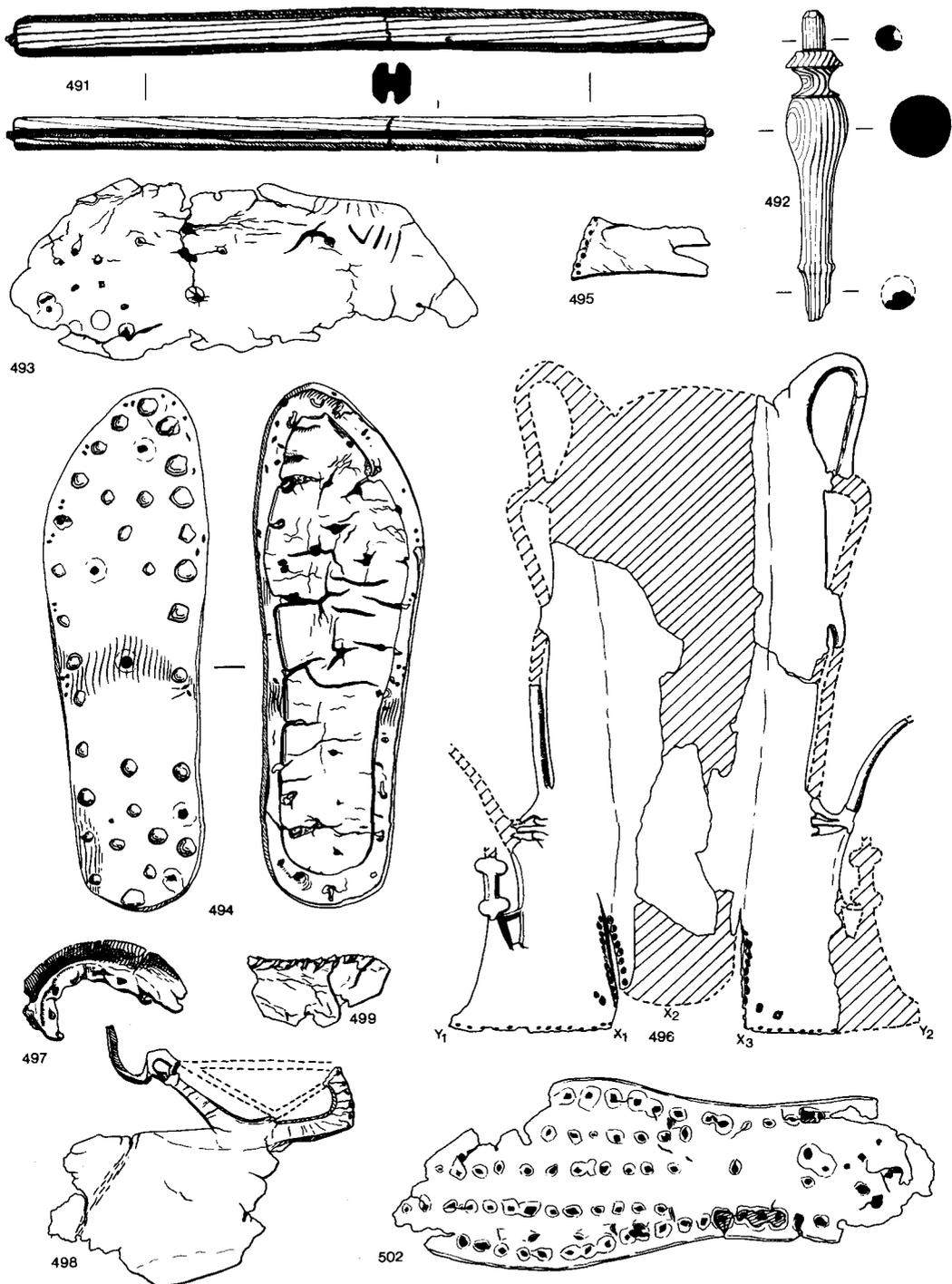


Fig. 21. Angel Court: Roman wooden objects Nos. 491 — 492 ( $\frac{1}{3}$ ); Roman leather shoes Nos. 493 — 502 ( $\frac{1}{3}$ )

- cracks (illustrated to show grain side and also flesh side with insole superimposed).
495. (1590/124b) Fragment of upper tie-strap (?). Bifurcated at one end but with the two legs now torn and incomplete. The opposite end has a row of fine stitching holes, 5.0mm separation, where it was joined to the rest of the upper. One of the sides has a torn edge and there is a slight indication of stitch holes here so possibly the section was originally wider than it is now (grain side illustrated).
496. (1590/160) Fragments of a moccasin-type shoe. Formed from a single piece of leather which passed upwards either side of the foot from underneath, see Thornton (1970). The adjoining edges at the toe-end and the back were stitched together (the holes still remain at the back, stitch length *c.* 4.5mm) and a lace held the two sides together over the forepart and instep of the foot, see Thornton (1975). The sole part of the present shoe has now disappeared and so has most of the tracery pattern of straps which originally formed the top of each side of the upper; several detailed pieces of tracery remain. The back construction is still used in modern moccasins; see Thornton (1970). (Illustrated from the underside as is opened out, with conjectural areas shaded.  $X_1$ ,  $X_2$  and  $X_3$  would have been stitched together.  $Y_1$  would have been stitched to  $Y_2$ .)
- Trench A, Layer 18a c. AD 145-160*
497. (1589/122) Portion of upper backpart (?). Showing the lasting margin and some of the quarters (?). The impression inside of the edge of the insole is very marked as are the scallops caused by stitching or bracing during lasting. The stitch holes have a separation of *c.* 1.1mm suggesting bracing rather than permanent stitching. As this specimen is only *c.* 20mm high (above the angle), tapers in thickness to a cut top edge and has the grain inwards it may possibly be part of a *heel stiffener* rather than the actual upper itself, see Charlesworth and Thornton (1973). Height *c.* 20mm, width of lasting margin *c.* 15mm (illustrated to show grain surface of the up-side).
498. (1589/180) Portion of sole and upper. Probably from a moccasin (see No. 5). Has the remains of the top-edge tracery with stitch holes, 5mm apart possibly where the back was stitched to an adjoining edge (illustrated as if opened out with the grain surface of the sole and outside showing).
- Trench A, Layer 20 c. AD 120-280*
499. (1592/99) Sixteen fragments, possibly from a moccasin as some have tracery stamps (some may be laminae of the same section). One piece with large holes and scallops could be part of a lasting margin which was braced across the insole. Another has "hemstitched" leather thonging along one edge (illustrated) although it is not obvious how this piece was placed.
500. (1592/101) Four fragments. One with many holes is probably part of a bottom section (insole or middle).
501. (1592/102) Fragments of sole (or other bottom section) of a nailed shoe; two nails remain and there are many empty holes. The nails show the typical curvature caused by striking an iron last (see No. 494).
502. (1592/105a) Sole of nailed shoe for a right foot. Outside of forepart edge and back of seat now worn away. The nail holes are arranged in: (i) a continuous line round the edge of the sole; (ii) in three lines down the forepart (one straight and two curved); (iv) one in the waist; (v) a scatter in the seat. As some parts are now missing the exact number of nails can no longer be determined but as some 75 still remain, there may have been as many as 100 originally. The positions of the nails may be seen by their impressions although none remain *in situ*. Holes from large tunnel stitches may be seen on the flesh side (inside) of the sole (the flesh side is illustrated).
- (Fig. 22, Nos. 503-511).
503. (1592/105b) Heel seat part of a nailed shoe bottom. Consists of fragment of sole, possibly a middle and an insole. Eleven large nails remain *in situ* and there are several empty holes; the curled points rest on the insole surface. There are insufficient signs of wear to indicate whether this piece came from a right shoe or a left one (illustrated).
504. (1592/106) Moccasin-type shoe. In fragments, with remains of "tracery" tie loops each side and typical back construction with stitch holes, 6mm separation and marked edge scalloping. The forepart and the heel seat of the "sole" area have worn away in parts. (Illustration shows grain side, i.e., outside with sides of shoe flattened out. The free ends at the heel in fact join).
505. (1592/107) Fragments of nailed sole and filler. Left foot.
- Sole:* many nail holes and a few nails *in situ*. The forepart and waist of the sole are now separated and the heel seat is missing. The nails, as usual, are in a row round the margin and there are three additional rows in the forepart and a scatter in the waist.
- Middle* (or filler): this fitted centrally between sole and insole (or another section); its nail holes match those in the sole. (Illustrations show underside of sole and the upper side with the filler superimposed.)
506. (1592/110) Several very deteriorated fragments or laminae of a shoe, bottom and possibly an upper. Very large holes in two pieces are enlarged nail holes.
507. (1592/113) Shoe bottom and part of upper for right foot. Very heavily nailed. In poor condition with heel seat end missing. There are at least three layers — insole, middle and sole — with only the forepart of the insole remaining. In addition to the marginal row of nails there are four additional rows down the forepart, three in the waist and (presumably) there was a scatter at the heel seat. The total number of nails, most of which remain, must have been about 100 (as at Ickham, see Thornton, forthcoming).
- Upper:* a fragment, *c.* 80mm x 60mm remains attached along the inside edge of the bottom with its lasting margin still sandwiched between sole and insole; the other edges are torn but traces of stitch holes remain at the rear edge, stitch length 4 — 5mm. (Illustrated as if opened out to show underside of sole and outside of upper.)
508. (1592/117) Sole and insole of a child's shoe. Nailed construction. Possibly right foot. On the insole an incised inscription in Greek reads: EKTOPI i.e. for Hector (identification by Mark Hassall). The nail holes are widely spaced round the margin, *c.* 25mm — 30mm apart and there are only two extra ones — one in the forepart and one in the seat situated at the outside front. 42mm x 60mm *c.* Size 5 (children's) in modern sizes (illustrated).
509. (1592/123) Small fragments of a shoe bottom with enlarged nail holes.
510. (1592/126) Sole of a child's sandal, now delaminated into two parts. Very broad toe with a slot hole for the

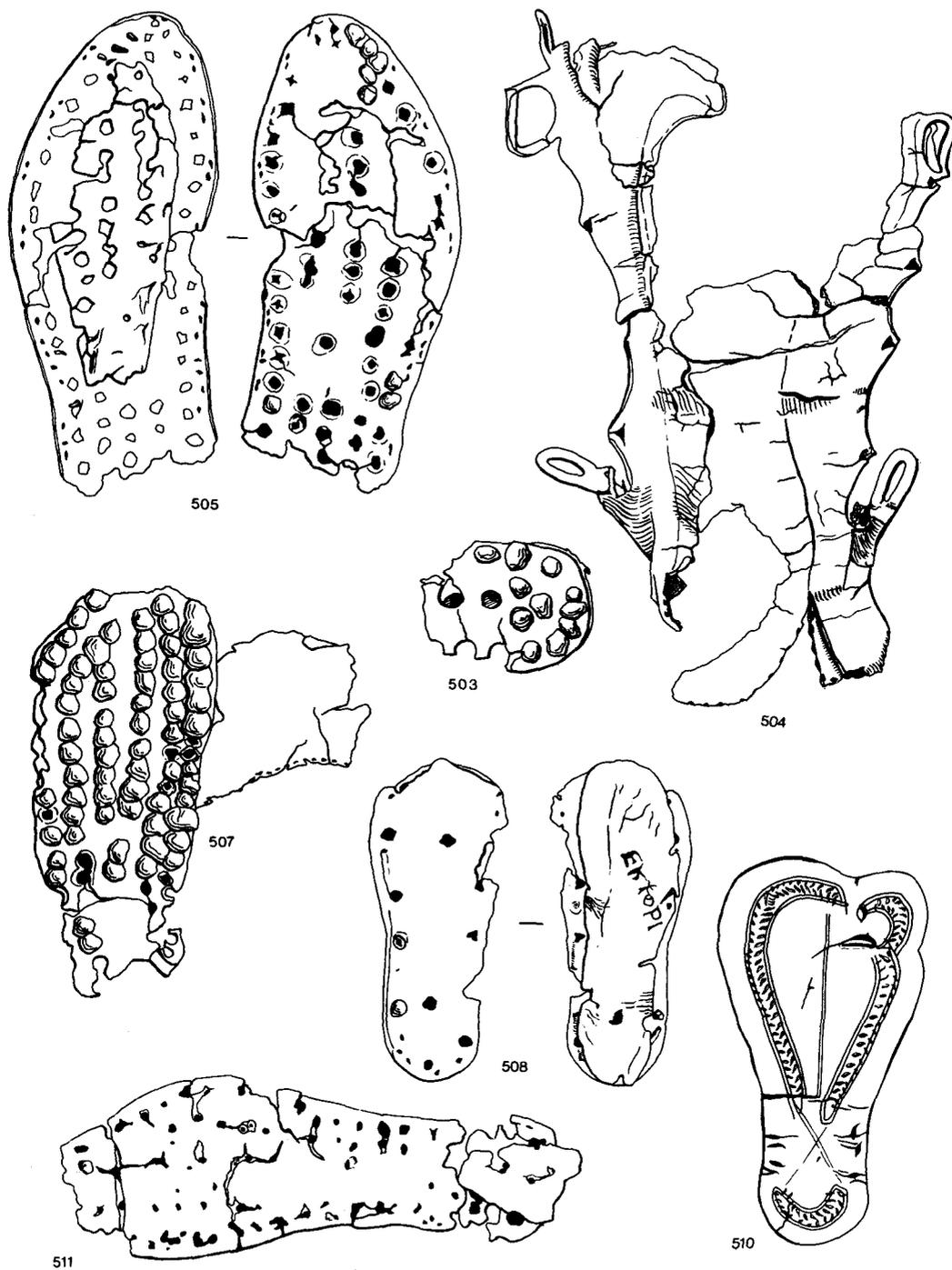


Fig. 22. Angel Court: Roman leather shoes Nos. 505 — 511 (2/3)

toe thong and a decorative leaf pattern running parallel to the edge round the forepart. Near the heel seat there are two pairs of holes either side where an ankle strap would have been attached. Since there are no nail holes or thong holes to indicate that several layers had been joined together to make the shoe bottom it must be assumed that the shoe was a single soled one intended for indoor use. The leaf decoration has been made by cutting and lifting the grain side of the leather. The sandal, which is similar to Egyptian types, probably belonged to the child of a wealthy family. An adult one of the same shape is in the Guildhall collection (see Thornton, 1975, Fig. 1, p.3). (Illustration shows upper side.)

511. (1592/171) Sole from a nailed shoe, left foot; seat portion detached. Apart from the usual marginal row of nail holes there appear to be three additional rows down the forepart. There are several detached nails but none *in situ*. (Illustration shows grain side, i.e., underside.)

(Fig. 23, Nos. 512-519).

512. (1592/179) Insole and other fragments of a nailed shoe, right foot. The insole is complete and its pointed toe and general slimmness suggests it belonged to a woman's shoe. In addition to the usual marginal row of nail holes (finer than in a man's shoe), some of which still have the curled nail points in them even though the rest of the nail has gone, there is a central line of thonging from toe to seat which appears on the grain surface (uppermost) at three points. This was used to hold together the bottom assembly of insole and other intermediate layers while the lasting of the upper was carried out. One smaller middle section remains but is now much deteriorated. Another section is the now flattened stiffener which originally went round the back of the shoe to give support (see No. 497 above and Charlesworth and Thornton, 1973). It is crescent shaped and still has its lasting margin with a well-defined angle between the upper part and the margin itself. Three holes for the bracing thread and scallops formed by the thread remain in some places with very variable separation up to 18mm. A second row suggests that a repair was carried out here. There is also one sole attaching nail *in situ* at the extreme back. The stiffener would have been fitted in the shoe with the grain side inwards (standard practice). Other fragments are probably part of the upper and middle sections. (Insole drawn grain-side up. Stiffener drawn to show grain side and with a section to show the angle.)

513. (1592/184) Shoe bottom unit, nailed, right foot. Comprises: insole, middle and sole. Worn away at outside forepart and outside corner of heel seat. The nails are set in the usual marginal row, originally *c.* 34 in all; a group in the forepart originally *c.* 9; one in the waist and originally *c.* 6 at the seat. Twenty nails still remain *in situ* with well-defined curled points resting on the insole. The narrow pointed shape of the unit suggests that it is from a woman's shoe. Length: 215mm, corresponding to size 13 (children's) in modern sizes. (Illustrated to show underside.)

*Area B, Unstratified and Poorly Stratified Finds*

514. (1598/103) Insole, right foot, with toe indents (see No. 1) and marginal holes of lenticular shape, set in pairs. Round the forepart there is a separation of *c.* 8.5mm between centres of the holes of each pair and *c.* 23mm between centres of pairs; round the waist and seat the corresponding distances increase to *c.*

12mm and 133mm respectively. There is also a central lenticular hole near the toe, probably where a toe thong was inserted; also at least one extra hole at the seat. Part of the toe end is worn away. The shape and disposition of the marginal holes suggest that the insole was thonged to the sole and not nailed. This plus the general shape and size of the insole indicates a woman's indoor shoe. Corresponds to size 13 (children's) in modern sizes. (Illustration shows grain side.) Unstratified.

515. (1598/104) Shoe bottom unit, left foot. Comprises: insole (almost complete); very fragmentary sole; traces of an intermediate layer which may be either sole lamina produced by deterioration of the centre of the leather, or a separate middle. Eight headed nails remain *in situ* and there are others which have now lost their heads; there are also several points resting on the insole surface. Apart from the customary marginal row of nails there were two extra lines down the forepart and a curved line in the region of the outside joint (little toe) where extra wear normally occurs. At the seat there were also extra nails, some set in a roughly circular pattern. Overall deterioration of the sole prevents a precise analysis of the nailing pattern but there appear to have been some 80 nails altogether.

One curious feature is a single impression of a nail *head* on the insole surface near the centre of the tread. Perhaps a nail was driven in here to effect a repair but if so, it must have been very uncomfortable! There is also a fragment of upper showing the angle of the lasting margin and remains of nail holes where it was sandwiched between sole and insole. 155mm x 35mm. Unstratified. (Illustration shows both sides of the shoe bottom.)

516. (1601/1) Waist and heel seat of a right (?) foot nailed sole and shank. Heavily nailed with *c.* 35 remaining although some heads are missing. Part of the shank (or filler) remains attached on the flesh side. The extra wear on the right side (nail heads underneath) and the missing heads on the right corner of the seat suggest that the fragment came from a right foot shoe. From Trench B, Context 3 (illustrated).
517. (1601/128) Three fragments: (a) Possibly part of a child's shoe insole outside forepart, with marginal holes. 140mm x 47mm. (b) Possibly part of (a) or an associated section; two nail points remain in the grain surface. (c) Small fragment with a large rusty concretion; the fragment itself now resembles a piece of strap but this may be accidental; some small holes down one edge may be stitch holes. From Trench B, Context 3.

518. (1605/53) Some twenty fragments of a nailed shoe bottom unit, very deteriorated and delaminated.

(a) The largest section is the waist and seat part of an *insole* with the *shank* (or filler) still thonged in position. Nail holes show where the sole attaching nails penetrated. The surface is depressed where the foot rested but this may be due to grain shrinkage (illustrated).

(b) Two corresponding fragments of *insole* and *sole*. No nails now remain but there are several holes and the impression of at least one head remains on the worn surface of the sole. The insole surface is still comparatively smooth. Length: *c.* 95mm, width: 65mm.

(c) Fragment of a bottom unit with three nails *in situ* still holding together parts of sole and insole. The

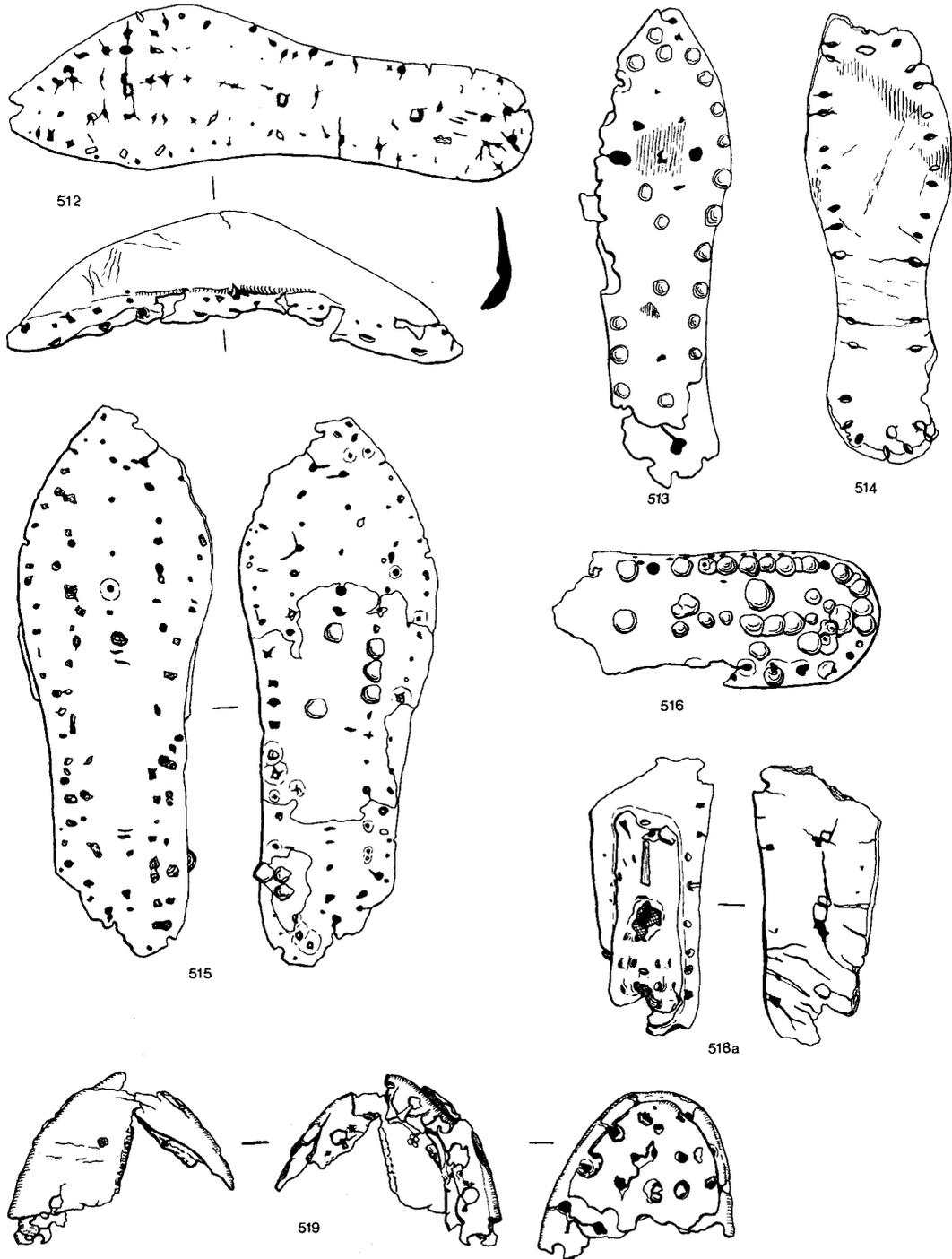


Fig. 23. Angel Court: Roman leather shoes Nos. 512 — 519 (1/3)

curved points are very prominent.

(d) The other small fragments all show nail holes and some also have thong holes.

From Trench B, Context 7.

519. (1605/54) Toe-end of upper, sole and insole of a nailed shoe.

*Upper.* On top the fragment has the remains of a fine butted seam where the adjoining edges of a V-cut were stitched together, stitch length: 3.5mm; one edge is now missing. Underneath there is a prominent lasting margin *c.* 13mm wide showing (a) the holes through which the bracing thong passed and (b) the larger holes made by the sole attaching nails. Some pleats still remain. There is a second layer of leather underneath the margin which may be either a lamina produced by deterioration of the centre of the leather during burial, or a separate lining. There is a curious group of what appear to be four small nails (like small modern tacks) on the flesh side of this toe portion with corrosion on the opposite side (outside); their purpose is obscure (illustrated).

*Sole and insole.* The pieces fit roughly within the upper lasting margin, the nail holes corresponding. A piece of thong remains *in situ* on the insole. (Illustration shows insole superimposed on the sole.) From Trench B, Context 7.

520. (1605/120) Portion of shoe bottom unit, several layers heavily nailed, probably the heel seat. Also a fragment of upper with no identifiable features. From Trench B, Context 7.

(Fig. 24, Nos. 521-522).

521. (1605/121) Back part of a nailed shoe, comprising heel stiffener insole, shank (?), sole and fragments or laminae; all heavily nailed together. There are a few nails missing from the right corner of the seat (as looked at from above) also the sole is worn away here exposing the lasting margin of the heel stiffener; this suggests that this specimen may be part of a right foot shoe but this is by no means certain. There is the usual row of marginal nails but the pattern of those in the waist and seat resemble a tennis racket. The stiffener has the usual long crescent shape and is *c.* 16mm high at the back. On the right side it has been pressed outwards by the foot so that it almost forms an extension in width of the sole. Some holes in the wing here may indicate that the upper was re-fastened to it after the lower edge of the upper itself had worn away. From Trench B, Context 7 (illustrated to show underside).

522. (1605/129) Back part of a shoe bottom unit with a repair addition comprising insole, sole and heel piece;

## WALL PAINTING

BY JOAN LIVERSIDGE

(Figs. 25-7).

This collection of material poses problems because it has been seriously affected by fire. It consists of demolition material deposited between *c.* AD 120 and 160, and most of it came from Trench A, Layer 16 (ER 1587) which was probably dumped to raise the ground level. A few pieces from Trench A, Layer 26 (ER 1595) which is stratigraphically later than Layer 16 seem to come from the same building. Nothing noteworthy was found with Trench A, Layer 18b (ER 1590).

Pieces of the familiar imitation marbling stippled in red and black appear from both Layers 16 and 26 on ground colours now much discoloured by burning but originally probably grey or pink. They may have formed part of a dado design with rectangles of different colours used alternatively.

The best preserved fragment comes from Layer 16 and escaped the flames (No. 529). It appears to be part of a red panelled design with a border of white flowers alternating with a green and white motif set

nailed. There is the usual marginal row of nail holes with head impressions and some in the centre, especially at the seat. Four headed nails remain. The outside corner of the insole/sole unit is worn away and the additional seat piece was probably added to cover this; the addition itself has now worn away at the outside corner. One of the nails with a large head (now about 9mm diameter) was probably one of those used to attach the repair. Two other nails with only traces of their heads left were probably covered by the repair piece. From Trench B, Context 7. (Illustration shows both sides of sole and additional seat piece.)

523. (1609/11) Two fragments, possibly of an insole, very deteriorated. Many holes but these are fairly small suggesting that the sections belong to an inner part of the shoe bottom rather than to the sole itself where the holes tend to be larger due to corrosion of the nail heads. The smaller fragment from the toe has one nail point *in situ*. Presumably the two fragments belong to each other. Length (two sections together): *c.* 182mm; maximum width: 74mm. From Trench B, Context 11.
524. (1610/10) Fragment of a sole, many nail holes and one nail with a very large corroded head. The present holes are set in four roughly parallel rows but it is not clear whether these were the usual marginal rows either side with two inside rows or whether there were originally five rows — two marginal and three inside ones — as one edge appears to be a torn row. 105mm x 65mm. From Trench B, Context 12.

## THE OTHER LEATHER FINDS

FROM NOTES BY JOHN WATERER

(Fig. 24, Nos. 525-528).

525. (1592/125) Perhaps goatskin. Probably part of a garment such as a jerkin, judging largely from the chevron-cut (lower) edge. The one straight edge appears to have been part of a seam. From Trench A, Layer 20 and therefore not later than *c.* AD 280 (illustrated).
526. (1592/179/2) Fragment of leather, perhaps goatskin, with incised ornamentation. Date and provenance as for No. 525 (illustrated).
527. (1592/112) Leather, perhaps calf. Possibly part of the binding of an army tent flap (see Richmond, 1950, and Waateringe, 1967). Date and provenance as for No. 525 (illustrated).
528. (1607/12) Fragment of probable calf leather bearing stitch marks. From Area B, Context 9 (illustrated grain-side up).

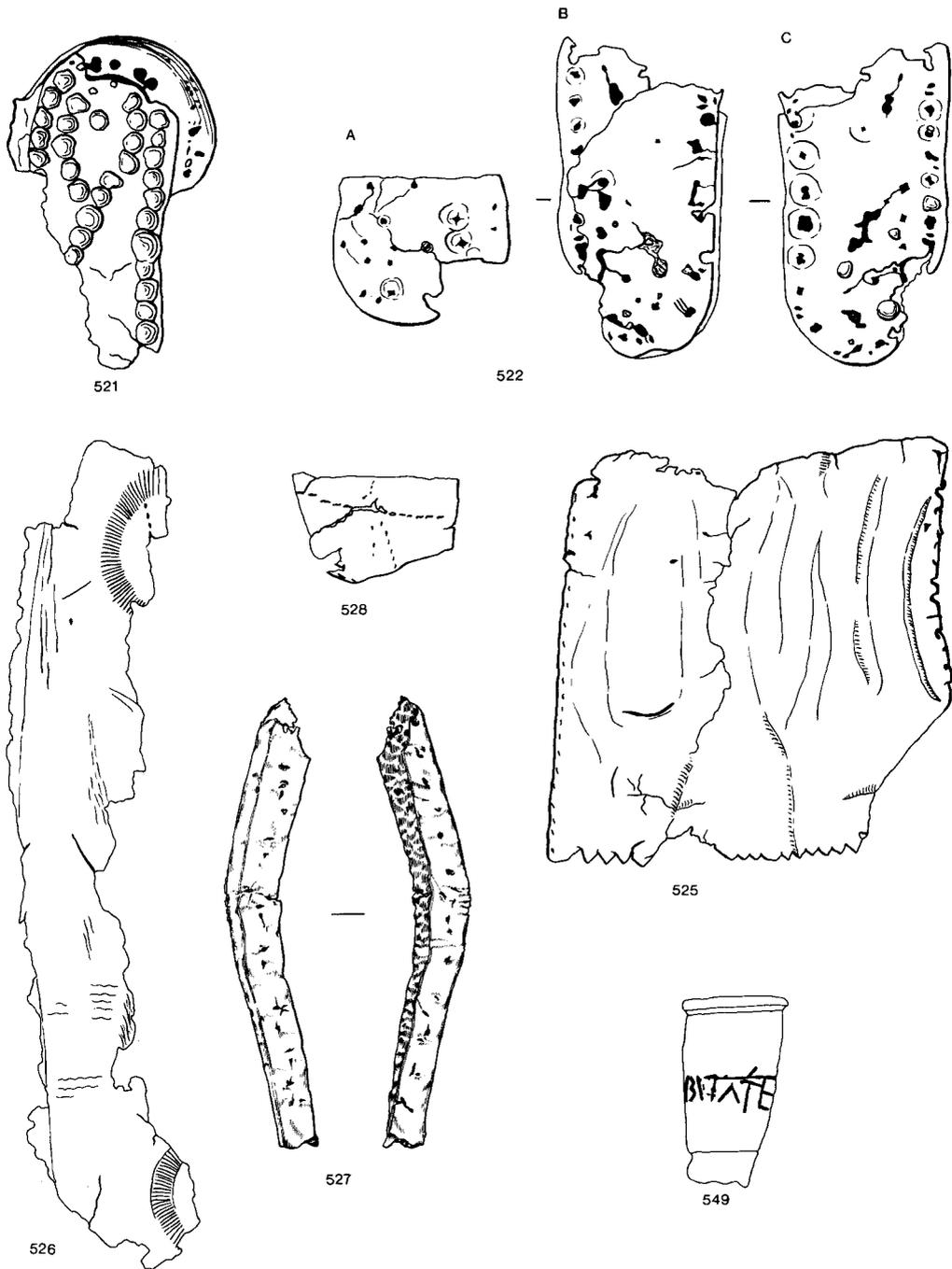


Fig. 24. Angel Court: Roman leather Nos. 521 — 528 ( $\frac{1}{3}$ ); Roman inscription No. 549 ( $\frac{1}{2}$ )

between fine white lines. Below there may have been a green band at least 90mm wide, outlined in white (No. 530). Material from Layer 26 suggests that a black band belongs below the green (No. 531) although the white outline between green and black is missing from this piece. It may have been rubbed off as a result of damp or burning as the rest of the fragment is very discoloured. Below these bands there may have been the dado. The rest of the red material from Layer 16 is very scorched but seems likely to belong to the same panels and it does produce evidence for foliate motifs comparable to some found elsewhere. No. 532, for example, seems to be part of a rod we have to imagine as suspended from the top of the panel. This piece shows the rod at a point where one end of a garland is tied to it. No. 533 may be a pendant motif in black, yellow and/or white, suspended from the rod elsewhere. A number of other pieces hint at leaf motifs and streamers in paint which is either black or has turned that colour from burning and a yellow flower (No. 534) may also come from this area. Another less scorched red fragment seems to show a ghost design where the print of the detail has been destroyed (No. 535).

Presuming that the red material comes from the same series of panels, it seems doubtful if the border design of No. 529 goes all round the panel, as this piece is the only evidence for it. Some of the red ground occurs next to black without the intervening green band, and it would not be surprising if the red panels were divided by black pilaster strips. No. 538 is the only unburnt example of a red motif (flower or berry) with green and white leaves and stalks on a black ground, but leaves and stalks in white and possibly red appear on other pieces (Nos. 536, 537, 539, 540). Traces of a small yellow flower design are also dimly visible on a black ground (No. 541). Layer 26 also produced a very scorched fragment (No. 542) of red with traces of a blackened design. Two white lines *c.* 8mm wide meet at right angles and separate the red from black. Obviously this is most probably the corner of a panel.

Other motifs on fragments of plaster from Layer 16 may come from different walls. One slightly burnt piece, No. 543, is part of a candelabrum design outlined in black with black lights, and filled in in pink. No. 544 probably comes from the candelabrum stem decorated with black leaves, and white and possibly red or yellow flowers. The design is painted on a light coloured ground, perhaps cream as white details show up on it. Further fragments probably painted on the same light ground include No. 545 in dark red and blue outlined in black. This may come from a scroll design. There is also blue with black leaves (?), and a border with a red scalloped line between black blobs (No. 546). Other pieces have red designs on white (No. 547), red diagonals bordered with black, and one piece, No. 548, has a white design on yellow. Material not illustrated includes multicoloured stripes which may have framed panel or dado designs. On a red ground these include yellow 18mm wide overpainted with two white lines and with a black line outlining one edge; black, 30mm wide probably with white lines, dividing the red from white or yellow; and green separated from red by a black line 9mm wide. One piece now pale grey but probably originally white, bears a lightly incised design of two groups of curves crossing each other, probably originally drawn with a compass. Just possibly this is an experiment by someone trying to draw a guilloche design; it could even be vault or ceiling plaster as the back is convex in section.

The most that can be said for this collection of material is that it may all have come from the same site but not necessarily from the same room. The rod and garland design on the red ground occurs in other Romano-British cities, notably Leicester (see Davey, 1972, 262-3, Figs. 8, 9), Verulamium and Winchester. The probable presence of black pilaster strips between the panels can be paralleled at Verulamium (see Liversidge, 1971, p. 88, Pl. 24a, 27-8). The motif which separates the flowers painted on the red panel, No. 529, is more unusual. Other items of particular interest include the candelabrum motif, Nos. 539 and 540, and the scroll design, No. 545. The black blob motif, No. 546, bears some resemblance to unpublished material from the North Warnborough (Hants.) and Kintbury (Berks.) villas where small pieces occur using blobs of different colours combined with curvilinear designs.

## GRAFFITO AND INSCRIPTIONS

BY MARK HASSALL

(Fig. 24, No. 549).

549. (1598/195) Graffito on sherd of Samian (Drag 18, Flavian, South Gaulish). Cut on outside, below rim after firing. Reads DU]BITAT(A)E], presumably the

owner's name in the genitive, i.e., "of Dubitata". See Brailsford (1964, 67 No. 8). From Area B, unstratified (illustrated).

For other inscriptions see Nos. 490 and 508.

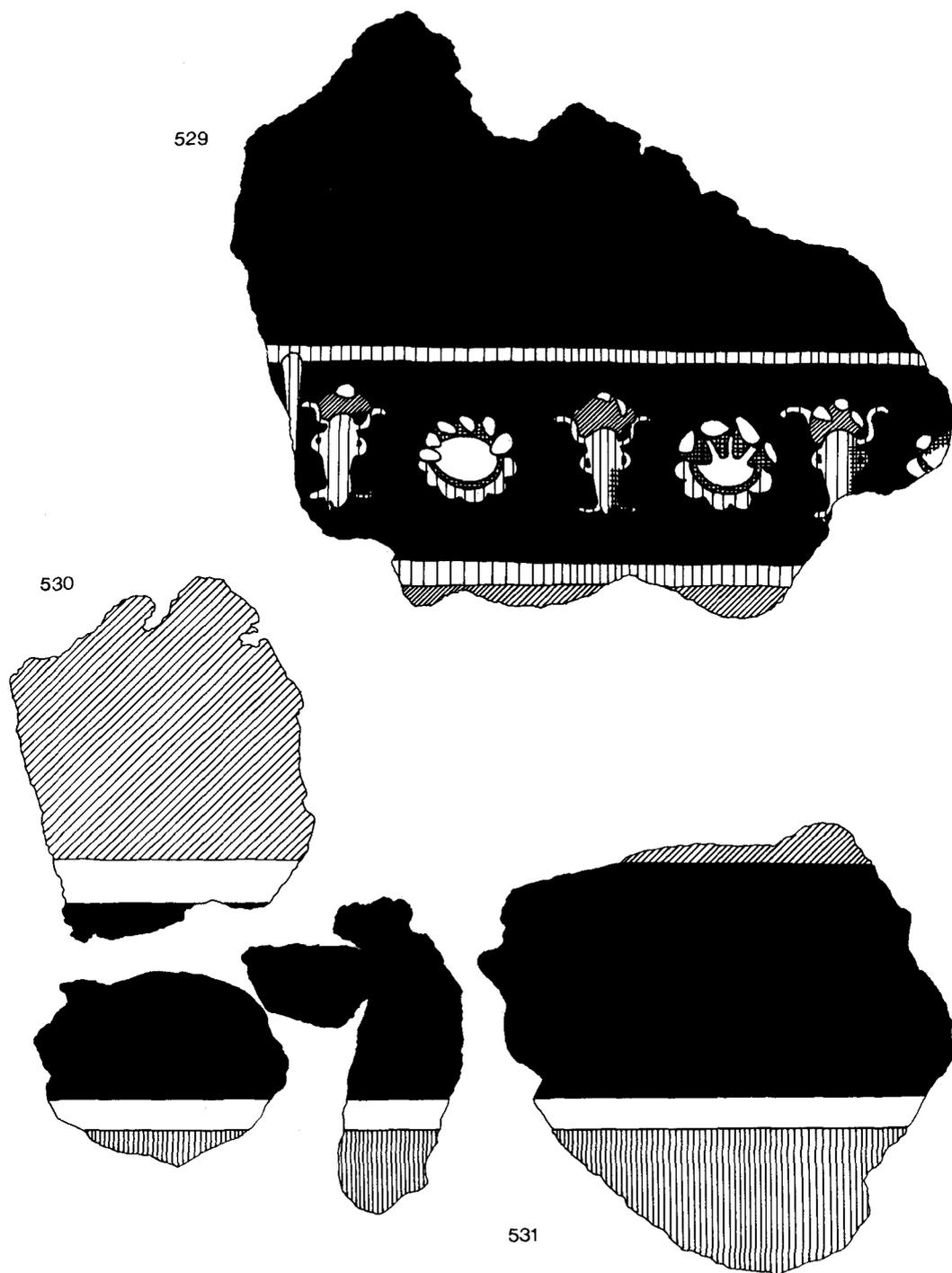


Fig. 25. Angel Court: Roman wall-painting Nos. 529 — 531 (½)

CODE	
	White
	Cream
	Brownish White
	(Brownish) Yellow
	Orange-Brown
	Brown
	Whitish Green
	Green
	Blue
	Whitish Red
	Weak Red
	Red
	Dusky Red
	Grey
	Dark Olive-Grey
	Black Nos 530-548
	Red No 529

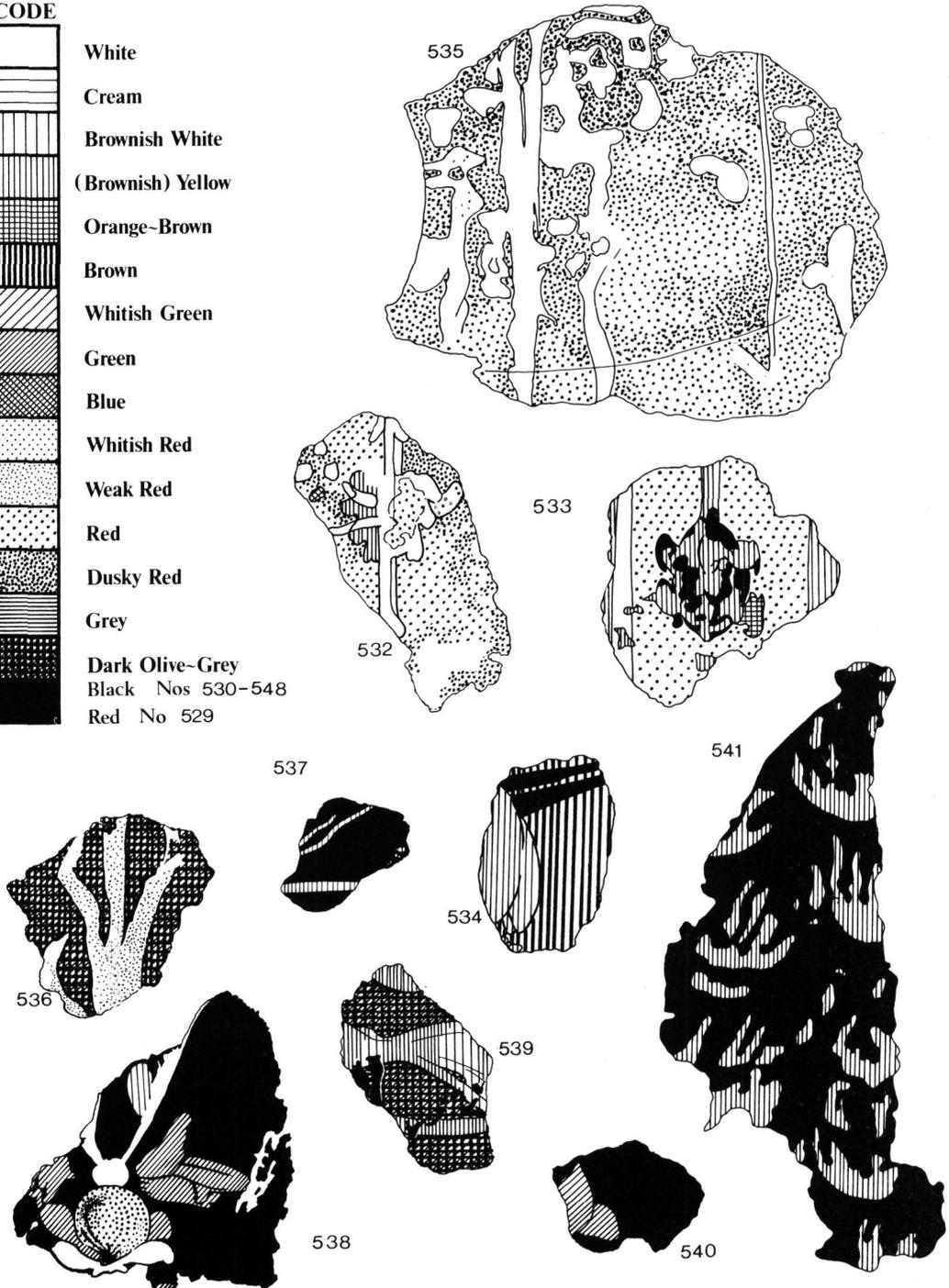


Fig. 26. Angel Court: Roman wall-painting Nos. 532 — 541 (1/2)

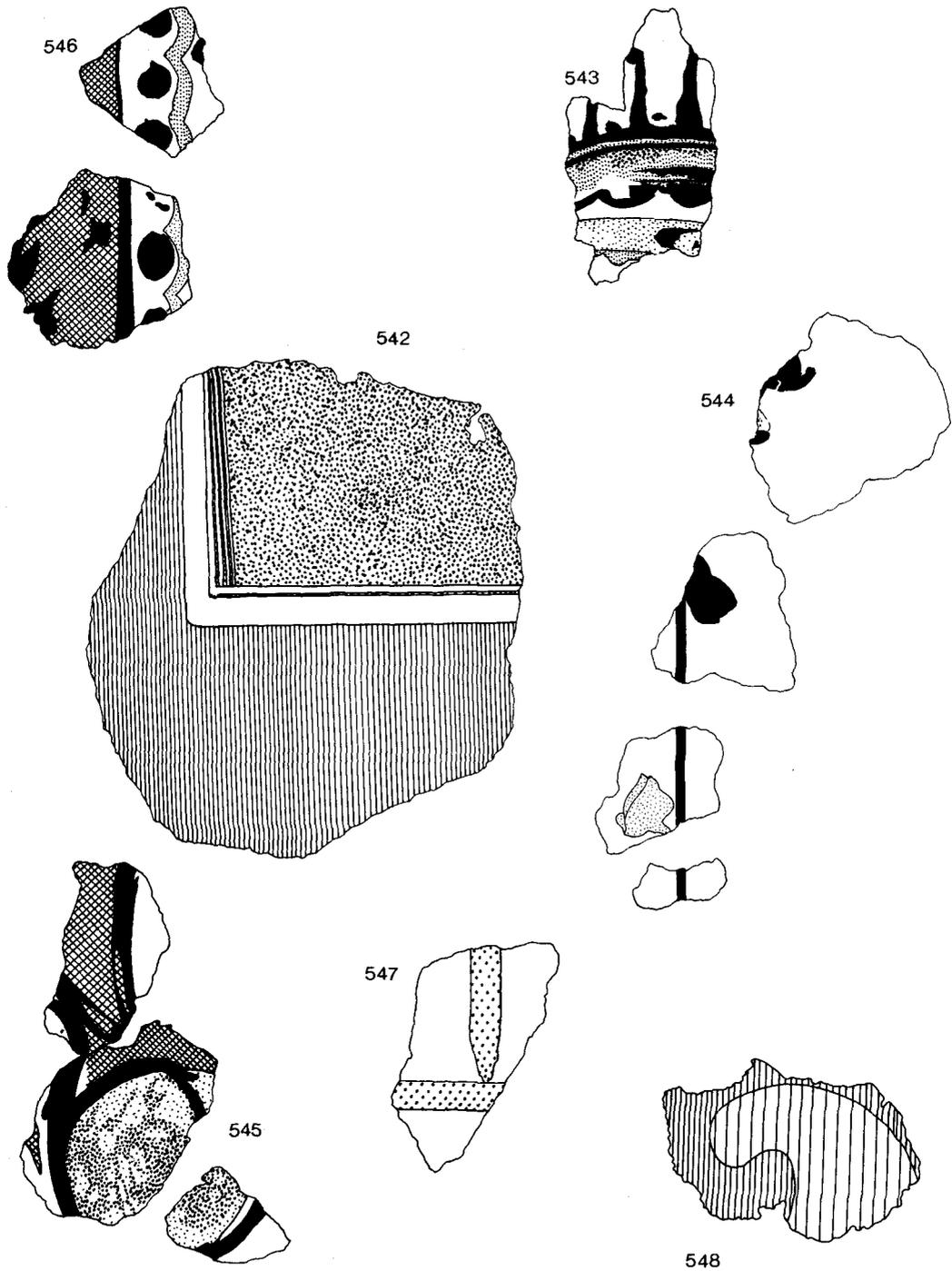


Fig. 27. Angel Court: Roman wall-painting Nos. 542 — 548 (½)

## SAXON

## POTTERY

(Fig. 28, No. 550).

One possible sherd of Saxon pottery came from Trench A, Layer 7 (ER 1581) which underlies the lowest medieval layers and seals Layer 9 which is clearly late Roman. The other 187 sherds are late Roman with the exception of two, probably intrusive, medieval sherds, but appear to be more abraded than those from Layer 9. Even if this sherd is Saxon it is unlikely to represent occupation in the immediate area.

550. Bowl. Rim sherd of a hand-made vessel with wipe marks on the outside. A fairly hard partially reduced fabric with a black core, yellowish-red margins and irregular fractures, being tempered with abundant crushed shell (probably fossil) <3mm. The inside

surface is abraded. This is possibly a St. Neots type ware, even though it is not particularly soapy to the touch. Bowls of this size are known from late Saxon times. No close parallels could be found in the Museum of London collections.

## MEDIEVAL

## POTTERY

BY CLIVE ORTON

1. The methods of examination and reporting have already been described in the section on the Roman coarse pottery.

2. The main groups of pottery are from Trench A, Layers 5-12 and 2; smaller amounts were also found in Trench A, Layers 6, 4 and 3. The small amount from other trenches is not described as it is unstratified and none is of special intrinsic interest.

3. The fabrics appear to be more variable than the Roman (i.e., there are less sherds per distinct fabric), perhaps reflecting the smaller overall amount of pottery. The main recognised ranges of fabrics account for some 70% of the pottery, and are described below: the rest are discussed under "other fabrics". Future work on larger groups may well lead to the recognition of groupings within this material. The main ranges are:

*South Herts Grey Ware*

These fabrics are hard with an irregular fracture, but often rather friable. Core colour is grey, but margins can be dark grey or (less often) brown. The most common inclusions are transparent and translucent (colourless and/or pale brown to yellow) quartz; others are white quartz, black iron ore, mica and limestone (or shell) — not necessarily all in the same sherd (see below). Surfaces generally have a harsh feel, and show turning marks. The only decorative traits are various forms of grooving, and thumbing on the handles (No. 554). It is difficult to identify forms: hollow shapes — jugs or cooking pots — seem to be represented. The majority of sherds have either (i) common coarse colourless quartz, some very coarse grains, moderate white quartz of similar size, sparse very coarse shell, and very fine mica and black iron ore (No. 553), or (ii) common coarse white quartz, moderate medium colourless quartz, sparse very fine black iron ore and white mica (No. 554). Other variants include one with moderate limestone, more brownish quartz (No. 568), and moderate limestone and black iron ore.

Hard grey unglazed medieval pottery, superficially similar to this group, is known to have been produced in two areas close to London: south Hertfordshire (Renn, 1964) and east Surrey (Limpsfield) (Prendergast, 1975). This pottery is more likely to come from the former: the presence of white quartz grains seems to indicate a source north of the Thames. The texture of pottery from the More (Biddle, 1959) is similar, but the colour is lighter and often browner. Possible sources are the kilns at Wild Hill, Hatfield and Potter End (Renn, 1964) but positive attributions will not be possible until more is known of the variations in the products of the kilns in this area.

*Coarse Sandy Glazed fabrics*

These are hard fabrics with an irregular fracture, often rather friable. Core colour is grey, with red or brown margins and surfaces. Main inclusions are translucent quartz (colourless, yellowish or brownish), up to coarse size with sparse larger grains: other inclusions are clear or white quartz, flint, mica, grog, black iron ore, shell, limestone (all moderate or less: not all present in the same sherd). The texture between inclusions is finely irregular, suggesting the presence of inclusions below 0.1mm in size. Surfaces generally have a harsh feel, and show turning marks. The (external) glaze is pitted, generally thin and patchy, but with locally glossy smooth areas.

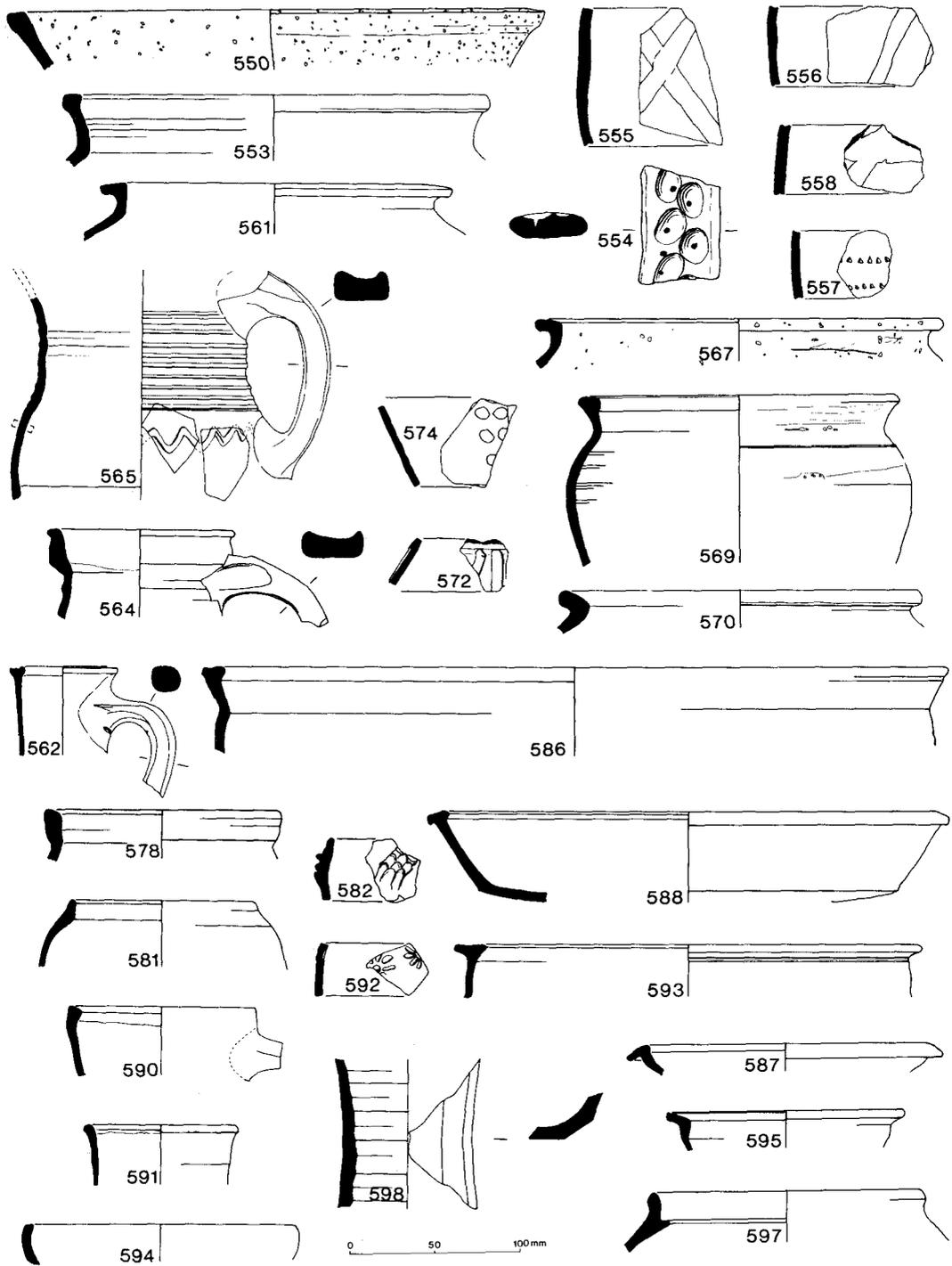


Fig. 28. Angel Court: Saxon (?) and medieval pottery Nos. 550 — 598 (1/4)

Forms represented appear to be jugs (Nos. 555-7, 563-4, 566). The usual form of decoration is white slip lattice (e.g. Nos. 555-6). The sources of these fabrics are not known, but they seem likely to be very local.

#### *West Kent fabrics*

This range is distinguished visually by extensive areas of white slip on the exterior. Fabrics are fairly hard, with a slightly rough "sandy" feel. The fracture is generally smooth, but finely irregular at 20x. There are abundant very fine colourless quartz inclusions (some larger grains) with sparse very fine white mica and black iron ore, and sparse coarse red iron ore. A minority of sherds have coarse or coloured quartz, some with moderate iron ore or mica.

Colour values are in the range 4 to 6 and hue is most commonly 2.5 YR, sometimes 5 YR, possible variants being red or yellowish red (chroma 6 or more), possibly with dark grey core; red from centre to exterior surface, dark grey from centre to interior surface; light grey/grey with thin brown/light red margins.

The slip is generally white and continuous, thinning near bases and handles, and continuing over tops of rims. Glaze varies from clear (showing yellow over slip) with green (copper) mottling, to pale green with darker mottling: both smooth and pitted finishes are found. Vessels represented appear to be jugs (Nos. 578-82). The usual decoration is vertical graffito combing. No kiln sites for these fabrics are known — the term West Kent, although well established (see e.g. Thorn, 1975, 118) is rather conjectural.

#### *Surrey fabrics*

This general term covers a range of broadly similar fabrics, thought to derive from the iron-free clays of the Reading beds which lie across the north edge of the North Downs (Holling, 1971, 63). All are hard, with a rough feel, and quartz inclusions — varying proportions of white, grey, pale yellow or brown, or red translucent grains, with a small proportion of clear transparent grains. The predominant grain size varies from fine to medium, often with a "tail" of larger grains, up to very coarse size. Frequency varies from abundant to moderate: grains, especially the larger ones, tend to be angular. Other inclusions are sparse very fine black iron ore and occasional sparse very fine white mica.

Except when burnt, fabrics are light in colour (value 7 or 8) and are in hue range 5YR-10YR. Chroma varies within sherds: 3 or 4 (pink or very pale brown) to 0, 1 or 2 (white or light grey) being the usual pattern, although some sherds range up to 6 (reddish yellow). The core is generally of lower chroma ("greyer") than the margins, although in some sherds this is reversed. The fabric tends to break around grains: between them it is smooth. Turning marks are apparent on both surfaces. The variants recognised here are:

(a) *Kingston type*: (i) abundant medium translucent quartz (with some coarser grains), sparse medium clear quartz, very fine black iron ore and white mica (Nos. 586-9). (ii) similar but fine quartz predominates (Nos. 590). (iii) similar to (ii) but translucent quartz is all white or grey; no mica (Nos. 591-5). These all appear similar to the products of the Eden Street Kiln in Kingston (Smith, 1969).

(b) *Cheam type* Similar to (ii) above, but there is less quartz (moderate frequency) and possibly more black iron ore. The occasional piece of flint is probably not diagnostic (No. 597). Similar sherds, from the "1923" Cheam kiln (Marshall, 1923) are in Kingston Museum.

(c) "other" types Other variants have solely red translucent quartz (No. 596); moderate fine colourless quartz, no mica, smooth fracture (No. 562); fine colourless quartz or brownish/grey quartz.

Three basic forms are represented: jugs, with areas of external glaze and spots and patches on either surface; "cooking pots", with spots and patches of glaze on exterior and upper interior, and area of glaze on lower interior; bowls and/or dishes similarly glazed. The jugs generally have flat bases, and the other forms sagging bases. Continuous glaze on interiors is generally glossy, smooth, green with darker mottling, sometimes with red grains in fabric showing brown through glaze; exterior areas of glaze are similar but lighter and thinner, and some are pitted. Olive-brown and yellow glazes occur infrequently.

Decoration is not common: one sherd has "raspberry" stamps on small bosses (No. 592).

#### *Other fabrics*

Fabrics represented by very few sherds (often only one) are listed below. No attempt has been made to trace their sources.

Fig. 29. (below) List of all numbered sherds, with Figure Nos. of illustrated sherds, Layer and ER Nos., fabric group, internal parallels

No.	Fig.	fabric group	internal parallel
Layer 5=12 (ER 1579, 1584)			
551	—	shelly	—
552	—	shelly	—
553	28	S. Herts Grey ware	—
554	28	S. Herts Grey ware	—
555	28	Coarse sandy, glazed	—
556	28	Coarse sandy, glazed	No. 555 (D)
557	28	Coarse sandy, glazed	—
558	28	misc. inclusions	No. 555 (D)
559	—	other sandy, glazed	—
560	—	other sandy, glazed	—
561	28	other sandy, unglazed	—
Layer 6 (ER 1580)			
562	28	other Surrey Ware	—
Layer 4 (ER 1578)			
563	—	Coarse sandy, glazed	No. 555 (D)
564	28	Coarse sandy, glazed	—
565	28	other sandy, glazed	—
Layer 3 (ER 1577)			
566	—	Coarse sandy, glazed	—
Layer 2 (ER 1576)			
567	28	shelly	—
568	—	S. Herts Grey Ware	—
569	28	other white slipped	—
570	28	other sandy unglazed	—
571	—	misc. inclusions	—
572	28	other sandy, glazed	—
573	—	other sandy, glazed	—
574	28	other sandy, glazed	—
575	—	other sandy, unglazed	—
576	—	other sandy, unglazed	—
577	—	other sandy, unglazed	—
578	28	West Kent	—
579	—	West Kent	—
580	—	West Kent	—
581	28	West Kent	—
582	28	West Kent	—
583	—	other white slipped	—
584	—	other white slipped	—
585	—	other white slipped	—
586	28	Surrey-Kingston	—
587	28	Surrey-Kingston	—
588	28	Surrey-Kingston	—
589	—	Surrey-Kingston	—
590	28	Surrey-Kingston	—
591	28	Surrey-Kingston	—
592	28	Surrey-Kingston	—
593	28	Surrey-Kingston	—
594	28	Surrey-Kingston	—
595	28	Surrey-Kingston	—
596	—	Surrey—other	—
597	28	Surrey—Cheam	—
598	28	Spanish tin-glaze	—
599	—	Saintonge	—
600	—	Stamford	—

Fabric	Layer							total
	9 (ER 1582)	7 (ER 1581)	5=12 (ER 1579 1584)	6 (ER 1580)	4 (ER 1578)	3 (ER 1577)	2 (ER 1576)	
misc. inclusions			3		1		1	5
shelly			8		2		1	11
S. Herts Grey Ware (other sandy unglazed)			17	1		1	5	24
Coarse sandy, glazed (other sandy, glazed)		2	16		4	1	15	16
West Kent	1		10		3		13	23
(other white-slipped)			1			34	7	35
Surrey-Kingston			1				69	8
Surrey-Cheam							1	1
Surrey — other				3			9	12
imports							6	6
1	2	57	4	10	2	163	239	

Residual Roman pottery is found in Layers 5=12, 4, 3 and 2.

Fig. 30. Numbers of medieval sherds from Trench A by fabric and Layer (the quantities are too small for vessel-equivalents or percentages to be calculated)

*Fabrics with 'miscellaneous' inclusions*

Generally, these sherds have a relatively high proportion of black iron ore inclusions. Exceptions are: (i) No. 558, a decorated jug sherd in soft fabric with hackly fracture. Red throughout: abundant medium clear and colourless quartz (some coarse grains), common medium white 'dolomite' and sparse very fine black iron ore. Patchy pitted olive glaze, decoration as No. 555 (illustrated).

(ii) No. 571, two flat-topped flanged rim sherds with internal beading, probably from a bowl. Hard surfaces but soft section; hackly fracture. Reddish yellow/light grey core, red margins, red/reddish yellow/light grey surfaces. Abundant medium clear, colourless and red quartz, moderate angular very coarse hard grey limestone, medium black iron ore and sparse very fine white mica inclusions. Surfaces smoothed, traces of thick white deposit.

*Shelly fabrics*

All have moderate to abundant very coarse shell, some (Nos. 551-2, 567) also have 'sandy' inclusions.

They seem to belong to cooking-pots (Nos. 551-2 are sagging bases and No. 567 is a rim).

*'Other' sandy unglazed fabrics*

This group includes sherds from both cooking-pots (Nos. 561, 570) and jugs (Nos. 575-7). All except No. 577 have grey core with red or brownish margins and surfaces (No. 577 is red throughout), abundant very fine quartz with moderate or sparse grains up to "coarse" size and associated black iron ore and white mica (No. 577 also has sparse coarse red grog). All are wheel-thrown. The jug sherds are all from sagging bases with intermittent thumb impressions.

*'Other' sandy glazed fabrics*

All sherds appear to be from jugs (Nos. 559-60, 565, 572-3). The coarsest is No. 572, a decorated shoulder sherd with common medium sandy inclusions, clear external glaze and decoration of vertical bands of thick white slip, leading to a horizontal band of applied clay at the neck (illustrated). The others are all in fine-sandy fabrics: No. 559 is a flat base with grey core, reddish brown margins and brown/dark grey surfaces (?burnt) with a dribble of clear glaze on the exterior; No. 560 (a strap handle) and No. 573 (flat base) both have grey core and red margins and surfaces, clear to olive glaze with some copper mottling.

An unusual vessel is No. 565, which has light grey core, pinkish grey margins and dark grey interior. Abundant fine colourless quartz, sparse very fine black iron ore and white mica. Patchy light olive glaze with copper streaks, pitted. Broad shallow horizontal grooving on body between ends of handle, chevron incisions below (illustrated).

*'Other' white-slipped fabrics*

Included here are three decorated jug sherds (Nos. 583-5) and a 'cooking-pot' rim (No. 569). No. 583 differs from the West Kent group in having a fracture that appears smooth between inclusions, and a grey core. It is decorated with two vertical bands of slip, triangular in section and *c.* 15mm apart, overlaid by the edge of a 'beard' (presumably this sherd belongs to a face-mask jug) in grey clay. Nos. 584-5 also have grey cores, and common very fine black iron in addition to the usual 'sand'. Both come from jug necks: No. 584 has a horizontal line of slip at the neckpoint, and patchy slip elsewhere, while No. 585 has horizontal incised grooves, *c.* 2-3mm wide, which have been filled with white slip and trimmed off. *This is an unfamiliar style and could be an import.*

No. 569 is unusual, being a cooking-pot with white slip on both surfaces. The core is grey and margins red. Coarse 'sandy' inclusions with sparse red iron ore and flint. Spots and dribbles of clear glaze on the exterior.

*Imports*

598. Jug: three (out of ten) vertical facets present. Body sherd. Hard, irregular fracture. Reddish yellow fabric with abundant fine colourless quartz, moderate medium limestone and red and black iron ore, sparse very fine white mica. Thick greyish tin-glaze on exterior; dribble of white glaze on interior. Spanish, *c.* AD 1400.

599. Jug: 'parrot-beak' spout. Four body sherds. Hard; smooth fracture. Pink fabric with sparse inclusions. Craze very glossy green glaze on exterior. Saintonge, late 13th century. Residual.

600. Small body sherd. Fairly soft; irregular fracture. White fabric with moderate fine quartz and sparse very fine white mica. Thin pitted yellow glaze. Stamford Ware.

*Discussion of dating*

There are few firm dates in medieval pottery: one accepted as such is that 'Surrey' fabrics seem to start *c.* 1300 or a little earlier (e.g. Hurst, 1961, 254). However, the Kingston variant is thought to date to the second half of the 14th century; the Cheam kiln is now thought to be 15th century. Bifid rims in general may start in the last quarter of the 14th century (Hurst, 1961, 255). The south Herts grey pottery is thought to have a 12th or early 13th century date (Renn, 1964).

'West Kent' pottery is usually given a late 13th to mid-14th century date, but evidence from Southwark sites — e.g. Angel Place (Orton, 1978) — suggest that it may continue into the second half of the 14th century.

*Summary of dating for Trench A*

Layer 5 = 12 (ER 1579 and 1584): first half of 13th century

Layer 6 (ER 1580): first half of 14th century

Layer 4 (ER 1578): } no independent date, but 14th

Layer 3 (ER 1577): } century on stratigraphic grounds

Layer 2 (ER 1576): last quarter of 14th century.

There is insufficient material for a statistical discussion.

## CRUCIBLES

(Fig. 31, Nos. 601-603).

601. (1576/37) Rim and lip of a large crucible of vitrified clay, showing traces of greenish metallic residue. Thin-section examination by D. F. Williams of the University of Southampton showed frequent inclusions of subangular quartz grains, average size 0.1 — 0.2mm set in a matrix of optically isotropic fired clay and a scatter of yellow anhedral crystals, ranging up to 0.35mm in size, which are probably fayalite, a characteristic constituent of furnace slags.

The fragment contained a considerable amount of sand, which he considered was added to the clay for refractory purpose. From Trench A, Layer 2 and therefore probably *c.* late 14th to 15th century (illustrated).

602. (1576/45) An almost hemispherical, basal fragment of a large crucible in a similar fabric to No. 601 except that no yellow crystals were found. Same provenance and date as No. 601 (illustrated).

The above fragments were submitted to Leo Biek of the Ancient Monuments Laboratory of the Department of the Environment who comments: "Both fragments belonged to crucibles of a size and wall thickness which it is surprising to find among 14th or even 15th century material; however, it may be necessary to revise present views in the light of current excavations in York (Addyman, pers. comm.). These finds will form part of a comparative study of such equipment to be reported elsewhere. For the present, the petrological report above makes it clear that the crucibles had been exposed to temperatures high enough to produce vitrification, i.e., probably above 1100°C and in view of the presence of 'fayalite' crystals possibly even higher. Justine Bayley examined the metallic inclusion under the 'milliprobe' an X-Ray fluorescence spectrometer and found both copper and zinc, but no traces of tin or lead; the metal melted in the crucibles was therefore a straight brass and would not have required such a high temperature. In the circumstances the crucibles might have needed overheating on account of their thickness, or the fragments might have suffered (?secondary) overfiring during or after use."

603. (1576/276) Rim fragment of a crucible in a hard light grey fabric with a dark grey outer surface fairly smooth to the touch, with abundant well sorted clear sub rounded quartz grains *c.* 0.1 to 0.25mm across and abundant black, irregular, specks of iron ore (?) of similar size. The fracture is irregular and there are wheel marks on the outer surface indicating the vessel was probably thrown. From Trench A, Layer 2 and

therefore probably *c.* late 14th to early 15th century (illustrated).

604. (1576/277) Body sherd of a crucible in a somewhat similar light grey fabric with abundant clear, white and grey sub-rounded quartz grains ranging between 0.1 and 0.5mm across. Also abundant, irregular black specks of iron ore (?) varying in size between 0.1 and 1.0mm across. Date and provenance as for No. 603.

Leo Biek comments: "These two, smaller fragments were clearly used for a different purpose. John Evans (North-East London Polytechnic) found that emission spectroscopy showed large amounts of both lead and copper to be present in the glassy slag coating the surfaces, as well as some silver and small but possibly significant amounts of tin and zinc. A pink coloration on the outside surface of No. 604 seemed to be related only to differences in iron and manganese content."

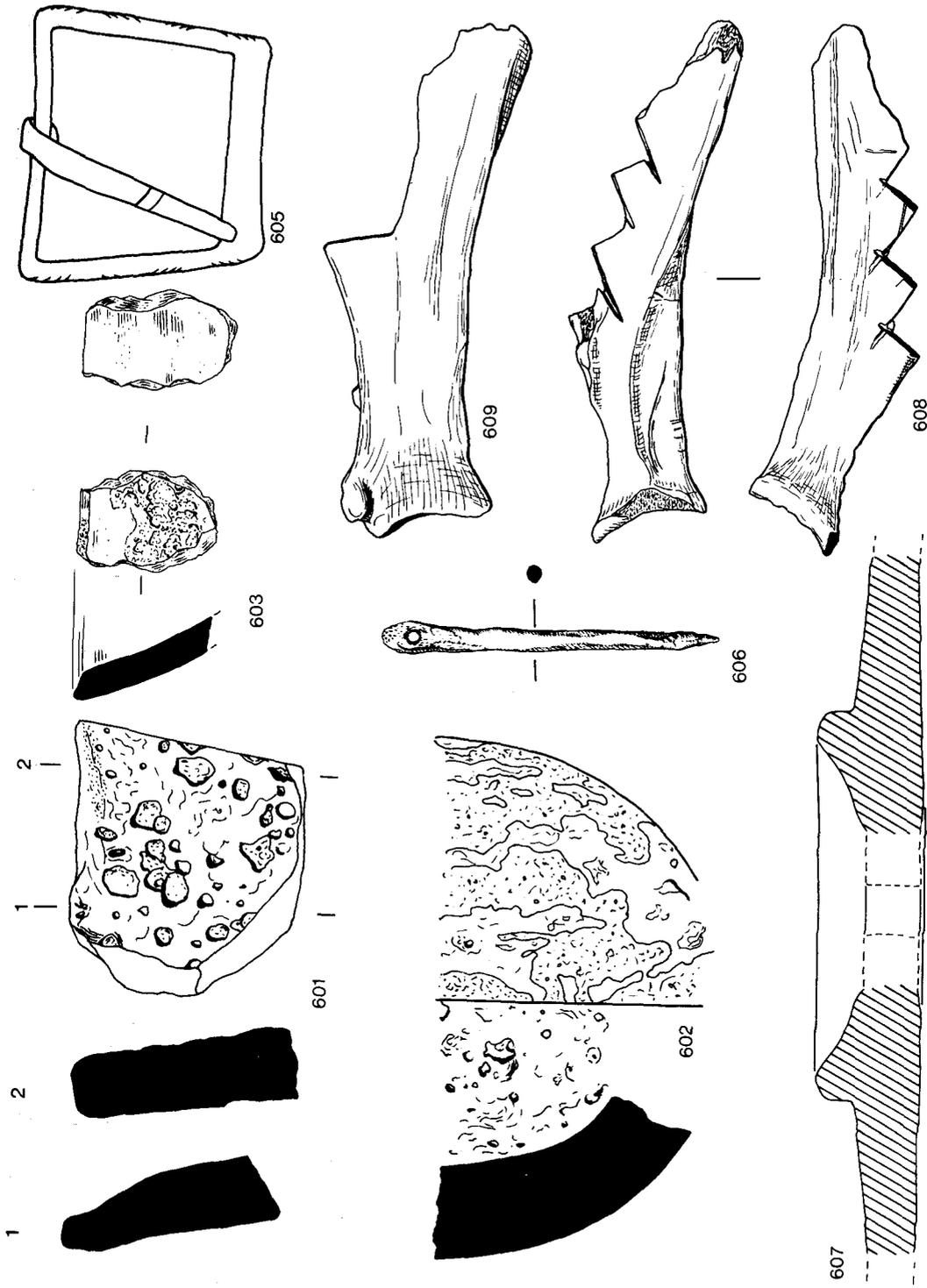


Fig. 31. Angel Court: Miscellaneous medieval finds Nos. 601 — 606 ( $\frac{1}{2}$ ), 607 ( $\frac{1}{4}$ ), 608 — 609 ( $\frac{1}{3}$ )

## IRON

(Fig. 31, No. 605).

605. (1576/51) Buckle; rectangular with grooved decoration on sides and on pin. Possibly from a

harness. Cf. London Museum (1967, Pl. 79, 3). From Trench A, Layer 2 and therefore possibly *c.* late 14th to early 15th century. (Illustrated from a radiograph).

## IRON NAILS

Three iron nails were recovered from Trench A, Layer 6, the fill of a wooden barrel. These appear to be equivalent in general shape to Roman Type I (p. 63), although any existing minor differences cannot be observed due to their much deteriorated condition. From the shape of their corrosion products it is clear that at least two of the three were still embedded in wood when they became buried. The only complete example is 51mm long and the others were probably of an equivalent length before breakage. The way in which nails of this size could have been incorporated in the barrel, as suggested by the excavator, is not immediately obvious.

A few other corroded medieval nails were recovered from Trench A, but these are not discussed in this report.

## BONE

(Fig. 31, No. 606).

606. (1576/14) Needle; roughly carved. Probably used for weaving or coarse sewing. From Trench A, Layer 4 and therefore, probably *c.* AD 1250 to 1400 (illustrated).

sandstone. It shows no uniquely diagnostic characteristics and such sandstones are not uncommon throughout parts of the Geological Column. Comparison with specimens in the collections of the Institute of Geological Science has failed to reveal a specimen of similar character, although it may be compared with stone from the Hythe Beds division of the Lower Greensand formation, Cretaceous Age, from the Hythe area. The Hythe Beds show a considerable degree of natural change. The possibility remains that the stone is from abroad but it has not, unfortunately, been possible to compare this specimen with foreign material." From Trench A, Layer 4 and therefore probably *c.* AD 1250 to 1400 (illustrated).

## STONE

BY HUGH CHAPMAN

(Fig. 31, No. 607).

607. (1576/38) Fragment of top stone of quern with raised rim round central hole to form hopper; grinding striations visible on underside. Mr. Francis Dimes (Institute of Geological Science) writes: "This may be described as a compact, fine grained, glauconitic

## APPENDIX 1

## MAMMAL REMAINS FROM TRENCH A

BY JULIET CLUTTON-BROCK AND PHILIP ARMITAGE

The complete collection of animal remains is held in store at the British Museum (Natural History). Accession Nos. ARC 1976 5000 — 5032 (Roman) and ARC 1976 5033 — 5035 (Medieval). Full data and measurements of the material are available on request in the form of an indexed computer print-out from the BM (NH) and from the Department of Urban Archaeology, Museum of London.

## INTRODUCTION

The animal remains from the Roman and medieval levels of Trench A are described separately in systematic order under species. In the Roman levels there was only a scattering of animal bones except in Layer 9 (late 4th century) which contained a very large number of cattle horn cores, jaws, and postcranial elements. From both periods there is a great preponderance of cattle over other species of livestock. The large number of cattle horn cores in the Roman Layer 9 and the medieval Layer 5 together with the goat horn cores from the medieval levels probably indicate workshops for horn, although in the Roman level this was obviously not an exclusive industry as there are also a large number of postcranial bones (see Fig. 32).

Our thanks are due to Andrew Redfern who carried out much of the initial sorting and identification of the animal remains.

## ROMAN LEVELS

*Domestic dog*

Remains of at least two dogs were recovered from Layer 9. There are the occipital regions of two adult skulls, a complete humerus, one complete tibia and one distal end of a tibia and two metapodial bones.

Bone	Layer 7	Layer 11	Layer 9	Layer 20	Layer 13	Layer 19	Layer 15	Layer 18	Layer 18A	Layer 18B	Layer 16
Skull			25	2							1
Horn core	11		98	8	1						1
Maxilla	2		10			1					
Mandible	24	1	54	5		1					1
Tooth	17		38			1					1
Vertebra	5		34	4					4		10
Rib			42	15					27		17
Scapula	5		32	1					2		1
Humerus	10		26	1						1	
Radius	4		26	1							
Ulna			8								
Carpal											
Metacarpal	24		71				2	1	2		
Innominate			4	3					4	1	2
Femur	2		6	2							
Tibia			18								
Tarsal	9		11								1
Metatarsal	38	1	115	2		1	2				
Phalanx I	1		3	3			1		1		1
Phalanx II			2							1	1
Hoof core			3								1

Fig. 32. Numbers of identified cattle remains from Roman Levels in Trench A

*Domestic horse*

One large upper tooth from an adult horse was recovered from Layer 7, one adult incisor from Layer 13 and one complete left mandibular ramus from a stallion or gelding from Layer 20. In addition there is one 2nd phalanx from this level. The mandible has the complete row of cheek teeth, the canine and all but the two central incisors. The bones and teeth appear perfectly healthy although the horse was more than 12 years old at the time of its death. There is no evidence from the wear of the teeth that the horse was ridden with a metal bit.

*Domestic pig*

As the bones and teeth of primitive, unimproved pigs do not reach maturity until the animals are over four years old it is unusual to find the remains of fully adult pigs from archaeological sites. Two fragments of maxillae, one mandible fragment and two metapodials, all from subadult pigs were identified from Layer 7, whilst from Layer 9 there are the following remains of pig:

Mandible	one fragment with the lower right M3, length 31.4mm one fragment with P4, M1
Maxilla	one fragment
Teeth	one upper and one lower tusk and one incisor
Skull	one fragment
Scapula	two fragments
Humerus	one fragment
Radius	two fragments
Ulna	one fragment
Femur	two distal epiphyses
Talus	one fragment, gnawed by dog
Calcaneum	one nearly complete

*Red deer (Cervus elaphus)*

Three fragments of antler tines were found in Layer 7 and one antler tine and one upper molar tooth in Layer 9. There is no evidence for antler working although, no doubt, antler was a very important raw material.

*Domestic ox*

The remains of domestic cattle greatly outnumber those of any other species. The bones are not listed here in detail but a summary is given in Fig. 32 of the numbers of identified bones from the separate layers. In addition there is a large quantity of fragments of cattle bones as well as a few from other species which have been retained but are not registered.

The very large number of metatarsal bones from Layer 9 (115, see Fig. 32) is probably biased by the proximal and distal ends being counted separately, whereas some may be from single bones. Without the distal ends there are 83 complete and proximal ends which is closer to the number of horn cores and may indicate that at least 40 cattle are represented in Layer 9.

The 98 horn cores from Layer 9 are so complete and in such a good state of preservation that we have been able to use them as a type series for our work on a new method of establishing the sex of horn cores and description of their relative shape and curvature (Armitage and Clutton-Brock, 1976). The ox horn cores from Layers 7 and 9 are therefore listed below according to this system:

**Horn Cores, Layer 7**

Short horned group	1 adult, left, cow 2 adult, right, cow 2 adult, right, bull 2 juvenile
Medium horned group	1 adult, left, bull
3 fragments, undetermined sex or group	

**Horn Cores, Layer 9**

Short horned group	12 adult, left, cow 11 adult, right, cow 6 adult, left, castrate 2 adult, right, castrate 5 adult, left, bull 1 juvenile, left, bull 8 adult, right, bull 1 adult, left, sex? 11 fragments
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Medium horned group	9 adult, left, cow
	5 adult, right, cow
	4 adult, left, castrate
	8 adult, right, castrate
	3 adult, left, bull
	5 adult, right, bull
	4 juvenile, sex?
	3 fragments

The short horned group contains all those horn cores that are between 96 and 150mm in length and the medium horned group contains those with lengths between 150 and 200mm. The other two groups that we have differentiated are small horned and long horned but neither of these is represented from Angel Court. These divisions are arbitrary distinctions taken for convenience so that the horn cores may be described precisely; they do not reflect any definite separation into breeds but rather they show the natural variation within a local population of cattle which would not have undergone any artificial selection for shape or length of horn. Furthermore these characters are not related to size of body and the postcranial skeletal bones cannot be divided into any equivalent grouping.

The following percentages can be given for the sexes of the horn cores from Layer 9:

Total no.	98
Cows	37.7%
Bulls	22.4%
Castrates	20.4%
Indeterminate	20.5%

No deductions may be made about methods of livestock husbandry or kill-off patterns from the proportions of sexed horn cores recovered from a horn worker's shop because the sexes will only reflect the craftsman's preference in the horn as his raw material. As has been said in the introduction the collection of horn cores from Layer 9 are not likely to be exclusively the debris from horn working as they are mixed with a large number of postcranial cattle bones. They are more likely to have been discarded by the slaughterer after the horns and hide had been removed as valuable side-lines to the butchery trade. It is notable that there are extremely few horn cores or parts of the skeleton that are from calves or even from young cattle. This is supported by an examination of the mandibles which were arranged in relative classes according to the tooth wear using the method described by Grant (1975), see Figure 33. This does not allow the absolute age to be determined but it can be seen from the figure that the majority of the mandibles are from cattle that were well over five years old when they were killed.

The skeletal bones of cattle from the Roman levels show that the animals were of the usual small stocky build that is characteristic of the period. An attempt has been made to sex the metatarsal bones from Layer 9 using the method of Mennerich (1968) where the length is plotted against the maximum proximal width (Figure 33). This method can only be used on complete metatarsal bones of which there are only 16 but it is clear that there are more cows than bulls or castrates. It is evident from the horn cores as well as from the qualitative and quantitative assessment of the skeletal bones that a high proportion of adult cows was killed (approximately 40%) and as only a very low percentage of the total number of cattle bones is from calves it is likely that old cows were slaughtered for food and raw materials when they were too old for breeding or draught.

#### *Domestic sheep and goat*

Most of the caprine material could be ascribed to either sheep or goat but it is difficult to determine the teeth and jaws so, although these are likely to be sheep as very few goat bones were identified, they have been classified as sheep/goat. Only Layers 7 and 9 produced appreciable numbers of caprine remains and these are listed as follows:

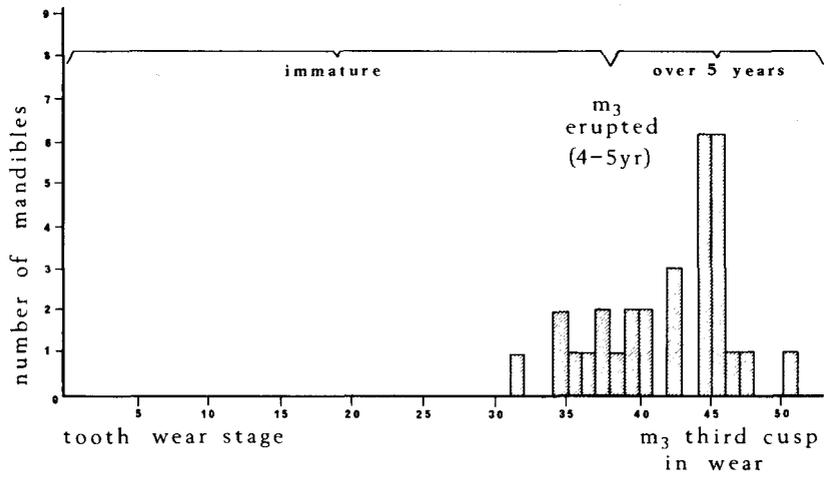
#### Sheep, Layer 7

Horn core	three
Rib	three fragments
Humerus	one distal end
Radius	one proximal end and one distal end
Metacarpal	two proximal ends
Metatarsal	six incomplete
Tibia	three incomplete

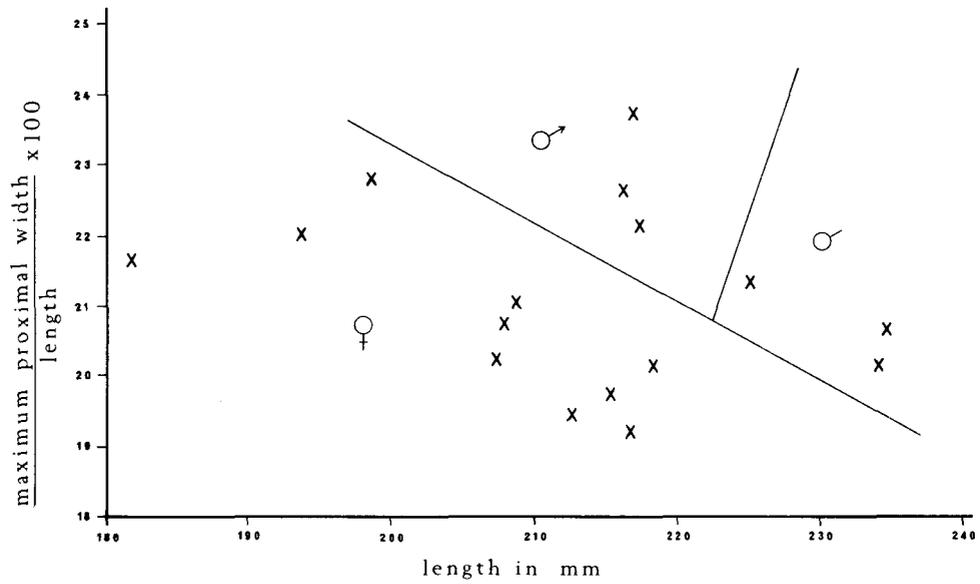
#### Sheep/Goat, Layer 7

Teeth	one upper and one lower cheek tooth
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AGE STRUCTURE OF CATTLE MANDIBLES FROM TRENCH A LAYER 9



COMPLETE CATTLE METATARSAL BONES FROM TRENCH A LAYER 9



S.G.

Fig. 33. Angel Court: Bone report; tables

## Sheep, Layer 9

Horn core	one fragment
Vertebra	one atlas, one cervical, adult
Radius	five incomplete, two adult, three lambs
Metacarpal	one almost complete, four incomplete, one juvenile
Metatarsal	seven incomplete, one juvenile
Tibia	one distal end

## Goat, Layer 9

Horn core	one, from a small goat
-----------	------------------------

## Sheep/Goat, Layer 9

Tooth	one lower right M3, 3-4 years
Mandible	two fragments, 4-6 years one fragment, 2-3 years one horizontal ramus with cheek teeth, 3-4 years one horizontal ramus with cheek teeth, 4-6 years one horizontal ramus with molar teeth, 3-4 years.

The ageing of these mandibles was based on the method described by Payne (1973). The sample is, however, very small and no conclusions can be drawn from it on kill-off patterns, except that it provides no evidence for the slaughter of lambs or kids for food.

## Evidence of butchery and bone working

Most of the bones show some form of butchery and it is clear that the collection as a whole consists of bone waste that was discarded at all stages from slaughterer, bone worker, cook and diner.

A number of the horn cores have cutting marks around the base showing where the horn has been removed from the skull; other bones, particularly the scapulae, provide evidence for the use of bone as a raw material, for they have had pieces sawn from the flat part of the blade (see Nos. 608 and 609, both from Layer 9, illustrated, Fig. 31). In contrast to the animals killed for food which, of course, include the bird remains, none of the horse, dog, or cat bones show any signs of butchery. A summary is given in Fig. 34 of the indications of butchery exhibited by the cattle bones from Layer 9.

## MEDIÆVAL AND LATER LEVELS

*Domestic dog*

One right mandibular ramus of a rather large adult dog was recovered from Layer 2 together with one metapodial bone, not necessarily from the same dog.

*Domestic cat*

One ulna of a small cat was identified from Layer 5 and a tibia and a shaft of a femur, also from a small individual, from Layer 4. The femur is from an immature cat.

*Domestic horse*

One cervical vertebra of an adult horse was recovered from Layer 4, and a lower cheek tooth from Layer 3.

*Domestic pig*

Layer 5 provided the majority of the pig remains as of other livestock. The identifications of pig from the separate levels are listed as follows:

## Layer 5

Mandible	1 right ramus with incisor, canine and cheek teeth, M3 unerupted, subadult 1 fragment of a left ramus, subadult
Rib	2 fragments
Humerus	1 fragment 1 distal end, subadult
Ulna	1 shaft
Radius	1 proximal end and shaft
Tibia	4 shafts, juvenile
Metapodial	4 shafts

## Layer 4

Mandible	1 anterior part of a right ramus, female, 2-3 years
Scapula	1 part of a blade
Radius	1 shaft, juvenile
Fibula	1 fragment, juvenile

## Layer 3

Two metapodial bones from juvenile pigs, both incomplete.

Bone	Part remaining	Number	Description
Scapula (See Fig. 31)	Articular end+ part blade	1 (No. 608)	Square pieces of bone removed from the blade by sawing, leaving a broad, saw-edged effect. Waste from bone working.
	Articular end+ part blade	3 (inc. No. 609)	Pieces of bone removed, leaving the waste from bone working.
	Articular end+ part blade	4	Blade chopped across. Butchery or bone-working.
	Part articular end+ blade	10	Chopped obliquely across the posterior end of the articular surface.
Humerus	Distal end+ part of shaft	10	Cleavage of the distal epiphysis and shaft.
	Shaft	4	Split with spiral fracturing.
	Shaft	1	Irregular chop marks on the shaft just below the line of epiphyseal fusion. The lateral edge of the trochlea of the distal epiphysis has been sliced through.
	Distal epiphysis	2	Chopped fragments.
Radius	Proximal end+ shaft	5	Chopped longitudinally from the proximal end with the shaft split along its length.
	Proximal end+ shaft	6	Spiral fracturing of the shaft.
	Proximal epiphysis	2	Chopped through obliquely.
	Distal end+ shaft	1	Chopped through obliquely just above distal epiphysis.
	Distal end+ shaft	3	Spiral fracturing of the shaft.
	Head of femur	2	Chopped through probably in the removal of the hind limbs from the body of the carcass.
Femur	Distal epiphysis	1	Chopped through obliquely.
	Shaft	4	Proximal end removed by oblique chop through the joint.
	Shaft	7	Cleaved with spiral fracturing.
	(Shaft)	1	Proximal end gnawed away by dog).
Metatarsal	Proximal end and distal end	67	The bone has been chopped across transversely leaving the splintered ends as waste.
	Shaft	8	Split medially along the length.
Calcaneum	Corpus calcanei	1	Chopped through obliquely probably during the removal of the hind foot from the limb.
	Fragment	9	Some with spiral fracturing, others with straight-edged breaks. These are debris from the smashing of marrow bones.

Fig. 34. Evidence of butchery on the cattle bones from Trench A, Layer 9

## Layer 2

Maxilla	2 fragments with unerupted M3
Mandible	1 anterior part of a ramus with deciduous canine 1 fragment from an adult pig
Tooth	2 incisors and one fragment of an unerupted molar
Rib	3 fragments
Scapula	1 part of a blade
Humerus	1 shaft of a young piglet
Radius	1 shaft, juvenile
Ulna	3 proximal ends
Innominate	1 fragment, juvenile
Tibia	1 shaft, juvenile
Hoof core	1

*Domestic ox*

As with the Roman Layer 9, the large number of cattle horn cores (together with those of goat) suggests that the debris from horn working is represented here. The cattle horn cores have been grouped in the same manner as for the earlier levels. In addition there are the remains of three cattle skulls, two from polled animals and one from which the horn cores had been removed after death. Horn 'scars' are present on the two polled skulls, being more evident on one than on the other. These skulls were probably naturally hornless but it is not impossible that the horn buds had been removed, either with a sharp knife or by burning, when the calves were quite young.

## Layer 5

Short horned group	1 frontal bone with both horn cores, adult, cow 6 adult, left, cow 4 adult, right, cow 1 adult, right, castrate (perhaps castrated when the animal was well grown) 9 adult, left, castrate 3 adult, right, castrate 1 adult, right, bull 9 juvenile, left, sex? 4 juvenile, right, sex?
Medium horned group	1 adult, left, cow 1 adult, right, cow 1 adult, left, castrate 1 adult, right, castrate 2 adult, left, bull 1 juvenile, left, sex? 1 juvenile, right, sex? 7 fragments, undetermined sex

Besides the horn cores from Layer 5 there are two mandibular rami, three isolated teeth and 59 postcranial elements, as listed in Fig. 35.

## Layer 4

This level also provided a large number of cattle horn cores.

Short horned group	3 adult, left, cow 3 adult, right, cow 5 adult, left, castrate. One appears to have been "poll-axed" behind the horn core. 2 adult, right, castrate 3 juvenile, right, castrate
Medium horned group	1 adult, castrate, frontal bones with both cores

The total numbers of horn cores and postcranial remains of cattle are listed in Fig. 35. It is of interest that there are no apparent differences in the horn cores or in the limb bones between the Roman and Medieval periods, although the sample of postcranial elements from the later levels is too small for a metrical comparison to hold validity. From neither period are there any of the small horned cores that are typical of Iron Age cattle, nor of the long horned cores that have been recovered from the 15th century deposits at the nearby site of Baynard's Castle, London (Armitage in prep.).

*Domestic goat*

Evidence for bone working is further supported by the presence of 15 horn cores, some very large and nearly complete, from Layer 5. In addition Layer 4 provided 7 goat horn cores, and Layers 3 and 2 provided one each. A single metacarpal bone was also identified as goat from Layer 5 but with this exception all the other material appears to be from sheep.

Bone	Layer 2	Layer 3	Layer 4	Layer 5
Skull				3
Horn core	1	3	17	46
Maxilla				
Mandible	4			2
Tooth	2	1	4	3
Vertebra	8		5	11
Rib	3	3	8	23
Scapula			1	4
Humerus	2		6	2
Radius	4		4	2
Ulna			1	1
Carpal				
Metacarpal			3	
Innominate	6			1
Femur	1		3	5
Tibia	4	1	5	7
Tarsal	2		1	2
Metatarsal	1		1	
Phalanx I				
Phalanx II			1	
Hoof core	1			1

Fig. 35. Numbers of identified cattle bones from the Medieval Levels in Trench A

*Domestic sheep*

With the exception of the single goat metacarpal bone from Layer 5 all the postcranial remains could be sheep and have been listed as such, but it is, however, quite possible that some of the fragments are goat.

## Layer 5

Scapula	1 incomplete, young lamb
Radius	4 incomplete, two adult, one juvenile, one fragment
Innominate	2 incomplete, adult
Tibia	2 incomplete
Metatarsal	1 proximal end, adult

## Layer 4

Vertebra	2 fragments
Humerus	1 shaft, lamb
Radius	1 shaft, lamb
Metacarpal	1 proximal end
Tibia	1 shaft, adult
Metatarsal	1 proximal end, adult 1 incomplete, juvenile

## Layer 3

Radius	1 proximal end of shaft, adult
--------	--------------------------------

## Layer 2

Horn core	1 fragment
Skull	2 bisected skull parts, hornless
Scapula	1 fragment
Humerus	1 distal end, adult
Radius	1 proximal end
Ulna	1 fused to radius
Femur	1 proximal end, adult 1 shaft, lamb
Tibia	1 proximal end, juvenile 1 shaft 1 distal end, adult
Metacarpal	1 proximal end
Metatarsal	1 proximal end

## Evidence of butchery and bone working

As with the animal remains from the Roman levels, most of the bones show signs of butchery in that they have been chopped. The numbers of bone from each level were, however, too small to merit the special attention paid to the cattle remains from Layer 9 (Fig. 34) where it was possible to distinguish the waste products of bone working from those of food preparation.

Most of the horn cores, including those of goat, show evidence for horn working for they have been chopped or sawn from the skulls and some have obviously been cut into sections.

## APPENDIX II

## BIRD BONES FROM TRENCH A

BY J. S. GASK

## Roman

Layer 18a c. AD 145-60

Right tarsometatarsus (complete, chipped at proximal end).

It fits chicken (*Gallus gallus*) very well.Clavicle (broken) Chicken (*Gallus gallus*).Tibiotarsus (broken) immature. Possibly chicken (*Gallus gallus*).Left femur (broken at proximal end) it fits Mallard, (*Anas platyrhynchos*), very well.

Layer 19 Late 3rd century AD

Sternum of Domestic/Grey Lag Goose (*Anser anser*).

Layer 9 Late 4th century AD

Right humerus, most probably a very small Chicken.

## Medieval

Layer 5 12th-13th century AD

Right humerus (complete) Chicken

Right tarsometatarsus (complete) Chicken

Left tibiotarsus (broken at Proximal end) Chicken

Right tibiotarsus (broken at proximal end) Chicken

Right tibiotarsus (broken in two halves) Chicken

Immature tibiotarsus, possibly Chicken

Left radius (complete) quite possibly Chicken

Left coracoid (complete) Domestic/Grey Lag Goose (*A. anser*)

Right ulna (broken at distal end) Domestic/Grey Lag Goose

Part of right humerus, probably Domestic/Grey Lag Goose

Layer 4 between c. AD 1250 and 1400  
 Right tibiotarsus (broken at distal end) Chicken  
 Left carpometacarpus, Domestic/Grey Lag Goose  
 Layer 2 c. late 14th to early 15th century  
 Left tarsometatarsus (broken at proximal end) Chicken  
 Right humerus (broken at proximal end) Chicken  
 Left femur (complete) Chicken, probably immature

Right tibiotarsus (complete) Chicken  
 Right tibiotarsus (broken at proximal end) Chicken  
 Part of tibiotarsus, most probably Chicken  
 Left coracoid (chipped at distal end) Domestic/Grey Lag Goose  
 Left ulna (broken at proximal end) compares very well with Partridge (*Perdix perdix*)

## APPENDIX III

### FISH REMAINS

BY A. C. WHEELER

Trench A, Layer 2 c. late 14th to early 15th century  
 Cod (*Gadus morhua*) 2 abdominal centra, 1 caudal centrum and 1 articular, probably all from one fish.

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# EXCAVATIONS AT LINCOLN ROAD, LONDON BOROUGH OF ENFIELD, NOVEMBER 1974—MARCH 1976

ANNE GENTRY, JOHN IVENS and HEATHER McCLEAN

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### *Summary*

*Part of what appears to be the perimeter of a Romano-British ditched enclosure was revealed at Lincoln Road, Enfield. Occupation ranged in date from the late 1st century to the end of the 4th century, and perhaps beyond. Evidence has been gathered by a combination of part-time digging by the Enfield Archaeological Society, three months' full-time excavation, and site watching during the subsequent redevelopment of the site.*

### 1. INTRODUCTION

The site lies within the London Borough of Enfield, approx. 14.8 Km north of the City of London, situated on the brickearth and gravel at the western side of the Lea Valley, at 22.1 m O.D. It is bounded by Lincoln Road, Seventh Avenue and Bush Hill Park School (TQ 341959) (Fig. 1). Ermine Street, the main Roman road north from Bishopsgate, in the City, to Lincoln and beyond has been located to the south of the borough at Snell's Park, Lower Edmonton<sup>1</sup>, and to the north at Ware, Hertfordshire<sup>2</sup>. Its course between these points has not yet been ascertained, although it has been conjectured to cross Lincoln Road near its junction with Main Avenue and Carterhatch Lane to the east of the bridge over the New River, and thence to be preserved in a minor road to the north of Enfield at Bulls Cross<sup>3</sup>. This projected course for Ermine Street ran across the site available for excavation in Lincoln Road. Other Roman finds had been made in the vicinity, notably occupation material ranging from the 1st to 4th centuries detected at Landseer Road (TO 340956), and a possible cremation group found under the former Price's Bakery Yard on the west side of Seventh Avenue (TQ 340959), plus several other burials, including a lead coffin, and isolated Roman finds in the borough<sup>4</sup>.

Thus, when the terraced houses fronting onto the south side of Lincoln Road and Seventh Avenue became due for demolition, and the site cleared prior to redevelopment a very keen interest was taken in the investigation of the site by the Romano-British Research Group of the Enfield Archaeological Society under the supervision of Mr. John Ivens. Preliminary

work was undertaken by the group in trial trenching the gardens of several houses prior to their demolition. Excavation was, of necessity, part time, conducted mainly at weekends. The nature of the finds discovered at this time convinced Mr. Ivens that more intensive work was necessary, and funds were raised initially from local resources, sponsored by donations from the London Borough of Enfield, the site contractors, and many residents of Enfield, to finance this work.

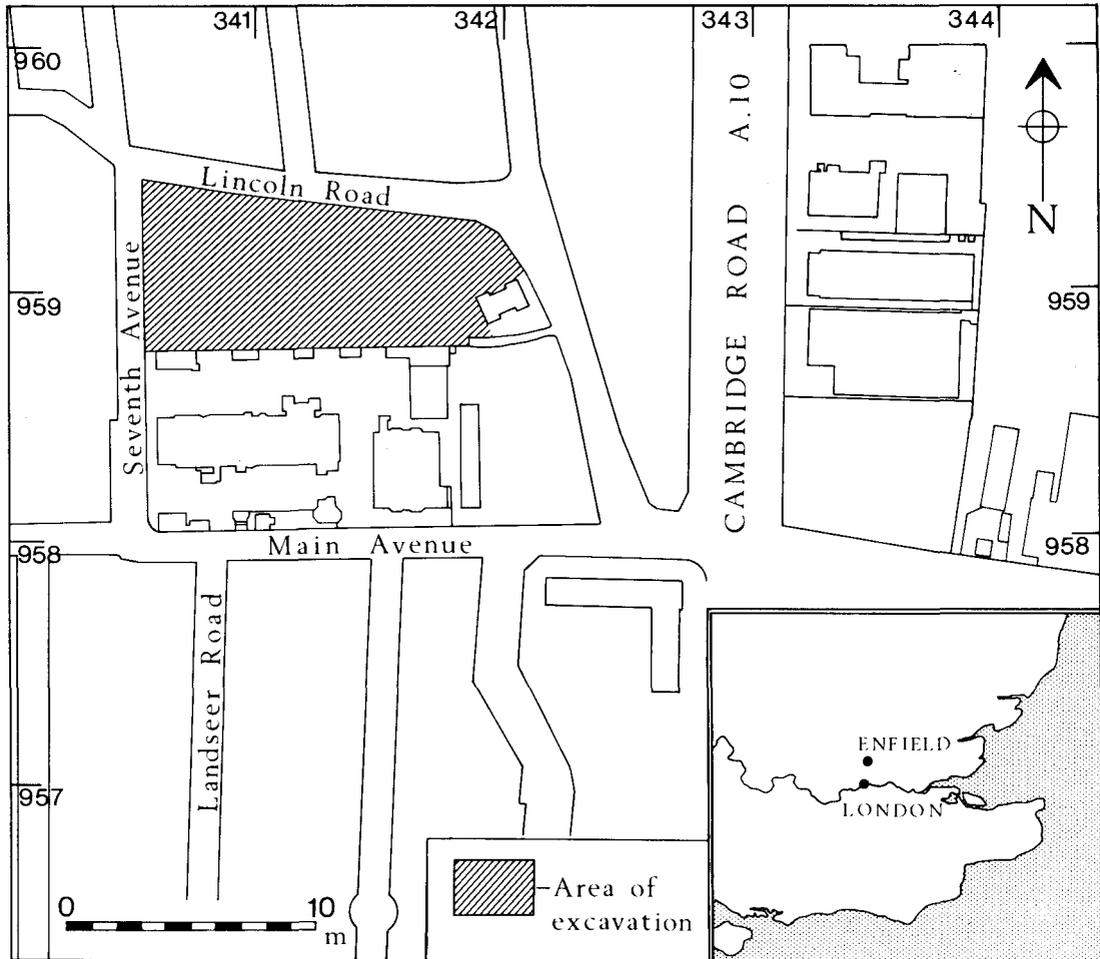


Fig. 1. Lincoln Road, Enfield. Location map

Having contacted Alison Laws, Harvey Sheldon and Ralph Merrifield of the London and Middlesex Archaeological Society, and the Department of the Environment funds were made available for a full time excavation team which conducted an excavation of 13 weeks' duration between July and October 1975, under the direction of Anne Gentry. Subsequently Heather McClean of the Inner London Archaeological Unit was appointed to watch the site during the initial clearance and foundation digging by the contractors. Thus the examination of the site took place in three parts, and are described below by the individuals responsible; the finds have been dealt with together.

The path of Ermine Street was not located during the excavation. However, an aerial photograph (Plate 6), taken at the height of the drought in the summer of 1975 shows the line of what is possibly Ermine Street running north-south across the playing fields to the north of the site, and to the west of the Cambridge arterial road (p. 122).

#### HISTORY OF THE SITE

Work was started on the terraced houses in Lincoln Road in 1903-4, and they were ready for occupation by 1904-5<sup>5</sup>. Prior to this building the site had been an area of open fields, and as such there is very little documentation referring to it. The western section of Lincoln Road, which ran between Enfield town and Hertford Road, was known in 1572 as Bungeys or Bungers Lane<sup>6</sup>. A map of Enfield *c.* 1800<sup>7</sup> depicts it as Joan Potter's Lane, running between open fields, but by 1823 it was more generally known as Brick or Red Lane when it served as a private road for the landowner, William Mellish<sup>8</sup>. Between the publication of the 1868 and 1897 editions of the Ordnance Survey 6 inch maps of the area this lane had been renamed Lincoln Road.

Exploitation of the brickearth subsoil led to an expansion of brickmaking in the Lea Valley during the 19th century<sup>9</sup>. In 1823 a brick field is recorded in Lincoln Road, although its precise location is unknown, and by 1863 there were brick fields and clay mills in the vicinity of Lincoln Road, Southbury Road, and Old Road, Enfield Highway<sup>10</sup>. A large area in Toops and Laundry Yards (Fig. 2) was found by excavation to consist of large gravel or clay extraction pits which, although not documented, probably belong to this period; the fact that Lincoln Road was known as Brick Lane by 1823 may support this.

## 2. EXCAVATIONS AT 149 LINCOLN ROAD

BY JOHN IVENS AND GRAHAM DEAL

### SUMMARY

Initially the excavation was restricted to an area 15m x 10m which after clearance of the overlying makeup exposed Roman occupation at a depth of 600mm. Apart from some modern intrusions the Roman layer was undisturbed and consisted of an unstratified layer of black soil 200mm in depth containing small clumps of burnt clay together with a scatter of 1st-4th century pottery. Where this overlay features 1 and 2 a concentration of coinage was recovered which suggested that this layer could not have been redeposited earlier than AD 330-340 and was sealing three phases of occupation.

#### PHASE 1

1st Century — Traces of a beam slot (F. 10), which had been cut through a later ditch (F. 4).

#### PHASE 2

Mid 2nd Century — Cutting of ditches (F. 4, F. 6, F. 7), gully (F. 8) and circular pit (F. 1).

#### PHASE 3

3rd-late 4th Century — Cutting of ditch (F. 3) and industrial activity indicated by the capping of a circular pit with a bowl shaped structure (F. 1) and construction of a corn drier (F. 2) with associated gravel spread.

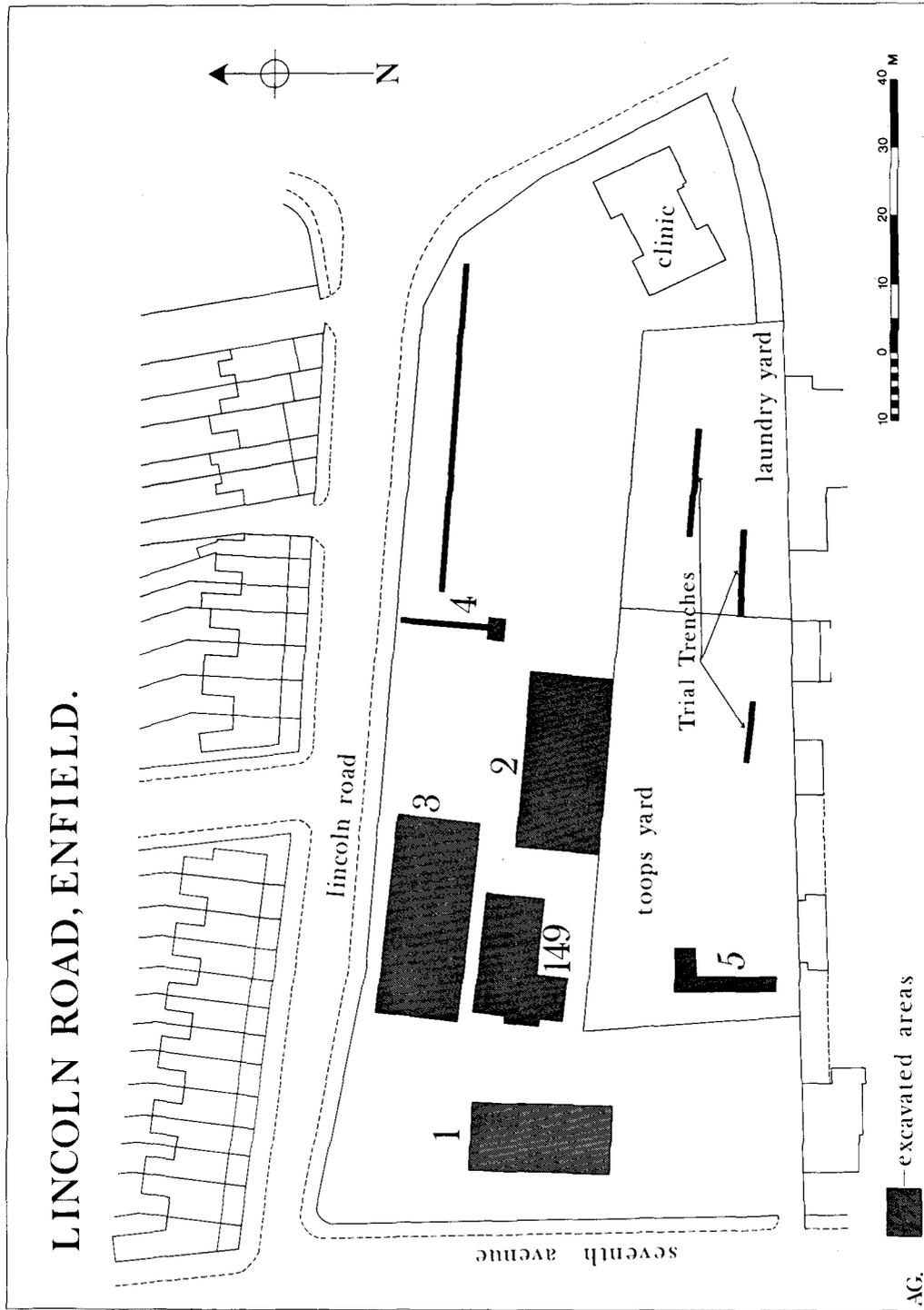


Fig. 2. Lincoln Road, Enfield. Areas investigated

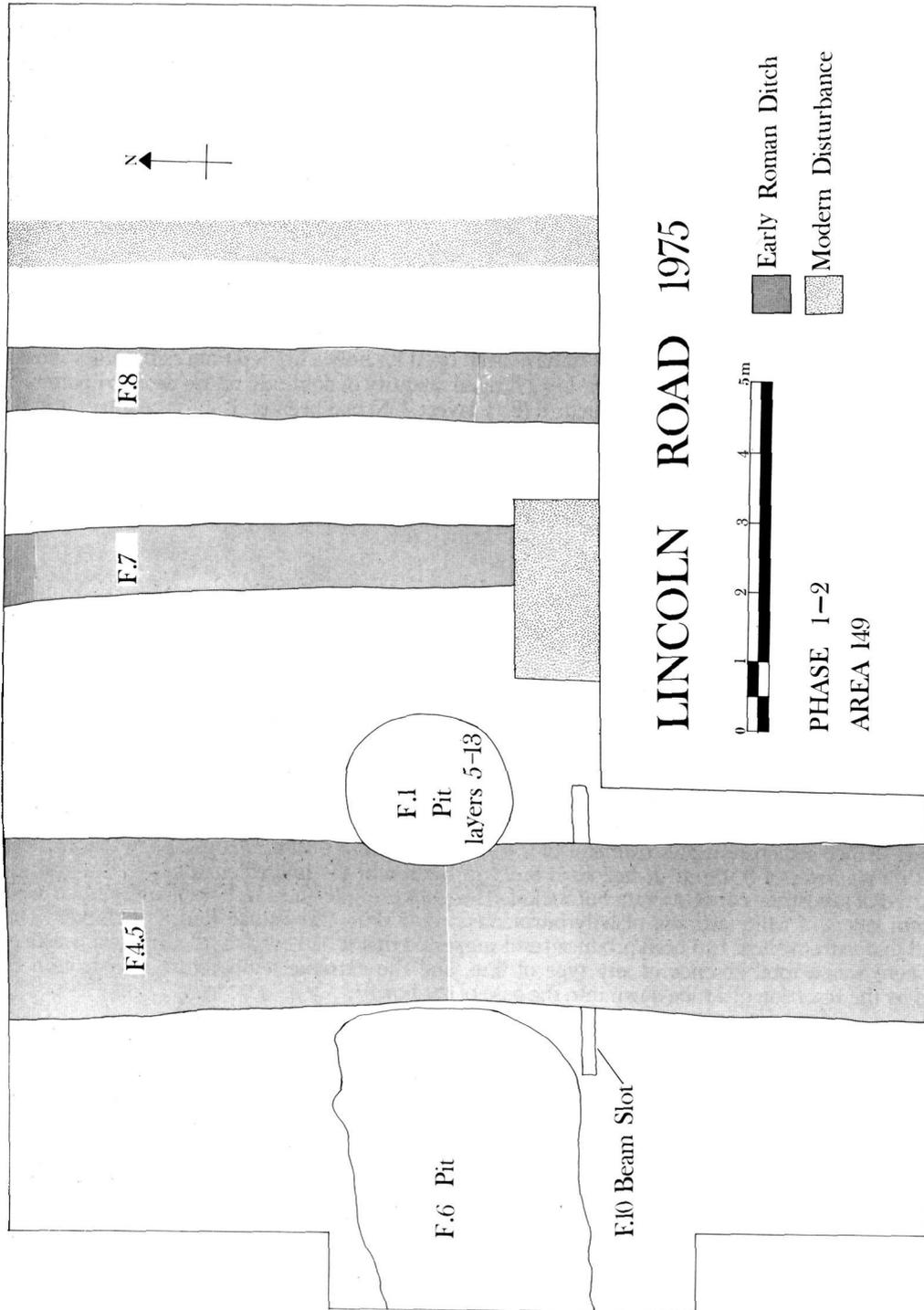


Fig. 3. Lincoln Road, Enfield. Area 149. Phases 1 and 2

## THE EXCAVATION

## PHASE 1 (FIG. 3) — FEATURE 10

The earliest evidence of occupation was a beam slot with dimensions 4.96m x 250mm. No positive date can be assigned to the slot, but it clearly predates the ditch (F. 4) which had been cut through it sometime in the early part of the 2nd century.

## PHASE 2 (FIG. 3) — FEATURE 4

A wide shallow ditch aligned north-south which had silted up sometime during the early 2nd century, and predates the circular pit (F. 1) which had been partly cut into the east side. The fill contained domestic refuse, bronze objects and pottery. At the north end it was overlain by a 4th century gravel spread (Fig 4).

## FEATURE 1 (LAYERS 6-13)

A circular pit with a diameter of 2.45m and depth of 2.82m had been cut through brickearth into natural gravel. Black staining on the gravel sides suggested the possibility of a reed or timber lining. Its exact function is unknown, but it appears to have been open for only a limited time as the sides showed no signs of deterioration. The infill containing a limited quantity of domestic refuse dated by pottery to the mid-2nd century. The sandstone structure (F. 1 layers 1-5) had been built into the top of it in the 4th century.

## FEATURE 7

A 'V' shaped ditch running north-south, just west of F. 8 with a 'gutter slot' cut along the bottom, in which a layer of blue/grey clay was overlain by black soil containing domestic refuse and a few pottery fragments.

## FEATURE 8

Two shallow parallel gullies running north-south to the east of F. 7 with light brown gritty fill containing a few fragments of pottery. The sides were compacted suggesting that they had been open for a long period of time.

## FEATURE 6

(a) The butt end of a ditch the fill of which contained a large quantity of domestic rubbish, bronze objects and coins.

(b) Cut into the side of F. 6a was a shallow pit which contained the complete articulated skeleton of a calf. This was sealed by the later construction of corn drier F. 2 in the 4th century.

## PHASE 3 (FIG. 4) — FEATURE 1 (LAYERS 1-5)

A bowl-shaped structure with a diameter of 2.45m and depth of 960mm, curving inwards to a clay base with a diameter of 850mm. It had been built on the top of the infilled circular pit F. 1 and was constructed of sandstone conglomerate but included fragments of tile and amphora handles. At a depth of 380mm layers of white ash and heavily burnt clay, containing a few small lumps of clinker. This indicated that extreme heat had been produced and suggested that it had been used as an open hearth or oven. There was a total absence of any type of flue, and the extreme temperature may have been achieved by the insertion of a tube down into the base of the bowl<sup>11</sup>.

## FEATURE 2

A 'banjo' shaped corn drier constructed of clay, with a single flue 2.10m in length 280mm wide, with walls surviving to a height of 200mm, leading away from a shallow bowl firing end the base of which was partially lined with tile. A baffle was still present half way along the flue. Several alternate thin layers of burnt clay and black soil immediately to the west of the flue, showed successive firings and refurbishment.

When sectioned it was revealed that because of subsidence into an earlier ditch beneath (F. 6) it had been necessary to relevel the flue.

## FEATURE 3

A 'U' shaped ditch running north-south just east of F. 1. The black fill contained domestic refuse, pottery and coins of 4th century date, bronze objects and a fine decorated belt buckle of late Roman provincial style (No. 18, p. 171).

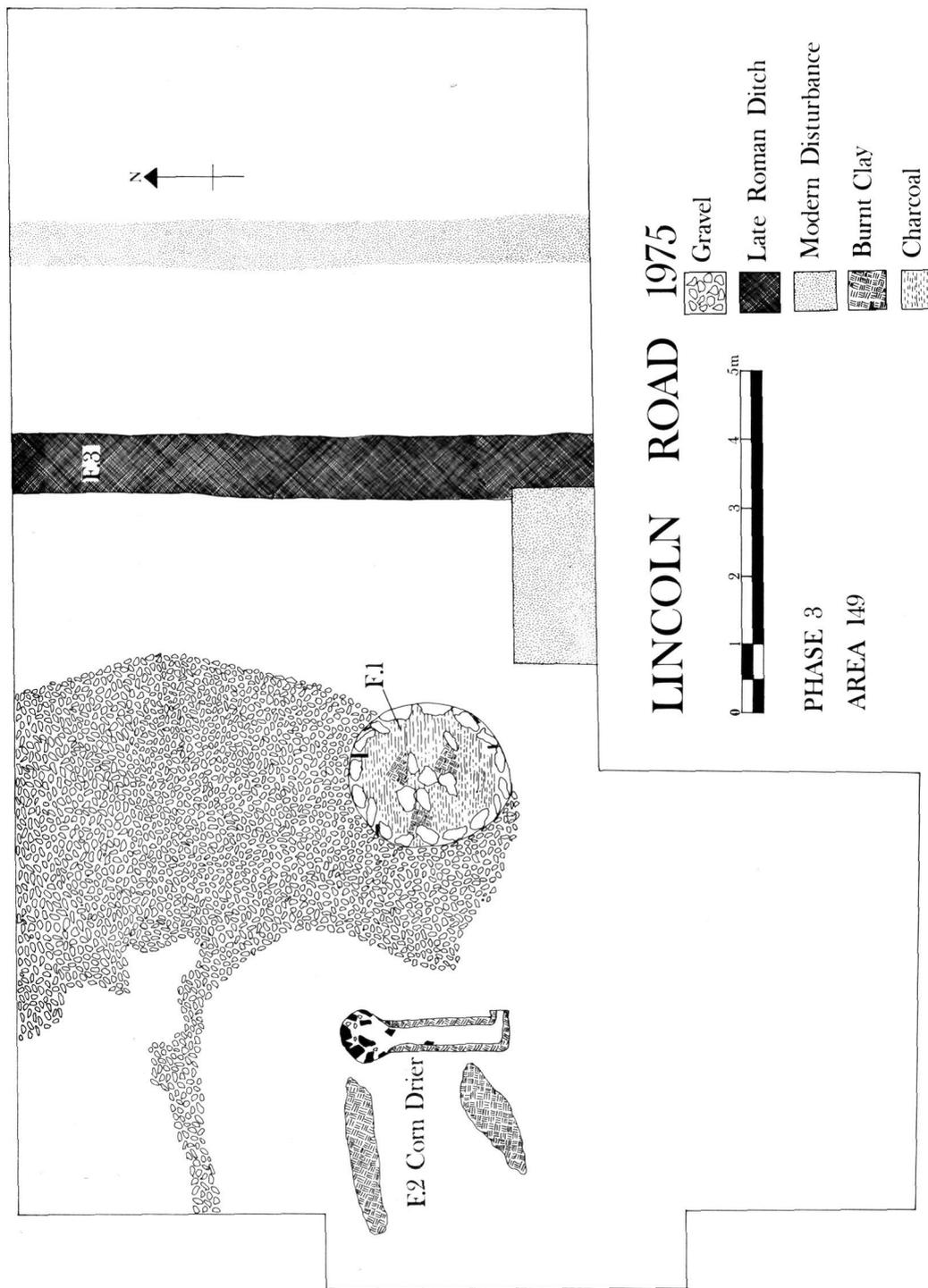


Fig. 4. Lincoln Road, Enfield. Area 149. Phase 3

## 3. EXCAVATIONS AT LINCOLN ROAD, JULY-OCTOBER 1975

BY ANNE GENTRY

## THE ARCHAEOLOGY OF THE SITE

The demolition of the 19th century terraced houses fronting Seventh Avenue and the south side of Lincoln Road, and the clearance of the industrial premises in Toops Yard gave the opportunity of examining an area of approximately 0.9ha. Toops Yard proved to be heavily concreted over and filled with various modern industrial pits and tanks. Exploratory machine-dug trenches in this area and the adjoining Laundry Yard showed that they were, for the most part, too badly disturbed by clay and gravel extraction pits to preserve archaeological deposits (Fig. 2).

To the north and west the Roman ground surface survived at a depth of some 0.5m below the modern pavement level. Three large areas were selected for total excavation. Areas 1, 2 and 3 (Fig. 2). They measured 18 x 10m; 25.5 x 12m and 29.2 x 11.6m respectively. The foundations of the houses had not disturbed the underlying Roman deposits, and fortunately no cellars had been dug. The only disturbance was caused by two series of sewer trenches in Area 1, and two isolated sewer trenches in Area 3, together with the excavation for two Anderson shelters in Area 2 during the last war.

The remainder of the area available for excavation was trenched mechanically; the first trench, 48m long parallel with Lincoln Road, and the second (Area 4), 15m in length and perpendicular to it (Fig. 2). The modern deposits directly overlay the Roman levels, with no intervening occupation. The area had clearly been fields until the end of the 19th century.

## PRE-ROMAN ACTIVITY

Occupying the eastern half of Area 3 was a shallow depression, 0.4m deep in the top of the natural brickearth, which had been sealed at the beginning of the Roman occupation of the site by levelling prior to the construction of an east-west roadway. The Roman material sealed a thin band of orange clay 60mm thick, which produced two abraded pottery sherds. They were too fragmentary to be datable, nor were any of the associated flints distinctive. A section through these deposits was revealed in the side of the modern sewer trench at the extreme east end of Area 3, and a series of pollen samples was taken from this horizon<sup>12</sup>. In addition, a few worked flints were scattered on and below the earliest Roman surfaces in all the areas examined (p. 127, Fig. 16).

## ROMAN SETTLEMENT: SUMMARY

Part of what appears to be the perimeter of a large Romano-British ditched enclosure was revealed, comprising a series of successive ditches and entrances. An area of some 300 square metres within the enclosure was excavated, and a service road, running east-west, was traced for a total distance of 99 metres, possibly linking the settlement with Ermine Street. A further area was examined outside this enclosure.

More or less continuous Roman activity was revealed, in four main periods:

PHASE 1. *c.* AD 85-130

A succession of ditches and entrances to the settlement was served by an east-west roadway. In the interior was an early clay level with several small bronzes and a cremation burial. Outside the enclosure was revealed a circular structure, with possible timber-framed buildings situated further to the east.

### AREA 1. ALL PHASES

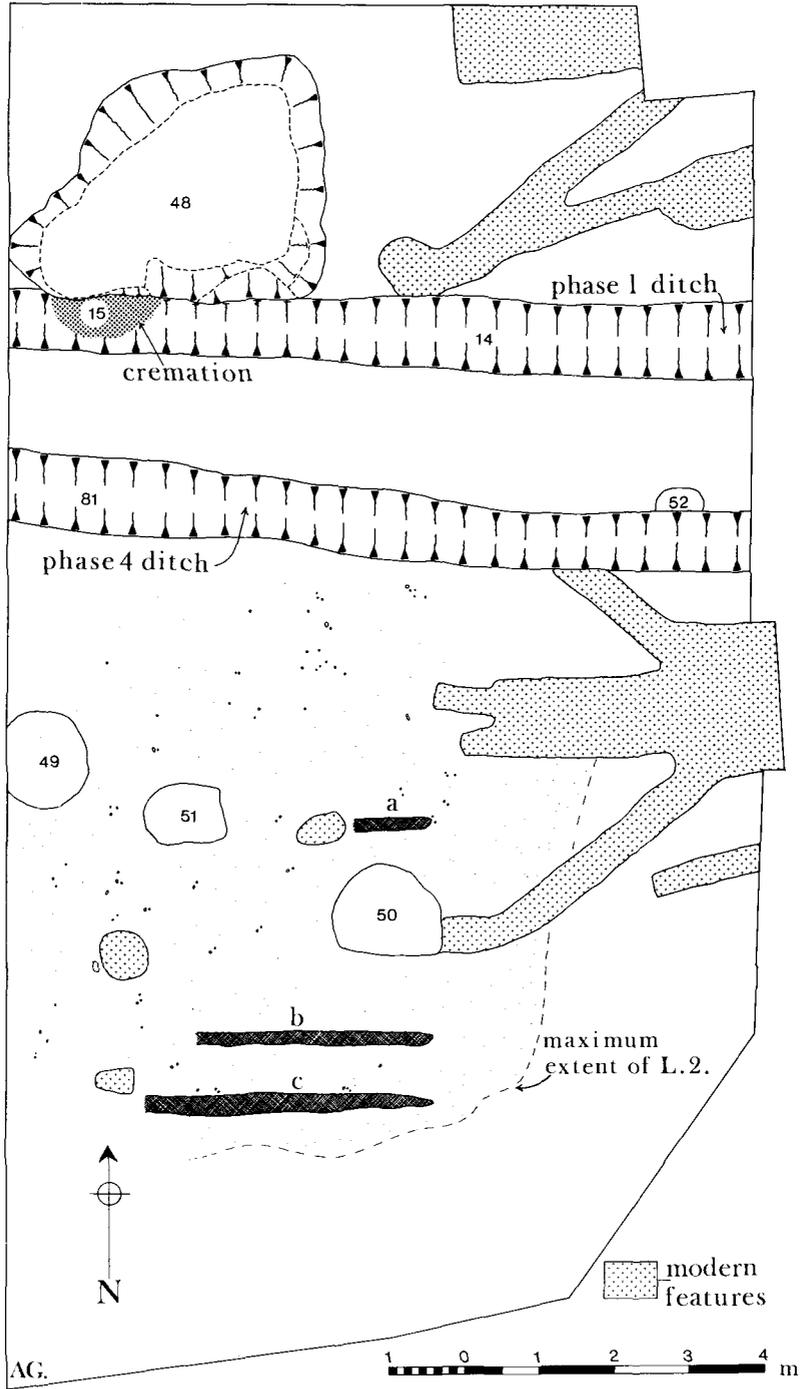


Fig. 5. Lincoln Road, Enfield. Area 1. All Phases

PHASE 2. *c.* AD 130-200

Consisting of a series of pits. Several large pits had a probable industrial function. In addition a clay extraction pit and a preserved timber-lined well were located. There were also smaller rubbish pits and isolated postholes. No enclosure ditches at this period were detected.

## PHASE 3

The pits were infilled and consolidated by the deposition of a dump of clean clay in Area 3. The pits in Area 2 were also infilled with a layer of sterile soil which was levelled over the whole area. This phase is undatable from the pottery, which is mostly residual.

Later rubbish pitting occurred within a newly dug enclosure ditch.

PHASE 4. EARLY-MID 4<sup>TH</sup> CENTURY

This phase is represented by the reuse of the east-west roadway, with patching and repair. A new enclosure ditch was dug and a timber gateway was erected.

The latest features recorded consist of a series of rammed gravel surfaces damaged by ploughing, and several gravel and flint post bases, overlying all the previous Roman deposits and constructed at 45 degrees to the predominant Roman alignment. There was no conclusive dating evidence for this phase.

PHASE 1. *c.* AD 85-130 — AREA 1 (FIG. 5)

The earliest features detected in Area 1 consisted of a clean, relatively stone free orange-brown clay surface (Layer 2) directly overlying the natural brickearth, and separated from the natural to the south of the trench by two parallel bands of dark soil with small pebbles, charcoal and tile fragments (Fig. 5, a and b). They were 0.20m wide, extending east-west for a distance of 3.80m.; 0.68m apart. There was a possible third such band 2.80m to the north. Their function is unknown, but they may represent traces of a building constructed upon timbers laid directly on the ground, without any excavated foundations. Upon the clay surface pottery was scarce and fragmentary, although there was a relatively high number of bronze fragments and fittings scattered upon it (p. 174).

An east-west ditch (F.14), U-shaped in section, was traced for a distance of 9.80m. Its width was 1m and depth 0.39m. Its fill consisted of a homogenous dark grey and orange mixed clay, with charcoal and burnt clay flecks, with pottery of *c.* AD 85-100 (p. 140). No traces of this ditch were discovered in Area 149 and we must assume that it terminated or turned before this point (Figs. 6 and 12).

A cremation burial (F.15) was cut into the top of this ditch, at its western end. The group contained several vessels including flagons, a small hand-made jar, flat dish, samian ware, an amphora and a mortarium, plus an ox jawbone and knife blade (p. 140). A small quantity of cremated bone was present, but the assemblage was disturbed by the cutting of a large pit to the north of it (F.48) which resulted in the smashing of most of the vessels and the dispersal of the fragments into the bottom of the pit. Indeed, some traces of cremated bone were found in the infilling of this pit together with the fragments of a face urn (p. 143); they are often found in funerary contexts and may have originally been part of the cremation group. The group was probably assembled *c.* AD 85-100.

There is little significant difference in the dating of the contents of either the ditch or the cremation burial. The uniform nature of the ditch fill suggests that it was filled up deliberately at one time rather than being allowed to weather and silt up. It was infilled with domestic refuse, from a structure still undiscovered, and then the cremation was cut into the top soon afterwards whilst its position was still apparent. It is uncertain as to where in Phase 1 to place these activities because of the lack of stratigraphic continuity into one of the other areas of excavation. The pottery seems to place it at the beginning of the sequence, probably contemporary with the digging of the earliest ditches (F.25 or 26) in Area 3.

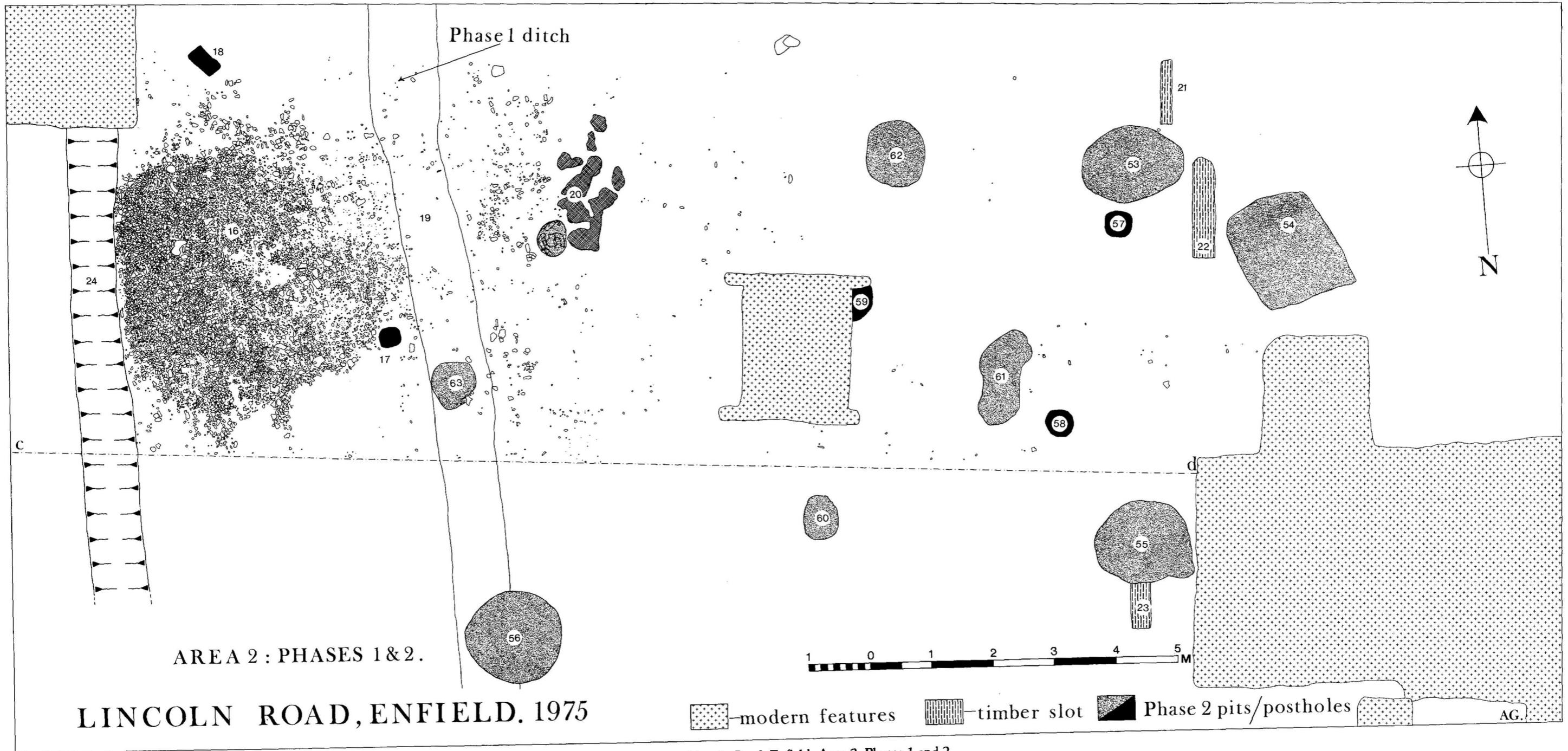


Fig. 6. Lincoln Road, Enfield. Area 2. Phases 1 and 2

## AREA 2 (FIG. 6)

Probably the earliest feature found during the excavation was located in this area, outside the main enclosure. Here a circular gravel spread, apparently a floor, approx. 4.85m in diameter was discovered (Fig. 6 and Plate 4). The floor consisted of firmly packed gravel into which fragments of tile, amphora and pottery sherds and nails were embedded (F.16). A slightly worn coin of Domitian also came from this surface (p. 164). Whilst it is suggested that this building had a timber superstructure there was a marked absence of postholes or any evidence of walling. No daub was found, although this would only be distinguishable had the structure been burnt. The only remaining structural features consisted of a flat block of sandstone (0.26 x 0.12m) situated to one side of the centre of the floor which may have served as a timber base, a circular posthole (F.17; 0.34m in diameter and 0.15m deep), situated at the south-east corner, and another rectangular one on the north side (F.18; 0.44 x 0.22 x 0.08m deep).

Despite the lack of structural evidence it is notable that the general spread of gravel and pottery was very regular in outline, suggesting that it had originally been confined by walling of some kind. There was no corresponding scatter of early material across the contemporary clay surfaces. A projection to the south (1.30 x 0.80m) may represent the foundations of a porch. The west side of the floor was cut by a north-south ditch (F.24), which is a continuation of F.27 in Area 3, and attributed to Phase 1B of the ditch sequence in that area (see below).

At a distance of 2.60m to the east of this floor was a series of erratic intrusions (Fig. 6; F.20) on the crest of a small ridge suggesting the former existence of a hedge line, perhaps marking a boundary related to this building. Subsequently a ditch was dug, north-south (F.19) 1.80m west of this feature, which may have been designed as a property boundary. The total excavated length was 12.10m. It was U-shaped, 1.45m wide and 0.55m deep. It had evidently lain open for some time, as 0.37m of silt had accumulated. It contained pottery of *c.* AD 85-120 (p. 143).

To the east of this ditch, cut into the natural brickearth, were the very fragmentary traces of three timber slots running north-south (Fig. 6). F.22 was 0.34m wide with an excavated length of 1.60m and 0.12 deep; F.21, 0.20m wide, 1.26m long and 0.08m deep; F.23, 0.30m wide, maximum length traced was 0.72m, with a depth varying from 0.20-0.24m. All had a similar fine grey soil with charcoal infill. There was no dating material.

## AREA 3 (FIG. 8)

In this area there were several phases of ditches (Figs. 8 and 12).

A. The earliest feature on this site was probably a U-shaped ditch cut into the natural brickearth, and running north-south (F.25), which was traced for a total length of 25.70m (including Area 149, p. 106). Its width was 1.80m, and depth 0.97m. The fill consisted of 0.14m of orange-brown silt overlain by 0.20m of clean clay and then a homogenous layer of darker mixed clay containing charcoal, lumps of burnt clay, sandstone and tile fragments, and a large quantity of pottery dated to the period *c.* AD 85/100-120 (p. 143). The nature of the infill, with the pottery, sandstone and tile debris suggested the proximity of a domestic settlement. The presence of the silting in the bottom indicates that the ditch had remained open for some time.

B. This ditch was followed by another also running north-south (F.26), situated some 3m to the east of its predecessor, and terminating in the centre of Area 3. Its maximum length excavated (including Area 149, p. 106) was 13.30m. Cut into the natural brickearth this ditch was V-shaped in profile, with a slot at the bottom (Fig. 8, 13; Plate 2). Its width was 1.90m and depth, 1.30m; the slot was 0.30m wide and 0.25m deep and filled with fine grey silt. In its upper levels the ditch contained grey sandy soil, and a much darker brown-black pebbly fill, which produced pottery datable to *c.* AD 85-120.

Thus there is no significant difference in the dating material from either of these ditches, nor any stratigraphical evidence for their relationship. They were both cut into the clean natural subsoil, and the silting in their bases suggests that they had both been open for some time. It is most unlikely that they were open simultaneously and so it seems most probable that the continuous ditch (F.25) was infilled and replaced by F.26, which terminated and provided an entrance for the settlement.

At a distance of 14.30m to the east of F.26 another north-south ditch was discovered, similarly terminating near the centre of the site (F.27). It was steep sided, with a flat bottom, 0.82m wide and 0.41m deep. The fill consisted of 0.08m of light grey gritty soil, which was overlain by a uniform fill of dark brown, very gritty, soil with a slight burnt clay fleck and a fragment of tegula. This ditch was traced for a distance of 22m to the south (including Area 2). The northern butt end of the

corresponding ditch was also located (F.28), giving an entrance 3.80m wide.

The presence of a timber gate was indicated by two pairs of rectangular postholes, rather irregularly spaced, within the entrance (Fig. 8). The two smaller ones (F.32; 0.40 x 0.28 x 0.15m deep and F.31; 0.42 x 0.31 x 0.20m deep) were both filled with the same dark gritty soil (Layer 4), which infilled the ditches. The others (F.30; 0.64 x 0.40 x 0.20m deep and F.29; 0.56 x 0.40 x 0.12m deep) were both infilled with mixed orange and pale brown clay. These differences may represent successive structures.

Remnants of four further postholes were found to the east of the ditches. Three were cut by a modern sewer trench, whilst one survived almost intact. This posthole (F.34; 0.44m in diameter, 0.26m deep) was stone packed and infilled with black sandy soil. F.33, also circular had an approximate diameter of 0.40m, and depth of 0.25m. It had no packing, but contained a similar black fill. Two other postholes (F.35 and 36) were situated to the south, containing the same kind of fill, although it was not possible to determine their exact dimensions owing to the modern disturbance. These postholes were cut into Layer 4, which infilled the ditches F.27 and 28, and must represent a later boundary of some kind, although their precise function is unknown.

Unfortunately no dating evidence was recovered either from the ditches or from their associated postholes. However they have been assigned to this phase of activity on the stratigraphical evidence outlined below (p. 119). A natural depression in the brickearth extended over the eastern half of Area 3, necessitating levelling sometime during the initial occupation of the site. For this purpose a thick deposit of dark gritty soil (Layer 4) was spread over the entire eastern end of the site. It was through this deposit that both ditches F.27 and F.28 and their postholes were cut (Fig. 12). It seems unlikely that the ditches were open for very long, for although a few centimetres of silt had accumulated in them, their steep sides, cut into a very loose gritty deposit, showed very little signs of weathering. When they fell into disuse they were infilled with similar material and the area levelled prior to being covered by a gravelled trackway (F.39), which served the entrance of the enclosure at a later date (during Phase 1D). It is improbable that the entrance provided by F.27 and 28 would have been required when the ditch to the west was continuous and the entrance blocked (e.g. in Phase 1A or 1C). Thus it seems most probable that they were in commission at the same time as the entrance provided by the termination of F.26.

C. During this phase the ditches to the east of the site (F.27 and 28) appear to have gone out of use when the entrance north of F.26 was blocked by the digging of another ditch (F.38) (Fig. 8). Unfortunately the actual point at which they met was obscured by the subsequent digging of a well at this very junction. However, sufficient evidence remained to indicate that F.26 did terminate just before it was obliterated by the well, and that F.38 was a later addition, dug on the same line, but shallower in depth and slightly different in cross section (Figs. 12 and 13). It was traced for 6.50m. Its width was 2.10m and depth 1.41m; 0.36m higher than the bottom of F.26. In profile it was also V-shaped, although much more rounded than F.26.

This ditch remained open sufficiently long to accumulate 0.40m of silt, which was overlain by two layers of rather gritty soil, a layer of orange-yellow clay, with dark brown soil at the top. The finds suggested that it had been infilled during the Hadrianic-Antonine period (p. 143). It is just possible that by the time this continuation had been dug approximately 0.40m of silt had accumulated in the bottom of the steep-sided F.26 sealing pottery predominantly earlier, and thus accounting for the seeming disparity in their depths.

D. After the levelling of the east of the site and the infilling of ditches and postholes of Phase 1B the northern half of the site was overlain by a metal surface (F.39). This feature proved to be an east-west roadway. Its southern edge was located during the excavation, but the northern one must lie under the line of the modern Lincoln Road. The maximum width recorded by excavation was 6.50m. It was traced for a total distance, to the east, of 99m by means of a machine dug trial trench, and continued its course outside the area available for excavation, where it may have met Ermine Street possibly somewhere between the east end of the site and the western edge of the Cambridge arterial road.

The road surface consisted of hard packed fine gravel with a maximum thickness of 0.18m; there was evidence for patching and repair. No dating evidence was recovered from its surface, the only finds consisted of a few unidentifiable iron fragments. The pattern of the roadway on the plan (Fig. 8) shows the differential preservation of the gravel surface caused by erosion, probably as a result of ploughing.

A north-south ditch terminated in the centre of the site on the southern edge of this roadway (F.40).

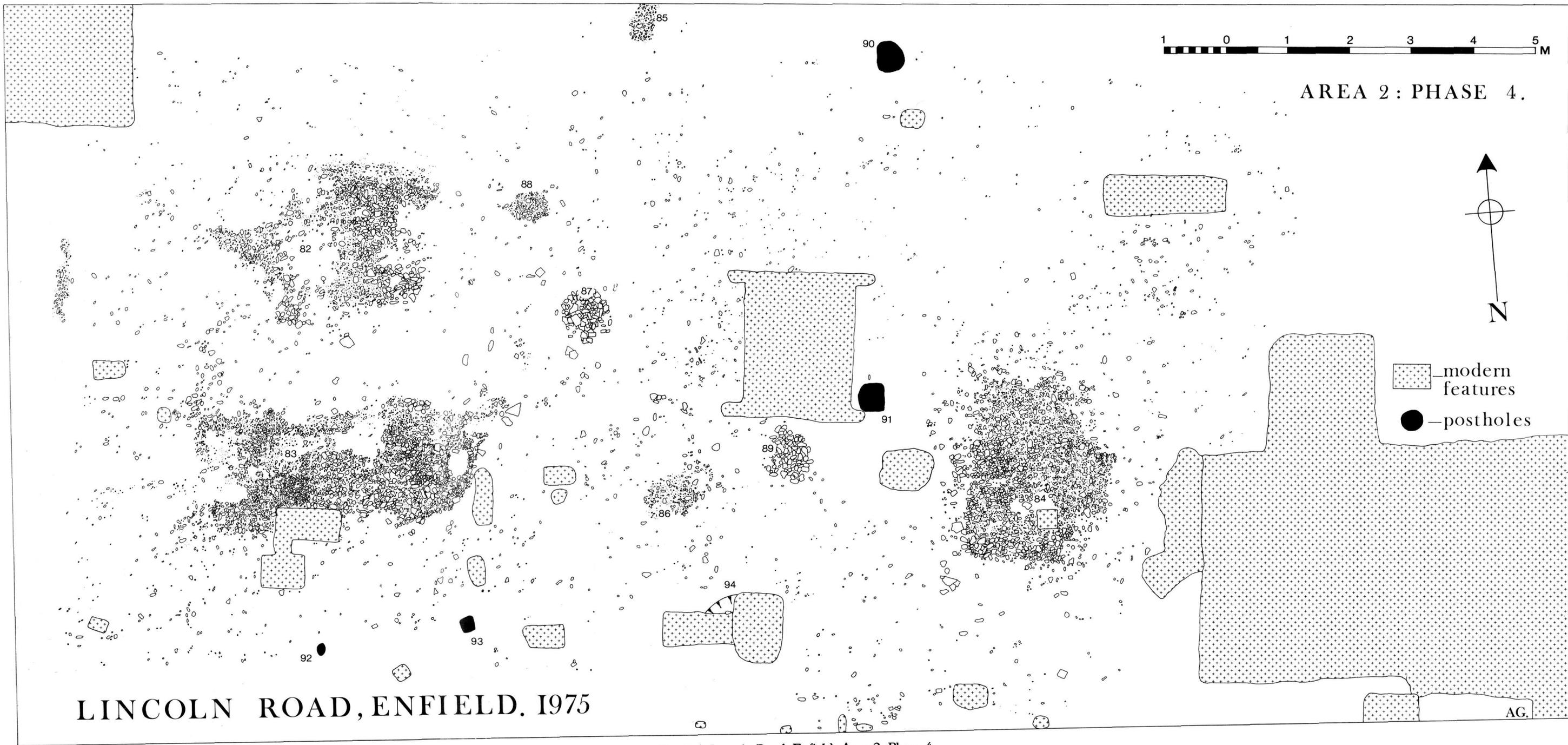


Fig. 7. Lincoln Road, Enfield. Area 2. Phase 4.

# LINCOLN ROAD, ENFIELD.

# AREA 3 - PHASES 1 & 2.

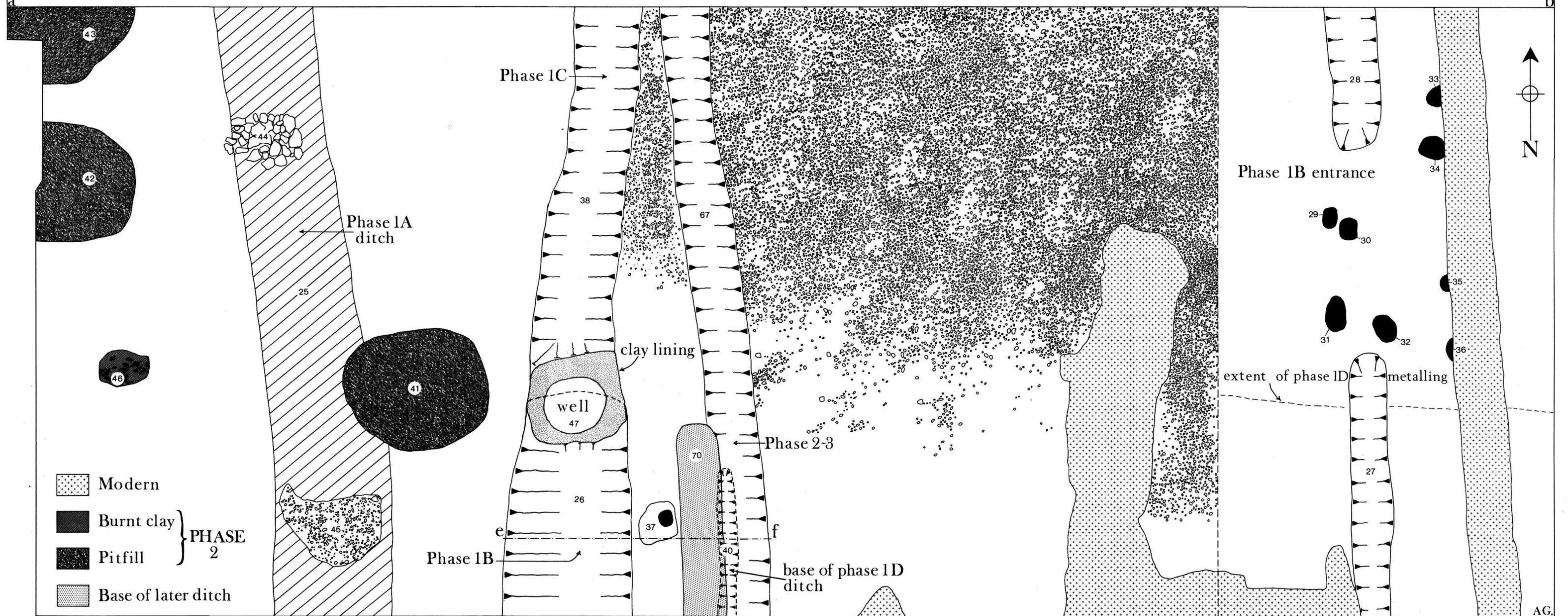
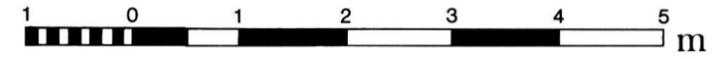


Fig. 8. Lincoln Road, Enfield. Area 3. Phases 1 and 2

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The corresponding ditch to the north of the road was not located and probably also lies under Lincoln Road. Only the very bottom of this ditch survived, as it had been cut through by two later ditches (Fig. 13); the maximum depth remaining was 0.30m. The fill consisted of dark clay with a large amount of gravel. No dating evidence was recovered.

The story of this phase of occupation of the site, represented within the area of excavation, is one of constant remodelling of the enclosure ditches and the provision of a metalled trackway possibly linking the settlement with Ermine Street. Although the dating evidence for the individual modifications is not always very precise it is clear that they can all be assigned to the period prior to the early 2nd century.

The earliest ditches in the sequence were infilled with coarse pottery of AD 85-120, but both have sufficient early samian and building debris, tile fragments etc., to indicate domestic occupation of an earlier period in the vicinity. However, the excavation was restricted to examination of the boundary ditches and the areas immediately within and without on the periphery of the settlement, and thus no evidence of structures belonging to this occupation were found.

PHASE 2. *c.* AD 130-200 (FIG. 8)

During the succeeding phase the enclosure ditches seem to have been abandoned, and all three areas of excavation produced evidence for rubbish pits, industrial pits and isolated postholes.

The most intensive industrial activity was detected in Area 3 and Area 149 (p. 106). Four large circular pits were dug (F. 1, 41, 42 and 43). The former two were fully excavated, but the proximity of the other two to the edge of the excavation and modern roadside prevented their examination in any detail. F.1 is described above (p. 106) F.41 proved to be a circular tank cut into the natural brickearth and the eastern edge of F.25, with a diameter of 2.25m and a total depth of 2.15m. The sides were vertical for the first 1.30m, suggesting that they had been timbered, but below this depth they sloped inwards; 0.65m of heavy silt had accumulated in the bottom. The rest of the infilling consisted of alternate layers of dark clay and soil with burnt clay and charcoal, and bands of clean, smooth orange clay (Fig. 13). The layers of burnt clay had not been burnt *in situ*, but were derived from elsewhere.

It is clear that as the infilling of the pit settled it caused marked slumping in the centre, necessitating consolidation with further levelling material. This levelling can be seen in the dump of 0.18m of smooth orange-yellow clay with burnt clay fragments overlain by a 0.20m thick deposit of gravel (Fig. 13). Further sinkage was consolidated by the addition of a very black stony soil, characteristic of the late 3rd-4th century deposits on the site. F.42 also displayed this pattern of later consolidation with a makeup of burnt clay and charcoal overlain with gravel and dark occupation material; also F.43 had a similar infill, although here no gravel was used.

The function of these pits remains a mystery. They were too carefully dug and their sides too vertical to be pits for clay extraction, although no doubt the clay was utilised. An irregular clay extraction pit (F.48) was dug in Area 1 during this period. Evidence from F.1, less definite from F.41, suggests that they may have been timber-lined, perhaps to contain a liquid; the large deposit of clean silty clay in the bottom makes this a possibility. It is clear that they were not dug primarily as rubbish pits, as they contain very little material which could be described as refuse.

Another problem occurs in the dating of these pits. Material from the lower silt of F.41 suggests an Antonine date for the original infilling, whilst the consolidation took place from the late Antonine period until the late 3rd to 4th centuries. However, only the upper layers of levelling were examined in the other two features in Area 3, which also yielded pottery of late Antonine date onwards. In their upper levels it is clear that identical material was shovelled into the tops of both F.42 and 43, but no dating evidence was recovered for their initial infilling and thus it is not possible to be sure whether they were all open simultaneously or whether they were consecutive, a new pit being dug when the old one, whatever its function, became unserviceable.

In the area between F.42 and 41, overlying the infilled ditch, F.25, was a sub-rectangular feature (F.44; 1.5 x 0.8m) consisting of one layer of rough undressed sandstone blocks whose average size was 0.3 x 0.2m. Some 6.4m to the south, also overlying F.25 was a thin semi-circular gravel surface set in dark clay, with patches of burnt clay (F.45). Both features were overlain by the dump of orange clay (F.66) which also infilled the tops of the industrial pits. These two may have functioned in conjunction with the industrial activity, although their function is far from clear.

A timber-lined well (F.47) was dug 1m to the west of F.41. The shaft itself was 0.95m in diameter, with a clay packing behind the timbers varying in width between 0.20 and 0.40m. Its depth was 2.83m. The well was dug through 1.63m of brickearth and then a further 1.20m into the underlying

gravel. Evidently the original excavators found it necessary to reinforce the sides with a packing of grey clay before the timber lining was inserted. Nineteen planks were used; the maximum height of timber surviving was 0.95m<sup>13</sup>. A layer of 0.65m of silt had accumulated in the bottom. Pottery from this deposit was dated to at least the late Antonine period, with the possibility of being of early 3rd century in date (p. 146). Overlying this silt was a deposit of mid brown silty soil 1.18m thick. The settling of the contents of the disused well had also caused problems for later occupants of the site, and the uppermost layers consisted of levelling material which contained 3rd and 4th century pottery, and one mid 4th century coin. There was little evidence of any domestic occupation material in the area at this time and it seems most probably that the well was dug to serve the industrial processes in the vicinity.

Another feature associated with this industrial phase is a small pear-shaped hearth (F.46; 0.94 x 0.66 x 0.07m deep). The surrounding clay had been burnt to a bright rust-red colour with a heavy charcoal fleck for a distance of 0.15m around the rim. Internally, one fragment of tile (0.14 x 0.10m) remained *in situ* on one side of the hearth. The fill consisted of pale brown, charcoal flecked clay. The projection at the end of the hearth may represent the remains of a flue; there may have been bellows inserted here. Unfortunately there was no residual material present to suggest the nature of the process for which the hearth had been constructed.

There is no clear indication of any boundary ditch in Area 3 at this period. Fig. 12 shows the ditch, F.67 (layers 22 and 23) cutting through a layer of orange clay to the west, and a gritty layer to the east. This orange clay (F.66) infilled the upper levels of the industrial pits of this phase. However, the contrasting nature of these deposits on either side of F.67 suggests strongly that there was an earlier boundary in this position. It is possible that F.67 represents the recutting of an earlier ditch of Phase 2, whose presence it has completely obliterated.

#### AREA 1 (FIG. 5)

A large, irregularly shaped pit was dug in the north-west corner of Area 1 during this phase (F.48), cutting through the cremation burial, implying a duration of time in which its position had been forgotten and perhaps a marker removed. The pit was 2.90m wide and varied in length between 3 and 4m. The northern and western sides were almost vertical, whilst the south and east sides comprised a series of irregularly scooped steps. Although the bottom was uneven, the maximum depth recorded was 1.40m. It is probably that this pit had been dug in this rather haphazard way for clay extraction. Clean orange silt, up to 0.30m deep had accumulated in the bottom. This was overlain by a layer of clean orange-yellow clay containing a large quantity of pottery (p. 140), and then by a uniform dark brown pitfill containing more domestic rubbish. Despite the amount of silt in the bottom the pottery from the lower levels (p. 140 Layers 3 and 4) is all of Hadrianic date, whilst that from the upper, darker levels (p. 143 Layers 1 and 2) is slightly later, of Hadrianic-Antonine date.

Three small pits and one posthole in Area 1 appear to have been in use during this phase. F.49, a circular pit (1.30m diameter and 1.40m deep) contained a glass vessel (Plate 7) and fragments of samian ware, F.50 was a sub-rectangular pit (diameter 1.50m and 0.84m deep) situated in the centre of the site. Very little pottery was recovered from its dark brown-greenish clay and charcoal fill. Another small sub-rectangular pit was located to the north (F.51; 1.0 x 0.76 x 0.48m deep), filled with dark grey silty soil. An isolated posthole (F.52; 0.65 x 0.45m) with only 0.20cm depth remaining was cut through by a later east-west ditch. It contained an Antonine flagon.

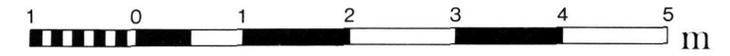
#### AREA 2

In Area 2 (Fig. 6) a series of rubbish pits was cut through the remains of the timber slots and the ditch (F.19). An oval pit (F.53; 1.64 x 1.25 x 0.55m deep); a square rubbish pit (F.54; 1.80 x 1.60 x 0.37m deep) with a black homogenous fill and large amount of pottery (p. 143); F.55, a small circular pit (1.56m in diameter and 0.38m deep); and F.56, circular (1.46m in diameter) with a black fill and much pottery and burnt material. All these pits were infilled predominantly with coarse pottery of *c.* AD 100/120+, although a samian ware stamp (p. 134) from F.54 gives a *terminus post quem* of *c.* AD 140-170.

Two pits (F.64 and 65) were cut through the disused gravel roadway (F.39) in Area 4 at this period (Fig. 11).

LINCOLN ROAD, ENFIELD. 1975.

AREA 3 - PHASE 4.



-  Modern
-  Burnt clay
-  Postholes

Fig. 9. Lincoln Road, Enfield. Area 3. Phase 4

## PHASE 3

The western half of Area 3 was covered by a dump of clean orange clay (F.66) (Fig. 10). Its maximum thickness was 0.32m in the north-west thinning out towards the south so that it was only 0.17m thick over F.41, tailing out completely to the south of this feature. It is unclear whether the top of the well was also covered at this period because of the sinkage of modern debris into its top. The western edge of the roadway was overlain by a wedge of dark brown gritty soil for a distance of 2.45m; the maximum depth of this deposit was 0.28m (Fig. 12 Layer 24).

A continuous north-south ditch (F.67) was cut through the clean clay levelling (Fig. 12). It was U-shaped (0.95 x 0.87m deep) and the maximum length recorded (including Area 149) was 21.60m. Its fill consisted of 0.15m of smooth grey primary silt with a further 0.17m of greyish-green silt, overlain by a uniform deposit of dark grey-black gritty soil. Coarse pottery from this deposit is dated *c.* AD 180-250 (p. 146).

Two rubbish pits were dug to the west of this ditch; F.68 was a circular, rather irregular pit (diameter 2.30m x 0.64m deep), containing domestic refuse; a coin of Constantine had been pressed into the top (p. 166). A second pit, (F.69; approx. 1.20m wide x 0.78m deep) disappeared into the northern bank and could only be partially excavated. The fill was of domestic rubbish alternating with two bands of clean orange clay. Both pits contained pottery dating to the end of the 2nd century, *c.* AD 150-180. By the late 2nd century the infilling of the industrial pits had slumped and been consolidated (p. 113).

The whole of Area 2 was covered by a clean deposit of homogenous soil, varying in thickness between 0.15 and 0.35m (Layer 3) (Fig. 12). This soil was greenish-brown in colour with some streaks of orange clay and the occasional daub and charcoal flecks. It had been well worm-sorted, suggesting that it had remained undisturbed for some time. Finds from this layer included several abraded sherds of Antonine pottery, two samian stamps of *c.* AD 100-120 and *c.* AD 130-160 (p. 134), several fragments of lead (p. 174), and a coin of Vespasian (p. 163). The date of deposition of this layer is uncertain. It is cut by a single rubbish pit containing mid 4th century coins. It is tempting to see this levelling as contemporary with that on Area 3, but this is not proven.

## PHASE 4. EARLY-MID 4TH CENTURY, AND LATER (FIGS. 5, 7 AND 9)

The entrance to the enclosure in the centre of Area 3 was renewed and parts of the roadway patched and brought back into commission during this phase. A north-south ditch (F.70) terminating at the southern edge of the roadway was dug with steep sides and a flat bottom (1.30m wide x 0.58m deep) ending in a slight turn and step. It was traced for a total length (including Area 149) of 13.80m. The fill was a distinctive uniform black-brown soil with a quantity of charcoal and domestic refuse (Fig. 13). The road metalling at the eastern end of Area 3 (Fig. 9) was patched and reused, and a thin layer of gravel was laid down over the wedge of soil overlying the original surface at the western end. The top of F.67 was packed with a strip of large pebbles and flints for a distance of 2.60m from the north bank to prevent subsidence of the new road surface (F.71). Similarly the tops of the industrial features (F.41 and 42) were infilled with gravel, and the tops of all the ditches were consolidated with gravel at this period for a distance of 7.50m west of the new ditch line.

A U-shaped horizontal feature (F.72) was constructed 1.10m to the west of the new enclosure ditch, its northern extent seemingly governed by the line at which the ditch terminated. Its overall dimensions were 2.80m long x 2.16m; the northern arm was 0.82m wide and the southern and eastern arms, 0.56-0.60m wide, with a depth of 0.22m.

The entrance to the enclosure contained three postholes situated at a distance of 1.10m behind the ditch; F.73 (0.48m square, 0.24m deep with a post socket 0.14 x 0.20m, and 0.30m deep), F.74, rather elongated (0.52 x 0.45m and 0.40m deep with a post socket 0.18m square and 0.54m deep) packed with two fragments of a sandstone quern (p. 181); F.75 circular (diameter 0.50m, 0.17m deep with a post socket 0.20m square and 0.46m deep). The packing of all three consisted of very hard packed fine grits and gravel. They were 2.80 and 2.30m apart respectively (distance measured from centre of post socket).

Four other postholes ran inwards, at right angles to them, close to the southern edge of the roadway. 2.80m to the west of F.75 was a rectangular posthole (0.32 x 0.50 x 0.21m deep) with an oval post socket in the centre (0.24 x 0.18 x 0.37m deep) (F.78). A further 2.20m to the west was a second posthole (F.79) which was rectangular (0.56 x 0.46 x 0.20m deep) with an oval post socket (0.14 x 0.27 x 0.35m deep). The fill of both was dark grey soil with some burnt clay and charcoal.

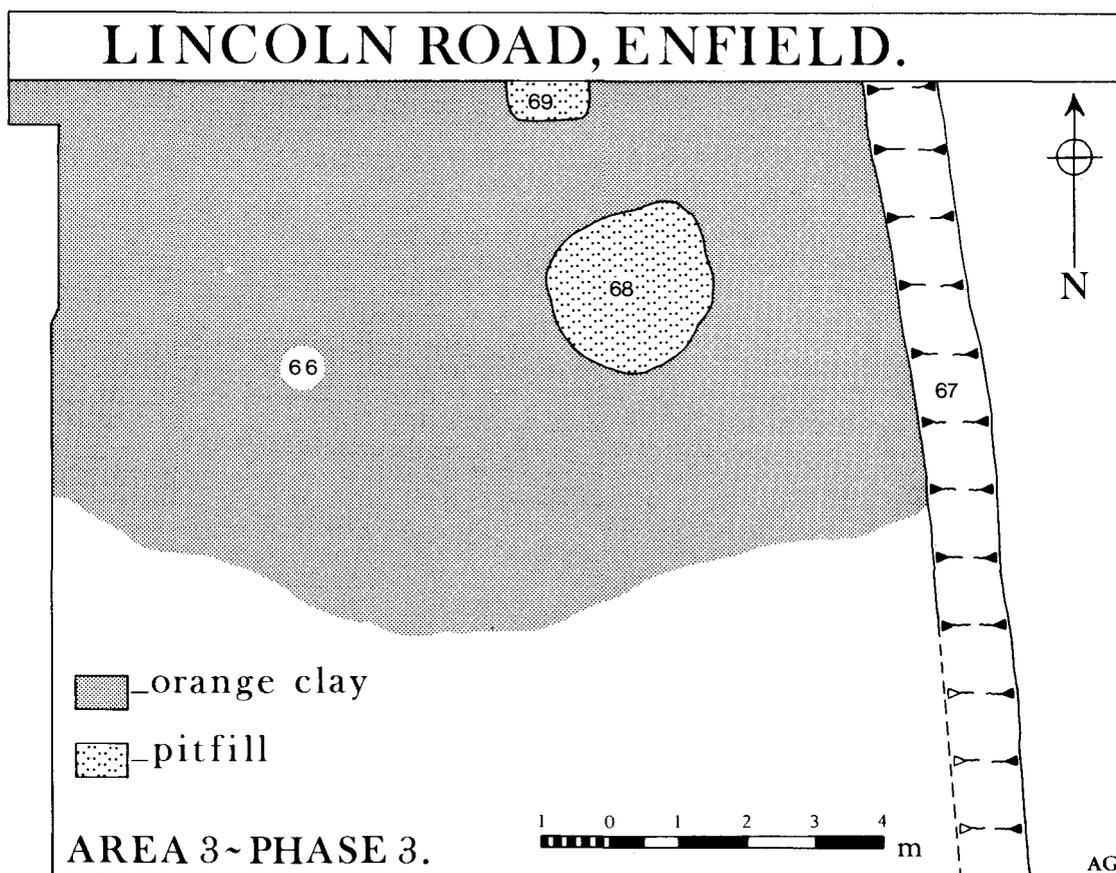


Fig. 10. Lincoln Road, Enfield. Area 3. Phase 3

Two further postholes (F.76 and 77) were situated next to F.75. Both had diameters of 0.30m and depth of 0.14m. Their close proximity both to each other and to F.75 probably means that they represent later replacements, or fulfilled a different function.

Both the ditch (F.70), F.72, and the tops of the industrial pits, which had sunk still further, were infilled with dark brown-black occupation debris. Pottery and coins from the ditch fill date to the middle of the 4th century (p. 148). Similarly coins from the uppermost levelling of F.41 and F.42 also date from the mid to late 4th century (p. 167). F.72 contained 3rd to 4th century pottery and a coin of Valentinian, and a coin from the contemporary road surface was of Gratian (AD 367-75) (p. 167).

An east-west ditch (F.81) was cut across the centre of Area 1 and traced for a distance of 9.80m. It was U-shaped in profile, just over 1m wide, and 0.64m deep. 0.10m of smooth silt was overlain by a homogenous fill of dark brown mixed clay with charcoal, tile, a fragment of lead sheeting and five coins; the latest of Constantius II (AD 350-60) (p. 166). Associated with this ditch was the uppermost clay surface (Layer 1) which yielded six bronze coins, the latest also attributable to Constantius II (p. 166).

Overlying the deposit of sterile soil (Layer 3) in Area 2 was a series of compact rammed gravel surfaces (Fig. 7 and 12). Their pattern is difficult to interpret but two distinct alignments seem to emerge. Firstly three large gravel spreads, two almost square in shape (F.82 and 84), and one rectangular, (F.83) running east-west. Secondly a line of regular, circular gravel packed features aligned at almost 45 degrees to the established Roman alignment (F.85, 86, 87, 88, and 89).

The rectangular gravel spreads consisted of a thin layer of hard packed flint gravel with some fragments of tile and pottery. F.84 was situated at the south-east corner of the site. It comprised a spread of compacted flint gravel (2.20 x 2.95m). Roman pottery, daub, bronze, and fragments of quern were incorporated into the surface; several iron nails were located along the south and east edges of this feature. F.82, at the north-west of the trench, was much disturbed by ploughing, but the remains formed a rough square, 2.40m in length. This feature was underlain by approximately 0.10m of pale brown soil much more gritty in texture than the remainder of Layer 3. Parallel to this surface, 1.70m to the south F.83 was more rectangular in shape (4.50 x 2m); and better preserved, especially at its eastern end. It was disturbed on its southern edge by modern postholes. None of these surfaces was associated with any recognisable timber structure.

Five circular areas of gravel survived. The two most complete (F.87 and F.89) had diameters of 0.75m and consisted predominantly of large pebbles, flint nodules and large amphora fragments. F.87 was laid upon 0.10m of yellow clay with patches of burnt clay (Fig. 12). The other gravel features in this series were less well preserved (F.85, 86 and 88), and were predominantly of smaller gravel with less pottery. Their dimensions were 0.25 x 0.60m; 0.60 x 0.80m and 0.40 x 0.50m respectively.

The purpose of these circular gravel spreads may have been as post bases for a large timber structure. They do not follow the Roman alignment, nor were any comparable structures found on the rest of the site. Thus it must be assumed that this small group of features relates to a complex which focused somewhere to the south which has since been destroyed by later activity in the area of Toops Yard.

The dating of these features is difficult. Both groups produced Roman pottery, especially amphora sherds. Whilst no recognisable late Roman or sub Roman objects were found on these surfaces it is nevertheless quite possible that these features, especially those on the unusual alignment completely ignoring the well-established Roman road line, are of post Roman date. Two postholes were also located at this level; F.90 and 91 (both 0.44 x 0.40 x 0.20m deep), and two stakeholes, F.92 and F.93 (Fig. 7).

A small pit (F.94) was cut into Layer 3 from the level of the gravel spreads, which, although almost totally destroyed by modern disturbance, yielded a mortarium and two coins; the latest of Gratian (AD 367-375) (p. 167). However, no direct relationship between this pit and the gravel surfaces could be established.

#### DATING EVIDENCE: NOTE

1. Comprehensive tables detailing the dating evidence (samian, coarse pottery, coins) for each feature have been prepared as part of the archival report and copies can be obtained on request.

#### STRATIFICATION

*Section 1. Area 3. Principal east-west section, looking north (Fig. 12).*

- |             |   |
|-------------|---|
| Layer 1     | Modern concrete and black soil with ashes, clinker, modern brick and gravel.  |
| Layer 2     | Mid brown garden soil.  |
| Layers 3-8  | Fill of industrial pit (F.43), (upper levels only).   |
| Layer 3     | Black soil with heavy burnt clay fleck. Represents late Roman infilling of the top of this feature after subsidence and settling of the contents. |
| Layer 4     | Smooth orange clay with streaks of bright orange burnt clay.  |
| Layer 5     | Very gritty greenish-yellow deposit.  |
| Layer 6     | Dark grey clay with much charcoal.  |
| Layer 7     | Smooth orange-brown clay with some pebbles and a charcoal fleck.  |
| Layer 8     | Dump of smooth orange clay (F.66), which covered the whole of the western half of Area 3. Some pebbles, charcoal and tile fragments.              |
| Layers 9-11 | Fill of a ditch (F.25).   |
| Layer 9     | Dark grey clay with charcoal and flecks of burnt clay.  |
| Layer 10    | Pale yellow-brown clay with charcoal and some burnt clay fleck.   |

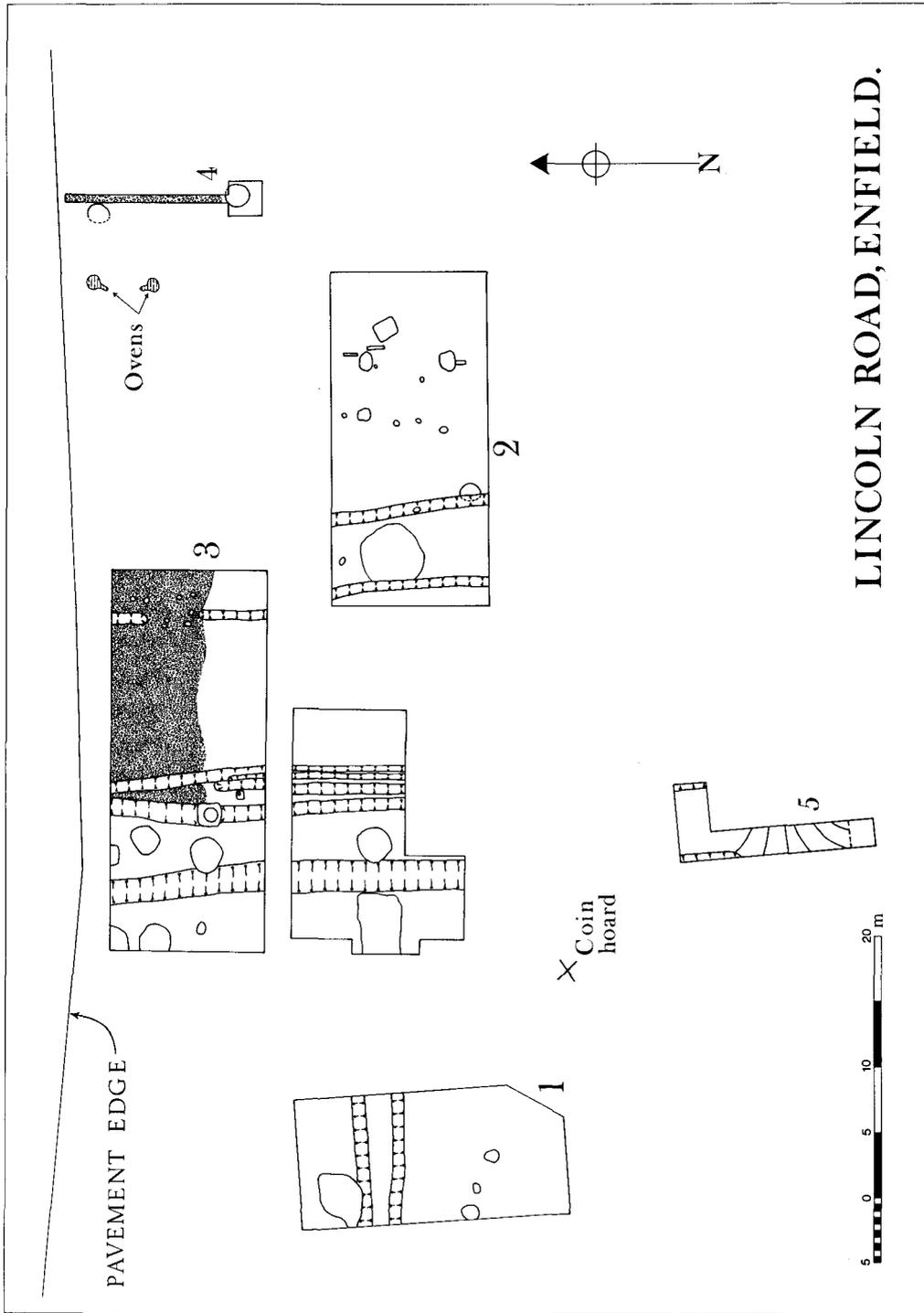
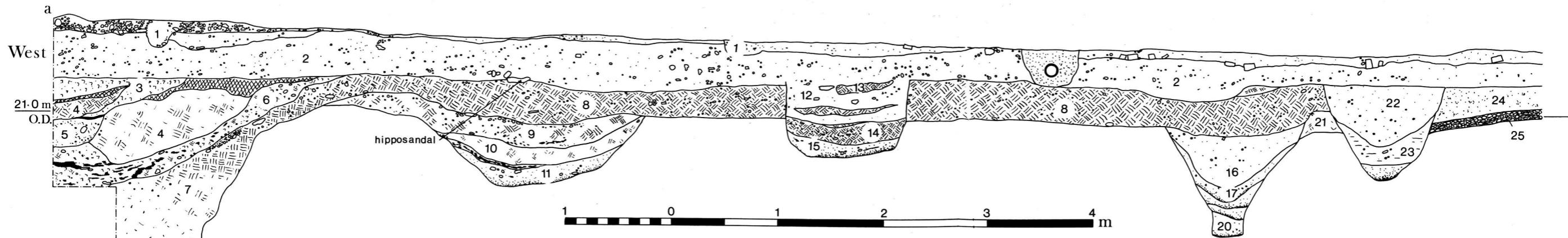
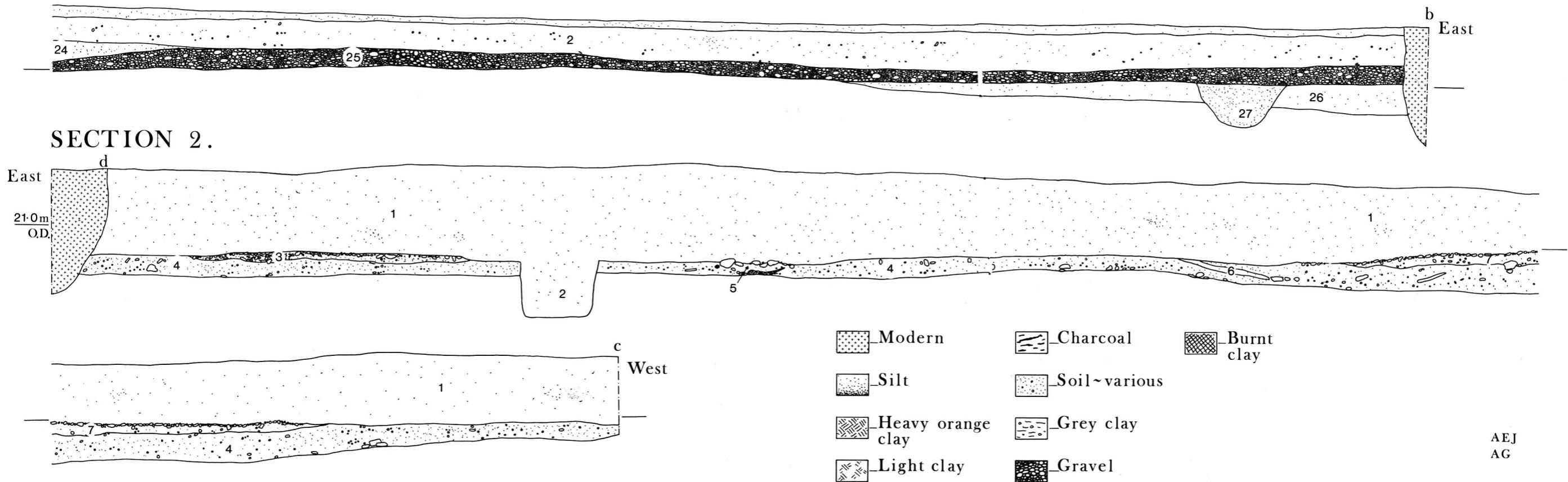


Fig. 11. Lincoln Road, Enfield. Summary of major features of all phases

SECTION 1.



SECTION 2.



- |  |            |  |                |  |                   |
|--|------------|--|----------------|--|-------------------|
|  | Modern     |  | Charcoal       |  | Burnt clay        |
|  | Silt       |  | Soil ~ various |  | Heavy orange clay |
|  | Light clay |  | Grey clay      |  | Gravel            |

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Fig. 12. Lincoln Road, Enfield. Sections 1 and 2

- Layer 11 Orange-brown silt.
- Layers 12-15 Pit fill (F.69).
- Layers 12-13 Dark brown fill with pebbles, charcoal, with bands of clean orange clay.
- Layer 14 Dark clay with much gravel.
- Layer 15 Dark grey silt with patches of orange silty clay.
- Layers 16-20 Fill of ditch (F.38).
- Layer 16 Greenish-brown, very gritty deposit.
- Layer 17 Grey silt with patches of orange clay.
- Layers 18-20 Layers of orange silt.
- Layer 21 Mid brown clay with charcoal, burnt clay and pebbles.
- Layers 22-23 Fill of ditch (F.67).
- Layer 22 Dark brown gritty fill with many large and small pebbles, some clay patches, charcoal, and burnt clay fleck.
- Layer 23 Smooth greyish clay with some pebbles, charcoal fleck. 0.16m of grey silt in the bottom.
- Layer 24 Wedge of dark brown gritty soil.
- Layer 25 Metalling of the roadway (F.39).
- Layer 26 Dark brown, extremely gritty layer (Layer 4). Represents infilling of a natural hollow at the east end of this area.
- Layer 27 Infill of ditch (F.28). Homogenous dark brown gritty fill. No silting.

*Section 2. Area 2. Layer 3. East-west section, looking south (Fig. 12).*

- Layer 1 Modern garden soil.
- Layer 2 Modern pitfill.
- Layer 3 Gravel spread (F.84), with an underlying layer of dark yellow-brown gritty soil.
- Layer 4 Layer 3. Cleaner orange-brown soil. Worm sorted.
- Layer 5 Postbase (F.89). Patches of burnt clay in a very sandy orange-yellow soil.
- Layer 6 Smooth greenish-yellow clay.
- Layer 7 Gravel spread (F.83) layer of light brown sandy soil, much grittier in texture than the underlying soil.

*Section 3. Area 3. Ditch Sequence, e-f. East-west section, looking south (Fig. 13).*

- Layer 1 Dark brown soil with many pebbles.
- Layer 2 Clean orange clay with a few large pebbles.
- Layers 3-4 and 6-11 Fill of ditch (F.26).
- Layer 3 Dark brown sandy soil with pebbles. Becomes less gritty in texture in the lower levels.
- Layer 4 Lens of yellow clay with charcoal fleck in this otherwise homogenous deposit.
- Layer 5 Cut through ditchfill. Fill of a posthole (F.37), consisting of dark brown soil with patches of yellow clay, with charcoal fragments.
- Layer 6 Dark brown soil with patches of bright yellow sandy soil.
- Layer 7 Bright yellow sandy soil with small pebbles.
- Layers 8-10 Silt at bottom of ditch.
- Layer 8 Grey silt.
- Layer 9 Grey sandy soil.
- Layer 10 Grey silt with small pebbles.
- Layer 11 Smooth dark grey silt with occasional small pebbles.
- Layer 12 Black ditchfill of late Roman ditch (F.70), with pebbles and tile and pottery fragments. Homogenous fill. No silting.
- Layer 13 Dark brown sandy ditchfill of (F.67), with pebbles and slight charcoal fleck. 0.12m of grey silt in the bottom.
- Layer 14 The only surviving wedge of ditch fill of (F.40). The fill consisted of dark soil with a large amount of gravel.

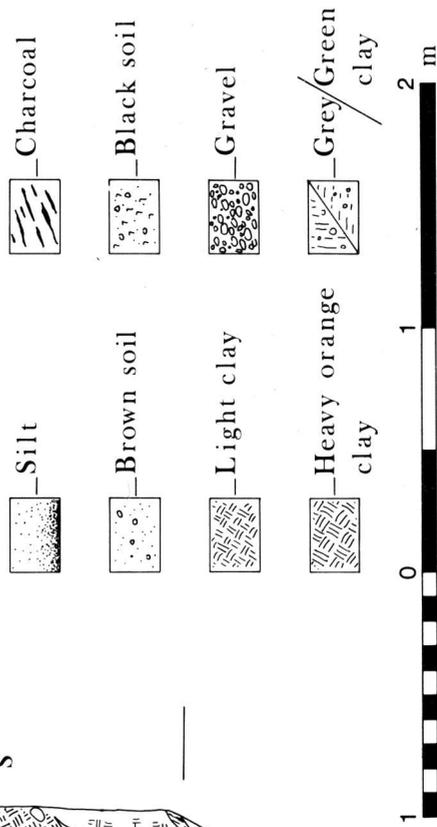
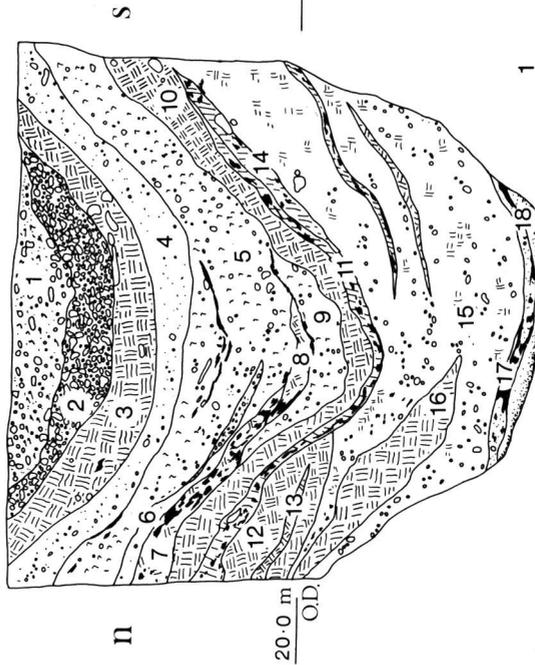
*Section 4. Area 3. Fill of industrial pit (F.41). North-south section, looking east (Fig. 13).*

- Layer 1 Black soil with a large number of pebbles. Late Roman infill.
- Layer 2 Layer of gravel probably spread over the top of the feature as consolidation after the settling of the contents. The gravel in turn had slumped inwards. Coin of Theodosius.

SECTION 3.



SECTION 4.



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Fig. 13. Lincoln Road, Enfield. Sections 3 and 4

Layer 3	Smooth orange clay with patches of bright orange burnt clay.
Layer 4	Very gritty mid-brown soil. Possibly also represents consolidation after sinkage of the contents of the pit. Pottery of late 2nd-3rd century.
Layer 5	Black occupation debris and soil, small pebbles and charcoal fleck.
Layer 6	Burnt orange clay, with charcoal fleck.
Layers 7-14	Alternating bands of smooth orange clay and dark clay with charcoal and burnt clay fleck, showing marked slumping into the centre of the pit.
Layer 15	Dark brown clay with patches of orange clay, charcoal and w/wp.
Layer 16	Orange brown clay with patches of burnt clay. Antonine pottery.
Layer 17	Dark black-grey silty clay, with heavy charcoal fleck. Antonine pottery.
Layer 18	Pale grey silt.

#### 4. SITE WATCHING AT LINCOLN ROAD, OCTOBER 1975—MARCH 1976

BY HEATHER MCCLEAN AND GRAHAM DEAL

##### INTRODUCTION AND SUMMARY

Despite the extensive areas that had been already excavated, further information was obtained by observing the subsequent contractors' trenches, and as a result it was possible to record not only the continuation of features from areas excavated, but also a series of new features including ditches, a Roman coin hoard, two clay built ovens and several clay and gravel extraction pits.

##### AREA 5

An area measuring 14m x 2.30m was opened prior to the construction work and at a depth of 700mm a light black clay soil was visible containing fragments of pottery of a mixed date. Below this a gravel spread (c. 150mm thick) was found sealing three east-west ditches measuring 1.10m in width and 850mm in depth. Pottery in the fill was dated to the early 2nd century. Cutting through these ditches to the east side was the continuation of ditch F.4 (width 1.60m; depth 750mm) from area 149 with a fill of black soil and silt. This too contained pottery of early 2nd century date. To the west of the ditch was a large pit with a black filling containing sherds of 4th century pottery. The ditch F.3 (width 800mm; depth 600mm), continuing from area 149, was traced on the west side of the pit and had a fill of black gritty soil containing 4th century pottery.

##### COIN HOARD

During the cutting of the contractors' trenches, several fragments of a large grey pot were observed in the section. Subsequent excavation revealed a pot, sealed by a layer of daub, and containing a 4th century hoard of some 326 coins (see Fig. 11 for position of hoard, and p. 168 for coin report).

##### AREA A

Excavation in advance of the contractors' foundation trenches in the north-east corner of the site exposed two clay built ovens in association with a 4th century ditch running east-west (Fig. 11). These features were overlain by a layer of material of a mixed date that included a large amount of Roman flue tile, the first to be recorded from the site. The first oven (F.1) was 1.30m in length (including the flue) and 930mm in diameter with clay walls 230mm thick. Initial examination of these walls suggests that the clay had not been subjected to a temperature of more than a few hundred degrees centigrade.



### LINCOLN ROAD 1976 AREA A

-  Late Roman Ditch
-  Burnt Clay
-  Modern Disturbance

Fig. 14. Lincoln Road, Enfield. Site watching. Area A

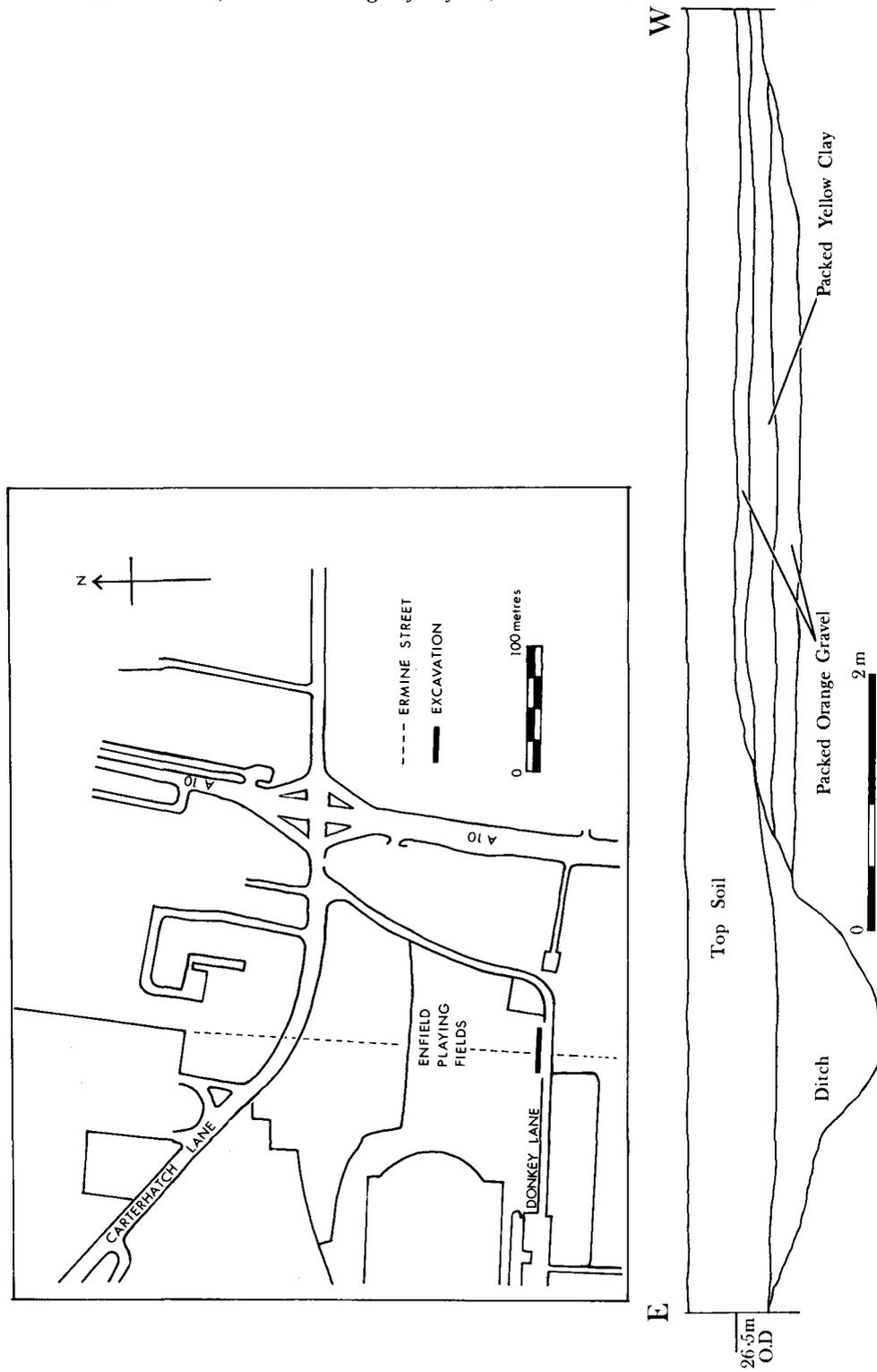


Fig. 15. Enfield Playing Fields. Location map and section

The second oven (F.2) had less substantial walls and was 1.15m in length and 820mm in diameter. The floor of this oven was covered with a layer of burnt (oak) charcoal 150mm thick. The purpose of both ovens remains unclear.

To the south of the ovens lay a ditch (F.3) (width 750mm; depth 620mm) with a fill containing 4th century pottery and fragments of roof tile. To the east of Area A several large clay and gravel extraction pits were recorded.

## 5. EXCAVATIONS FOR ERMINE STREET, ENFIELD, 1976

BY GRAHAM DEAL

(FIG. 15; PLATE 7)

While the excavations were taking place at Lincoln Road (summer 1975) it seemed an opportune moment to try to establish the line of Ermine Street in the area and its relationship to the site. A series of aerial photographs were therefore taken. On one of these, of Enfield Playing Fields to the north of Enfield, two parallel lines running north-south could be detected, though they were only observable on the ground near Donkey Lane.

In the spring of 1976 a trench 18m in length and 1m in width was cut across these crop marks (TQ 97313418). At a depth of 350mm a hard compact surface of gravel was traced 13.80m in width with traces of a side ditch to the east and with a smaller pit feature. When fully uncovered the gravel layer was found to be 450mm deep at its thickest point, thinning to the sides and consisting of a mixture of sand, clay and hard packed gravel. Unfortunately the surface had suffered from ploughing and stripping of top soil. The pit cut into the side of the ditch contained fragments of pottery, perhaps of 12th century date. Both the pit and ditch had been cut into the natural clay and gravel.

## 6. DISCUSSION

The excavations at Lincoln Road, together with previously discovered Roman material in the vicinity confirm the widespread and continuous nature of Roman activity in this part of Enfield. The earliest feature on the site consisted of a north-south ditch which was replaced by a V-shaped ditch with a cleaning slot in the bottom, a profile characteristic of Roman military fortifications. This ditch terminated at an entrance way corresponding to an entrance in an outer ditch line 14.3m to the east. The trackway between the two was not metalled at this period, and there was no evidence for heavy traffic use in the underlying clay surface. No trace of a bank was detected behind either of these ditches, although subsequent levelling and cultivation would probably have removed any such evidence. The presence of several bronzes and fragments from the earliest Roman clay surface in the interior (p. 110; Fig. 32, No. 37 and Fig. 33, Nos. 44 and 53), together with the military shaped ditch may well indicate early military activity on the site. Such occupation left no definite structural trace, although the bands of dark soil with stones in the interior (Area 1. F.12 and 13, Fig. 5) may indicate the position of timber buildings whose sill beams were placed upon ground level, requiring no excavated foundations. The date of such activity cannot be firmly established. There are two periods when military activity in this area is most likely, either during the initial conquest or during the troubles attendant on the Boudiccan rebellion and its aftermath in AD 60<sup>14</sup>. However, the temporary nature of this occupation has left no finds conclusively earlier than the Flavian period.

During the Flavian period it is clear that somewhere in the interior of the enclosure was a structure roofed with *tegulae* and constructed either from sandstone blocks or, more probably, half timbered upon a sandstone sill. Debris from this structure was incorporated into the fill of the earliest ditches after they had been open for some time and silting had occurred. Associated with this period of activity is a cremation burial, ditch and small circular gravel floor outside the enclosure ditches.

Evidence from Area 3 shows a constant remodelling of the enclosure ditches, and the construction and repair of a metalled surface road, presumably linked with Ermine Street. Alternately the entrance was open and then blocked by a new ditch; a sequence which continued until the late 3rd-4th century when the final butt end of a ditch was dug and a gateway constructed. Throughout its history the perimeter of the settlement, within the enclosure ditches was utilised as an area of pitting and industrial use, presumably leaving the central area reasonably free. One of the most intriguing, and at the same time insoluble, problems posed by the excavation is the function of the four large circular pits (Figs. 8 and 13, p. 113). The amount of silt in their bases suggests an industrial purpose involving large quantities of liquid, but the absence of any residue or associated structural features makes it impossible to establish the processes involved.

Inevitably perhaps the final stage of the site's history is the most elusive and difficult to interpret. The latest ditch was infilled with dark occupation material and late 3rd-4th century pottery and the timbers of the gate were either left to rot or were pulled out vertically. The latest occupation is represented by two series of gravel spreads, one following the established Roman alignment, and the other consisting of post bases constructed at 45 degrees to it. Roman material was still accessible in the vicinity and abraded sherds of pottery became incorporated into these spreads; it may be significant that no Roman coins were found in these levels. Although their deviation from the Roman alignment suggests a post-Roman date it cannot be proved. If the large rammed gravel surfaces can be interpreted as post bases the timber building involved must have been of a quite substantial nature.

Generally the lack of any structural evidence necessarily makes it difficult to make any conclusions as to the true nature of the settlement, nor do we yet know its actual extent; the nucleus must be sought elsewhere in the vicinity. Occupation material found directly to the south of the recent excavations, in Landseer Road, ranging from the 1st to 4th centuries may well be situated within the enclosure<sup>15</sup>. To the west observation during clearance and construction of an extensive area at Fourth Avenue detected no trace of Roman material or structures which might have been expected<sup>16</sup>. Thus there is still a great deal of work to be done in attempting to define the limits of the settlement. The entrance located was not necessarily the only, or principal, one. There was no evidence for cart rutting on the east-west road surface which might be expected had this been the main line of communication between the Roman residents of Enfield and Ermine Street; nor was the gate of any real substance. It is therefore suggested that there may well have been another point of access elsewhere.

Ermine Street would have had a series of imperial posting stations, *mansiones*, with minor posting stations, *mutationes*, of the *cursus publicus*. Such a *mansio* has been postulated at Staines<sup>17</sup> 10.5 Roman miles from London on the main road to the west country. A smaller post has been suggested at Brentford, 10.3 Roman miles from the City<sup>18</sup>. The site of the excavations at Lincoln Road lies adjacent to Ermine Street, which ran north-east from the city of London to the next major Roman town of Braughing, a distance of 29 Roman miles. Upon

this route two minor posting stations have been postulated, one at Enfield, and the other at the crossing of the River Lea at Ware<sup>19</sup>. Nothing has emerged from the present excavations to throw any more light on this hypothesis. However, the fact that the site lies almost exactly 10 Roman miles from Londinium, and a further 9.7 Roman miles from the next postulated site at Ware, makes the siting of such a changing post at Lincoln Road a possibility.

There can be little doubt that the foundation of the original Roman settlement owed much to its proximity to Ermine Street. In the absence of direct evidence for the economic basis of the settlement it may be worthwhile to consider the traditional resources of the area, as documented from the post-medieval period. Enfield has long been associated with market gardening and, more recently, the exploitation of the clay and gravel resources of the Lea Valley has made Enfield an important centre for the manufacture of tiles and bricks. The easily worked brickearth soils would have made agriculture profitable. The presence of at least one clay extraction pit in Phase 2 of the Roman occupation together with the presence of two pottery wasters (p. 148) may bear witness to tile and pottery manufacture, somewhere in the vicinity.

Despite the extensive urban development of Enfield there is still some scope in aerial photography to detect sites of archaeological interest (see Section 5 and Plate 6). From a preliminary study of air photographs taken during the summer of 1975 in the vicinity of the site it is clear that several areas of playing fields have showed a variety of features. Although many of them are no doubt modern it is quite possible that planned archaeological excavation of some of these features may prove fruitful.

It must be emphasised that the extensive nature of the archaeological material makes it impossible on the basis of one site alone to draw meaningful conclusions at this stage. The extent of the settlement located needs to be defined, and further observation and recording by the Enfield Archaeological Society, upon which they have been engaged for several years, will attempt to fill in some of the gaps. The previously isolated findspots have, through these excavations, been placed within a more definite framework, and they have, it is hoped, helped to frame lines of inquiry for future research in the borough.

#### NOTES

1. *Enfield Archaeological Society Bulletin* No. 3 (December 1959).
2. 'The Ermine Street at Ware' *Trans. East Herts. Arch. Soc.* 13 Pt. 2 (1952-4) 156.
3. Margary, I. D. *Roman Roads in Britain* (1967) 195.
4. Gillam, G. *Prehistoric and Roman Enfield*. Enfield Archaeological Society Research Report No. 3 (1973) 13-30.
5. Information kindly supplied by Mr. David Pam.
6. Duchy of Lancaster Rentals and Surveys. 43/7/5. See also *Victoria County History. Middlesex. V* (1976) 207-60.
7. This map is now in the Public Library. See also Whitaker, C.W. *An Illustrated historical, statistical, and topographical account of the Urban District of Enfield*. (1911) 79.
8. Robinson *History of Enfield* 1 (1823) 71-2, and *Victoria County History. Middlesex. V* (1976) 207-60.
9. *Industrial Archaeology in Enfield*. Enfield Archaeological Society Research Report No. 2 (1971) 23. I am very grateful to Mr. G. Gillam for supplying this information.
10. Robinson, *op cit* (Note 8), 71 and Ordnance Survey Map, 6 inch. Middx. VII NE. 1868 edition.
11. Coles, J. *Archaeology by Experiment*. (1958).
12. These samples have not yet been analysed, but will be available for further study at Forty Hall Museum, Enfield.
13. The timber has been provisionally identified as a softwood, possibly a species of pine, which may be of some interest if verified by subsequent examination, as this timber would probably have been imported at this period. It is at present being examined by Mr. George Willcox, of the Department of Urban Archaeology, Museum of London.
14. Chapman, H. and Johnson, A. E. 'Excavations at Aldgate and Bush Lane House in the City of London, 1972.' *Trans. London Middx. Archaeology Soc.* 24 (1973) 71-73.
15. Gillam, G. *op. cit.* (Note 4), 13-14.
16. This work was carried out by Miss Heather McClean as part of her site watching brief.
17. Crouch, K. 'The Archaeology of Staines and the Excavation at Elmsleigh House' *Trans. London Middx. Archaeol. Soc.* 27 (1976) 73.
18. Laws, A. 'Excavations at Northumberland Wharf, Brentford.' *Trans. London Middx. Archaeol. Soc.* 27 (1976) 187.
19. Gillam, G. *op. cit.* (Note 4) 11.

## 7. THE FINDS

### 1. THE WORKED FLINTS

BY ROBERT YOUNG

Eleven pieces of flint were recovered; two from Area 1, three from Area 2, five from Area 3, and one from Area 149. None of the flint shows any patination, and it is still quite sharp and fresh.

(Fig. 16)

#### AREA 1

1. A probable scraper made on the distal end of a broken dark grey/fawn brown flake, with fawn inclusions. The flake has broken transversely to its long axis. The scraping edge of the implement has been formed by delicate pressure flaking from the bulbar surface. On the left edge a few irregular chips have been removed on both dorsal and bulbar surfaces. This may suggest use with a sawing or cutting action. However, on the greater part of the implement's worked edge no chips have been removed on the bulbar surface. In turn, this would suggest a uni-directional use as a scraper. The flint is still quite sharp and fresh (Layer 2).
2. A serrated flake or saw made on a light grey/brown, mottled, flint with fawn inclusions. The left edge has been serrated by flaking from the bulbar surface. Approximately 12 teeth are visible and they have the appearance of being worn, rounded and well used. The right edge exhibits steep inverse retouch. The intention may have been to work the flake to a point for boring, however the point has been snapped off and the working seems to carry on across the break. Alternatively the chipping may have been carried out to blunt the edge of the flake for easy holding of the saw (Layer 2).

#### AREA 2.

3. An amber coloured, translucent flint blade. Both edges show irregular chips removed from the dorsal surface, probably in the course of use. The flint is fresh and sharp (Layer 3).
4. A fawn/amber coloured translucent blade, lighter in colour than 3. A few very small irregular chips have been removed from the bulbar surface on the right edge. A slight hinge fracture is visible on the blade's distal end (unstratified).
5. A sub-triangular black-brown flint lump, with reddish brown patches and a patch of fawn sandy cortex-like material on its underside. On its upper surface the left edge of the triangle is slightly abraded. The base of the triangle has been very steeply worked from the underside to form a scraping edge (F.53).

The dating of such a small sample of flint as this, on purely typological grounds is impossible. The end-scraper and saw from Area 1 seem Mesolithic in character, as do the two fine blades from Area 2. The rest of the material however, which consists mainly of utilised flakes, could fit quite easily into any period between the Mesolithic and the Iron Age.

## 2. THE SAMIAN POTTERY

BY PETER WEBSTER

### Abbreviations

Caerhun 1931

P. K. Baillie Reynolds 'Excavations on the Site of the Roman Fort at Caerhun. 5th Interim Report; The Samian Pottery.' *Arch. Cambrensis*, (1931) 263-339.

Forrer 1911

R. Forrer *Die Römischen Terrasgillatöpfereien von Heiligenberg-Dinsheim und Ittenweiler im Elsass* (Stuttgart 1911).

Hartley 1972

B. R. Hartley, "The Roman occupation of Scotland: the evidence of the samian ware" *Britannia* 3 (1972) 1-55.

#### AREA 3.

6. A utilised, mottled grey, flint flake. Several irregular chips have been removed from the right edge on the dorsal surface. Approx. 15mm of very steep inverse retouch is visible across the base of the flake where it seems to be broken. This chipping has been carried out from the bulbar face. This would suggest that both edges of the flake had been used with a sawing or cutting action (Unstratified).
7. A utilised, light grey/brown semi-translucent flake, possibly removed in the course of core trimming. The flake still retains a patch of buff coloured cortex. The left edge shows small, irregular chips removed from both surfaces in the course of use and a small patch of inverse retouch. Irregular chips have also been removed across the base of the flake. Similar traces of use occur on the right edge (Layer 3).
8. A utilised flint blade with a fawn/grey patch on its left edge at the bulbar end. Slight irregular chipping is visible on the right and left edges. Striations are visible on the right edge of the bulbar surface (Layer 2).
9. A mottled, dark grey/fawn flake with a slight patch of buff cortex remaining on its bulbar end. The right edge shows irregular retouch on both faces, suggesting that the flake was used as a knife blade, with a cutting or sawing action. The tip of the flake, at its distal end, has snapped transversely to its long axis (Layer 4).
10. A fawn/dark brown translucent flake. No bulb of percussion is visible but conchoidal rings can be seen on both surfaces. The flake is triangular in cross section and has been notched on its left edge by working from the base. The implement may have been used as a spokeshave (unstratified).

#### AREA 149

11. A translucent core trimming flake. A patch of hard, fawn, crusty cortex is visible on the dorsal surface at the distal end. The dorsal face shows at least four flake scars from previous striking and several irregular chips have been removed on the right edge (underside) of the flake (F.6).

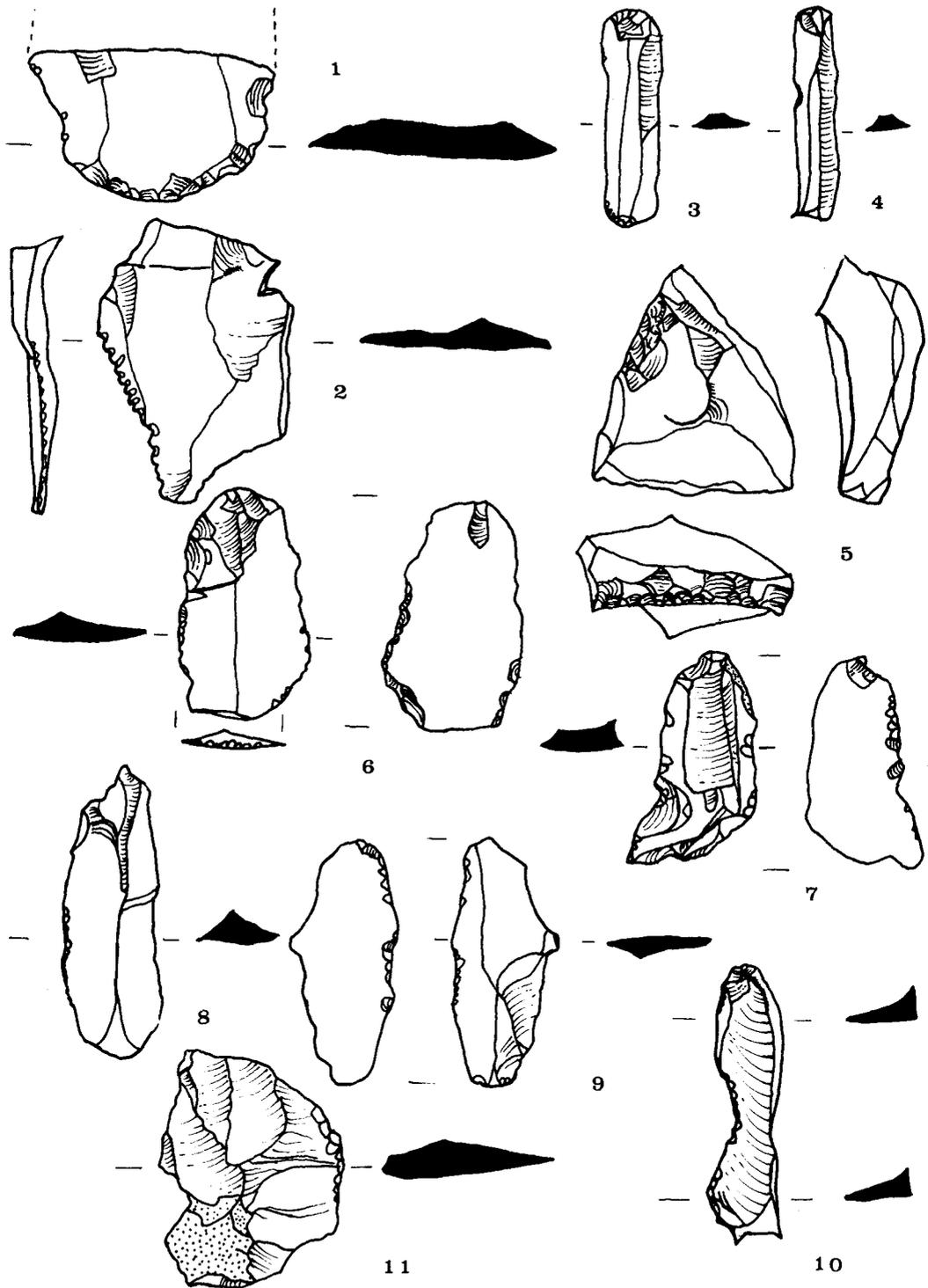


Fig. 16. Lincoln Road, Enfield. Worked flints (1/1)

- Johns 1971 *Arretine and Samian Pottery*. British Museum (1971).  
 Knorr 1919 R. Knorr *Töpfer und fabriken verzierter terra-sigillata des ersten jahrhunderts* (Stuttgart 1911).  
 Knorr 1952 R. Knorr *Terra-sigillata-gefäße des ersten jahrhunderts mit töpfernamen* (Stuttgart 1952).  
 Knorr: Rottweil 1912 R. Knorr *Sudgallische terra-sigillata gefäße von Rottweil* (Stuttgart 1912).  
 O F. Oswald *Index of figure types on terra-sigillata* (Liverpool 1936-7).  
 O&P F. Oswald, T. Davies Pryce *An introduction to the study of terra-sigillata* (London 1920).  
 Ovilava P. Karnitch *Die reliefsigillata von Ovilava* (Linz 1959).  
 Pompeii Hoard D. Atkinson "A hoard of samian ware from Pompeii" *J. Roman Stud* 4 (1914) 27-64 & Pl. 2-16.  
 Ricken 1948 H. Ricken *Die bilderschüsseln der Römischen töpfer von Rheinzabern*, Dr. W. Ludowici Katalog VI meiner ausgrabungen in Rheinzabern 1901-1914 (Speyer 1948).  
 Ricken & Fischer 1963 H. Ricken, C. Fischer *Die bilderschüsseln der Römischen töpfer von Rheinzabern*, textband mit typenbildern zu Katalog VI der ausgrabungen von W. Ludowici in Rheinzabern 1901-1914 (Bonn 1963).  
 Rogers G. B. Rogers *Poteries sigillées de la Gaule Centrale. I. Les motifs non figurés*, 28th supplement to *Gallia* (Paris 1974).  
 Simpson & Rogers 1969 G. Simpson, G. B. Rogers "Cinnamus de Lezoux et quelques potiers contemporaines" *Gallia* 27 (1969) 3-14.  
 S&S J. A. Stanfield, G. Simpson *Central Gaulish Potters* (Durham 1958).

## GENERAL

Samian was plentiful on the site with both South Gaulish and Central Gaulish fabrics well represented, as well as small quantities of East Gaulish ware. A catalogue of both plain and decorated sherds has been compiled within the dating evidence of the individual features, see note 1 (p. 117). Only a few of the more unusual pieces of plain ware and the stratified decorated sherds are discussed in detail here. A complete catalogue will be deposited with the finds in Forty Hall Museum, Enfield.

## DATING

The dating of individual features will be discussed elsewhere. The samian as a whole does, however, give us an idea of the intensity of occupation during the first two centuries AD and to this end the following summary has been produced to give some idea of the total number of fragments of each form present on the site (totals have been reached by counting all sherds over c. 20mm in diameter unless obviously joining sherds already counted; the result will reflect the proportion of one form to another rather than total numbers of vessels).

	South Gaulish	Central Gaulish	East Gaulish
Form	Quantity	Quantity	Quantity
15/17	6		
15/17	1		
18	25		
18R	2		
18/31	19	29	1
18/31R		2	
27	31	6	
29	30		
30	2	5	4
31		59	12
31R		3	1
33	2	46	9
35/36	6	12	1
37	35	77	15
38		7	6
40		1	2
44		4	
45			4
79/80		4	1
Curle 11		5	
Curle 23			1
Lud.Tg			2

The range of forms is fairly considerable but there are a number of notable absences. The number of vessels of form 15/17 is small and pre-Flavian forms such as 22 and 24/25 are totally absent. This reinforces the impression gained from the decorated ware that the site is unlikely to have been occupied before the Flavian period. At the other end of the samian date-range the numbers of East Gaulish vessels and the presence of forms such as 45, 79/80 and Curle 23 are sufficient to suggest occupation into the late 2nd century or early 3rd century even if we did not have other dating evidence.

In the catalogue which follows the fabric source (South, Central and East Gaul) has been abbreviated to SG, CG and EG throughout.

#### DECORATED WARE

(Fig. 17)

1. Form 37 CG. Two joining fragments from a free-style bowl with three examples of the horse O.1902 and two examples of the horse O.1896 and also a dolphin not in Oswald. The horse O.1896 is possibly that ascribed to Censorinus, S&S (1958, Pl.103,20) while the ovolo may be that shared by him with other potters including the Quintilianus group (Ovolo 3, S&S (1958, 190)). The wavy line below the ovolo makes it unlikely that this is a Censorinus product and an earlier potter is more likely. ?Hadrianic-Antonine (F.1).
2. Form 30. CG. Two joining fragments showing the lower part of a panel design with a larger version of the eagle than that illustrated as O.2167. The second panel has an S-motif formed by two abutting spirals. ?Hadrianic-Antonine (F.1).
3. Dechelette form 64. In pale orange micaceous fabric with a somewhat patchy matt slip. Mr B. R. Hartley informs me that this is a standard Lezoux fabric; he comments "Matt orange glazes and micaceous fabrics, similar to first century and early second century ones, were used at Lezoux under Hadrian for this and related forms only. It is primarily a matter of firing temperature. It would seem that just as the corresponding black coated forms were fired with reduced colour coated ware, so these oxidised cups were fired in the same kilns as oxidised colour coated ware. Since the firing temperature used for the kilns producing colour coated ware was always relatively low (i.e. below 1000°C), the mica remains unfused (and hence the coating is matt) and the fabric is relatively soft."

The design includes a vine tree with grapes, Diana (D.67=0.109) and seven-dot rosette. For the grapes see Rogers, M.39. The vine as a whole has certain resemblances to D.1124, an illustration of a bowl design which includes the vine (and also a hare not present on our piece). Some connection between the maker of this piece and the mould makers of Les Martres seems possible as all the elements of the design can be paralleled in the work of one of the mould makers supplying Donnaucus (cf. *Terrisse*, Pl.31, 214 and 230) for the vine and also the hare of the Dechelette illustration, S&S, Pl.49, 580 and Pl.45, 521 for the Diana and rosette. However, as this is a Lezoux piece we must note that the Diana occurs in the work of the Medetus-Ranto group (cf. S&S, Fig. 29, 352-3) and that vines also feature in some of their work (cf. S&S, Fig. 28, 336). If there is indeed some connection with Les Martres then it is perhaps through Medetus who moved to Lezoux under Hadrian. Date: Hadrianic.

(I should like to thank Clive Partridge who kindly made his preliminary report on this piece available to me. Mr Partridge has showed the piece to M. H.

Vertet and we are most grateful to him for his comments. Mr B. R. Hartley has examined the piece and made a number of very useful comments for which I am most grateful.)

4. Form 37 SG. Six fragments, four joining, of a bowl with panel decoration which includes a cross-motif, bestiarius and lion, kneeling figure and bud. The bestiarius and lion occurs in the work of Pudentus, Knorr (1919, 68) and Biragillus, Knorr (1919, 16, 3 and 6) and Knorr (1952, 6A); see also Caerhun (V (1931) 298-9, S178-9 with references). c. AD 80-110 (F.4).
5. Form 37 CG. Fragment of winding scroll beneath an ovolo which is possibly Cinnamus ovolo 3b Simpson and Rogers (1969, Fig. 1, 2). c. AD 150-170 (F.4) (not illustrated).
6. Form 30 SG. Three pronged ovolo with a panel of arrows and wavy lines and a narrow panel with palm leaf; cf. (Ovilava, 10, 5) Knorr (*Rottweil* 1912, XVI, 3). Flavian (F.4).
7. Form 29 SG. Two joining fragments of the upper zone showing a hare following a dog below coarse rouletting. c. AD 70-85 (F.4) (not illustrated).
8. Form 37 CG. A Les Martres product. Fragment showing basal wreath and part of a winding scroll. The wreath element is Rogers, G.371 used among others by Potter X-11 S&S (1958, *Ioenalis* style cf. PL.41 for scrolls used by this potter). c. AD 100-120 (F.4).
9. Form 29 SG. Lower zone with panel decoration including a roundel containing a figure, possibly a Cupid. The details include the bud, Knorr (1919, Fig. 12, 5, lower left corner of fig.). See Knorr (1919, 5) and Knorr (1952, 22A) for similar designs. c. AD 60-85 (F.4).
10. Form 30 CG. Fragment of panel decoration with a beaded border and standing female nude, probably O.286 used by Albiucius, Arcanus and Drusus II. The former may be ruled out as he used bead and reel vertical border. c. AD 125-150 (F.9) (not illustrated).
- 10a. Form 29 SG. Lower zone showing opposing animals with a plant between. c. AD 70-85 (F.9) (not illustrated).
11. Form 29 SG. Upper zone with a very coarse design of running animals, scroll and pendant arrows; cf. Knorr (1952, 24 D and F, by Felix). Knorr dates this potter c. AD 60-75 but the coarseness of our design might indicate a slightly later date (F.15).
12. Form 29 SG. Two non-joining fragments showing part of the lower zone with wreath and hare and dog motif. The wreath could be that used by Passienus, Knorr (1919, 64F, also G for a comparable hare). c. AD 60-85 (F.25).
13. Form 29 SG. Two fragments probably from the same bowl, showing a winding scroll with triple leaf and bud motif and a small bird. The motif is used by a variety of potters (Cosus and Rufus, *lucundus*,

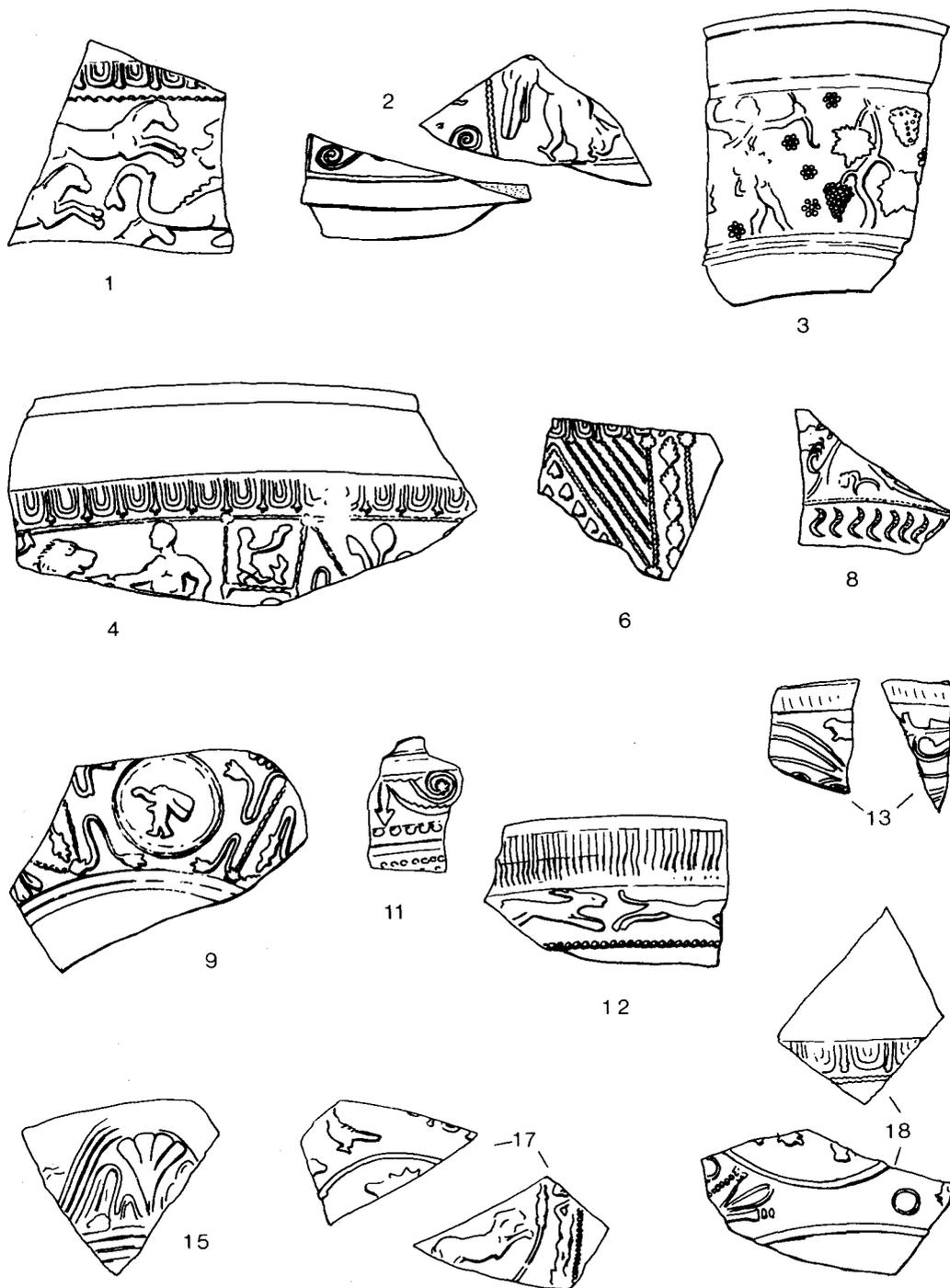


Fig. 17. Lincoln Road, Enfield. The samian pottery (1-18). (1/2)

- Matugenus, Meddillus, Passienus, Pontus); Meddillus also uses a small bird which is similar Knorr (1919, 54) and animals occur frequently in his work and that of Passienus. It seems possible that this is in fact the upper zone of No. 12 above in which case it is most probably the work of Passienus. *c.* AD 60-85 (F.25).
14. Form 29 SG. Lower zone: poorly impressed winding scroll which includes the leaf pattern, Knorr (1919, Fig. 12, 5 (upper row)). *c.* AD 60-85 (F.25) (not illustrated).
  15. Form 37 CG. Part of a bowl with panel decoration. The composite cross panel includes the use of bolsters and an acanthus spray which both occur in the work of Attianus S&S (1958, Fig. 23, 2 and 12). See also S&S (1958, P1.85, 9) which includes a Diana and hind, probably present in fragmentary form on the left of our piece. *c.* AD 130-160 (F.25).
  16. Form 37 SG. Lower zone of small godroons with fragmentary panel decoration above, including a running animal and grass. *c.* AD 75-100 (F.38) (not illustrated).
  17. Form 37 CG. Two fragments, not necessarily from the same bowl. One shows a panther, O.1518 and a figure on a plinth, similar to O.1203; the other shows a small fragment of ovolo and a bird above a winding scroll, see, for instance, S&S (1958, P1.162, 58). Antonine (F.38).
  18. Form 37 CG. Three fragments probably from the same bowl. The overall design is that of a winding scroll with the lobes open downwards and closed above with a beaded border. Details include the triangle, Rogers (U.269, used by Sacer and Attianus); the circle also occurs in the work of Attianus S&S (1958, Fig. 23, 9) and the ovolo is probably his ovolo 4 S&S (1958, Fig. 23). The rosette is close to that of Sacer S&S (1958, Fig. 22, 5). *c.* AD 125-160 (F.38).
- (Fig. 18)
19. Form 37 CG. Ovolo and fragment of panel decoration. The ovolo is Cinnamus ovolo 3b cf. Simpson and Rogers (1969, Fig. 1). The overall design could well be from the same mould as *ibid.* (Fig. 3, 19) with panther within a half-medallion and dancing warrior. *c.* AD 150-170 (F.41e).
  20. Form 37 CG. Ovolo and bead row; possibly Doeccus, ovolo 3 S&S (1958, Fig. 44). Antonine (F.42a) (not illustrated).
  21. Form 37 CG. Fragment of ovolo, possibly Cinnamus, ovolo 1 S&S (1958, Fig. 47, 1). Hartley suggests that this ovolo should be dated *c.* AD 155-175 cf. Hartley (1972, 49) (F.42b) (not illustrated).
  22. Form 37 CG. Two small joining fragments showing ovolo 2 of Cinnamus, S&S (1958, Fig. 47). Hartley suggests a date of *c.* AD 150-170 for this ovolo Hartley (1972, 49) (F.42c) (not illustrated).
  23. Form 37 EG. Three joining fragments showing a panel division with roped border and S-ornament. Figures are the lion O.1497K, Warrior, O.201, Pan, possibly O.717, and a cock similar to O.2361 (F.42c) (not illustrated).
  24. Form 37 EG. Below the ovolo is panel decoration divided by beaded borders. The principal panels are separated by a strip of spirals joined to make large S-designs. One other panel contains a series of concentric circles. The circles occur in the fabric of La Madelaine (cf. *Saalburg Jahrbuch*, VIII, Taf.X, 7), while the ovolo could be *ibid.* (Taf VII,C). A similar style of decoration does, however, occur in other East Gaulish centres, cf. Forrer (1911, Taf. xxiv, 4-5). Hadrianic-Antonine (F.79) (not illustrated).
- Nos. 23-24 have been placed together because they show an obvious similarity. The S-design is common to both and it is quite possible that they belong to the same consignment if not the same bowl.
25. Form 29 SG. Upper zone: sea monster; Lower zone: wreath and half-medallion. *c.* AD 65-85 (F.42d).
  26. Form 37 EG. A Rheinzabern product, with arcaded ornament below the ovolo cf. Ricken and Fischer (1963, E.16). The arcade is divided by the festoon seen frequently in the work of Primitivius IV Ricken (1948, Fig. 199 and 200) and others. The figures are the cupid, Ricken and Fischer (1963, M.111a), the triton, *ibid.* (M.104a), with the three leafed ornament, *ibid.* (P.134). Antonine (F.47a).
  27. Form 37 CG. Panel decoration with figures including the panther O.1518 and ?Diana and hind O.106; cf. S&S (1958 P1.84, 15, Sacer). Hadrianic-Antonine (F.48, Layer 1) (not illustrated).
  28. Form 37 CG. Fragment showing a very worn ovolo, possibly Rogers (1974, B.234) used by Paternus II. *c.* AD 160-190 (F.48, Layer 2) (not illustrated).
  29. Form 37 CG. Fragment of ovolo and leaf. The ovolo appears to be Rogers (1974, B.50), assigned to Fgientinus, while the leaf could be Rogers (1974, H.23). Hadrianic-Antonine (F.48, Layer 2) (not illustrated).
  30. Form 37 Les Martres. This piece is probably from the same mould as S&S (1958, P1.7, 80) ascribed to Potter X-2. AD 100-120 (F.54).
  31. Fragment of the same or a similar bowl to No. 30. Unstratified.
  32. Form 37 CG. Three-quarters medallion with the tail of a sea monster, O.46, used by both Cinnamus and Doeccus. The bolster at the head of the medallion could be that of Cinnamus S&S (1958, Fig. 47, 41). *c.* AD 150-175 (F.1) (not illustrated).
  33. Form 37 EG. A Rheinzabern product with the ovolo, Ricken and Fischer (1963, E.56), Athena, *ibid.* (M.29a) and rosette, *ibid.* (0.42). All occur in the work of Reginus I. Antonine (F.64).
  34. Form 37 CG. Panel decoration is divided by bead rows and lines of leaf "bunches" cf. Rogers (1974, L.20), accribed by him to Potter X-13, and by S&S (1958) to the style of Donnaucus. See S&S (1958, P1.5, 517) for the lion and arrows, *ibid.* (P1.46, 534) for the cross-motif, leaves and a possible interpretation of the dancing figure (although the latter seems more likely to be from a *poisson* with two figures and, therefore, coupled with the kneeling figure beside it as *ibid.* (Fig. 48, 573). *c.* AD 100-120 (F.66).
  35. Form 37 CG. Leaf, Rogers (1974, H.13), used by Cinnamus and associates and Sissus II cf. S&S (1958, P1.77, 1), it is not clear whether this mould was signed after firing although the drawing clearly shows that it signed after decoration; the use of signatures and plain-ware stamps suggests a potter who bought in moulds, however, and would suggest that the mould is a Cinnamus product. *c.* AD 145-175 (f.68) (not illustrated).
  36. Fragment of decoration including the bead and reel used by Censorinus. *c.* AD 150-180 (F.68) (not illustrated).
- For a decorated vessel from F.79 see No. 24 above.
37. Form 37 CG. Fragmentary ovolo with bead row and

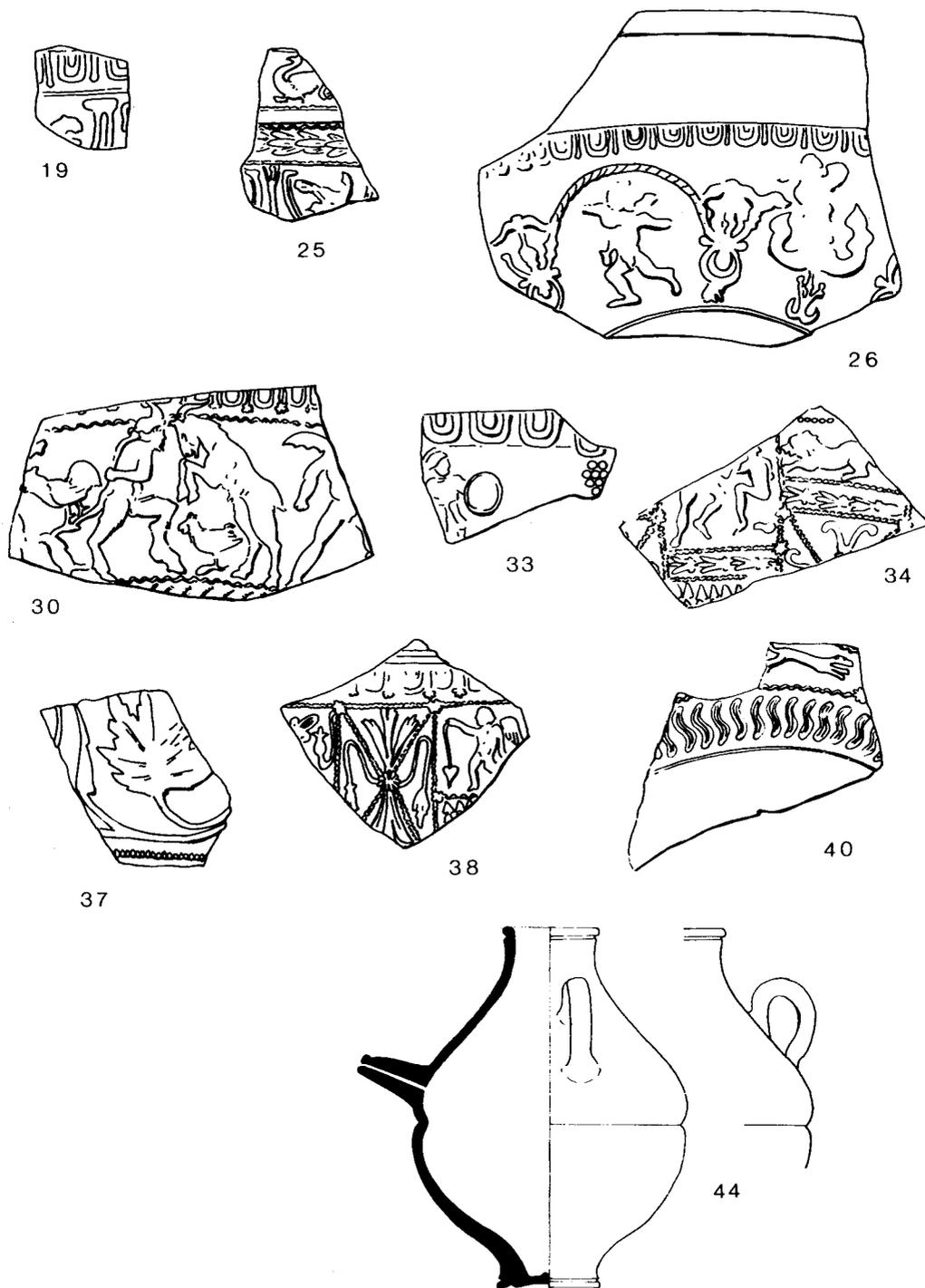


Fig. 18. Lincoln Road, Enfield. The samian pottery (19-44). (1/2)

winding scroll with the leaf, Rogers (1974, H.13). The leaf is used mainly by Cinnamus and his associates (see No. 15 above); the ovolo is probably Cinnamus ovolo 2 S&S (1958, Fig. 47) which Hartley would date *c.* AD 150-170 Hartley (1972, 49) (F.69).

38. Form 30 SG. Two fragments almost certainly from the same bowl. The panel decoration includes the cupid O.436 and a cross motif. See also Knorr (1919, P1.17, 30) for cupid used by Calvus, who also used a comparable cross-motif; see also Hermet (P1.87, 4) for the cross and Knorr (1919, Fig. 12, 41) for a detail from it. *c.* AD 60-90 (Area 5, F.6).
39. Form 37 SG. Fragment with zoned decoration. Flavian (Area 5, F.6) (not illustrated).
40. Form 37 SG. Basal wreath of S-shaped godroons with panel above containing running dog, cf. Pompeii Hoard (1914, 59 and 61) *c.* AD 70-90 (Area 5, F.7).
- 40a. Small fragment from the same or a very similar bowl to No. 40 above (Area 5, F.5) (not illustrated).
41. Form 37 SG. Fragment of a bowl with ovolo and S-shaped godroons below. *c.* AD 70-90 (Area 5, F.7) (not illustrated).

#### PLAIN WARE

Only a few unusual pieces are noted here.

42. Form 33 variant EG. It resembles O&P (1920, P1.75, 11) but lacks the rouletting of the illustrated example (F.4).
43. Form 72 CG. Fragment of neck and upper (undecorated) part of the body. cf. O&P (1920, P1.77, 6). Second half of 2nd century (F.6).
44. Baby's feeding bottle CG. A number of examples of this type are known, see for example, Johns (1971, P1.11a) but it has been little discussed. A number of unpublished examples have been noted and it is hoped to publish these with a fuller discussion of the type in due course. The illustrated vessel came from F.6 together with the base of a separate but similar vessel; the site also yielded a base probably from a vessel of this type (F.8), and a handle similar to that illustrated. (From F.2).

Vessels 42-44 do not occur on the summary table p. 129. Of the three only No. 44 is illustrated.

### 3. THE SAMIAN POTTERS' STAMPS

BY B. R. HARTLEY

Potter	Die	Form	Reading	Origin	Date	Site Code
1. Beliniccus i	9a	33	BELINICC [I.M]	Lezoux	<i>c.</i> 140-170	Unstratified
2. Buccula	2a	33	BV.CCVL .F	Les Martres de Veyre?	<i>c.</i> 140-170	F.43
3. Calvus i	5v	15/17	[O] FCA [LVI]	La Graufesenque	<i>c.</i> 70-90	Area 5, F.6
4. Censor i	3g	33	OF.CEN	La Graufesenque	<i>c.</i> 65-85	Unstratified
5. Cerialis ii	2a	27	[CERIA]LIAA	Lezoux	<i>c.</i> 130-160	Area 2, L.3
6. Dagodubnus ii	2a	33	DAGODVB NVSF	Rheinzabern	<i>c.</i> 160-200	F.43
7. Decmus ii	2b	33	DECM.LAA	Lezoux	<i>c.</i> 165-195	F.47c
8. Dontio	6a	27	DONTIOHICI	La Graufesenque	<i>c.</i> 65-90	Area 5, F.6
9. Meddilus	5a	29	MEΘ ILLVS	La Graufesenque	<i>c.</i> 60-80	Area 5, F.6
10. Minuso i	1a	33	MINVSO	Argonne	Antonine	F.43
11. Nicephor i	3a	27	NICEPHOR F	Les Martres de Veyre	<i>c.</i> 100-120	Area 2, L.3
12. Niger ii	4a	15/17 or 18	OFNIGR	La Graufesenque	<i>c.</i> 55-70	F.4
13. Paterclus	10a or a— or a—	18/31	PATE [RCLOSFE]	Les Martres de Veyre	<i>c.</i> 110-130	F.38
14. Paternus v	7a	37		Lezoux	<i>c.</i> 160-195	F.71
15. Severus i	7t	18/31	OFSEVERI	La Graufesenque	<i>c.</i> 75-95	F.4
16. Sollemnis i	5a	18/31R	SOLIIMNI	Lezoux	<i>c.</i> 130-150	F.64
17. Surburo	3a	33	SVRBVRO	Lezoux	Antonine	F.41c
18. Tarvillus	2a	18/31	[TAR] VILLV.F	Lezoux	<i>c.</i> 140-170	F.54
19. Titurus	2a—	18/31 or 31	TITV [RI.M]	Lezoux	<i>c.</i> 140-180	Unstratified
20. Verecundus ii	8a	27	VERECV	La Graufesenque	<i>c.</i> 65-85	Area 5, F.2/3
21.						2 unidentified stamps, probably both illiterate, from F.1 and F.4

Table 1. The samian potters' stamps

## 4. THE ROMAN COARSE POTTERY

BY PAUL A. TYERS

The report is divided as follows:

1. Acknowledgements.
2. Description of method.
  - 2.1. Southwark typology.
  - 2.2. Fabric groups.
  - 2.3. Catalogues of pottery.
  - 2.4. Abbreviations and conventions
3. Analysis of pottery by period.
  - 3.1. Phase 1.
  - 3.2. Phase 2.
  - 3.3. Phase 3.
  - 3.4. Phase 4.
4. The illustrated pottery.
  - 4.1. Catalogue of illustrated pottery.
  - 4.2. Discussion of illustrated pottery.
    - 4.2.1. Bead-rim jars in fabric D.
    - 4.2.2. Fabric group A 4.
    - 4.2.3. Much Hadham products.
    - 4.2.4. Face Urns.
    - 4.2.5. The Romano-British lead glazed bowl by Paul Arthur.
    - 4.2.6. Stamped London ware, from information supplied by W. J. Rodwell.
    - 4.2.7. The Amphora stamps.
    - 4.2.8. The mortarium stamps by Mrs K. F. Hartley.
5. Conclusions.

### 1. ACKNOWLEDGEMENTS

I am grateful to Mr Christopher Young for the identification of the Oxfordshire ware and the Much Hadham ware, to Mr Paul Arthur for the report on the lead-glazed (Section 4.2.5.), to Mr Warwick J. Rodwell for information on the stamped London ware, which is incorporated into Section 4.2.6, and to Mrs K. F. Hartley for her report on the stamped mortaria. Fig. 25.1 was drawn by Paul Arthur, and Fig. 24, 22.1-24.2, 25, 27.1 and 27.2 are by members of the Enfield Archaeological Society. The amphora and mortaria stamps (Fig. 26) were drawn by Miss Dot Francis, who also assisted in the compilation of Tables 2 and 3.

### 2. DESCRIPTION OF METHOD

#### 2.1 The Southwark Typology.

Throughout the coarse pottery report extensive use has been made of the Southwark typology (Marsh and Tyers 1977, forthcoming). The classification scheme in the Southwark typology is on three levels:

- i) Roman numerals I-VI indicate the broad groups; flagons (I), jars (II), beakers (III), bowls and dishes (IV), plates (V) and cups (VI).
- ii) Capital letters indicate the classes thus IB are ring-necked flagons.
- iii) Divisions within the classes are indicated by Arabic numerals; thus IB1 is a specific form of ring-necked flagon.

The Southwark typology only includes material up to *circa* AD 200, as the stratification and dating is inadequate after that date in Southwark, but some of the classes are still applicable to later material. The descriptions and dating evidence for all the classes and forms is discussed in the Southwark report, and there are references to external dating material and kiln site evidence. The use of the Southwark typology has two main advantages. Firstly it reduces considerably the number of drawings, thus avoiding repetition of the common types. The only pots drawn are complete and intrinsically interesting vessels. Secondly it enables a numerical treatment of the material to be attempted (see Section 3, p. 137).

The Enfield report is the first attempt to write a pottery report using the Southwark typology as its basis and is therefore to some extent experimental. Where appropriate reference is made to the pottery from the Highgate Wood kiln site (Brown and Sheldon, 1974, and Tyers, 1977). A large proportion of the Phase 1 and 2 pottery is similar to Highgate products. The concept of a 'Highgate industry' is discussed in the Southwark report. It seems likely that there are a number of sites similar to Highgate producing similar pottery scattered over North London, and the Enfield pottery probably comes from one such site.

The pottery from the Enfield Archaeological Society's excavations (Area 149) has been classified and included in the lists, but many of the groups seem to have been disturbed and include intrusive material. For example, the pottery from F.4 includes sherds of Oxfordshire Ware, but the comparable groups from Area 3 (F.25) are of Phase 1 date (ie, pre AD 130).

## 2.2 Fabric Groups.

The following fabric groups have been defined:

### A. Reduced grey sand tempered wares.

A.1. with a burnished black or dark grey slip.

A.2. with a burnished white, cream or silver-grey slip.

A.3. without any slip; with or without burnishing.

A.4. very hard fabric with a gritty, coarse sand tempering. No slip. With or without burnishing.

### B. Reduced grey or brown grog tempered ware.

### C. Oxidised wares.

C.1. Buff, cream or white (iron free) granular fabric. A Verulamium region product.

C.2. Red (iron rich) granular fabric, often with a grey core, with a cream or white slipped surface. A Verulamium region product.

### D. A vesicular dark brown and/or grey fabric.

With the exception of fabrics C1 and C2 there is no one to one correspondence between fabric groups and production centres. Enfield fabric groups A1 and A2 include products of Highgate (fabric C) and related industries. Group A3 includes a wide range of products from many centres. Group A4 is discussed further below (Section 4. 2.2, p. 150). Enfield fabric B includes Highgate fabric B, and products of Highgate or related centres constitute the bulk of the Enfield material. Fabric group D is discussed in Section 4.2.1 (p. 150). BB2 is a specific fabric within one of the group A fabrics, but, within the limitations discussed in the Southwark report, BB2 has been identified and noted; similarly sherds in BB1 are noted. For detailed information on the occurrence of the fabrics with different forms and in the various deposits, reference must be made to the unpublished lists summarising the pottery evidence.

## 2.3 Catalogues of Pottery

Lists of the pottery in each stratified group have been prepared and included in the summaries of dating evidence. These are available from the Asst. Editor, c/o Museum of London, 150 London Wall, London, EC2Y 5HN. They include the following information: 1 Fabric group. 2 Form or class in the Southwark typology. 3 Portion of vessel represented. 4 Minimum number of vessels represented. 5 Comments. Each list of pottery from a stratified group is concluded by a date for the material. Tables 2 and 3 (see section 3 below) are compiled from these lists, and summarise the coarse pottery evidence from the site.

## 2.4 Abbreviations and conventions in the catalogues of illustrated pottery.

When describing colour, the following convention is used: red-brown indicates a colour intermediate between red and brown, whilst red/brown indicates patches of red and patches of brown. In the description of the pottery the following abbreviations are used:

br. = brown. gr. = grey. bl. = black.

r = rim. s = sherd. b = base.

s. = surface. int. = internal. ext. = external. c. = core. f. = fabric.

BB1 = Black burnished 1.

BB2 = Black burnished 2.

NJ. = Necked jar rim sherd.

## 3. Analysis of pottery by period.

Tables 2 and 3 (p. 138-9) illustrate the occurrence of the different forms in the stratified groups. In Table 2 the pottery groups are listed by area, and the types are listed in 'typological' order (eg, IA, IB, IC, etc.). In table 3 the stratified groups are listed by period, and the forms and classes are listed in an approximate order of introduction. The method of working out this 'order of introduction' is explained in the Southwark report, and the table here can be compared with a similar one for Southwark pottery groups published there.

### 3.1 Phase 1.

There are none of the Early Flavian beakers of Southwark form III B1, (an ovoid beaker with barbotine decoration of alternate panels of circles and dots) which are very characteristic and recognisable even in very small sherds. The larger groups of Phase 1 contain poppy-beakers (III F), hooked or rolled rim bowls (IV F) and London Ware, which are all typical Flavian-Trajanic types. A date of AD 85/90 for the beginning of Phase 1 is indicated.

Two of the Phase 1 groups contain BB2 piedishes (F.14 and F.38) which are to be dated from *c.* AD 130. Therefore Phase 1 can be dated *c.* AD 85/90-130.

### 3.2 Phase 2.

The majority of Phase 2 deposits contain BB1 or BB2 and are therefore of Hadrianic or later date. Three groups (Area 3.L.3., F.42c, F.42d) contain pottery similar to that of Phase 1, and it seems that this material is redeposited. The latest introduction into the Southwark sequence are BB2 bowl forms (IV H 5, 6 or 7) which are *c.* AD 180 plus. Several Phase 2 groups contain these vessels. An early 3rd century type in Southwark is a BB1 dish or bowl with a lid groove and decoration of burnished intersecting arches (equivalent to Gillam, 1968, forms 225 and 314; Hull, 1958, type 304). There are no examples of this type in Phase 2 groups, which can therefore be dated *c.* AD 130-200.

The larger groups of Phase 2 are of late Antonine date, and there may be a break or drop in the intensity of occupation during the late Hadrianic-early Antonine period. Some types of this period (such as ring-necked flagons of form IB 7, 8 and 9), are missing from the assemblages.

### 3.3 Phase 3.

Phase 3 contains no types that are not present in the preceding periods; much of the pottery is abraded and presumably residual. There is one base from a tall folded beaker (Fig. 23, 20.5) which is likely to be 3rd century in date, but otherwise the phase is undateable from the pottery. The problems with the dating of 3rd century pottery are discussed in the Southwark report.

### 3.4 Phase 4.

With the exception of F.70 (Fig. 23, 21.1-21.16) all the groups contain much residual material. The

FEATURE NO. TYPE	AREA 1					AREA 2					AREA 3					AREA 4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	18 L1	19 L2	20 L3	21 L4	22 L5	23 L6	24 L7	25 L8	26 L9	27 L10	28 L11	29 L12	30 L13	31 L14	32 L15	33 L16	34 L17	35 L18	36 L19	37 L20	38 L21	39 L22	40 L23	41 L24	42 L25	43 L26	44 L27	45 L28	46 L29	47 L30	48 L31	49 L32	50 L33	51 L34	52 L35	53 L36	54 L37	55 L38	56 L39	57 L40	58 L41	59 L42	60 L43	61 L44	62 L45	63 L46	64 L47	65 L48	66 L49	67 L50	68 L51	69 L52	70 L53	71 L54	72 L55	73 L56	74 L57	75 L58	76 L59	77 L60	78 L61	79 L62	80 L63	81 L64	82 L65	83 L66	84 L67	85 L68	86 L69	87 L70	88 L71	89 L72	90 L73	91 L74	92 L75	93 L76	94 L77	95 L78	96 L79	97 L80	98 L81	99 L82	100 L83	101 L84	102 L85	103 L86	104 L87	105 L88	106 L89	107 L90	108 L91	109 L92	110 L93	111 L94	112 L95	113 L96	114 L97	115 L98	116 L99	117 L100	118 L101	119 L102	120 L103	121 L104	122 L105	123 L106	124 L107	125 L108	126 L109	127 L110	128 L111	129 L112	130 L113	131 L114	132 L115	133 L116	134 L117	135 L118	136 L119	137 L120	138 L121	139 L122	140 L123	141 L124	142 L125	143 L126	144 L127	145 L128	146 L129	147 L130	148 L131	149 L132	150 L133	151 L134	152 L135	153 L136	154 L137	155 L138	156 L139	157 L140	158 L141	159 L142	160 L143	161 L144	162 L145	163 L146	164 L147	165 L148	166 L149	167 L150	168 L151	169 L152	170 L153	171 L154	172 L155	173 L156	174 L157	175 L158	176 L159	177 L160	178 L161	179 L162	180 L163	181 L164	182 L165	183 L166	184 L167	185 L168	186 L169	187 L170	188 L171	189 L172	190 L173	191 L174	192 L175	193 L176	194 L177	195 L178	196 L179	197 L180	198 L181	199 L182	200 L183	201 L184	202 L185	203 L186	204 L187	205 L188	206 L189	207 L190	208 L191	209 L192	210 L193	211 L194	212 L195	213 L196	214 L197	215 L198	216 L199	217 L200	218 L201	219 L202	220 L203	221 L204	222 L205	223 L206	224 L207	225 L208	226 L209	227 L210	228 L211	229 L212	230 L213	231 L214	232 L215	233 L216	234 L217	235 L218	236 L219	237 L220	238 L221	239 L222	240 L223	241 L224	242 L225	243 L226	244 L227	245 L228	246 L229	247 L230	248 L231	249 L232	250 L233	251 L234	252 L235	253 L236	254 L237	255 L238	256 L239	257 L240	258 L241	259 L242	260 L243	261 L244	262 L245	263 L246	264 L247	265 L248	266 L249	267 L250	268 L251	269 L252	270 L253	271 L254	272 L255	273 L256	274 L257	275 L258	276 L259	277 L260	278 L261	279 L262	280 L263	281 L264	282 L265	283 L266	284 L267	285 L268	286 L269	287 L270	288 L271	289 L272	290 L273	291 L274	292 L275	293 L276	294 L277	295 L278	296 L279	297 L280	298 L281	299 L282	300 L283	301 L284	302 L285	303 L286	304 L287	305 L288	306 L289	307 L290	308 L291	309 L292	310 L293	311 L294	312 L295	313 L296	314 L297	315 L298	316 L299	317 L300	318 L301	319 L302	320 L303	321 L304	322 L305	323 L306	324 L307	325 L308	326 L309	327 L310	328 L311	329 L312	330 L313	331 L314	332 L315	333 L316	334 L317	335 L318	336 L319	337 L320	338 L321	339 L322	340 L323	341 L324	342 L325	343 L326	344 L327	345 L328	346 L329	347 L330	348 L331	349 L332	350 L333	351 L334	352 L335	353 L336	354 L337	355 L338	356 L339	357 L340	358 L341	359 L342	360 L343	361 L344	362 L345	363 L346	364 L347	365 L348	366 L349	367 L350	368 L351	369 L352	370 L353	371 L354	372 L355	373 L356	374 L357	375 L358	376 L359	377 L360	378 L361	379 L362	380 L363	381 L364	382 L365	383 L366	384 L367	385 L368	386 L369	387 L370	388 L371	389 L372	390 L373	391 L374	392 L375	393 L376	394 L377	395 L378	396 L379	397 L380	398 L381	399 L382	400 L383	401 L384	402 L385	403 L386	404 L387	405 L388	406 L389	407 L390	408 L391	409 L392	410 L393	411 L394	412 L395	413 L396	414 L397	415 L398	416 L399	417 L400	418 L401	419 L402	420 L403	421 L404	422 L405	423 L406	424 L407	425 L408	426 L409	427 L410	428 L411	429 L412	430 L413	431 L414	432 L415	433 L416	434 L417	435 L418	436 L419	437 L420	438 L421	439 L422	440 L423	441 L424	442 L425	443 L426	444 L427	445 L428	446 L429	447 L430	448 L431	449 L432	450 L433	451 L434	452 L435	453 L436	454 L437	455 L438	456 L439	457 L440	458 L441	459 L442	460 L443	461 L444	462 L445	463 L446	464 L447	465 L448	466 L449	467 L450	468 L451	469 L452	470 L453	471 L454	472 L455	473 L456	474 L457	475 L458	476 L459	477 L460	478 L461	479 L462	480 L463	481 L464	482 L465	483 L466	484 L467	485 L468	486 L469	487 L470	488 L471	489 L472	490 L473	491 L474	492 L475	493 L476	494 L477	495 L478	496 L479	497 L480	498 L481	499 L482	500 L483	501 L484	502 L485	503 L486	504 L487	505 L488	506 L489	507 L490	508 L491	509 L492	510 L493	511 L494	512 L495	513 L496	514 L497	515 L498	516 L499	517 L500	518 L501	519 L502	520 L503	521 L504	522 L505	523 L506	524 L507	525 L508	526 L509	527 L510	528 L511	529 L512	530 L513	531 L514	532 L515	533 L516	534 L517	535 L518	536 L519	537 L520	538 L521	539 L522	540 L523	541 L524	542 L525	543 L526	544 L527	545 L528	546 L529	547 L530	548 L531	549 L532	550 L533	551 L534	552 L535	553 L536	554 L537	555 L538	556 L539	557 L540	558 L541	559 L542	560 L543	561 L544	562 L545	563 L546	564 L547	565 L548	566 L549	567 L550	568 L551	569 L552	570 L553	571 L554	572 L555	573 L556	574 L557	575 L558	576 L559	577 L560	578 L561	579 L562	580 L563	581 L564	582 L565	583 L566	584 L567	585 L568	586 L569	587 L570	588 L571	589 L572	590 L573	591 L574	592 L575	593 L576	594 L577	595 L578	596 L579	597 L580	598 L581	599 L582	600 L583	601 L584	602 L585	603 L586	604 L587	605 L588	606 L589	607 L590	608 L591	609 L592	610 L593	611 L594	612 L595	613 L596	614 L597	615 L598	616 L599	617 L600	618 L601	619 L602	620 L603	621 L604	622 L605	623 L606	624 L607	625 L608	626 L609	627 L610	628 L611	629 L612	630 L613	631 L614	632 L615	633 L616	634 L617	635 L618	636 L619	637 L620	638 L621	639 L622	640 L623	641 L624	642 L625	643 L626	644 L627	645 L628	646 L629	647 L630	648 L631	649 L632	650 L633	651 L634	652 L635	653 L636	654 L637	655 L638	656 L639	657 L640	658 L641	659 L642	660 L643	661 L644	662 L645	663 L646	664 L647	665 L648	666 L649	667 L650	668 L651	669 L652	670 L653	671 L654	672 L655	673 L656	674 L657	675 L658	676 L659	677 L660	678 L661	679 L662	680 L663	681 L664	682 L665	683 L666	684 L667	685 L668	686 L669	687 L670	688 L671	689 L672	690 L673	691 L674	692 L675	693 L676	694 L677	695 L678	696 L679	697 L680	698 L681	699 L682	700 L683	701 L684	702 L685	703 L686	704 L687	705 L688	706 L689	707 L690	708 L691	709 L692	710 L693	711 L694	712 L695	713 L696	714 L697	715 L698	716 L699	717 L700	718 L701	719 L702	720 L703	721 L704	722 L705	723 L706	724 L707	725 L708	726 L709	727 L710	728 L711	729 L712	730 L713	731 L714	732 L715	733 L716	734 L717	735 L718	736 L719	737 L720	738 L721	739 L722	740 L723	741 L724	742 L725	743 L726	744 L727	745 L728	746 L729	747 L730	748 L731	749 L732	750 L733	751 L734	752 L735	753 L736	754 L737	755 L738	756 L739	757 L740	758 L741	759 L742	760 L743	761 L744	762 L745	763 L746	764 L747	765 L748	766 L749	767 L750	768 L751	769 L752	770 L753	771 L754	772 L755	773 L756	774 L757	775 L758	776 L759	777 L760	778 L761	779 L762	780 L763	781 L764	782 L765	783 L766	784 L767	785 L768	786 L769	787 L770	788 L771	789 L772	790 L773	791 L774	792 L775	793 L776	794 L777	795 L778	796 L779	797 L780	798 L781	799 L782	800 L783	801 L784	802 L785	803 L786	804 L787	805 L788	806 L789	807 L790	808 L791	809 L792	810 L793	811 L794	812 L795	813 L796	814 L797	815 L798	816 L799	817 L800	818 L801	819 L802	820 L803	821 L804	822 L805	823 L806	824 L807	825 L808	826 L809	827 L810	828 L811	829 L812	830 L813	831 L814	832 L815	833 L816	834 L817	835 L818	836 L819	837 L820	838 L821	839 L822	840 L823	841 L824



Oxfordshire Ware in F.70 suggests an early-mid 4th century date.

#### 4. The Illustrated Pottery.

In the illustrations (Figs. 19-24) pottery from stratified groups is numbered consecutively (ie, 1.1, 1.2, 1.3, etc.).

#### 4.1. Catalogue of Illustrated Pottery.

	<i>Feature</i>	<i>Description</i>	<i>Fabric group</i>	<i>Form or class</i>
(Fig. 19)				
1.1	F.15	Dark gr.-br. c and s. Vesicular. (See Section 4.2.1.)	D	II A
1.2	F.15	Granular micaceous orange f. ext.s. burnished. Verulamium region product.	C 1	VB
1.3	F.15	Gr.c., orange-br./red-br.s. Grog tempered f.	B	—
1.4	F.15	Fine micaceous light gr.f. Finely burnished bl.ext.s., dark br./gr. int. s. London Ware. The London Ware flasks from the Bank of England are divisible into two types. Type 1 has a decorated shoulder, whereas in Type 2 there is no distinction between neck and body. (Marsh and Tyers 1976, Fig. 9) These types are equivalent to Southwark forms II R 1 and II R 2 respectively. The example illustrated here does not fit into either of these categories, and represents a new type (Form II R 3).	—	II R
2.1	F.14	Grey c., dark br. ext. s., red-br. int. s. Slightly gritty texture, vesicular. (See Section 4.2.1.)	D	II A
2.2	F.14	Dark gr./br. c. and s. Vesicular. (See Section 4.2.1.)	D	II A
2.3	F.14	Grey c. buff ext.s., red-br. int. s. Grog tempered f.	B	II A
2.4	F.14	Grey c., black ext. s., red-br. int. s. Gritty grog tempered f., slightly vesicular.	—	II A
2.5	F.14	Grey c., dark br./gr. s. Grog tempered f.	B	II A
2.6	F.14	Grey c., dark br./gr. s. Grog tempered f.	B	II A
2.7	F.14	Black c. and s. Vesicular f. (See Section 4.2.1.)	D	II A
2.8	F.14	Grey f., darker ext. s. Sandy texture	A 1	II E
2.9	F.14	Grey c., dark gr.-br. int. s., brown ext. s. below grooves. Black grog tempering. This jar is derived from a pre-Roman form current in the Hertfordshire area (eg, Wheeler and Wheeler 1936. Prae Wood Group B, type 61). There is only one comparable vessel from Southwark, but they are commoner at Verulamium (Frere 1972, Fig. 107, 272, 273 and 275).	B	II E
2.10	F.14	Grey c., brown int. s., dark br. heavily smoke blackened ext. s., br. base and feet. Burnished on rim only. Grog tempered f. This vessel is very similar to Period II Highgate products. There are an unusual number of feet from tripod bowls amongst the Enfield material — they are much rarer in Southwark. A single foot is illustrated in Fig. 21, 8.2.	B	—
2.11	F.14	Grey c., orange s., burnished orange-red ext. Grog tempered f. Similar to Highgate products. The fabric is comparable with a rare fabric made during Period II at Highgate, which is more commonly found on simple dishes (Tyers 1977, type 21). There are also a few examples of a deep campanulate cup similar to <i>Camulodunum</i> form 76 A (Tyers 1977, type 24) in this fabric, and the Enfield vessel may be a devolved example of one of these.	B	—
3	F.48. L.3	Grey f., burnished white slip on rim and shoulder. Burnished decoration.	BB 2	II F 10
4.1	F.48. L.3	Dark gr. c., dark gr. int. s. Finely burnished black ext.	A 1	II E

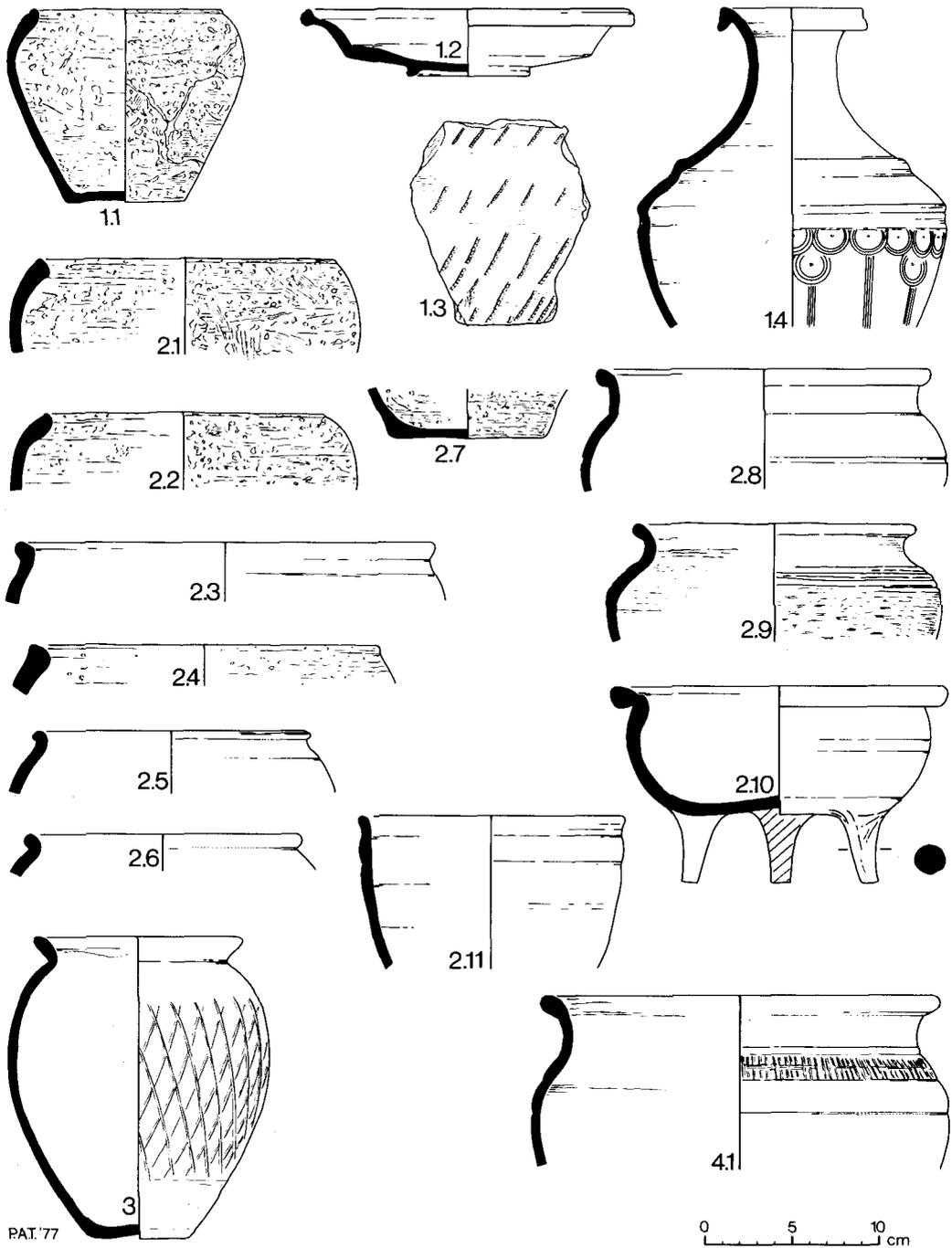


Fig. 19. Lincoln Road, Enfield. The coarse pottery. Area 1 (1.1-4.1). (1/4)

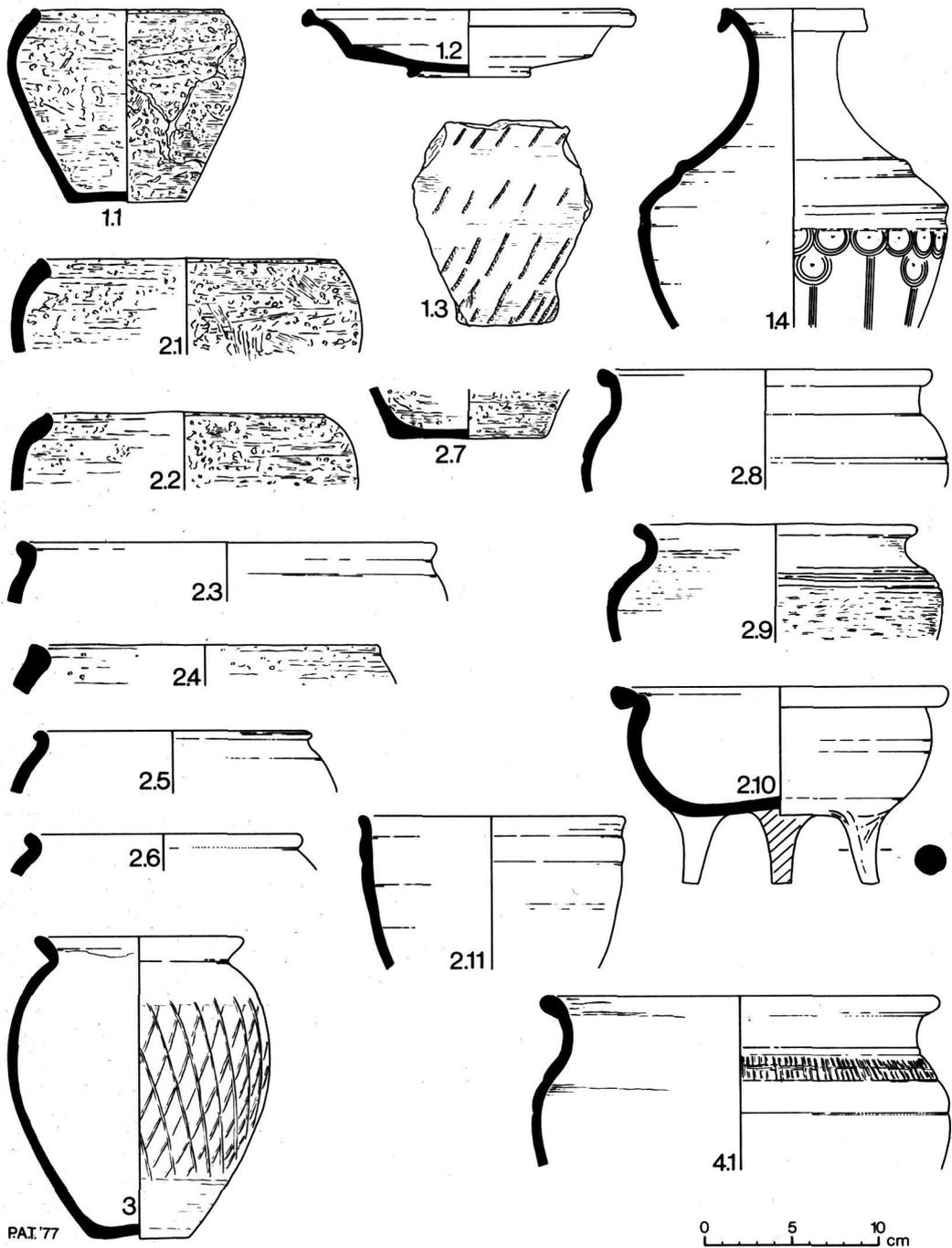


Fig. 19. Lincoln Road, Enfield. The coarse pottery. Area 1 (1.1-4.1). (1/4)

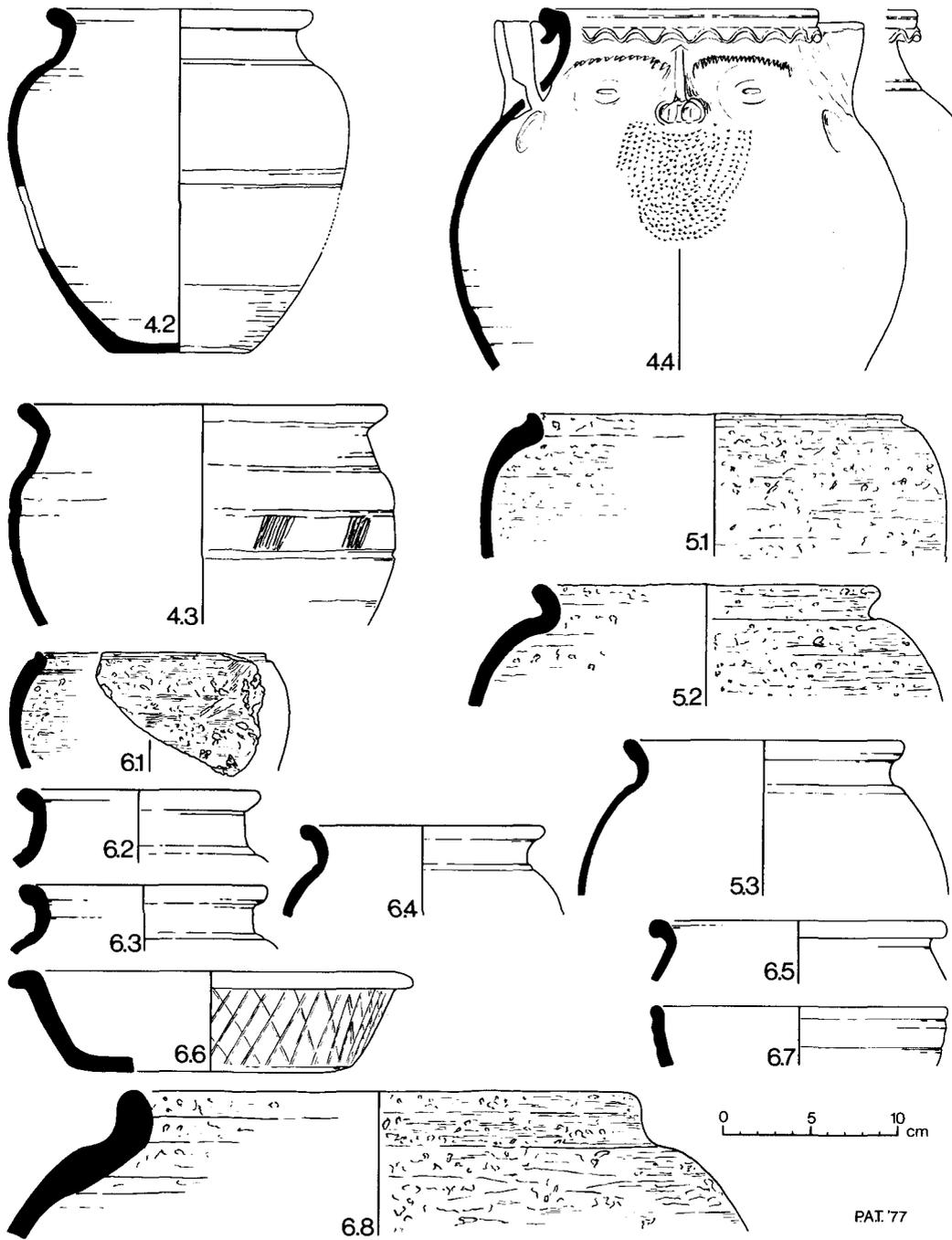


Fig. 20. Lincoln Road, Enfield. The coarse pottery. Area 1 (4.2-6.8). (1/4)

	<i>Feature</i>	<i>Description</i>	<i>Fabric group</i>	<i>Form or class</i>
(Fig. 20)				
4.2	F.48. L.3	Dark gr./bl. c. and s. Hard sand tempering, gritty texture (see Section 4.2.2).	A 4	II G
4.3	F.48. L.3	Grey c., fired orange-red; grey s. Unevenly burnished ext. s. Fine, slightly micaceous f. with some sand tempering. Sherds also in F.48. L.1.	A 3	—
4.4	F.48. L.3	Orange f. with grey c. Creamy yellow slip ext. Verulamium region product (see Section 4.2.4).	C 2	—
5.1	F.48. L.2	Grey c., red/br. s. Some shell tempering.	D	II A
5.2	F.48. L.2	Grey c., orange-br. s. Vesicular.	D	II L
5.3	F.48. L.2	Grey/red-br. c., grey s. Very gritty f., including angular quartz sand (see Section 4.2.2).	A 4	II G
6.1	F.48. L.1	Red/br./gr. c., dark gr.-br. ext. s., br. int. s. (see Section 4.2.1).	D	II A
6.2	F.48. L.1	Light gr. c. and s. Very hard coarse sandy texture (see Section 4.2.2).	A 4	II G
6.3	F.48. L.1	Black c. and s. Hard sandy texture (see Section 4.2.2).	A 4	II G
6.4	F.48. L.1	Grey c., dark gr. int. s., br.-gr. ext. s. Very hard coarse sandy texture (see Section 4.2.2).	A 4	II G
6.5	F.48. L.1	Red-br. c., black s. Smooth textured f. with coarse sand inclusions.	A 4	—
6.6	F.48. L.1	Grey c., fired red with black s. Burnished. Coarse white sand tempering.	BB 1	IV G 2
6.7	F.48. L.1	Orange micaceous f. with grey c. Dark red-br. burnished s.	—	—
6.8	F.48. L.1	Grey f., orange-br. ext. s., light br. int. s. Vesicular texture with some shell tempering. Also a large number of body sherds of this vessel and a base (radius 12.5cm).	D	—
(Fig. 21)				
7.1	F.54	Grey c., br. s., smoke blackened ext. Grog tempered f; burnished decoration. The fabric is related to the 'Patch-Grove' ware of Kent and Surrey.	B	—
7.2	F.54	Grey-buff f., gr./orange-br. s. Sandy texture; burnished decoration. There are a few rims from similar jars in Period II at Highgate Wood.	—	—
7.3	F.54	Grey c. and s. White slipped ext.	A2	—
8.1	F.19	Red-br. c. grey s.	A3	—
8.2	F.19	Grey c., dark gr./red-br. s. Micaceous sandy fabric. A single foot from a tripod bowl. Two holes have been pierced through the foot, presumably to facilitate drying.	—	—
9	A.2. L. 3	Fine white c. and s. Some coarse sand and red grog inclusions. This base is a member of a small group of vessels in fine white fabrics, including the 'eggshell' beakers (Southwark form VI C 1) found in the London area in the period AD 90-130. They may be products of kilns in the City of London itself.	—	—
10	F.84	Orange-br. c., dark red-br. s. Probably a Verulamium region product (see Section 4.2.4).	C 2	—
11	F.38	Grey/red-br. c., grey s. Very hard coarse sandy f (see Section 4.2.2).	A 4	II G
12.1	F.25	Grey c., dark gr.-br. s. Grog tempered f. burnished on rim and shoulder.	B	II A
12.2	F.25	Grey c., dark gr./br. ext. s., red-br. int. s. Vesicular f (see Section 4.2.1).	D	II A
12.3	F.25	Gr./br. f., dark br. int. s., dark gr.-br. ext. s. Vesicular f. Radius c. 10-12cm. (see Section 4.2.1).	D	II A
12.4	F.25	Buff-red c., orange-red s. Vesicular f; black slip on rim.	D	II A

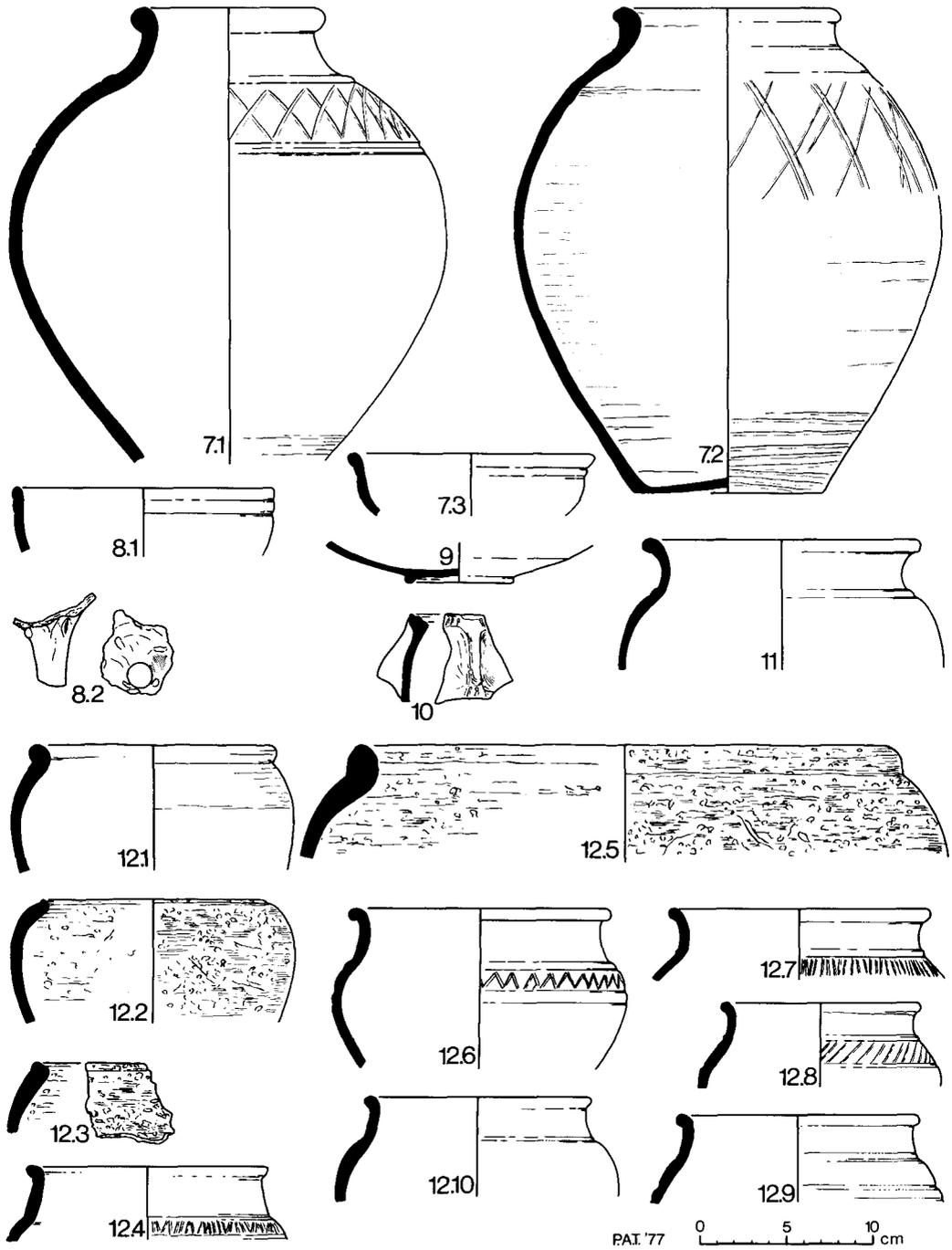


Fig. 21. Lincoln Road, Enfield. The coarse pottery. Area 2 (7.1-10) and Area 3 (11-12.10). (1/4)

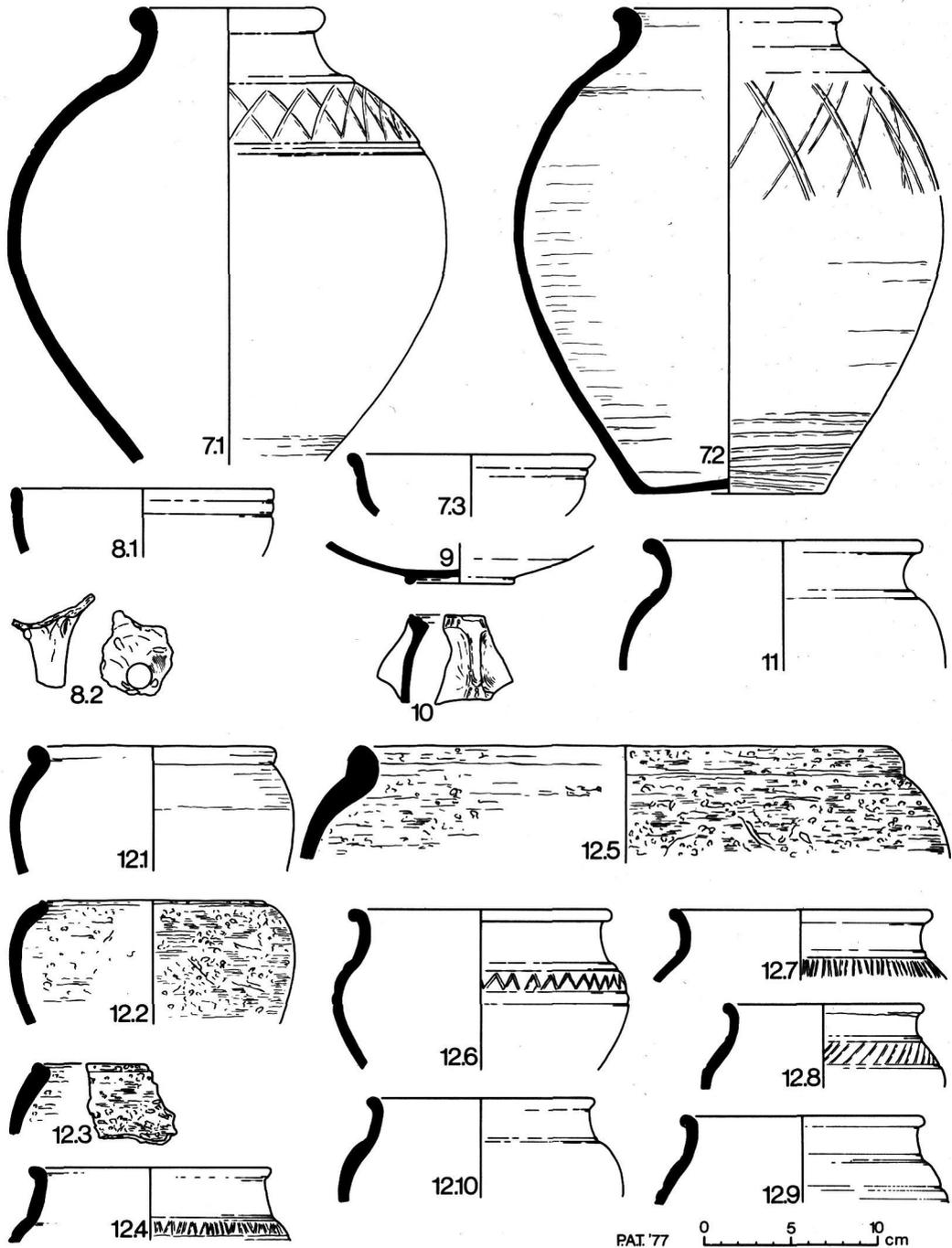


Fig. 21. Lincoln Road, Enfield. The coarse pottery. Area 2 (7.1-10) and Area 3 (11-12.10). (1/4)

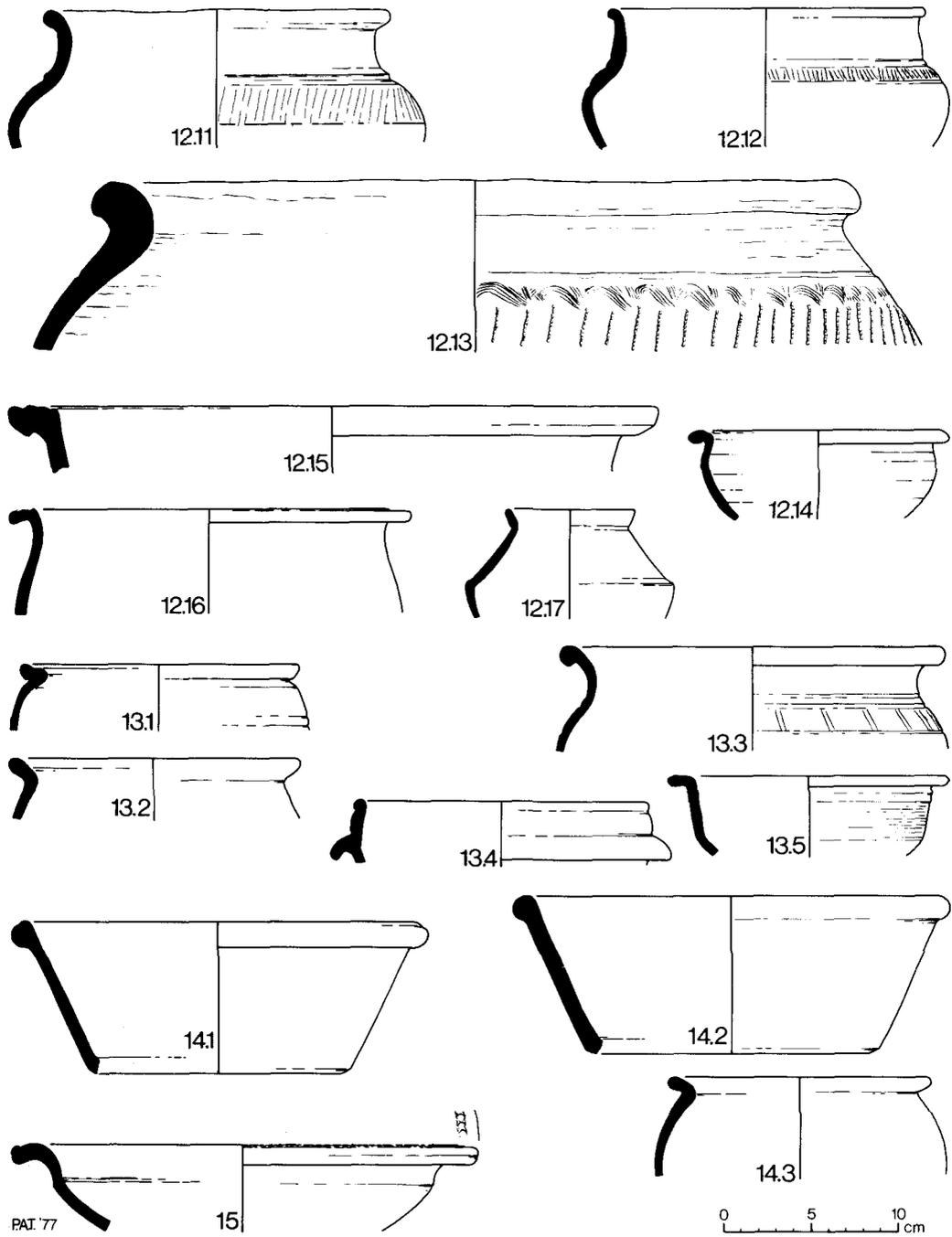


Fig. 22. Lincoln Road, Enfield. The coarse pottery. Area 3 (12.11-15). (1/4)

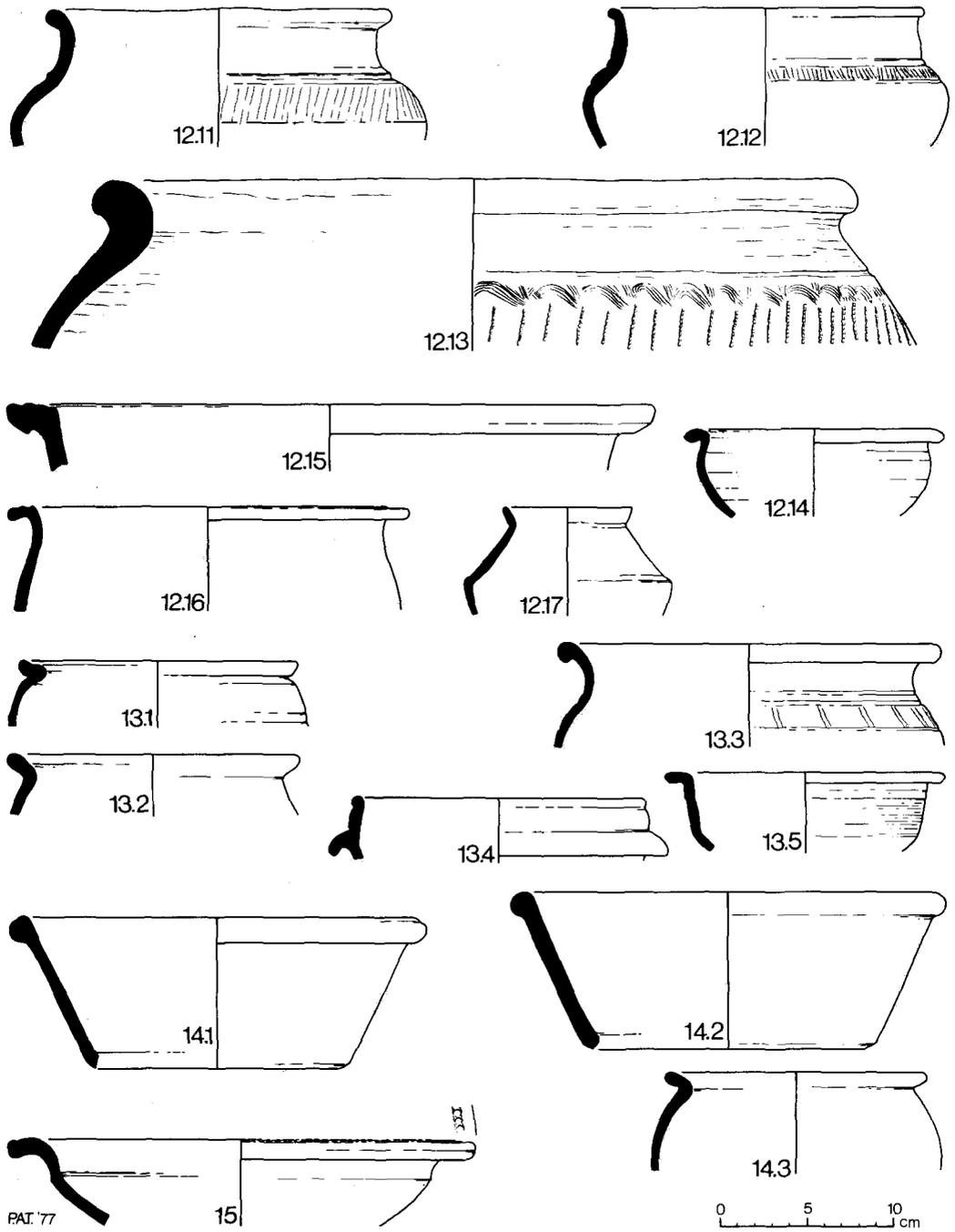


Fig. 22. Lincoln Road, Enfield. The coarse pottery. Area 3 (12.11-15). (1/4)

	Feature	Description	Fabric group	Form or class
	12.5	F.25 Grey c., dark gr./bl. ext. s. Coarsely burnished ext.	A 3	II E
	12.6	F.25 Grey c., red-br. int. s., br. ext. s. Burnished ext. Grog tempered fabric.	B	II E
	12.7	F.25 Grey sand tempered f. Burnished bl. slip ext. Burnished decoration.	A 1	II E
	12.8	F.25 Light gr. sandy f. Burnished ext.	A 3	II E
	12.9	F.25 Grey-br. c., gr. s. Grog tempered f.	B	II E
	12.10	F.25 Grey c., dark gr. s. Grog tempered f.	B	—
<i>(Fig. 22)</i>				
	12.11	F.25 Grey sandy f. Burnished decoration.	A 3	—
	12.12	F.25 Grey c., dark gr.-br. s. Grog tempered f., burnished decoration.	B	II E
	12.13	F.25 Orange-red/gr. c., orange-red int. s., gr./orange ext. s. Grog tempered f. Burnished b. slip on rim. Combed and impressed decoration.	B	—
	12.14	F.25 Grey sandy f.	A 3	IV F
	12.15	F.25 Granular yellow-buff c. and s. Verulamium region product.	C 1	IV A
	12.16	F.25 Grey c. and s. Grog tempered f.	B	—
	12.17	F.25 Hard grey sandy f., dark gr./bl. s. Burnished ext.	A 3	—
	13.1	F.43 Gr. c., red-br. s. Very hard granular f. with coarse sand tempering (see Section 4.2.2).	A 4	—
	13.2	F.43 Red-br. c., br. ext. s., gr. int. s. Compare Jones and Rodwell 1973, Fig. 5, 31, type G from the Mucking kilns; there dated from <i>c.</i> AD 200 ( <i>ibid.</i> , 24) on the evidence from Colchester.	A 3	—
	13.3	F.43 Grey c., dark gr. br. s. Very hard, coarse granular sandy textured f (see Section 4.2.2).	A 4	II E
	13.4	F.43 Fine textured gr. f. Finely burnished int. and ext. s.	A 3	—
	13.5	F.43 Granular yellow-buff f. Verulamium region product.	C 1	IV A?
	14.1	F.47c Hard gr. sandy f. Dark gr./bl. burnished.	BB 2	IV H7
	14.2	F.47c Hard gr. sandy f. Dark gr. burnished s. This bowl is representative of many in Phase 2.	BB 2	IV H 7
	14.3	F.47c Hard gr. sandy f. Silver grey burnished ext. s.	A 3	—
	15	F.47c Orange-red f. Burnished surfaces. A Much-Hadham product (see Section 4.2.3).	—	—
<i>(Fig. 23)</i>				
	16	F.42b Pink-orange f. with gr. c. Granular texture, Verulamium region product (see Section 4.2.4).	C 1	—
	17	F.46 Br./gr. c., gr. ext. s., br. int. s. Coarse sandy f. The form of this bowl represents a fusion between the IV A (carinated bowl) of the Verulamium region industry, and the IV F (hooked/rolled rim bowl) of the Highgate industry (see Section 4.2.2).	A 4	—
	18	F.41 Buff-yellow granular f. Verulamium region product.	C 1	—
	19	F.68 Gr.-buff f. with bl. c. Burnished gr. ext. s. Barbotine dots.	A 3	III F
	20.1	F.67 Gr./buff c., dark gr.-bl. s. Very coarse vesicular f. Hand made. Coarse burnished lattice decoration ext. Not BB 1.	—	II F
	20.2	F.67 Fine white fabric, blue-gr. colour-coat. Barbotine animal decoration. Nene Valley product.	—	—
	20.3	F.67 Gr. c., br. s., burnished ext.	A 3	III F?
	20.4	F.67 Gr. sandy f. with bl. slip. Burnished ext.	—	—
	20.5	F.67 Buff-gr. sandy f. No slip or colour-coat. Folded beaker.	—	—
	20.6	F.67 Br. c., gr.-br. s. Burnished ext.	A 3	—
	21.1	F.70 Red-br. granular f., orange-br. int. s., orange-br./buff/gr. ext. s. Horizontal grooves on ext. s.	—	II G
	21.2	F.70 Dark br./gr. vesicular f.	—	—
	21.3	F.70 Gr. f. with bl. surfaces. Vesicular.	—	—

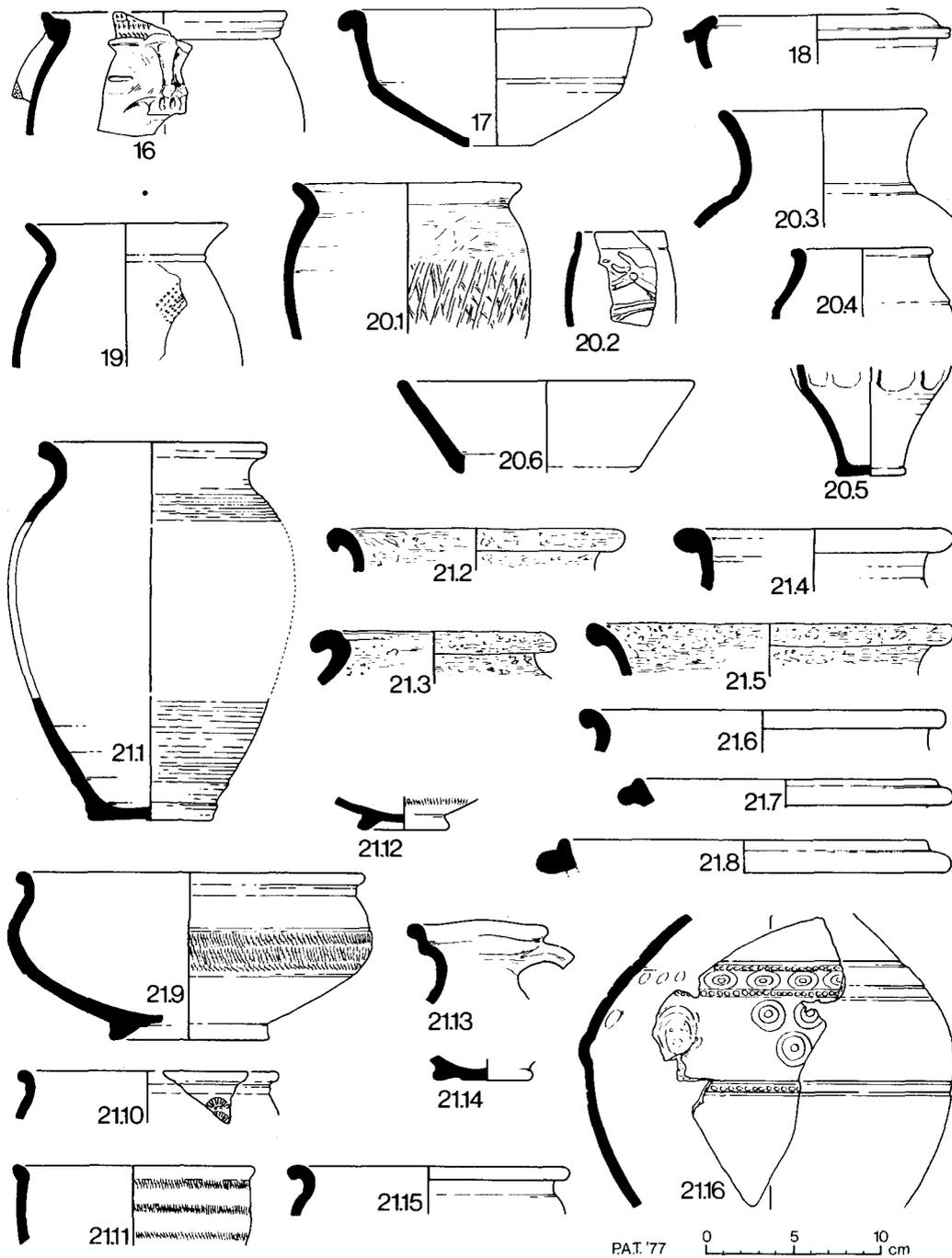


Fig. 23. Lincoln Road, Enfield. The coarse pottery. Area 3 (16-21.16). (1/4)

	<i>Feature</i>	<i>Description</i>	<i>Fabric group</i>	<i>Form or class</i>
21.4	F.70	Gr. sandy f.	—	—
21.5	F.70	Gr.-br. vesicular f.	—	—
21.6	F.70	Hard gr. sandy f. with dark gr. burnished ext. s.	—	—
21.7	F.70	Gr. sandy f., dark gr. burnished ext. s.	—	—
21.8	F.70	Light gr. sandy f., burnished gr. ext. s.	—	—
21.9	F.70	Orange-red micaceous f. Traces of dark red colour-coat on ext. s. — very badly worn. Oxfordshire ware.	—	—
21.10	F.70	Orange-red micaceous f. Traces of worn red colour-coat externally. Rosette stamped decoration. Oxfordshire ware.	—	—
21.11	F.70	Orange-br. f. Red colour-coated ext. s. Rouletted decoration. Oxfordshire ware.	—	—
21.12	F.70	Orange f. Red colour-coated ext. s. Rouletted decoration. Oxfordshire ware.	—	—
21.13	F.70	Orange f. with burnished ext. s.	—	—
21.14	F.70	Orange f. with burnished surfaces. A Much-Hadham product (see Section 4.2.3).	—	—
21.15	F.70	Fine white f. with orange-br. colour-coated surfaces. Nene Valley.	—	—
21.16	F.70	Orange f. with burnished orange s. Rouletted, stamped, embossed and moulded decoration. A Much-Hadham product (see Section 4.2.3).	—	—
<i>(Fig. 24)</i>				
22.1	F.4	Hard gr. sandy f. with burnished surface, Burnished decoration.	A 3	—
22.2	F.4	Gr. f. White slipped externally.	A 2	—
22.3	F.4	Buff-white granular f.	C 1	—
22.4	F.4	Gr.-br. grog tempered f. with burnished br. surface externally.	B	—
22.5	F.4	Gr. sandy f., burnished surface.	A 3	—
23	F.9	Gr. c., burnished orange surface. A Much-Hadham product (see Section 4.2.3).	—	—
24.1	F.7	Gr./br. vesicular f.	—	—
24.2	F.7	Gr. sandy f. with burnished bl.-slipped surface. Burnished decoration.	A 1	—
24.3	F.7	Dark gr./br. f; pink-red surface. Not a Verulamium region product (see Section 4.2.4).	—	—
25	A.5. F.9	Hard gr. f. with burnished gr. surface. Rouletted decoration. This bowl is comparable with two vessels from the Bank of England (Marsh and Tyers 1976, Fig. 8, 128-8).	A 3	—
26	F.56	Coarse gr. f. Burnished on rim externally. Radius <i>c.</i> 24cm. Compare Hull 1958, form 273, which seems to be undatable on the Colchester evidence. Examples were made in the Mucking kilns throughout the 3rd and 4th centuries (Jones and Rodwell 1973, 33 and Fig. 10, 108-112).	—	—
27.1	F.2	Hard light gr. f. with darker surfaces. Burnished externally. A 'waster' or 'second'.	A 3	—
27.2	F.2	Dark gr. sandy f., burnished on rim and neck. Horizontal rilling on shoulder. This vessel, and the preceding, are clearly 'wasters' or 'seconds', and they can be dated to the early-mid 4th century. Similar jars were made at the Mucking kilns (Jones and Rodwell 1973, Fig. 6). Their presence indicates kilns somewhere in the vicinity, but there is insufficient kiln waste to suggest that they were very close.	A 3	—
27.3	F.6	Buff-yellow granular f (see Section 4.2.4).	C 1	—
27.4	F.6	Orange-pink f. with burnished bl. metallic slip. A Lezoux product.	—	—

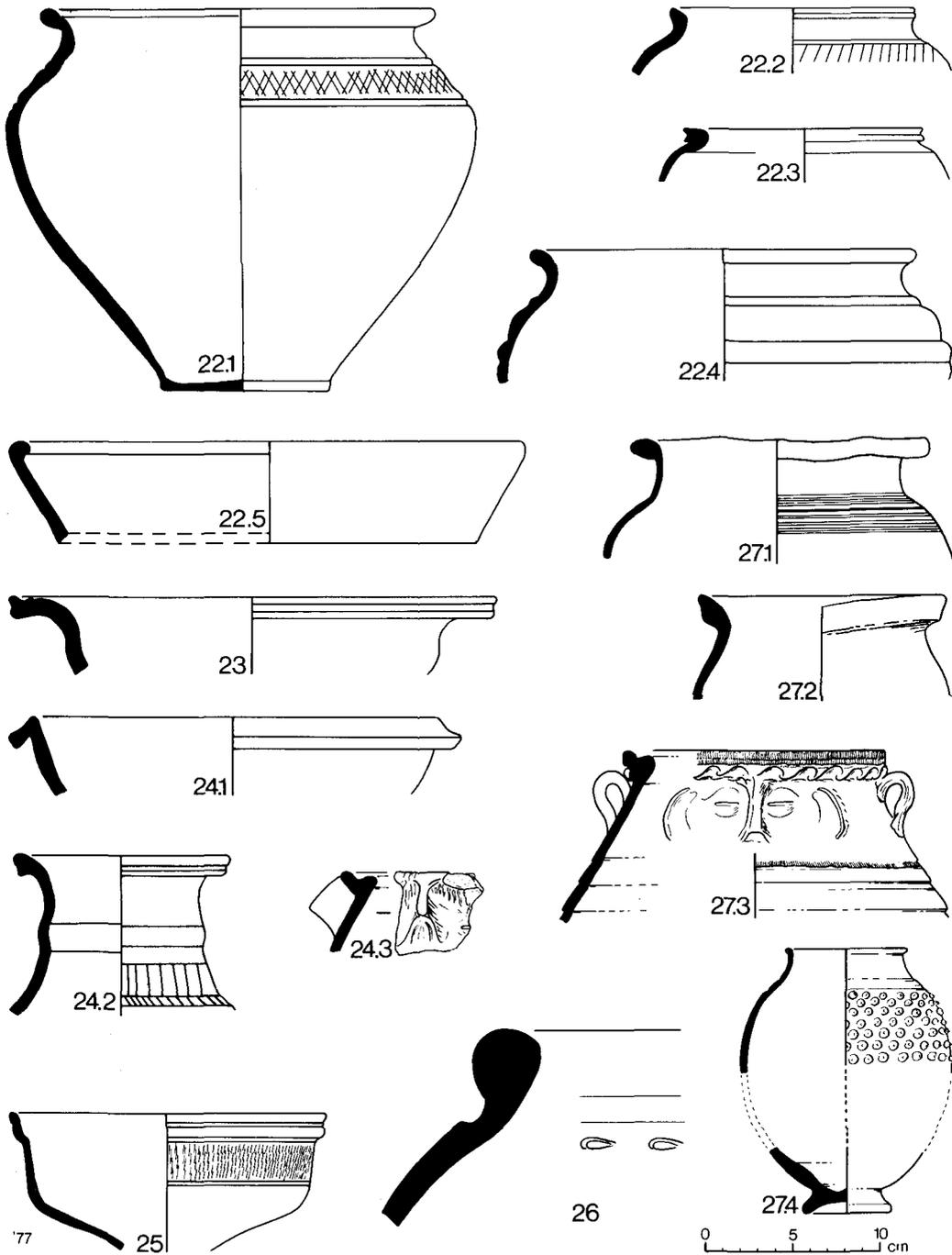


Fig. 24. Lincoln Road, Enfield. The coarse pottery. Area 5 and 149 (22.1-27.4). (1/4)

## 4.2 Discussion of Illustrated Pottery

### 4.2.1 Bead-rim jars in Fabric D

A number of bead-rim jars in a slightly gritty brown/grey vesicular fabric occur in Phases 1 and 2. Six are illustrated (Fig 19, 1.1, 2.1, 2.7; Fig. 20, 6.1; Fig. 21, 12.2, 12.3); there is one base (Fig. 19, 2.7). The typical form is a low shouldered jar with a small upturned bead, generally thickened internally. Two examples have an internal ledge-rim (Fig. 20, 6.1; Fig. 21, 12.3). These vessels are not paralleled in Southwark, but there are a few examples at the Highgate kiln site (Tyers, 1977, type 1.6), one of which is stratified in an Antonine, Period IV, deposit. The Enfield evidence indicates that such vessels are current from AD 85 until some time in the late 2nd century.

### 4.2.2 Fabric group A 4

The largest number of vessels in fabric group A 4 are simple necked jars (II G), of which a number are illustrated (Fig. 20, 4.2, 5.3, 6.2, 6.3, 6.4; Fig. 21, 11). The rim is consistently prominent and rounded, and a single cordon defines the neck. Ledge-rim jars (Fig. 22, 13.1), bowls (Fig. 23, 17) and jars of form II E (Fig. 22, 13.3) complete the assemblage.

There are a number of vessels in fabric A 4 from Phase 1, but the majority are Phase 2. The fabric is not common in Southwark. There are a few sherds in similar coarse sand tempered fabrics from the later groups at Highgate Wood. The Enfield vessels may be the products of local industries.

### 4.2.3 Much-Hadham products

I am grateful to Mr. Christopher Young for his identification of the Much-Hadham kiln products. Three examples are illustrated, in addition there are a number of sherds which may be of Much-Hadham origin. Those illustrated consist of flanged dishes (Fig. 22, 15; Fig. 24, 23), a small base, probably from a beaker (Fig. 23, 21.14), and a number of sherds from a flask or narrow-necked jar (Fig. 23, 21.16). The distribution of Much-Hadham products has been illustrated by Fulford (1975, Fig. 61) — broadly East Hertfordshire, Essex and Suffolk.

The flanged dishes can be paralleled at Verulamium (Frere 1972, Fig. 136, 1204) in a group dated AD 360-370. The decoration on the sherds (Fig. 23, 21.16) includes hollow raised bosses, stamped circles and a moulded face, which is very heavily worn. Bosses are present on some Antonine vessels from Verulamium (Frere *op. cit.* Fig. 125, 906; Fig. 127, 947) and they do not necessarily represent Romano-Saxon cultural fusion (*ibid.* 264).

### 4.2.4 Face Urns

A fine collection of face urns is illustrated (Fig. 20, 4.4; Fig. 21, 10; Fig. 23, 16; Fig. 24, 24.3, 27.3). The number is unusually large for a site of this size. The most complete example (Fig. 20, 4.4 — Phase 2) has small cups on either side of the face, and this feature can be paralleled with an example from Insula XIV at Verulamium, (Frere, 1972, Fig. 125, 910) dated AD 150-155/160. In finer details all examples seem to differ.

### 4.2.5 The Romano-British Lead Glazed Bowl

by Paul Arthur, London Institute of Archaeology.

(Fig 25, 1) Five sherds of a Romano-British lead glazed bowl were recovered from F.48. The bowl was made in imitation of the Samian Dr.37 and has a simple bead rim, and a cordon further down, below which, is a panel of decoration. The fabric is fairly soft, varies from grey, through purple, to orange and has sporadic inclusions of angular quartz grains, about 0.5mm average diameter. The surface of the vessel is slightly pitted by the green glaze (between brown/green A5 and brown/yellow A4 in colour — R.B. Pottery Colour Chart) which covers both the interior and exterior surfaces. The underglaze decoration consists of a continuous band of overlapping circles in white slip.

This vessel is another addition to the rapidly growing regional group of S.E. English glazed wares, although as yet it cannot be exactly paralleled. I have included a list of similar bowls, decorated with 'hairpin' motifs, in the discussion of an example found at 93/95 Borough High Street, Southwark, Sheldon (ed. 1977, forthcoming). In date, they would seem to be Flavian or slightly later and therefore it is possible that our piece derived from the disturbed cremation burial (F. 15).

## 4.2.6 Stamped London Ware

The information contained in this section is taken from a report supplied by Mr. Warwick Rodwell. (Fig. 25, 2) (Rodwell corpus No. 47).

Six sherds from a roughly cylindrical bowl approximately 19 cm. in diameter, probably related to Dr. 30 in form. A soft, fine, micaceous, reddish-brown fabric with a grey brown core. The original surface has decayed, but was originally lightly burnished on the decorated portions. The decoration is in two horizontal bands separated by three grooves and comprises adjacent groups of circles and block patterns, which frequently overlap.

*Triple ring stamp* (Rodwell die No. R 3.2) This die is recorded on sherds from London, (Lombard Street), Chelmsford, Canvey Island and, possibly, Wickford.

*Block stamp* (Rodwell die No. B 2) This die depicts three dots amongst a group of lines and strokes. The only other record of this die is on a vessel from Lombard Street, London (the sherd noted above), which is certainly the work of the same potter (F.25). (Not illustrated. Rodwell corpus No. 46).

A single sherd, showing a curving groove and parts of two rows of circle stamps, probably the shoulder of a jar. A micaceous grey fabric with a dark brown core, probably due to secondary burning of the sherd in a reducing atmosphere.

*Triple ring stamp* (Rodwell die R 3.2) — as above. (Area 1, Layer 2).

The distribution suggests that a centre of manufacture for stamped London Ware may be found in Essex, and it can be, provisionally ascribed to the first quarter of the 2nd century. The example in F.25 is in a context dated *c.* AD 90-130.

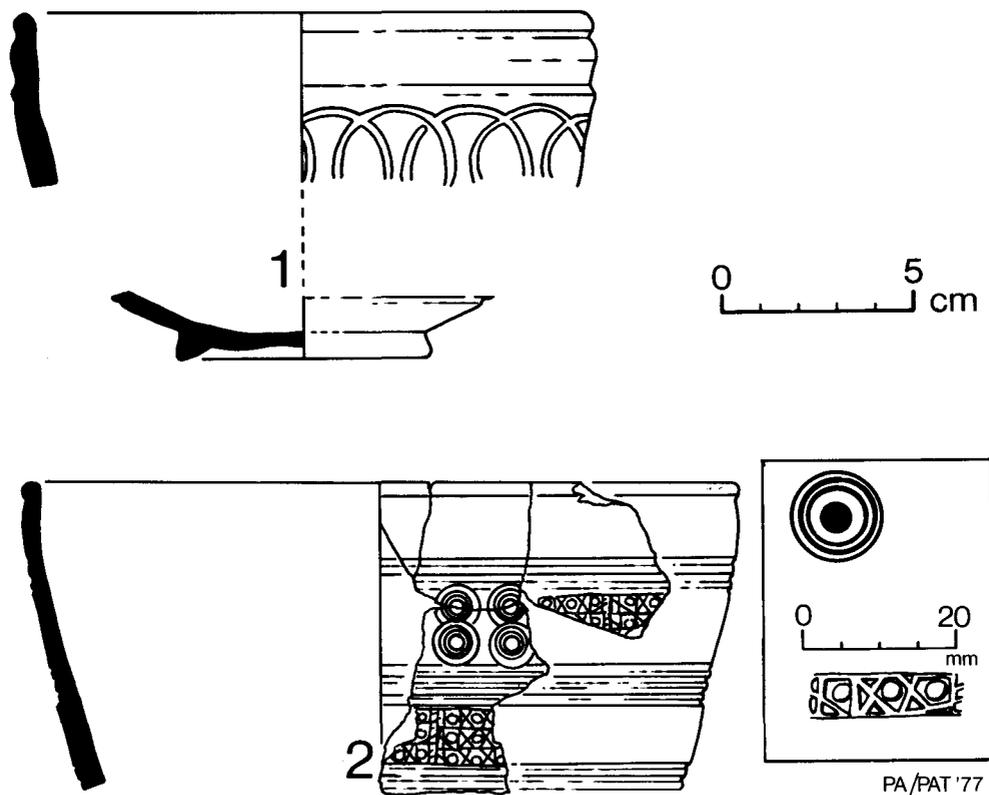


Fig. 25. Lincoln Road, Enfield. The coarse pottery. Lead glazed bowl (1) and stamped London ware (2) (1/2, except detail — 1/1)

## 4.2.7 The Amphora Stamps

(Fig. 26)

1. AGRICOLAE, on the handle from a South Spanish amphora, form Dressel 20. The stamp is Callender, (1965), No. 51. Callender's illustrations (Fig. 3, 23, 24) are not of this die. An example of Agricola's work from the Vindonissa Schutthügel (dated *c.* AD 30-101), suggests the second half of the 1st century for his production. Coarse buff fabric with quartz and ironstone inclusions (Area 2, Layer 4).

2. Mrs. Joanna Bird has supplied the following note:

L.S.LVPI, on the base of the handle from a South Spanish amphora, form Dressel 20. The stamp is Callender (1965) No. 932, L. Sernili or Sternili Lupi: Fig. 9, 44, suggests that Sernili is the correct reading. Fig. 9, 42, from Geneva, is probably from the same die. No date is suggested in Callender, but it is presumably of 1st or 2nd century date. Coarse buff fabric with grey core and inclusions of lime and quartz; the surfaces have a buff slurry (Area 5, F.7).

## 4.2.8 The Mortarium Stamps by Mrs. K. F. Hartley

(Fig. 26)

3. A flange-fragment in granular, cream fabric. The stamp cannot be identified with certainty but it could well be from a counterstamp used by the potter Doinus. Castle (1972, 77, Fig. 5, Die C; the counterstamp is probably intended to represent 'Fecit' although it certainly does not read that). Doinus worked at Brockley Hill *c.* AD 70-110 (*ibid.* 69-88). (F.84).

4. A mortarium in granular, cream fabric with pale grey core and flint trituration grit. The fragmentary stamp cannot be identified with certainty but it is most likely to be from another die of Doinus. Castle (1972, 77, Die D). (F.67).

5. A burnt mortarium in granular, greyish cream fabric with grey and white flint trituration grit. The fragmentary stamp is from the same die as eight stamps from Brockley Hill, where he undoubtedly worked. See Castle (1973, 82, Fig. 6, MS1-4 for an illustration of the complete stamp). His stamps, when complete, probably read ARIINT .X retrograde for Arentus or Arentius. His work is consistent with activity *c.* AD 110-145. (F.26).

6. A heavily burnt fragment from a mortarium in granular buff-pink fabric. The broken stamp is from one of the two dies of Bruccius who worked at Brockley Hill, Middlesex, where ten of his mortaria have been found. There is no site evidence to date his work, but his rim-profiles suggest that the period AD 85-120 would cover his activity. Castle and Warbis (1973, 102, M1 for further details). (F.25).

7. A burnt mortarium in granular cream fabric with sparse flint trituration grits. The fragmentary stamp has not yet been identified but the fabric and rim-form indicate manufacture in the potteries south of Verulamium in the period AD 110-150. (F.43a).

8. A burnt mortarium in granular, greyish cream fabric. This is a stamp of an illiterate or semi-literate potter and other stamps from the same die have been noted from Corbridge, London and Verulamium. The fabric and forms used point to production in the potteries south of Verulamium (including the extensive workshops at Brockley Hill and Radlett), in the period AD 110-155. There were a large number of illiterate or semi-literate potters working in this area in the first half of the 2nd century. (Area 3, Layer 3).

9. A flange-fragment from a mortarium in granular, drab cream fabric with brownish slip partly discoloured to grey. The incomplete stamp is from a die of Matugenus of Brockley Hill, who was active in the period AD 90-125. See Suggett (1954), and Castle and Warbis (1973, 104, M16-17) for further details of Matugenus' work (SW 64).

10. As 9 above. (SW 61).

11. A mortarium in hard, fine-textured cream fabric, pale grey in parts, with dark greyish brown trituration grits. The fragmentary stamp cannot be identified with absolute certainty but it is probably from a die of Iunius, who worked in the Mancetter-Hartshill potteries. Warks, *c.* AD 155/160-185. (F.1).

12. A rim-fragment from a mortarium in granular brownish cream fabric, fired to a reddish shade at the upper surface. The incomplete, retrograde stamp is from a die which gives MIILUS/IIICI when completely impressed. Melusi worked at Brockley Hill, where twenty-nine of his mortaria have been found. Suggett (1954, 259-76). The range of his forms is closely similar to that of Castus and a similar date *c.* AD 95-135 is likely. Frere (1972, 374, No. 15). This example is probably later than AD 100. (SW 60).

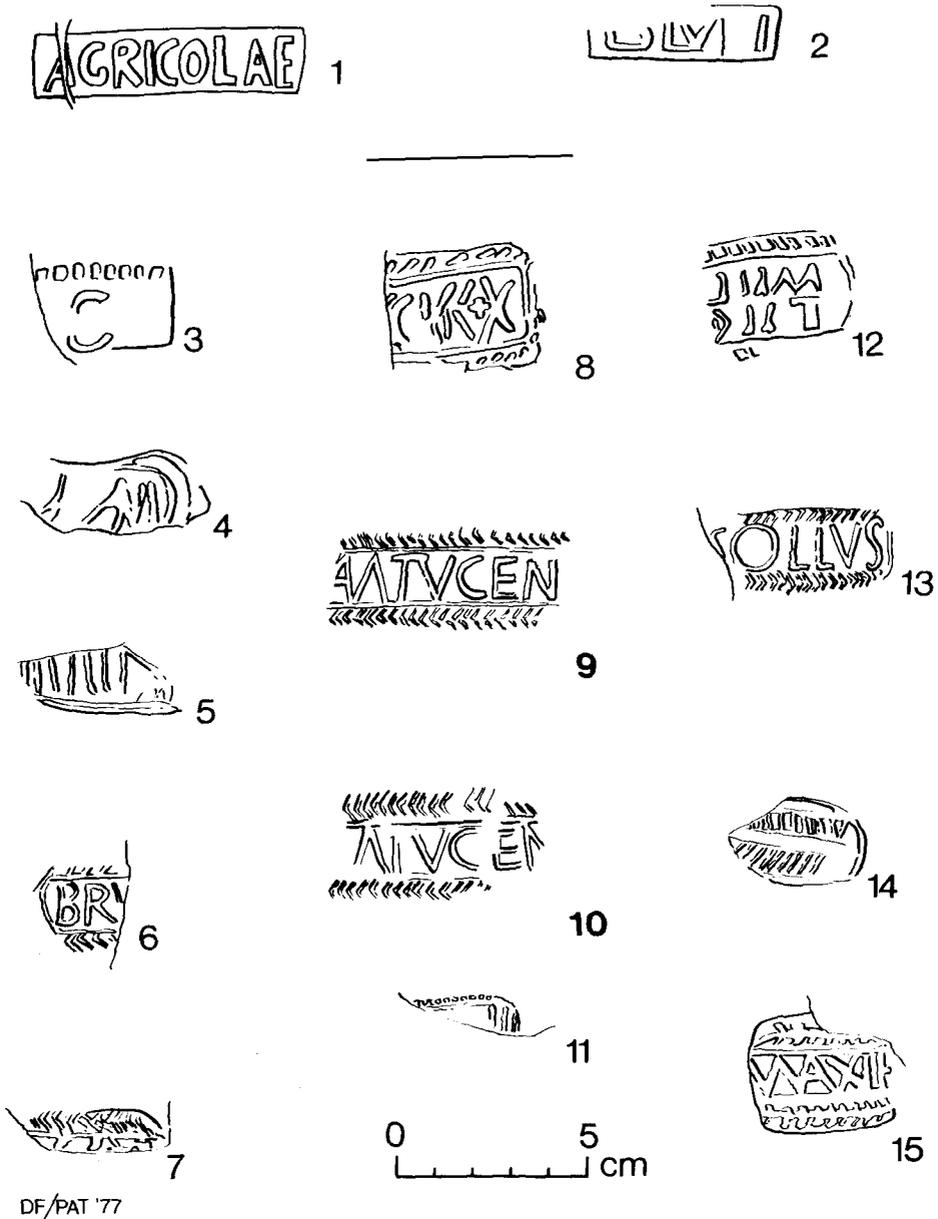


Fig. 26. Lincoln Road, Enfield. The coarse pottery. Amphora stamps (1-2) and mortaria stamps (3-15). (1/2)

13. A mortarium in granular, cream fabric with a darker slip. This is a stamp from the most commonly used die of Sollus. Over seventy stamps of his are known from sites throughout England, including thirty-two from London and three from Flavian forts in Scotland. The fabric and forms of his mortaria and their distribution are typical of the potters working in the Brockley Hill region *c.* AD 70-100. (F.4).

14. A mortarium in fine-textured, yellowish cream fabric, with flint and quartz trituration grit. This stamp is from a herringbone type die used in the 2nd century potteries at Colchester. Hull (1963, Fig. 60, No. 30). This is from one of the most commonly used dies, and thirty-one stamps from it are known at sites in England, excluding Colchester, and nineteen from sites in Scotland.

The date of this potter and others producing herringbone stamps at Colchester is attested by the large number of stamps from forts on the Antonine Wall in Scotland (*ibid.*, 114, Fig. 62). A recent assessment by B.R. Hartley of the samian ware from these sites indicates that the Wall was evacuated *c.* AD 163, Hartley (1972, 1-55). A date of *c.* AD 140-165 is, therefore, probable for these potters. (F.64).

15. A burnt mortarium in granular, greyish cream fabric with cream slip and flint trituration grit. The stamp reads MAXIF, presumably for Maximus, and twelve other stamps of his have been found in the south-east of England; six of them from London. The fabric suggests manufacture in the complex of potteries centering around Brockley Hill, but also including workshops at Radlett and Verulamium. There is no site evidence for this date but his rim-forms indicate activity within the period AD 110/5-155. (F.43c).

## 5. Conclusions

The Enfield pottery is distinguished from contemporary Southwark groups in several respects. Of the fabrics, fabric D is not known from Southwark, and fabric A 4 is rarely found there. In addition there is an unusually large number of tripod bowls and face urns.

The report has shown that the Southwark typology is applicable to the material and illustrates a possible method of approach in its use. It has been possible to define one new type, a London Ware flask of form II R 3.

## 5. THE ROMAN GLASS

BY JENNIFER PRICE

(Fig. 27)

One hundred and fifty-two fragments of vessel glass were found, of which thirty prismatic and cylindrical containers dating from the 1st and 2nd centuries. All the bottle glass was bluish green, and this was the commonest colour for the tableware; there were also a few pieces of yellow, yellowish green, amber and dark brown glass, and some pale greenish pieces. Strongly coloured glass was quite often used in the 1st century AD, but became comparatively rare in the 2nd and later centuries. Only two small pieces of colourless glass were recorded; it is interesting to note the virtual absence of this from the assemblage, since colourless tableware was already being produced early in the Flavian period, but became dominant only in the 2nd century. Most of the glass forms seem to belong to the later 1st and early 2nd centuries AD, though there are two fragments of 4th century vessels.

The presence of the nearly complete discoid jug is surprising, as it is rather unusual to find complete or nearly complete glass vessels in other than funerary contexts, especially in civilian settlements. One of the reasons for this seems to be that the fragments from broken glass vessels were normally collected together and re-used in glassmaking, so it is normal for only small scraps of a vessel to survive, even in rubbish pits.

None of the vessels was of great luxury or rarity, though one of the fragments of prismatic container may have come from a rather unusual octagonal bottle with two long and six short sides in the body, like the one found recently at Braughing.<sup>1</sup> There is very little window glass from the site, only one possible fragment being recognised.

Four glass beads were also found, one of which is probably a late Roman type, belonging to the 4th century. The following pieces have been selected for more detailed consideration.

### Cast glass

1. Two small fragments of lower body and base, Pillar Moulded bowl; pale bluish green. Very dull. Parts of three ribs on side, fading out on base. Cast, ground and fire-polished; wheel-polishing marks visible inside (Area 5, F.3/2). (Not datable, not illustrated).

Bluish green Pillar-moulded bowls are very common on most 1st century AD sites in Roman Britain, especially in Claudian, Neronian and early Flavian contexts; it seems very likely that they went out of production soon after *c.* AD 75. A large number of fragments have been found at sites such as Colchester,<sup>2</sup> Verulamium,<sup>3</sup> Richborough,<sup>4</sup> Fishbourne,<sup>5</sup> and Usk.<sup>6</sup> By contrast, sites occupied later in

the 1st century AD, such as Caerleon, have produced comparatively little evidence for the use of these bowls, though occasional fragments do occur in late 1st and early 2nd century contexts.

#### *Blown glass*

2. (Pl. 8) Fragmentary jug with discoid body. Yellow-brown, colour rather streaky in places. Some pieces of body and base missing. Small air bubbles in body, neck and handle. Usage scratches in ring on base edge, round top of rim and top of handle, and at widest part of body.

Folded rim, edge bent out, up and flattened; narrow neck tapering out with constriction at bottom; discoid body with constriction above open pushed-in base-ring and slightly domed base. Angular ribbon handle with prominent central rib, applied to upper body and to neck below rim. Vertical ribs on lower part of neck, spirally wound on upper body, changing to vertical S-shaped ribs at widest part, and disappearing on lower body. (F.49).

Ht. 198 mm; length of neck 113 mm: Diameter (rim) 30 mm.

Diameter (max) 152 mm.

Diameter (base) 66 mm.

The ribbed decoration was pre-formed by partial inflation into a dipper mould with vertical ribs, and then manipulated during free inflation, probably by holding the bottom of the neck and spinning the body, at the same time applying restraint to the upper body in order to produce the change of direction in the trails over the central part of the body. In some places the vertical ribs on the lower neck have been smoothed away, but they are quite distinct behind the handle.

The amount of usage scratching on the glass strongly suggests that this vessel had been in use for a considerable time before being broken and deposited in the pit.

The jug is rather unusual in shape, though it can be related to the well-known group of long necked jugs which occurs widely at sites in the north-west provinces of the Roman empire, especially in Neronian to early second century contexts and is not found outside this area.<sup>7</sup> Most of these jugs have either conical or globular bodies, and it seems likely that the discoid jugs developed as a variant of the globular examples.

The conical jugs may have either a simple concave base or a carinated lower body with open-pushed-in base ring and domed base. The former type is probably the most common, and has been discussed many times, most recently and in great detail, by Harden in connexion with a Flavian burial at Winchester.<sup>8</sup> However, the group with carinated body and open base ring has not been so closely studied in Britain, perhaps because fewer examples have been found on Romano-British sites. Most of these have been found in burials in the eastern counties of southern England. Specimens with ribbed conical bodies include a bluish green jug from East Hall, Murston, in Kent,<sup>9</sup> and a similar, rather globular one from a Flavian burial at Colchester.<sup>10</sup> There is also a fragmentary amber jug with spiral ribs from Litlington, near Royston, Cambs.,<sup>11</sup> as well as the light yellowish green piece with two handles, now in the British Museum, which was found in a late 1st or early 2nd century burial at Bayford-next-Sittingbourne in Kent.<sup>12</sup>

Several jugs of this form have undecorated bodies; these include a wine coloured example from Northill, near Shefford, Bedfordshire,<sup>13</sup> and bluish green ones from Chesterford, Essex,<sup>14</sup> and from the Flavian burial in the Bartlow Hills, barrow 1, at Ashden, Essex.<sup>15</sup> There is rather a strange bluish green example from an early 2nd century burial at Huntingdon, which has a hollow up-turned flange above the base-ring;<sup>16</sup> this is a very unusual feature, which may also have occurred on a jug found at Canterbury in 1873; however, this cannot now be verified, as the latter jug has not survived.<sup>17</sup>

The vessels from burials are usually easily recognisable, but fragmentary conical jugs with pushed-in base-rings have also been identified on other 1st and 2nd century sites in Roman Britain; these include Fishbourne,<sup>18</sup> Camulodunum,<sup>19</sup> Piercebridge,<sup>20</sup> and Caerleon.<sup>21</sup>

These jugs also occur in similarly dated burials in the Rhineland, Northern France, Belgium and Holland,<sup>22</sup> and many have been studied by Faider-Feytmans in connection with the example from Frizet.<sup>23</sup> Among the jugs of this type discovered recently is a bluish green one with a plain body from Grave 4 at Esch, North Brabant, which was found in 1959. The glass in the burial included a bluish green Pillar moulded bowl, and other 1st, 2nd and 3rd century vessels.<sup>24</sup> There is also a small, very pale greenish jug from Grave 318 at Wederath-Belginum, which does not have a central rib on the handle,<sup>25</sup> and a rather strange, almost colourless jug from Burial 2 at Maastricht-Belfort, which has a square-sectioned handle and a simple everted rim.<sup>26</sup>

Jugs with globular bodies (Isings Form 52.b) always have an open pushed-in base-ring and concave base; the body may be plain or decorated with trails, and in many examples the angular handle does not have a single prominent central rib, but instead has several fine vertical ribs which do not continue

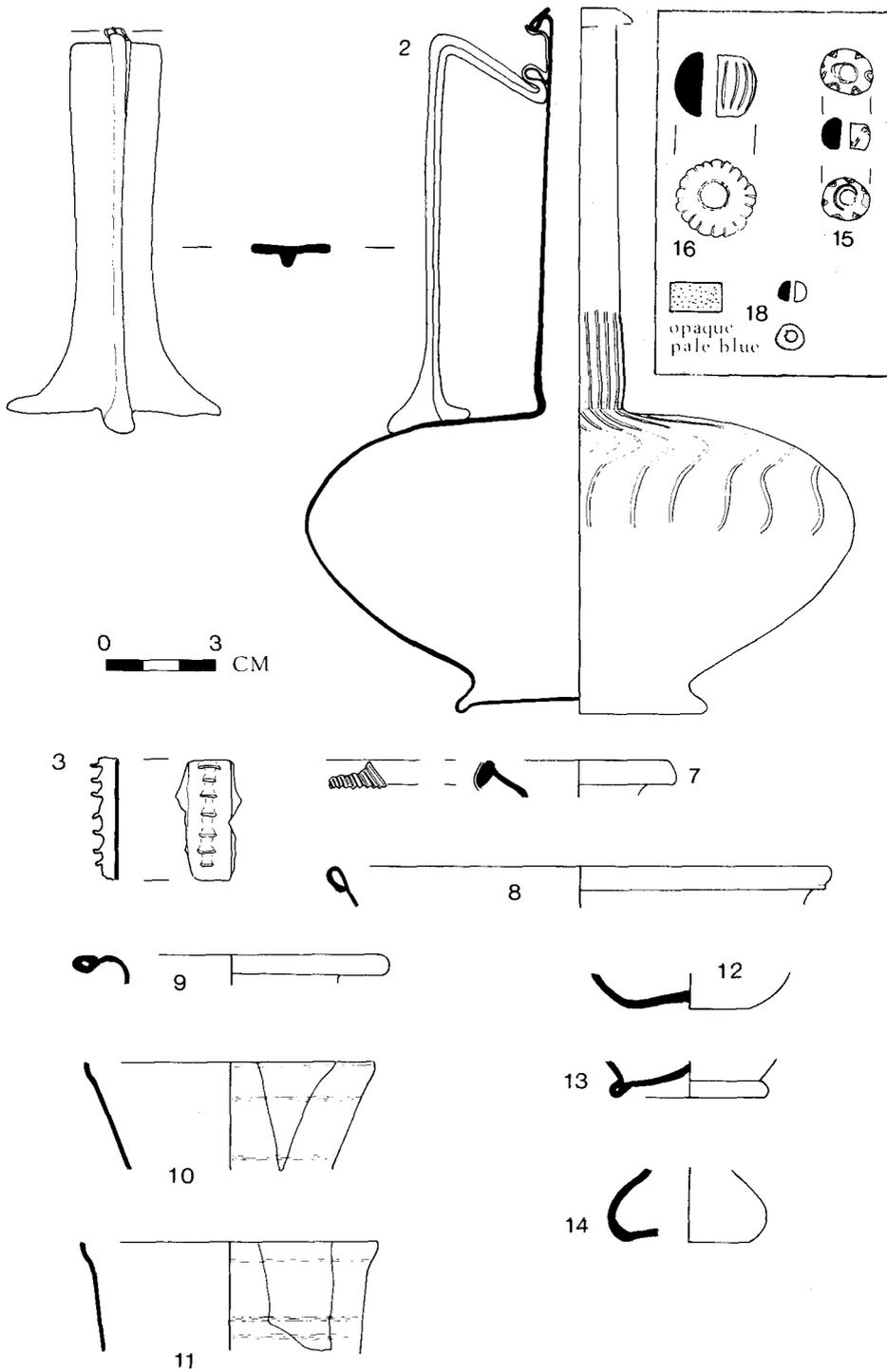


Fig. 27. Lincoln Road, Enfield. The glass (2-14) and glass beads (15-18). (1/2)

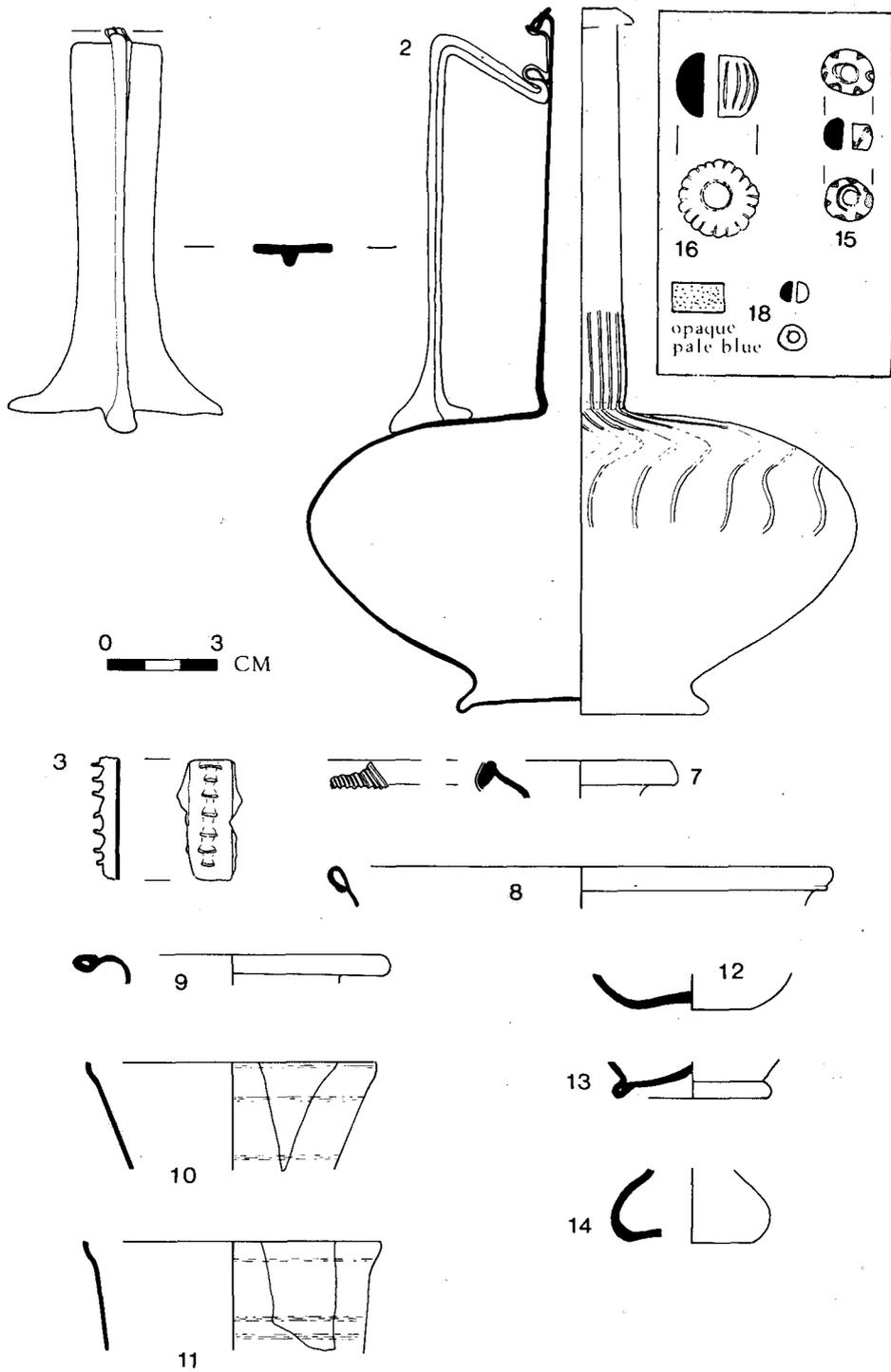


Fig. 27. Lincoln Road, Enfield. The glass (2-14) and glass beads (15-18). (1/2)

down the body as an extended trail. They are undoubtedly contemporary with the conical jugs, as they sometimes occur in same burials, as at Planig, Rheinhessen, where two ribbed globular jugs were associated with an undecorated conical jug with a simple concave base and other glass vessels in a stone cist containing a Flavian<sup>27</sup> burial; and at Bléhen, Liege, Belgium where a ribbed globular jug was associated with a ribbed conical jug with carinated lower body and open pushed-in base-ring.<sup>28</sup> However, apart from the study of the Frizet burial by Faider-Feytmans,<sup>29</sup> these jugs do not seem to have attracted a great deal of attention.

Jugs with globular bodies do not appear to have been used in funerary contexts in Roman Britain, so it is rather difficult to identify these vessels. There are a number of fragments, characteristically from the reeded handle and ribbed upper body, which suggest that the type was in use during the Flavian period at some military sites, such as Caerleon,<sup>30</sup> and Caer Gai;<sup>31</sup> there is also evidence for ‘‘three or four ribbed handles from globular or bulbous vessels, the ribs forming a ‘claw’ to grip on to the shoulder’’ from Verulamium.<sup>32</sup> However, as has been pointed out elsewhere,<sup>33</sup> the number of globular jugs in Britain may be greater than it appears to be, because in many cases the body and base fragments can be mistaken for the very similar ribbed jars (Isings Form 67.c) which are commonly found in funerary and other contexts on later 1st century sites in Britain.<sup>34</sup> The great similarity between the body and base of these vessels strongly suggests that they are products of the same tradition of glassmaking, and probably of the same glassmakers.

The only globular bodied jug known to me from a Romano-British burial is the dark blue one with vertical ribs on the body from a Flavian burial at Shefford, in Bedfordshire.<sup>35</sup> This jug has a short neck, a trefoil mouth, and a broad curved ribbon handle, so it cannot be said to belong to this group of globular jugs, though it must be very closely related, as the body is indistinguishable from either the globular jars or from the long necked globular jugs with angular handles.

There are fewer discoid bodied jugs than any of the forms already mentioned, though their similarity to the globular jugs suggests that they may have developed from these, since in many cases the only difference is that the body of the discoid jug has been compressed during inflation. The handles are angular, either with one substantial central ridge or with several rather fine vertical ribs.

Most of the examples known to me have bodies decorated with vertical or spiral ribbing, though some are undecorated, like the dark blue jug in the Römisch-Germanisches Museum at Köln, and the fragmentary light green one found in a Neronian or early Flavian pit at St. Swithin’s House, Walbrook.<sup>36</sup> The pale bluish green jug from Litlington, Cambs., which has vertical ribbing on the lower neck and body and an angular handle with central rib which finishes in a ‘claw’ attachment with a ‘medusa-mask’ medallion below,<sup>37</sup> is in many respects very similar to the Enfield piece. Other examples from Romano-British cemeteries include one with a ribbed body from ‘near Canterbury’,<sup>38</sup> and another from Old Newton, Suffolk.<sup>39</sup> Excavations at Gloucester in 1969 produced part of the body and ‘claw’ handle attachment from a dark blue discoid jug with spiral ribs, and a small bluish green body fragment with vertical ribs which was found at Corfe in 1969 may also come from this form of jug,<sup>40</sup> but I do not know of other examples from military or civilian sites in Britain.

Apart from the jug at Köln which is mentioned above, there seem to be very few examples of this form; only two are known to me from sites in Northern France and Belgium. One comes from the cemetery of Vieil-Atre at Boulogne;<sup>41</sup> and the other is part of a grave assemblage, Tomb 134, at Blicouy, Hainault, Belgium, which dates from the beginning of the 2nd century AD.<sup>42</sup> Both of these jugs have more or less vertical ribs on the lower neck and body.

The decoration of the body of the Enfield jug is more complex than that on any other discoid jug, and would have involved a great deal of skill on the part of the glassmaker and his assistants.

However, a yellow brown conical jug with simple concave base, found at Faversham and now in Canterbury Museum,<sup>43</sup> has precisely the same decorative motifs, and there is a similar fragment, a dark blue conical jug, from Caerleon.<sup>44</sup> These two, and several more fragments from the body of a pale yellowish green jug recently excavated at Usk,<sup>45</sup> are the only examples known to me, though Thorpe 1935,<sup>46</sup> suggests that this combination of vertical and spiral motifs is fairly common on the conical jugs of Seine-Rhine type.

The decorative motifs on the jugs provide a link between the conical and discoid jugs, and it is to be hoped that further study, especially of the medallions found at the base of the handle of some jugs, and elsewhere on the body of the vessel on others, will provide further close links between the various jug forms in this group.

In view of the concentrated distribution of the long-necked jugs it seems very likely that they were manufactured within the Seine-Rhine area from about AD 60-125, perhaps at several centres, not all of which need have been in use at the same time. However, it may well prove very difficult to establish with reasonable certainty where these glass-houses were situated.

3. Fragment of body and pinched handle trail, jug; pale bluish green. Part of conical body with vertical handle trail. Seven very small pinched-out protrusions on trail. Maximum length of fragment 33 mm. (F.68) (Late 2nd-early 3rd century AD).

This sort of trail occurs most frequently as the downward extension of the lower handle attachment on later 1st and early 2nd century conical jugs (see discussion under No. 2, above). In this case, too little survives to be certain of the shape of the vessel. In many cases, the pinched trail is larger, with more pronounced protrusions, but small examples are known, for instance on Niessen No. 6107 in the Römisch-Germanisches Museum, Köln.<sup>47</sup>

4. Fragment of ribbon handle with central ridge, jug; bluish green. Part of straight handle, drawn out. Present length 23 mm. Also from a later 1st-early 2nd century jug, probably made in the Rhineland or Northern France, see discussion under No. 2 above. (F.4, probably disturbed) (Should be AD 85-120) (Not illustrated).
5. Fragment, lower body and base-ring, from jug or jar (?); pale yellow. Curving lower body, tapering inwards to constriction above open pushed-in base-ring and concave base. Diameter (base-ring) 60 mm. (F.43a) (Late 2nd-early 3rd century AD) (Not illustrated).
6. Fragment, lower body and base-ring, from jug or jar (?); pale green. Curving ovoid body tapering inwards to constriction above open pushed-in base-ring and concave base. Diameter (base-ring) 70 mm. (F.4, probably disturbed) (Should be c. AD 80-125) (Not illustrated).

Both of the base fragments may belong either to a globular (or ovoid) jug, or to a jar, see discussion under No. 2 above, (especially footnotes 32-34). Too little of the vessels survive to be at all certain of their original form, but both vessel types are normally found in contexts dating from the later 1st to the early 2nd century AD. Other fragments from jugs or jars

- (a) Body fragment, curved. 1 raised rib; pale bluish green. (F.22).
- (b) Curved body fragment, three wide spaced ribs; bluish green. (F.25) (c. AD 85-120).
- (c) Body fragment, close-set curving ribs; yellow green. (F.6). (?Late Roman).
- (d) Four fragments, conical body with vertical ribs, two fragments, concave base; dark amber brown. Probably part of long necked jug. (Area 5, F.6).
7. Fragment, rim and funnel mouth with handle, from jug (?); bluish green. Rim edge folded down, out and up, with shallow funnel mouth. Small portion of handle attached to outside edge of rim. Diameter (rim) 50 mm. (F.67) (Late 2nd-3rd century AD).

It is not possible to identify this vessel with any certainty, but it appears to be some sort of bottle or flagon with a shallow funnel mouth. The rim form is a little unusual because the folded edge has been bent out diagonally after formation, but this is a minor variation which occurs from time to time in several other groups of vessels which normally have a horizontal rim, and it does not seem to be of great significance. For instance most of the 2nd-3rd century colourless cylindrical jugs with horizontal wheel-cut bands on the body have more or less horizontal folded rims, but the Hauxton jug has a diagonal folded rim, similar to the fragment under discussion.<sup>48</sup>

8. Fragment, tubular rim and side of bowl; bluish green. Everted rim, edge rolled inwards and then bent out and down to form open tubular rim; slightly concave upper body tapering inwards. Diameter (rim) 140 mm. (Area 3, Layer 3).

This is very long-lived vessel form. It occurs in an early Claudian context at Cosa, in central Italy,<sup>49</sup> and is found in Britain in the Claudio-Neronian period, for instance, at Camulodunum.<sup>50</sup> These bowls were particularly wide spread during the later 1st century AD.<sup>51</sup> However, they also occur in 2nd and 3rd century contexts in Britain, as at Fishbourne,<sup>52</sup> and Verulamium;<sup>53</sup> they are less common in the later Roman period, though a few fragments are known from 4th century sites, such as Portchester,<sup>54</sup> and Barton Court Roman Villa, Abingdon,<sup>55</sup> and one which is believed to be a late Roman survival was found in Grave 53 of the 5th century cemetery at High Down, Sussex.<sup>56</sup>

9. Six fragments, four joining, horizontal tubular rim and body, from jar (?); pale bluish green. Very bubbly. Outspayed horizontal rim, edge rolled inwards to form tube, and flattened on top. The width of the rim is very uneven; constricted neck. Diameter (rim) 86 mm. (F.26 Late 1st-early 2nd century) and (F.72, glass residual in a late 3rd-4th century feature).

Jars of several types occasionally have tubular rims formed by rolling the edge up and inwards. For instance, this feature may be seen on some 1st and 2nd century cinerary urns, as in examples from Bishopsgate, London, and at Southwark.<sup>57</sup> Similar rims also occur on much smaller jars and pots, mainly in later 1st and early 2nd century contexts. A small bag shaped jar, perhaps intended to contain unguents, was found in the latrine drain in the Commandant's house at Housesteads,<sup>58</sup> and another very small specimen came from a stone coffin in the Railway cemetery at York.<sup>59</sup>

10. Fragment, rim and body of conical cup or beaker; yellow green. Slightly everted curving rim, edge cracked off but not smoothed, with inward bevel. Upper body straight sided, tapering inwards. Very faint band of abraded lines on rim, broad bands below rim and on body. Diameter (rim) 80 mm. (Area 5, F.6).
11. Fragment, rim and body of conical cup or beaker; pale greenish. Very bubbly glass. Slightly everted curving rim, edge cracked off and slightly smoothed, with inward bevel. Upper body straight sided tapering inwards. Band of abraded lines below rim, and two bands close together on body. Diameter (rim) 82 mm. (F.72) (Late 3rd-4th century AD).

The two fragments of beakers, and the black bead with opaque blue zig zag trails (No. 15, below) are the only pieces of Late Roman glass from the site. Conical beakers are quite common in 4th century contexts at sites in the middle and lower Rhineland, northern France, Belgium and Holland, especially in late Roman cemeteries.<sup>60</sup> Similar vessels also occur at a number of sites in Britain, though they are often rather fragmentary; for example, pieces are recorded from Shakenoak Roman villa, Oxon.,<sup>61</sup> and Bradwell Abbey Roman villa, Bucks.<sup>62</sup> There are also a few nearly complete specimens, such as one from Silchester,<sup>63</sup> and another from Wint Hill, Banwell, Somerset.<sup>64</sup>

12. Three joining fragments, lower body and base, from cup or flask (?); bluish green. Convex curving lower body and small concave base with pontil mark. Diameter (base) 30 mm. (F.43a) (Late 2nd-early 3rd century AD).

Many small glass vessels made during the first and second centuries had a simple concave base, so it is not possible to be definite about the original shape of the vessel. The presence of the pontil mark in the centre of the base indicates that the rim has been finished by hot working, e.g. folding, or fire-rounding, rather than being cracked-off and ground after the vessel has cooled. This might perhaps favour the form being a flask, rather than a cup, but this is by no means certain, as many drinking vessel types were finished with fire-rounded rims.

13. Fragment, body and base-ring, perhaps from small bowl or plate; bluish green. Curved lower body tapering inwards to solid tubular pushed-in base-ring and concave base with central 'kick'. Scars on base-ring, indicating use of 'post-technique'. Diameter (base-ring) 42 mm. (F.64) (Late Antonine).

In the 1st and 2nd centuries AD many types of small cups, bowls and plates were made with this kind of tubular base-ring, and one cannot know which of them is represented here.<sup>65</sup>

The scar on the edge of the base-ring probably indicates that a 'post', or broad plate attached to the end of the pontil iron, was used to hold the vessel while the rim, or handles and so on, were finished off. This, like No. 12, above, indicates that the rim was either fire-rounded or bent over into a tubular rim, rather than cracked-off when cool, because in the latter case there would be no need to support the vessel. Also:

- (a) Fragment of base-ring and base, perhaps from bowl; bluish-green. Body wall broken away above hollow tubular pushing-in base-ring and slightly concave base. Diameter (base-ring) 60 mm. (F.6) (Late Roman context) (Not illustrated).
14. Four joining fragments, body and base of small discoid unguent bottle; pale greenish. Low squat body, convex curving sides and wide concave base. Diameter (base-ring) 40 mm. (F.49) (First half of 2nd century AD).

The unguent bottle was probably manufactured at the end of the 1st or beginning of the 2nd century AD, as the type does not become common until that period. Similar vessels are known from a burial group dated late 1st or early 2nd century at Chichester,<sup>66</sup> and in a deposit dated *c.* AD 80-120 at Wroxeter.<sup>67</sup>

#### Objects

15. Small mis-shapen bun bead; complete. 'Black' ground with opaque light blue zig-zag trail round body. Diameter 14 mm; Height 6.9 mm; Diameter (perforation) 5 mm. (F.70) (Late 3rd-4th century AD).

In view of the context and general appearance of this bead, it seems probable that it belongs to the late Roman period. However, it has proved rather difficult to trace any close parallels.<sup>68</sup>

16. Melon bead; complete. Dark blue faience. Height 17-15 mm; Diameter (maximum) 22 mm; Diameter (perforation) 9 mm. (Area 5, F.3).
17. Melon bead, fragment. Blue faience. Height 18-15 mm. (F.19) (Coarse pot *c.* AD 55-120) (Not illustrated).

These beads are very common on military and civilian sites in Britain in the 1st century AD, but became scarcer in the 2nd and later centuries.

18. Small globular bead, complete. Opaque blue glass. Diameter (maximum) 8 mm; Diameter (perforation) 3 mm; Height 6 mm. (F.4, probably disturbed context) (? *c.* AD 85-120).

#### NOTES

1. D. Charlesworth 'The Glass' in I. M. Stead 'A Trial Excavation at Braughing, 1969' *Hertfordshire Archaeology* 2 (1970) 37-47

2. D. B. Harden 'The Glass' in C. F. C. Hawkes and M. R. Hull, *Camulodunum* (1947) 288 and 301-2, Pls. 87 and 88 also, D. B. Harden 'Glass' in M. R. Hull *Roman Colchester* (1958) 157-8 and Fig. 79.

3. D. Charlesworth 'The Glass' in S. S. Frere *Verulamium Excavations, I*, (1972) 198-99 and Fig. 74, 4.
4. J. P. Bushe-Fox *Excavations at Richborough, 3rd Report* (1932) 58-9 and Pl. 15.
5. D. B. Harden and J. Price 'The Glass' in B. W. Cunliffe *Excavations at Fishbourne 1961-1969* Vol. II (1971) 328-30, Fig. 137 and Pl. 25.
6. Unpublished; during the excavations directed by Dr. W. H. Manning between 1965 and 1975, more than 60 fragments of pillar-moulded bowls have been found. I am grateful to Dr. Manning for permission to refer to this material.
7. C. Isings *Roman Glass from Dated Finds* (1957) Forms 52 and 55, for details of vessels from dated contexts.
8. D. B. Harden 'The Glass Jug' In M. Biddle 'Two Flavian burials from Winchester' *Antiq J* 47 (1967) 238-40. This paper contains a comprehensive list of references.
9. Now in the Pilkington Glass Museum, St. Helens (inv. No. 1969/39); 'Recent Important Acquisitions' *J. Glass Studies* 13 (1971) 137, No. 12.
10. From the Jarmin collection, Gr. 8. See T. May *The Catalogue of the Roman Pottery in the Colchester and Essex Museum* (1930) 288 and Pl. 90, 8.
11. A. J. Kempe 'Sepulchral Remains found at Litlington, near Royston, Cambridge' *Archaeologia* 26 (1836) 375 and Pl. 45, 8.
12. In the Dept. of Prehistoric and Romano-British Antiquities (83. 12-13, 319). Published many times; see D. B. Harden *et al. Masterpieces of Glass* (1968) 82, No. 108 for detailed description and previous references.
13. T. Inskip *J. British Archaeol. Association* 1 (1846) 52 and Fig.
14. R. C. Neville 'Remains of the Roman period at Chesterford, Essex', *Archaeol. J.* 12 (1855) 113 and Fig.
15. J. Gage 'The Bartlow Hills, Ashden, Essex, with an account of Roman sepulchral relics recently discovered in the lesser barrows' *Archaeologia* 25 (1834) 5 and Pl. II. Fig. 1.
16. D. B. Harden 'Roman Glass from Huntingdon and Rapsley, Surrey' *Antiq. J.* 48 (1968) 308 and Pl. 80a.
17. J. Brent; communication of 29. iv. 1875; *Proc. Soc. Ants. London*, 2nd ser., 6 (1873-6) 377.
18. Harden and Price *op. cit.* (Note 5) 358-60, No. 90; Fig. 142 and Pl. 28.
19. Harden *op. cit.* (Note 2) 305, No. 94-5.
20. Unpublished; found during excavations directed by Mr. Peter Scott, Durham University, to whom I am very grateful for permission to refer to this.
21. J. Price 'The Roman Glass from Excavations at Barrack Block XII, Prysge Field, Caerleon, in 1970' in P. J. Casey *Arch. Camb.* (forthcoming). Another jug was found during excavations in the Extra-Mural settlement at Caerleon; this is unpublished, and I am very grateful to Mr. G. C. Boon, Keeper of Department of Archaeology, National Museum of Wales, Cardiff, for drawing my attention to this vessel.
22. Isings *op. cit.* (Note 7) 73-4. Form 55b.
23. G. Faider-Feytmans 'Les Verreries du Tumulus de Frizet' *Etudes d'Histoire et d'Archeologie Namuroises dédiées à Ferdinand Courtoy* (1952) 71-81.
24. The definite report of this burial is still awaited; for a summary of the glass finds see C. Isings 'Glass from Roman Barrows at Esch' *Annales de 2e Congrès des 'Journées Internationales du Verrè* (Leyde 1962) Liège n.d., 69-76.
25. A. Haffner *Das Keltisch-Römische Gräberfeld von Wederath-Belginum. I* (1971) 70 and Pl. 81 (gr. 318).
26. C. Isings *Roman Glass in Limburg* (1971) 36, No. 116, and Fig. 12, 7.
27. G. Behrens 'Römische Gläser aus Rheinhessen' *Mainzer Zeitschrift* 20-21 (1925-26) 67 and Figs. 6 and 7.
28. M. Vanderhoeven *Verres Romains (Ier-IIIe siècle) des Musées Curtius et du Verre à Liège* (1961) 70 and 77, Nos. 75 and 81, Pls. 17 and 18.
29. Faider-Feytmans *loc. cit.* (Note 23).
30. Exhibited in National Museum of Wales, Cardiff.
31. Unpublished; found during excavations directed by Dr. M. G. Jarrett, of University College, Cardiff in 1965, to whom I am grateful for permission to refer to this.
32. Charlesworth *op. cit.* (Note 3) 209.
33. Harden and Price *op. cit.* (Note 5), 330-355, and also Charlesworth *op. cit.* (Note 3), 204-5.
34. From funerary contexts: Colchester, Acton Collection, Cat. No. 310; W. A. Thorpe *English Glass*, (1935) 28, Pl. III(b). Shefford, Beds. Illustrated in J. Liversidge *Britain in the Roman Empire* (1969) Pl. 34, top left. Thornborough, Bucks. J. Price 'The Glass Vessels' in A. E. Johnson, 'Excavations at Thornborough' *Records of Bucks* (forthcoming). Other contexts: Verulamium; Charlesworth *op. cit.* (Note 3) 204-5 and Fig. 76, 25-6, fragments of seven jars. Corbridge; W. Bulmer 'Roman glass vessels in the Corstopitum Museum, Corbridge' *AA.* 33 (1955) 120 and Fig. 4; fragments of twelve jars. The Lunt, Baginton; D. Charlesworth 'Glass' in B. Hopley 'The Lunt Roman fort and Training School for Roman Cavalry, Baginton, Warwicks. Final Report. Excavations (1972-3) with conclusions' *Trans. Birmingham and Warwicks. Archaeol. Society* 87 (1975) 39 and Pl. 10 A. Silchester; G. C. Boon *Silchester: the Roman Town of Calleva* (1974) 230-2 and fig. 36, 1 example, nearly complete.
35. C. Fox *The Archaeology of the Cambridge Region* (1923) 213 and 216 and Pl. XXVI, 2.
36. F. Fremersdorf *Römisches Buntglas in Köln* (1958) 34 and Pl. 40; Inv. No. 23, 241; R. Merrifield *The Roman City of London* (1965) Pl. 121.
37. Fox *op. cit.* (Note 35) 189, 217 and Pl. XXV, 4.
38. In Canterbury Museum. *P.S.A.L.* 2nd series, (1901), 279-80, ill.; But J. Ward *The Roman Era in Britain* 2nd ed. (1920) 182 and Fig. 52 G, says that the jug came from Faversham.
39. Said to be in the British Museum, Thorpe, *op. cit.* (Note 34) (Colchester), 26, (fn. 1), but since apparently transferred to the Victoria & Albert Museum.
40. Both unpublished; *Gloucester* found during excavations (77/69) directed by Mr. H. Hurst; the glass from this site is now being studied by Mrs. Denise Allen, at University College, Cardiff. *Corfe* found during excavations directed by Mr. N. J. Sunter.
41. Morin-Jean *La Verrerie en Gaule sous l'Empire Romain* (1913) 117 and Fig. 143.
42. S. J. de Laet *et al. La Nécropole Gallo-Romaine de Blicquy* (1972) 99, 15 and Pl. 37 and frontispiece.
43. *P.S.A.L.* 2nd series (1901) 279-80, illust.
44. Thorpe (1935); *op. cit.* (Note 34) (Colchester); 27,

- ftn. 2 (not illustrated).
45. Unpublished; found during excavations of 1974.
  46. Thorpe *op. cit.* (Note 34), 27.
  47. F. Fremersdorf *Das Naturfarbene sogenannte Blaugrüne Glas in Köln* (1958) 23 and 1.9.
  48. D. B. Harden 'Four Roman Glasses from Hauxton Mill, Cambridge, 1870' in J. Liversidge 'Roman Discoveries from Hauxton' *Proc. Camb. Ant. Soc.* 51, (1958) 12, 14-15 and Fig. 6, 2 and Pl. 3b.
  49. D. Grose 'Roman glass of the first century AD: a dated deposit of Glassware from Cosa, Italy' *Annales du 6e Congrès de l'Association Internationale pour l'Histoire du Verre, Cologne 1973* (Liège 1974) 44, No. 26 and Fig. 5.
  50. Harden *op. cit.* (Note 2) 304, Nos. 80-1 and pl. 88.
  51. Isings *op. cit.* (Note 7) Forms 44 and 45.
  52. Harden and Price *op. cit.* (Note 5), 349-50, 352-3; Nos. 60 and 70. Figs. 140-1.
  53. Charlesworth *op. cit.* (Note 3) 199-200 and Fig. 74, 6-10.
  54. D. B. Harden 'The Glass' in B. W. Cunliffe *Excavations at Portchester Castle; Vol. I, Roman* (1975) 369 and Fig. 197, 8.
  55. J. Price 'The Roman Glass from Barton Court Farm, Abingdon' (forthcoming); there are two fragments from late Roman tubular rim bowls at this site, one of which is mould blown.
  56. D. B. Harden 'Saxon Glass from Sussex' *Sussex County Magazine* 25 (1951) 263 and 266 and Fig. 8.
  57. *Roman London* RCHM (1928) 159 and Fig. 65, 32; 169 and Fig. 69, 63.
  58. D. Charlesworth 'A Group of vessels from the Commandant's house, Housesteads' *J. Glass Studies* 13 (1971) 35 and Fig. 10.
  59. D. B. Harden 'Glass in Roman York' in *Eboracum* RCHM (1962) 180 and Fig. 89 (HG 2).
  60. Isings *op. cit.* (Note 7). Form 106c.
  61. D. B. Harden 'Glass' in A.C.C. Brodribb et al. *Excavations at Shakenoak IV* (1973) 103-4 and Fig. 52, 225.
  62. J. Price 'The Glass' in M. J. Green *The Bradwell Roman Villa – 1st Interim Report* (1975) 12 and Fig. 33, 6.
  63. Boon *op. cit.* (Note 34) Silchester, 230-1 and Fig. 36, 8.
  64. D. B. Harden 'The Wint Hill Hunting Bowl and related glasses', *J. Glass Studies* 2 (1960) 51-2 and Figs. 8 and 9.
  65. Isings, *op. cit.* (Note 7) Forms 34, 35, 37, 41, 42, 44, 45, 52, 69, 75, 85 and 94.
  66. M. Rule and A. Down *Chichester Excavations, I* (1971) 92 and Fig. 5.20.
  67. J. P. Bushe-Fox *Excavations at Wroxeter 1913* (1914) 20 and Fig. 11.
  68. However, see J. P. Bushe-Fox *Excavations at Richborough 4* (1949) 149, Nos. 236-8 and Pl. 55. Black beads with opaque blue and opaque red trails, either late or post-Roman.

## 6. THE COINS

BY M. HAMMERSON AND R. COXSHALL

The coinage of the first two and a half centuries AD, as is normal, gives only a partial guide to the level of activity on the site. Most coins from this period show medium to heavy wear, with the earlier coins, to the end of the Flavian dynasty (AD 96) showing somewhat less wear (pointing to loss during the late 1st-2nd centuries) than the post-Flavian coins, which show uniformly heavy wear (suggesting circulation into the 3rd century, possibly as late as the AD 260s). The overall impression given is one of absence of any significant levels of occupation until the last years of the 1st century AD.

Losses of the base *antoniniani* and their imitations, of the AD 260s and 270s, are normal (increased coin loss during a period of inflation and increased volume of coins in circulation), but the virtual absence of coins of the British usurpers of AD 287-296 is unusual; comparable sites around London such as Old Ford, Sheldon (1971, 42-77 and 1972, 101-147) and Brentford, Laws (1976, 1 9-205) both yield numbers of these. It may be noted here that the occurrence of twenty-six of these *antoniniani* from F.6 (p. ) could suggest a scattered hoard.

4th century coin loss is typical of sites which saw their peak of prosperity during the Constantinian era and the period immediately following, *c.* AD 320-380, with economic activity falling off sharply thereafter. This compares closely with the coin pattern from Brentford, but contrasts with that from Old Ford, which belongs to that class of site which remained economically active until the end of the 4th or early 5th century. On the basis of the coin finds, then, occupation at Enfield should have been declining by the AD 380s. Reference to the histograms of coin numbers from Enfield and comparable sites, (Fig. 28) illustrates this.

The key to the periods shown on the horizontal axis of the histogram (Fig. 28) is:

1. Pre-AD 41	12. 222-238
2. 41-54	13. 238-253
3. 54-69	14. 253-273
4. 69-79	15. 273-287
5. 79-96	16. 287-296
6. 96-117	17. 296-330
7. 117-138	18. 330-348
8. 138-161	19. 348-364
9. 161-180	20. 364-378
10. 180-192	21. 378-388
11. 192-222	22. 388-402

Fig. 28. Coin Histograms

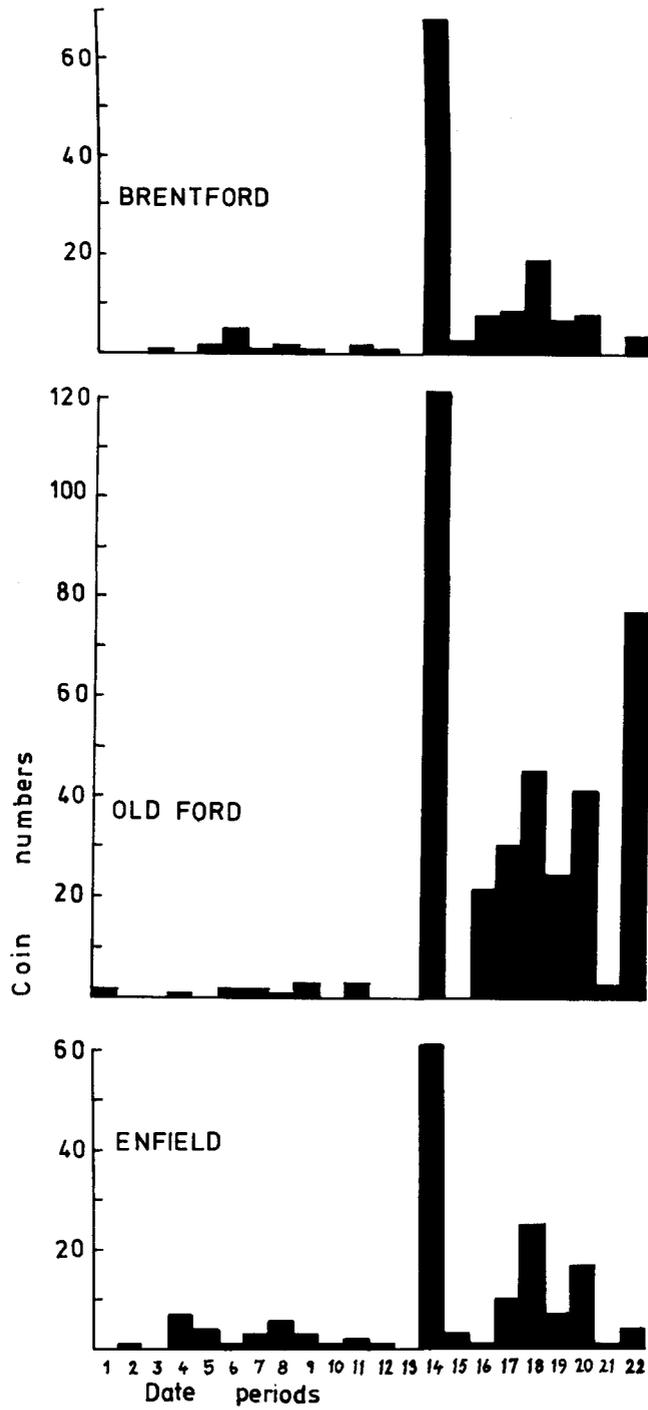


Fig. 28. Lincoln Road, Enfield. Coin histogram.

Summary of Coin Finds according to context  
(Coins are specified according to coin list number).

F.1. AD 388-402: 163, 161. AD ? 364-378: 155. AD 350s-360s: 140. AD 330-335: 114, 109. AD 318: 103. AD 270s-280s: 93, 84, 73, 70. AD 268-273: 59, 53. AD 179: 25. AD 161-175: 23. *Later 3rd-4th century AD*: 176.  
 F.2. AD 330-378: 158. AD 330s-340s: 132, 130, 133, 116. AD 314-315: 102, 99. AD 287-290: 98. AD 270s-280s: 92, 91, 88, 78, 82, 77, 72. AD 268-273: 64, 71, 57, 46, 43. AD 253-268: 33.  
 F.3. AD 367-375: 143. AD 330s-340s: 131, 113. AD 270s-280s: 87. AD 268-273: 66. *Later 3rd-4th century AD*: 171, 172, 173, 181.  
 Dark soil to s. of F.1. AD 325-341: 124, 118, 108.  
 Dark soil above F.5. AD 330s-340s: 129. AD 268-270: 41. *1st-2nd century AD*: 28.  
 Pit, w edge of Area 1. AD 194: 30.  
 F.6. AD 270s-280s: 97, 90, 89, 86, 85, 81, 80, 79, 76, 69, 67. AD 259-273: 95, 63, 62, 60, 58, 56, 55, 54, 51, 50, 44, 39, 37, 36. AD 134-175: 22, 15.  
 F.16. AD 85: 9.  
 F.25. AD 73-78: 8.  
 F.38. AD 74-79: 5.  
 F.41. AD 379-402: 389. *Later 3rd-4th century AD*: 178, 184.  
 F.42. AD 355-360: 134. AD 268-273: 65.  
 F.43a. *Later 3rd-4th century AD*: 187.  
 F.48. L.1. AD 330-335: 111. *End 2nd century-beginning 3rd century AD*: 31. AD 119-121: 14.  
 F.64. AD 270: 45. AD 161-9: 24.  
 F.66. *Later 3rd-4th century AD*: 175.  
 F.68. AD 330-337: 115.  
 F.70. AD 364-378: 156, 153, 149, 148, 142. AD 330-378: 159.  
 F.72. AD 364-378: 151.  
 F.81. L.1. AD 330-341: 119, 110.  
 F.81. AD 350s-360s: 136.  
 F.94. AD 367-375: 147. AD 323: 104.  
 Area 1 Unstratified. AD 350s-360s: 137. AD 330-348: 127, 122, 117.

Area 2 Unstratified. AD 378-383: 160. AD 364-378: 150, 144, 141. AD 330-348: 128, 123. AD 323-324: 105. *Uncertain late 3rd-4th century AD*: 179, 177, 167, 165. AD 153-155: 19, 18. AD 71-96: 12, 3.  
 Area 2. L.1. AD 337-341: 121. AD 259-276: 96, 42, 48.  
 Area 2. L.2. AD 50s-60s: 1.  
 Area 2. L.3. AD 71: 4.  
 Area 3 Unstratified. AD 364-375: 152, 146. AD 350s-360s: 135. AD 347-348: 125. AD 337-341: 120. *Later 3rd century AD*: 94. AD 154-5: 20. AD 69-79: 7. AD 310: 100. *Later 3rd-4th century AD*: 166. *Illegible*: 186.  
 Area 3. L.1. AD 350s-360s: 139. AD 270s-280s: 74, 68. *Later 3rd-4th century AD*: 182.  
 Area 3. L.3. AD 364-378: 154.  
 Site watching material.  
 Area 6. AD ?364-378: 157.  
 F.1. AD 138-141: 21.  
 F.2. AD 259-268: 49.  
 F.6. *Illegible*: 188.  
 F.11. AD 270s-280s: 76.  
 F.25. AD 322-324: 107.  
 F.26. *3rd-4th century AD*: 189.  
 F.28. AD 253-270: 47. AD 231-235: 32. *Later 3rd-4th century AD*: 192, 191. *Illegible*: 190.  
 F.30. AD 367-375: 145.  
 F.32. AD 259-268: 52.  
 F.34. AD 347-348: 126.  
 F.46. *Later 3rd-4th century AD*: 193.  
 F.48. AD 350s-360s: 138. *Later 3rd-4th century AD*: 174. *Illegible*: 194.  
 F.51. AD ?98-117: 13.  
 F.52. *1st-3rd century AD*: 168.  
 F.57. AD 268-270: 40.  
 F.63. AD 388-402: 162.  
 Area 5. F.1. *Later 3rd-4th century AD*: 180.  
 Area 5. F.2. *Later 3rd-4th century AD*: 185.  
 Area 5. F.3. *1st-2nd century AD*: 27.  
 Unstratified. AD 270s-280s: 83. AD 71-78: 6. AD 138-161: 17. AD 85: 1. AD 330-335: 112. AD 310-324: 106, 101. AD 117-138: 16. *Prob. end 2nd century AD*: 29. *Illegible*: 195.

COIN LIST

All coins are bronze unless otherwise stated.

CONDITION: to indicate state of wear, and possibly period of circulation, before loss: A=unworn; B=slightly worn; C=average wear; D=quite heavy wear; E=heavily worn; ?=corroded, uncertain.

REFERENCES: RIC=*Roman Imperial Coinage* (Various Volumes, 1923- ); LRB1/2=*Late Roman Bronze Coinage* R. A. G. Carson, P. V. Hill, J. P. C. Kent (1965), Parts 1 and 2.

		Coin Date	Con- dition	Provenance (SW=Site Watching features)
1. Irregular Copy, Claudius I	AE 20.5mm, type RIC 66, Minerva	c.45-65	D	Area 2, L.1
2. Vespasian	Dup., RIC 475, PAX AVG (Rome)	71	C	Area 2, L.1
3. Vespasian	Dup., RIC 479, SECVRITAS AVGVSTI (Rome)	71	B	Area 2 (Unstratified)
4. Vespasian	As, RIC 500, SECVRITAS AVGVSTI (Rome)	71	C	Area 2, L.3
5. Vespasian	AR Den., RIC 124a, 176 or 211, IOVIS CVSTOS (Rome)	74-9	D	Area 3, F.38
6. Vespasian	Dup., PROVIDENT AVG	71-8	?D	Area 5, F.3

7. Vespasian	As or Dup., unc. rev.	69-79	?C	Area 2 (Unstratified)
8. Domitian (Caesar)	As or Dup., FELICITAS PVBLICA SC (Rome)	73-78	?	F.25
9. Domitian (Augustus)	Sest., RIC 285, Emperor and German (Rome)	85	A	F.16
10. Domitian	Dup., RIC 301, MONETA AVGVST SC (Rome)	85	C	Area 149 (Unstrat.)
11. Domitian	Dup., RIC 327, MONETA AVGVST SC (Rome)	86	C	Area 2, L.1
12. Domitian	Sest., unc.	81-96	E	Area 2 (Unstratified)
13. Probably Trajan	As/Dup., unc.	98-117	E	SW F.51
14. Hadrian	Quadrans, PM TRP COS III SC, Rostrum (Rome) RIC 623	119-21	C	F.48, L.1
15. Hadrian	Sest., RIC 748ff, FELICITAS AVG SC (Rome)	134-8	E	F.6
16. Hadrian	Sest., unc.	117-138	E	(Unstratified)
17. Antoninus Pius	Sest., unc.	138-161	E	(Unstratified)
18. Antoninus Pius	Sest., RIC 916, LIBERTAS COS III SC (Rome)	153-4	B	Area 2 (Unstrat.)
19. Antoninus Pius	Sest., RIC 929, LIBERTAS COS III SC (Rome)	154-5	D	Area 2 (Unstrat.)
20. Antoninus Pius	Dup., RIC 930, BRITANNIA COS III SC (Rome)	154-5	D	Area 3 (Unstrat.)
21. Faustina Sr.	Sest. RIC (Antoninus Pius) 1078, IVNO REGINAE SC (Rome)	138-141	D	SW F.1
22. Faustina Jr.	Dup., unc.	145-175	?D	F.6
23. Faustina Jr.	Sest., RIC (Marcus Aurelius) 1635, FECVND AVGVSTAE SC (Rome)	161-175	D	F.1
24. Lucilla	Sest., RIC (Marcus Aurelius) 1730-2, CONCORDIA AVG (Rome)	161-9	E	F.64
25. Commodus (Augustus, with Marcus Aurelius)	Sest., RIC 1599, Minerva, IMP II COS II PP SC (Rome)	179	D	F.1
26. Commodus (Sole reign)	As, RIC 570, COL. L. AN. COM. TRP XV IMP VIII COS VI SC	190	B	F.2
27. Uncertain	As or Dup.	1st-2nd C	E	Area 5, F.3
28. Uncertain	As or Dup.	1st-2nd	?	Dark soil above F.5 between F.1 and 2
29. Uncertain	Sest.	2nd C.	?	
30. Septimius Severus	AR. Den., RIC 56, SECVRTAS PVBLICA (Rome)	194	C	Pit, W. edge of area 1
31. Septimius Severus	Silver-plated bronze copy, type of A.D. 194-9	c. 200	?C	F.48, L.1
32. Severus Alexander	AE Sest., RIC 637, MARS VLTOR SC (Rome)	231-235	D	SW F.28
33. Gallienus	Ant., RIC 160, AETERNITAS AVG (Rome)	259-268	C	F.2
34. Gallienus	Ant., RIC 236 or 492 (var.), MARTI PACIF	259-268	A	F.81
35. Gallienus	Ant., RIC 481, FIDES MILITVM (Milan)	259-268	C	Area 1, L.1
36. Gallienus	Ant., RIC 499, PAX AVG (Milan)	259-268	C	F.6
37. Gallienus	Ant., unc.	253-268	C	F.6
38. Gallienus	Ant., unc.	253-268	C	F.2
39. Claudius II	Ant., RIC 34, FIDES EXERCII (Rome)	268-70	B	F.6
40. Claudius II	Ant., RIC 54, IOVI VICTORI (Rome)	268-70	D	SW F.57
41. Claudius	Ant., RIC 109, VIRTVS AVG (Rome)	268-70	C	Dark Soil above F.5, between F.1 and 2
42. Claudius II	Ant., RIC 113 (var.), VIRTVS AVGVSTI (Rome)	268-70	C	Area 2, L.1
43. Claudius II (posthumous)	Ant., RIC 259ff, CONSECRATIO, Altar	270	B	F.2
44. Claudius II (posthumous)	Ant., RIC 261, CONSECRATIO, Altar (Milan)	270	B	F.6
45. Claudius II (posthumous)	Ant., RIC 290, VIRTVS AVG (Rome)	270	?B	F.64
46. Claudius II	Ant., unc.	268-70	?C	F.2
47. Central empire, uncertain	Ant., unc.	253-270	B	SW F.28
48. Postumus	Ant., RIC 58, FELICITAS AVG (Lyons)	259-268	B	Area 2, L.1
49. Postumus	Sest., RIC 162, SALVS AVG	259-268	B	F.2

50. Postumus	Ant., RIC 80 or 323, PROVIDENTIA AVG	259-268	C	F.6
51. Postumus	Ant., RIC 377-8, FIDES EQVIT (Milan)	259-268	C	F.6
52. Postumus	Ant., unc.	259-268	?	SW F.32
53. Victorinus	Ant., RIC 118, PAX AVG (Cologne)	268-270	B	F.1
54. Victorinus	Ant., unc.	268-270	B	F.6
55. Tetricus I	Ant., RIC 136, SPES PVBLICA	270-273	C	F.6
56. Tetricus II	Ant., RIC 271, SPES AVGG	270-273	B	F.6
57. Tetricus II	Ant., RIC 280, VIRTUS AVG	270-273	C	F.2
58. Tetricus II	Ant., unc.	270-273	C	F.6
59. Victorinus or Tetricus I	Ant., INVICTVS	268-273	C	F.1
60. Victorinus or Tetricus I	Ant., LAETITIA AVG	268-273	C	F.6
61. Victorinus or Tetricus I	Ant., LAETITIA AVG	268-273	C	F.2
62. Victorinus or Tetricus I	Ant., SPES AVG(G)	268-273	B	F.6
63. Victorinus or Tetricus I	Ant., SPES AVG(G)	268-273	C	F.6
64. Victorinus or Tetricus I	Ant., unc.	268-273	C	F.2
65. Victorinus or Tetricus I	Ant., unc.	268-273	?C	F.42
66. Uncertain	Ant.	253-273	?	F.3
67. Irregular copy, Gallienus	AE 14mm, unc.	270s-80s	B	F.6
68. Irregular copy, Claudius II	AE 12.5mm, type <i>CONSECRATIO</i> , (Altar)	270s-80s	B	Area 3, L.1
69. Irregular copy, Victorinus	AE 16.5 x 15mm, unc. rev.	270s-80s	B	F.6
70. Irregular copy, Tetricus I	AE 15.5mm, type RIC 101-2, <i>Pax Aug</i>	270s-80s	C	F.1
71. Irregular copy, Tetricus I	AE 13mm, type RIC 101-2, <i>Pax Aug</i>	270s-80s	C	F.6
72. Irregular copy, Tetricus I	AE 14.5mm, type of <i>Laetitia Augg</i>	270s-80s	B	F.2
73. Irregular copy, Tetricus I	AE 18mm, type RIC 130ff, <i>Spes Aug</i>	270s-80s	B	F.1
74. Irregular copy, Tetricus I	AE 14mm, type ? <i>Felicitas</i> or ? <i>Hilaritas</i>	270s-80s	C	Area 3, L.1
75. Irregular copy, Tetricus I	AE 15.5mm, unc. rev.	270s-80s	B	F.6
76. Irregular copy, Tetricus I	AE 13 x 11mm, unc. rev.	270s-80s	C	SW F.11
77. Irregular copy, Tetricus I	AE 16mm, unc. rev.	270s-80s	A	F.2
78. Irregular copy, Tetricus I	AE 16mm, unc. rev.	270s-80s	B	F.2
79. Irregular copy, Victorinus or Tetricus I	AE 10 x 9mm, unc. rev.	270s-80	C	F.6
80. Irregular copy, Victorinus or Tetricus I	AE 14mm, unc. rev.	270s-80s	B	F.6
81. Irregular copy, Victorinus or Tetricus I	AE 16 x 14mm, type <i>Providentia</i>	270s-80s	A	F.6
82. Irregular copy, Tetricus II	AE 11.5mm, type RIC 254-7, <i>Pietas Augg</i>	270s-80s	B	F.2
83. Irregular copy, Tetricus II	AE 15.5mm, type <i>Pax Aug</i>	270s-80s	C	Site working 76: trench by block 24
84. Irregular copy, Tetricus II	AE 16.5 x 14.5mm, type RIC. 267, <i>Salus Aug</i>	270s-80s	B	F.1
85. Irregular copy, Tetricus II	AE 17 x 15mm, type RIC 234, <i>Invictus</i>	270s-80s	B	F.6
86. Irregular copy, Gallic empire	AE 15.5mm, unc. rev., possibly type <i>Principi Iuventutis</i> of Tetricus II	270s-80s	B	F.6
87. Irregular copy, Gallic empire	AE 16.5mm, rev. unc.	270s-80s	B	F.3
88. Irregular copy, radiate	AE 8.5mm, unc. rev.	270s-80s	B	F.2
89. Irregular copy, radiate	AE 10 x 9mm, unc. rev.	270s-80s	C	F.6
90. Irregular copy, radiate	AE 11.5mm, unc. rev.	270s-80s	C	F.6
91. Irregular copy, radiate	AE 13mm, unc. rev.	270s-80s	B	F.2
92. Irregular copy, radiate	AE 14.5 x 13.5mm, unc. rev.	270s-80s	D	F.2
93. Irregular copy, radiate	AE 17mm, unc. rev.	270s-80s	C	F.1
94. Radiate, probably irregular	AE 15mm+	270s-80s	?	Area 3 (Unstrat.)
95. Aurelian	Ant., RIC. 108, DACIA FELIX (Milan)	270-271	B	F.6
96. Aurelian	Ant., FIDES MILITVM	270-276	B	Area 2, L.1
97. Irregular copy, Probus	AE 12mm, unc. rev.	276-c.286	C	F.6
98. Carausius	Ant., RIC 832, LETITIA AVG (no mint)	287-290	B	F.2
99. Licinius I	Follis, RIC (London) 31, GENIO POP ROM	315	B	F.2
100. Constantine I	Follis, RIC (London) 118-9 MARTI CONSERVATORI	310	B	(Unstratified)
101. Constantine I	Follis, RIC (Trier) 87a, SOLI INVICTO COMITI	310-313	B	SW Clearing
102. Constantine I	Follis, RIC (London) 27, SOLI INVICTO COMITI	314-315	C	F.2
103. Constantine II	AE3, RIC (London) 136, PRINCIPIA IVVENTVTIS	318	B	F.1
104. Constantine I	AE3, RIC (Trier) 390, BEATA TRANQUILLITAS	323	B	F.94
105. Crispus	AE3, RIC (Trier) 440, CAESARVM			

	NOSTRORVM	323-324	A	Area 2 (Unstrat.)
106. Constantine II	AE3, RIC (London) 292, CAESARVM NOSTRORVM	323-324	C	(Unstratified)
107. Constantine II	AE3, CAESARVM NOSTRORVM	322-324	B	SW F.25
108. Irregular copy, Constantine II	AE 15 x 14mm, type LRB1-39, but head right, PROVIDENTIAE CAESS (Trier)	324-330	C	Dark soil to s. of F.1
109. Constantinopolis	AE3, Victory on Prow (Lyons)	330-335	B	F.1
110. Constantinopolis	AE3, Victory on Prow (Lyons)	330-335	B	Ditch F.81, L.1
111. Constantinopolis	AE3, Victory on Prow (Lyons)	330-335	C	F.48 L.1
112. Urbs Roma	AE3, LRB1-70, Wolf & Twins (Trier)	330-335	C	SW Clearing
113. Urbs Roma	AE3, LRB1-85, Wolf & Twins (Trier)	330-335	C	F.3
114. Urbs Roma	AE3, LRB1-200, Wolf & Twins (Lyons)	330-335	B	F.1
115. Constantine I	AE3, LRB1-48, GLORIA EXERCITVS, two standards (Trier)	330-337	C	F.68
116. Constantine I	AE3, LRB1-747, GLORIA EXERCITVS, two standards (Siscia)	330-337	C	F.2
117. House of Constantine	AE3, GLORIA EXERCITVS (2 standards)	330-337	B	Area 1 L.2
118. Constantius II	AE3, LRB1-242, GLORIA EXERCITVS, one standard (Lyons)	337-341	D	Dark soil to s. of F.1
119. House of Constantine	AE3, GLORIA EXERCITVS (one standard)	337-341	B	F.81 L.1
120. House of Constantine	AE3, GLORIA EXERCITVS (one standard)	337-341	B	F.47
121. House of Constantine	AE3, GLORIA EXERCITVS (one standard)	337-341	C	Area 2, L.1
122. House of Constantine (possibly irregular)	AE3, GLORIA EXERCITVS (one standard)	337-341	D	Area 1 L.1
123. House of Constantine (possibly irregular)	AE3, GLORIA EXERCITVS (one or two standard)	330-341	C	Area 2 (Unstrat.)
124. Helena	AE3, LRB1-119, PAX PVBLICA (Trier)	337-341	C	Dark soil to s. of F.1
125. Constans or Constantine II	AE3, LRB1-139/140, VICTORIAE DD AVGGQ NN (Trier)	347-348	A	Area 3 (Unstrat.)
126. Constans	AE3, LRB1-143a/144, VICTORIAE DD AVGGQ NN (Trier)	347-348	?C	SW F.34
127. Constans or Constantine II	AE3, VICTORIAE DD AVGGQ NN	347-348	C	Area 1 L.1
128. Constans or Constantine II	AE3, VICTORIAE DD AVGGQ NN	347-348	C	Area 2 (Unstrat.)
129. Irregular, Constantinopolis	AE 12mm, Victory on prow	330s-40s	B	Dark soil above F.5, between F.1 and 2
130. Irregular, Urbs Roma	AE 11.5mm, Wolf & Twins	330s-40s	C	F.2
131. Irregular, House of Constantine	AE 15mm, type <i>gloria exercitus</i> (two standards)	330s-40s	C	F.3
132. Irregular, House of Constantine	AE 11.5+mm, type <i>gloria exercitus</i> (two standards)	330s-40s	B	F.2
133. Irregular, House of Constantine	AE 14.5mm, type <i>gloria exercitus</i> (one standard)	330s-40s	C	F.2
134. Constantius II	AE3, LRB2-257, FEL TEMP REPARATIO (Lyons)	355-360	B	F.42
135. Irregular, Constantius II	AE 17 x 14.5mm, type <i>Fel Temp Reparatio</i> (Galley)	350s-60s	C	Area 3 L.2
136. Irregular, Constantius II	AE 13.5mm, type <i>Fel Temp Reparatio</i> (Fallen horseman)	350s-60s	C	F.81
137. Irregular, Constantius II	AE 13mm, type <i>Fel Temp Reparatio</i> (Fallen horseman)	350s-60s	B	Area 1 L.1
138. Irregular, Constantius II	AE 12.5mm, type, <i>Fel Temp Reparatio</i> (Fallen horseman)	350s-60s	C	SW F.48
139. Irregular, Constantius II	AE 11.5mm, type <i>Fel Temp Reparatio</i> (Fallen horseman)	350s-60s	B	Area 3, L.1
140. Irregular, Constantius II	AE 9mm, type <i>Fel Temp Reparatio</i> (Fallen horseman)	350s-60s	C	F.1
141. Valentinian I	AE3, LRB2-477, SECVRITAS REIPVBLICAE (Arles)	364-367	C	Area 2 (Unstrat.)
142. Valentinian I	AE3, LRB2-112, SECVRITAS REIPVBLICAE (Trier)	368-369	B	F.70
143. Valens	AE3, LRB2-301, GLORIA ROMANORVM (Lyons)	367-375	C	F.3
144. Valens	AE3, GLORIA ROMANORVM	364-378	C	Area 2 (Unstrat.)
145. Gratian	AE3, LRB2-517, GLORIA NOVI SAECVLI (Arles)	367-375	C	SW F.30
146. Gratian	AE3, LRB2-517/523, GLORIA NOVI SAECVLI			

	(Arles)	367-375	B	F.42a
147. Gratian	AE3, LRB2-503ff, GLORIA NOVI SAECVLI			
	(Arles)	367-375	D	F.94
148. Gratian	AE3, GLORIA NOVI SAECVLI (Arles)	367-375	C	F.70
149. House of Valentinian	AE3, GLORIA ROMANORVM (Lyons or Arles)	364-378	B	F.70
150. House of Valentinian	AE3, SECVRITAS REIPVBLICAE (Lyons or Arles)	364-378	C	Area 2 (Unstrat.)
151. House of Valentinian	AE3, SECVRITAS REIPVBLICAE (Lyons or Arles)	364-378	?B	F.72
152. House of Valentinian	AE3, SECVRITAS REIPVBLICAE	364-378	B	Area 3 (Unstrat.)
153. House of Valentinian	AE3, SECVRITAS REIPVBLICAE	364-378	B	F.70
154. House of Valentinian (probable)	AE3, ? SECVRITAS REIPVBLICAE	364-378	?	Area 3, L.3
155. House of Valentinian (probable)	AE3, ? GLORIA ROMANORVM	364-378	?	F.1
156. House of Valentinian (probable)	AE3, ? SECVRITAS REIPVBLICAE	364-378	?C	F.70
157. House of Valentinian (possible)	AE3	364-378	?	SW Area 6
158. House of Constantine or Valentinian	AE3	330-378	?	F.2
159. House of Constantine or Valentinian	AE3	330-378	?	F.70
160. Gratian	AE4, VOT XV MVLX XX	378-383	B	Area 2
161. Arcadius or Honorius	AE4, VICTORIA AVGGG	388-402	C	F.1
162. House of Theodosius	AE4, VICTORIA AVGGG	388-402	D	SW F.63
163. House of Theodosius (probable)	AE4, probably VICTORIA AVGGG	388-402	?D	F.1
164. House of Theodosius (probable)	AE4	?379-402	?B	F.41
165. Uncertain	AE3/4	2nd half		
		4th C.	D	Area 2 (Unstrat.)
166. Uncertain	AE3/4	2nd half		
		4th C.	?	Layer (2nd scraping)
167. Uncertain	AE 10.5mm, irregular or possibly Theodosian	c. 345+	D	
168. Uncertain	AE, broken	?1st-3rd C.	?	SW F.52
169. Probably irregular radiate	AE 14mm, possibly type <i>Pietas Augg</i> of Tetricus II	?later		
		3rd C.	?C	F.2
170. Probably irregular radiate	AE 9.5mm	?later		
		3rd C.	B	F.2
171,				
172. Probably irregular radiate	AE 12mm, 6.5mm	?later		
		3rd C.	?B	F.3

*Illegible coins, later 3rd-4th C.*

<i>Diameter</i>	<i>Provenance</i>
173. AE3	F.3
174. 14mm	SW F.48
175. 12mm	F.66
176. 12 x 10mm	F.1
177. 11mm	Area 2 (Unstratified)
178. 11mm	F.41
179. 10mm	Area 2 (Unstratified)
180. 10mm	Area 5, F.1
181. 10mm	F.3
182. 9mm	Area 3, L.1
183. 9mm	Area 2-4
184. 8mm	F.41
185. 7mm	Area 5, F.2

*The following coins broken, corroded and illegible*

186. L. 4, 2nd scraping  
 187. F.43a  
 188. SW F.6  
 189. SW F.26  
 190-  
 192. SW F.28  
 193. SW F.46

194. SW F.48  
195. SW Unstratified

*Notes on individual coins*

No.

1. This has a hole drilled near the edge, presumably for suspension.
14. Very few quadrantes have been found in Britain, and these tend to be of 1st-century date. To the writer's knowledge, no other quadrans of Hadrian is known from Britain.
20. Struck on a small, uneven flan, 23 x 21.5mm, characteristic of many of the Antonine 'Britannia' coins.
26. A coin of considerable rarity.
34. In RIC, Mars carries a spear. Its absence on this specimen does not seem to be a striking fault.
42. Mint-mark is  $\frac{XI}{X}$ . RIC has  $\frac{I}{X}$ .
49. Sestertii of Postumus are scarce as site-finds.
103. An extremely rare variety.
137. This may be an overstrike.

THE COIN HOARD

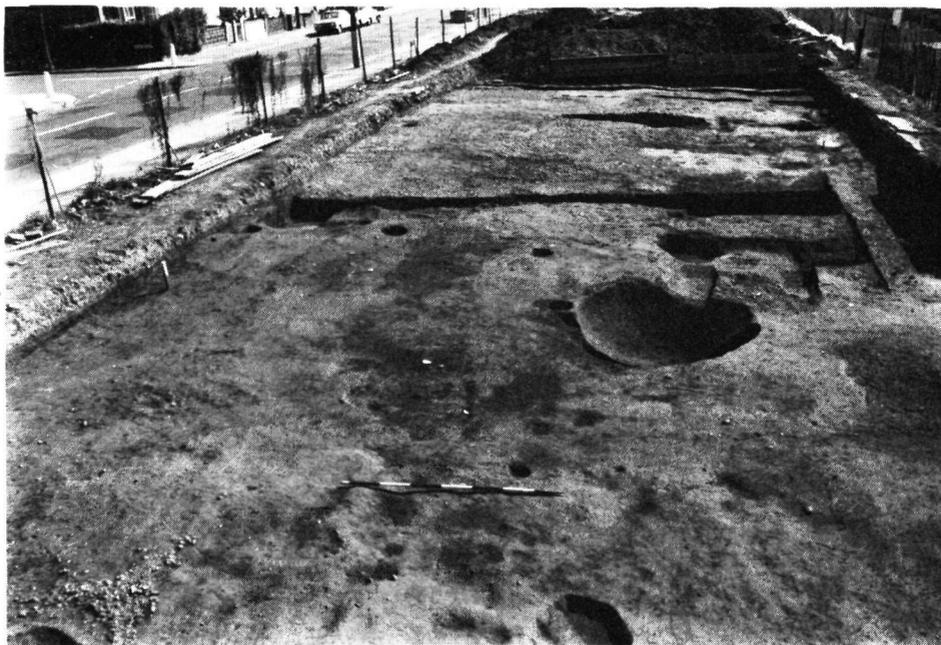
BY J. P. C. KENT

A hoard, consisting originally of 326 pieces was found in the remains of a very large grey pot, but this seems an unlikely container for so few coins. Many of the coins were entirely oxydized and did not survive the necessary cleaning. The 250 survivors, many in a very poor condition, probably over-represent the larger types earlier than AD 330, and there has doubtless been a specially heavy toll of the imitations of the post-AD 330 coinage. A single coin of Constans shows that the date can be no earlier than AD 334, and there are no examples of the GLORIA EXERCITVS 'One standard' issue that must have begun about the end of AD 335.

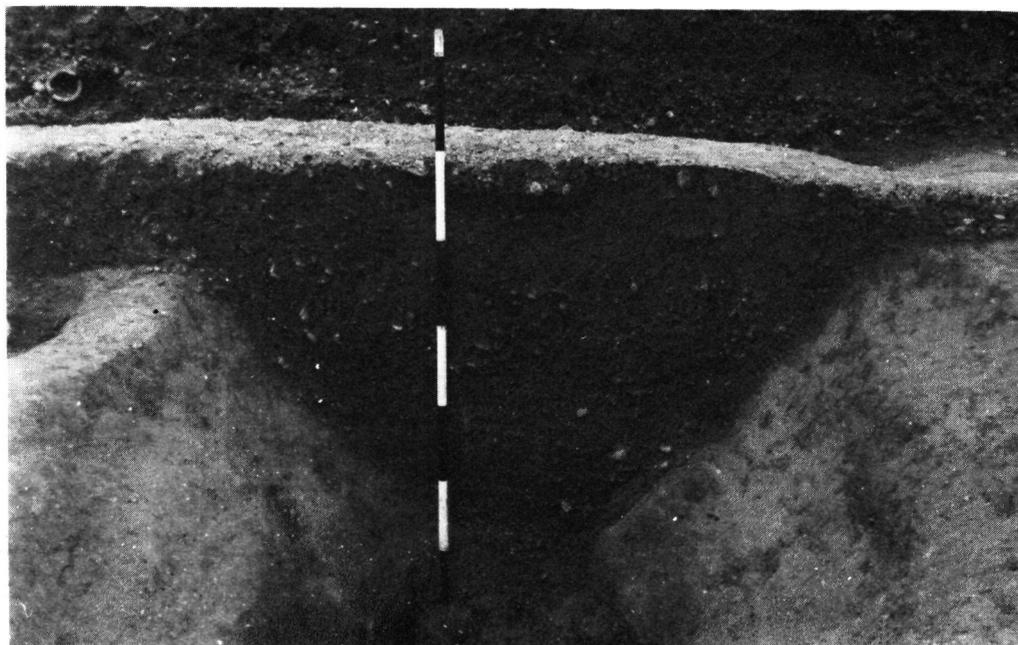
- |  |   |
|--|---|
| <p>3rd century Tetricus II (271-274) <i>RIC</i>. 224 1, uncertain 1.<br/>317-318 Constantine I <i>RIC</i>. London 105 (but PRINCIPIA) 1.</p> <p>318-324 IOVI CONSERVATORI. <i>RIC</i>. Cyzicus 15 <i>off.</i> B 1, <i>off.</i> A 1, 18 <i>off.</i> A 1, <i>RIC</i>. Alexandria 30 <i>off.</i> A 1.<br/>VICTORIAE LAETAE PRINC PERP etc. <i>RIC</i>. London 158 1, 166 1, 169 1, 172 1, 181 1; Trier 213 <i>off.</i> S 1; Lyons 90 1.<br/>VIRTUS EXERCIT. <i>RIC</i>. London 190 1; Trier 258 <i>off.</i> S 1; Lyons 116 1.<br/>BEATA TRANQVILLITAS etc. <i>RIC</i>. London 207 (var. bust r.) 1, 214 (but obv. 7C31) 1, 236 2, 240 1, 251 1, 257 1, 275 2, 287 6; Trier 308 <i>off.</i> ? 1, 316 <i>off.</i> P 2, 341 <i>off.</i> P 3, <i>off.</i> S 1, 353 <i>off.</i> P 2, 372 <i>off.</i> S 1, 389 <i>off.</i> P 1, 390 <i>off.</i> S 1 399 <i>off.</i> P 1, 410 <i>off.</i> P 1; Lyons 131 1, 133 1, uncertain cf. 204 1.<br/>SARMATIA DEVICTA. <i>RIC</i>. London 289 2; Trier 429 <i>off.</i> P 1, <i>off.</i> S 1, 435 <i>off.</i> P 1, <i>off.</i> S 2; Lyons 214 5, 222 1.<br/>VOT XX DN CONSTANTINI MAX AVG. <i>RIC</i>. Ticinum 167 <i>off.</i> S 1; Uncertain mint 2.<br/>VOT X CAESARVM NOSTRORVM. <i>RIC</i>. London 291 1, 292 7; Trier 433 <i>off.</i> S 2, 440 <i>off.</i> P 2, <i>off.</i> S 3, 441 <i>off.</i> S 1; Aquileia 113 <i>off.</i> T 1, 114 <i>off.</i> T 1; Uncertain mint, Constantine II, 1; Irregular. Crispus 1, Constantine III.<br/>VOT V CAESARVM NOSTRORVM. <i>RIC</i>. Siscia 163 <i>off.</i> E 1.</p> <p>324-330 PROVIDENTIAE AVGG and CAESS. <i>LRBC</i>.</p> | <p>I. London 4 1, 6 4; Trier 15 <i>off.</i> S 1, 18 <i>off.</i> P 1, 28 <i>off.</i> S 1, 33 <i>off.</i> P 2, <i>off.</i> S 1, 34 <i>off.</i> P 1, <i>off.</i> S 2, 38 <i>off.</i> P 3, 40 <i>off.</i> S 1; Nicomedia 1094 <i>off.</i> A 1; Uncertain mint, Constantine I 1.<br/>VIRTUS AVGG. <i>LRBC</i>. I Arles 329 <i>off.</i> P 1.<br/>SECVRITAS REI PVBLICE. <i>LRBC</i>. I Trier 41 <i>off.</i> S 1.</p> <p>330-335 GLORIA EXERCITVS. <i>LRBC</i>. I Trier 53 <i>off.</i> S 2, 53a <i>off.</i> P 1, 54 <i>off.</i> P 1, 56 <i>off.</i> S 2, 57 <i>off.</i> P 2, <i>off.</i> S 3, 60 <i>off.</i> S 4, 63 <i>off.</i> P 2, <i>off.</i> S 2, 64 (but bust J) <i>off.</i> S 1, 67a <i>off.</i> P 1, 68 <i>off.</i> S 2, 69 <i>off.</i> P 2, <i>off.</i> S 2, 81 <i>off.</i> P 1; Lyons 186 <i>off.</i> P 1, 187 <i>off.</i> P 1, 188 <i>off.</i> P 1, <i>off.</i> S 1, 198 <i>off.</i> P 2, Constans (mark uncertain) 1; Arles 355 <i>off.</i> S 1, 367 (but bust K) <i>off.</i> P 1, 373 <i>off.</i> ? 1, Constantine I (mark uncertain) <i>off.</i> S 1; Rome 534 <i>off.</i> T 1; Uncertain mint, Constantine II 3, Constantius II 2, uncertain emperor 1; Irregular 2.<br/>VRBS ROMA. <i>LRBC</i>. I Trier 58 <i>off.</i> P 10, <i>off.</i> S 6, 65 <i>off.</i> S 5, 70 <i>off.</i> S 3, 76 <i>off.</i> P 1, <i>off.</i> ? 1, 85 <i>off.</i> P 1, uncertain mark and <i>off.</i> 1; Lyons 184 <i>off.</i> P 3, 190 <i>off.</i> S 1, 200 <i>off.</i> P 3, 205 <i>off.</i> P 2; Heraclea 922 <i>off.</i> 1; Uncertain mint 4; Irregular 1.<br/>CONSTANTINOPOLIS. <i>LRBC</i>. I Trier 59 <i>off.</i> P 10, <i>off.</i> S 4, 66 <i>off.</i> P 3, <i>off.</i> S 2, 71 <i>off.</i> P 4, <i>off.</i> S 3, 77 <i>off.</i> S 1, 86 <i>off.</i> P 1; Lyons 185 <i>off.</i> P 3, 201 <i>off.</i> P 7; Siscia 746 <i>off.</i> B 1; Uncertain mint 5; Irregular 4.<br/>Uncertain 2.</p> |
|--|---|

The following rulers and personifications are represented in the hoard: Tetricus II, Licinius I, Licinius II, Constantine I, Crispus, Constantine II, Constantius II, Constans, Helena, Urbs Roma and Constantinopolis.

The 218 coins which can be attributed to specific mints are shown on the following table:



1. Lincoln Road, Enfield: Area 3. Phase 2 in the course of excavation. The industrial pit in the centre has been half-sectioned



2. Lincoln Road, Enfield: Area 3. Section across early ditch (F.26). (Scale 2 metres). (*Photographs A. E. Johnson*)



3. Lincoln Road, Enfield: Area 2. Phase 4. Late Roman gravel spreads



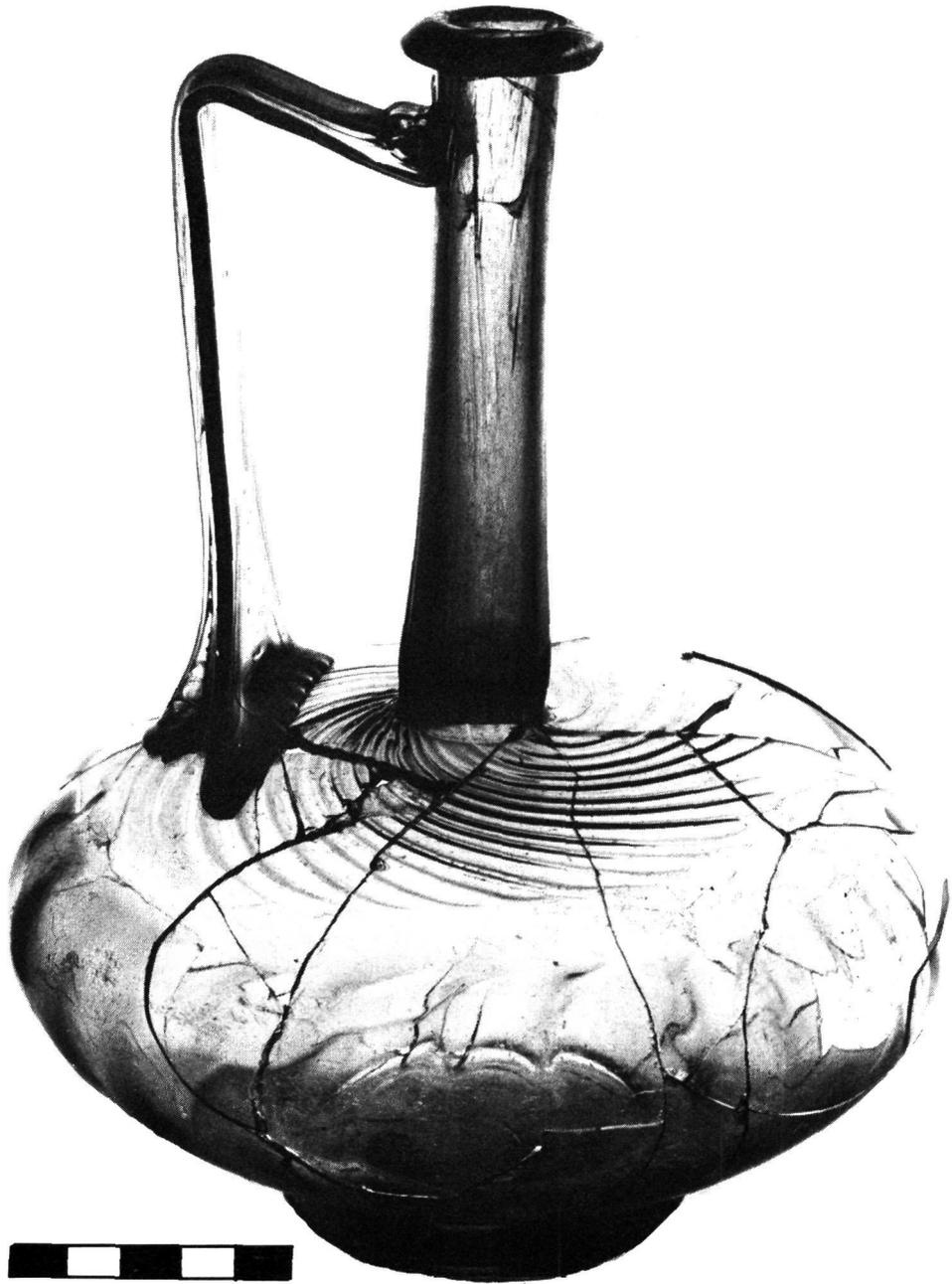
4. Lincoln Road, Enfield: Area 2. Phase 4 deposits sectioned and Phase 1 circular gravel floor revealed in the foreground. (Scale 2 metres). (*Photographs A. E. Johnson*)



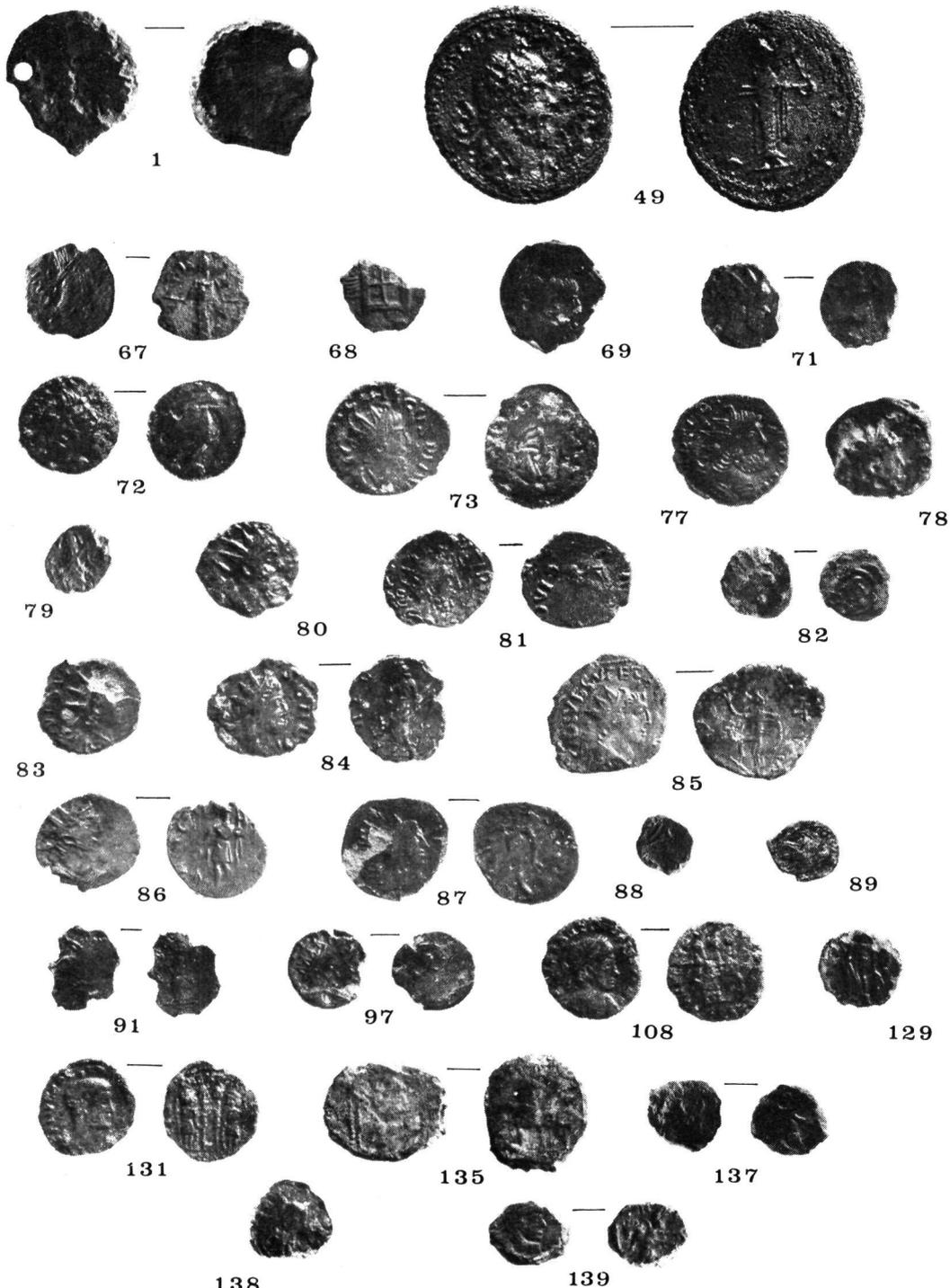
5. Lincoln Road, Enfield: Area 3. General view of the excavation, looking west. The scale in the foreground rests on the metallised roadway. (Scale 2 metres). (Photograph A. E. Johnson)



6. Aerial photograph of Enfield Playing Fields looking east, showing the possible line of Ermine Street (arrowed)



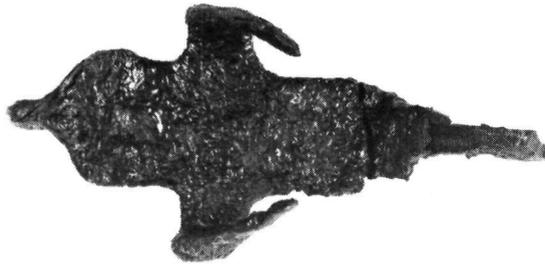
7. Lincoln Road, Enfield: Glass jug; No. 2 Fig. 27 and p. 155 (Scale 5cm). (*Photograph Keith Bellamy*)



8. Lincoln Road, Enfield: Irregular Roman coins. (1/1) (p. 163). (Photograph Keith Bellamy)



9. Lincoln Road, Enfield: Late Roman/Saxon buckle; No. 18 Fig. 30 and p. 169 (Scale 10mm).  
*(Photograph Trevor Hurst)*



10. Lincoln Road, Enfield: Miniature hipposandal; No. 19 Fig. 37 and p. 176 (see text for measurements). (*Photograph by courtesy of Ancient Monuments Laboratory, Department of the Environment*)

	London	Trier	Lyons	Arles	Ticinum	Rome	Aquileia	Siscia	Heraclea	Nicomedia	Cyzicus	Alexandria
317-318	1	—	—	—	—	—	—	—	—	—	—	—
318-324	31	29	11	—	1	—	2	1	—	—	3	1
324-330	5	14	—	1	—	—	—	—	—	1	—	—
330-335	—	84	26	4	—	1	—	1	1	—	—	—
	37	127	37	5	1	1	2	2	1	1	3	1

## 7. THE ROMAN SMALL FINDS

(At the time of writing the small finds from Areas 1-4 were awaiting conservation in the Ancient Monuments Laboratory, Department of the Environment. A few of the better preserved bronze objects were available for drawing, but most of the ironwork had to be drawn from X-rays. The finds, when conserved, will be available for further study at Forty Hall Museum, Enfield.)

## COPPER ALLOY

(Fig. 29) BY GRAHAM DEAL (Nos. 1-29) AND A. E. JOHNSON (Nos. 30-53).

1. Brooch with criss cross decoration, with red enamel in decoration; Collingwood and Richmond Group Q. (Site watching).
2. Disc brooch with cog wheel decoration and traces of blue-green enamel. (F.1).
3. Brooch of Dolphin type; Collingwood and Richmond Group H. (Site watching).
4. Signet ring; stone missing. (F.2).
5. Stud with two grooves on the upper surface. (F.6).
6. Spade shaped pendant. (F.2).
7. Harness (?) strap slide. (F.2).
8. Finger ring with beading and V-shaped incisions. (F.3).

(Fig. 30)

9. Pin. (Unstratified).
  10. Pin. (Site watching).
  11. Pin. (F.4).
  12. Pin with spherical head. (F.1).
  13. Pin with spherical head. (F.4).
  14. Three fragments of bronze sheets. (F.1).
  15. Part of a bracelet with zig-zag decoration. (F.6).
  16. Part of a bracelet with ring and dot decoration. (F.3).
  17. Spatula or large spoon with zig-zag decoration on reverse. (Site watching).
  18. Late Roman/Saxon buckle; ring and dot decoration. (F.3), (Pl. 9)).
  19. Needle. (Site watching).
- (Fig. 31)
20. Part of a ring, perhaps from a harness. (F.6).
  21. Ring, perhaps from a harness. (F.2).
  22. Bar, probably part of a buckle. (F.2).
  23. Two fragments of sheet metal rivetted together. (Area 5).
  24. ? strap part. (F.4).
  25. Stylus. (F.6).
  26. Part of a spoon handle. (Site watching).
  27. Fragment of wire. (F.1).
  28. Part of a pin with traces of blue enamel. (Site watching).

29. Irregular block. (F.4).

(Fig. 32)

30. Fibula. Distorted. The pin is intact, and therefore it is possible to see how the pierced catchplate has been bent away from the body. There is a series of small incisions on the bow; Camulodunum Type IV. (Area 2. Unstratified).
  31. A penannular brooch; the body has been broken. (Area 2. Layer 3).
  32. Fibula, undecorated; spring, pin and lower portion missing. Camulodunum Type IV. (Area 2. Layer 3).
  33. Fibula; badly corroded, part of the catchplate and pin are missing. Undecorated bow; probably Camulodunum Type V. (F.44).
  34. Fibula identified by X-ray. 45 mm long, 18 mm across the bow, with a 6 mm diameter ring attached to the top of the bow, perhaps intended to take a chain. Probably one of a pair. (F.68) (Not illustrated).
  35. Fibula; badly corroded; probably Camulodunum Type IV. (F.68).
  36. Decorative strap mounting cast in one piece. The strap loop has been forced towards the centre, perhaps in order to grip a thinner strap than was originally intended. The design is abstract and symmetrical on two planes, and is straight from the mould. There is no suggestion of any other working beyond polishing, *although it is possible that the deep recesses around the two bosses may have been enamelled; but no trace remains.*
- The use of pronounced bosses and heavy castings is commonly found in Iron Age contexts, *cf* tankard handle from Seven Sisters, Neath, Glamorgan, Fox (1958, Plate 66a, Fig. 78, 9). It is probable that these traditional elements became incorporated into examples of early Roman Provincial metalworking styles, and occur on military sites both in Britain and the continent, Brailsford (1962, 15 and Fig. 14 No. 16) ORL (1914 Pl. 12, No. 24) and at Newstead, *v* Curle (1911, 302 and Pl. 75 No. 1, 3, 9). (F.48. Layer 1).
37. Bronze fitting, 425 x 225 mm. Made from a single sheet. Illustrated from an X-ray. There are two oval

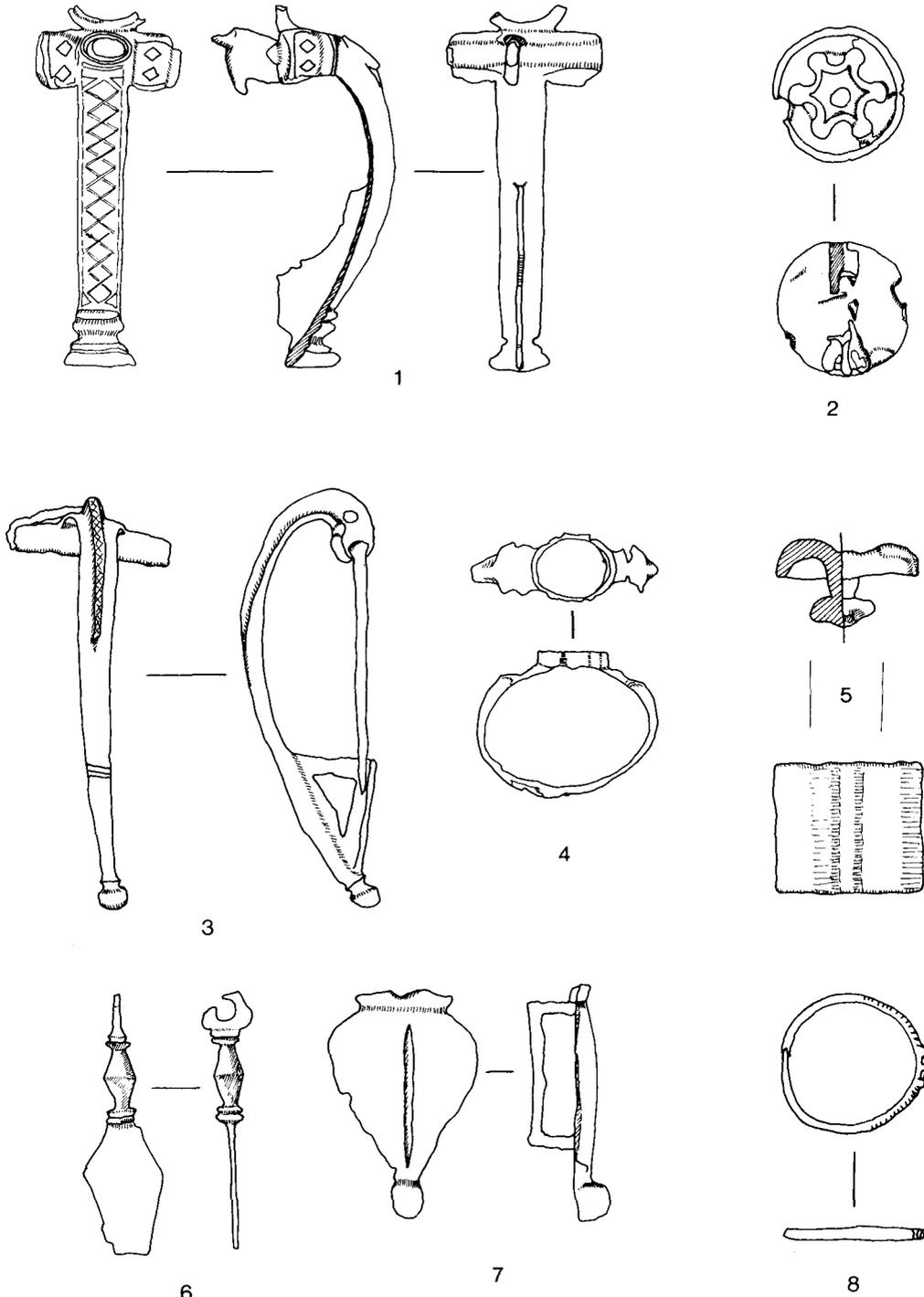


Fig. 29. Lincoln Road, Enfield. Small finds. Copper alloy (1-8). (1/1)

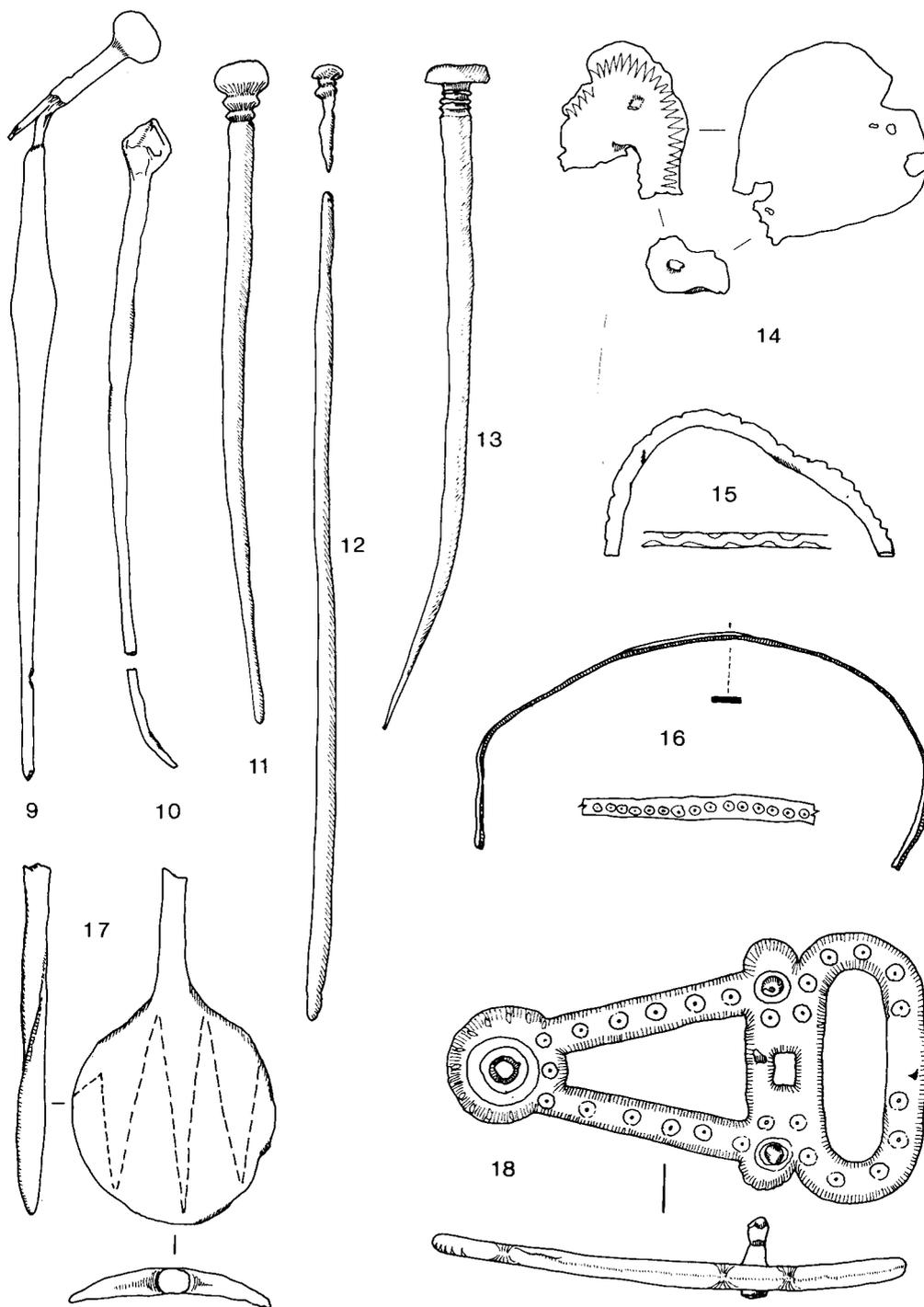


Fig. 30. Lincoln Road, Enfield. Small finds. Copper alloy (9-18). (1/1)

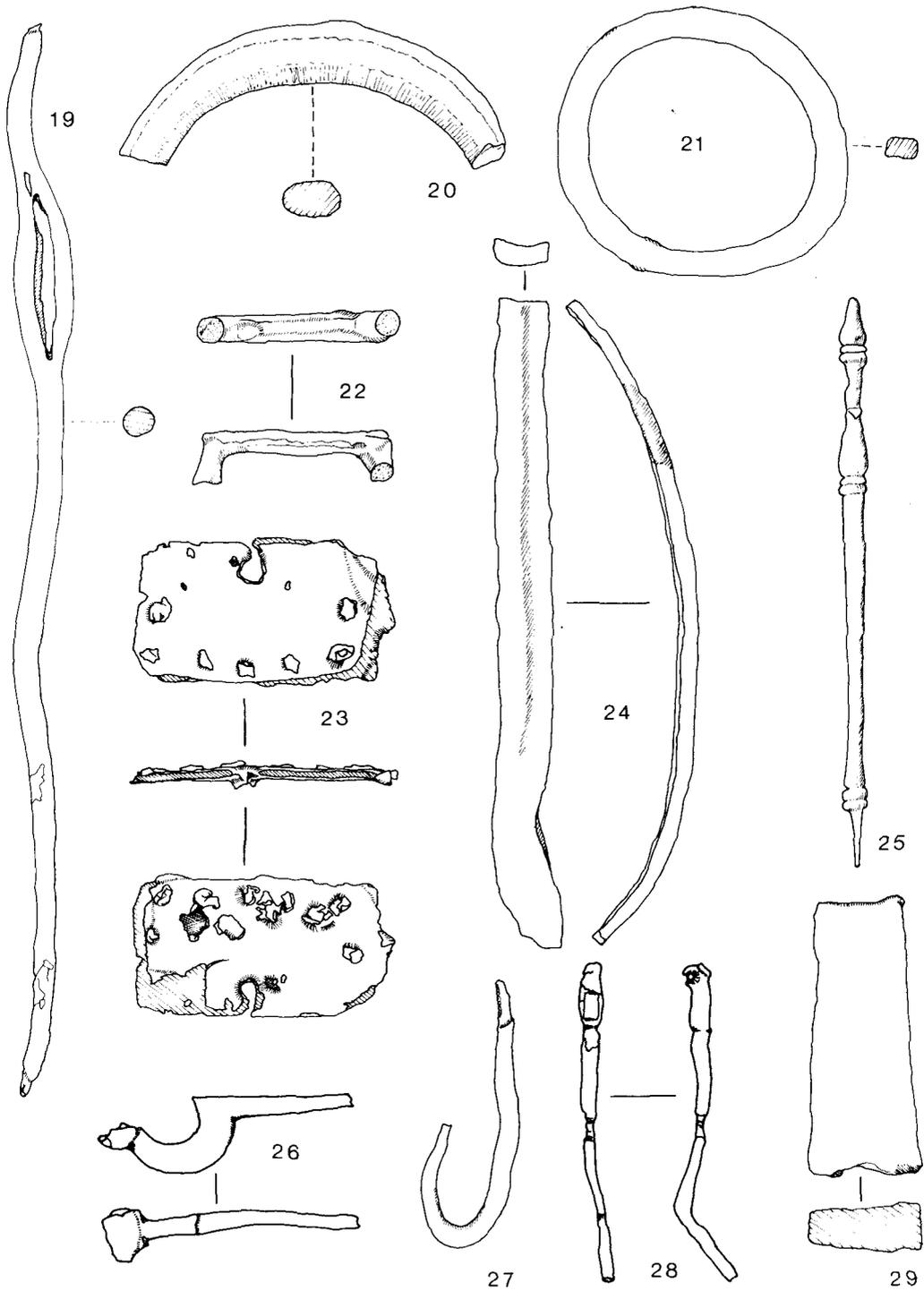


Fig. 31. Lincoln Road, Enfield. Small finds. Copper alloy (19-29). (All 1/1, except No. 23, 1/2)

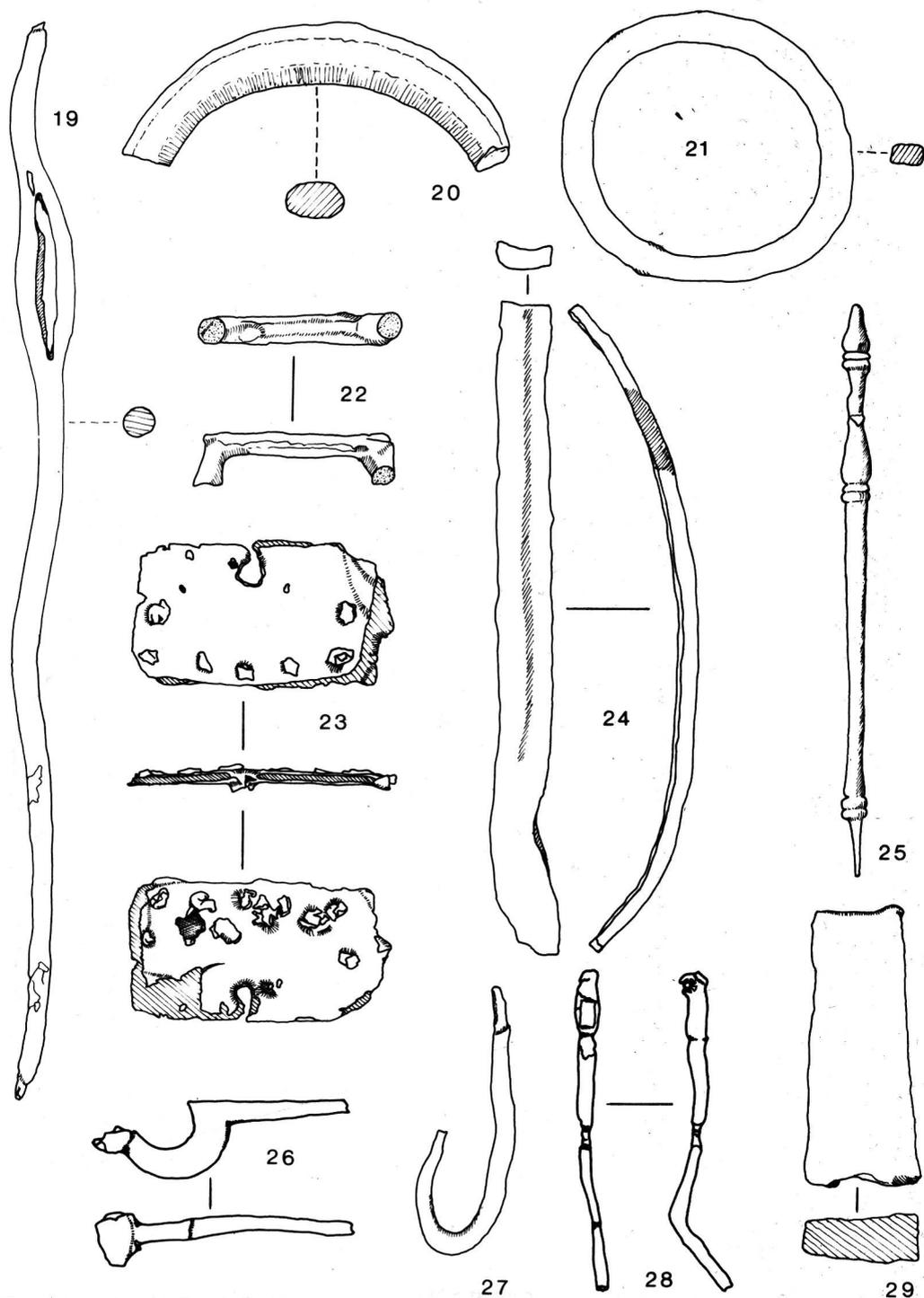


Fig. 31. Lincoln Road, Enfield. Small finds. Copper alloy (19-29). (All 1/1, except No. 23, 1/2)

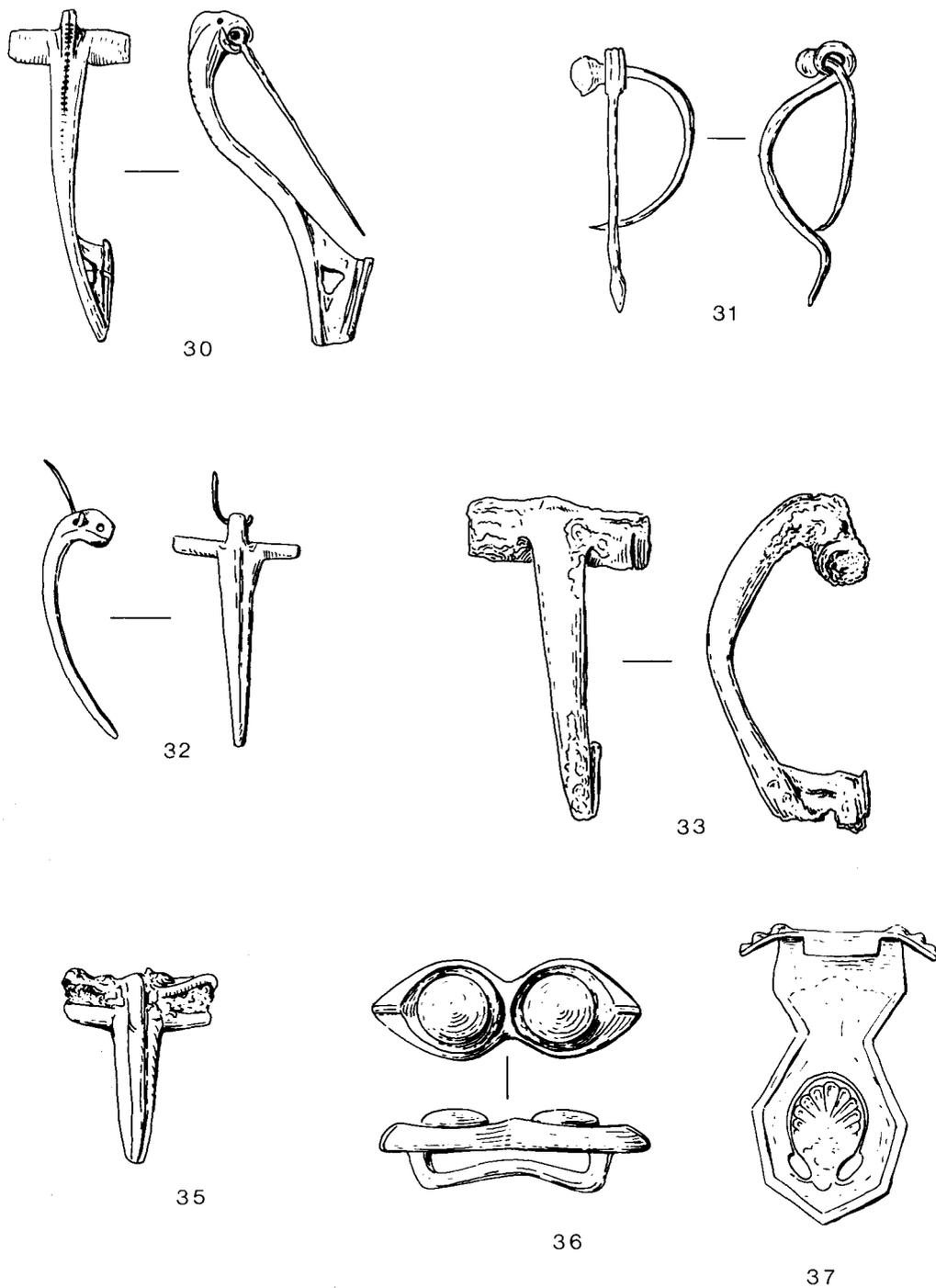


Fig. 32. Lincoln Road, Enfield. Small finds. Copper alloy (30-37). (1/1)

holes at one end joined by an elliptical cut forming a tongue into which a scallop shell motif has been impressed. The opposite end is folded at right angles and a small tab bent back parallel with the body. Two extensions on either side of the tab have three raised projections. This piece is probably a fitting from a leather or wooden container, and may have functioned as a fastener. It would be possible to thread a tape under the tongue behind the scallop and thus into the two holes. (Area 1. Layer 2).

(Fig. 33)

38. Pin with small elliptical head. Length 113mm. Slightly waisted at its junction with the shaft. (F.41e).
39. Pin with cone-shaped head. Length 90mm. (Area 2. Layer 4).
40. Pin with small circular head. Length 90mm. (F.42b). There were 9 other pins recorded in various contexts.
41. Piece of sheet bronze 1mm thick, pierced at one end by two small bronze rivets, one of which remains *in situ*. The domed head of this rivet corresponds with an extremely smooth surface which appears to have been worn, possibly by handling or polishing. The reverse is also flat, but not so highly polished. This sheet was probably in contact with a flat non-metallic surface, possibly wood or leather. This piece may be half of a strap fitting; a similar pair of plates was found in a military context at Templeborough, Yorks, May (1922, Pl. XV B, Nos. 11-12, 75) (F.42b).
42. Small rectangular plate, 24 x 13mm. Pierced to one side of the centre by a 4mm diameter hole. (Area 2. Layer 3).
43. Small pair of plain tweezers, formed from a single strip of bronze. Half of one side missing. A common type found frequently on Roman sites of all periods. (F.19).
44. Base of a cast bronze seal box. Heart shaped, with three 3mm diameter perforations. Similar heart shaped seal boxes with champlévé enamel decoration on their lids have been recorded from London, Smith (1859, 129 and Pl. 33, 14 and 15); Reculver, Smith (1850, Plate 7, 14); Richborough, Bushe-Fox (1949, Plate 34, 77); and at Zugmantel, ORL (1914 Plate

#### LEAD

BY A. E. JOHNSON

(Fig. 33)

1. Small weight, irregular in shape, formed by drilling a 4mm hole in a piece of 3mm sheet. Weight = 28.3mm. (F.19).
2. Cylindrical object, probably a weight, produced by wrapping a piece of 2mm sheet round a 5mm core. (Area 2. Layer 3).
3. Small strip 35 x 50 x 1mm thick. Deliberately cut or trimmed on both sides. Probably broken at either end. (F.16).
4. Sheet 1mm thick. Shows signs of having been cut

#### CLAY

1. Base of a beaker of dark brown fabric trimmed and worn smooth at the sides. Diameter: 37mm. Probably

#### BONE AND JET

BY GRAHAM DEAL

(Fig. 34)

(All the objects in this section are from unstratified contexts).

1. Bone pin.

10, Nos. 33 and 47) (Area 1. Layer 2).

45. Small finger ring, 18mm in diameter, 3mm wide. Surface badly corroded; may have been decorated. (Area 2. Unstratified).
46. Small finger ring, 18mm in diameter; 2.5mm wide. Corroded, but no trace of decoration. (Area 2. Layer 4).
47. Finger ring, 21mm in diameter. Formed by coiling a 2.5mm thick strip of bronze. Beaten thin at both terminals in order to close the join, which has subsequently sprung apart. (Area 3. Unstratified).
48. Rim of beaten vessel, approx. 120mm in diameter. Folded rim. (Area 2. Layer 2).
49. A bronze amulet or pendant. Mr. Percival Turnbull writes:  
A bronze amulet or pendant, consisting of a curving shaft of 'U-section', looped for suspension at the thicker end, and tapering to a small knobbed terminal. Amulets of this type are often grouped with the phallic pendants common on Roman military sites of the 1st and 2nd centuries, which have been discussed by Dr. Graham Webster, Hobbly (1967). This example, with the glans-like swelling at its tip, may be seen in this light. R. A. Smith, however, has considered this class to be charms derived from the 'cavesson' type of horse-bit, Smith (1919). (Area 2. Layer 4).
50. Piece of cast bronze, corroded. Approximately 20 x 30mm. May have formed part of a finished object subsequently broken, but more likely to be waste material from bronze smelting because the large number of impurities present giving parts of the surface a glassy appearance. (F.84) (Not illustrated).
51. Piece of sheet bronze, 1mm thick, folded and hammered flat, 250 x 130mm. (Unstratified) (Not illustrated).
52. Remains of a pin or needle, broken and badly corroded. Originally probably 110mm long. Head missing. (F.64) (Not illustrated).
53. Five fragments of thin sheet. (Area 1. layer 3) (Not illustrated).

with shears or a knife along one side. For the most part badly corroded. (F.43) (Not illustrated).

5. Small circular fragment, 40mm in diameter, and 2-3mm thick. Probably spillage from pouring. (F.19) (Not illustrated).
6. Irregular piece, c. 70 x 35 x 2mm thick. Probably spillage from a casting. The lower surface appears to have been in contact with wood whilst cooling. (F.81) (Not illustrated).
7. Piece of 1mm thick sheet. 50 x 20mm. Trimmed along one edge. (Area 2. Layer 4) (Not illustrated).
8. Irregular piece approx. 30 x 40mm. Maximum thickness = 7mm. Probably waste from a casting. (F.19) (Not illustrated).

used as a counter or gaming piece. (Area 2. Layer 1) (Not illustrated).

2. Bone pin.
3. Bone pin.
4. Jet annular bead, half remaining.
5. Jet fitting with incised decoration, perhaps inlay from a casket or piece of furniture.
6. Bone counter with a depression in the centre.
7. Bone disc with small hole in the centre.

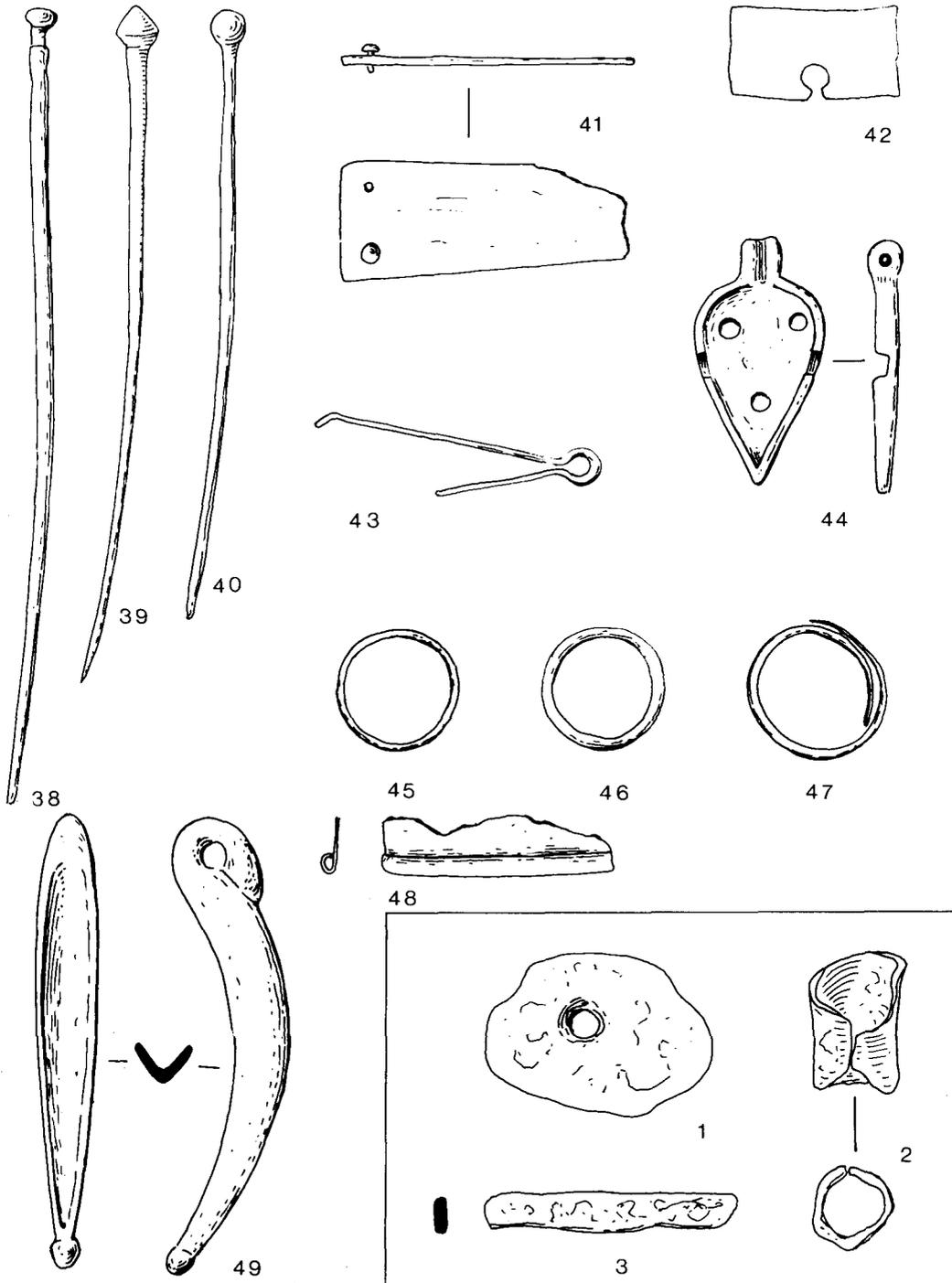


Fig. 33. Lincoln Road, Enfield. Small finds. Copper alloy (38-69) and Lead (1-3). (1/1)

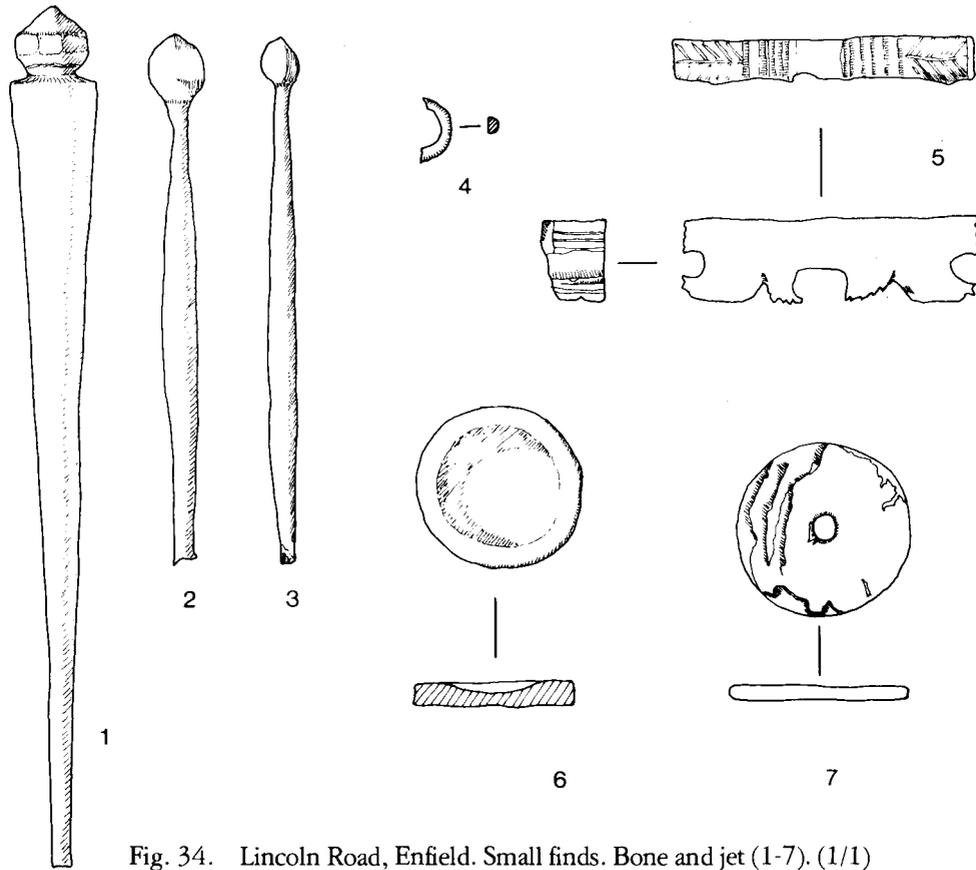


Fig. 34. Lincoln Road, Enfield. Small finds. Bone and jet (1-7). (1/1)

### IRON

BY GRAHAM DEAL (Nos. 1-12) AND A. E. JOHNSON  
(Nos. 13-22).

(Fig. 35)

1. Nail. (F.1).
  2. Ring and staple. (F.4).
  3. Uncertain function. (F.6)).
  4. Part of a brooch. (F.6).
  5. Length of twisted iron. (F.6)).
  6. Stylus with two copper alloy inlaid bands. (F.4).
  7. Lynch pin. (F.1) (Not illustrated).
  8. Knife blade. (F.4) (Not illustrated).
  9. Knife blade. (F.6) (Not illustrated).
  10. T-clanip. (F.6) (Not illustrated).
  11. Punch or drift. (F.6) (Not illustrated).
  12. Several nails. (F.6) (Not illustrated).
- (Fig. 36) (Nos. 13-19 have all been drawn from X-rays).
13. Suspension loop. (F.42).
  14. Small ring, 40mm in diameter, 3 mm thick. (F.81).
  15. Strip of iron forged decoratively at one end into a crook shape. Broken. May be a knife blade or latch lifter. (F.15).
  16. Iron fitting. Function unknown. (Area 1. Layer 2).
  17. Knife blade, 110mm long. (F.48. Layer 2).
  18. Large ring 140mm in diameter, 5mm thick, round

cross section. Drawn from an X-ray, and thus it is unclear as to how the ring was closed. (F. 65).

(Fig. 37)

19. Miniature hipposandal. Overall length, 140mm; 45mm along the base. Width 25mm. It is less than half the size of normal examples, and is probably a model. The loop has been bent away from the centre and would originally have stood vertically. (Area 2. Layer 4). (Pl. 10).
20. Hipposandal. Length, approx. 220mm; full size. This object was undergoing conservation at the time of publication, and is thus unavailable for drawing. Both the model (No. 19 above) and this hipposandal belong to Aubert's Class I, Aubert (1929, 5, 53 and 75 No. 19) having a single hooked arm at the front for attachment, with two inward curving wings to grip the front of the hoof. There is little doubt that these hipposandals were a form of temporary horseshoe. For a general discussion of the type see Wheeler and Wheeler (1936, 220-221 and Plate 63b). From late Roman road surface in Area 3. (See Fig. 12) (Not illustrated).
21. Remains of the sole of a shoe with hobnails attached. Very badly corroded (F.49). Several hobnails were also scattered across the clay surface of Area 1. Layer 2. (Not illustrated).

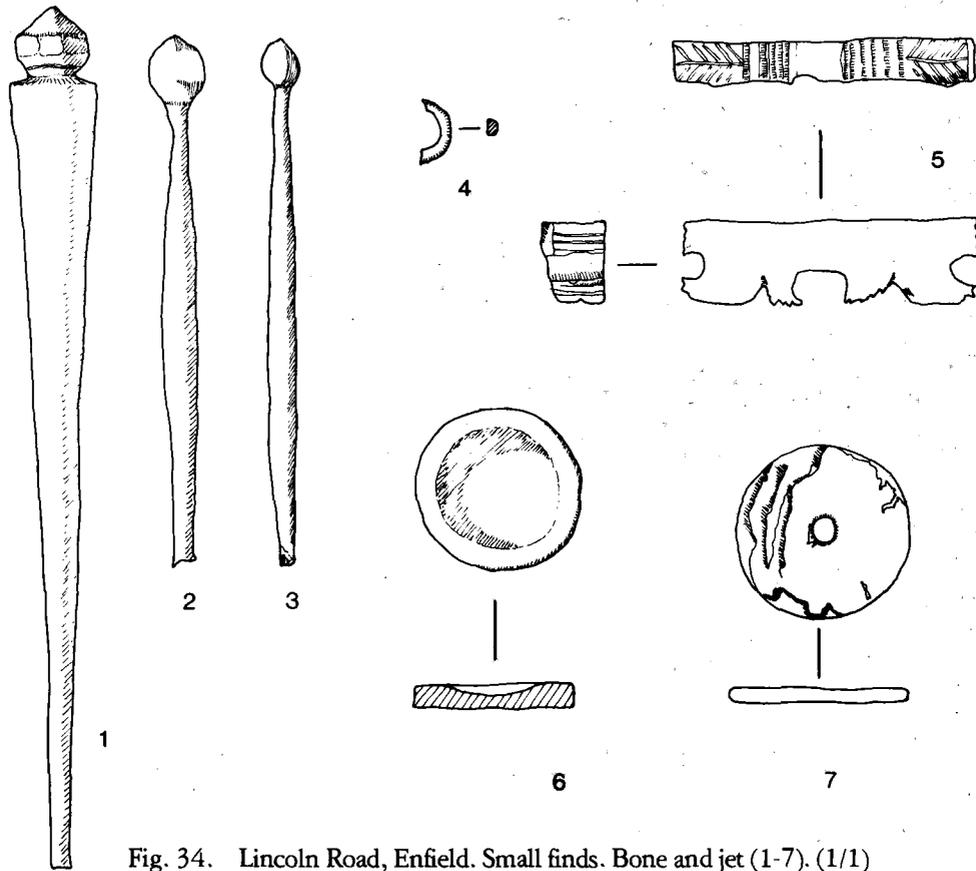


Fig. 34. Lincoln Road, Enfield. Small finds. Bone and jet (1-7). (1/1)

#### IRON

BY GRAHAM DEAL (Nos. 1-12) AND A. E. JOHNSON (Nos. 13-22).

(Fig. 35)

1. Nail. (F.1).
  2. Ring and staple. (F.4).
  3. Uncertain function. (F.6)).
  4. Part of a brooch. (F.6).
  5. Length of twisted iron. (F.6)).
  6. Stylus with two copper alloy inlaid bands. (F.4).
  7. Lynch pin. (F.1) (Not illustrated).
  8. Knife blade. (F.4) (Not illustrated).
  9. Knife blade. (F.6) (Not illustrated).
  10. T-clamp. (F.6) (Not illustrated).
  11. Punch or drift. (F.6) (Not illustrated).
  12. Several nails. (F.6) (Not illustrated).
- (Fig. 36) (Nos. 13-19 have all been drawn from X-rays):
13. Suspension loop. (F.42).
  14. Small ring, 40mm in diameter, 3 mm thick. (F.81).
  15. Strip of iron forged decoratively at one end into a crook shape. Broken. May be a knife blade or latch lifter. (F.15).
  16. Iron fitting. Function unknown. (Area 1. Layer 2).
  17. Knife blade, 110mm long. (F.48. Layer 2).
  18. Large ring 140mm in diameter, 5 mm thick, round

cross section. Drawn from an X-ray, and thus it is unclear as to how the ring was closed. (F. 65).

(Fig. 37)

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21. Remains of the sole of a shoe with hobnails attached. Very badly corroded (F.49). Several hobnails were also scattered across the clay surface of Area 1. Layer 2. (Not illustrated).

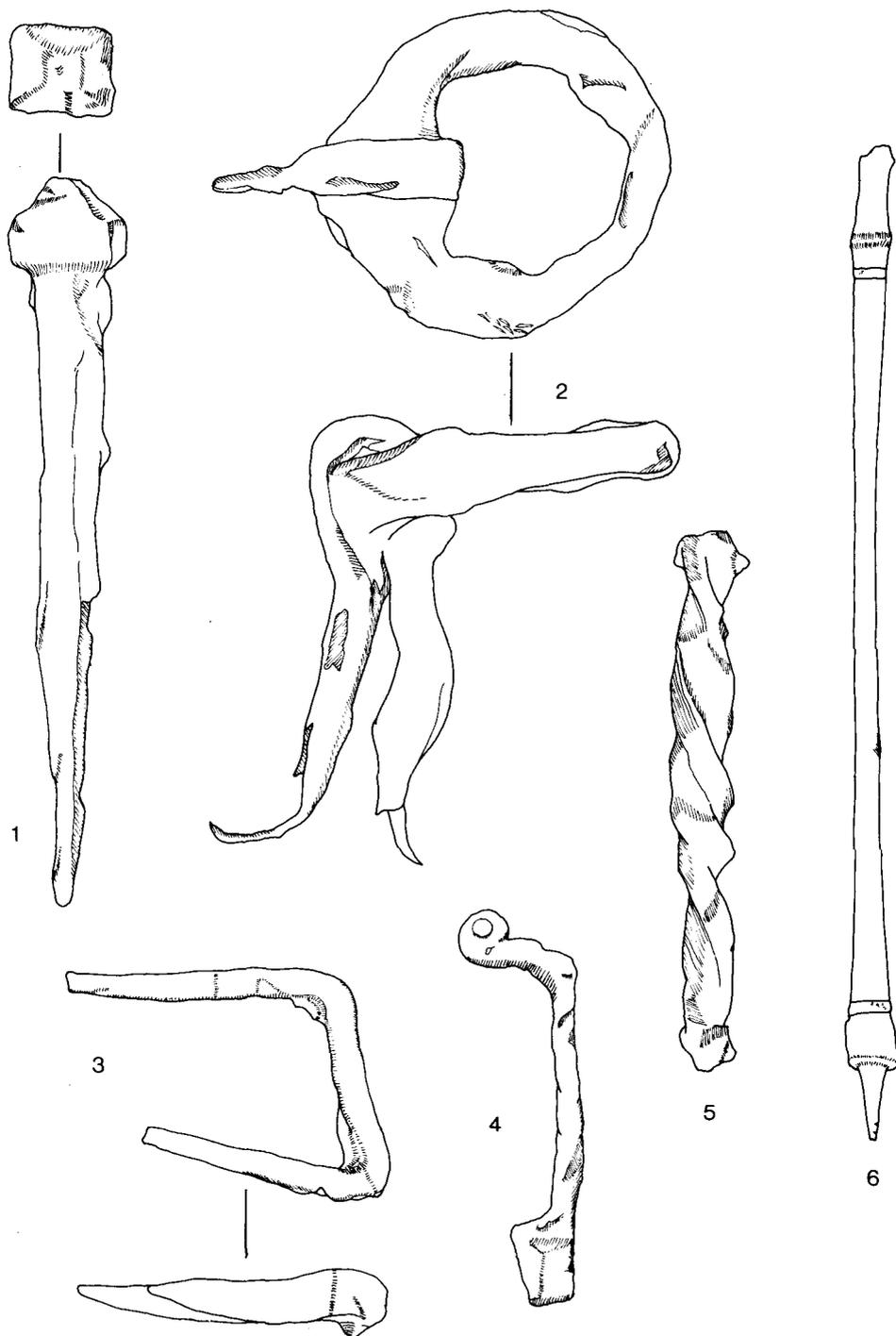


Fig. 35. Lincoln Road, Enfield. Small finds. Iron (1-6). (1/1)

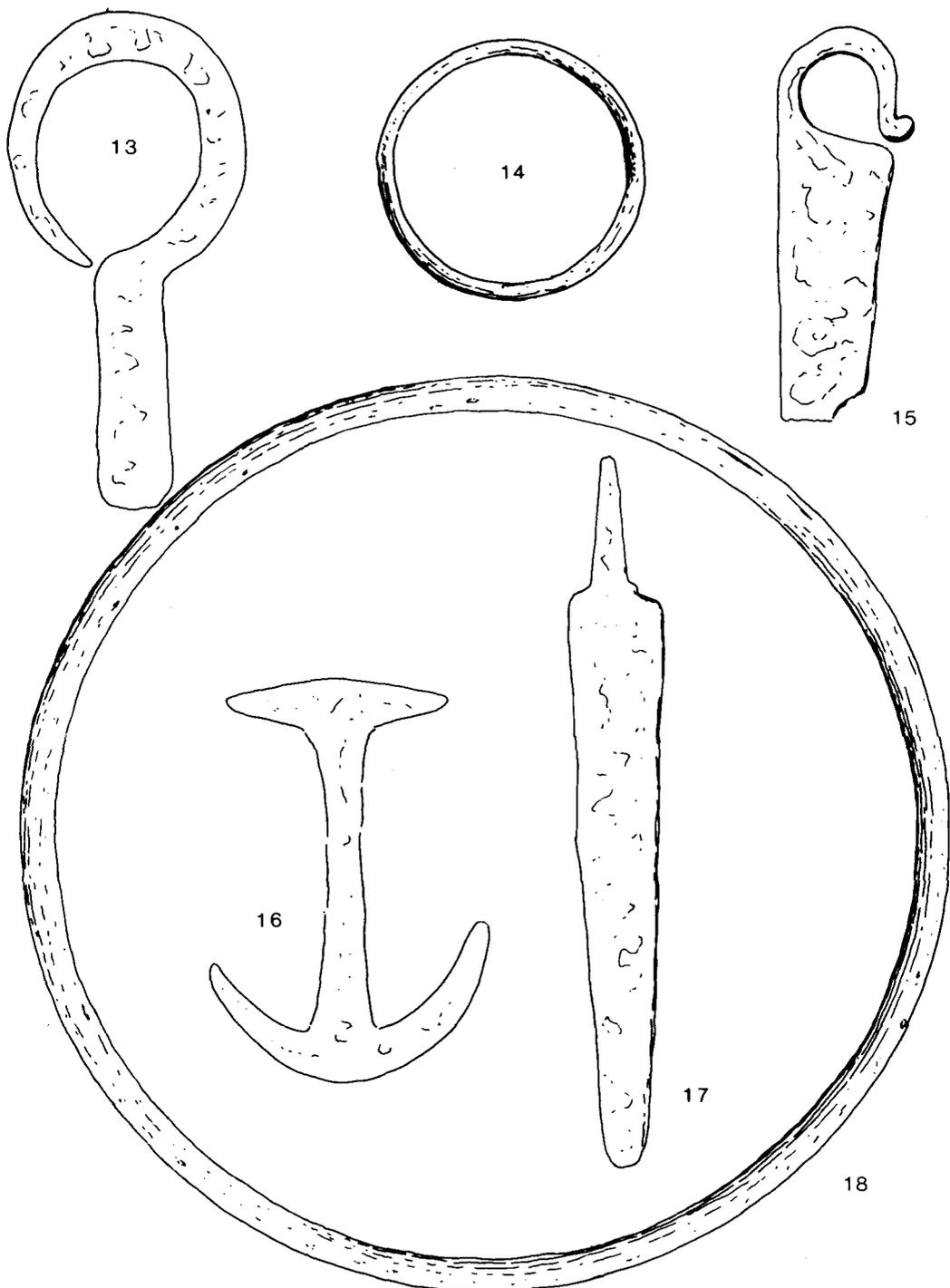


Fig. 36. Lincoln Road, Enfield. Small finds. Iron (13-18). (1/1)

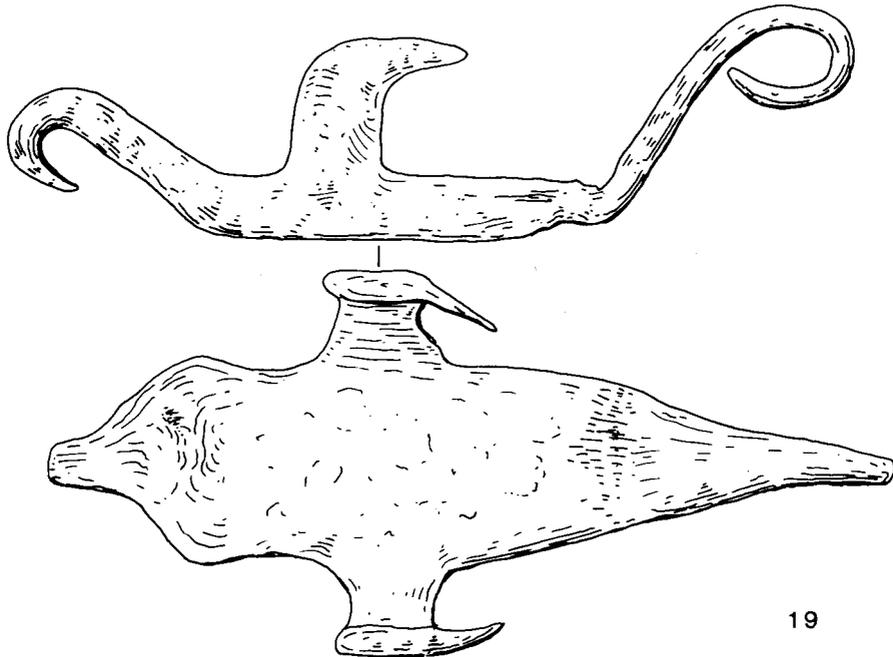


Fig. 37. Lincoln Road, Enfield. Small finds. Iron (19). (1/1)

## 8. THE QUERNS

BY P. W. GLEDHILL

(Figs. 38, 39).

The quern fragments from this site can be divided petrologically into two major groups; those made from sedimentary rocks, and those from Basaltic lava.

1. The querns from sedimentary rocks can be subdivided on the basis of their grain size and shape and the makeup of their cement:

(a) Coarse gritstone

Two fragments are made from a coarse grit consisting of sub-angular quartz grains with some grains of feldspar.

(b) Fine gritstone

A fine gritstone which has an iron oxide cement, giving the rock a red tinge, makes up four of the fragments.

(c) Quartzite

Three fragments of quern were cut from a pure sandstone (quartzite), which may have undergone some low grade metamorphism.

(d) Fine grit with carbonaceous inclusions

Only one fragment was cut from an iron cemented fine gritstone with carbonaceous inclusions, which represent decayed plant material. Such grits are typical of sediments of the Upper Carboniferous throughout Europe but, as with the other querns from sedimentary rock, no light can be shed on the exact area of origin.

2. Of more interest are the querns cut from a vesicular Basaltic lava, which make up 50% of the quern fragments from this site. This stone is known from several sites in London and its environs, see Chapman (1973, 51) and (1976, 127). It was quarried from the Bellerberg lava field near Mayen in Germany.

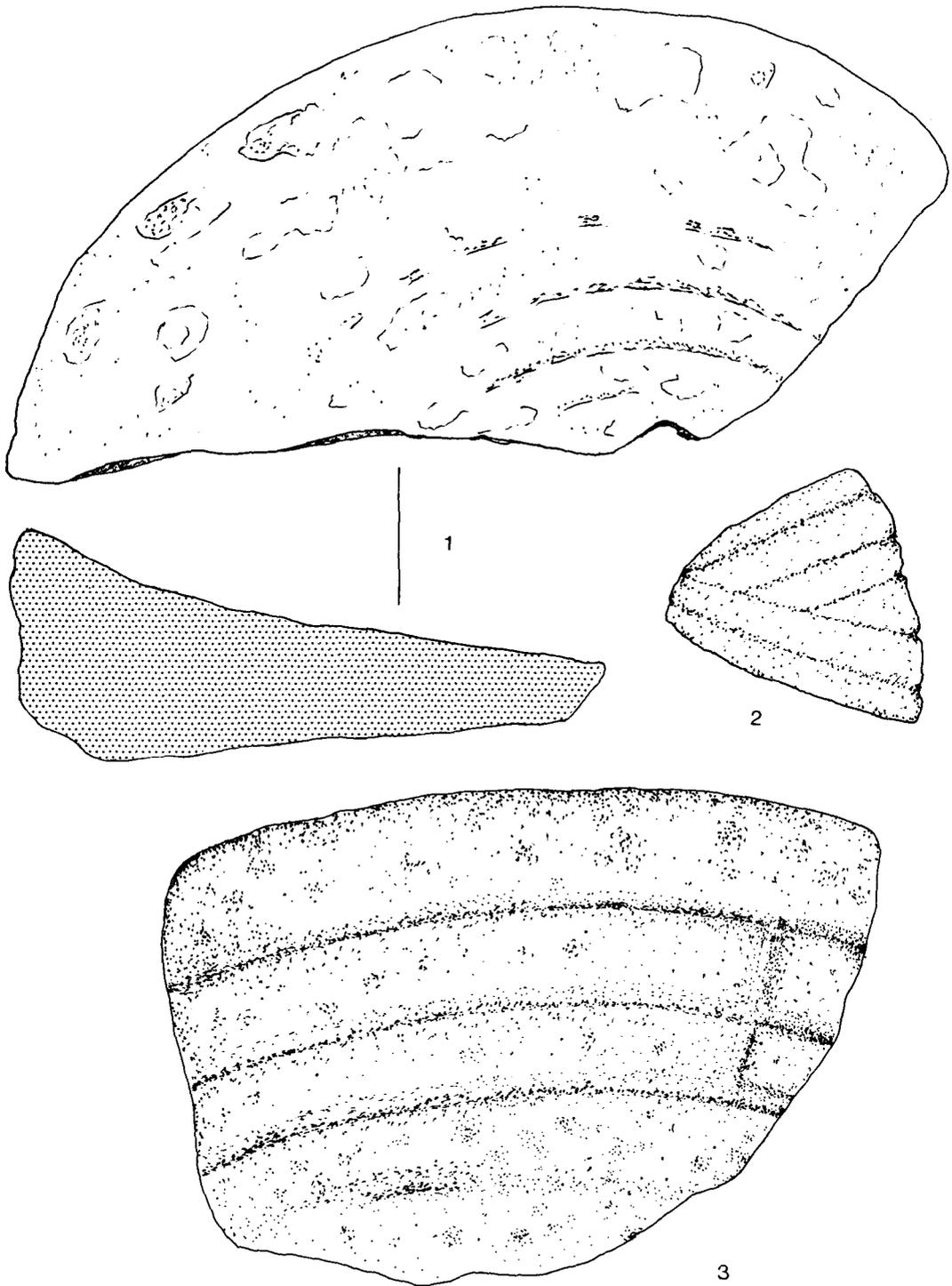


Fig. 38. Lincoln Road, Enfield. The querns (1-3). (1/2)

Gritstone Coarse with Feldspar.	Fine Grit Iron cement.	Quartzite.	Gritstone with Carbonaceous Inclusions.	Bellerberg Lava. (Nieder Mendig).
F.64 F.84	F.24 F.48 F.74	F.19 (2) F.39	F.38	F.19. F.42 F.42d. F.43a. F.48 F.61 F.70 Area 1. Layer 2. Area 3. Layer 2.

Table 4. Provenance of quern fragments

- Fragment of an upper stone of fine grit, with iron cement. (F.24).
- Small fragment of Mayen lava. Thickness = 37 mm. (Area 1. Layer 2).
- Fragment of a lower stone of gritstone with carbonaceous inclusions. Dressing marks are visible on the underside. Also vertical tooling on the edge. Thickness = 46 mm. (F.38).
- Part of an upper stone of fine grit, with iron cement. (F.74).
- Small fragment of a lower stone of Mayen lava. Thickness = 37 mm. (Area 3. Layer 2).
- Fragment of an upper stone of Mayen lava. Vertical tooling on the edge. Tooling on both surfaces; that on the underside is worn from the stone's use as an upper stone. The tooling on the top is only partly worn, suggesting that the stone may have been reversible, and could be used alternatively as a lower stone. (F.42b).

## 9. THE ANIMAL BONES FROM AREAS 149 AND 5

BY PHILIP L. ARMITAGE  
INTRODUCTION

The deposits of domestic refuse in the ditches and pits at the Lincoln Road site (Areas 149 and 5) yielded 466 mammal and 9 bird bones, as well as one complete, articulated skeleton of a calf.

With the exception of area 5 (Toop's yard) which was only partially excavated, each deposit (Area 149, F.1 to F.8) was completely excavated by careful trowelling, and all bones uncovered were collected for subsequent identification and analysis.

Table 5 shows the number of bones recovered from each feature. The largest feature which was excavated, the main ditch (F.4 and F.5), contained relatively few bones, 5.7 bones per cubic metre compared with 18.8 for the ditch/refuse dump (F.6). This may indicate that, unlike F.6, the main ditch had not been used extensively for the disposal of domestic refuse but had instead fallen into disuse and subsequently become silted-up (see report on excavation above). Only nine bones were found in the fourth century ditch (F.3) and these were in a very poor state of preservation, probably due to the acidic nature of the enclosing matrix.

For all features, except F.3 and F.8, the skeletal remains of cattle and sheep predominated over those of other animals (Table 6). The presence of skull fragments, mandibles, metapodial bones and phalanges of cattle, sheep and pig (Table 7) indicate that the domestic livestock had been slaughtered and butchered on the site. The head and extremities of the fore and hind limbs are the first parts to be removed during the dressing of a carcass and would not have been present if the butchery had been carried out elsewhere. Evidence that the meat had also been consumed on the site was provided by the presence of ribs, and the chopped and splintered remnants of 'marrow bones' (humeri, femora and tibiae etc.).

The mammalian remains are described separately in systematic order under species:

The mammal species identified:

### *Domestic*

- Horse *Equus* (domestic)

A complete mandible of a stallion or gelding, aged approximately 10 to 11 years was recovered from

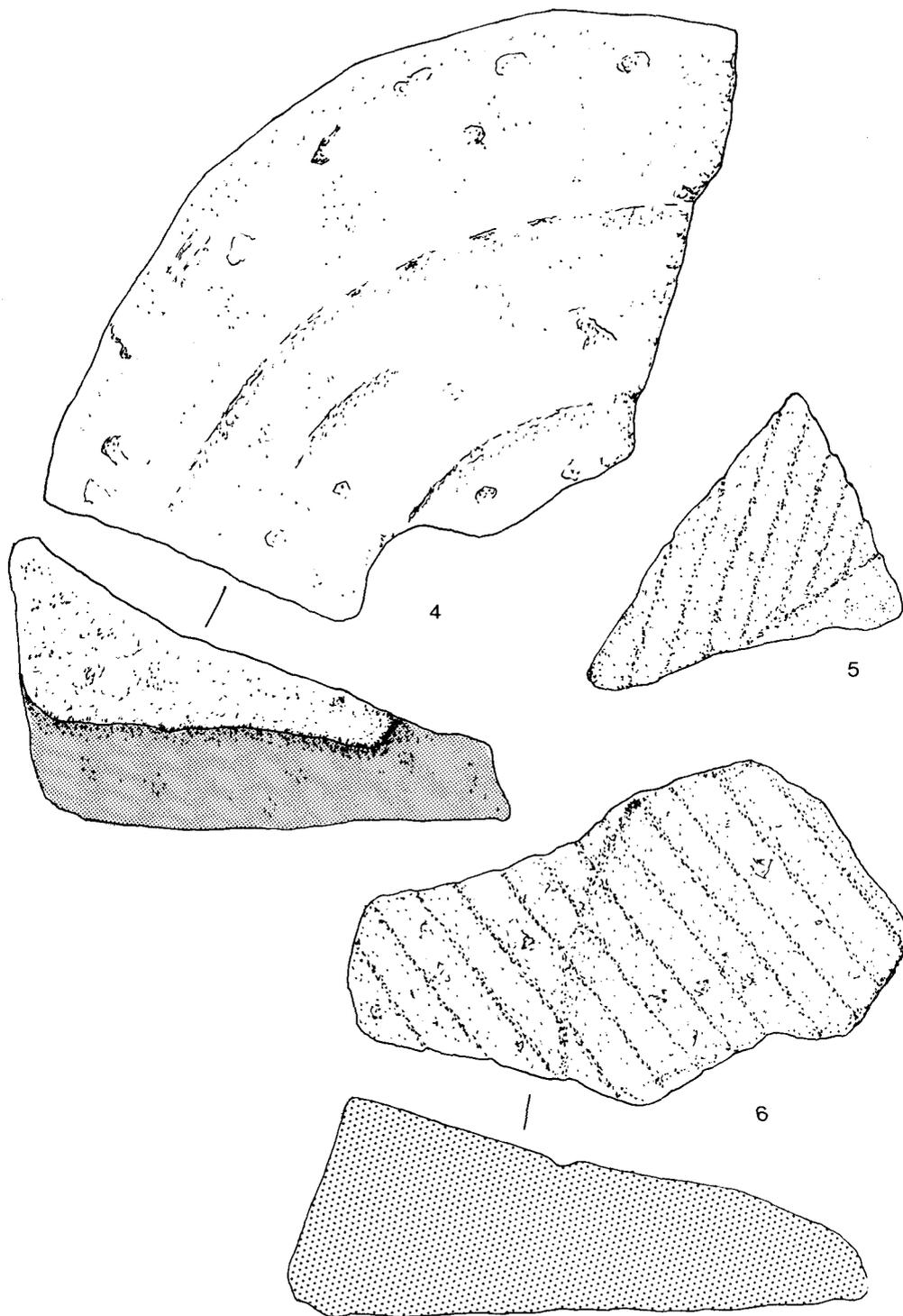


Fig. 39. Lincoln Road, Enfield. The querns (4-6). (1/2)

F.3, a ditch dated to late 3rd-mid 4th century AD.

For the complete metacarpal bone from the circular pit (F.1/6-13) the height at the withers was calculated after the method of Kiesewalter (1888), and came to 136.9 cm (approx. 13½ hands).

## 2. Cattle *Bos* (domestic)

### Horn cores:

Twenty horn cores of cattle were recovered. Apart from two which were from juveniles (with very light, porous bone) these all came from adult and sub-adult animals. The specimens are listed below according to the system for classification and description of the horn cores of cattle from archaeological sites proposed by Armitage & Clutton-Brock (1976):

#### Area 149:

F.1/6-13	Medium horned group	1 left, ox
	Unidentified group	3 fragments of 2 juveniles and 1 adult, sex?
F.4 and F.5	Short horned group	1 right, bull 2 left, bull 2 right, ox 1 left, ox
	Medium horned group	1 left, cow 1 left, bull 1 left, ox
	Unidentified group	2 fragments, sex?
F.6	Short horned group	1 left, bull
F.7	Medium horned group	1 left, ox
F.8	Medium horned group	1 right, ox

#### Area 5:

F.6	Short horned group	1 left, bull
F.8	Short horned group	1 left, cow

### Calf skeleton:

A complete, articulated skeleton of a calf was found in a shallow pit cut into the side of a ditch (F.6), and was dated to the late 2nd-3rd century AD. In the pit, the calf was lying on its right side with the forelegs stretched out, the head resting on them. Using information on the sequence of tooth eruption in 19th century cattle, Silver (1971, Table D, p.296), the age of the animal at the time of death was estimated at under 6 to 9 months.

The following measurements (mm) were taken:

skull	Cranial length: Basion — nasion (6)	141.5
	Length of face: Nasion — prosthion (7)	117.1
	Width across occipital condyles (26)	60.5
	Numbers as in von den Driesch (1976, Figs. 8b, p.29 and 8c, p.30)	
	Small bony protuberances (horn buds) present	
mandible	Upper tooth row: Deciduous premolars 2, 3 and 4 First molar partially erupted	
	Length (1)	177.1
	Length of diastema (11)	44.9
	Height: Angle of mandible — condyle (12)	71.7
	Numbers as in von den Driesch (1976, Fig. 21a, p.56)	
humerus*	Lower tooth row: Deciduous premolars 2, 3 and 4 First molar just visible in crypt	
	Length	129.5
	Min. shaft width	17.2
	Distal width across trochlea condyle	48.5
radius*	Length	143.5
	Proximal width	42.8
	Min. shaft width	19.2
	Distal width	42.9
tibia*	Length	181.4
	Proximal width	56.7
	Min. shaft width	19.9
	Distal width	40.5
femur*	Length	172.5
	Min. shaft width	17.1
	Distal width	57.1

metatarsal bone**	Length	145.6
	Proximal width	32.1
	Mid shaft width	15.7
	Distal width	33.7

All measurements follow those of von den Driesch (1976)

Key: \* Both proximal and distal epiphysis unfused

\*\* Proximal epiphysis fused, distal unfused

The cause of death could not be ascertained. The bones of the skeleton appearing normal and healthy with the exception of a deformed right metacarpal bone. A radiograph of this bone showed that it had been fractured and that the natural healing processes had been well advanced at the time of death. Although successfully healed, the break had nevertheless resulted in bowing of the shaft of the bone, possibly giving the calf a slight limp.

### 3. Sheep/goat *Ovis* (domestic)/*Capra* (domestic)

With the exception of a complete first phalanx identified as certainly goat, the postcranial bones were too fragmented to allow a separation between sheep and goat, based on metrical and morphological criteria.

One mandibular ramus of a sheep from the lowest level of the circular pit (F.1/6-13) was encrusted with tubular structures of sand and silt, possibly made by the small, worm-like larvae of chironomid flies (midges). Originally these structures were thought to be the work of caddis fly larvae, but closer inspection revealed that the bores of the tubes were too small to have housed the larger caddis fly larvae. The jaw bone must have stood for some time in a layer of silt or mud beneath flowing (?) water.

### 4. Pig *Sus* (domestic) and *Sus scrofa*?

With the possible exception of the one ulna described below, all the bones came from domestic pig. The largest quantity of bone came from F.6, and included:

2 fragments of cranium

3 mandibles (1 from a male over 2 years of age, 1 from an individual aged 1½ to 2 years and 1 from a sucking pig)

A large ulna was recovered from the circular pit (F.1/6-13), the width across the articular surface was 27mm, which falls within the range of *Sus scrofa* proposed by Clason (1967, p.63). This bone could therefore represent a wild pig or, alternatively, a very large domestic male.

### 5. Dog *Canis* (domestic)

Only two bones of dog were found, these were:

Area 149, F.1/6-13                      1 incomplete radius from a small dog  
early/mid 2nd century AD

Area 5, F.4                                1 left, mandibular ramus of a small house dog  
2nd century AD

According to Harcourt (1974) the Romans were the first to introduce pet lap dogs to this country.

### Wild

1. Red deer                                *Cervus elaphus*
2. Roe deer                                *Capreolus capreolus*

A complete metatarsal bone, tibia and antler of Red deer, and fragments of a Roe deer skull amongst the refuse from F.6 indicate that the inhabitants of the settlement supplemented their diet by hunting.

The following measurements (in mm) were taken from the complete right metatarsal bone of Red deer:

Length	274.6	(276.4)
Proximal width	35.3	(35.5)
Mid shaft width	25.9	(21.8)
Distal width	38.8	(39.8)

Dimensions from a modern specimen of male Red deer held by the BM(NH). Reg. No. 1962.11.22.1.

### Scavenging by dogs

Evidence that certain of the bones had been scavenged, or were fed to dogs was provided by the presence of perforation holes made by the teeth of dogs whilst they were gnawing and crunching the bones (see Bonnicksen, 1973).

The proportion of bone (expressed as %/total no. bone of each species) showing evidence of gnawing by dogs is summarised below:

Feature	cattle	sheep	pig
F.1/6-13 circular pit	4%	8%	—
F.4 and F.5 main ditch	0%	0%	0%
F.6 ditch/refuse dump	14%	8%	9%

### Butchery

Many of the bones had chop marks on them, showing evidence of butchery.

The proportion of bone (expressed as %/total no. bone of each species) with evidence of butchery is summarised below:

Feature	cattle	sheep	pig
F.1/6-13 circular pit	48%	8%	—
F.4 and F.5 main ditch	13%	0%	20%
F.6 ditch/refuse dump	20%	17%	9%

A summary is given in Table 8 of selected examples of the butchery marks exhibited by the cattle bones.

### Horn and bone working

Evidence that the cattle horn cores were the discarded waste from horn working was provided by the presence of three horn cores (listed below) that had been sawn through their base:

F1/6-13	Medium horned group	1 adult, ox
	Unidentified group	1 juvenile, sex?
F.4 and F.5	Short horned group	1 adult, bull

Animal bone had also been used as the raw material for the manufacture of three hair pins and two counters (see section on small finds).

Feature	No. bones	Volume of deposit <sup>1</sup> (cubic metres)	Density of bone (No./Vol.)
Area 149:			
F1/1-5	Bowl furnace ? 4th C. AD	5	—
F1/6-13	Circular pit. Early/mid 2nd C. AD	45	9
F3	Ditch. 4th C. AD	9	2
F4 & F5	Main ditch. 1st/early 2nd C. AD	104	18
F6	Ditch/refuse dump. Early/mid 2nd C. AD	245*	13
F7	Ditch. 1st/early 2nd C. AD	28	4
F8	Two parallel gullies. Late 2nd/mid 3rd C. AD	3	1
Area 5:			
F1 to F8	Pits and ditches. 2nd to 4th C. AD	36	—

Table 5. Number of animal bones recovered from Areas 149 and 5

#### Key:

1. Calculated from the dimensions of each feature

\* Plus one complete, articulated skeleton of a calf from a shallow pit cut into F6, dated to late 2nd/3rd century AD.

Feature	Cattle	Sheep/goat	Pig	Horse	Red deer	Roe deer	Bird	Dog	Unidentified fragments
F1/1-5	3(2)	1(1)	1(1)	—	—	—	—	—	—
F1/6-13	16(4)	12(5)	2(2)	1(1)	1(1)	—	1(1)	1(1)	11
F3	5(3)	—	1(1)	3(1)	—	—	—	—	—
F4 and F5	77(10)	11(3)	5(2)	3(1)	—	—	1(1)	—	7
F6	90(11)	25(5)	11(3)	1(1)	3(2?)	2(1)	5(3?)	—	108
F7	15(1)	5(2)	3(1)	2(1)	—	—	—	—	3
F8	2(1)	—	—	1(1)	—	—	—	—	—

Table 6. Number of bones from each of the species identified

#### Note:

1. Estimates of the grand minimum number of individuals for each species, calculated after the method of Chaplin (1971, p.74) are given in ( ).

2. As area 5 (Toop's yard) was only partially excavated, details of the number of bones/species have been omitted from this table.

	HEAD					BODY		FORE & HIND LIMBS					EXTREMITY									
	antler	horn core	skull	maxilla	mandible	tooth	vertebra	rib	scapula	humerus	radius	ulna	innominate	femur	tibia	calcaneum	talus	metapodial bone	phalanx 1	phalanx 2	hoof core	carpal/tarsal bone
F1/6-13																						
Circular pit																						
HORSE	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
CATTLE	—	4	—	—	—	2	2	4	—	—	—	—	—	—	—	1	—	1	2	—	—	—
SHEEP/GOAT	—	—	—	1	6	4	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
PIG	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—
RED DEER	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
DOG	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
F4 and F5																						
Main ditch																						
HORSE	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—
CATTLE	—	11	—	7	12	6	7	—	2	2	—	1	6	3	—	1	2	8	3	4	—	—
SHEEP/GOAT	—	—	—	2	3	5	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
PIG	—	—	—	1	2	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—
F6																						
Ditch/refuse dump																						
HORSE	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
CATTLE	—	1	—	2	11	9	5	26	6	6	3	1	3	1	2	—	—	5	5	2	2	—
SHEEP/GOAT	—	—	—	—	5	3	—	7	—	2	—	—	2	1	2	—	—	2	1	—	—	—
PIG	—	—	2	—	3	1	—	—	—	—	—	1	—	—	1	—	—	3	—	—	—	—
RED DEER	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—
ROE DEER	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 7. Mammal bones, parts of skeleton identified (Major deposits only)

Bone	Part remaining	Number	Description
Scapula	Articular end + part of blade	4	Blade chopped across transversely
Humerus	Distal end + part of shaft	2	Cleavage of distal epiphysis and shaft, possibly for marrow extraction
Metacarpal bone	Distal end + part of shaft	1	Spiral fracturing of the shaft, split for marrow extraction
	Proximal end + part of shaft	4	Bone has been chopped across transversely leaving the splintered end as waste
Phalanx I	Fragment	1	Bone sliced through obliquely, hoof detached from the limb
Femur	Proximal end + part of shaft	1	Head chopped through obliquely, removal of hind limb from body of the carcass
	Distal end + part of shaft	1	Shaft chopped through just above epiphysis, lower half of limb separated from the trunk
Rib	Fragment	13	Chopped
Unidentified limb bone	Fragment	30	Some with spiral fracturing, others with straight-edged breaks. These are the debris from the smashing of 'marrow bones'

Table 8. Evidence of butchery in the cattle bones from all features

## 10. THE ANIMAL BONES FROM AREAS 1, 2 &amp; 3

BY PHILIP L. ARMITAGE

Feature	Species	Bone	Number of bones	Part remaining and comments
F.48. L.1	cattle	tooth	10	fragments
F.15	cattle	right, maxilla	1	tooth row: P4, M1, M2, M3
F.48. L.1	cattle	metapodial bone	1	fragment of distal condyle
F.48. L.3	cattle	mandibular ramus	2	fragments of jaw
F.48. L.5	pig	calcaneum	1	fragment
		scapula	1	fragment
		tibia	1	shaft only, gnawed by dog
F.81	horse	lower premolar	1	complete tooth
	cattle	upper premolar	1	complete tooth
F.14	horse	set of teeth from lower jaw		horse aged approx. 2½ to 3 years
	sheep	lower molar	2	complete
F.48. L.4	?	unidentifiable fragments (>30)		
F.16	cattle	mandibular ramus	2	fragments, chopped
F.19	cattle	metacarpal bone	1	distal epiphysis + part of shaft
F.82	sheep	left, mandibular ramus	1	fragment
	cattle	scapula	1	fragment
F.54	cattle	mandible	1	fragment
F.58	cattle	ulna	1	fragment
F.70	cattle	radius	1	proximal end + part of shaft
	cattle	lower 3rd molar	1	complete tooth
	cattle	scapula	1	fragment

## 11. THE BIRD BONES

Identified by G. Cowles and Miss J. Gask, Sub-Department of Ornithology, British Museum (Natural History), Tring.

## Area 149:

F1/6-13 Circular pit (early/mid 2nd century AD)

Right radius (broken) domestic chicken (*Gallus gallus*).

F4 and F5 Main ditch (1st/early 2nd century AD)

Right tarsometatarsus — most probably woodcock (*Scolopax rusticola*).

F 6 Ditch/refuse dump (early/mid 2nd century AD)

Right ulna (complete) domestic chicken (*G. gallus*).

Right tibiotarsus (broken at proximal end) domestic chicken (*G. gallus*).

Right tibiotarsus (broken at proximal end) domestic chicken

(*G. gallus*).

Left tarsometatarsus (complete) domestic chicken (*G. gallus*).

Left tibiotarsus (broken at proximal end) — Greylag goose, probably domestic (*Anser anser*).

Area 5:

F4 Pit (2nd century AD)

Left femur (broken at proximal end) — domestic chicken (*G. gallus*).

Right tibiotarsus (both ends broken off) — domestic chicken (*G. gallus*).

(The finds from all three excavations have been deposited at Forty Hall Museum, Enfield, and may be consulted there.)

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# THE REDEVELOPMENT OF 20 DEAN'S YARD, WESTMINSTER ABBEY 1975-77

GRAHAM BLACK

From February to May 1975 the Inner London Archaeological Unit carried out an excavation at the rear of 20 Dean's Yard, Westminster Abbey, in the eastern third of the sub-vault of the Abbey misericorde. The results of that excavation were published in the Transactions of the London & Middlesex Archaeological Society Volume 27, for 1976<sup>1</sup>.

This present account contains specialist reports on mortar samples taken during the excavation (p. 204), on a coin from the 11th century ditch revealed during the excavation (p. 200), and on the glazed tiles (p. 202) and a 12th century stone carving (p. 200) uncovered during the redevelopment of the site. It also contains a description of features exposed during redevelopment, both within the sub-vault and in the area between the sub-vault and monastic kitchen to the east, and the late 14th century cellarer's range to the west (see Plan, Fig. 3).

## THE PATHWAY BETWEEN THE KITCHEN AND FRATER

In the report on the excavation in the sub-vault one of the unanswered problems concerned the pathway between the kitchen and frater<sup>2</sup>. There was no archaeological evidence for a roof over this pathway prior to the construction of the sub-vault. A passage in the Customary of Abbot Ware (1266) states that "up to the time of Prior Philip (1253-8) there was a hollow and a mural arch with a vault skilfully contrived between the refectory and the convent kitchen"<sup>3</sup>. In the excavation report this was interpreted as referring to an early version of the serving hatch in the frater wall through which the food was served<sup>4</sup>. If the "vault skilfully contrived" in fact referred to a roof over the pathway between the kitchen and frater, which had been built without using vertical supports, this might account for the lack of archaeological evidence.

This, however, would alter the date for the construction of the misericorde and its sub-vault from that of pre 1246 advanced in the excavation report<sup>5</sup> to between 1253-58. The initial dating of the sub-vault was largely based on the fact that the pier bases were of water-holder type, whereas those used in the rebuilding of the Abbey under Henry III which began in 1246 were largely of the succeeding triple roll type<sup>6</sup>.

Water-holder bases were used in this country from the late 12th century to c. 1260. The latest accurately dated examples were used in Lincoln Cathedral in the 1250s. There were a small number used in the post 1246 rebuild of Westminster Abbey, around the outer side of the ambulatory, and at the extremities of both transepts, but these, as the example X in Fig. 2 shows, were considerably more elaborate than the bases in the misericorde sub-vault.

It is virtually impossible to date water-holder bases with any accuracy. Most authorities tend to date the bases from other features of the building, or, failing that alternative, equate simplicity of moulding with earliness of date. It must be emphasised, however, that while there is a considerable amount of information available for the mouldings used in major structures, little is known of those used in minor works. It seems likely that while new techniques were being applied in major construction work, older ideas continued to prevail in the smaller structures.

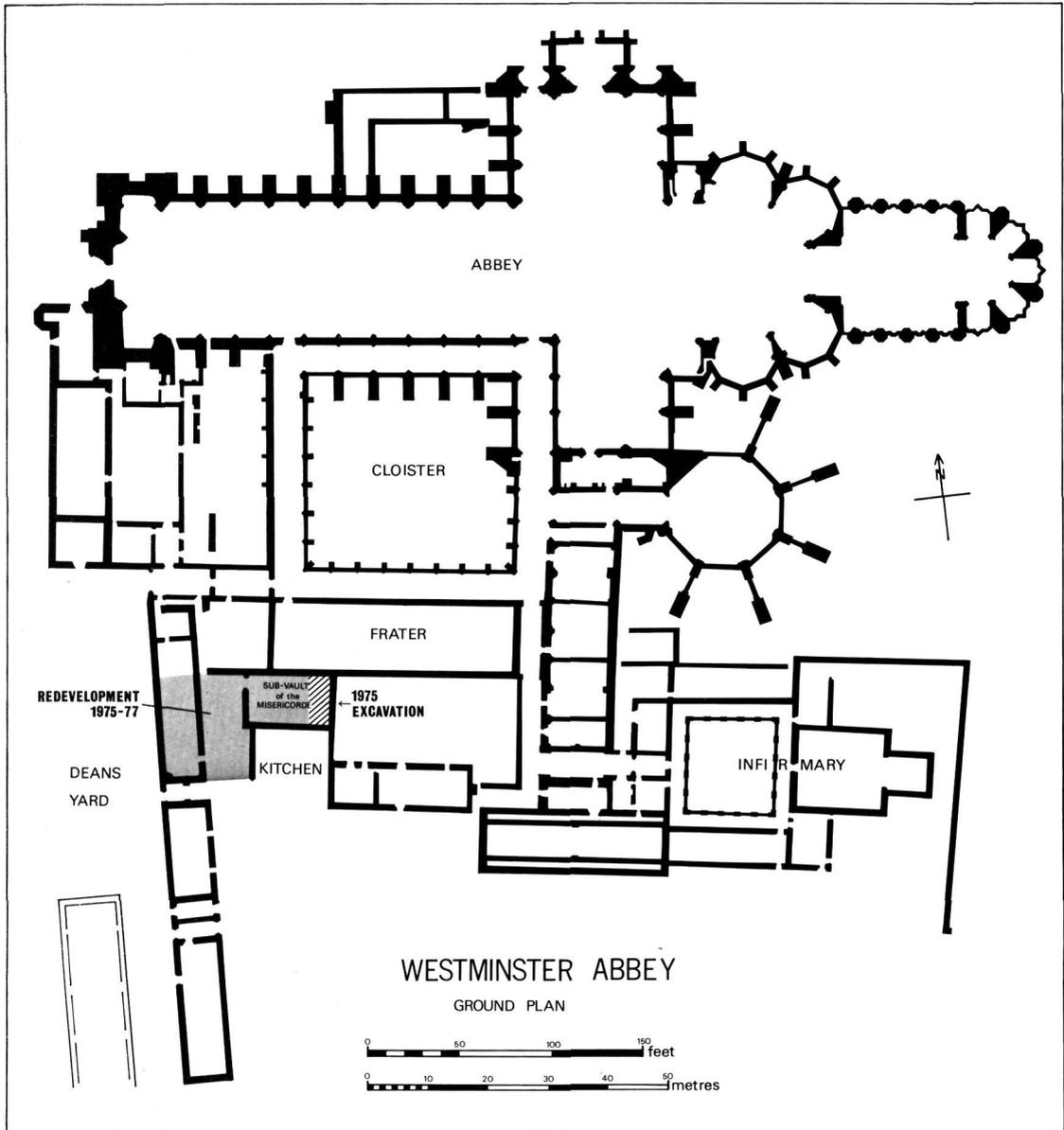


Fig. 1 Westminster Abbey ground plan. (After R.C.H.M. Westminster Abbey)

## Pier elevations

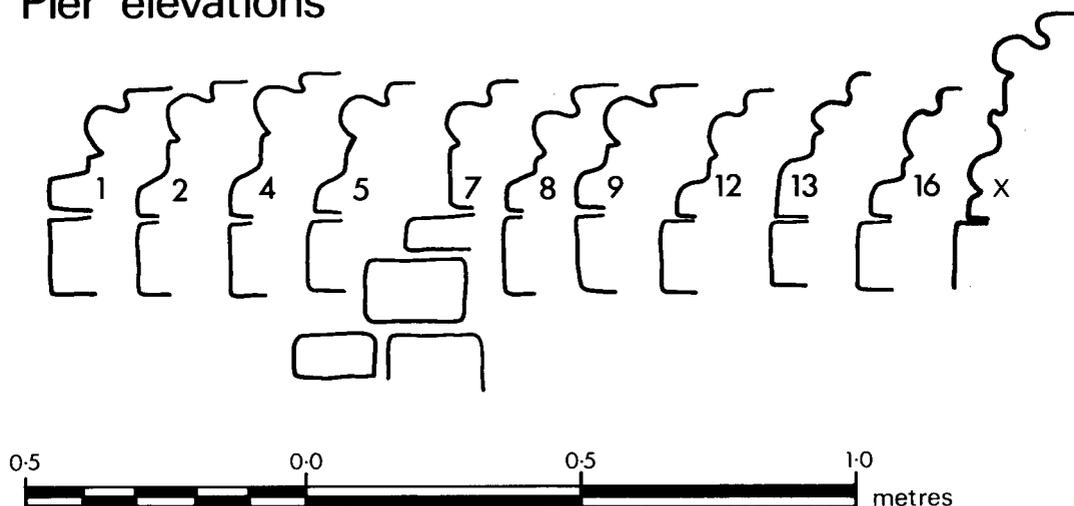


Fig. 2 Westminster Abbey. Redevelopment of 20 Dean's Yard 1975-77. Pier elevations. The numbers correspond to those in Fig. 3. Pier base X is a waterholder base from the west wall of the south transept of the abbey church

The pottery is not exceptionally helpful either. On the whole, the evidence from phases 3(d) and 4(a) of the excavation<sup>7</sup> would fit a pre 1246 date better. The only sherds which at present would seem better suited to a date in the 1250s are the Rouen copies, but there is a lack of information on when Rouen vessels were first imported into this country, and thus a pre 1245 date for copies is possible.

Thus, were it not for the documentary reference quoted above, the simplicity of the base mouldings and the evidence of the pottery would still point to a pre 1246 date for the building's construction. However, an alternative date between 1253-58 cannot be ruled out, and would solve the problem of the roofing of the pathway between the kitchen and frater.

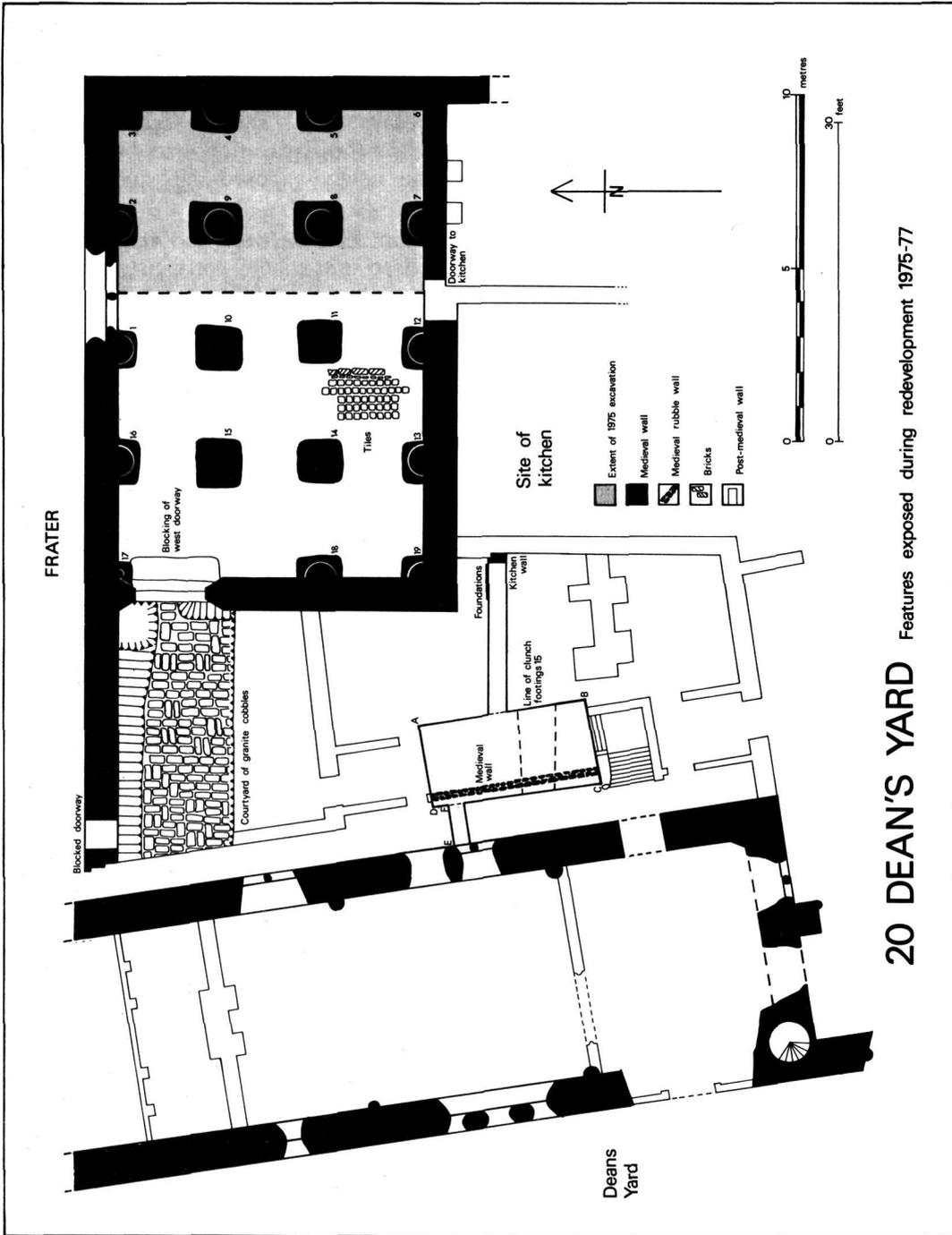
### DEPOSITS DISTURBED DURING REDEVELOPMENT

Redevelopment began in September 1975. Within the sub-vault all deposits above the original 13th century floor level of the building were removed, and the west wall, west door, and remaining pier bases of the sub-vault were exposed. The wall and door had been recorded by Rev. H. F. Westlake in 1921<sup>8</sup>. West of the sub-vault, for a distance of 7.3m, deposits were removed down to the same level. A long drainage trench was dug from the sub-vault westward under the cellarer's range, cutting through its foundations, and one metre into Dean's Yard.

Within 20 Dean's Yard (see Plan, Fig. 3) a large trench was dug by the contractors. This trench was *c.* 5m north-south x 2.5m east-west x 1.25m deep. A shallow foundation trench was dug eastwards from this trench, and a small trench was excavated westwards from the NW corner of the large contractor's trench to the cellarer's building.

### STRATIGRAPHY WITHIN THE SUB-VAULT AND IMMEDIATELY WEST

Over the entire sub-vault a mortar floor survived in patches at the level of the original 13th century floor. In one area (see Plan, Fig. 3) a section of a decorated tile floor survived,



20 DEAN'S YARD Features exposed during redevelopment 1975-77

Fig. 3 Westminster Abbey. Redevelopment of 20 Dean's Yard 1975-77. Features exposed during redevelopment

consisting of re-used 13th and 14th century tiles bordered by bricks (see tile report p. 202). These tiles replaced the mortar floor at this point. Most of the deposits above this floor had been removed by 17th and 18th century pits. Even in the small area archaeologically excavated there had been a noticeable increase in post-medieval pitting towards the west. The main excavation section was in fact rendered useless because it only showed sections through post-medieval features. The area immediately west of the excavation had been totally destroyed, rendering it impossible to associate the newly exposed deposits with the stratigraphy recorded during the excavation.

Over most of the area, the post-medieval pits varied in depth between 0.05m and 0.25m above the level of the original floor. Below the pits, a deposit of rubble, consisting of Reigate stone, clunch, and mortar fragments lay directly on top of the original floor level. This rubble layer dated from the demolition of the misericorde and its sub-vault in the 1570s. This fact, and the presence of a section of a tiled floor consisting of re-used 13th and 14th century tiles, makes it likely that at some date prior to 1570 the deposits in the western part of the sub-vault were removed down to the original 13th century level. The 1975 excavation showed that the most easterly bay had been partitioned off from the rest of the sub-vault<sup>9</sup>, which probably explains why the deposits had not been removed in that bay.

The remains of the west wall of the sub-vault, surviving to a height of four courses, were revealed in the position recorded by Westlake<sup>10</sup>. The wall was rubble-faced, similar to the eastern wall, and 1.15m thick. The doorway in the north-west corner of the sub-vault was 2.14m wide. The splayed door jambs were faced with Reigate stone and the base of an internal moulded arch survived<sup>11</sup>. The doorway was blocked, and the blocking was sealed by demolition rubble. There was some evidence of burning on the internal face of the blocking and on the floor immediately adjacent to it.

The only pier bases which had survived within the sub-vault west of the excavated area were those which had been cut into the surrounding walls. The plinths of the internal piers survived but the pier bases themselves were probably removed when the sub-vault was demolished. Probing with a crow-bar failed to reveal the presence of any sleeper walls under the plinths similar to the one present in the excavated area. The original purpose of the sleeper wall discovered in the excavated area remains unknown<sup>12</sup>.

West of the sub-vault a surface of granite setts was exposed. This abutted the exterior face of the western wall and blocked doorway post-dating the blocking, and was 0.25m above the floor level of the sub-vault. The setts were laid on a deposit of clean sand, below which no deposits were removed by the contractor.

The demolition of an 18th century wall built against the south face of the frater revealed that the original facing of the frater wall had been partially removed at an earlier unknown date. The core of the frater wall was of clunch and mortar. A narrow drop-arched doorway leading into the frater was revealed in the north-west corner of the site. The date of its blocking is unknown.

The drainage trench dug westwards from the sub-vault through the cellarer's range to Dean's Yard revealed that the earliest floor in the excavated area (F90 — dated to the second half of the 11th century<sup>13</sup>) extended to the east wall of the cellarer's range where it was cut through by the late 14th century foundations. Within the cellarer's building all the deposits had been removed in the 19th century to allow the construction of a new floor at the original 14th century level (*c.* 1.25m below present ground level). Most of the deposits exposed in

Dean's Yard had been destroyed by Victorian drains, but there was evidence of clunch and mortar surfaces.

STRATIGRAPHY IN THE REAR OF 20 DEAN'S YARD (see Sections 1, 2 and 3; Fig. 4)

This area lay between the west wall of the monastic kitchen and the east wall of the cellarer's range. At no point within the contractor's trench was the underlying river silt or natural gravel exposed. Within the excavated area of the sub-vault *c.* 10m north-east of this trench, natural gravel occurred at 2.14m OD, and was overlain by a deposit of chocolate brown river silt, the top of which was at 2.54m OD<sup>14</sup>. The lowest point reached in the contractor's trench was 2.06m OD, revealing a slope in ground level.

Sections 1 and 2 ran parallel north-south. Section 2 was 2.5m west of Section 1. Section 3 ran westwards from Section 2 to the east wall of the cellarer's range.

It was not possible to closely observe deposits as they were being removed, therefore the remarks below on the stratigraphy of the site must be considered as tentative.

The east-west sections of the contractor's trench were damaged to such an extent by an 18th century wall at the northern end and work associated with the 1976 building operations at the southern end, that they could not be used to obtain a direct relationship between Sections 1 and 2.

A rubble wall 0.45m thick ran north-south along the entire length of the contractor's trench 0.30m east of Section 2, and had a partition wall of the 18th century building resting on it. Its top varied from 0.05m - 0.10m below the 18th century floor level. The surviving top two courses were faced (depth varied from 0.18m - 0.30m). Below these the foundations began with a single irregular step on the east side of the wall. It was not possible to associate the rubble wall with a particular phase in either Section 1 or 2, but it may have been connected with the construction of the cellarer's range, separating a pathway from the remainder of the yard.

SECTIONS 1, 2 and 3 — STRATIGRAPHY

Section 1 — nos 1-44; Section 2 — nos 1, 2, 15, 45-74, 80-82; Section 3 — nos 58-60, 62, 63, 71, 74-79, 83-85

*Phase 1*

Sections 1, 2 and 3

Floor 1 — consisted of packed Reigate stone flakes (1)

Floor 2 — a deposit of orange gravel (2)

Trampled deposits or dumping to raise the ground level — a deposit of mid brown soil (45).

The floors (1 and 2) extended across the contractor's trench, occurring in both sections, and may represent a general surface, possibly a part of either the Great Court of the monastery, or of the kitchen yard. There was no evidence for a trampled deposit on the surface of (1). This may mean that the surface was regularly swept clean, or that it was only make-up for a gravelled yard (2). The layer of mid-brown soil (45) may have been trampled on to the yard surface, or dumped to raise ground level.

*Phase 2*

Section 1

Wall of Reigate stone blocks (3) — faced on south side — block on north side probably removed by later cut (15) (see below Phase 3).

Floor 3 — mortar surface (4) on south side of the wall (3), and associated with it.

Trampled deposit of dark greyish brown soil (5) over the mortar floor (4).

Floor 4 — new mortar surface (6) laid south of the wall.

Floor 5 — north of the wall (3) the gravel (2) was sealed by a new mortar surface (7) — this surface did not extend along the remaining length of the trench.

Above this floor (7) was a deposit of light brown soil (8) which may have been trampled on to the

floor, or dumped there to raise the ground level.

Floor 6 — a new mortar surface was laid (9)

Above this floor was a trampled deposit of dark greyish brown soil (10).

Dumped deposits of mortar (11), dark greyish brown soil (12), rubble (13), and mid-brown soil (14).

The relationship between deposits north and south of the Reigate stone wall (3) was uncertain. It is probable that this wall was faced, and had associated floors, on both sides. Floor (7) may be the floor on the north side of the wall, laid after its construction, and therefore be of approximately the same date as floor (4). The relationship of floor (9) to floor (6) is unknown. Presumably the wall separated functions on its north side from those on its south side. The shallowness of the footings for the wall (3) are worthy of note. The reason for this may lie in the firm bed of Reigate stone flakes provided by the earlier floor (1). The deposits on the south side of the wall above floor (6) are discussed under Phase 3 below.

### Sections 2 and 3

Make-up for a floor — a deposit of Reigate stone flakes (46).

Floor 7 — deposits of orange gravel (47, 48) and brown gravel (49).

Dumping from the kitchen, or possible remains of a fire (50).

Floor 8 — a laid mortar resurfacing of floor 3 (51, 52).

Dumping of mortar (53, 54) rubble and dark greyish brown soil (55).

Floor 9, or make-up for a floor — a deposit of laid mortar (56).

Dumping of dark greyish brown soil containing fragments of clunch (57) or rubble (58).

Dumping from the kitchen or possible evidence of a fire (59).

Floor 10 — deposits of laid mortar (60) and Reigate stone flakes (61).

Dumping of Reigate stone flakes (62), sand (63) and dark soil (64).

Dumping of mid-brown soil with clunch fragments (65), deposits of Reigate stone flakes and mortar (66), orange gravel (67), and more Reigate stone flakes (68).

Shallow cut backfilled with burnt material (69).

There are two possible alternatives to the order of deposits enumerated above. Firstly (56) may originally have extended along the entire length of the trench, but had been cut through, and the cut backfilled by (57, 58, 59), and possibly (49) and (52).

The second alternative is that the deposits (61, 65, 66, 67, 68 and 69) represent the backfill of a cut.

There is also a possibility that layer (68) represents a Reigate stone flake floor associated with (15) — see Phase 3.

The contrast between Phase 2 deposits in Sections 1 and 2 is difficult to explain. Those in Section 1 are associated directly with the Reigate stone wall (3). The wall and deposits extended 0.15m into the trench before being cut through by an earlier exploratory trench dug by the developers. One possible explanation is that there may have been an earlier north-south partition on the site, associated with this wall.

### Phase 3

#### Sections 1, 2 and 3

Insertion of a foundation trench — filled with crushed clunch (15). The Reigate stone wall (3) was largely dismantled and the facing blocks were removed from its north side. Some earth fell in (16) during the digging of the trench.

South of the clunch foundations (15) material was dumped to raise the ground level — dark greyish brown soil (17), burnt material (18), more soil (19), mortar (20), more soil (21), sand (22), and some lighter soil (23).

Floor 11 — floor of laid mortar (70) running south from the wall (15) — may be the same as (24) in Section 3. Associated with the new wall.

The foundations (15) were the remnants of a wall which ran east-west across the area. The purpose of this wall is unknown, but must be associated with the floor surface (70/24) which extended south from it (see Phase 4 below, p. 197).

The deposits in Section 1 may be interpreted in different ways. It is not known, for example, whether the dumped deposits (17, 18, 19) were associated with the Reigate stone wall (3) or with the construction of the new wall (15). The mortar layer (20) looked remarkably like a floor surface, with a trampled deposit (21) above it. If so, presumably it represents a floor associated with the new footings (15) and immediately overlying the remains of the Reigate stone wall (3).

# WESTMINSTER ABBEY. 20 DEAN'S YARD REDEVELOPMENT 1975-77

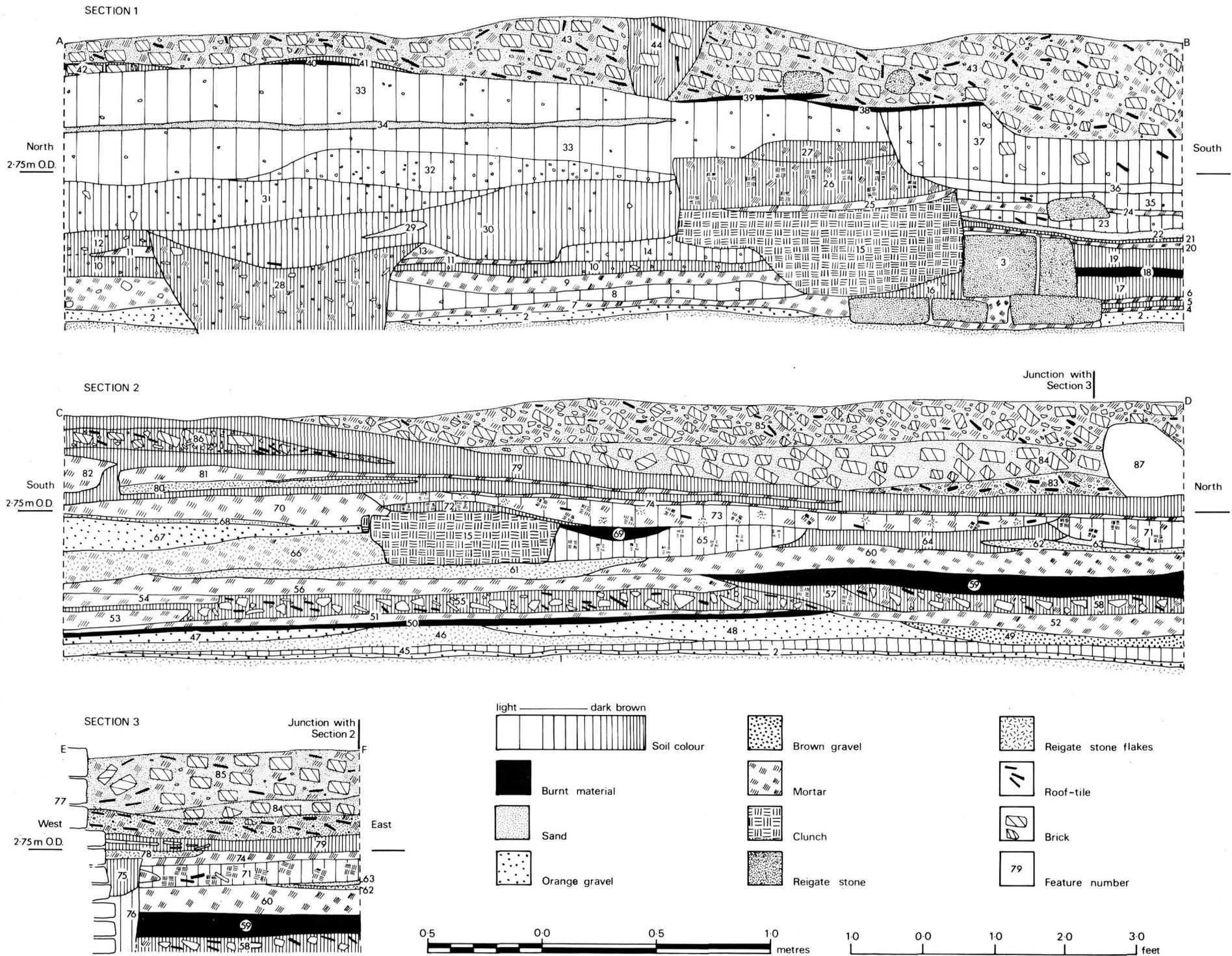


Fig. 4 Westminster Abbey. Redevelopment of 20 Dean's Yard 1975-77. Sections 1, 2 and 3

Whatever the reason for the separate Phase 2 functions revealed by Sections 1 and 2, it must have ended with the construction of a new wall which extended east-west across the entire area. As with the Reigate stone wall (3), it was not possible to determine its function, i.e. whether it was a partition wall or the wall of a hitherto unknown monastic building. In either case, the clunch foundations (15) may represent a rebuild of the earlier Reigate stone wall (see Phase 4 below).

#### *Phase 4*

##### *Section 1*

The wall above the clunch footings (15) went out of use and was robbed away completely. Remains of the robber trench survived (25, 26, 27), but the deposits it cut through had been totally removed by later features.

A large pit (28) was dug, and backfilled with dark greyish brown earth containing fragments of stone and mortar. (This pit may belong to an earlier phase).

Large shallow trenches were dug, and backfilled with soil, with patches of sand. In the northern three-quarters of the section the earlier trench was backfilled with deposits (29, 30, 31, 32, 33, 34). This was then cut through on its south side, where the feature was backfilled by deposits (35, 36, 37).

A number of interpretations are possible, particularly if the deposit of light brown soil (33) represents a gradual build-up rather than a sudden dump. The first possibility is that layers (15, 25, 26, 27) were all cut into existing deposits. Alternatively the robber trench represented by (25, 26, 27) may have been cut in from immediately below deposit (39) and that the sand layer (34) was actually cut through at its southern end. Associated with this, all the soil deposits from (30) upwards may represent a gradual accumulation after the insertion of the wall above (15).

##### *Sections 2 and 3*

A cut through the earlier dumped layers (62, 63, 64) — backfilled with mid-brown soil which contained fragments of clunch and mortar (71).

The removal of the wall for which (15) was the foundations, and its backfill with soil containing fragments of clunch and mortar (72, 73 — associate with 26, 27 in Section 1).

Floor 12 — resurfacing with laid mortar (74) above trenches (73) and (71) — acting as a partial resurfacing of floor 11 (70).

This resurfacing was then cut through by the foundation trench (75/76) for the cellarer's range (77), and that building constructed. The top of the foundation trench was then resurfaced with a mixture of Reigate stone flakes and mortar (78).

The formation of a tramped deposit of soil (79) above the floor (70/74/78).

Floor 13 — the possible construction of a new floor of laid mortar (81/82) resting partially on a deposit of Reigate stone flakes (80).

The wall above (15) was therefore removed and a new surface laid before construction work on the cellarer's range began. It is likely, however, that the demolition of the wall above (15) and the late 14th century construction of the cellarer's range were associated. The Blackstole Tower, which is part of the cellarer's range, lies 4.4m south of the contractor's trench. This tower is generally interpreted as the entrance to the kitchen yard of the monastery<sup>15</sup>. It is possible that the east-west walls in the contractor's trench ((15) in Sections 1 and 2; (3) in Section 1 — see Section 1 Phase 2 above p. 195) represent the northern extent of the original route to the kitchen from the Great Court, and this function ceased with the construction of the cellarer's range. Alternatively they may represent rebuilding phases of a hitherto unknown building within the monastery.

The contrast between Phase 4 deposits in Sections 1, 2 and 3 can be explained if the north-south rubble wall located during the redevelopment belongs to this phase (see above p. 195).

The deposits above the floor (70/74/78/?24) contrast sharply with those below it. Between this floor and the 18th century dumps of rubble were deposits of soil with, at most, one new floor level (34/81/82). This may mean that later medieval deposits were removed at some unknown date, or that there was a major change in the function of this area after the construction of the cellarer's range. There were three doors in the rear of the cellarer's range leading into this area, and a pathway may have existed from these doors, and possibly from the kitchen yard, to the sub-vault of the misericorde, and possibly to the small side door discovered in the frater wall during the redevelopment (see above p. 194).

*Phase 5*

## Sections 1, 2 and 3

The dumping of soil (79), burnt material (38, 39, 40) and demolition rubble (43, 83, 84, 85, 86).

A post-hole (44) was cut through these deposits.

These deposits represent the raising of the ground level in the 18th century to allow the construction of a new floor.

(87) was a hole dug by the contractor in 1976.

## DATING EVIDENCE FOR SECTIONS 1, 2 and 3

No datable finds were recovered from any of the sections in this trench. The most important factor is the relationship between the deposits in Section 3 and those in the foundation trench (75/76) for the cellarer's range (77). This latter was constructed in the late 14th century, probably with the major part of the building operations being carried out between 1388-92<sup>16</sup>. The foundation trench for the cellarer's range was sealed by a deposit of Reigate stone flakes and mortar (78) which was probably used to repair the floor (70/74) after the construction of the cellarer's range. The construction of the cellarer's range was within Phase 4 of the stratigraphy of the sections. The Reigate stone and mortar patching (78) of the floor (70/74) must therefore be dated *c.* 1390, and, although natural was not reached in the trench, there were eleven possible floor levels present which preceded this date.

## OTHER NOTES

A narrow foundation trench (*c.* 0.80m wide and *c.* 1.10m deep) was dug by the contractor from the main trench to the rear wall of 20 Dean's Yard. The trench revealed that this rear wall was built on top of the core of a medieval wall. Below the 18th century ground level this was faced with Reigate stone, but above this level the facing was removed. This wall was probably the west wall of the medieval kitchen.

Abutting the kitchen wall at this point, on the northern side of the contractor's trench, were massive rubble foundations 1.40m wide and 1.00m deep. These foundations were sealed by the 18th century floor and cut through the earlier deposits revealed in the contractor's trench. It was not possible to discover how far north these foundations ran.

## MASONRY EXPOSED IN THE ENTRANCE HALLWAY OF 20 DEAN'S YARD

The cellarer's building was a long range built along the east side of Dean's Yard in the late 14th century. It was originally of two storeys, with the Blackstole Tower incorporated in the centre of the range as the entrance to the kitchen yard. North of the Blackstole Tower the four bays of the ground floor were used as a storeroom, which was approximately 22.8m long<sup>17</sup>. The entrance hallway of 20 Dean's Yard almost fills the most southerly of the four bays.

The south wall of the hallway fronted onto the entranceway of the Blackstole Tower. The removal of an 18th century fireplace and its surrounds revealed a spiral staircase in the south-west corner, and a blocked doorway with a pointed arch opening into the Blackstole Tower. The position of this doorway was already known from the outer face of the wall<sup>18</sup>. The other features visible in the drawing are an 18th century window and the chimney from the 18th century fireplace (see Fig. 5).

The removal of plaster from the east wall exposed a late 14th century cinquefoil window, with its iron saddle bars still intact, and the damaged remains of a second similar window south of the 18th century doorway. It is likely that the doorway is on the site of a 14th century opening, and that it was raised in the 18th century because the ground level had risen 1.25m since the cellarer's range was constructed.

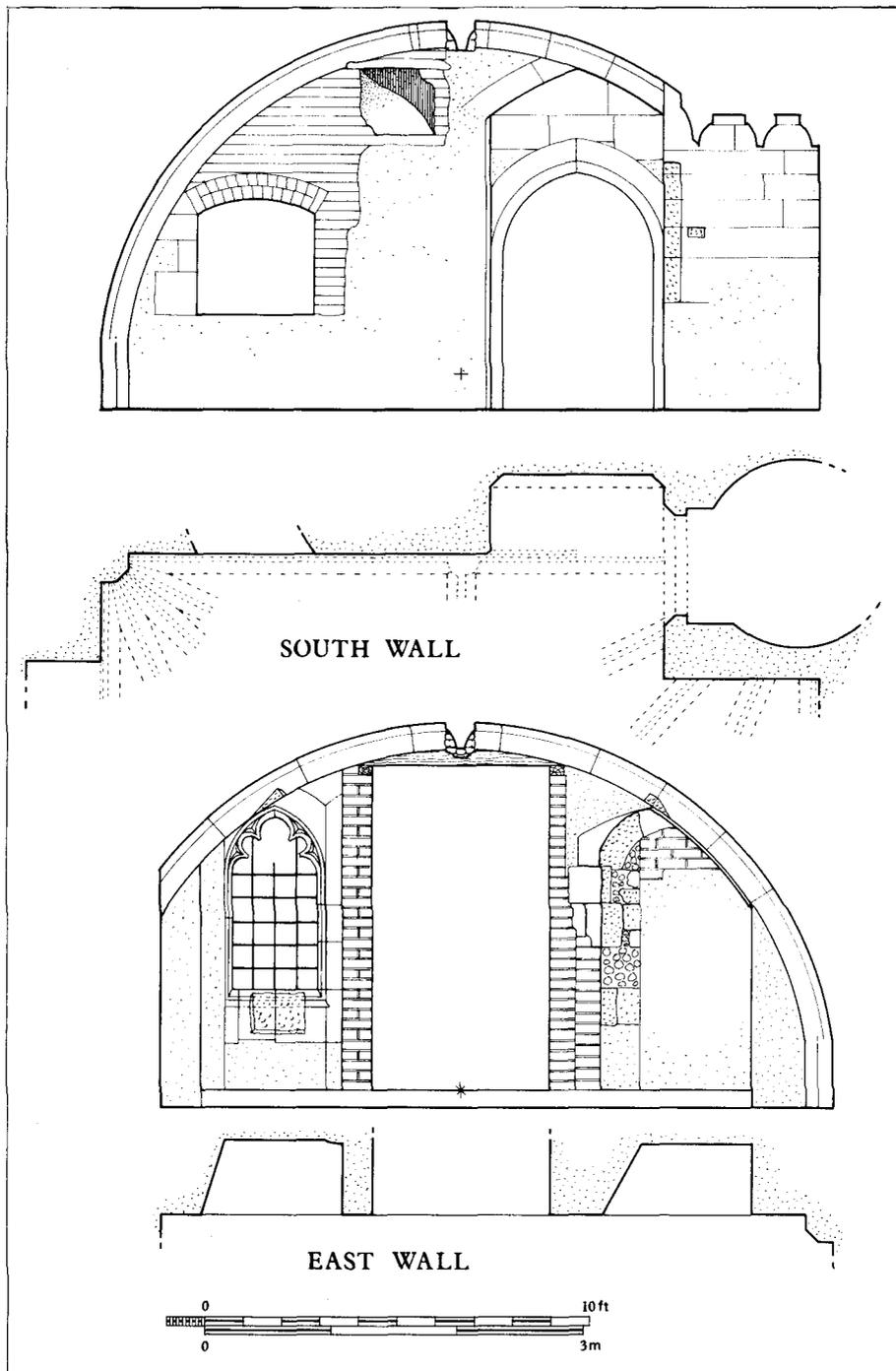


Fig. 5 Westminster Abbey. Redevelopment of 20 Dean's Yard 1975-77. Elevations of the south and east walls of the hallway

## NOTES

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| <p>1 Graham Black — "Excavations in the Sub-Vault of the Misericorde of Westminster Abbey" <i>Trans. London Middlesex Archaeol. Soc.</i> 27 (1976) 135-178.</p> <p>2 <i>ibid</i> 145, 156.</p> <p>3 Rev. H. F. Westlake <i>Westminster Abbey I</i> (London 1923) 30.</p> <p>4 <i>Black op cit</i> 139.</p> <p>5 <i>Black op cit</i> 154.</p> <p>6 <i>Black op cit</i> 154.</p> <p>7 <i>Black op cit</i> 161-168.</p> <p>8 Rev. H. F. Westlake "Notes on some recent excavations at Westminster Abbey" <i>Antiq. J.</i> 50 (1921) 232-3.</p> | <p>9 <i>Black op cit</i> 147, 155.</p> <p>10 Westlake <i>op cit</i> 232-3.</p> <p>11 <i>Black op cit</i> pl. 5.</p> <p>12 <i>Black op cit</i> 143, 145.</p> <p>13 <i>Black op cit</i> 143.</p> <p>14 <i>Black op cit</i> 141.</p> <p>15 Royal Commission on Historic Monuments <i>London (Westminster Abbey)</i> (1924) 89.</p> <p>16 Rev. H. F. Westlake <i>Westminster Abbey II</i> (London 1923) 373.</p> <p>17 Royal Commission on Historic Monuments <i>op cit</i> 89 Westlake <i>op cit</i> II 372-373.</p> <p>18 Royal Commission on Historic Monuments <i>op cit</i> 89.</p> |
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## COIN REPORT

IDENTIFICATION BY PETER BERGHAUS, UNIVERSITY OF MUNSTER.  
 COMMENTS BY MARION ARCHIBALD, DEPARTMENT OF COINS & MEDALS,  
 BRITISH MUSEUM

(Plate 2)

IDENTIFICATION — Barbarous imitation of Duisberg, Emperor Konrad II (1027-39), (Dannenberg 1876 311-313 [obverse]).

Not known in combination with the unusual cross reverse. Possibly minted in the Netherlands, certainly *not* Rhineland, Westphalia or Lower Saxony.

COMMENTS — The coin was hitherto unknown to German numismatists. German imperial coins and their copies are very unusual as site finds or in hoards in England. The London Walbrook hoard found in *c.* 1872 and containing some 7,000 coins, concealed in *c.* 1070, included one pfennig of Emperor Henry III (1039-56). A Henry IV pfennig of *c.* 1080-90 was also recently found in London — during the 1974 Seal House excavation in the City.

The date of deposition is difficult to determine. The evidence is very limited, but the context of the Walbrook hoard is Norman and not Saxon, and it is the Norman coins, not the Saxon, which exhibit borrowings from German imperial prototypes. Particularly because the coin is a copy of a Konrad II pfennig and not an original, it would be difficult to make the loss of pre-Conquest date.

EXCAVATOR'S COMMENTS — The ditch in which the coin was discovered was backfilled and a yard surface (F90) laid in a phase before construction of the frater began. The frater was completed in *c.* 1100, and it is likely that the ditch was of mid-11th century date (Black 1976, 141-2).

### SCULPTURED BLOCK FROM SUB-VAULT OF MISERICORDE, WESTMINSTER ABBEY

BY S. E. RIGOLD

(Fig. 6, Plate 1)

The stone was recovered from rubble from the demolition of the misericorde and its sub-vault in the 1570s.

This is a block of coarse Oolite, 0.38m long but broken off, 0.18m high and 0.23m thick. It has been re-worked on the rear-face to form a plinth-moulding, consisting of a cyma brought back to the face below by a relatively large hollow chamfer, all rather roughly tooled but consistent with the third quarter of the 14th century, when much of the refectory and the adjoining walk of the cloister were rebuilt. In view of the proximity of discovery and the material extracted from the south wall of the cloister under Gilbert Scott (Lethaby 1924, 33-37) it would seem likely that the stone derives from the refectory (possibly the main entrance or the lavatory) or the adjoining walk. The lower bedding-face seems original, the front is entirely covered with Romanesque carving, the upper bedding-face, which is now horizontal, seems to belong to the re-working, so that it may have been voussoir-shaped, and the left edge (as seen from the original front) is canted somewhat out of vertical.



Fig. 6 Westminster Abbey. Redevelopment of 20 Dean's Yard 1975-77. (a) The 12th century sculptured block — face (b) The 12th century sculptured block — profile of plinth-moulding on rear-face

The carving is deep but not particularly delicate — less fine than those in Canterbury cathedral crypt (Gardner 1951, 103-4, Stone 1972 pl 33-4, Zarnecki 1951 pl 49-56 (in a better-textured stone)), but about on a par with the cloister-capitals from Reading Abbey (Gardner 1951 fig. 115, Stone 1972 p 36-7, Zarnecki 1951 pl 59-63) some of which are also in Oolite, which, with a few fragments from Westminster itself (Lethaby 1924), are the most obvious technical analogues. The points in common are the tight interlace of three-banded strap-work, with beads or pellets along the central band; the enclosed, finger-like terminals of the foliage, forming three rolls of equal emphasis; and the bulging eye with no pupil marked. Each of these is widespread in English Romanesque; none is very subtle. But *their combination in very ornate works of high patronage makes a telling parallel with the other royal Abbey of Reading* (begun in 1121, fast-moving and probably nearly complete by the burial of Henry I in 1135).

The beaded strap on this piece forms an arc crossed by another strap, sharply recurved above the cross-over, and possibly by a third. It is gripped by an acanthus-like leaf and inhabited by a crouching female monster with short wings (sphinx?). The interlace is crossed by a geometrical frame represented by two straight, oblique rolls, not quite parallel, which might form part of a pedimental design. A composite tympanum is unlikely as late as this, but it might form the springer of a segmental arch-head, or a normal voussoir, but without enough selvage to allow for an outer order. Interlace is often confined (compare the spiral bands on the Gloucester candlestick or the west portal-shafts of St. Denis), and occasionally crossed by a geometrical frame.

This piece is another addition to the purely archaeological evidence for an elaborate campaign in the south and (?) west claustral ranges, under Henry I, possibly initiated (the evidence is the lost capital) in the repentant latter days of William II (Lethaby 1924).

## THE TILES

WITH COMMENTS FROM ELIZABETH S. EAMES

The majority of the tiles were recovered during the redevelopment work after the excavation, and although a number were found laid *in situ* they had, in fact, been relaid at least twice and in some cases three times. It is therefore to be expected that a high proportion of these re-used tiles would be the plain tiles used in borders and at the edges of rooms where they would receive less wear. Of the decorated examples, however, the largest number are from what must be a local source (Type I, Fig. 7, 1, 2, 4 to 9). They measure on average 134 mm square and the designs include the Griffin, the Clare Chevrons, the Lion, etc. They would appear to date from the late thirteenth and early fourteenth centuries.

There is one fragment of a tile (Type II, Fig. 7, 13) which appears in the Chapter House of the Abbey, and the last date for the manufacture of which is 1258, and one example of a tile (Type III, Fig. 7, 11) which occurs in the Muniment Room.

There are examples of Penn and Penn type tiles (Type IV) made in the middle of the 14th century (Fig. 7, 10 and 12) and one (Fig. 7, 3) which although similar to a Penn design, Hohler (1942, p65) is not a Penn tile, but may be a "Hertfordshire" type produced at the beginning of the 14th century.

The group also includes plain tiles imported from the Netherlands, with nail holes, and dating from the 14th and 15th centuries, with a preference for the later date.

The building material recovered included a number of fragments of glazed roof tiles and some broken pieces of brick which show secondary burning. The broken bricks occur in layers which may be associated with the bakers' ovens and could be associated with that phase of the sub-vault's use and occupation.

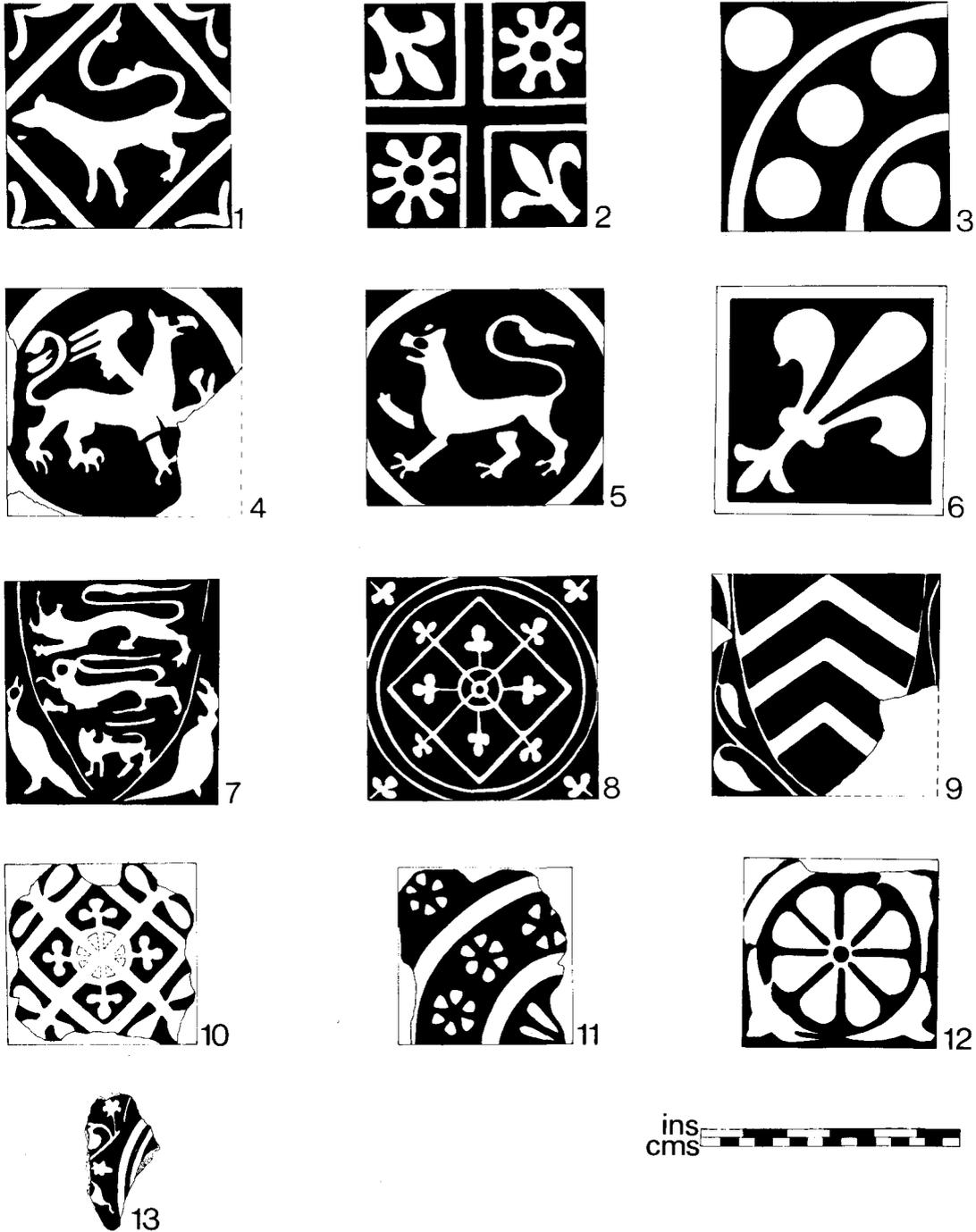


Fig. 7 Westminster Abbey. Redevelopment of 20 Dean's Yard 1975-77. The decorated tiles

## ANALYSIS OF MORTAR SAMPLES FROM THE SUB-VAULT

by JOHN EVANS, NORTHEAST LONDON POLYTECHNIC

### HISTORIC DEVELOPMENT OF CEMENT

Mortar is a term loosely applied to material used for bedding, jointing and rendering masonry. It consists of cementitious binding material, usually mixed with a fine aggregate such as sand. If the cementitious material is mixed with a coarse aggregate a concrete is produced. Concrete was used in historical times for foundations, floors and wall hearing.

It was not until the Roman occupation of Britain that building techniques employed mortar and concrete to any appreciable extent. Roman mortar and concrete are popularly supposed to be superior in quality to any that have been produced until modern times. This is partly due to the characteristic of well-made mortar that it tends to harden with the process of time and, partly, because Roman builders took care in the selection of their materials. The quality of Roman cements was sometimes further enhanced by the use of pozzolanic additives.

Pozzolanas are defined as materials which, though not cementitious in themselves, contain constituents which will combine with lime at ordinary temperatures in the presence of water to form stable insoluble compounds possessing cementing properties. Pozzolanas can be divided into two groups, natural and artificial. Natural pozzolanas are, for the most part, materials of volcanic origin, but include certain diatomaceous earths, (ie. earth containing the silicious deposit of diatom shells). The artificial systems are mainly obtained by the heat treatment of natural materials such as clays. In the Roman period natural pozzolanas were available for use in Italy but not in Britain. The Roman builders overcame this problem by producing an artificial material, namely crushed tiles and bricks.

The absence of pozzolanic materials in post-Roman building mortars gave rise to mortar (and concrete) mixtures that generally had relatively little strength and were slow setting. It was often necessary, therefore, to place spacers (such as oyster shells and wooden pegs) between the masonry blocks to prevent the mortar from being squeezed out of the bedding joints under load.

In the 16th and 17th centuries, Dutch pozzolanas were imported and used in mortar and concrete preparations. John Smeaton experimented with various limes and he deduced that a good cement could be produced by deliberately mixing and burning together limestone and clay. Towards the end of the 18th century James Parker found that he could produce a satisfactory cement by calcining nodules of argillaceous limestone washed out of the London clay cliffs on the foreshore of the Thames estuary. This cement was called 'Roman' cement.

At the beginning of the 19th century James Frost patented a cement produced by calcining a mixture of limestone and clay, which he ground together in a wet mill. Improvements on this method were made by Joseph Aspdin. The first reliable Portland cement was produced by Ian Johnson at Swanscombe in 1845 and, thus, gave birth to the modern cement industry.

### POTENTIAL EVIDENCE

#### MORTARS — CONCRETES

Scientific investigation of cementitious materials cannot give any absolute dating information; it can give, however, useful relative dating data within a given structure. In principle, it is assumed that when building operations were commenced, sufficient supplies of aggregate, lime, etc were available from a common source. Hence, when mortars and concretes are examined, if there is a high degree of similarity in their constitution it is reasonable to assume a common constructional period. One problem that occasionally arises, especially in material from the Roman period, is the use of sieved aggregate. In such situations, very similar results may be obtained for samples that are not contemporary. However, if a relatively large time period elapses between constructional features, there is usually a detectable change in the nature of the aggregate, as it appears that no large-scale quarry sources were available in Roman times. Thus it is possible, provided that sufficiently representative samples are used in conjunction with excavational evidence, to decide which modifications to the parent structure are contemporary and, hence, outline the principle periods of activity in the building.

Additional evidence is sometimes found in the nature of the aggregate itself. Although this is, mostly, gravel and sand (and crushed tile/brick in the Roman period) usually from a local source, it does occasionally contain oddities. The presence of daub, bones, charcoal, pot fragments and metal

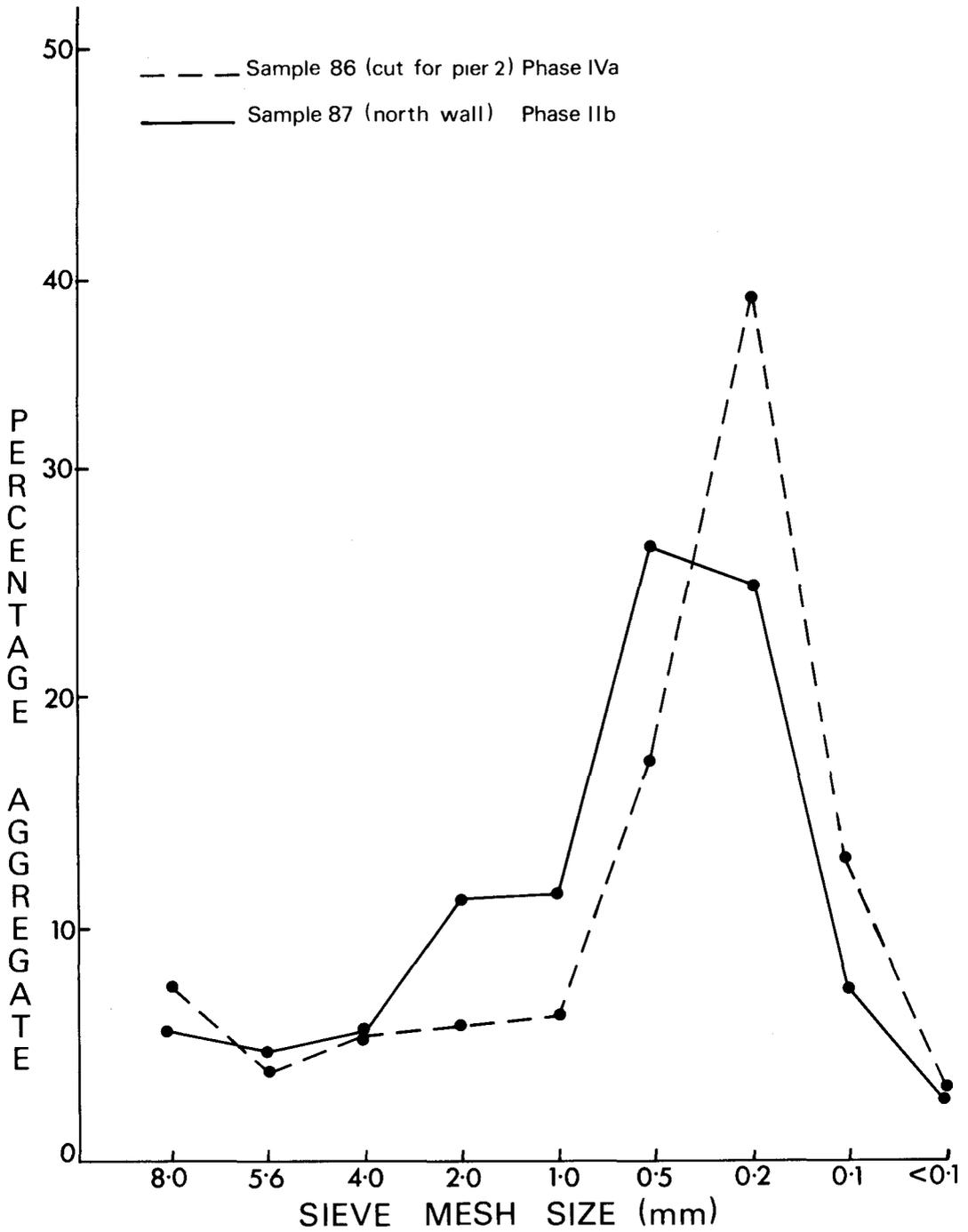


Fig. 8 Westminster Abbey. Redevelopment of 20 Dean's Yard 1975-77. Examples of aggregate distribution curves from the mortar analysis

fragments have all been detected and, as a consequence, some useful additional information may be obtained.

#### THE MORTAR SAMPLES FROM THE SUB-VAULT

55 mortar samples were taken during the excavation. The dates assigned to them on archaeological grounds ranged from the late Saxon period to the early 20th century. It was hoped that analysis of the samples would not only support the archaeological assignments but also give information about the development of mortar preparation techniques throughout this time period. Unfortunately, the samples, with the exception of No. 82 (early 20th century), were in a very friable state and most appeared to have lost calcium salts through leaching processes. It was not practicable, therefore, to draw any certain conclusions concerning the latter part of the investigation. The poor state of the samples, however, does seem to indicate that no pozzolanic materials had been used in any of the pre-20th century systems.

#### EXPERIMENTAL

Visual examination of the samples showed them to be in an extremely friable condition (excluding the early 20th century sample) and excessively leached. Several samples had in fact no coherent structure and consequently data concerning them can only be considered with circumspection. The aggregates appeared to be composed mostly of flints and sand with inclusions of chalk. In most cases the chalk inclusions accounted for no more than 5% of the observable aggregate. However, it was noted that in several samples the percentage was much higher, often approaching 50%. It was further noted that these chalk rich systems tended to be associated with Phases IV and V of the building, although not exclusively so. Several of the samples contained charcoal fragments particularly those samples concerned with the early building phases.

The colours of the samples ranged from a sandy brown to very pale cream, the colour variation appearing to depend on the percentage of chalk inclusion. Four samples, 11, 31, 51 and 82, had colours outside this range; 11 and 82 were pink in colour, and 31 and 51 dark grey. The former colour was produced by a preponderance of burnt clay fragments and the latter by inclusions of fine charcoal.

The samples were first dried at 110°C to constant weight. 200 g. of each sample was then treated with dilute hydrochloric acid to remove acid soluble material (mainly calcium salts) and thus reduce the sample to its aggregate. The aggregate was filtered, thoroughly washed and dried to a constant weight. It was then passed through a series of sieves and the various quantities retained noted. In order to enable comparison of the aggregate distributions to be made, the weights retained were converted into percentage of the total aggregate weight and plotted against sieve mesh size. The results of this exercise are shown in the following diagram (Fig. 8). All analyses were carried out in duplicate and the mean values plotted.

Geological examination of the insoluble aggregate indicated that the larger aggregate (that retained by a 2.00 mm mesh sieve) in all samples was composed mainly of flint fragments showing natural fractures and quartzite pebbles. 14 samples (4, 11, 21, 24, 31, 51, 67, 72, 73, 75, 76, 77, 81 and 82) contained burnt clay fragments, and 8 (33, 45, 50, 52, 56, 70, 74, 87) white/grey clay aggregations. The burnt clay fragments in 21 and 67 were identified as brown glazed tile fragments and a piece of daub (weight 17.5 g) respectively. Several of the flints in the samples had a reddish appearance reminiscent of having been fired, but the absence of sharp fractures suggested that this was a natural phenomenon. Samples 31 and 51 also contained several fish bones.

The finer aggregates were composed of small flints, sub-rounded quartz and fragments of oxidised pyrites. Both burnt and unburnt clay were also observed in the finer aggregates of those samples mentioned previously.

#### RESULTS

For convenience, the samples have been divided under three headings (based on archaeological considerations); floors, walls and samples from within features.

	Building Phase	Samples Assigned on Archaeological Evidence	Mortar Group	Samples assigned on Mortar Analysis
<b>Floor Samples</b>				
II	a	45(F90a) 46(F90b)	P1	45(F90a) 46(F90b) 51(F94d) 55(F94g)
	d	47(F94a) 48(F94b) 49(F94c) 50(F94e) 51(F94d) 55(F94g) 56(F94h)	P2	47(F94a) 48(F94b) 50(F94e)
			P3	49(F94c)
			P4	56(F94h)*
III	b	66(F92c) 67(F92d) 70(F106)	P5	34(F70b) 40(F76a) 52(F95) 66(F92c) 67(F92d) 70(F106)
	b/c	40(F76a) 52(F95)	P5	See above under III b
IV	a	34(F70b)	P5	See above under III b
	b	23(F64) 33(F59b)	P6	23(F64)
			P7	33(F59b)
	c	31(F56b)	P8	30(F51h) 31(F56b)
V	a	20(F51a) 21(F51b) 22(F62) 24(F51c) 28(F51d)	P9	20(F51a) 21(F51b) 22(F62) 24(F51c) 28(F51d)
		30(F51h)	P8	See above under IVc
		14(F51)	P11	See below under Vb
	b	10(F49a) 12(F49c) 13(F49b)	P10	10(F49a)
			P11	12(F49c) 13(F49b) 14(F51)
<b>Wall Mortars</b>				
II	b	83(N wall foundation) 85(S wall core) 87(N wall)	M1	83(N wall foundation) 87(N wall)
	c	73(F101) 74(F101c)	M2	73(F101)
			M3	74(F101c)
IV	a	75(pier 9) 76(plaster between piers 3 & 4) 77(pier 7)	M4	75(pier 9) 76(plaster between piers 3 & 4) 77(pier 7) 81(blocking of doorway in S wall)
		84(foundations E wall) 86(cut for pier 2) 88(cut for pier 3)	M5	84(foundations E wall) 85(S wall core) 86(cut for pier 2) 88(cut for pier 3)
VI	a	6(mortar from top of pier 4)	M6	6(mortar from top of pier 4)
	b	1(F1)	M7	1(F1)
Vb or VIb		81(blocking of doorway S wall)	M4	See above under IVa
C20th		82(early C20th sewer pipe)	M8	82(early C20th sewer pipe)
<b>Samples from within features</b>				
I	c	39(F84) 72(F108)	W1	39(F84) 72(F108)
IV	a	25(F68a) 26(F68b) 27(F68c) 35(F81a) 80(F86)	W2	26(F68b) 27(F68c) 35(F81a)*
			W3	25(F68a)*
			W4	80(F86)
V	a	8(F42a) 9(F42a) 11(F42b)	W5	8(F42a) 9(F42a) 11(F42b)
	b	16(F47b)	W6	16(F47b)
VI	b	4(F28)	W7	4(F28)*

\* Indicates degenerate sample

## DISCUSSION

It can be seen from the table that there is quite a high degree of correlation between the groups produced by the archaeological evidence and those produced by the aggregate analysis. Each of the subdivisions will now be considered in detail.

## A. FLOOR SAMPLES

A consideration of the two sets of groups shows that the aggregate analysis has tended to re-distribute the features concerned with the earlier building phases. As the aggregate distribution curves for groups P1 and P2 are quite characteristic it seems reasonable to assume that features F90 a/b and F94 d/g are contemporary, as are features F94 a/b/e. The marked differences between the curves for either of these groups and the curves for P3 and P4 clearly suggests that features F94c and F94h are not contemporary, either with the previously mentioned features or with each other. (It may be, of course, that the samples are not representative, as is likely with the degenerate sample 56.)

The six samples assigned to group P5 appear to spread across building phases III and IV. Aggregate analysis indicates a contemporary origin for the four features F76a, F92 c/d, F95 and F106. The presence of a sample from F70b in this group suggests that some phase IIIb structure, possibly a floor, was broken up and used as rubble hardcore for the phase IVa floor. The splitting-up of the IVb sample into two groups P6 and P7 gives support for the idea that the floor F57/64/67 was new.

The assignment to a single period of features F51h and F56b (group P8) is not unexpected as the samples were removed from floor features that were described as patchy. It is quite possible, therefore, that the samples were, in fact, removed from contemporary deposits. Although both were described as sandy deposits by the excavator, the high soluble percentages (29% for 30 and 25% for 31) argue strongly for them to be degenerate mortars as opposed to natural sands.

Four of the five mortars making up group P9 are samples of the mortar used for laying the tiled floor F51d. As their aggregate make-up is very similar to that used in feature F62 it is reasonable to assume that this feature is contemporary with the construction of the tiled floor.

The occurrence in P11 of a sample from the brick partition, F51, with two samples from the suspected rubble in feature F49 c/b suggests that the partition was partially demolished and used for hardcore for the phase Vb development.

## B. WALL MORTARS

At first sight, aggregate analysis appears to have produced quite a marked difference in the sample groupings. However, on closer examination the redistribution is not unexpected. Possibly the most serious deviation from the archaeological groupings are the re-arrangement of the samples assigned to building phase IVa and the samples assigned to group M5.

The M1 group is in keeping with the archaeological evidence, as the foundation of the north wall of the kitchen was a phase IIb activity. One would thus expect a sample from its foundation to correspond to other phase IIb samples.

One curious anomaly (apparently) thrown up by the aggregate curves is the assigning of the sample from the south wall blocking to M4. The other members of this group are all concerned with the piers and consequently would be expected to be similar. It seems most unlikely (on archaeological grounds) that the blocking of the south wall could be contemporary with the activities concerning the piers and so the presence of F81 in this group must be considered to be coincidental. A possible cause of this could be the poor state of the sample.

Although group M5 contains only four samples it is probably the most controversial group in the whole analysis. The occurrence of the two samples from piers 2 and 3 with that from the east wall foundation, F86a, is, of course, quite acceptable, but the additional presence of the sample removed from the south wall core is totally unexpected. Indeed, the archaeological evidence is completely against this latter sample having an origin contemporary with the samples from the piers and the east wall. As the aggregate distribution characteristics of this group are quite distinctive it seems highly unlikely that the presence of the wall sample is a coincidence.

## C. WITHIN FEATURE SAMPLES

It can be seen that there is a high degree of correlation between the two sets of groups in this subdivision. Such differences that do occur can all be accounted for in such a way as not to contradict the excavational evidence.

The grouping together of the samples from the trench feature, F108, and the post-hole F84, in W1,



Plate 1 Westminster Abbey. Redevelopment of 20 Dean's Yard 1975-77. 12th century sculptured black (scale cms) (see p. 200)



Plate 2 Westminster Abbey. Redevelopment of 20 Dean's Yard 1975-77. Barbarous imitation of Duisberg, Emperor Konrad II pfennig. Obverse (*above*); Reverse (*below*). (Diameter 19.5mm)

is particularly significant as it lends support to a contemporary origin of these two features. As feature F68 was stratigraphically later than feature F86, and feature F81 was isolated from the other features by pits, it is not surprising that the five samples from phase IVa did not fall into a single group. Furthermore, the samples from F68a and F86 were in a very poor state, consequently they could well give erratic results.

The assignment of the two samples from the mid-late 15th century oven (feature F42) is, at first sight, not surprising. However, one sample was removed from the external surface and one from deep within the wall structure of the oven. The fact that they are practically the same indicates that the oven structure was never re-pointed.

#### EXCAVATOR'S COMMENTS

The results of the analysis of mortar samples from the excavation have been important for a number of reasons. Firstly the high degree of correlation between samples assigned on the evidence of mortar analysis and the features phased on archaeological evidence provides further welcome support for the interpretation of the site.

As a corollary to this, the phasing of the features, where archaeological and mortar evidence seemed to disagree, was re-assessed. In particular this involved the phasing of features F51 and F94, the blocking of the door in the south wall, and the south wall core.

Feature 94 (Black 1976, 143) (Phase IIb; mortar groups P1, 2, 3 and 4) consisted of a series of repairs to the pathway between the kitchen and frater, west of the sleeper wall. It was not possible to separate these repairs into different phases because of the lack of finds from them, and because of the disturbance caused by modern features. Mortar analysis separated these repairs into four groups. Archaeologically this is perfectly acceptable, and helps to show that the repairs occurred periodically over a long time.

Feature F51 (Black 1976, 150) (Phase Va; mortar groups P8, 9, 11) was an area partitioned off in the north-east corner of the sub-vault, within which was a plain glazed tile floor, which was later replaced by a new floor also of tiles. F51(h) was a deposit of loose mid-brown soil containing some mortar, sealed by make-up for the earliest tile floor, and initially interpreted as part of that make-up. However it was an isolated deposit, sealed by the cut for that tile floor. There were also no datable finds from it. Therefore it may in fact have been associated with F56(b) which was make-up for a phase 4(c) floor (F57/64/67).

It is more difficult to account for the presence of sample 81 (from the blocking of the doorway in the south wall) in mortar group M4. This group also contained samples from piers 7 and 9, and from a plaster facing between piers 3 and 4. One possibility is that the walls were plastered and the piers re-pointed when the doorway in the south wall was blocked.

There is no obvious archaeological explanation for the presence of sample 85 (from the Norman south wall core) in mortar group M5. The rest of the group were samples from the 13th century insertion of the sub-vault. The only possibility seems to be that the sample came not from the original Norman core of the wall, but from the backfill of a later cut. The sample was taken from a badly disturbed section of the wall beside the 15th century baker's oven (F42).

Finally, analysis of two of the samples, 30(F51h) and 31(F56b) revealed them to be degenerate mortars rather than sandy soils, which is how they were described in the site report. This shows the importance of analysing deposits where their constituents are not totally certain.

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The Unit gratefully acknowledges the assistance given by Mrs Elizabeth S. Eames of the British Museum, on whose comments the tile report is based, and Mr Peter Kidson of the Courtauld Institute for his comments on the pier bases. The wall elevations were drawn by the G.L.C. Historic Buildings Division.

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# EVIDENCE FOR THE MANUFACTURE OF AMBER BEADS IN LONDON IN 14-15th CENTURY

VANESSA K. MEAD

Evidence of jewellery making in 14-15th century London has been identified from the medieval rubbish dump levels excavated on the site of Baynard's Castle in 1972. The evidence comprises amber, jet and box wood beads and one fragment of coral. It is proposed to examine only the former in this note.

The amber fragments which consist of irregular lumps, partly completed, discarded and finished beads have been identified as Baltic amber and have a colour range of dark orange to pale yellow<sup>1</sup>. A few beads are of opaque white amber known as bone amber. The amber was found in 14-15th century deposits, which due to their waterlogged condition has more or less preserved the original colour. Under normal circumstances when amber is exposed to the atmosphere, it tends to slowly darken in colour and the surface patination becomes cracked and crazed<sup>2</sup>.

## THE MATERIAL

1. (Layer 250) Find no. (4790) (2886) (2885)

*Unfashioned fragments (Pl. 1)*

13 pieces; irregularly shaped; size range 18mm-5mm diameter. One piece has an inclusion of a piece of tree bark or leaf. These pieces were perhaps discarded because they were too irregular, too small or faulted.

*Partially worked or completed beads (Pls. 2, 3, 4, 5)*

- (a) Faceted; 5 beads roughly shaped in the form of short cylinders with approximately 7 facets on each; size range from 6-4mm diameter 3-2mm length.
- (b) Faceted and drilled; 32 beads have their sides faceted and a central drill hole. 5 of these apparently split whilst being drilled; 12-4mm diameter.
- (c) Turned and partly polished; 48 beads of ranging shapes<sup>3</sup> *i.e.* 2 oblate disc (22mm diameter), 8 ellipsoid long beads (15-4mm length), 7 standard circular (13-6mm length) 14 short barrel (10.5-4mm length), 18 undefined, represent part finished beads in the first stages of the turning process with facet marks still visible.
- (d) Completed; 7 beads of varying shapes, *i.e.* 3 oblate disc, circular, (8-5mm diameter, 3.5-2.5mm length). 1 ellipsoid (7.5mm length), 1 standard circular, (6mm length 6mm diameter) 2 short barrel, (3mm length).

2. Material from other deposits

(Layer 1)

(399) Complete bead; standard circular; (7.5mm length, 13mm diameter).

(449) Complete bead; standard circular; (6mm length, 6mm diameter).

(Layer 10)

(310) Half a bead; standard circular; (7mm length, 7.2mm diameter).

(Layer 23)

(1548) Complete bead; short barrel (5.5mm length, 7mm diameter).

(Layer 23B)

(2097) Complete bead; standard circular, possibly hand turned as the surface is very uneven but polished; (15mm length, 14mm diameter).

(Layer 55)

(1794) Complete bead, oblate disc; (3.8mm length, 8.2mm diameter).

(Layer 79)

(1836) (*Pl. 6*) An incomplete string of 8 ellipsoid amber beads threaded on two lengths of fine cotton string<sup>4</sup>, 120mm and 67mm in length. The beads range in size from 7mm-9mm length with an average diameter of 6mm and central holes of *c.* 1.5mm diameter. One of the beads contains a small inclusion of a piece of twig.

The material from Baynard's Castle clearly shows the stages required to turn a piece of raw amber into a finished bead. After the selection of a suitable lump the initial stage was to trim the piece by cutting or sawing thus producing a cuboid or polygonal shape with faceted sides. The central hole was then drilled and the bead turned and polished into the finished article.

As the number of split examples indicate the drilling part of the operation was clearly difficult to achieve without accident. The wide spaced spiral marks visible on the holes of some of the broken examples perhaps indicate the slowness of the drill used and several pieces clearly show (*e.g. Pl. 4* top central) that the hole was started from two opposing sides to meet in the centre. It is not possible from the evidence of the amber itself to speculate on the type of drill employed though one or two unfinished holes indicate that the bit had a sharp conical point. The regularity and smoothness of the polished surface of the finished beads must indicate that they were mechanically turned, presumably on a lathe, and not polished by hand.

A portrait of a paternoster at work from the 'Housebook' of the Zwölfbrüderstiftung' at Nuremberg<sup>5</sup> and dated to the early 15th century (*Pl. 7*) is of interest in this connection though it provides no direct evidence of the method used in London. Though the artist must have omitted many details of the lathe-drill in the picture the basic *modus operandi* can be deduced. He appears to be operating a horizontal lathe drill powered by a hand bow. A trifurcated, hollow (?) bit bores into a block of, presumably, wood, producing a complete though rough bead. The beads were subsequently drilled and finished. This technique clearly cannot be taken to represent that employed for the production of amber beads in London, but the size and character of the machinery and the operation must reflect a similar situation.

Bead necklaces were not very common in the medieval period and beads were mainly used for rosaries worn around the neck or waist, as a badge of faith (*Fig. 1*). The many different sizes of beads in these deposits suggests that they could have been made or used for rosaries where different size beads represented different parts of the prayer. Usually a set of rosary beads had ten small and one large bead. The small ones represent 'Aves' for the 'Hail Mary', and the large ones 'Paternosters', the 'Our Father' and 'Glorias'. A 'Gaude' is one of the large beads placed between the decade of 'Aves' in a rosary<sup>6</sup>. From the 11th century, the joys and sorrows of the Blessed Virgin had been associated with 165 beads. The saying of one Paternoster, ten Aves and one Gloria for each of the five glorious mysteries of the Blessed Virgin became more common by the 14th century. The medieval paternoster, later called rosary, was much less formalized; there were two types, circlets ('chaplets') and single strings of beads with tassels on the end.

The presence of jet, coral and boxwood beads with the Baynard's Castle material also indicates the possibility of these being used as rosary beads.

The stratigraphical context of the beads suggests that their manufacture can be dated to the 14-15th centuries. It is not possible to say where in the city this took place as the pieces for the most part represent waste material recovered from a general rubbish deposit. However, it is likely that these deposits were accumulated and carried to the waterfronts, often for

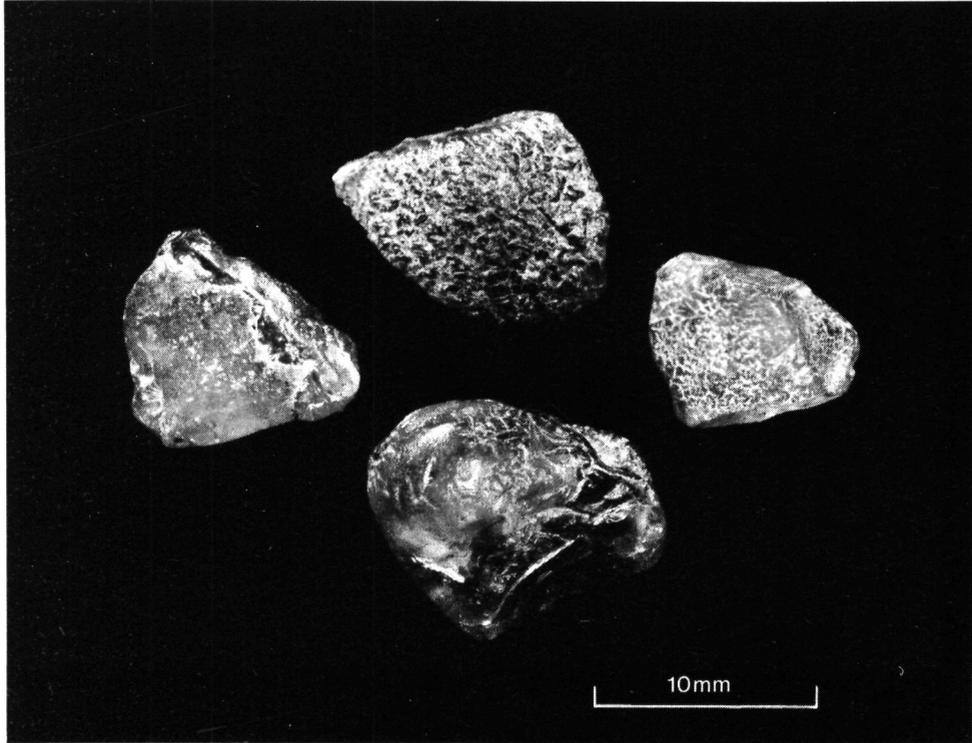


Plate 1 — Baynard's Castle: pieces of raw amber.

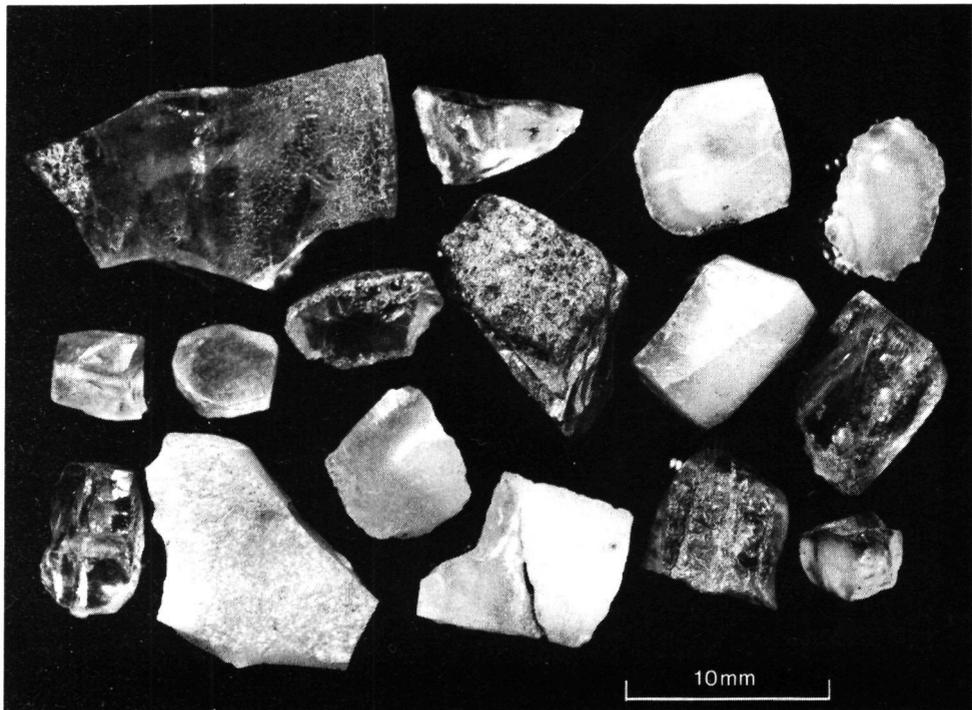


Plate 2 — Baynard's Castle: Amber with edges roughly trimmed to remove surface patination.

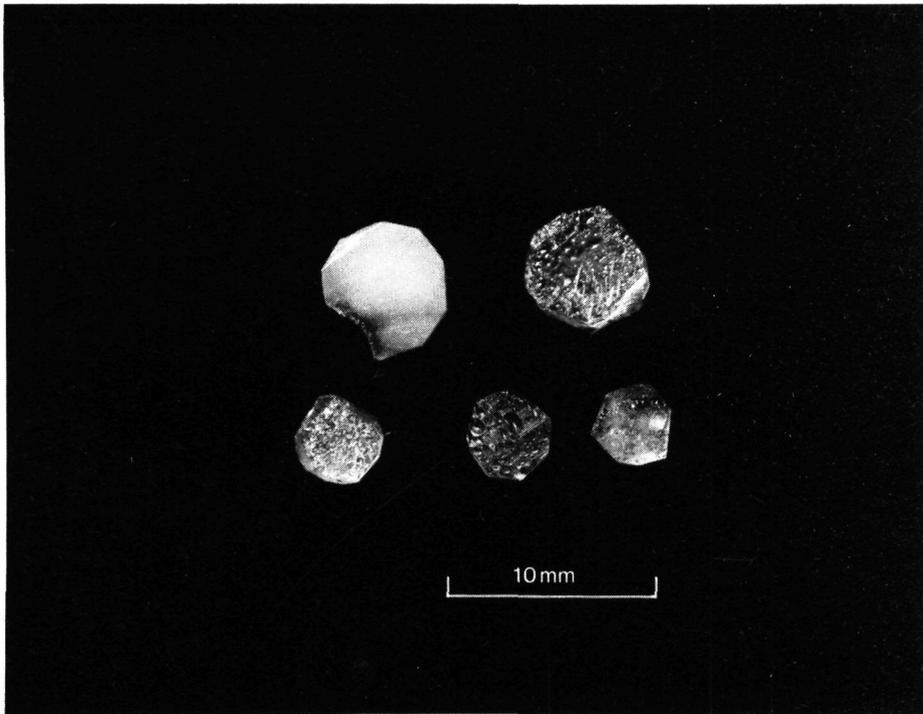


Plate 3 — Baynard's Castle: Roughly shaped beads with faceted sides discarded before drilling of centre hole.

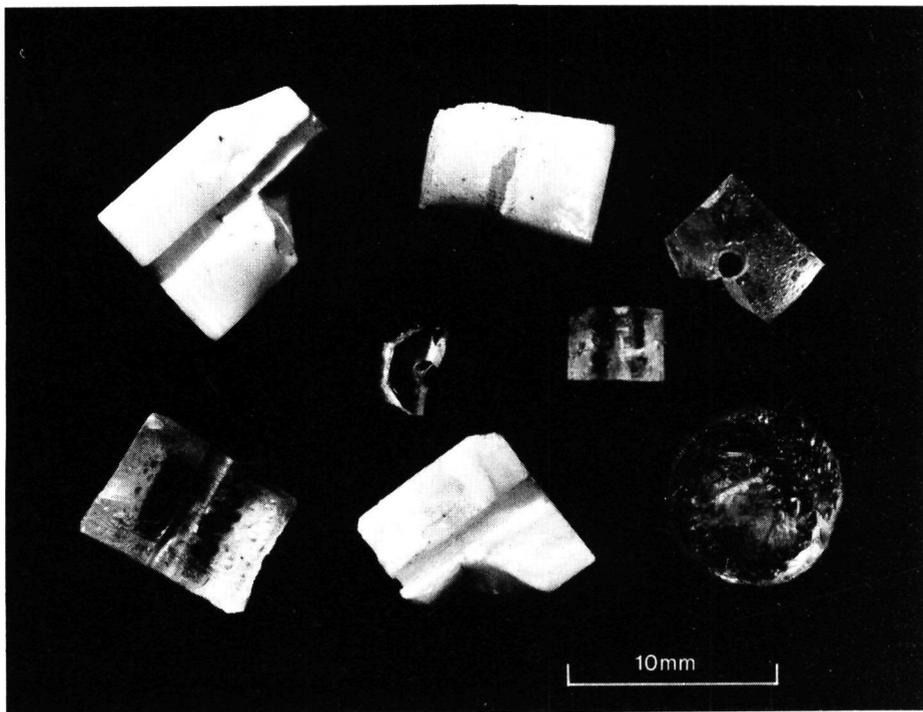


Plate 4 — Baynard's Castle: Discarded beads broken during drilling.

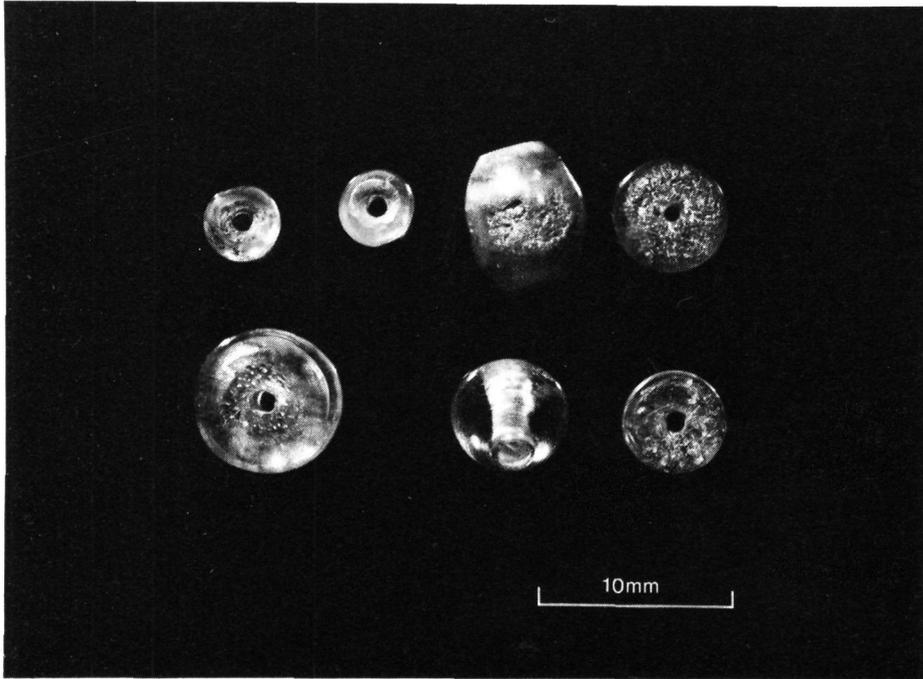


Plate 5 — Baynard's Castle: Finished beads.

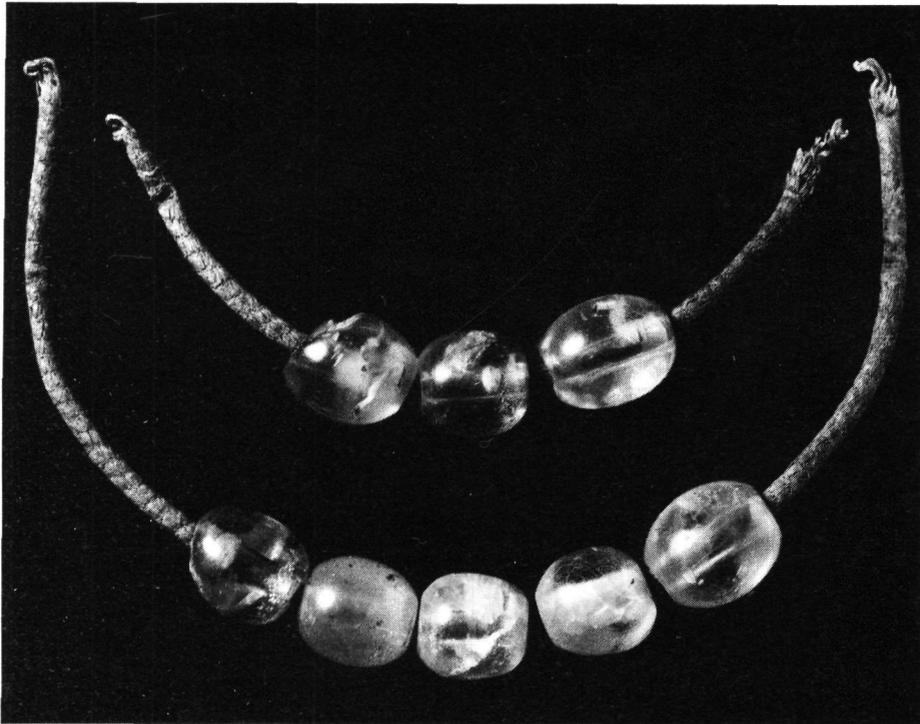


Plate 6 — Baynard's Castle: 15th century amber beads on string of cotton. (See text for measurements).



Plate 7 — Paternoster making beads, Nuremburg. 15th century.



Unknown Civilian c.1465



Thomas Williams 1495

Fig. 1 Funerary brasses from St Helen's, Bishopsgate, showing rosaries worn at the waist.

transportation down river by barge, by 'ward rakers' or street cleaners organised as their names suggests on a ward basis'. It is perhaps worth pointing out that both the site of Baynard's Castle and the streets of Paternoster Row and Ave Maria Lane, where the bead-makers had their workshops<sup>8</sup>, lie comparatively close to one another and within the same ward.

The main source for amber in the medieval period was the Baltic coast and it formed part of a very considerable trade based on timber and furs. However, despite the distance which it had to come its relative value compared with other materials used for beads and jewellery remained low. Three London inventories can serve to demonstrate this point.

1. *Annys Borde, Dec. 1544 inventory of goods*<sup>9</sup> —  
Pair of jet beads gauded with silver, six gaudees and a little silver cross 2s.  
Certain bead stones with a pair of amber beads 8d.
2. *Thomas Cutler, 1389, inventory of goods*<sup>10</sup> —  
Pair of silver paternosters valued at 3s.4d.  
Pair of gilt paternosters with crucifix at 4s.  
Pair of amber paternosters at 20d.
3. *Paston letters. A late 15th century inventory.*  
A box with beads, where of 2 pair of jet with paternosters of coral 40d.  
A pair of jet 12d.  
5 pairs of box 10d.  
A pair of amber 18d.

#### NOTES

1. Dr. P. Whalley of the Department of Entomology at the Natural History Museum kindly identified the amber as 'good quality Baltic amber'.
2. D.E. Strong *Catalogue of the Carved Amber in the department of Greek and Roman Antiquities* (British Museum, 1966) 14-15.
3. H.C. Beck 'Classification and Nomenclature of beads and pendants'. *Archaeologia* 77 (1927) P1.II and III. P1.II long beads group 1.D.1.a. Plate II 1 x B 2.b. and 1.B.2.b. P1.II. Disc beads group 1.C.1.a. and short barrel beads group. P1.III standard beads group 1.C.4.d.b.
4. The identification was kindly made by Mr. George Willcox.
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# BUTCHER ROW, RATCLIFF, E.14

IRENE SCHWAB AND BERNARD NURSE

*Major road works on the east side of Butcher Row and the restoration of murals within the adjacent Master's House, the Royal Foundation of St. Katharine (Fig. 1), presented the opportunity to examine this area both archaeologically and through documentary records.*

*Archaeological evidence up to the 17th century has been recorded and the history of the Master's House has been traced back to the 16th century.*

*The report comprises an account of the excavations carried out in 1975 by the Inner London Archaeological Unit; notes on the history of the present site and house of the Royal Foundation of St. Katharine; and a report on the finds from the excavation.*

## EXCAVATIONS AT BUTCHER ROW, RATCLIFF, E.14.

IRENE SCHWAB

### INTRODUCTION AND SUMMARY

Between June and September 1975 the Inner London Archaeological Unit excavated two sites on the east side of Butcher Row, Ratcliff in advance of a road widening scheme (Fig. 1). The earliest settlement at Ratcliff was probably concentrated along the river-front, possibly around Broad Street (Plate 2). However, in the later medieval period this settlement expanded westwards towards Wapping, eastwards to Limehouse and northwards along Butcher Row, the continuation of which was the main route to Stepney and Hackney.

The purpose of the excavation was to determine the date of this expansion to the north, and the nature of the settlement.

Trial trenching showed the area to have been heavily disturbed by post-medieval cellars and in Trench I the early features were, in the main, only preserved where they cut the natural brickearth. Trench II produced evidence of a stream, which had silted up in the 14th or 15th century, running roughly parallel with the present line of Cable Street. A gravel surface to the north of this channel may have been a track which was replaced after two large scale floods had necessitated the raising of the land level. The earliest settlement on the site appeared to be in the late 15th-early 16th century when a building, at least partially constructed of brick, was erected.

The complete archaeological records, including all the unpublished plans and sections, are available for examination at the headquarters of the Inner London Archaeological Unit.

### TRENCH I (PLAN 1, FIG. 2)

An area of 72 sq. metres was investigated on the eastern side of Butcher Row, to the south-west of the Royal Foundation of St. Katharine. The trench was limited on the south side by the Rotherhithe Tunnel, on the west by Butcher Row, on the north by the access road to the Royal Foundation of St. Katharine and on the east by St. James's Gardens.

The trench had been heavily disturbed by the cellars and foundations of 18th and 19th century warehouse buildings, originally fronting onto Butcher Row. A number of service trenches and an early 19th century well also damaged many of the earlier deposits. No

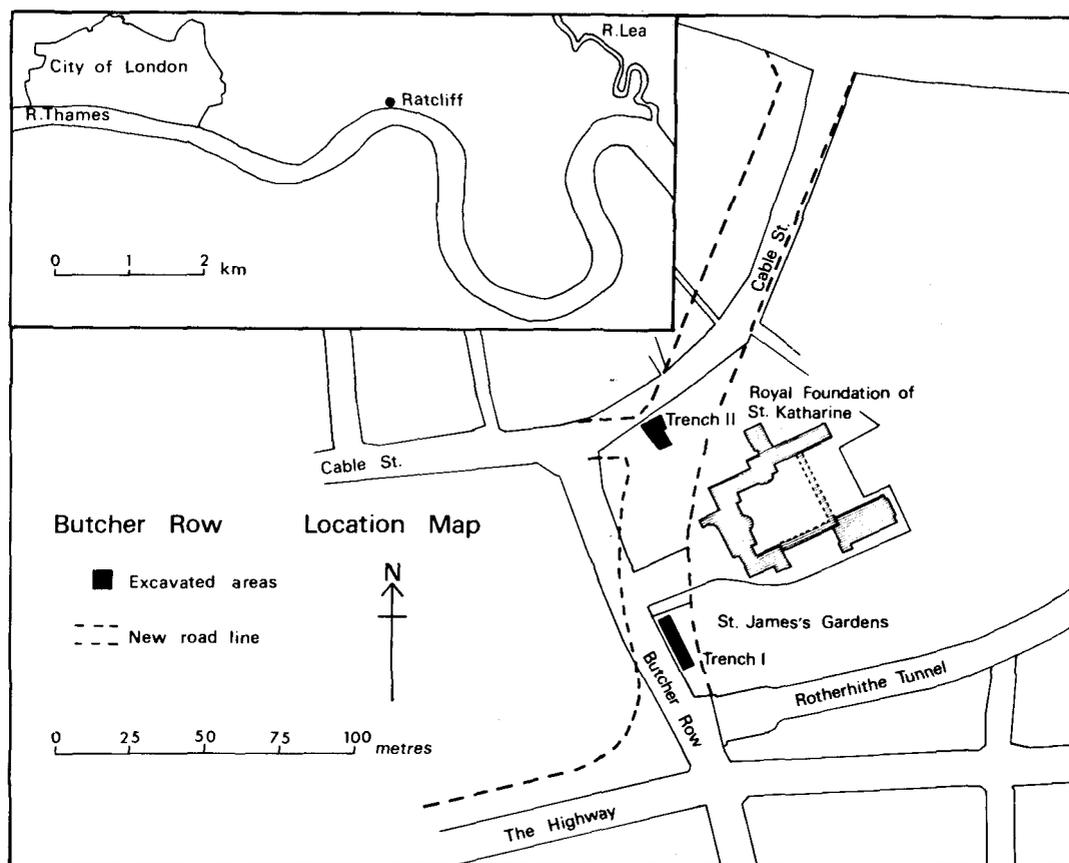


Fig. 1. Butcher Row: Location map

occupation levels survived on the site and the five pits and the gully that did survive were truncated by these later features. While in most cases the pits could not be related to each other, the dating evidence suggests that they were all filled within a hundred years, from the mid 16th century to the mid 17th century, and pits 1, 2, 3 and 5 may have been contemporary.

The site lay on an alluvial deposit of brickearth, the top of which lay at +6.10m OD.

#### PIT 1:

This was a rectangular pit truncated by the later cellars, bisected by the concrete foundations of an 18th or 19th century wall and cut by the early 19th century well. The pit, which had almost vertical sides, measured 2.34m north-south by 1.34m east-west and retained a depth of 0.90m. It contained three layers of fill, the lowest, layer I, being 0.09m deep and consisting of brown clay containing a quantity of animal bone. Above this was a layer, 0.24m thick, of sandy soil, layer II, which contained a large amount of pottery and tile.

The layer above, layer III, was *c.* 0.58m thick and consisted of brown clay which contained fragments of brick, charcoal, chalk and mortar.

The pottery from all three layers was of similar type and is of late 16th century date. Unlike the other pits on the site, there was little residual material, and this does not appear to be an ordinary refuse pit. The quantity of unabraded sherds suggests it may have been dug specifically to dump this material,

which may have been waste from a kiln. While the pottery resembles closely that found with the earthenware kiln at Woolwich, it may also be derived from a more local, as yet undiscovered, kiln.

## PIT 2:

On the western edge of the site, adjacent to the road frontage, lay a sub-rectangular pit with a flat base 3.60m in length (north-south) and *c.* 2.00m wide. It had been cut by the 19th century walls and three drainage trenches. It retained a depth of 0.46m and contained five layers of fill. The western edge lay beyond the western limits of the trench. The earliest layer, layer I, consisted of 0.15m of brown-grey clay containing fragments of charcoal. It contained a quantity of bone and shell, with pottery dating from the mid 16th to 17th century and two early 17th century clay pipes. The second layer did not extend over the whole pit, but consisted of a patch of dirty orange clay 0.11m deep.

Layer III was a thin layer of brown clay only 0.04m thick containing a substantial amount of charcoal. Layer IV consisted of 0.02m of yellow clay. Layer V was 0.14m deep and was formed of orange clay.

There were no finds from layers II, IV and V, and the pottery from layer III, which dated to the mid 16th century, must all have been residual. The range of pottery, the quantity of bone and the presence of charcoal suggest that this was used as a refuse pit.

At the southern end of the site lay two features, only a small proportion of which lay within the trench:

## PIT 3:

The earliest of these was a large pit, cut into the natural brickearth. Little of its plan was obtained but it measured at least 3.40m east-west and at least 1.34m north-south. It retained a depth of 1.90m. The first two layers of fill covered a smaller area than layer III, which belled out another 1.40m to form a step.

Layer I contained yellow-brown clay and was 0.88m deep. Layer II was a thin layer of charcoal 0.06m thick which did not entirely cover layer I, but measured 2.03m east-west and 0.40m north-south.

Sealing the charcoal and the clay was a layer of brown clay Layer III, which was 1.05m deep, and broadened out towards the east.

The pit contained very little dating material. There were no finds from layer II and only one sherd from layer III, but the finds from layer I suggest a 16th or early 17th century date for the fill. From its size and the paucity of finds, this feature seems likely to have been dug for the extraction of brickearth.

## PIT 4:

Pit 3 was cut by Pit 4, which measured at least 1.20m east-west and at least 0.54m north-south. It had been filled back with yellow-brown clay containing patches of chalk, charcoal and pebbles to a depth of 1.60m. There was no dating evidence from this feature.

## PIT 5:

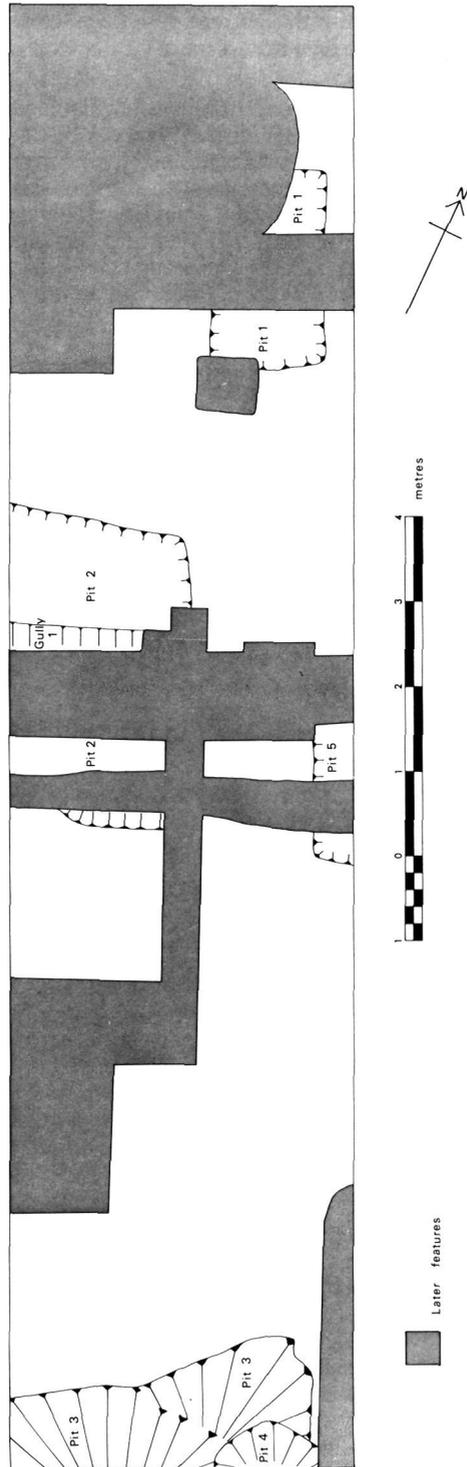
To the north of Pits 3 and 4, on the eastern edge of the trench, lay a rectangular pit. This had been cut through by a drainage trench and the northern part had been destroyed by the foundations of a late 18th or early 19th century wall. It retained a length of 1.66m and a width of 0.48m although its eastern edge lay beyond the limits of the trench. It had almost vertical sides and rounded corners and had been filled with yellow-orange clay to a depth of at least 0.55m. The pottery from the fill dates to the late 16th or early 17th century.

## GULLY 1:

Pit 2 was cut by a shallow gully, only a half section of which was obtained, the other half having been removed by the foundations of an 18th or 19th century wall. It was, however, at least 0.74m wide (north-south) and at least 1.80m long (east-west). The gully contained three layers of fill, with a total depth of 0.30m.

Layer I consisted of brown, burnt sand and was 0.15m deep. Layer II contained very burnt black sand to a depth of 0.08m. Layer III was a lighter deposit of burnt sand *c.* 0.07m deep.

Some, but not all, of the pottery from this feature had been burnt. This, together with the size of the feature, suggests that it was not a hearth, but a shallow gully, into which burnt material had been dumped. The pottery from the gully dates to the 16th century and is therefore probably residual.



Butcher Row 1975 Trench I Plan I

Fig. 2. Butcher Row: Trench I plan 1

## CONCLUSIONS

Due to the badly disturbed nature of the trench, no occupation layers survived. It is therefore difficult to associate the results of the work in this trench with the findings from Trench II. While the presence of the pits in Trench I does not preclude the possibility of earlier occupation layers, it seems likely that during the period when the building in Trench II (p. 226) was in use, the more southern area was not built on, and was probably in agricultural use.

Despite the cellars, the top of the brickearth survived to the same height as in Trench II. There was, however, no evidence for any of the environmental features such as channels or flood deposits which were exposed in Trench II, or of cut features earlier than the mid 16th century. This suggests that the earliest known use of the site would, perhaps, have been contemporary with Phase VIIIg in Trench II.

## TRENCH II

This trench was situated at the northern end of Butcher Row, bordering onto Cable Street. An area of *c.* 75 sq. metres was cleared by mechanical excavator to a depth of *c.* 1.40m from the ground surface (+7.20m OD).

The trench contained fewer modern intrusions than Trench I, although a certain amount of damage was caused by a 20th century drain running north-south through the centre of the trench, and by three late 19th century concrete and brick pillar bases. The edges of the trench were limited by modern cellars to the east, west and south and by Cable Street on the north. The reason that this area remained uncellared was that it had been used for access to the buildings, and had thus been preserved by a cobbled road surface.

The natural alluvial sands and clays (1) lay at *c.* +5.61m OD in the northern part of the site, sloping slightly towards the south (and the River Thames), where the top lay at +5.535m OD. One worked flint (Fig. 11 no 1) was recovered from this deposit, but it was not possible to date it with certainty.

## PHASE I

(Plan 2 Fig 3; Section 1 Fig. 4)

a) The earliest feature on the site was a natural water channel, aligned north-east-south-west and with a width of *c.* 3.80m. The line of this watercourse was evident from a marbled effect of blue and grey clays and sands (2) in the natural sand and clay which would have been created by the movement of the ground water on the surrounding sands. The edges or banks of the channel were unclear as the staining faded out only gradually and graded into the natural yellow sand and clay.

The flow of the water in the channel caused yellow sand (3) to be deposited on the southern bank.

The sand (3) contained a small amount of Roman material, including a very abraded sherd of samian, but a single shell-gritted sherd suggests a date of 12th century or later. No dating evidence was retrieved from the bed of the stream and it is therefore impossible to estimate the date of its formation.

The direction of flow of the stream is unknown, but it seems likely that it rose somewhere to the north-east of the site and flowed into the Thames to the west of the site.

b) A trench, Ditch 1, was dug into the edge of the south bank of the stream, running roughly parallel with the line of the channel. It was 1.24m wide and butt-ended 1.42m from the west section. It had a depth of 0.28m and a broad flattened base. It had been filled back with brown silty sand (4) and a layer of gravel on the surface was probably caused by weathering. The top of the ditch lay at +5.40m OD. The trench deepened at its eastern end into a sump, where the fill was more gravelly. The ditch contained one fragment of Roman tile. If, however, Phase I is post 12th century, this must be residual. The purpose of this ditch remains unclear.

The stream was still flowing at this time, as shown by the fact that a bank of sand (5) was still being formed and no material was being deposited on the streambed.

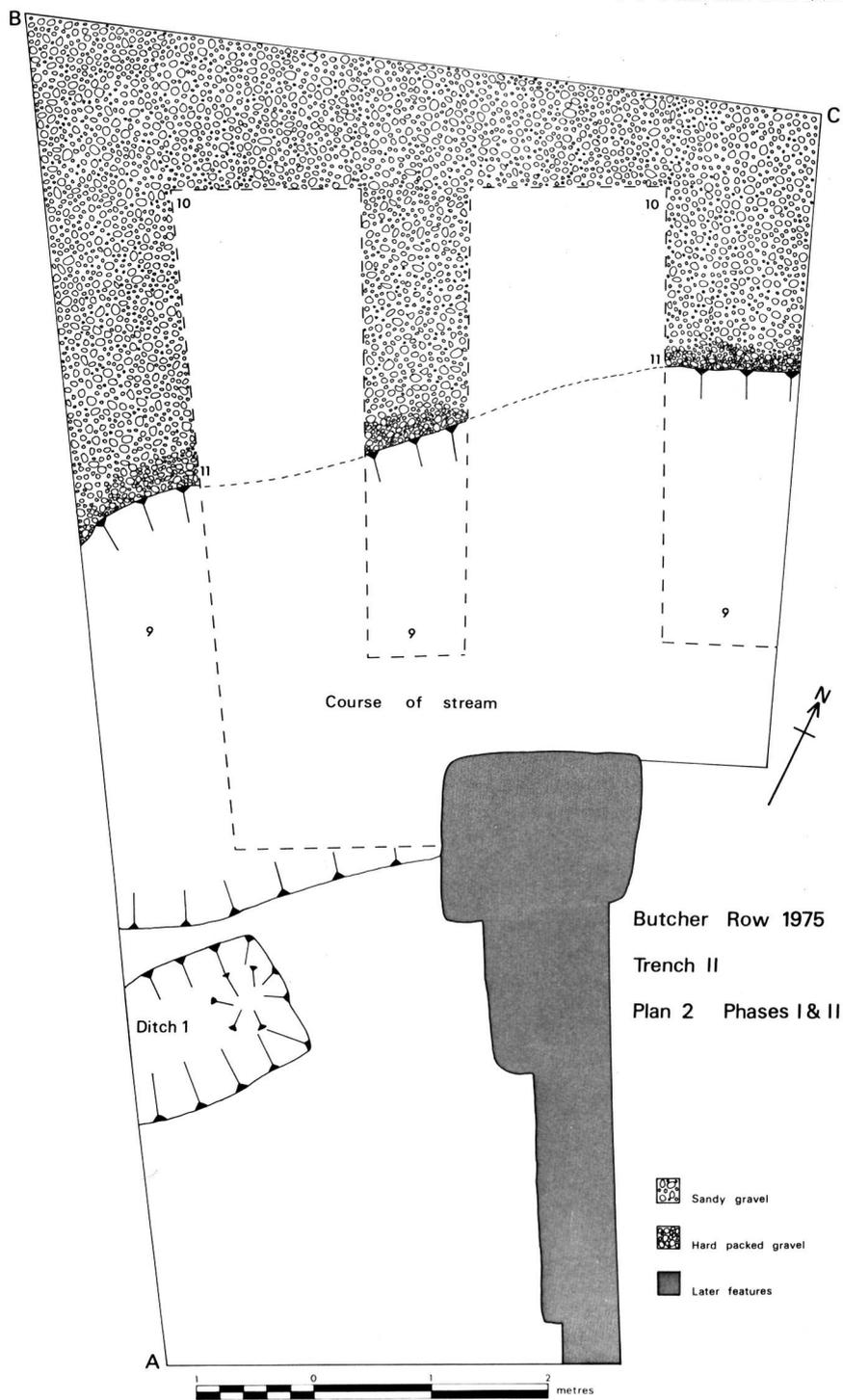


Fig. 3. Butcher Row: Trench II plan 2

Butcher Row 1975 Trench II Section 1



Fig. 4. Butcher Row: Trench II section 1

## DISCUSSION OF PHASE I

No Roman features were found on the site although some half a dozen sherds were recovered from later features, notably in these earlier phases. The possibility remains of a Roman road along the line of the Highway leading to, or through, a small riverside settlement at Ratcliff. The evidence from the excavation neither proves nor disproves this theory, although if a Roman settlement existed it was not in the area covered by the excavation.

The stream was certainly flowing along this line by the 12th century and may have been in existence much earlier. As it had silted up and had had a track or road constructed over it by the 14th or 15th century (see Phase II), it is not surprising that it is not recorded on the earliest map of the area (Faithorne and Newcourt 1658). However, on Gascoyne's map of 1703 (plate 2) Cable Street, to the west of Butcher Row, is called Brook Street and had been thus named at least since 1405.<sup>1</sup> As no other brook is known in the vicinity, it seems likely that the brook referred to is that recorded in the excavation.

## PHASE II

(Plan 2 Fig 3; Section 1 Fig. 4; Section 2 Fig. 5)

Sealing the ditch (4) and stretching over the site south of the watercourse were deposits of some 0.50m of light brown and grey clay. These deposits were observed in two narrow sections across the site and appear to relate to two separate phases of flooding in the area.

a) Earliest in this sequence was a thick layer of greyish-brown clay (6) in the south-west corner of the trench. This was not a homogeneous deposit and contained at least six visible soil horizons with signs of weathering. The surface of the deposit lay at +6.10m OD and had been eroded away on its northern edge by the action of the creek.

The deposits suggest a number of years of flooding, difficult to estimate but maybe as few as 3-6 years. This phase of flooding appears to relate to the channel and may have been relatively localised. The stream was still flowing at least intermittently, because it was eroding rather than depositing.

b) The creek then began to be filled with a deposit of silt (7), sand (8) and blue-grey sandy clay (9). These deposits are likely to have been laid during a natural silting up of the stream bed, caused by a gradual stagnation of the water. Although the dark colour of the fill suggested a high organic content, the examination of soil samples proved negative apart from one fragment of oak charcoal (p. 250).

The 0.44m depth of silting shows the stream to have narrowed to a width of *c.* 3.20m. The lack of distinct layering in the fill suggests that the silting up may have occurred quite rapidly.

During this period a gravel surface (10) was laid to the north of the creek, spreading from the stream bank over the entire northern part of the site to a depth of *c.* 0.10m. The gravel contained much sand and was light grey-green in colour. The part lying closest to the river bank was heavily stained with iron pan, and concreted (11). This gravel is almost certainly a deliberately laid surface possibly a track running north-east-south-west, of which only the southern edge was found. The surface of the gravel was remarkably clean and unworn, implying very little use before the surface was flooded over.

c) Sealing the fill of the creek (9) and the gravel surface (10) and (11) was a deposit of clay *c.* 0.50m deep. This contained various layers; *c.* 0.13m of yellow-brown sandy clay at the base (12); then *c.* 0.18m of grey clay (13) covered by a layer of brown clay (14) *c.* 0.20m deep. The clay thickened towards the south in the direction of the River Thames and was probably laid down by a flooding of the river. The cessation of the flow of the stream could have caused problems with drainage and this may have allowed the area to have become waterlogged.

Although these three events occurred in a sequence, rather than contemporaneously, the small quantity of the finds and the difficulty of closely dating the pottery of this period makes it difficult to date them more closely than 14th-15th century.

## DISCUSSION OF PHASE II

While numerous records survive of incursions by the river east of the City, there is no known record of a flood at Ratcliff. Indeed the settlement developed here precisely because of

its natural defences against the river and by the 14th-15th century Ratcliff was the only area on this part of the river not to be artificially embanked.

It is therefore likely that the first flood deposit (Phase IIa) is a purely local occurrence, emanating from the brook and affecting only the area in its immediate vicinity. The presence of various weathered horizons in this deposit suggests that the flooding was seasonal and perhaps caused or abetted by the stream bed beginning to silt up.

The second flooding, however, occurred after the stream bed had totally silted up, and must therefore originate from the Thames. The most likely derivation for this is a flood described by H. Llewellyn Smith<sup>2</sup> and Dr. K. McDonnell.<sup>3</sup> It occurred on Lady Day 1448 and at the resulting inquisition it was suggested that much of the embankment around Stebenhith marsh (the Isle of Dogs) had been broken down through the neglect of the landholders, in particular John Harpour, who had not repaired his bank opposite Dartford Strand.

The lands remained under water for at least sixteen years as attested by an entry in the receipts of Stepney Manor of 46s. 8d. received from "fishing and fowling in the marsh of Stebenhith now under water by reason of the overflow of the Thames".<sup>4</sup>

Some 1,000 acres were affected by the flooding, an area greater than the Isle of Dogs (some 600 acres), and the inundation may have encroached on Ratcliff from the low land on the east rather than from the river itself.

Although on pottery evidence the flooding at Butcher Row can be dated no more closely than 14th-15th century, the residual nature of many of the finds would suggest a 15th century date, rather than earlier.

The interpretation of the gravel surface is more problematical. It probably represents the southern edge of the road on the present line of Cable Street and White Horse Road. The latter, which is called White Horse Street by Gascoyne (Plate 2), was first mentioned in 1371 as Clyvestre (Cliff Street)<sup>5</sup> and was the main route north from Ratcliff Cross to Stepney. Although, in general, medieval roads were unmetalled, in this case it may have been necessitated by the heavy carriage trade resulting from the shipbuilding business at Ratcliff.

### PHASE III

(Section 1 Fig. 4; Section 2 Fig. 5)

Once the stream had begun to stagnate, a large amount of clay was dumped both into the channel and on the surrounding land, raising the land level to *c.* +6.35m OD. It is likely that until this period the area was still very marginal and before it could be used a certain amount of reclamation was necessary.

Apart from a layer of sand (15) in the northern part of the site, this dumping consisted of various layers of clay.

The earliest layer of dumping consisted of brown clay, flecked with iron stains (16). This was directly over the natural silting of the creek and its northern bank. Above this and still inside the creek was a layer of light brown clay (17), which was overlain by a layer of green-brown clay (18). Sealing the creek and the gravel spread on the north side was a thick layer of dark green clay (19) and sealing the fill of the creek on the south side was a layer of light green clay (20). The light green clay (20) contained a patch of yellow sand and gravel (21) and a patch of greenish 'pea' gravel (22). The top layer of dumping at the north end was a green sandy clay (23) which contained flecks of chalk and charcoal.

The dumping contained much abraded pottery with a wide date range, from the Roman period to the 14th or 15th century.

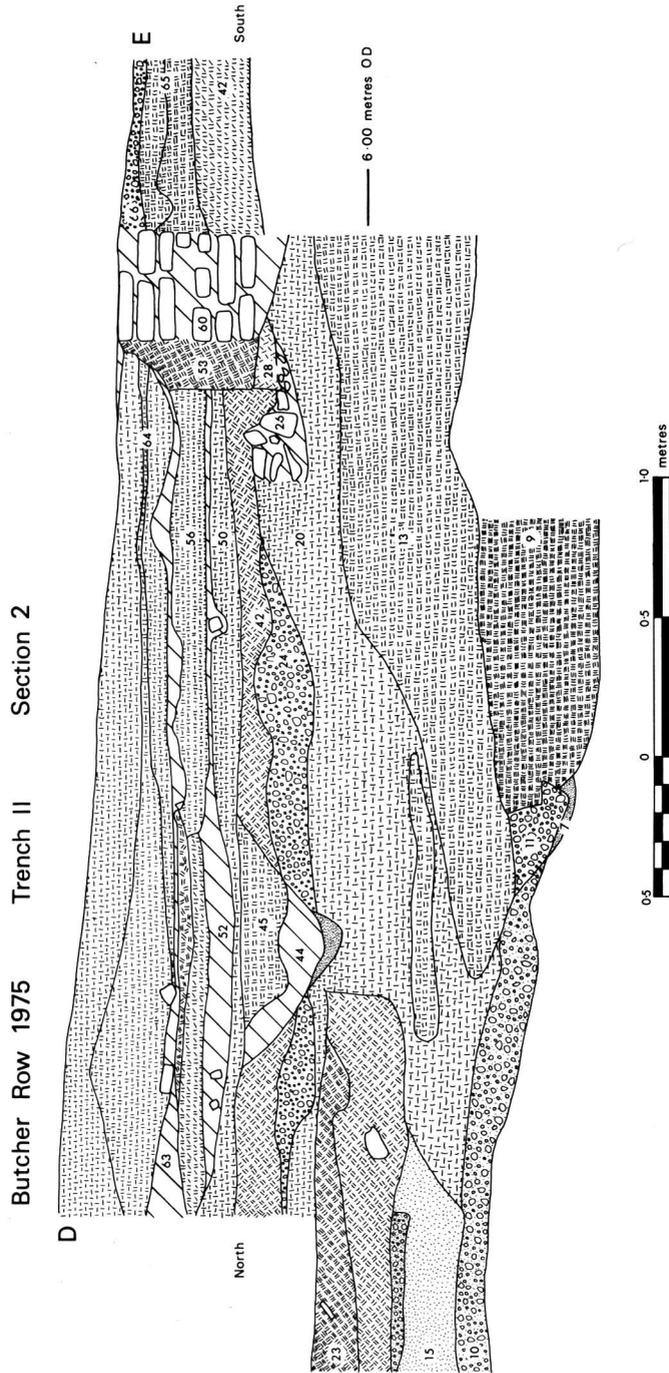


Fig. 5. Butcher Row: Trench II section 2 (key as for section 1, Fig. 4)

## PHASE IV

(Plan 3 Fig. 6; Section 1 Fig. 4; Section 2 Fig. 5; Section 3 Fig. 8)

After consolidation, a gravel spread (24) was laid across the northern part of the site extending beyond the eastern, western and northern sections. It had been cut away in the north-west by the foundations for the later building and on the east by the foundation trench for wall (68). In the centre it had been cut by Ditch II, by the drain cut (72) and by the cut for the pillar base (73) but it retained dimensions of at least 3.20m north-south and 6.40m east-west. The gravel spread consisted of fairly loose gravel mixed with soft clay. West of the drain cut (72), the gravel appeared to be cut into the dumped clays of (19) below, but east of (72) whilst possibly filling a natural hollow, there were no signs of a definite cut.

The gravel varied in thickness from 0.10m in the west to 0.55m in the north-east, and although over most of the area no surfaces could be detected within the fill, at one point in the north-east a patchy layer of brown soil 0.08m thick (25) may represent a build-up of soil before a resurfacing. Whilst generally lying at *c.* +6.15—6.30m OD, the surface in the north-east, at +6.52m OD, showed a difference of at least 0.20m over 2 or 3 metres. A scatter of tile and pottery on the surface in the north suggests that this is the original surface of the gravel which has been lost elsewhere.

The gravel spread was a yard or more probably a road surface aligned north-east-south-west.

Associated with this possible road and running parallel to it, were the foundations of a narrow wall (26) surviving to a height of 0.30m. The wall lay *c.* 0.60m from the edge of the gravel and 4.45m of its length remained. It had been robbed out (27) at the eastern end of the trench for a length of 1.20m. The wall was *c.* 0.34m wide and was constructed of chalk, flint and greensand rubble, bonded with an off-white mortar. The foundation trench for the wall (28) was observable on the south side. It varied in width from 0.40m wider than the wall to only marginally wider than the wall itself. The foundation trench was lined with a thin layer of chalk, and then filled back with yellow clay. There was no dating evidence from either the wall or the foundation trench.

An ovoid post hole within the wall (29) measuring 0.30m north-south x 0.25m east-west retained a depth of *c.* 0.26m below the surviving top of the wall. The post was probably associated with a gate or stile in the wall, further evidence for which is detailed below.

Although parallel to each other, the road and the wall were only connected at one point by a narrow laid path. This had been cut on the north-west by the pillar base (73) and on the east by the wall (59) and the foundation trench for wall (68). Only a small portion measuring 1.32m north-south x 0.83m east-west remained. A thin layer of green sandy clay (30) overlaid the gravel (24) at this point and ran down to the wall. This was overlain between the gravel and the wall by yellow clay and daub (31) to bring it up to the same level as the gravel surface. The layer contained a little charcoal and a quantity of tile. A flat surface of daub, pebble and tile (32) was then laid joining (24) to (26). The pebbles and tile were set into clay and presented a solid, well laid surface. The tiles used were fragmentary and undecorated. This surface lay at +6.425m OD, only 0.02m below the surviving top of the wall. A shallow gully (33) 0.13m wide and 0.07m deep marked the western edge of the path.

Also associated with this phase were 7 stake holes and 1 post hole on the south side of the wall (26) and at the west of the trench.

The largest of these (34) contained a square post 0.14m x 0.14m, which was 0.19m deep and had been sharpened at the base. The post hole, which had a rounded shape, measured 0.30m x 0.30m, and was packed with yellow clay.

Three of the stake holes (35) (36) and (37) were sub-rectangular in shape:

(35) measured 0.14m north-south x 0.13m east-west and retained a depth of 0.08m.

(36) measured 0.17m north-south x 0.21m east-west and retained a depth of 0.15m.

(37) measured 0.18m north-south x 0.17m east-west and retained a depth of 0.18m.

No wood survived in the holes, which were filled with black silty soil. They did not form a regular pattern, but were grouped around the wall and may have been the support for a flimsy lean-to structure against the wall.

Other possible stake holes in the area south of the wall were:

(38) which measured 0.07m north-south x 0.08m east-west and had a depth of 0.09m. It had a brown woody fill and a near circular shape;

(39) which had a diameter of 0.10m, a depth of 0.17m and a brown soil fill;

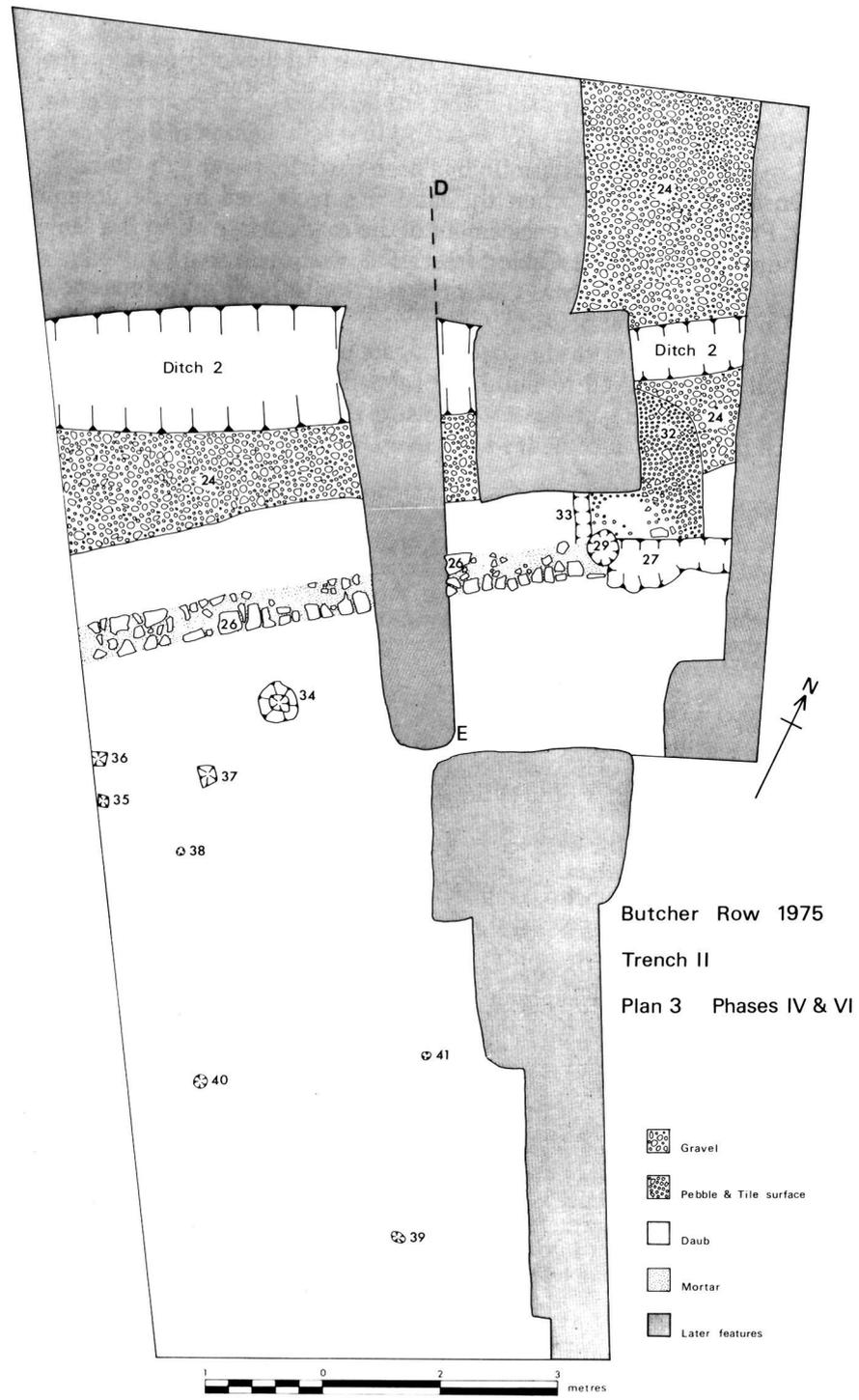


Fig. 6. Butcher Row: Trench II plan 3

(40) which had a diameter of 0.13m and a depth of 0.12m. It had a loose woody fill;

(41) which had a diameter of 0.08m and a depth of 0.16m. It had a brown soil fill.

These stake holes formed no logical pattern and it is possible that they only represent root holes.

This phase, again, cannot be more closely dated than 14th-15th century.

#### DISCUSSION OF PHASE IV

The probable road described in Phase IIb had been partially covered by flood deposits. The surface was then completely lost when the land was reclaimed by the dumping of large amounts of clay. Phase IV sees the replacement of the road surface along the same line, some 6.00m to the south of the present Cable Street. The wall must mark the edge of a field or estate to the south of the road. It was common practice to leave a grass verge between the edge of the road and the adjacent fields.<sup>6</sup>

It is likely that the path led from the road to a gate or stile in the wall. It is possible that a portion of the wall was removed to build the gate/stile and this would explain the robber trench and the post hole for a gate post or stile support. The surface of (32) adjacent to the wall was worn as if it had sustained heavy use.

#### PHASE V

(Section I Fig. 4; Section 2 Fig. 5)

Sealing the wall and the gravel surface was a layer of grey, brown and yellow-brown clays *c.* 0.10m-0.35m thick (42) and containing flecks of chalk and charcoal. The clay appears to have been dumped and used as make-up for the subsequent building. At the southern end of the trench, the layer contained less inclusions and had a more greyish-brown colour (43).

The pottery from these layers suggests a late 15th-early 16th century date.

#### PHASE VI

(Section I Fig. 4; Section 2 Fig. 5; Plan 3 Fig. 6)

A ditch (Ditch 2) was then dug, cutting through the dumping (42). It ran north-east-south-west across the site parallel to the line of the wall (26) but *c.* 1.40m north of it. The ditch was considerably narrower and shallower at the eastern end of the site. It was cut by the drain (72), the pillar base and foundation trench for wall (68).

The deeper part of the ditch in the west was *c.* 1.00m wide, this narrowed to 0.80m, east of the drain cut, and to 0.50m east of the pillar base.

At its western end the ditch retained a depth of 0.56m. It was lined with tile and contained *c.* 0.40m of mortar at the bottom (44). The layer also contained a quantity of tile. Above it was *c.* 0.20m of brown clay containing mortar (45).

East of the pillar base the ditch also contained a large amount of building rubble, but it lacked the mortar layer and appears to have filled up with a grey silt (46).

The ditch cannot be more closely dated than late 15th-early 16th century. It was probably dug for drainage and the mortar and rubble fill may well have aided this function. It is not known for how long the ditch remained in use.

#### PHASE VIIa

(Plan 4 Fig. 7; Section 3 Fig. 8)

The foundations for a brick chimney were then cut into these levels. The foundation trench was filled with dark grey clay, which contained a large amount of shell (47). The trench had been cut on its western edge by wall (71) and its northern edge lay beyond the north section of the site. The bottom of the trench had subsided somewhat into the drain (72) below. In this trench the chimney (48) was constructed. The foundations were of bricks, randomly laid and set in a solid off-white mortar.

#### DISCUSSION OF PHASE VIIa

The chimney is associated with a building, of which only a fragment of walling remains (49). It is likely that the walls of this building were removed by the insertion of new walls in

phase VIIe. If wall (49) is indeed part of the original building, these walls would have been constructed, at least in part, of brick. Unfortunately the intrusion of a 19th century brick pillar base made it impossible to establish the relationship between this wall (49) and the later wall (61). However, it is notable that wall (49) is 0.15m narrower than wall (61) and lies on a marginally different alignment.

#### PHASE VIIb

(Section 2 Fig. 5)

Overlying layer (42) and sealing ditch 2 was a layer of green clay, containing flecks of charcoal, chalk, mortar and brick (50) *c.* 0.10m thick. This appears to be a further layer of make-up for a floor. It contained pottery dating to the late 15th-early 16th century.

#### PHASE VIIc

(Section 2 Fig. 5; Plan 4 Fig. 7; Section 3 Fig. 8)

Resting on this layer of make-up was a brick wall (51), running north-south, but cut at its southern end by the pillar base (73). The wall retained a length of 1.63m and was 0.21m wide (the width of two bricks). Only one course of bricks remained and the narrowness of the wall suggests that it was not load-bearing and that part of the superstructure was possibly built of timber.

A mortar floor (52) was then laid over the clay make-up. This was a thin layer 0.02m thick, except where it filled a hollow in the make-up (50) and was *c.* 0.10m thick. The floor was associated with a brick built hearth (53) at the northern end of the trench. A second contemporary hearth (54) was associated with another room or building, lying mostly to the north of the trench. The fireplaces had obviously received heavy use as the bricks were very worn and burnt.

This floor still related to walls in a similar position to those of Phase VIIe. It was not found further south than wall (60). East of wall (59) this level had been cut out by the foundation trench for wall (68). A small patch of mortar (55) existed west of wall (61).

#### PHASE VIId

(Section 2 Fig. 5)

A layer of dumping or make-up overlaid the floor. This consisted of dark green-brown clay (56); and yellow-brown clay (57) to a depth of *c.* 0.10m.

The pottery from these layers dates this make-up to early-mid 16th century.

#### PHASE VIIe

(Section 1 Fig. 4; Section 2 Fig. 5; Plan 4 Fig. 7)

A major reconstruction then occurred in the building. New walls were put in to form a square room, apparently along the lines of the former walls. The foundation trench for these walls (58) cut through layers (42), (50), (52), (56). It contained a green clayey earth with a large amount of tile and pebbles. The walls (59), (60), (61), (62) were built of brick and survived in places up to a height of seven courses (60). Walls (59), (60) and (61) were bonded into each other but wall (62) abutted walls (60) and (61). The pottery from the foundation trenches was mainly residual material of late 15th-early 16th century date.

#### PHASE VIIf

(Section 2 Fig. 5)

A second floor of mortar (63) was then laid, sealing the foundation trench (58) for the walls. The mortar contained a large amount of building rubble and shell and varied in thickness from 0.02m to 0.14m. There was no dating evidence from this layer.

#### PHASE VIIg

(Section 2 Fig. 5)

Sealing the second floor was a thick layer of green clay (64), up to 0.35m deep, which contained patches of grey and light brown clay and scraps of mortar. This layer appears to be make-up for a later floor which no longer survived. The pottery suggests a date of late 16th century for this deposit.

To the south of the building, and contemporary with this later floor level, was a gravel yard (66), about 0.05m thick and containing fragments of building material — chalk, brick, tiles. The gravel was

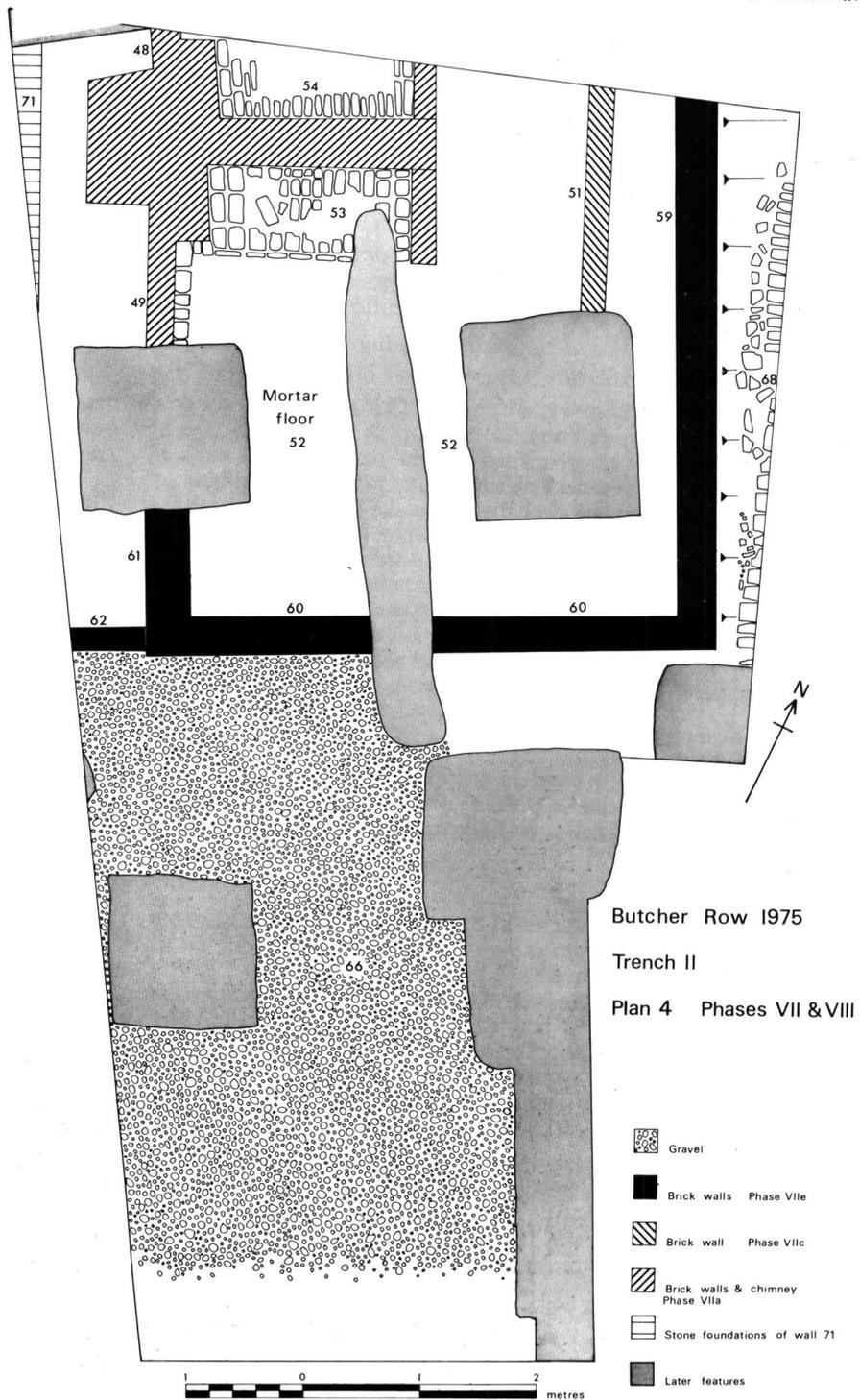


Fig. 7. Butcher Row: Trench II plan 4

set onto a layer of green-brown clay (65) 0.20m thick, which lay to the south of wall (60). The yard measured some 5.00m north-south, and stretched east-west across the excavated area.

A large group of pottery in the yard and its make-up dates to the 16th or early 17th century. It is not possible stratigraphically to link the yard with the floor levels inside the building but from the dating of the finds, it appears to tie in with a later floor level, for which the clay (64) is perhaps the make-up.

A layer of grey clay (67) containing a large amount of mortar, brick and rubble overlaid the gravel surface, south of the building. This dates to the 17th century and may be associated with the demolition of the building.

#### DISCUSSION OF PHASE VII

The building is the first evidence of occupation on the site. It appears to have been in use from the late 15th-early 16th century until the 17th century, during which time the floor was renewed at least twice. It is possible that some of the clay layers, interpreted as make-up, may also have been floor levels. It is not known whether the superstructure would have been of timber or of brick, but perhaps the former is more likely.

If the building was still standing at the beginning of the 18th century it may be that depicted on Gascoyne's map on the north side of Sugar House Yard (Plate 2). The gravelled yard lying to the south of the building is almost certainly Sugar House Yard itself.

Although late 15th-early 16th century is early for the construction of a brick building, it is not so surprising in view of the cosmopolitan nature of society in Ratcliff and of the hamlet's proximity to Essex where scarcity of natural building materials caused brick to be in use from the 12th century.<sup>7</sup>

#### PHASE VIII

Traces of two other north-south walls were found at the edges of the trench, along the east and west sections.

a) Wall (68) (Plan 4 Fig. 7; Section 3 Fig. 8)

The wall ran along the east section and only survived to a height of 0.20m. The foundation trench cut through any floor layers to the east of wall (59) and had been filled back with layers of light brown clay (69) and yellow clay (70). A layer of tile at the bottom of the foundation trench extended slightly to the west of the wall and formed the base of the foundations. The pottery from the foundation trench dates to the 16th century, but the construction of this building must postdate the building in the trench.

b) Wall (71) (Section 1 Fig. 4; Plan 4 Fig. 7; Section 3 Fig. 8)

This wall lay along the western section on a slightly different alignment from the other walls. The method of construction was also dissimilar.

The total depth of the foundations of this wall was 0.84m. It had been truncated in the north-west corner by a brick-lined pit (74) and along the western boundary to the trench by a 19th century brick cellar wall.

The foundations entirely filled the construction trench and consisted of four different layers. At the base was 0.20-0.25m of large blocks of greensand, chalk and flint. Some of these blocks had been faced, but they were used randomly. Above this was a layer of crushed bricks and mortar *c.* 0.10m thick.

The third layer consisted of chunks of flint, greensand and chalk set in a hard yellow sandy mortar containing fragments of chalk; this layer was *c.* 0.35m thick.

The highest surviving layer consisted of broken bricks set at random in mortar; this layer was truncated by the cellar wall and only 0.20m survived. This wall cut through the foundation trench (47) for the chimney and is therefore later than the construction of that building. No dating evidence was retrieved from the wall (71).

The layers above those described were removed by the machine and were not recorded except in section. They appeared to consist mainly of rubble.

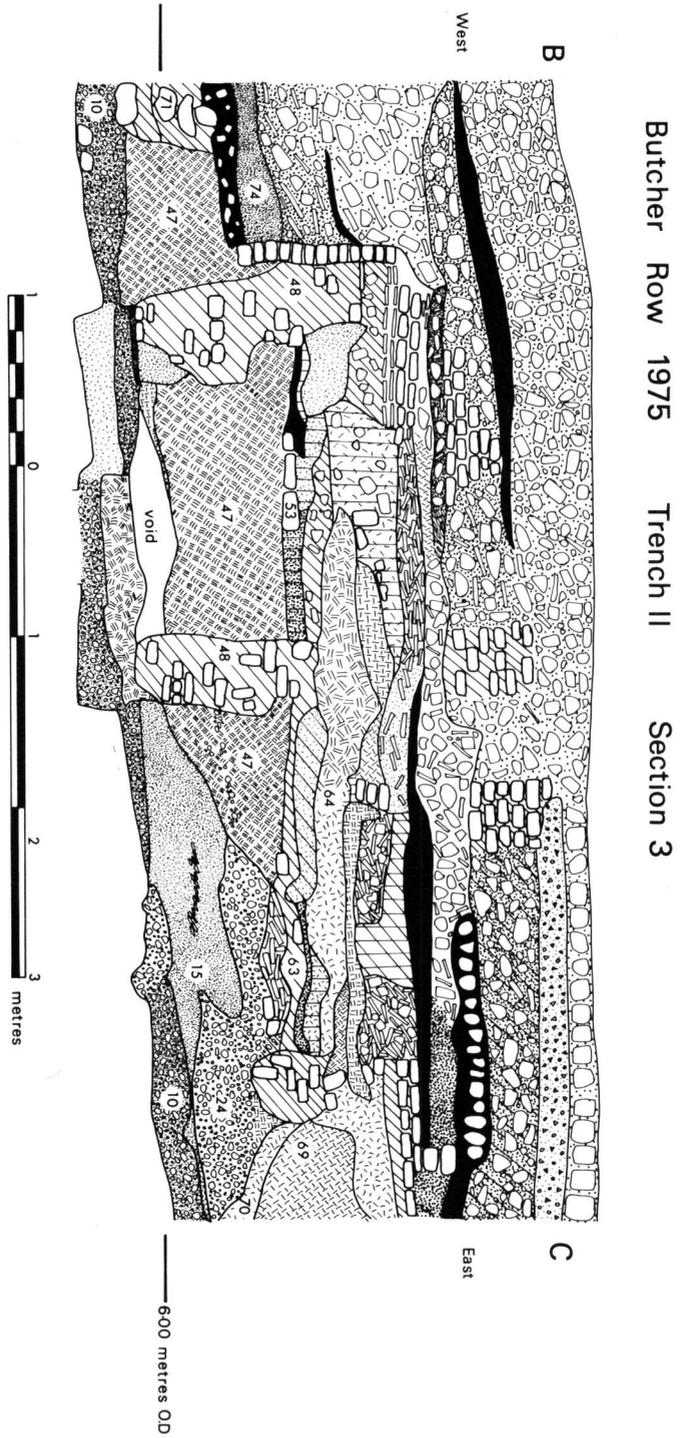


Fig. 8. Butcher Row: Trench II section 3 (key as for section 1. Fig. 4)

## DISCUSSION OF PHASE VIII

Little was found of these walls and it is not possible to relate them with any certainty to any shown on early maps of the area. Wall (71) however, appears to be the foundation of a substantial wall and it is notable that the stone blocks used in layers 1 and 3 appear to have been reused from an earlier construction.

## NOTES

1. English Place Name Society 18 *The Place Names of Middlesex* (Cambridge 1942) 155.
2. H. Llewellyn Smith *History of East London* (London 1939) 202-205.
3. K. G. T. McDonnell *The Economic and Social Structure of the Parishes of Bromley, Hackney, Stepney and Whitechapel from the 13th to the 16th century*. Ph.D. thesis University of London (1958).
4. Llewellyn Smith *op.cit.* (in Note 2); quoting Ministers' Accounts Bundle 1140 No. 24 Stepney.
5. English Place Name Society *op.cit.* (in Note 1) 158.
6. O. G. S. Crawford *Archaeology in the Field* (London 1960) 61.
7. M. Beresford and J. G. Hurst *Deserted Medieval Villages* (Guildford & London 1971) 94.

## THE ROYAL FOUNDATION OF ST. KATHARINE, BUTCHER ROW, E.14

*Notes on the history of the site*

## BERNARD NURSE

## SUMMARY

*The archaeological excavations in Butcher Row, reported in this paper, and the restoration of some of the 19th century murals within the Master's House have occasioned an examination of documentary evidence relating to the area (Fig. 1). Particular attention has been paid to the period before 1837 when the house and gardens were purchased for ecclesiastical use from the Corporation of the City of London. Prior to this date, evidence suggests the existence of a sixteenth century "sugar house" nearby; the hall of the Shipwrights' Company in the early 18th century is believed to have belonged to the Corporation of Shipwrights of Rotherhithe, rather than the City Guild as previously thought; the house which is now occupied by the Royal Foundation of St. Katharine was built 1794-5, possibly by Thomas Leverton, and it has been discovered that two of the restored murals were copied from engravings of paintings by Claude Lorrain.*

EARLY DEVELOPMENT OF RATCLIFF<sup>1</sup>

Ratcliff ('red cliff') was a natural landing place amongst the marshes on the north bank of the Thames. The point on the eastern side of the City of London where the gravel terrace comes nearest to the river is by the present Glasshouse Fields, or Cock Hill on Gascoyne's *Map of Stepney*, 1703 (Plate 2).<sup>2</sup> In 1635 it was claimed that there was no Thames wall in Ratcliff because the land was higher than the river; there were only three encroachments on the foreshore in west Ratcliff where a natural high bank existed but twenty eight in east Ratcliff.<sup>3</sup> However, the discovery of medieval flood deposits from the Thames in the north-east corner of Butcher Row suggests that even this natural defence was inadequate on one occasion at least.<sup>4</sup>

The earliest reference to a wharf in Ratcliff is in a will of 1348, but during the next fifty years many ships were constructed there for the French wars. By the mid-15th century

Ratcliff had developed into a riverside village devoted increasingly to the fitting out of ships and their repair rather than shipbuilding. The stream recently excavated in Butcher Row was most probably filled in and the adjacent land reclaimed during this period of early growth.<sup>5</sup> Communications to the north and east would have been via Butcher Row. The surface of part of the road appears to have been metalled,<sup>6</sup> an unusual feature in the medieval period, and building along its side had begun by the late 15th century.<sup>7</sup> The earliest known map of the area to the north (1615) shows an intermittent ribbon development along White Horse Street, the road to Stepney Church.<sup>8</sup>

In the 16th century many voyages of discovery began at Ratcliff, notably those by Sir Hugh Willoughby in 1553 and by Martin Frobisher in the 1570s. John Stow at the end of Elizabeth 1's reign provides the earliest description of Ratcliff's rapid growth.

Radcliffe itself hath been also increased in building eastward (in place whereof I have known a large highway with fair elm trees on both sides). But of late years shipwrights, and (for the most part) other marine men, have built many large and strong houses for themselves, and smaller for sailors, from thence almost to Poplar.<sup>9</sup>

At the beginning of the 17th century, it has been estimated that about 50% of the male population were mariners or boatmen, 11% were engaged in shipbuilding, 20% in land crafts (e.g. building, metal or clothing trades) and 12% in supplying provisions.<sup>10</sup> The victualling of ships therefore was an important feature of Ratcliff's economy. The rich pasture lands of Stepney and Poplar marshes had traditionally been used primarily for the fattening of cattle before slaughter for the London market; and accounts exist of the provision of oxen for expeditions abroad by the King's ships. According to one of 1549-50, hundreds of oxen were pastured in the neighbourhood and then slain, their meat salted and barrelled for an expedition; between a dozen and twenty butchers with labourers were employed for several days on the task. It is reasonable to suppose that Butcher Row was originally the centre for the supplying of meat for these ships; however, the first building on the eastern side of Butcher Row discovered in documentary sources is the "sugar house".<sup>11</sup>

#### THE SUGAR HOUSE

The "sugar house" belonged to John Gardiner who was described as "gent, of the Sugar House" on the burial register of St. Dunstan's Stepney (22 December 1599). Sugar refining was first introduced to England about 1544 and John Gardiner was one of the first dealers. He gave evidence in August 1595 "as a former dealer in refined-sugar, that when it was first made in London, they profited little by it as much better and cheaper came from Antwerp". However, the same enquiry also heard that since the troubles in the Spanish Netherlands, especially over the previous eight years, the sugar refiners, Gardiner and Co. included, had made great profits by it. Of the seven sugar refiners in England at this time, three had "sugar houses" in Ratcliff.<sup>12</sup> The prosperity of the refining industry in England was short lived and only recovered after the establishment of the sugar industry in the West Indies in the middle of the 17th century.

Sugar House Yard is shown on Gascoyne's *Map of Stepney* (1703) (Plate 2) as situated at the north-east corner of Butcher Row. The land to the east of Butcher Row was purchased from John (or George) Gardiner on 2 September 1616 by the Corporation of the City of London.<sup>13</sup> Despite the growth of building elsewhere in Ratcliff, little effort was devoted to developing the estate; and in the early 19th century London Field provided the open land on which the Regent's Canal Dock was excavated. By 1647 "the great messuage formerly called the Sugar House" had been leased to Thomas Tickner, Citizen and Grocer, and



Plate 1. Butcher Row: Trench II, Phase VII brick building. (Scale 1m)

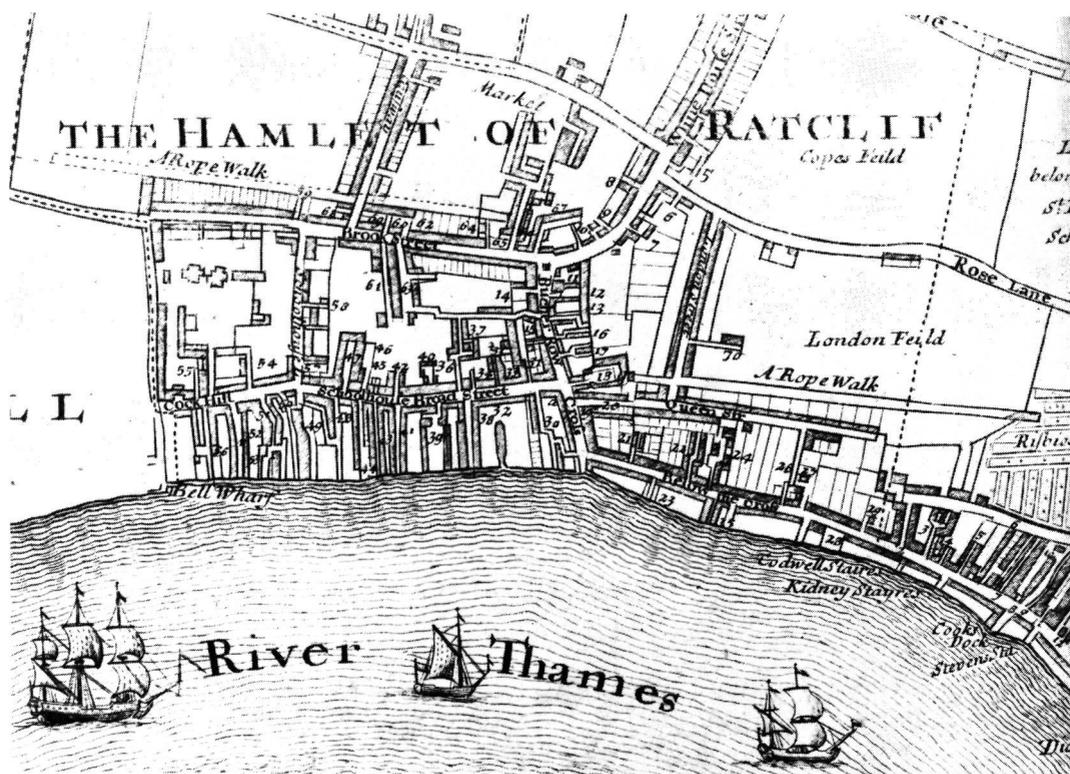


Plate 2. Butcher Row: Gascoyne's *Map of Stepney*, 1703 — "Hamlet of Ratcliff". 11 — Sugar House Yard; 12 — Dolphin Yard; 13 — Shipwrights Hall; 16 — Little Pump Yard; 17 — George Yard; 18 — Brewhouse

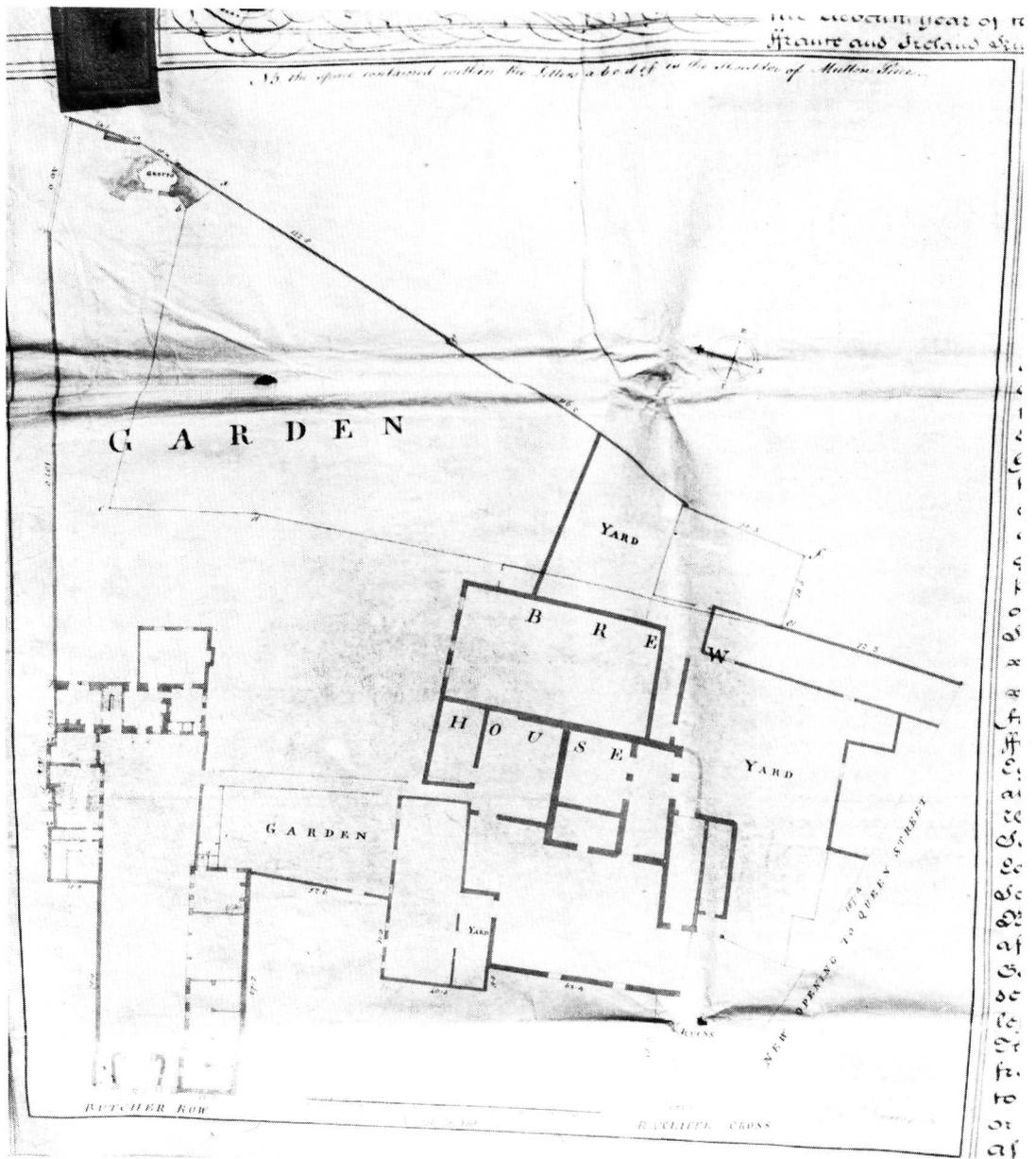


Plate 3. Butcher Row: Plan of house and brewhouse, 1771

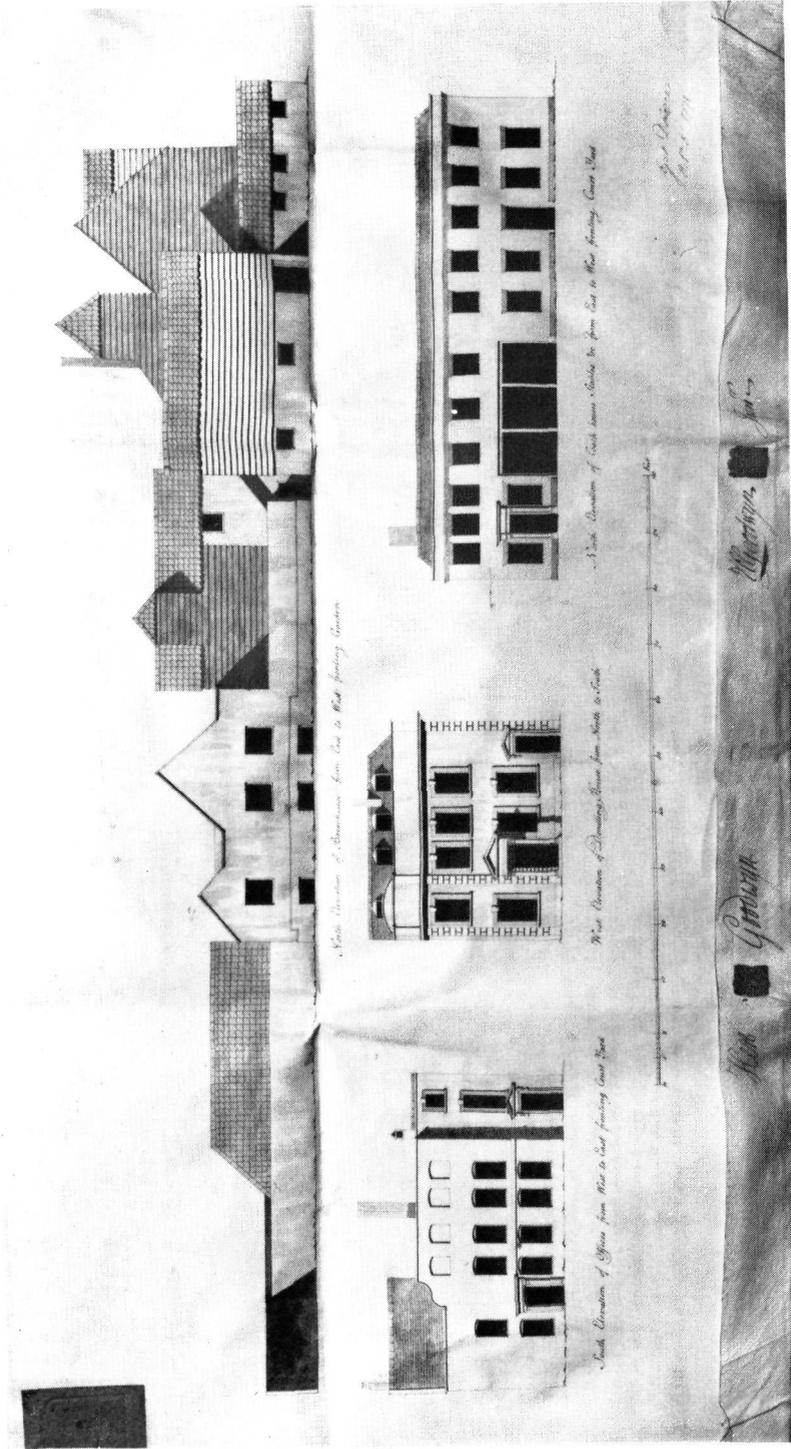


Plate 4. Butcher Row: Elevation of house and north elevation of the brewhouse, 1771

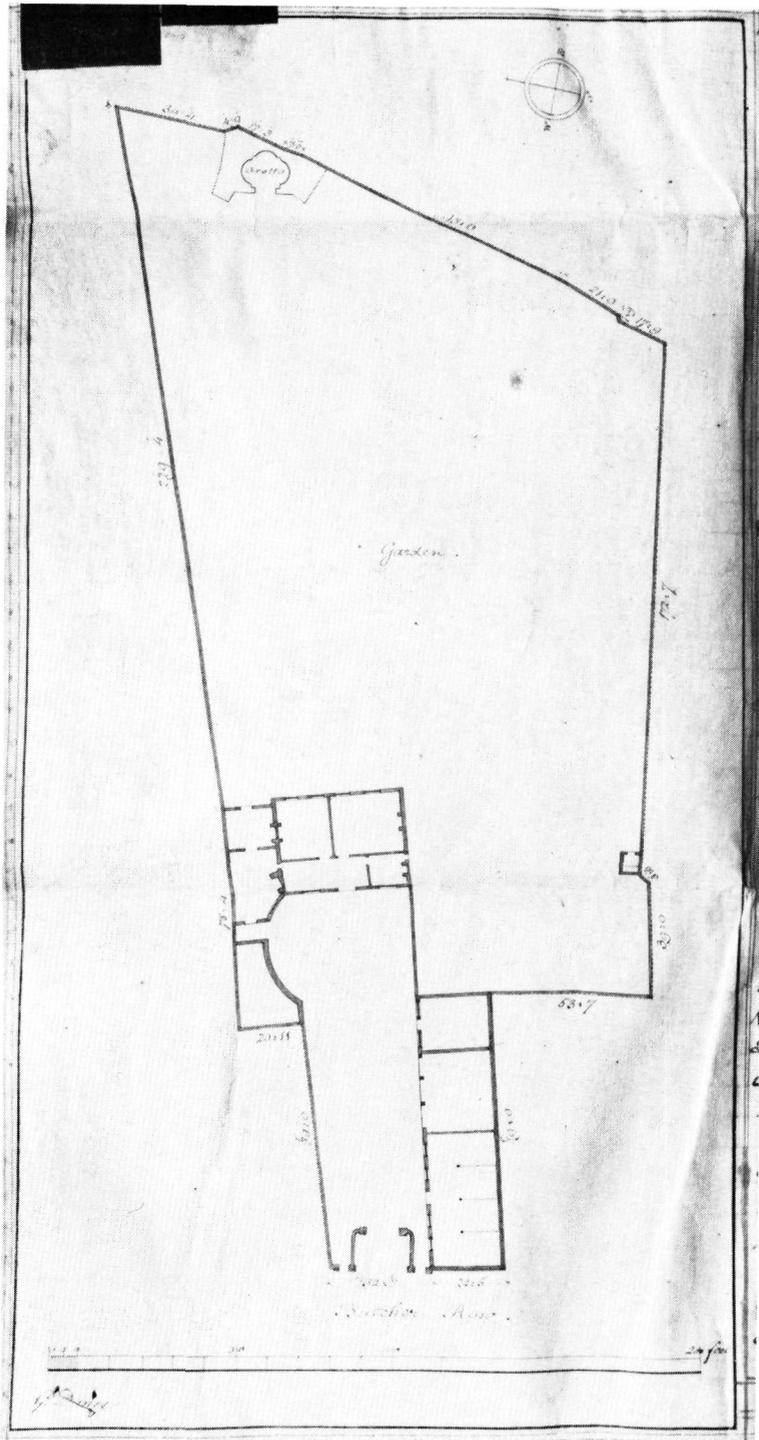


Plate 5. Butcher Row: Plan of the present Master's House, Royal Foundation of St. Katharine



Plate 6. Burcher Row: Master's House, Royal Foundation of St. Katharine — mural in the Chapter Room *Landing of Aeneas in Italy*

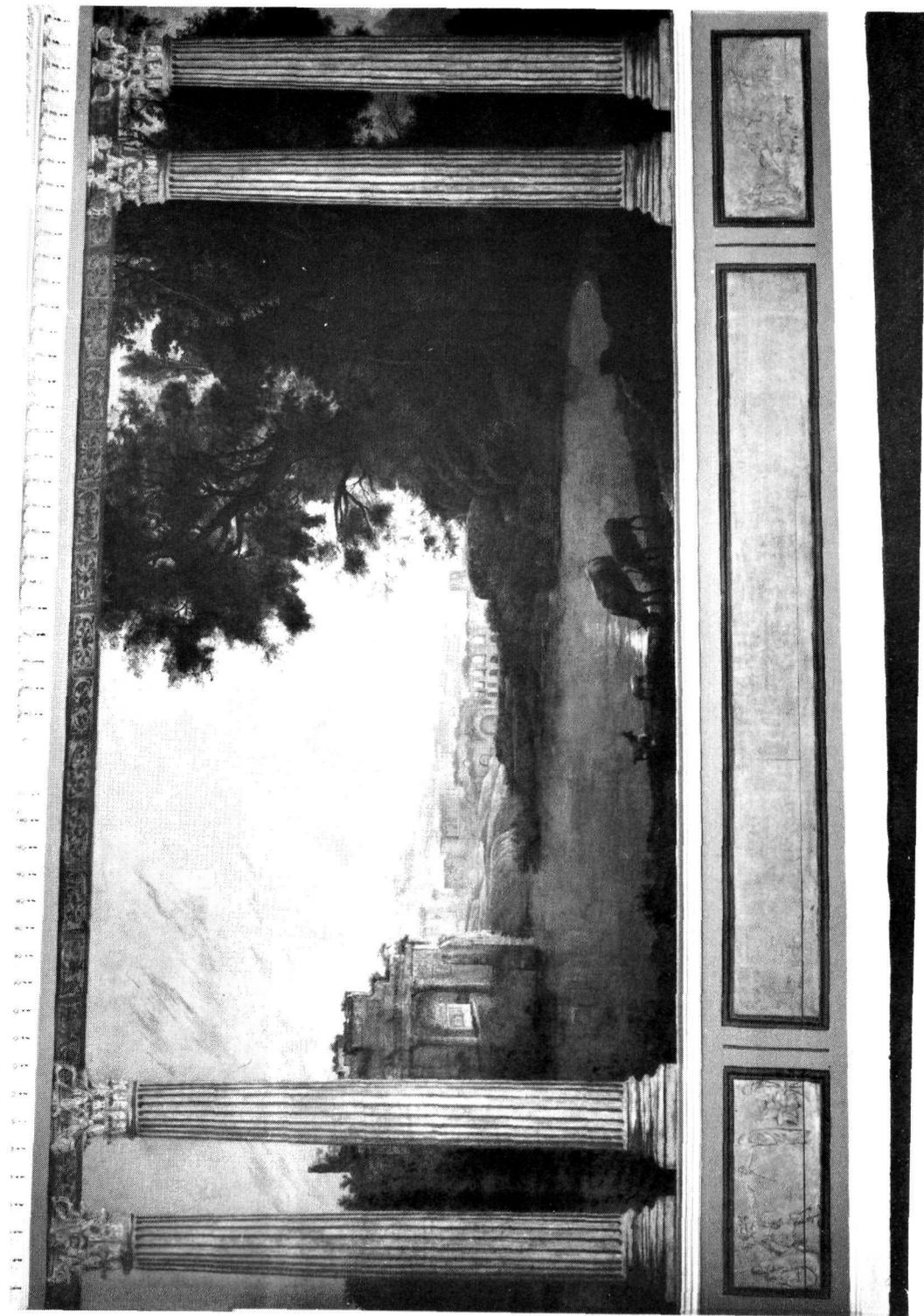


Plate 7. Butcher Row: Master's House, Royal Foundation of St. Katharine — mural in the Chapter Room *Roman Edifices in Ruins*

divided into four dwellings. A garden, orchard and twelve acres of land were attached; the valuation, at £40, was higher than any other nearby properties.<sup>14</sup> Gascoyne shows a haphazard maze of courts, yards and buildings leading eastwards from Butcher Row in 1703; one long building behind Sugar House Yard and Dolphin Yard is named as Shipwrights Hall.

#### SHIPWRIGHTS HALL

The Shipwrights may have occupied one or more of the dwellings into which the former "sugar house" had been divided. By 1704 the head lease had been granted by the City to William Wakelyn, ropemaker, in succession to Thomas Tickner.<sup>15</sup> Previously, it has been assumed that the Hall belonged to the Company of Free Shipwrights, one of the smallest of the City guilds.<sup>16</sup> However, in the 17th and early 18th centuries, the Company met at the Guildhall, paying the Hallkeeper 2/6d rising to 5/- every quarter for the use of a room. Even hiring a room must have been difficult in some years, for in 1661 they complained to the Court of Aldermen that "of late years they are greatly decreased in their number and decayed in their substance and become unable to subsist as a Company without some assistance".<sup>17</sup>

Another company of shipwrights had been incorporated by royal charter in 1605 as the Corporation of the "Shipwrights of England", re-established by a second charter in 1612 as the Corporation of the "Shipwrights of Redrith" (Rotherhithe), and described as the "foreign" shipwrights by the City or "free" shipwrights. Rivalry between the two companies had impoverished them both, but the support of the City proved stronger and more enduring than that of the Crown, and the Corporation of "foreign" shipwrights never recovered its charter after being forced to surrender it in 1684. During its brief existence the Corporation of "foreign" shipwrights had a great influence on the trade, and devised the method for determining the tonnage of ships known as the "Shipwrights Hall Rule". The latest known reference to this measure dates from 1711.

"Some say the general method which has been pitched upon by the greatest number of shipwrights and others and may be termed Shipwrights Hall Rule is to take the length of the keel . . .".<sup>18</sup>

The first hall of the "foreign" shipwrights was in Rotherhithe but Edward Hatton, writing in 1708 makes it clear that they must have moved later to Ratcliff, as his description could not be applied to the City Guild.

"Shipwrights Hall is situate at Ratcliffe Cross. This Company or Corporation were constituted in the reign of James I and a Master, two Wardens and sixteen Assistants; they have discontinued their meetings for some time upon the surrender of their Charter, pursuant to the Quo Warranto in the reign of Charles II, but their Charter being judged by learned Counsel to be yet of full force, they now begin their meeting again in January 1706".<sup>19</sup>

A year earlier the Master Shipwrights had presented a petition to Parliament claiming that their predecessors had been impowered by their Charter of 1605 "to rectify the Disorders and Abuses of the Shipwright's Trade . . . but the breed of able Workmen is almost lost, and . . . the Petitioners have not been in a regular Method many years past".<sup>20</sup> Despite the support of the Admiralty, Navy Board and Trinity House, the petition failed. In 1739, Maitland reported that their hall "anciently stood at Ratcliffe Cross, being gone, they occasionally meet at different places to treat of their affairs". Their presence at Ratcliff therefore, may have been limited to the brief period around 1700 when attempts were made to revive the Corporation.<sup>21</sup>

## RATCLIFF CROSS BREWERY

At the southern end of Butcher Row, nearest Ratcliff Cross, was the brewery belonging to the Raymond family and shown on Gascoyne's map of 1703 as a "brewhouse". (Plate 2). The first Raymond recorded as living at Ratcliff Cross was John Raymond, a man of considerable property, who was Constable of Ratcliff in 1657 and died in 1670. His brother Jonathan was elected Master of the Brewers' Company and knighted in 1679; he was also an alderman of the City of London and a member of Parliament.<sup>22</sup>

Most of the premises from the brewery northwards to White Horse Street were held by members of the family on City lease from 1715. This included the site of the former "sugar house" and the Shipwrights Hall. Other property was added gradually over the succeeding thirty years. Samuel Raymond purchased the land to the east in 1729 to make a garden, and John Raymond bought most of the land to the north-west fronting Butcher Row in 1744. The fifteen tenements in Sugar House Yard and Dolphin Court "being in a very ruinous condition were pulled down by the Mobb and the materials carried away".<sup>23</sup>

Thus, on the east side of Butcher Row, the groups of tenements in narrow courts most of which were probably erected in Ratcliff's period of most rapid growth in the 16th and 17th centuries, were replaced towards the middle of the 18th century by fewer but more substantial brick built houses, shops and warehouses fronting directly on to the road. Behind these buildings were the brewery premises and, on the site of the Shipwrights Hall, the house and gardens occupied first by the owners of the brewery.

John Raymond was the last member of the family to own the brewery. His connection ceased in 1758 when he was appointed brewer to the Board of Victualling, which supplied the Navy with provisions.<sup>24</sup> He was succeeded by Peter Greene who had already occupied the house from 1747; and in 1771 the lease of both house and brewery was granted to Henry Goodwyn. The City Surveyor, George Dance the Younger, surveyed the property; his plans and elevations show with great precision the extent and complexity of this group of buildings when the business was at the height of its prosperity.<sup>25</sup> (Plates 3 and 4). By 1779 Henry Goodwyn and Son were able to take a partnership in the larger and longer established Red Lion Brewery at Lower East Smithfield, St. Katharine's by the Tower; and five years later the firm was the first in London to order one of Watt's new rotative engines.<sup>26</sup> The Ratcliff Cross Brewery had lost some of its premises in the 1770s for the extension of Queen Street to Ratcliff Cross (now that part of The Highway east of Butcher Row); the remainder was used as a store and malthouse.

In July 1794 the worst of many fires that constantly swept through the riverside hamlets consumed much of Ratcliff, destroying more houses than any fire since the Great Fire of London. It started when a kettle of pitch boiled over in the warehouse of a barge builder in Cock Hill, spread to a barge laden with saltpetre and was carried by a strong wind as far as Butcher Row to the east and Stepney Causeway to the north. A survey by the officers of the hamlet reported "that out of twelve hundred houses, of which the hamlet consisted, not more than five hundred and seventy were preserved from the general conflagration".<sup>27</sup>

Most of the buildings on the east side of Butcher Row were destroyed. The City Lands Committee negotiated with builders to rebuild on the land; and apart from some minor alterations to frontages and boundaries, many premises were built on the former foundations. Goodwyn's "store and malthouse" appears to have been divided into several properties, but a small cooperage remained on part of the site, owned by Cracherode Whiffing, brewer of

Queen Street.<sup>28</sup> Most of this area was cleared at the beginning of this century for the construction of the Rotherhithe Tunnel.

#### 8 BUTCHER ROW

Among the properties rebuilt 1794-5 was the house numbered 8 Butcher Row on Frazer's map of the extent of the Ratcliff fire, 1794. This is now the Master's House, Royal Foundation of St. Katharine and stands on the site of the previous house (shown on Plates 3 and 4). The plan of 1771 (Plate 3) shows a house with walls almost a metre thick in places; the large room on the garden side and the smaller room with doorway on the south side appear to be later additions. The elevation (Plate 4) presents an eighteenth century classical facade added to an older fabric. If this interpretation is correct, the basic plan suggests a 16th or 17th century property; this could have formed a part of the long building shown on Gascoyne's *Map of Stepney*, (1703) (Plate 2) and may possibly date back to the "sugar house" which was divided into tenements in the 17th century. The house would then have been enlarged by the owners of the Ratcliff Cross Brewery, who occupied it — the Raymonds until *c.* 1745 and Peter Greene until *c.* 1771 followed by Henry Goodwyn. From *c.* 1780 until 1808 the house was occupied by members of the Whiting family, who had considerable business interests in Ratcliff.

Matthew Whiting, who lived there from about 1780 until his death in 1798, lost sugar valued at £40,000 that had been stored in his warehouse in Broad Street and destroyed in the fire of 1794; but he was still able to loan £10,000 (jointly with F. Kemble) to the Phoenix Assurance Company two months later. The Phoenix was closely linked to the sugar trade and sustained a massive loss in the fire. Matthew Whiting was a director of the company from 1785 to 1798, his brother John Scott Whiting a director from 1797 to 1814, and his nephew Matthew Whiting a director from 1819 to 1871.<sup>29</sup> Thomas Leverton was surveyor to the Phoenix at the time and it has been suggested that Matthew Whiting could have commissioned him to design the present house.<sup>30</sup> The builder was William Mason.

In July 1795 Goodwyn's City lease was assigned to Matthew Whiting and the ground plan by Dance that accompanies the lease<sup>31</sup> (Plate 5) shows marked differences from his survey of 1771 (Plate 3). The only remnant of the earlier building to be retained was the cellar; the present cellar is on two levels with the eastern, higher part being the older. The pre-existing basement may have helped to govern the form of the new building. The two present garden rooms are on the site of those that previously faced the courtyard. The large room on the east side in 1771 was not replaced but an entrance hall was added on the west. The columns which support the stairway in the entrance hall have capitals decorated with what appear to be leaves of the sugar cane plant, an appropriate detail for Matthew Whiting, a sugar merchant, to add. The courtyard immediately in front of the house was enlarged by rebuilding the offices on the north side. This block and the stables have since been demolished and Butcher Row was widened in 1976 so that the road now comes to within thirty metres of the house.

#### THE WALL PAINTINGS

The most significant additions to the 1795 house have been the large bow window in the north-east room and the murals in both rooms which face the garden. The murals are oil on plaster and could not predate the 1794 fire because comparison of the two plans (Plates 3 and 5) shows that the walls on which the murals were painted only appear on the 1795 plan. Decorating rooms in this way was common in the early 19th century but few examples have

survived. The murals were restored after the Second World War although those in the north-east room (sometimes called the dining room) had been badly damaged by fire and water. Those in the south-east room (sometimes called the drawing room and now the Chapter Room) were restored again in 1976 as these paintings are particularly fine and the colours had darkened considerably over the last thirty years.

The two principal scenes depicted in the Chapter Room are both copies of paintings by Claude Lorrain — *Coast Scene with the Landing of Aeneas in Latium* (Plate 6) and *Pastoral Landscape with the Arch of Titus* (Plate 7).<sup>32</sup> Claude painted them in 1650 and 1644 respectively, but they have always been considered a pair, having the same measurements (4'6" x 3'5") and the same horizons. They were purchased by the Earl of Radnor in 1754 in the same sale and have hung in Longford Castle, Wiltshire ever since.

Claude was extremely popular in England in the 18th century and these paintings were well known after they had been engraved for Boydell in 1772. The *Landing of Aeneas* was engraved by James Mason with the title *Landing of Aeneas in Italy, the allegorical Morning of the Roman Empire*, and the pastoral landscape, which was originally untitled, was engraved by W. Woollett as *Roman Edifices in Ruins*. Richard Earlom, the engraver of Claude's *Liber Veritatis* stated that the pictures were "intended, as has been supposed, to denote allegorically, the Fall of the Roman Empire" and its "allegorical Morning". His edition of the *Liber Veritatis* was published in 1777, the year after the first volume of Gibbon's *Decline and Fall of the Roman Empire*; from the 1770s onwards the two paintings were called the "Rise" and the "Decline" of the Roman Empire, and their atmosphere wrongly characterised as morning and evening. This reflected 18th and 19th century taste rather than Claude's intentions.

The "Roman edifices" shown in Claude's painting are thought to have been the Arch of Titus in its 17th century state and an imaginary combination of the top of the Colosseum and the arches of an aqueduct. The copies of both paintings in the Chapter Room are in reverse as are the engravings from which they are probably derived. They have been skilfully made to fit the walls by excluding the lower sixth portion of Claude's original pictures to reduce the height and extending the length by the addition of classical columns and suitable scenery on the other side of the columns. In *Roman Edifices in Ruins* (Plate 7) the artist has not included the figures of shepherdesses in the foreground of Claude's original and Woollett's engraving. These are also excluded from an early 19th century engraving by N. Naudet, so it is likely that the artist at Butcher Row used this later copy for his source.

Although the paintings have been likened to work by Agostino Aglio (1777-1857)<sup>33</sup> it is not known who was the artist. Sir Walter Besant records the local tradition that the house belonged to a City merchant who rode to London every day leaving his only daughter behind. He engaged a young Italian to stay in the house and decorate it with wall paintings. When the merchant discovered that the artist and his daughter had fallen in love, the Italian was ordered to leave but went upstairs to his room, hung himself and haunted the house thereafter.<sup>34</sup> Much of this ghost story is plausible. The house was occupied by City merchants between 1795 and 1837, and Italians were the most proficient at this sort of work. Some of the decoration appears to be unfinished.

It is also uncertain when, within the period 1795 to 1837, the murals were painted. The paintings in the north-east room originally continued along the wall of the bow window, which was added after the plan of 1795 was made. The painting here however, could have

been carried out to match the existing painted walls. Thus the murals could have been commissioned by either Matthew Whiting who lived there until 1798, his brother John Scott Whiting, a wharfinger (1798 to *c.* 1808) or George Brown, a sailmaker (*c.* 1808 to mid-1830s).<sup>35</sup>

#### ST. JAMES, BUTCHER ROW

The house and its extensive grounds formed the most substantial residential property in Ratcliff in the early 19th century but the influx of sailors and unskilled labour working at the nearby newly built docks rapidly made the area less attractive for the wealthy to live in. The garden however, attracted the attention of those searching for sites in East London that would be suitable for new churches and burial grounds; and in 1836 the Corporation of the City of London received a petition to purchase the freehold of the land for the erection of a church.

‘the building of a Church on this site . . . will confer an important benefit on the Inhabitants of this poor and populous district, that from the contiguity of the river many of the sailors will thereby be enabled on the Sunday to attend public worship, and that on account of the especial advantage which will thus arise to the tenants of the City of London who surround the site, the value of the houses which they occupy will consequently be improved’.<sup>36</sup>

The Corporation sold the property for £1,012 10s in the following year and the church of St. James Butcher Row was consecrated on 13th August 1838. It was the first church to be built in Stepney by Bishop Blomfield’s Metropolis Churches Fund and cost £9,033 10s 10d in all. The architect, Edward Lapidge, designed it in the Early English style using grey Suffolk bricks in the construction and providing seating accommodation for 1200. The parish was formed from that part of the hamlet of Ratcliff that had previously been in the parish of St. Anne Limehouse. A major restoration was undertaken by R. P. Day in 1899-1901 and further restoration was needed in 1932. On 7 September 1940 the church was gutted by incendiary bombs and the parish was united to that of St. Paul Shadwell in 1951. The graveyard is now a public garden.<sup>37</sup>

The house became the vicarage. The ghost of the Italian artist said to have been responsible for the murals was driven away by the wife of one of the vicars in what must rank as one of the most successful examples of exorcism. According to Sir Walter Besant, she ‘‘sat up all night by herself in the haunted chamber and testified that she had neither seen nor heard anything and was quite willing to sleep in the room. That disgusted the ghost who went away of his own accord’’.

Whilst laying drains in the summer of 1895, builders discovered a cesspit immediately outside the west wall of the house between the porch and the kitchen.<sup>38</sup> It was said to be large enough to turn a horse and cart in, and may have originally been supplied from the tunnel (now bricked up) that leads from the west side of the cellar.

#### THE ROYAL FOUNDATION OF ST. KATHARINE

The Royal Hospital of St. Katharine had moved to Regent’s Park after the eviction from its precinct in 1825 to make way for the St. Katharine Docks. An attempt was made in 1914 to reverse the inevitable decline of the foundation and restore its links with East London by re-organising the Royal Hospital as the Royal College of St. Katharine, basing it in Bromley Hall, Poplar but retaining the chapel in Regent’s Park. The College trained students and provided qualified health visitors for the people of Bromley. Its maternity and child welfare work came to an end with the establishment of the National Health Service and after the war

the Royal College was reconstituted on a religious basis as the Royal Foundation of St. Katharine.

Bromley Hall and the chapel in Regent's Park were vacated and the Royal Foundation under its new Master, the Reverend St. John Groser, purchased the bomb damaged vicarage of St. James Ratcliff, the land immediately adjacent, and additional land acquired from the Corporation of the City of London. This was the nearest suitable site to that of the original Hospital, and the Chapter occupied the house in 1949. The Royal Foundation restored the vicarage for use as the Master's House and added new wings to accommodate conference guests and retreatants. The murals were also restored but those around the bow window were too badly damaged and were painted over. A new Royal Chapel was built in 1951 on the site of St. James's Church as part of the Festival of Britain celebrations. Most of the furnishings that had been taken to Regent's Park in 1825 were installed in the new chapel. These included the 14th century misericordes and statues of Edward III and Philippa of Hainault, a 16th century marble relief depicting the Adoration of the Magi and a fine early 17th century hexagonal pulpit with carved panels.<sup>39</sup>

The patronage of successive Queens of England has continued since the original foundation by Queen Matilda in 1148. In 1968, the present Patron — Queen Elizabeth the Queen Mother — entrusted the Royal Foundation to the care of the Community of the Resurrection (Mirfield) and the Deaconess Community of St. Andrew. Thus, one of the most notable features of the medieval foundation, the equality of Brothers and Sisters within the Chapter, is perpetuated still.

## NOTES

1. K. G. T. McDonnell *The Economic and Social Structure of the Parishes of Bromley, Hackney, Stepney and Whitechapel from the 13th to the 16th century* Ph.D. thesis University of London (1958) provides the evidence for this section unless stated otherwise.
2. Geological Survey of England and Wales. *Edition of 1919*. London Sheet NV. S.E.
3. M. J. Power *The Urban Development of East London* Ph.D. thesis University of London (1971) 145.
4. Inner London Archaeological Unit. Butcher Row excavations, 1975. Trench II, Phase IIc.
5. *ibid*, Phase III.
6. *ibid*, Phase IV.
7. *ibid*, Phase VII.
8. Mercers' Company. Manuscript survey of the Stepney estate (1615).
9. John Stow (b.1525) *Survey of London* (1603). Kingsford edition vol. 2 (Oxford 1908) 71-2.
10. M. J. Power *op.cit.* 177. An analysis of the baptismal registers of St. Dunstan's Stepney from 1606 to 1610 by members of the East London History Group provided evidence for the occupation statistics.
11. The name "Butcher Row" first appears on Gascoyne's *Map of Stepney* (1703) spelt "Bucher Row". (Plate 2). There may be a link with the "sugar house" if, as has been suggested, bull's blood was originally used in the refining process.
12. John Stow *Survey of London* edited by John Strype vol. 2 (London 1720) 244; Calendar of State Papers *Domestic* (1595-7) 97 also refers to Massan and Co. and Alden and Co. — the other Ratcliff sugar refiners; G. W. Hill and W. H. Frere *Memorials of Stepney Parish* (Guildford 1890) contains references to John Gardiner d.1599, another John Gardiner, vestryman in 1606 and the earliest reference to a "sugar house" in Ratcliff — "William Stubbes by the Sugar House at Ratcliffe" (1584).
13. Corporation of London Record Office (CLRO). Rental of the City's Estate at Ratcliffe (1744) claims that the land was purchased from George Gardiner and gives the date of purchase. The rental for 1655 gives John Gardiner as the vendor, and the 1615 manuscript survey in the possession of the Mercers' Company showing their Stepney estate marks the land concerned as "Mr. John Gardiner's". G. H. Ridge *Records of the Worshipful Company of Shipwrights* 1 (London 1939) XII, amongst the many errors in his Introduction, says the City purchased this land from John Philpot in the 14th century, confusing this estate with other lands bequeathed by John Philpot to the City.
14. CLRO. City Rental (1667) Ratcliffe Estate.
15. CLRO. City Rental (1704) Ratcliffe Estate.
16. C. H. Ridge *op.cit.*; M. J. Power *op.cit.* 219; H. L. Smith *History of East London* (London 1939) 220-223.

17. The records of the Worshipful Company of Shipwrights deposited in the Guildhall Library include the *Wardens Accounts* (1621-1726) Ms. 4597/1 which record regular payments to the Hallkeeper of the Guildhall, and the Ordinance Book (1428-1782) Ms.4600 which includes the complaint of 1661 (f99) and refers to a meeting of the Court at Guildhall in 1704 (f2).
18. W. Sutherland *The Shipbuilders Assistant* (1711) 76 quoted in *Mariners Mirror* 52 (1966); also quoted is the reference by Henry Johnson of Blackwall in 1677 to the measure "according to Shipwright's Hall".
19. E. Hatton *New View of London* vol. 2 (1708) 619.
20. House of Commons *Journal* 14 (16 Jan 1704/5) 482.
21. W. Maitland *History of London* (1739). A general account of the Corporation of Shipwrights of Rotherhithe is given by W. G. Perrin in his introduction to *The Autobiography of Phineas Pett* Navy Record Society vol. 51 (1918) and by E. A. Ebbelwhite in Brassey's *Naval Annual* (1925).
22. G. W. Hill and W. H. Frere — *op.cit.*; A. B. Beaven *Aldermen of the City of London* 2 (London 1913).
23. CLRO. Ratcliffe Estate Rental (1744).
24. *Gentleman's Magazine*. Obituary notice for 21 Jan 1782.
25. CLRO. Comptroller's Deeds Box 18 no. 29.
26. Kent's *London directory* (1779); P. Matthias *The Brewing Industry in England 1700-1830* (Cambridge 1959).
27. *Gentleman's Magazine* (July 1794); M. Rose *The East End of London* (Bath 1973) 80-1.
28. The occupiers are listed in the land tax books for Ratcliff; 1730-1843 in Guildhall Library Ms 6014, and 1780-1832 in Greater London Record Office (Middlesex Section) MR/PLT/5939 ff. Details of rebuilding after the fire are given in CLRO City Lands Committee *Minutes* 27 Sept. 1794, 7 Oct. 1794, 18 Mar. 1795 and 3 June 1795. The most accurate maps for this period are J. Rocque *Map of London* (1746), W. Frazer *A Correct Ground Plan of the dreadful Fire at Ratcliffe* (1794), and Horwood *Plan of London* (1799, 1807, 1813, 1819).
29. Phoenix Assurance Company. *Directors' Minutes*.
30. I owe this suggestion to Mr. Frank Kelsall of the GLC Historic Buildings Division. Thomas Leverton had an extensive urban and suburban practice and would have known Matthew Whiting.
31. CLRO. Comptroller's Deeds Box 89 no. 35.
32. M. Röthlisberger *Claude Lorrain: The Paintings* (London 1961). *The Arch of Titus is Liber Veritatis* (LV) 82 and the *Landing of Aeneas* is LV 122. Röthlisberger lists a number of other copies of these paintings but was not aware of those in Butcher Row.
33. Edward Croft-Murray *Decorative Painting in England, 1537-1837* 2 (London 1970) 308.
34. Sir Walter Besant *East London* (London 1899) 87.
35. CLRO. City Lands Committee *Journal* 3 (1819-20) f. 193-4; 124 (1832) 1040; 128 (1836-7) 668. GLRO (London Section). Tower Hamlets Sewer Rate for 1831 (THCS/435 f.15) lists George Brown as occupier, and for 1836 (THCS/453 f.14) lists David Nunez, late G. Brown Esq., John Scott Whiting and George Brown were neighbours in business, both possessing premises in Broad Street, Ratcliff according to the London commercial directories.
36. CLRO. City Lands Committee *Journal* 128 (1 Dec. 1836) 668.
37. G. Barnes *Stepney Churches* (London 1967).
38. Guildhall Library, Church Commissioners Parish files *St. James Ratcliffe*.
39. C. Jamison *The History of the Royal Hospital of St. Katharine* (Oxford 1952); St. John B. Groser *The Royal Foundation of St. Katharine* (London n.d.); London County Council *Survey of London* 19 (London 1938) contains a list and many illustrations of the monuments and furnishings in the chapel at Regent's Park.

ACKNOWLEDGEMENTS I should like to acknowledge the Phoenix Assurance Company for permission to quote from the *Directors' Minutes*, help given by the staff of the Corporation of London Record Office and the Master and Brothers of the Community of the Resurrection, and the particular assistance of Mr. Frank Kelsall, GLC Historic Buildings Division in researching the occupiers and building history of the present Master's House.

Plate 2 is reproduced by permission of the Guildhall Library; plates 3, 4 and Fig. 9 are reproduced by permission of the Corporation of London Records Office; the photographs of the murals, plates 5, 6, were taken by Tony Othen.

The house and chapel of the Royal Foundation of St. Katharine may be visited by appointment.

## THE POTTERY FROM THE EXCAVATION

BY ELIZABETH PLATTS

### Trench I

A large amount of 19th century pottery was recovered from the dumping into the cellars of the warehouses and from the modern service trenches. The pottery, which covers the whole range of Victorian wares, is not dealt with here as the deposits were not sealed, but the sherds may be examined at the Unit's offices, Imex House, 42 Theobalds Road, London W.C.1.

The relevant archaeological features from Trench I (five pits Nos 1-5 and gully 1) contained material from the 16th and possibly very early 17th centuries. The number of sherds found totalled 529 and in contrast to the other part of the site the average size of sherd was large (approx. 20 sq. mm), and comparatively few vessels were represented. There was little residual material. The character of the fill of the individual pits suggests that they were filled at approximately the same date, but there is no conclusive evidence from the pottery itself that there is any connection between any of the pits.

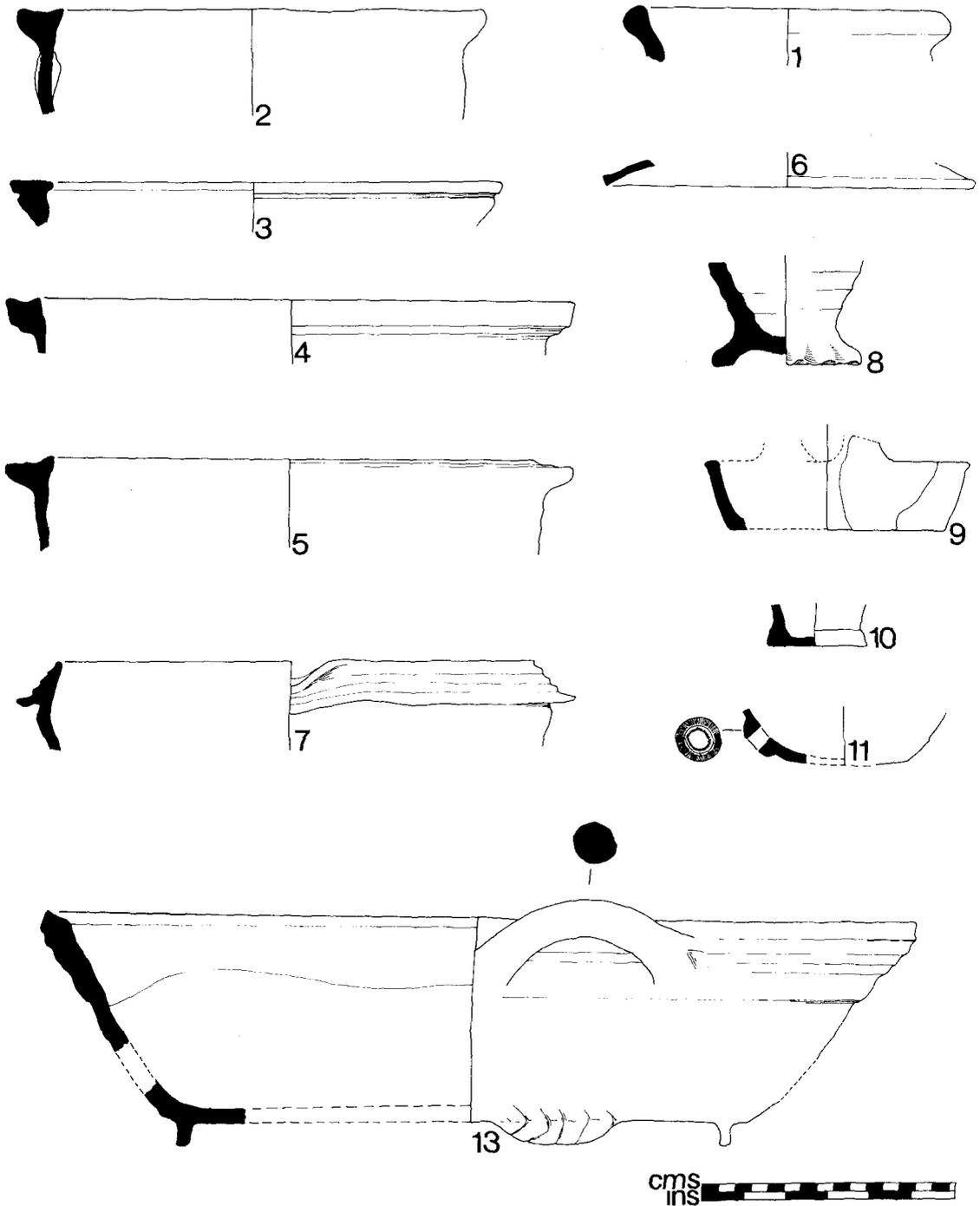


Fig. 9. Butcher Row: Medieval and post-medieval pottery. (Trench I Nos. 1 to 8, Trench II Nos. 9 to 11, 13) (1/4)

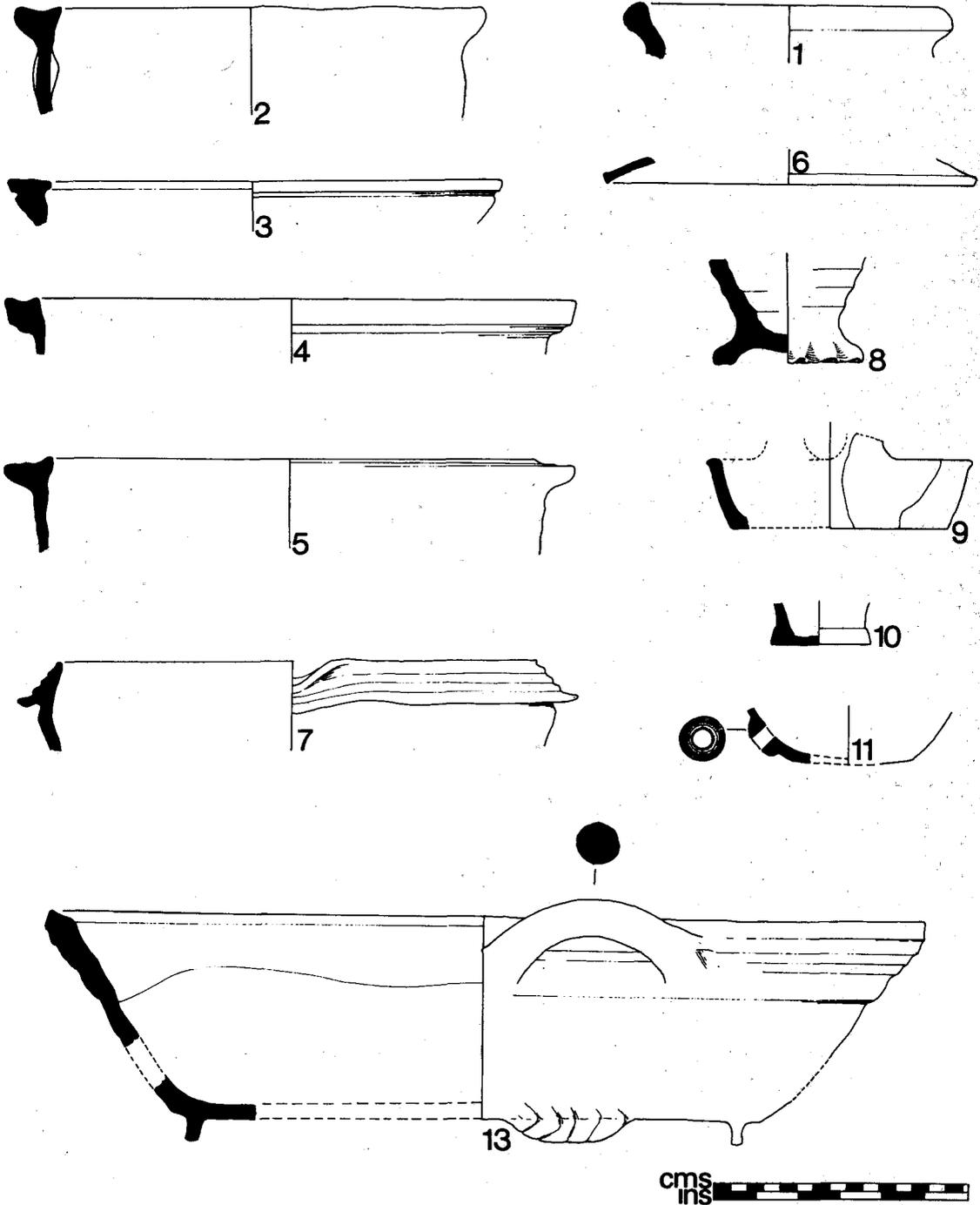


Fig. 9. Butcher Row: Medieval and post-medieval pottery. (Trench I Nos. 1 to 8, Trench II Nos. 9 to 11, 13) (¼)

However, the fact that the top of the pits had been removed indicated that the fill was not completely present and the possibility that they were all filled at the same time from the same source cannot be ruled out.

The almost complete absence of clay tobacco pipes in the fill of most of the pits — only two pipe stems were found — might imply a date before the general introduction of smoking, but the truncation of the pits could have affected the range of their fill.

#### Pit 1

##### Layer 1

Twenty sherds were recovered from this layer. The pottery includes a small tin-glazed rim with blue stripes running round the neck, probably from a small drug jar, of late 16th century date and probably from Holland. The remaining sherds are of red earthenware and include a sherd in a slightly micaceous fabric with a brown lead glaze on the interior surface. The majority are sherds in a light red sandy earthenware, unglazed or with spots of glaze only. Although all the sherds show some sign of general abrasion, none show any signs of ordinary wear, for example smoothing on the feet, base or rim, and the clay of one rim has been particularly badly wedged. The sherds might be interpreted as kiln waste but there is no further evidence of pottery manufacture on the site — the group was perhaps dumped from another source. The fabric and shapes are very like the material produced at the potteries in Woolwich at the end of the 16th and beginning of the 17th centuries, though it is very probable that other potters around London were producing similar wares.

##### Layer 2

The group contained 241 sherds almost all of which were the same type and fabric as Layer 1, although the sherds were, on the whole, larger. They included fragments of sugar load moulds, heavy applied handles, and the base of a jar with a dark brown glaze on the interior surface. There was one small residual sherd in a West Kent type fabric, cream slipped and mottled green glazed. The group also contained six thick coarse unglazed sherds in a light orange fabric with some grog tempering.

##### Layer 3

183 sherds were found in this group and they included small sherds from the Surrey–Hampshire potteries dating from the mid 16th century, and one sherd from a Spanish oil jar of the type imported into this country from the 16th century onwards. The remainder of the material was similar to that from Layers 1 and 2 and most pieces were unglazed but a few sherds had a yellow-brown glaze on the interior surface.

The dating of the pit as a whole would appear to be late 16th century.

#### Pit 2

##### Layer 1

Thirty seven sherds were found in this layer. The pottery included four sherds from the Surrey–Hampshire potteries, three green glazed and one yellow which also had burn marks on the outside; the sherds date from the mid 16th to 17th centuries. A large bowl with a pouring lip in a sandy red earthenware, yellow lead glazed inside and burnt outside, might be an import from the Low Countries but by the later 16th century there were a number of potters in this country making Aardenburg type wares. The rest of the red earthenware was similar to that found in Pit 1. There were four sherds of stoneware, two from Ræren, drinking mugs with frilled bases and two which had been thoroughly burnt, both of which were also probably Ræren and therefore of 16th century date. A single painted slip sherd was found, dating from the end of the 15th or beginning of the 16th century (more sherds probably from the same vessel were found in Layer 3). Two sherds, possibly from a lid, in a coarse dark red micaceous fabric, were recovered and in another London context these have been dated to the middle of the 16th century, Black (1976, 169).

Two clay pipe stems appeared in this group. It is difficult to date a small number of stems on their own accurately but these seem to be 17th and probably early 17th century in date.

There was one very small fragment of a yellow glazed cream slipped tile of the type produced in the late 15th and 16th centuries.

## Layer 3

Twenty-nine sherds came from this layer. Eight of these sherds came from at least two Ræren stoneware mugs. Sixteen, possibly burnt after fracture, came from a painted slip pot of late 15th-early 16th century date. A small red earthenware pot represented by four sherds (two rim sherds) was of similar date and had an interior yellow-brown lead glaze. There was one other red earthenware sherd, yellow-brown lead glazed outside.

## Pit 3

## Layer 1

This group includes two sherds of Surrey–Hampshire pottery with a mottled green and yellow glaze, one probably from a small bowl and the other probably part of a platter. They would appear to be 16th century/early 17th century in date. A rim probably from a tyg has a darker red fabric than usual for London finds of black glazed ware. This vessel might be from one of the Midlands potteries or an overfired example from the Kent and Essex kilns. The pimply coarse pink/grey slightly micaceous fabric of the fourth sherd suggests that it came from an olive or an oil jar (though more likely the former as the sherd is not particularly thick) imported from Spain from the 16th century onwards. The fifth sherd is an unglazed fairly fine red earthenware with a reduced core. The finds also include a flattened knob immediately above the foot of a clear wine glass. A late 16th or 17th century date seems likely for the glass. There are no pipes in this group, but it is too small for that to be entirely valid evidence. However, the other finds would suggest a late 16th or early 17th century date.

## Layer 3

Only one sherd came from this layer, the rim of a small bowl or cup: a fine red fabric covered with cream slip and decorative pellets, and glazed with a clear yellowish lead glaze streaked with green. It could possibly be an unusual form from Wanfried. It dates from the mid 16th century.

## Pit 5

The finds from this feature are two fragments of flat roof tile; two unglazed sherds of an orange-red sandy fabric which could have come from a sugar loaf mould; a thick sherd from an ordinary earthenware bowl with a brown lead glaze on the interior and a grey exterior surface into which have been incised curving lines; and an abraded sherd of partially green glazed Surrey–Hampshire ware. The sugar loaf mould fragments are difficult to date closely but the glazed sherd is typical of wares produced in the second half of the 16th and early 17th century. The Surrey–Hampshire sherd is of 16th century date. The date of the pit's fill as a whole is suggested as being late 16th or early 17th century.

## Gully 1

## Layer 1

There were nine sherds of pottery found in this layer, three from a little jug of Surrey–Hampshire border ware of mid 16th century date. The other six sherds had all been burnt, probably after fracture. They were originally red earthenware and consisted of two glazed rims, one from a plate and one flanged, two glazed and two unglazed body sherds, of 16th century date.

## Layer 2

This layer contained a fragment of a burnt curved roof tile.

## Trench II

Considering the size of the area uncovered in this part of the excavation (75 sq. m) a comparatively small amount of pottery was recovered — just over 600 sherds — and not only was the average size of each sherd very small (approx. 6 sq. mm) but also few of them had any distinguishing features. There were very few rims or bases. This factor, at a period in the development of medieval pottery when change took place particularly slowly, makes the close dating of the individual phases extremely difficult. In addition the high proportion of residual material in all but the latest phases (Phase VIIg and VIII) should be emphasised. In fact, it might be suggested that almost all the material could be residual and all dating has been placed too early because there are no specific dumps or pits for rubbish on the site and the pottery distribution across the site shows a random pattern. Although none of the groups is large enough to make it a reasonably certain proposition, it is possible to suggest that all the material comes from one source.

There is a high proportion of imported sherds among the group as a whole and this is perhaps to be expected from a site so close to a very important waterway (the Thames) and at a place which was involved in shipping in the medieval period.

A large number of the sherds came from the potteries on the Surrey–Hampshire borders. These white wares, often partially green glazed, are produced from the end of the 13th century (often at the same time as red wares) and apparently found a ready market in and around London during the 14th and 15th centuries, evolving at the end of the 15th century into the better quality mass produced wares sometimes known as Tudor Green. The high proportion of Surrey–Hampshire pottery compared to examples of West Kent types, East Anglian and London sandy red earthenware is interesting, but on so small a sample and probably a mainly redeposited one, it is clearly not useful to draw any hard and fast conclusions. The wares represented appear to be from kilns known to be supplying London, although, of course, only in a few cases are the actual kiln sites known, and more often only the general area from which they are thought to have emanated can be recognised.

It is difficult from such small and indeterminately shaped sherds to be certain from what vessels they come, but in general the range is the expected one for the 14th and 15th and early 16th centuries — a large number of jugs including three small red earthenware jugs, cooking pots, at least one bung-holed pot, and the somewhat unusual bucket-handled small bowl in a West Kent fabric, in addition to the imported drinking mugs in stoneware. However, the group is obviously not large enough to ensure a comprehensive range, nor can any specialised use for this part of the site be suggested from the range of wares.

#### Phase Ia (2, 3)

Only two sherds of pottery were found in this phase, a samian rim (3) which Joanna Bird has described as follows: “much abraded, Dragendorff 36, South Gaulish, Flavian (that is, *c.* AD 70–100)”; and a body sherd of a cooking pot (3) (showing burning on the outside surface) a coarse vesicular fabric, oxydised surfaces with a reduced core and mixed tempering for which a 12th century date is suggested. The other finds included fragments of Roman tile and a very abraded piece of roof tile with a reduced core.

The Roman material is obviously residual, and the suggested 12th century sherd could also be residual.

#### Phase Ib (4)

This phase yielded a single residual fragment of Roman tile.

#### Phase IIa (6)

The finds include twenty-one sherds of pottery and eight fragments of roof tile.

The pottery ranges in date from Roman to the 14th and possibly early 15th century. The residual Roman sherd is of the London ware type of *c.* AD 90 to AD 130, *cf.* Marsh and Tyers (1976, 234, nos. 96 to 117). There are three small abraded sherds of fine cooking pot type fabrics of 12th and 13th century date, a much abraded yellow lead glazed sherd from a jug similar to that from the Westminster Abbey Misericorde excavation, Black (1976, 161 no. 31) and an abraded sherd from a Rouen copy jug, *cf.* Tatton-Brown (1975, 134, nos. 211 to 214). Nine 14th century sherds of green and mottled yellow and green lead glazed coarse cream fabric pottery from the kilns of the Surrey–Hampshire border were found. They were all body sherds except for one base angle sherd and one fragment of a plain strap handle. The group also included a sherd possibly from a ribbed neck jug in a West Kent type fabric, dating from the end of the 14th or beginning of the 15th century and apparently the latest pottery sherd in Phase IIa.

#### Phase IIb (7, 8, 9, 10, 11)

The pottery from this phase consisted of twenty-five sherds. Thirteen of the sherds come from the Surrey–Hampshire kilns and date from the 14th and 15th centuries: two of the sherds show bases of handles and wood seem to have been burnt thoroughly, and a third (9, Fig. 10, 25) showing soot marks outside could perhaps have come from a skillet or a dripping pan, Holling (1971, 78, G2). While these and seven of the body sherds all have a coarse off-white and cream fabric, three of the body sherds (10) are distinctly finer in fabric and the quality of throwing, and suggest a 15th century date.

The group also contained a much abraded jug handle of the 13th century, a vesicular sherd in a cooking pot type fabric of a similar date, four sherds in a coarse pinkish fabric for which an Essex source

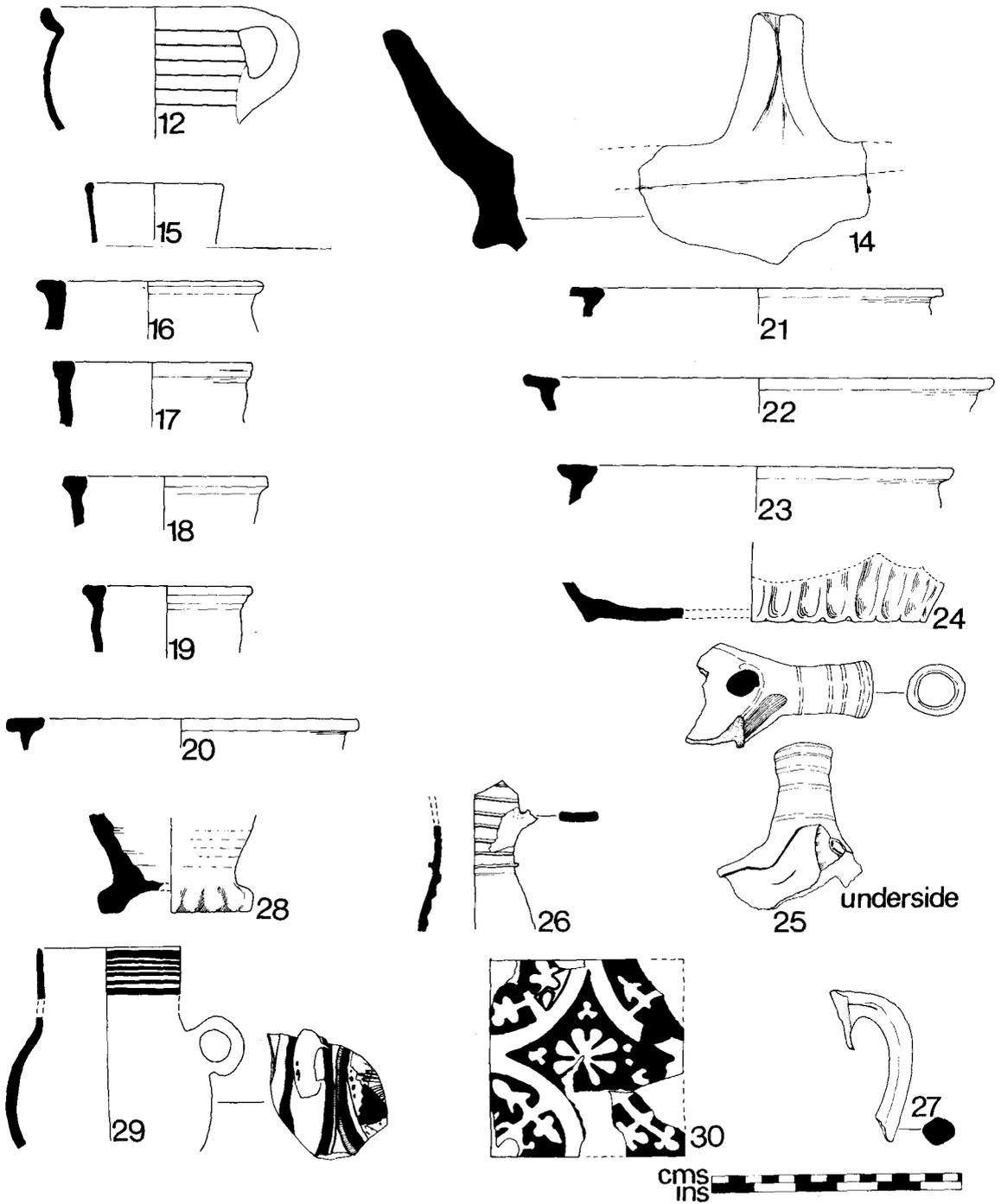


Fig. 10. Butcher Row: Medieval and post-medieval pottery and medieval tile. (Trench II Nos. 12, 14 to 30) (1/4)

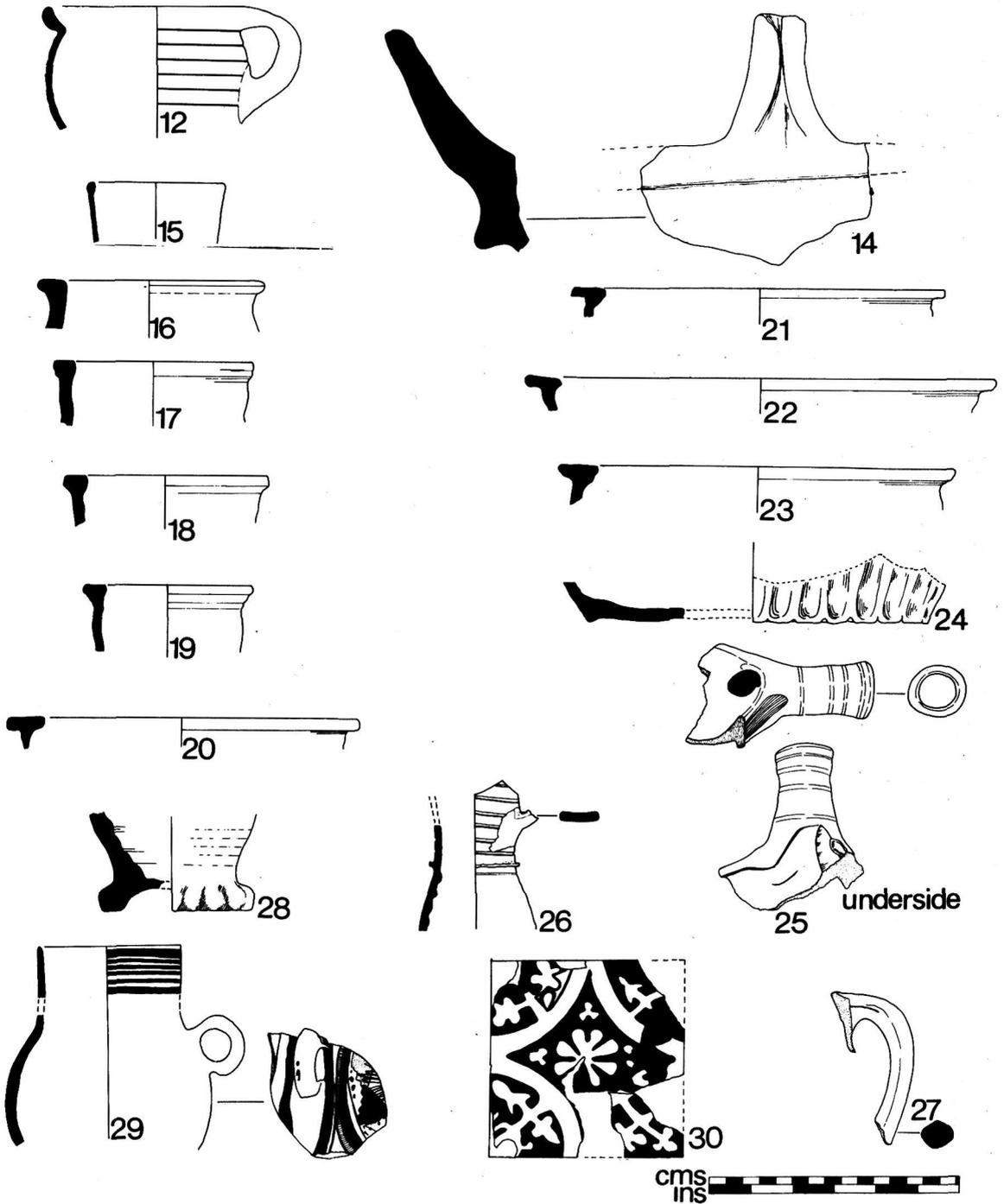


Fig. 10. Butcher Row: Medieval and post-medieval pottery and medieval tile. (Trench II Nos. 12, 14 to 30) (1/4)

is likely, of 13th-14th century date, and a small jug or bottle base (9, Fig. 9, 10) in a fine sandy fabric, light red surfaces and a reduced core with a streak of brown lead glaze down the outside *c.f.* Acc. No. 5717 in the Museum of London collection. There is one Siegburg stoneware rim sherd (10) of late 14th or 15th century date.

#### Phase IIc (12, 13, 14)

The twenty two sherds representing eighteen vessels and eight fragments of tile range in date from residual Roman to the 14th and 15th centuries. The Roman sherd (14), much abraded, is from the rim of a late Roman jar. The group also contained residual sherds of 12th and 13th century cooking pots. There were seven sherds of Surrey-Hampshire ware of 14th and 15th century date, four green lead glazed body sherds and three unglazed body sherds, one from a cooking pot showing signs of burning (13). There were also four sherds of West Kent type ware, one of which was sgraffito decorated (13).

#### Phase III (15, 16, 17, 18, 19, 20, 21, 22)

Although this phase contained a large amount of pottery, ninety five sherds in all, a high proportion of them are small body sherds, heavily abraded and residual. The group includes Roman material, 13th century jug sherds decorated with slip, and 12th and 13th century cooking pot sherds. From the 14th and 15th centuries there are examples of Surrey-Hampshire wares including two flanged rims (19, 20 Fig. 10, 20, 21) and a jug handle (20), sherds of slipped West Kent types including a ribbed strap-handle base (17), and the bung hole from a pitcher in a coarse sandy oxydised fabric with a reduced core (20 Fig. 9, 10). There were only four imported sherds in the group, also of 14th and 15th century date: two stoneware sherds including a Siegburg handle (15) and a Langerwehe sherd (15) and a green glazed centre-base sherd from Saintonge (19).

#### Phase IV (24, 25, 26, 27, 28, 30, 31, 32, 34, 35, 36, 37, 38, 39, 40, 41)

In addition to a number of fragments of roof tile there were sixty sherds of pottery. There was a smaller than usual proportion of residual sherds, dating from the 12th and 13th centuries, but the dating of the phase as a whole is 14th to 15th century.

The pottery ranges from a number of sherds of Surrey-Hampshire ware with various green glazes, of 14th and 15th century date including a flanged rim from a cooking pot (25, Fig. 10, 22), examples of West Kent type wares, sherds probably from Writtle, Essex, and East Anglian wares. Again, very few of the sherds join or are other than body sherds, but there is a group of four forming part of a small bucket-handled pot (24 and 25, Fig. 9, 9). The shape is generally thought to originate in France, but the fabric and decoration of this example is of the West Kent type.

The imported sherds include two small body sherds of Langerwehe stoneware (25) and the neck and body sherds of a Jacobakanne from Siegburg (31, Fig. 10, 26) *c.f.* Steinzeug (1971, no. 159).

#### Phase V (42, 43)

The group contained fifty sherds of pottery. Although there were a large number of residual sherds in the group, there were also later sherds from the Surrey-Hampshire kilns including a small jug rim (43, Fig. 10, 17) dating from the later 15th and early 16th centuries, a sherd of the ordinary brown lead glazed red earthenware sometimes known as Tudor Brown (43), and a sherd of the black glazed ware (43) produced from the end of the 15th century at various centres, chiefly in the Midlands but also in Kent and Essex.

#### Phase VI (44, 45, 46)

This phase produced thirteen sherds and one fragment of curved roof tile apparently burnt.

The sherds of pottery mostly date from the 15th and early 16th century. There are two residual sherds, one a 13th-14th century mottled green glazed jug sherd possibly from Oxford, and the other a 14th century green glazed Surrey-Hampshire sherd. The remainder of the material includes three imported stoneware sherds, one very small one from the filled base of a Siegburg jug (46), the other two a handle (45, Fig. 10, 27) and a body sherd from a Ræren drinking mug (45). A white slip painted red earthenware sherd (46) suggests a date at the turn of the 15th and 16th centuries, and three sherds of Tudor Brown type earthenware (44) would also support that date.

#### Phase VIIa (47)

In addition to some fragments of roof tile twenty one sherds were recovered from this phase, of which sixteen came from the kilns of the Surrey-Hampshire borders, possibly representing thirteen different

vessels. The shapes include a jug with a thumbled foot to the base (Fig. 10, 24) and two rims (Fig. 10, 18, 19). The glazes range from green and yellow mottled to green, and almost all the sherds date from the 14th century.

The other sherds include one 13th century reduced cooking pot type, one West Kent, one sandy oxydised fabric base sherd, glazed with a brown and green glaze, and two body sherds of similar fabric, one with spots of glaze on the outside surface. The latter sherds are all of 14th century date and as stratigraphically the phase must be later, all the material found in this group is residual.

Phase VIIb (50, 55)

There were forty eight sherds of pottery in this phase, as well as fragments of roof tile.

From the Surrey–Hampshire potteries there were two residual sherds dating from the 14th and 15th and early 16th centuries. There was also a residual Roman mica dusted sherd (50). The imported wares consisted of five sherds of Ræren stoneware, of which two at least represented vessels with frilled bases (50, Fig. 10, 28), and a single sherd of Spanish tinglaze (50) decorated with blue and dating from the late 15th century. The red earthenware included examples of yellow and mottled green glazes, a yellow glaze over a cream slip, a pipkin foot, and a lid (50). The phase also produced part of a large jug neck and handle (55) in a coarse oxydised fabric with a reduced core, unglazed and with traces of cream slip at the base of the handle.

The pottery suggests a date of late 15th and early 16th century for this phase.

Phase VIIc (51, 52, 53)

There were only seven sherds found in features within this phase. Any conclusions drawn from so small a sample are unlikely to be valid, particularly in view of the fact that at least two of the seven sherds are obviously residual. The sherds include a Surrey–Hampshire ware sherd (52) whose fabric and quality of glaze suggests a late 15th century date, two very small sherds of fine sandy red earthenware (52), and the base (52) of a small jug or bottle, which may have been burnt (see Phase IIb and VIIe for similar small jug bases). The group also contains two small sherds of stoneware (52), one from Langerwehe and the other perhaps from the early Cologne potteries, probably datable to the late 15th-early 16th century.

Phase VIId (56, 57)

The finds from this phase consisted of twenty three sherds of pottery and small fragments of tile.

From the Surrey–Hampshire kilns there were three sherds (57) dating from the late 15th-early 16th centuries and one residual sherd, apparently of Surrey–Hampshire fabric with a mottled green glaze forming a scale like pattern (57). Other residual material includes a small sherd (57) from a sandy medieval London ware jug with an olive green glaze, and a much abraded green glazed sherd. The stoneware consisted of a rim and four sherds (57) from a Ræren drinking mug of the type imported from the late 15th century. The other imported sherd (57) is of Spanish origin, a tinglazed ware produced from at least the end of the 15th century and into the 16th century.

There is also a single sherd of brown glazed red earthenware of the Tudor Brown type (57) dating from the end of the 15th century, and a rim sherd in a sandy pink-light orange fabric (57) which is possibly from an Essex source.

The dating for the phase is, therefore, late 15th or 16th century.

Phase VIIe (49, 58, 59, 60, 61)

Only six sherds of pottery came from this phase. Three were sherds from the Surrey–Hampshire potteries, one unglazed, one yellow glazed and one green (58), ranging in date from the late 14th to, possibly, the late 15th century. A base sherd (58) of red earthenware in a fine sandy fabric with a reduced core and brown glazed inside, also dates from the late 15th century. A large handle (58) from a jug in a partially reduced sandy fabric, somewhat abraded and with only three spots of glaze, dates from the 13th century. Another small jug or bottle base (58), of the type found in Phase IIb and VIIc, occurs in this phase. It is in a fine sandy red fabric with a partially reduced core, and some spots of a yellow-brown lead glaze on the inside and outside surfaces.

Phase VIIg (64, 65, 66)

This phase, unlike the others in Trench II, contained a large amount of pottery, 214 sherds in all, and while many sherds were small and residual, a number of large sherds could be joined and formed almost complete vessels.

Nineteen sherds could be identified as coming from the potteries of the Surrey–Hampshire border and although this included some residual material, most could be dated to the 16th century. There was one residual sherd from a cooking pot, probably of 13th century date. The imported pottery consisted of seven sherds from Ræren drinking mugs (66), two from Spanish oil jars (66), and seven from a single late 15th or 16th century vessel (66, Fig. 10, 29) a polychrome tinglaze jug from Italy, probably Faenza, *c.f.* Platt and Coleman-Smith (1975, 1348). The group included one painted slip earthenware sherd (65) of the type produced at the turn of the 15th and 16th centuries.

The majority of the sherds come from a large shallow handled dish with small thumb feet in an oxidised sandy earthenware with a reduced core (66, Fig. 9, 13). The vessel has a partially cream slipped interior over which there is a yellow lead glaze and the exterior has burn marks. This type of vessel was originally produced by the Aardenburg and Low Countries potters from at least the 15th century, but a number of the potters came to this country and the wares were imitated in England. It is not possible to be certain of the origin of this piece. The remaining sherds include a straight handle of the type found on dripping pans (66, Fig. 10, 14), characteristically burnt on one side only, and a small jug (64, Fig. 10, 12). There are also sherds from a small black glazed pot of Cistercian ware type (66).

It is suggested that this pottery was dumped probably in the late 16th century; the absence of clay tobacco pipes make it unlikely to be later.

Phase VIIIa (68, 69, 70)

Fourteen sherds were found in this phase, seven of Surrey–Hampshire ware ranging in date from the 14th century to the 16th. There were two residual sherds of cooking pots (70), while the imported sherds consisted of one North Italian sgraffito sherd (69) of the 16th century, which had a cream slip over a fine red fabric scored through and originally covered with a yellow and green lead glaze, and a small stoneware sherd (69). There were three sandy red earthenware sherds, two unglazed and one with a trace of glaze on it.

A date in the 16th century is suggested for the phase.

#### SMALL FINDS

(Fig. 11)

1. A flint of an unusual colour, red and brown, though this could be due to patination. It is damaged on one side which might be the result of use, and the side shows invasive retouching and damage, which also might be a consequence of use. It is not possible to attribute with certainty the flint to any particular period. Trench II (1).
2. Hone of quartz micaceous schist. The stone occurs in north eastern Scotland and in Scandinavia. It cannot be dated accurately; similar hones were imported from the Viking period onward (not illustrated). Trench II (9), Phase IIb (14th-15th century).
3. Bronze buckle. The pin appears to be secondary, i.e. a repair and not the original one. It is very similar to an example in the British Museum (No. 70, 4-2, 817) from Bury St. Edmunds, Suffolk, dated to the second half of the 14th century, *c.f.* Fingerlin (1971, 384 and Fig. 202). Trench II (19) Phase III (14th-15th century).
4. A curved length of bronze (not illustrated). Trench II (20) Phase III (14th-15th century).
5. Bronze ring found attached to an iron ?hook. There is no real reason to believe that the ring is necessarily associated with the iron object (not illustrated). Trench II (19) Phase III (14th-15th century).
6. Undecorated bronze ring (not illustrated). Trench II (47) Phase VIIa (late 15th-early 16th century).
7. Decorated bronze hook. The open work pattern suggests a date in the 15th century. Trench II (36) Phase VIId (late 15th-early 16th century).
8. Lead hook, cast in a mould. It is not possible to tell whether it was originally curved or not. The curve starts at the point where the square section becomes round. It is perhaps part of a set of small tools hung on a ring. Trench II (63) Phase VIIf (?late 15th-early 16th century).
9. Iron buckle, probably from a harness or large belt. Trench II (66) Phase VIIg (late 16th-early 17th century).
10. Complete bronze thimble and fragments of a second, both with typical "dimpling" on the surface. Similar examples are known in the 14th and 15th century but these could be as late as the phase date (not illustrated). Trench II (64, 65), Phase VIIg (late 16th-early 17th century).

#### THE TOKENS

BY PETER MORLEY

Three tokens found in Trench 1 are worthy of record. They all come from the fill of the 18th or early 19th century cellars.

1. Seventeenth century farthing token issued by Samuel Keinton, baker in Limehouse (Boyne-Williamson (1891) Middlesex No. 142). The style of the token suggests the work of David Ramage (d. 1662) and in particular the period 1650-1660 (prior to the Restoration).
2. Eighteenth century halfpenny token issued by Daniel Eaton, printer, (Dalton and Hamer (1910) Middlesex 301, edge milled). Dated 1795.
3. Farthing-sized brass check issued by Tower Hamlets Industrial Co-op Society Ltd.

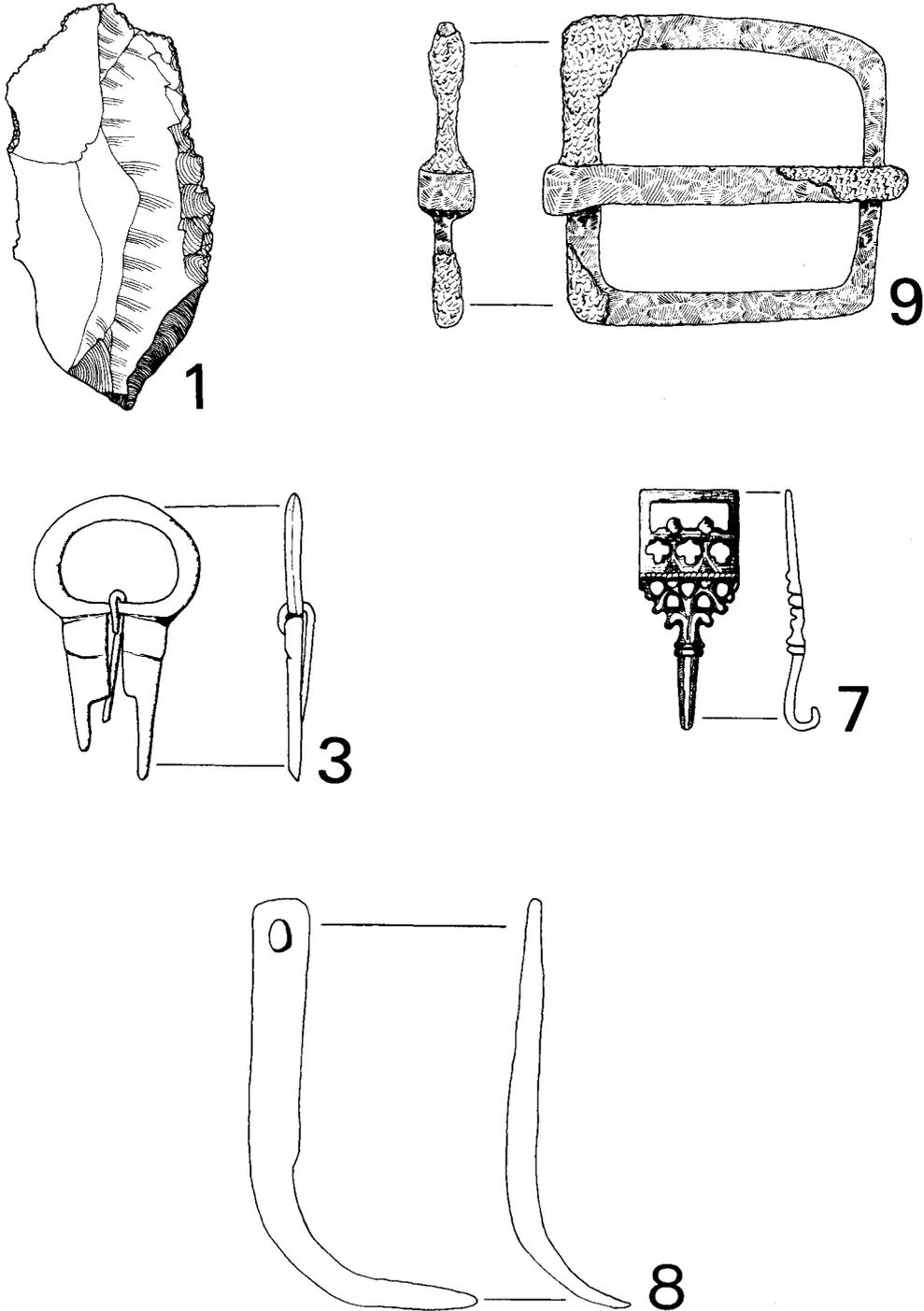


Fig. 11. Butcher Row: Small finds (Trench II Nos. 1, 3, 7, 8, 9)(1/1)

## THE TILES

The decorated tile from Trench II (65) (Phase VIIg) (Fig. 10, 30) was made at the tiliary at Penn, Buckingham, and dates to the middle of the 14th century. It is quite well worn and is clearly residual (the phase is dated late 16th-early 17th century). It does not have a published design, but is related to the designs P66 and P73 in Hohler's Buckinghamshire catalogue, Hohler (1942).

The plain tiles from Trench II (66) (Phase VIIg) are Flemish and 15th or early 16th century in date. A second group came from Trench II (65) (Phase VIIg) and are products of the Netherlands and probably date from the 14th and 15th centuries, although they could be as late as early 16th century.

## ANIMAL BONE

BY ALISON LOCKER

## Trench I

The quantity of bone from both Trenches I and II was small and probably represents food debris of local consumption.

The number of fragments noted after each species refers to the number of individual bones recovered. A full list of identifications and measurements is available on request.

The following species were present: cattle (*Bos sp.*), sheep (*Ovis sp.*), pig (*Sus sp.*), Fallow deer (*Capreolus capreolus*), rabbit (*Oryctolagus cuniculus*). Bird species include: duck (*Anas sp.*), domestic fowl (*Gallus sp.*), swan (*Cygnus sp.*), Red Grouse (*Lagopus lagopus*). Shellfish were also present: oyster (*Ostrea edulis* L.), mussel (*Mytilus edulis* L.), cockle (*Cardium edule* L.), whelk (*Buccinum undatum* L.).

## Pit 1 Layers I, II and III

The following were present: cattle (17 fragments), sheep (3), pig (3), Fallow deer (1), duck (1), goose (1), swan (1), domestic fowl (1) and 7 oysters.

## Pit 2 Layers I and III

The following were present: cattle (20 fragments), sheep (11), pig (3), rabbit (7 — more than one individual was present), domestic fowl (12), goose (1), Red grouse (12), swan (1), and the ulna of a wader. Shellfish include mussel (4), oyster (16) and whelk (7).

## Pit 3 Layers I, II and III

A very small amount of bone was recovered from this feature and also Pit 5. The following were present: cattle (2 fragments), sheep (1) and oyster (3).

## Pit 5

Cattle (1 fragment)

## Gully 1 Layers I and II

The following were present: cattle (2 fragments), sheep (9 and one piece of burnt bone), domestic fowl (1), oyster (2).

Cattle and to a lesser extent sheep are the main meat species represented, birds and shellfish are consistently present and also form an important part of the diet. Pig is only represented by maxillae and mandibles, which might indicate export of the carcass from the site, though this is really an assumption as only 6 fragments were recovered. Butchery was consistently noted on the meat producing species, but no particular selection of bones was observed.

Cattle, sheep and pig were mostly mature individuals, *i.e.* they had achieved full epiphyseal fusion and complete tooth eruption; there were no very young animals and neither were there any individuals showing excessive tooth wear which might indicate an animal past its prime as a meat producer.

## Trench II

The bone recovered from many of the features was small in quantity, though this is not surprising as there are no pits in this area or other features which produce food debris in quantity.

The bone is discussed by archaeological phase. (An omission of a phase indicates that no bone was recovered).

The following species were present: cattle (*Bos sp.*), sheep (*Ovis sp.*), pig (*Sus sp.*), dog (*Canis sp.*), horse (*Equus sp.*), rabbit (*Oryctolagus cuniculus*). Birds include: domestic fowl (*Gallus sp.*), duck (*Anas sp.*). Shellfish: oyster (*Ostrea edulis* L.), mussel (*Mytilus edulis* L.) and cockle (*Cardium edule* L.).

## Phase Ib (4)

Cattle (1 fragment)

## Phase IIb (9)

Cattle (8 fragments), sheep (1), pig (1), oysters (3)

(10)

Oyster (1 valve)

## Phase III (15)

Cattle (1 fragment)

(17) (19) (20) (22) (23)

Cattle (9 fragments), sheep (7), dog (1), mussel (1), oyster

(9), cockle (2)

## Phase IV (24)

Cattle (3 fragments), sheep (4), pig (1), oyster (6)

(25)

Cattle (1 fragment)

(27)

Cattle? (1 skull fragment), duck (1)

## Phase V (42)

Cattle (2 fragments, including the mandible of a calf),

sheep (4), pig (3), oyster (2)

(43)

Cattle (7 fragments), sheep (4), pig (3), rabbit (1),

domestic fowl (2), oyster (7)  
 Phase VI Ditch 2, (44)  
 Cattle (4 fragments), sheep (8)  
 Ditch 2, (45)  
 Cattle (8 fragments), sheep (2)  
 Ditch 2, (46)  
 Bird (1 immature tibia which was unidentifiable)  
 Phase VIIa (47)  
 Cattle (3 fragments), sheep (6), horse (1), mussel (1)  
 Phase VIIb (50)  
 Cattle (5 fragments), sheep (6), oyster (10)  
 Phase VIIc (52)

Cattle (1 fragment)  
 Phase VIId (56)  
 Cattle (5 fragments), sheep (5), oyster (4)  
 Phase VIIE (58)  
 Cattle (2 fragments), sheep (5), domestic fowl (1),  
 oyster (1)  
 Phase VIIf (63)  
 Cattle (3 fragments), oyster (2)  
 Phase VIIg (66)  
 Cattle (7 fragments)  
 Phase VIIa (69)  
 Cattle (2 fragments)

## Conclusions

The variety of species from Trench II is broadly similar to those of Trench I, but there are fewer occurrences of birds and shellfish. Pig again appears in small quantities but some long bones are present suggesting consumption rather than export.

The inclusion of horse and dog is probably incidental as they are not part of the food refuse and did not show signs of butchery.

The amount of bone from both Trenches I and II was insufficient to suggest whether this site was part of the victualling station as suggested by documentary records (see p. 232).

## THE ENVIRONMENTAL EVIDENCE

BY ALISON LOCKER

A number of soil samples was examined, especially from the area of the stream, to see if they contained any macroscopic remains, *i.e.* seeds that might indicate the vegetation in and around the stream. However, despite the acid nature of the soil which should aid preservation, no seeds were recovered. A few pieces of poorly preserved charcoal were all that remained.

All the samples were wet sieved down to 300.

Trench I. Pit 2, Layer I  
 Charcoal; 1 piece of Oak (*Quercus sp.*)

Trench II. Phase Ia (2)  
 This sand contained no macroscopic remains.

Trench II. Phase Ib (4)  
 No macroscopic remains were recovered.

Trench II. Phase Ib (8)  
 P.h. 4.2. No identifiable remains were recovered.

Trench II. Phase IIb (9)  
 P.h. at the top and bottom 5.5. 1 piece of charcoal, Oak (*Quercus sp.*)

Trench II. Phase III (20)  
 No macroscopic remains were recovered.

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# SITES INVESTIGATED BY THE INNER LONDON ARCHAEOLOGICAL UNIT 1974-1976

The Inner London Archaeological Unit was set up in October 1974 to provide a comprehensive archaeological service for the seven Inner London boroughs north of the Thames — Camden, Hackney, Hammersmith, Islington, Kensington and Chelsea, Tower Hamlets and the City of Westminster.

Prior to the setting up of the Unit, little archaeological work had been done in the area. The initial priority, therefore, was to collect and collate all existing information, in order to plan the Unit's fieldwork programme. The surveys were prepared in map form, with the information indexed as a sites and monuments record describing the position and character of every known archaeological site and find in the area.

Until the mid-19th century the greater part of Inner London was a rural area; settlements were small and scattered except close to the City. In many cases it is not now known where the original centres of settlement lay. The location of settlement centres was based to a large extent on the evidence of post-medieval maps and chance finds. By their very nature, the surveys tended to be over-optimistic because all possibilities had to be examined. Part of the work of the Unit since 1974 has been to assess the accuracy of these surveys, and one result of this work has been to reduce the areas in which settlement is likely to have occurred. It was also found that a high proportion of sites had already been destroyed by medieval and later brickearth and gravel pits and by basements. It is not yet possible to make any generalised statements about the nature of early settlement in the Inner London area, but future work should help solve the outstanding problems.

The results of the first two years work are summarised below. Except where mentioned this will be the only formal publication that these sites will receive. The full details of each site, together with plans and sections, and finds, may be examined at the Inner London Archaeological Unit, Imex House, 42 Theobalds Road, London WC1X 8NW.

## CAMDEN

Barter Street, Bloomsbury, WC1 TQ 304 815

The site was trial trenched in order to establish the lines of two Roman roads. However all archaeological deposits had been removed by the basements.

Land adjacent to 13 Church Row, Hampstead, NW3. TQ 261 856

A trial trench in the area of the medieval settlement of Hampstead showed any archaeological deposits had been removed when the site was levelled to build a tennis court.

Fox Court, Holborn, EC1. TQ 312 817

During trial trenching a brick-lined pit was found, containing pottery dating to the first half of the 17th century. The basements were too deep for stratified levels to survive.

147-152 Saffron Hill, 11-21 Charterhouse Street, EC1 TQ 315 817

The trial trench showed that basements had removed all archaeological deposits.

## HACKNEY

15 Anning Street, Shoreditch, EC2. TQ 335 825

A trench *c.* 3 m deep for a lift shaft was observed. The lowest 0.60 m consisted of dark greyish-brown soil, the bottom of which was not reached. No structural features were observed and only peg-tiles were found in the fill. Above this the trench was filled with 18th century dumped material.

The site lay within the precincts of the Priory of St John the Baptist, Holywell. According to the Survey of London<sup>1</sup>, the site is located within the Prioress' gardens.

65-69 Cazenove Road, N16. TQ 341 869

This trial trench, within the area of a palaeolithic working floor, exposed soil horizons over 360,000 years old. No artefacts were found.

Site at rear of 66-76 Northwold Road, Upper Clapton, N16. TQ 344 868

As in Cazenove Road, the intention of the trial trench was to locate the palaeolithic working floor. Most of the deposits on this site had been removed by 19th century brickearth pits.

Temple Mills Lane, Temple Mills, E15. TQ 375 855

Salvage work in a sewer tunnel, opposite the Spooky Lady public house, Temple Mills Lane, produced evidence of a timber structure and an incomplete skeleton.

The timbers, mostly pointed stakes *c.* 0.20 m square, were revealed in the sides of the sewer tunnel, and therefore could not be fully excavated. It is possible that they formed part of a wharf or jetty on a tributary of the River Lea. The skeleton, which was not directly associated with the structure, was of a female aged 35-45. No dating evidence was found either with the timbers or with the skeleton.

The finds occurred at a depth of *c.* 4 m from modern ground level, but the site lies within Hackney Marsh, an area which has been considerably built up, by dumping over the last two centuries.

## HAMMERSMITH

Site at rear of 51 Queen Caroline Street, Hammersmith, W6. TQ 231 783

A trench within the supposed settlement area of medieval Hammersmith revealed at least 3 m of 18th century dumping. It was not possible to excavate below this level.

## ISLINGTON

Bonhill Street, Finsbury, EC2. TQ 329 821

Rescue work during redevelopment provided a vertical section through the deposits of the marsh at Moorfields. The section revealed some 10 m of deposits and showed that large-scale reclamation by dumping in the 16th century preceded the construction of any buildings. A quantity of well-preserved 16th century leather was retrieved. Report forthcoming *Trans. London Middlesex Archaeol. Soc.* 29 (1978).

Farringdon Road, Clerkenwell, EC1. TQ 314 821

The purpose of this trial trench was to locate the western edge of the Fleet Valley. The trench revealed that large-scale dumping had taken place in the 18th century.

Whitbreads Brewery, Whitecross Street, EC1. TQ 324 821

The trial trench showed that the area lay within the marsh at Moorfields. Most of the dumping here was of 15th century date, which may imply that the land was reclaimed at an earlier date than at Bonhill Street. The trench also showed that the line of Whitecross Street had moved eastwards since the 18th century, as the back wall of an 18th century basement was located *c.* 1 m east of the present pavement.

## KENSINGTON &amp; CHELSEA

Thorney Court, Hyde Park Gate, Knightsbridge, SW7. TQ 262 796

The site was bounded by Kensington Road, Hyde Park Gate and Palace Gardens. The trench was dug at right angles to Kensington Road to locate a possible Roman road which may have joined the main highway from London to Silchester. The trench began *c.* 5 m (including pavement width) south of Kensington Road. At this end of the trench 18th and 19th century deposits lay directly on top of natural gravel. South of this point, all deposits had been removed by 19th century gravel pits. There was no evidence of Roman features, and the Roman road was not located.

## TOWER HAMLETS

27-33 Artillery Lane, Spitalfields, E1. TQ 335 817

Excavations within one of the major Roman cemeteries of London revealed a number of 14th-15th century gravel pits which had removed any earlier features. Twenty five fragments of human bone were recovered, probably from Roman burials which had been disturbed by the gravel pits. A large amount of Roman pottery was found in these pits including a sherd of a glazed unguent flask in the shape of a cow or bull (Fig. 1), report below.

## THE ROMAN LEAD GLAZED SHERD

PAUL ARTHUR

Institute of Archaeology, London

During the excavation of Feature 32 a small fragment of a lead glazed pottery vessel was unearthed. The sherd represents half of a bull or cow's head and is of a rather chalky off-white fabric with a good pale lemon-yellow glaze. The glaze partly covers the interior surface and was obviously applied in solution to the pre-fired vessel. The animal's head is split with a clean break vertically down the centre.

The head once formed part of a Central Gaulish unguent flask in the shape of a reclining bull or cow; the former is perhaps to be favoured. A vertical spout would have emerged from the top of its head or its shoulders and was probably attached to its back by an arched handle. The split down the centre of the head confirms that the flask was moulded in two halves and then joined and would suggest that the luted join was not too successful. The piece can be assigned to the mid-1st century AD.

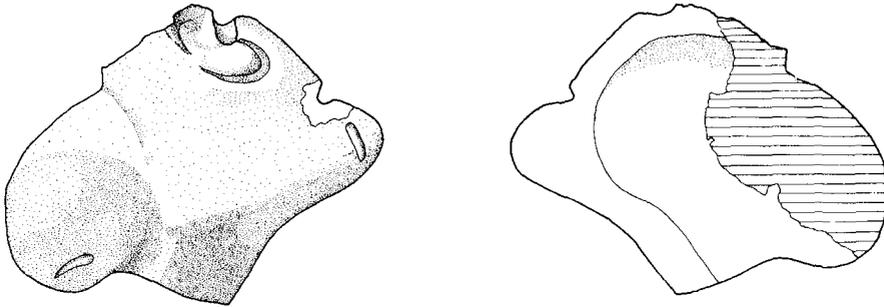


Fig. 1 — Part of the head of an unguent flask in the form of a bull or cow. Off-white fairly fine fabric, yellow lead glaze over exterior surface, and partially over the interior (the hatching shows the limit of interior glaze). (1/1)

Glazed unguent flasks were produced in fairly large quantities from the Central Gaulish factories and are frequently found on the continent. Brenders (1975) offers a full discussion of some of the types, of which the lion flask is the commonest; but does not note any examples of bull or cow flasks. Nevertheless, these animals appeared fairly frequently in the menagerie of unglazed animal figurines which were also made in quantity in Gaul, *c.f.* Rouvier-Jeanlin (1975) 66 and 129-135.

In Britain, apart from our example, animal-shaped unguent flasks of the type under discussion have only yet appeared at Colchester c.f. Hawkes and Hull (1941) 202, and Charleston (1955) 26; and at Preston, near Wingham, Kent, c.f. Dowker (1893) 53 (this vessel is now lost); although mention may also be made of the yellow glazed pine-cone shaped flask found at Cirencester (unpublished information from Miss Valerie Rigby).

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## 37-39 Artillery Lane, Spitalfields, E1. TQ 335 817

The remains of a plauge pit were exposed and recorded during refurbishment of the buildings.

## Butcher Row, Ratcliff, E14. TQ 359 809

Two sites were excavated on the eastern side of Butcher Row. On the north side, adjacent to Cable Street, evidence was found of a stream running north-east-south-west which had been filled in towards the end of the medieval period. A road surface of the 14th-15th century was associated with a chalk and flint boundary wall. Above this, was found a building constructed at least partially of brick in the late 15th or 16th century.

On the southern site a number of pits and a gully were found, which dated to the mid 16th-17th century. For the full report see *Trans. London Middlesex Archaeol. Soc.* 28 (1977).

## 6-8 Folgate Street, Spitalfields, E1. TQ 334 820

Observation during the refurbishment of these buildings, just north of the precincts of St Mary Spital and within a known Roman cemetery area, produced evidence of the clunch rubble foundations of a wall, probably dating to the medieval period.

A 1 m length of the bottom course of the foundations was exposed at a depth of c. 3 m, running parallel to the west wall of 6 Folgate Street, and c. 1.30 m east of that wall. Two sherds of medieval cooking pot were found in an associated layer.

Five holes 1 m square were dug. Natural brickearth occurred at a depth of c. 3.5-4 m below present ground level.

## Goodmans Yard, Whitechapel, E1. TQ 332 809

This site which was bounded by Goodmans Yard, Mansell Street, and the railway line to Fenchurch Street station, lies within the known Roman cemetery area, and was between c. 100 m and c. 170 m east of the city wall. Most of the site had been worked for gravel in the 13th-14th century. Close to Mansell Street, the gravel had not been extracted, but deposits had been removed by 19th century basements.

## The Highway, Shadwell, E1. TQ 350 807

During backfilling of the 1974 excavation<sup>2</sup> the opportunity was taken to trial trench the area to the south. The Roman ground level dropped away steeply towards the river. The continuation of the principal drain from the Roman signal tower was located, but no other features were observed.

## Parnell Road/Usher Road, Old Ford, E.3. TQ 370 835

The site was bounded by Roman Road, Parnell Road, Tredegar Road and Armagh Road, E.3. The buildings fronting onto Roman Road were not demolished.

Observation of building work on the site revealed evidence of three shallow Roman ditches, exposed in the sides of trenches cut for foundations and drains. The lines of two of the ditches were traced through a number of separate trenches for a length of 9 m (north-south) and 16 m (east-west). None of the features were sealed — the tops of all were heavily disturbed by plough soil c. 0.30 m thick which lay below modern rubble c. 0.35 m thick.

The northern part of the site, i.e. the area nearest to the Roman road from London to Colchester, was heavily disturbed, but a quantity of Roman pottery was recovered from the modern features.

Royal Mint Square, Whitechapel, E.1. TQ 341 806

Observation of contractors' trenches in the area between Royal Mint Street, Cartwright Street, East Smithfield, John Fisher Street and Blue Anchor Yard, E.1. showed that most of the site had been destroyed by post-medieval gravel working, and the foundations for a 19th century railway viaduct. The south-western part of the site had, in the 18th century, formed part of Aldgate churchyard.<sup>3</sup>

St. Stephens Road, Old Ford, E.3. TQ 366 833

Trial trenches were dug along the north, west and east sides of a site bounded by St. Stephens Road, Saxon Road and the Rosebank housing estate, in order to locate the line of the Roman road from Aldgate to Colchester.

The northern part of the site through which the road was expected to pass had been destroyed by modern features. The rest of the site was less disturbed, but no Roman features were observed.

Usher Road/Armagh Road, Old Ford, E.3. TQ 369 837

The site was bounded by Old Ford Road, Usher Road, Roman Road, and Armagh Road, E.3. This site lay immediately west of one excavated by S.A.E.C. in 1974,<sup>4</sup> which produced considerable evidence of Roman activity at the southern end of the site, i.e. in the area nearest to the Roman road.

Trial trenching exposed four shallow ditches, probably of Roman date, although Roman pottery was only found in one of them. The tops of all the features were heavily disturbed by ploughing. Three of the ditches were aligned east-west, and one ran north-south.

## WESTMINSTER

Bayswater Road/Porchester Terrace, Bayswater, W.2. TQ 261 807

The aim of the trench was to locate the line of the Roman road from London to Silchester. No evidence of the road was found and its exact line remains uncertain.

20 Dean's Yard, Westminster Abbey, S.W.1. TQ 300 794

Some evidence of the pre-Norman monastery was found, in particular the possible footing of a timber building.

The north and west walls of the Norman kitchen were located. The space between the monastic kitchen and frater remained an open court until the insertion of the misericorde and its sub-vault in the first half of the 13th century. This building was demolished in the 16th century. The area between the abbey kitchen and the cellarer's range remained open throughout the medieval period.

The excavation and the work during the redevelopment scheme has been published in *Trans. London Middlesex Archaeol. Soc.* 27 (1976) 135-178 and in the present volume.

Rear of St. Dunstan's House, Fetter Lane, Holborn, E.C.4. TQ 312 813

A small excavation<sup>5</sup> close to the City boundary produced evidence of a possible Roman ditch and of portions of the pre-fire Chambers of Cliffords Inn.

Observation during the redevelopment scheme revealed another possibly Roman feature and a pit dating to the 12th century.

Treasury Green, Whitehall Place, Whitehall, S.W.1. TQ 301 799

Minor building operations on the site of the Tudor Palace were observed, but no early deposits were disturbed.

Westminster Hall, S.W.1. TQ 303 795

The excavation, on behalf of the Department of the Environment, confirmed that 19th century construction work had destroyed nearly all traces of the 13th century stone building. However, a number of earlier pits and gullies were found and also the footings of a medieval wall. One pit contained

an assemblage of coarseware cooking pots, including a spouted pitcher. Iron Age material was found in the layers below the medieval deposits.

The site has been published in the *London Archaeologist*<sup>6</sup> and the full archaeological records lie with the Department of the Environment.

#### REFERENCES

1. L.C.C. Survey of London 8. Parish of St. Leonard's Shoreditch (London 1923) pl. 83.
2. T. Johnson 'A Roman signal tower at Shadwell, E.1.' *Trans. London Middlesex Archaeol. Soc.* 26 (1975) 278-280. Full report forthcoming.
3. L.C.C. The Housing Question in London (London 1855) 117.
4. Report forthcoming. *Trans. London Middlesex Archaeol. Soc.* 29 (1978).
5. Report forthcoming. *Trans. London Middlesex Archaeol. Soc.* 29 (1978).
6. David Whipp and Elizabeth Platts 'Westminster Hall Excavation' *London Archaeologist* 2 no 14 (1976) 351-355.

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# 19th CENTURY MARKED PIPES FROM MAVERTON ROAD, BOW, EAST LONDON

D. R. ATKINSON

## INTRODUCTION

*In the spring of 1972 my attention was drawn, by Mr Daniels of Bromley (Bow), to the fact that while the Bromley and Bow Archaeological Group had been searching for traces of the Roman road from Aldgate to Colchester by means of some trial digs they had come upon some rubbish deposits of the period c.1860-1880 in what had been the back gardens of 13a, 14a and 15 to 33 Maverton Road, Tower Hamlets.*

*Subsequently Mr Daniel's showed me examples of pipes he had collected which included several with stamped marks on the back of the bowl. The sample was relatively small but the proportion of marked bowls was unusually high and it seemed at once that the site was worthy of further investigation.*

*As the area was scheduled for re-development negotiations were opened with the Greater London Council without delay, resulting in permission being obtained for work to commence in July and to continue until the contractors required access to the site, which happened in November.<sup>1</sup>*

## THE SITE

The area of East London in which Maverton Road formerly existed was one badly damaged by enemy air raids during the last war. Only the ground plans and foundations of its houses could be seen in 1972. They were demolished between October 1969 and October 1971. Maverton Road joined Old Ford Road at right angles and remains of earlier buildings could be identified both at the Old Ford Road end and on the lane running parallel at the far end of Maverton Road, by the present railway lines. It appears (in the absence of early records) that the following sequence of events took place on the site. Some time in the 18th or early 19th century the area behind the cottages on the Old Ford Road was excavated by means of pits being dug, some as much as 8 feet deep, presumably for gravel deposits, leaving the ground very uneven. Some time in the mid 19th century when development of the area for new housing was planned, the gravel pits began to be in-filled with local builders' and household rubbish. The period of this infilling can be accurately gauged by the dating of the identified pipes found in the rubbish, c.1865-1880. The houses in Maverton Road were constructed in 1872-74 and their gardens seal the rubbish, either with two or three inches of imported black soil or with paving slabs. There was no indication of rubbish under the actual foundations of the houses, the soil being the natural brown gravelly mixture found under the rubbish deposits. Some 17th and 18th century pipe fragments were found on the surface in this area as one would expect.<sup>2</sup> At the end of the gardens and running parallel with Maverton Road was a very high brick wall marking the boundary of the playground of a local school. Because of the danger of undermining it was not possible to ascertain whether the rubbish deposits continued on the adjacent land now covered by the school and its playground. The school was opened in 1873.<sup>3</sup>

## THE RUBBISH

This consisted of ash from household grates, bones, shells, glass bottles, china, some pottery and numerous clay pipes. All metal objects had rusted away to nothing. There were also layers of builders' rubble.

#### THE PIPES

Many hundreds of plain and decorated pipebowls were found, sometimes bearing makers' initials on the spurs or names moulded on the stems, but the purpose of this paper is to describe the large number of bowls with stamped makers' marks. Many of the pipes had been smoked to the limit and were saturated with nicotine and still contained the remains of the last fill of tobacco, preserved by the dampness several feet below surface level.

Full name marks began to be stamped on the back of the bowl in London about 1770-80.<sup>4</sup> The practice was adopted at Bristol about the same time<sup>5</sup> but became more popular in the south-east, with the main concentration in London.<sup>6</sup> Odd examples are found from time to time in excavations, on the foreshore of the Thames and so on and continue right up to the turn of the present century as samples from the later rubbish deposits on the London fringes have shown.<sup>7</sup> But the high concentration among the pipes from Bow, covering only the period of c.1860-80 shows that at this time the practice must have reached its peak and the products of a high proportion of East London makers of the time are represented. Additionally pipes of several French and Dutch makers of the period were found.

#### THE MAKERS

The majority of 19th century London makers have now been recorded, with their dates of working, from contemporary trade directories.<sup>8</sup> These lists are not complete, however, as the discovery of several previously unrecorded makers' names shows. It must be presumed that some makers did not wish to be included when the directories were being compiled. In some cases accurate identification is made problematical because several members of one family worked in the trade, sometimes at different addresses and using old moulds, marks with the name only and pipes with initials on the spur.

#### *The Critchfields* (Fig 1)

Eleven different marks of this family were found and further varieties are known from other sites. Bowl type 1 bears serif initials A/C on the spur and occurs with marks a, d and k. Mark k also appears on bowls of types 4 and 5. It is probably, therefore, that all of these were produced by Alfred C. Critchfield of Half Moon Street, E.C., working between 1861 and 1869 and at other addresses subsequently. Bowl type 3 is found with marks e and f, and as the latter has 'A' in the stamp these must also be products of Alfred Critchfield.

Bowl type 2 has mark b and the same stamp occurs on bowls of the same shape and size but lacking the shield on the spur. Mark c is on a similar bowl but lacks the base and spur. Mark g occurs on bowl type 6. Neither of these can be identified at present.

Stylistically mark h on bowl type 7 is the earliest of this group as various makers in London used this design (presumably the work of a particular diecutter) in the 1840's and 1850's. James Critchfield is recorded at No. 30 Snowsfield, Bermondsey Street, Southwark between 1828 and 1894 but this long period of time probably represents more than one maker. Stems of the 1830's are found with the whole name and address in relief.

George J. Critchfield was working in the Bethnal Green Road between 1870 and 1890. His pipe (type 8) has mark j and the initial 'G' is included both on the spur and in the mark.

Finally, mark l. This is found on spurless pipes, probably like type 4, but no complete bowl had survived. There is no Critchfield recorded at Dalston in the London list. There are at least four other Critchfields working in the vicinity around the period of time covered by these pipes.

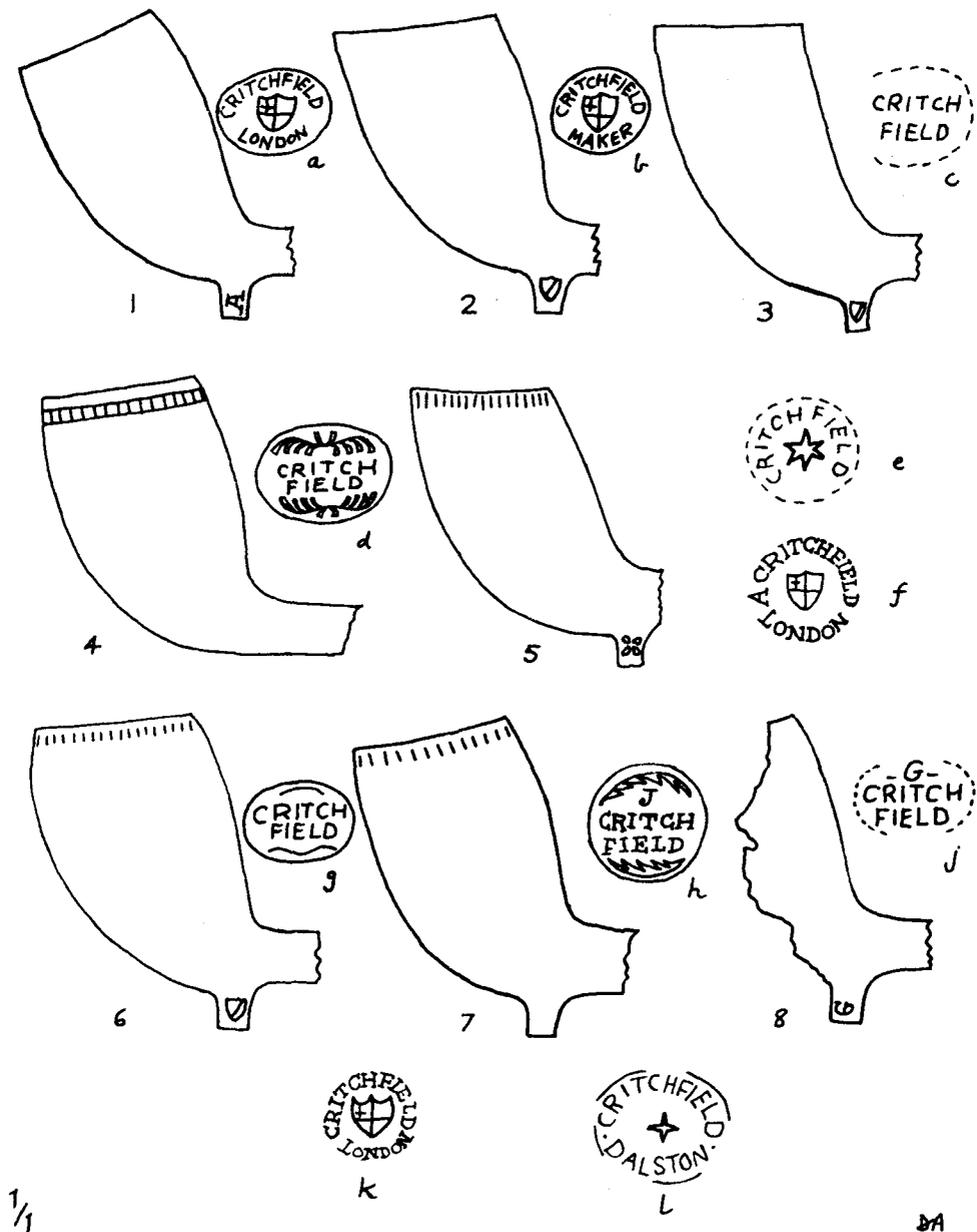


Fig. 1 19th century pipes from Bow: The Critchfield Makers (bowls, stamps 1:1).

It will be noticed that the lettering in some of these marks is serif and in others sans-serif. This can be a guide to more precise dating because sans-serif lettering was introduced by the post office in their datestamps from about 1845. Pipemakers seem to have followed suit for sans-serif lettering does not appear in makers' marks until about the 1850's, after which the serif fashion gradually died out, though it persisted into the 1860's and '70's as can be seen in stamps f and k. Thus it can with reasonable certainty be assumed that no sans-serif mark was used until the 1850's at the earliest.

### *The Balme makers (Fig. 2)*

Six different bowls and marks of the Balme family of Mile End are illustrated. Nos 1 to 4 are from Bow while 5 and 6 are later and earlier ones respectively for comparison.

Paul, Thomas, William and George Balme were all working at Mile End (Canal Wharf) between 1805 and 1876 at least, while Thomas Taylor is found at the same address from 1877 onwards. The Bow pipes without exception have the initials G/B on the spurs, so must be products of George Balme, working 1867/76.

During this relatively short period of time he was using at least 4 moulds and 5 or 6 stamping dies, as shown in a to e. Mark a, found on bowl type 1 also occurs on earlier pipes with W/B on the spur, William Balme, working 1856-61. Clearly the Balmes continued their business one after the other or sometimes in partnership and using old moulds and stamps. The earlier stamps have MILE END in serif letters below which is either an eight-pointed or six-pointed star. Later ones show MILE END in sans-serif letters. Mark d has a star like the earlier ones but c and e have a different type altogether with finer rays.

No. 5 shows a later type of bowl with mark b which is quite common but did not occur at Bow.<sup>9</sup> No. 6 is an example of an earlier Balme pipe (with incorrect City of London arms) of the 1830's - 1840's and shows clearly when compared with the Bow examples how the bowl styles had changed during the 1850's and 1860's.

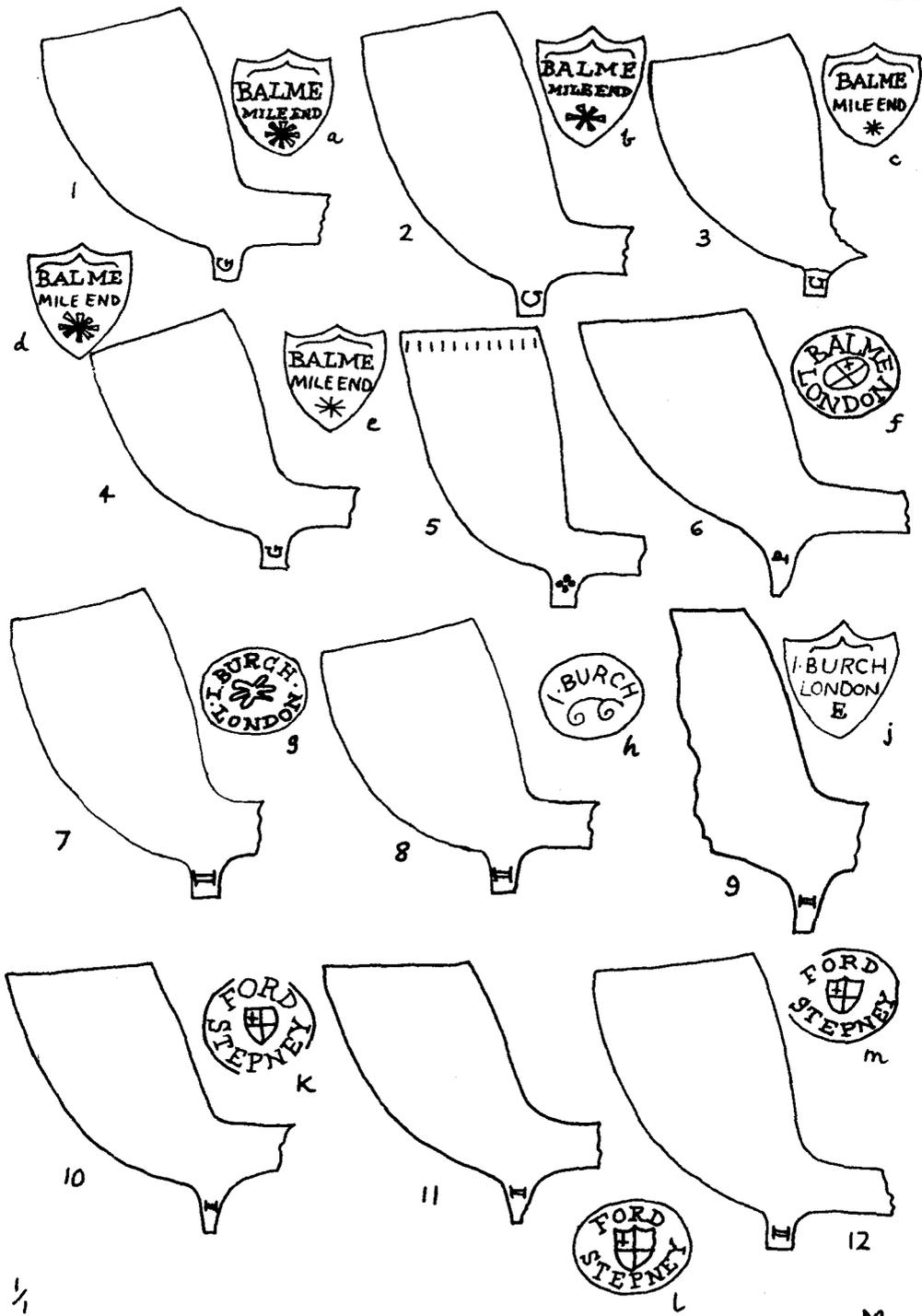
Bowl type 2 also occurred without any mark. There were numerous spurless pipes with George Balme's name and address moulded incuse along the stem. Some have BALME'S CUTTY/MILE END RD.

There were no pipes of Taylor and Co. of Mile End who apparently continued the Balme business but examples are known from other London sites.

### *John Burch (Fig. 2)*

This maker worked in Devonshire Street, Mile End Road, from 1857 to 1899 and perhaps later. In the directory his name is spelt BIRCH but all his marks have BURCH. Four moulds were used for the marked pipes found at Bow, three of which are shown. The fourth was very similar to No. 8 but slimmer and with a very thin stem. It also had sans-serif initials I/B on the spur whereas the others are all serif.

Marks g, h and j all appear on the bowl types 7 and 8 but only j is found on type 9, g was probably the earliest mark used as the sans-serif fashion was adopted with both h and j. The similarity between mark j and the Balme marks will be noticed. Clearly the same die-cutter produced this style of stamp, which is known for other 19th century London makers. John Burch also stamped mark h on the back of a decorated RAOB pipe.<sup>10</sup> Burch's later pipes, which do not occur at Bow, are of very much thicker type but still bear similar stamped marks, and initials on the spur.



1/1

DA

Fig. 2 — 19th century pipes from Bow: Balme, Burch, Ford makers (bowls, stamps 1:1).

*John Ford* (Fig. 2)

Working in White Horse Street, Stepney, between 1823 and 1865. Bowl types 10 and 11, clearly survivals of an earlier period, bear marks k, l and m. The differences are that k has much taller letters while in l and m, which have smaller lettering, the shields are of different sizes. Bowl type 12 is of more up-to-date style for the 1860's than 10 or 11, but only one example was found.

Several members of the Ford family worked in East London in the 19th century and a variety of marks has been recorded from various sites. They were also exporters and their pipes have been found particularly on Hudson's Bay Company sites in North America.<sup>11</sup> A pipe commemorating the coronation of Edward VII and Queen Alexandra in 1902 has FORD/STEPNEY moulded incuse on the stem and the firm was in business as late as 1909.

*John Smith* (Fig. 3)

There are several John Smiths recorded as working in London during the 19th century but this one can only be the person whose address is given as Old Ford Road from 1867-77. He must have been the 'local' maker as a very large number of his pipes were unearthed, all as No. 1, with mark a, though a few of the bowls were unmarked.

*Joseph Butler* (Fig. 3)

This maker worked in Cottage Street, Poplar, between 1873 and 1877. Only one bowl was found, No. 2, with mark b which is the shield-shaped variety already discussed.

*James Strutt* (Fig. 3)

Worked at Ocean Street, Stepney, 1856-76. Two pipes found as No. 3, with mark c. At least two other members of this family were making pipes in the vicinity during the first half of the 19th century.

*Hutton* (Fig. 3)

One example of the maker's work occurred as No. 4, with mark d. There is a small shield, dotted, on each side of the spur. The maker is so far unrecorded in London. By the style of the mark and the ornament on the spur the pipe is post-1860. Possibly William Hutton, apprenticed at Cambridge in 1859.

*Wolfe and Baker* (Fig. 3)

A single specimen as No. 5, quite plain, with mark e. Partnerships were not uncommon among pipemakers and appropriately marked pipes are known in the 19th century. A Henry William Baker is recorded in Ocean Street, Stepney, 1873-89 and seems the most likely, though there were others of this name working in the area. Wolfe does not occur in the list so the partnership may have been but a brief one.

*J. Lambert* (Fig. 3)

Several Lamberts are listed but not this one. Several examples as No. 6 with mark f. Two unusual features are (1) that the mark reads J. Lambert but the pipes have initials T/L, which indicates the take-over of an earlier mould, and (2) the pipes have hand-applied milling rolled round the lip in 17th century fashion. Contemporary pipes stamped WHEELER/NEWTON ST/HOLBORN (c. 1860-70) also show this rare feature. The many apparently milled bowls in the second half of the 19th century are normally mould-imparted and not hand-applied.

No. 7 with mark g, the only example found, may be the work of the same maker, but unfortunately it lacks the spur. Pipes of Samuel Lambert, Kingsland, Middlesex, occur on



later sites with the name and address moulded incuse along the stem, but none were found at Bow.

#### *E. Dale* (Fig. 3)

Several examples as No. 8 with marks h and j. The letter 'E' on the spur is sans-serif but the name in the marks is in serif lettering. No Dale is recorded in the London lists but as several bowls were found the maker was probably a local one.

#### *Russell* (Fig. 3)

Bowl No. 10 and a similar one with moulded milling both have mark l. This must be Charles Russell of Hague Street, Bethnal Green as the same mark occurs on an earlier pipe with C/R on a pointed spur. Working 1856-1882.

The remaining marks illustrated in Fig. 3 consist of initials only or the term 'Trade Mark'. Bowl No. 9 with mark k, was probably made by H. E. Reynolds of Old Ford Road, Bow, 1883-99. It was a surface find and is rather later than the period of the rubbish deposits so may be associated with the later occupation of the site. Identical examples are recorded from a rubbish pit at Hampstead.

Bowl No. 11 is one of three types bearing mark m which gives no indication of the maker. No. 12 appears to be an imitation of a Dutch type. It bears mark n, an incomplete strike of what looks like a bird in which are the initials R.L./M.

Mark o is on a thick 'Irish' type bowl which unfortunately lacks the bottom half but has moulded milling round the lip. Mark p is on a fragment of bowl the upper half of which has been dipped in white glaze. This could have been made by Mrs. Harriet Silk of Digby Street, Globe Road (1864-95) or Henry Silk of Usher Road, Bow (1884-5). Henry Strutt of Ocean Street, Stepney, is too early for the type of mark (1854).

Mark q is on a thin bowl with moulded milling but which lacks the spur. Mark r is stamped on the base of a 'fancy' pipe, the bowl of which represents a human skull. This mark is also recorded from Port Royal, Jamaica, on the back of the bowl of another 'fancy' pipe.<sup>12</sup> This example has LONDON moulded incuse each side of the stem in a frame. The writer incorrectly dates it to *c.* 1850 and attributes the mark to William Turpin, 1832, but both dates are too early for the types and the form of mark.

#### OTHER MARKED PIPES (FIG. 4)

In addition to the normal marked pipes produced by London makers in the conventional English style of the period a number of odd varieties were found.

#### *POSENER makers*

Several makers of this name are listed in London directories during the last few decades of the 19th century. According to the late F.H.W. Friederich (pers. corr) the name Posener originates from Posen in Silesia. Refugees from the area settled in the East End of London in considerable numbers as the many non-English names in the list of late 19th century London makers shows. No. 1 is a pipe of Adolf Posener & Co. working in Mansell Street, 1878-99 and later. It is thick-walled and lacks the normal surface gloss of clay pipes (as do similar Posener pipes from other sites). Mark a is on the back of the bowl.

No. 2 is of contemporary Dutch shape and bears mark b. A pipe from probably the same mould has mark m in Fig. 3 so the three types of bowl with this trade mark were doubtless made by one of the Poseners. The third Posener marked pipe from this site is No. 4,

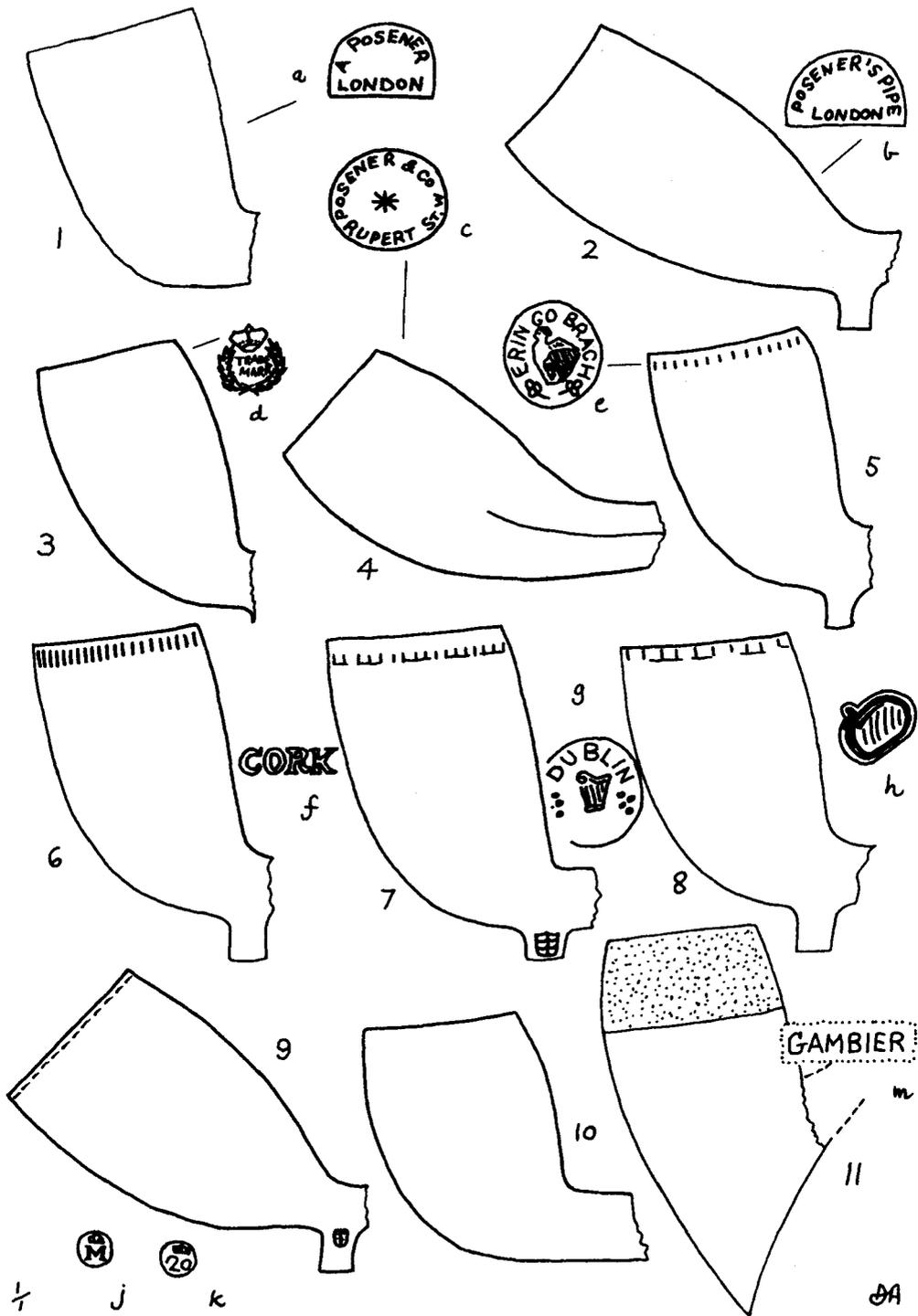


Fig. 4 — 19th century pipes from Bow: Pipes of unusual forms (bowls, stamps 1:1).

which has mark c. This address for the Posener pipes described occurred in the uppermost levels and are among the latest from the site.

No. 3, which lacks the spur, has another 'Trade Mark' stamp but this one includes a crown above the wreath. The bowl is of the conventional London style and originally had a spur.

#### *Irish Types*

During the 19th century large numbers of Irish labourers were employed in England, particularly on the construction of canals, railways and roads. The Irish pipes of the period were very thick and heavy by comparison with English ones and are generally stamped on the back of the bowl with the makers' names and often the town of origin (Waterford, Londonderry, Cork, Dublin etc.). About 1870-80 a new type appeared in England which is undoubtedly a deliberate copy of the contemporary Irish pipe and was produced for the Irish workmen. Examples of these found at Bow, again in the uppermost levels, are shown in Nos 5-8, with marks e, f, g, and h. ERIN GO BRACH means 'Ireland for Ever'. They normally have moulded milling round the lip. The type mould must have been supplied to many makers all over the country as they occur everywhere. Examples with or without stamps are found with DUBLIN, CORK, or DERRY moulded incuse on the sides of the stem. Of those shown No. 5 is the earliest, being smaller than the average for these pipes and less thick walled in the bowl. Their manufacture probably ceased about 1914.<sup>13</sup>

#### *Dutch pipes*

Three Dutch pipes were found, of which one is shown in No. 9. Two bowls of this type have the Gouda shield moulded on the spur and have marks j and k. This type of bowl had a very long life in Holland, appearing at first in the middle of the 18th century and continuing, with varieties of size, until about 1910. The marks are stamped on the flat base of the spur. The third Dutch bowl, not illustrated, is an upright, spurless type stamped with a crowned 51 in small circle on the back. On the stem it has moulded in relief PETER/DORNI.<sup>14</sup>

#### *French pipes*

Several products of French makers occurred at Bow but only those with marks are considered here. No. 10 is a high quality, polished pipe which is typical of French pipes of the period and is stamped on the stem in three lines L. Fiolet/a St. Omer/Depose. Many of these must have been imported in the latter part of the 19th century and later as they are found in many places. A Louis Fiolet is listed as a pipemaker in Fore Street, Cripplegate between 1853 and 1884 and later. If this is the same firm it is probable that they were in actual fact agents for the firm in St. Omer, and distributed their pipes in England.

No. 11 shows a large and unusual bowl, the upper part of which is glazed. Mark m was stamped incuse on the *front* of the bowl, which is an unusual procedure. Like those of Fiolet, Gambier's pipes, of many varieties, are often found in England, and the firm of Gambier & Co. is found in Carter Lane from 1865-95. The pipes were undoubtedly manufactured in France however, so must have been imported through a London office.<sup>15</sup> Many Fiolet and Gambier pipes, particularly decorated ones, have tiny stamps somewhere on the bowl with L.F. or J.G. in a dotted circle.

The stem of another spurless polished pipe, lacking most of the bowl, bears the stamp L.M.F./St. Malo. Another has part of a large, circular stamp of which 'a ANDENNE/Depose' has survived.<sup>16</sup>

The standard of production of Dutch and French pipes was generally of a far higher quality

than their English counterparts, and this can be the only reason why the French ones in particular must have sold so well in competition with the (still) large numbers of home-produced pipes in England.

#### NOTES AND REFERENCES

1. I am very grateful to Mr Lionel Herbert of the Valuation and Estates Department of the G.L.C. for all his help in making this possible. Digging could only be undertaken at weekends and was done by boys from St. Philip's School, Mr and Mrs G. Narraway and family and Mr and Mrs Rendall and family.
2. The black garden earth also contained pipe stems of 17th and 18th century date but this soil had clearly been brought in from elsewhere when the houses had been built to make up the gardens over the rubbish layers.
3. For this and other information on the history of the site I am grateful to Mr H. Ward, Borough Librarian of the London Borough of Tower Hamlets.
4. Adrian Oswald *Clay Pipes for the Archaeologist* British Arch. Reports 14 (1975) 82.
5. Iain C. Walker *The Bristol Clay Tobacco-Pipe Industry* City Museum Bristol (1971).
6. D. Atkinson "Makers' Marks on Clay Tobacco Pipes found in London" *Arch. News Letter* 7, No. 8 (April, 1962).
7. R. Smith, working in the 1890's in Gifford Street, Caledonian Road, used as many as eleven different marks stamped on the back of bowls.
8. D. Atkinson & A. Oswald "London Clay Tobacco Pipes" *J. Brit. Archaeol. Ass.* 32 (1969) 216-225.
9. This bowl type is also known with a shield-shaped stamp in which *all* the lettering is sans-serif and MILE END is at the base of the shield.
10. A similar R.A.O.B. bowl is also recorded with the Critchfield mark a on the back. The R.A.O.B. was a type of pipe introduced probably after 1850 and became a popular design until the turn of the century, produced by many makers all over the country. The letters stand for Royal Ancient Order of Buffaloes, a masonic lodge. Holland's catalogue (see Note 13) describes the type as "Buffalo Straw", "Buffalo Cutty" or "Buffalo Irish."
11. Described by Iain C. Walker *Ontario Archaeology* 16 (1970).
12. Robert F. Marx, *Clay Smoking Pipes recovered from the sunken city of Port Royal, 1966-67* Jamaica National Trust Commission (March 1968) 89 No. 218
13. A trade catalogue of Joseph Holland & Sons of Blackburn Street, Manchester of about 1913 describes these as "Irish Cutties". Similar designs with stamps on the back of the bowl are listed as "Small Cork", "Medium Dublin", "Small London Irish" etc. A trade card dated to c.1875 of D. McDougall & Co., 277 Parliamentary Road, Glasgow, lists 168 bowl types under the heading "Irish Price List" including many similar names of which No. 86 is "Erin go Brach".
14. Peter Dorni was, according to Iain C. Walker, "an as yet obscurely-known north French maker, c. 1850-80" whose style was plagiarised by other manufacturers, notably the Gouda (Holland) firm of Prince. By 1900 Davidson and McDougall in Glasgow were listing 'Peter Dornie' (sic) varieties. For Walker's discussion on these and other aspects of the subject in general see "The Potential Use of European Clay Tobacco Pipes in West African Archaeological Research" *W. Afr. J. Archaeol.* 5 (1975) 165-193. The article contains a particularly fine series of illustrations of Bristol pipes and marks.
15. According to Iain C. Walker (pers. corr.) Gambier's pipes were actually made at Givet in the Ardennes from 1780. In 1869 only one factory was working and the ruins still exist. Their offices were in Paris.
16. This mark was used by many Belgian manufacturers in the Meuse Valley from 1855-75 (the height of their prosperity) about 19 miles from Namur (information from Adrian Oswald).

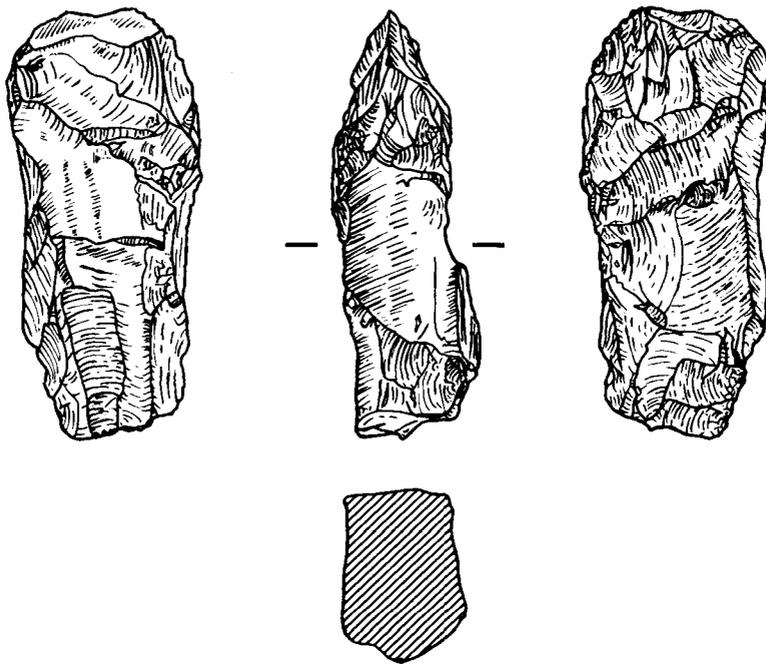
## NOTES

This series of notes is used to provide a place to publish important individual objects or finds that would otherwise remain unpublished. *Editor.*

# A MESOLITHIC TRANCHET AXE FROM THE THAMES AT FULHAM

GALE CANVIN

A tranchet axe of characteristic mesolithic type was found while examining the Middlesex foreshore of the River Thames at Fulham in June 1976.<sup>1</sup> The findspot lies on the north foreshore, at NGR TQ 25807558, 120m west of Wandsworth Bridge. This lies opposite a part of the river well known for finds of mesolithic material,<sup>2</sup> including the portions of Maglemosian bone or antler barbed points from Wandsworth and Battersea now in the Museum of London.<sup>3</sup>



The axe is 114mm long, with an average width of about 50mm and thickness of 30mm. It is of pale grey flint, stained olive green, and is fresh and unrolled, although slightly frost damaged on one face. No cortex is present. The axe is of sub-rectangular cross section, rather than the more usual rhomboidal, or triangular form, and has a sharply squared-off butt. The cutting edge has been formed by the classic tranchet blow, detaching a flake at a right angle to

the long axis across the full width of the axe. The axe is slightly wider at the blade than at the butt. A faint ridge halfway along the axe may be interpreted as a stop ridge for an antler sleeve, into which the axe could possibly have once been set.

This axe is but one more to add to the large number known from the Thames. Lawrence speaks of having had over a hundred from the river by 1929,<sup>4</sup> although most of these are unpublished and poorly provenanced. This essentially riverine distribution of tranchet axes and picks is also noted in the Upper<sup>5</sup> and Middle<sup>6</sup> Thames Valley, and whilst occurring in other river valleys and on lowland sites they are rare on upland sites.<sup>7</sup>

The reason for this biased distribution may be functional variability in the toolkits of mesolithic peoples, the requirement for heavy axes used in forest clearance and boat building being mostly confined to the lowland sites occupied in winter.<sup>8</sup>

The axe is lodged with Gunnersbury Park Museum, Acton.

(I should like to thank Jacqueline A. Nowakowski for her excellent drawing, and Dr P. A. Mellars of Sheffield University and R. G. Lancaster of Gunnersbury Park Museum for discussing it with me).

#### NOTES

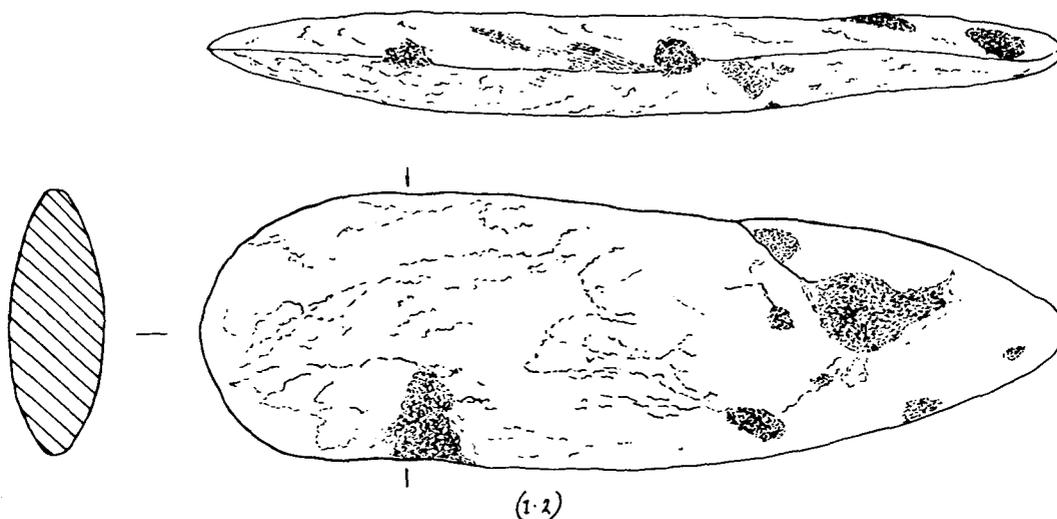
1. Found by the author during part of a systematic riverside survey of the borough by the Fulham and Hammersmith Historical Society, Archaeological Section. Other finds are currently being prepared for publication.
2. See, for example G. F. Lawrence "Antiquities from the Middle Thames" *Archaeol. J.* 86 (1929) 90, also A. D. Lacaille "Mesolithic facies in the Transpontine fringes" *Surrey Archaeol. Collect.* 63 (1966) 17.
3. E. Westerby *Ymer* (1931) 45. Also J. G. D. Clark *The Mesolithic Age in Britain* (Cambridge 1932) 18 and Fig. 2 Nos. 6, 7. These finds are in the Museum of London, accession numbers being A 19788 for the Battersea specimen, and A4907 for that from Wandsworth.
4. G. F. Lawrence *op.cit.* (in note 2) 74.
5. H. Case "Mesolithic finds in the Oxford area" *Oxoniensia* 17/18 (1952 and 1953) 2 Fig. 1.
6. R. F. Dennington and S. Morgan *The Middle Thames in Antiquity* (Slough 1966) 39.
7. P. A. Mellars "Settlement patterns and industrial variability in the British Mesolithic" in G. de G. Sieveking, I. H. Longworth and K. E. Wilson (eds) *Problems in Economic and Social Archaeology* (London 1976) tables 3 and 4.
8. J. G. D. Clark *Star Carr: A case study in Bioarchaeology* (Reading, Mass. 1972) 34.

# A JADEITE AXE FROM HENDON

REPORTED BY THE HENDON AND DISTRICT  
ARCHAEOLOGICAL SOCIETY

A jadeite axe was found in June 1975 in the back garden of 19 King's Close, Bell Lane, Hendon (TQ2396 8921).<sup>1</sup>

The axe is mid to dark green in colour and measures 224mm long x 72mm wide x 26mm thick. There is some surface damage and abrasion.



The axe is one of a series imported into Britain from a probable alpine source. Its size and shape link it, particularly, to examples found in the Rhineland. One of this generalised form has been C14 dated to *c.* 3200 BC in association with the Sweet Track, Somerset.<sup>2</sup> The Hendon piece could be of the same Neolithic date.

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1. The axe was found by Master Steven Jacob. Dr Ian Kinnes of the British Museum kindly examined the axe and confirmed the identification. It is now in the custody of the London Borough of Barnet.
2. Coles J. M., Orme B. J., Bishop A. C. and Woolley A. R. "A Jade axe from the Somerset Levels" *Antiquity* 48 (1974) 216-220.

# A MOULDED FACE-FLAGON NECK FROM CHURCH TERRACE, HENDON

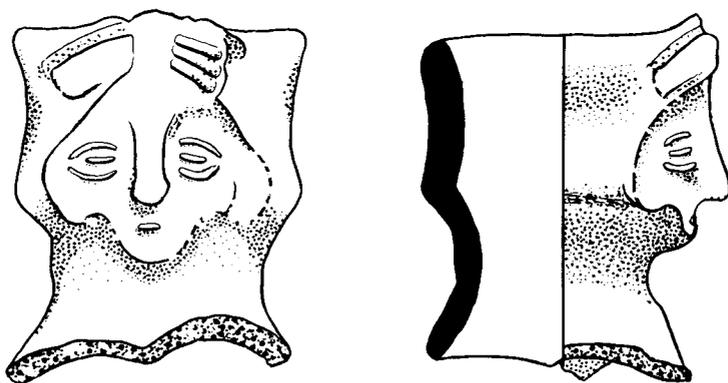
EDWARD SAMMES

The demolition of a group of shops and terraced houses at Church End, Hendon, N.W.4 in early 1973 created the need for a rescue excavation ahead of redevelopment (TQ 2289 8953). This was carried out by members of the Hendon and District Archaeological Society in 1973-4.

The site is on the edge of a hilltop, 87m above O.D., and in Roman times it could have afforded a view across the valley to Brockley Hill, (*Sulloniacae?*).

From an area on the west side of the excavation a quantity of Roman sherds and broken *tegulae* were excavated. The material can be dated to the late 3rd early 4th century and consists of coarse red ware, imitation samian, colour coated and grey wares.<sup>1</sup> In addition sherds of Saxon chaff/grass-tempered ware were found in a ditch adjacent to the parish church of St. Mary on the north side of the excavation area<sup>2</sup>.

Amongst the redware sherds is a flagon neck bearing a stylised face. The red fabric has fine quartzite inclusions and though sherds of a similar texture came from the same area, they are probably not part of the same vessel. The coarse redware could perhaps be of local manufacture.



The neck has a distinct indent on the inside where pressure has been exerted in moulding. There is however no thickening of the sherd on this side, and the face has been moulded from the clay of the neck of the thrown flagon. It has not been applied as a separate moulded piece like the moulded-face flagons from the Oxford kilns.<sup>3</sup> The face is simply portrayed, the hair being parted down the middle, and represented by three raised sloping bands. The eyes are small and owl-like and the mouth is scarcely present. Generally the workmanship is inferior to that from the Oxford kilns<sup>3</sup>.

In addition the Roman material includes fragments which could have come from the wide-mouthed section of a multiple vase. It is interesting to note that both these types of vessel have associations with religious beliefs.

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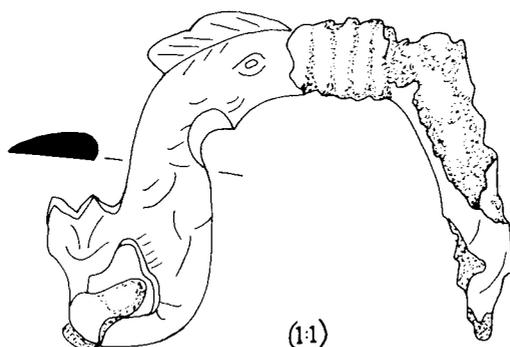
1. Mr. R. Merrifield kindly inspected the material and expressed an opinion on the date.
2. It is possible that St. Mary's has a Saxon foundation date. A priest is mentioned in the Domesday entry for Hendon, and in addition in a charter of the reign of King Edgar, in the muniment room of Westminster Abbey, dated AD 959, Hendon is mentioned as being in the possession of the Abbey, (see Brett-James N. G. *The Story of Hendon, Manor and Parish* (1932) 12-15).
3. J. Munby 'Some Moulded-Face Flagons from the Oxford Kilns. *Britannia* 6 (1975) 182-188.

# A ROMAN DOLPHIN HANDLE FROM PHOENIX HOUSE, KING WILLIAM STREET, LONDON

JENNY HALL

A recent acquisition for the Museum of London is a cast copper-alloy dolphin handle, found during excavations for the construction of Phoenix House, 4 King William Street in 1914-15<sup>1</sup>.

The handle is formed by two dolphins, one of which is complete, while the other only partially survives and is badly corroded. The dolphins are affrontée, their snouts joined by a ball decorated with three vertical concentric rings. Their bodies are s-shaped to form the handle and the three-pronged tail fin of the surviving dolphin curves around to fuse with the lower part of the body, thus forming a loop for attachment. The remnant of one split-pin is still attached to the loop. The eye and dorsal fin are deeply incised and other incised decorations are visible on the body. The dolphins are moulded on one side and the back is flat.



Such handles are thought to have been most commonly used on bronze bowls, wooden boxes and military helmets, though it is difficult to distinguish their exact function from the handle alone.

In some cases, it is possible to suggest whether they have a domestic or military purpose from the nature of the excavated site. Dolphin handles found in such settlements as Woodcuts<sup>2</sup>, Verulamium<sup>3</sup>, Fishbourne<sup>4</sup>, Gadebridge Park<sup>5</sup>, Wroxeter<sup>6</sup> and Alchester<sup>7</sup> were perhaps attached to bronze bowls or boxes. Alternatively, handles found in such military settlements as Corbridge<sup>8</sup>, South Shields<sup>9</sup>, Faurndau<sup>10</sup> and Niedermörmter<sup>11</sup> and perhaps Mucking<sup>12</sup> are more likely to be from helmets.

Dolphin handles on bronze bowls, though varying in size, are of a standard form. Those from Alchester and Verulamium are similar to examples attached to bronze bowls in the Rijksmuseum<sup>13</sup> and from Pompeii<sup>14</sup>. The tail does not fully curve to form the loop for the split-pin attachment. Such handles are firmly fixed in pairs by the tail on opposite sides of the bowl, and then rise outwards from the underside of the rim.

On the other hand, a movable handle attached by a split-pin would have been more practical for boxes and helmets. Examples of box-handles are rarely found with the wood of the box still surviving. Menzel<sup>15</sup> quotes three handles as being box-handles from Rheinzabern, Speyer and Altrip, but gives no suggestion of any surviving wood. Box-handles are usually flat-backed so that they can lie flat against the side of the box. The size of the handles vary with the size of the boxes.

In the late 2nd to early 3rd century AD certain legionary and cavalry helmets were made with both a suspension-ring (located underneath the neck-guard) and a carrying-handle (provided as a secondary means of suspension for transportation). This handle was attached by split-pins to the upper surface of the neck-guard. Examples of dolphin handles found still attached to helmets rather than boxes, are more common. A legionary bronze helmet from Niedermörmter and a similar fragmentary iron helmet with bronze attachments from Faurndau were found with the handles attached. Similarly, fragments of cavalry helmets have been found from Kastell Pfünz<sup>16</sup> and Heddernheim<sup>17</sup> that include dolphin handles.

The great similarity between the helmet and box-handles makes it difficult to assign a detached handle to one or other function, and Menzel<sup>18</sup> has even suggested that the armourers made the handles for both helmets and boxes, perhaps producing handles of a standard size and quality. However, one or two points can perhaps be noted to help distinguish the two types. The existence of split-pins, attached to the tail loops, can be a useful indicator of the thickness of the object to which it was attached. If the split-pin is intact, the distance to the bend in the pin shows whether the pin was inserted through a helmet neck-guard or through the side of a box, which would probably have been thicker. Secondly, helmet handles must be wide enough to take two fingers and were, by necessity, smooth and not angular for ease of carrying<sup>19</sup>. Box-handles vary according to the size of the box.

Unfortunately, since we have no record of stratification or evidence of closely associated finds, it is difficult to be certain about the use to which the Phoenix House handle was put, but it is perhaps more likely that it came from a small wooden box than a helmet.

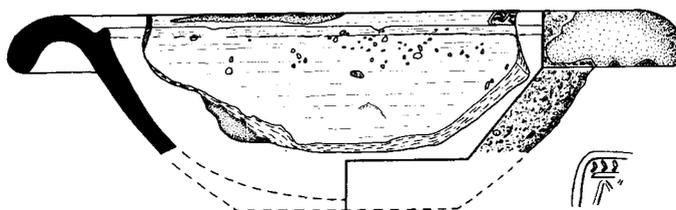
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1. MOL Accession No. 76.137.  
The handle was presented to the Museum together with other Roman and post-Roman material from the same site. We would like to convey our thanks to the Phoenix Assurance Company for the deposition of this material, and especially to Mr. G. M. Hayward who arranged the matter.
2. A. H. L. Pitt-Rivers *Excavations in Cranborne Chase I* (1887) 65 and Pl. 21, No. 5 and Figs. 1-5.
3. S. S. Frere *Verulamium Excavations I* (Rep. Res. Com. Soc. Antiq. No. 28) (London 1972) Fig. 41 Nos. 133-135.
4. B. Cunliffe *Excavations at Fishbourne 1961-69 II* (Rep. Res. Com. Soc. Antiq. No. 26) (London 1971) 117 and Fig. 48, No. 127.
5. D. S. Neal *The Excavation of the Roman Villa in Gadebridge Park, Hemel Hempstead 1963-68* (London 1974) 132 and Fig. 57, No. 72.
6. D. Atkinson *Report on Excavations at Wroxeter 1923-1927* (Oxford 1942) 212 and Pl. 49, No. A.260.
7. C. Hawkes 'Excavations at Alchester 1926' *Antiq. J.* 7 (1927) 181 and Fig. 11, No. 1.
8. H. Russell Robinson *The Armour of Imperial Rome* (London 1975) 92 and Fig. 117.
9. *ibid.* 92 and Fig. 118.
10. *ibid.* 74 and Pl. 192.
11. *ibid.* 92 and Fig. 119.
12. M.U. Jones 'The Mucking Excavations 1975' *Panorama Thurrock Local History Society* 19 (1975/6) 36 and Fig. 2.
13. M. H. P. Den Boesterd *Description of the Collections in the Rijksmuseum G. M. Kam at Nijmegen - The Bronze Vessels - V* (Nijmegen 1956) 55, No. 186 and Pl. 8, Nos. 186, 186A.
14. J. Ward-Perkins, A. Claridge *Pompeii Exhibition Catalogue* (London 1976) No. 263.
15. H. Menzel *Die Römischen Bronzen aus Deutschland I* (Mainz 1960) 51 and Pl. 55, Nos. 87-89.
16. H. Russell Robinson *op.cit.* 92 and Fig. 118.
17. *ibid.* 63.
18. H. Menzel *op.cit.* 51.
19. I must thank H. Russell Robinson for his advice on helmet carrying-handles.

# A GREEN GLAZED ROMAN MORTARIUM FROM THE CITY OF LONDON

JOHN MALONEY

Excavation in the basement of 2-3, Lombard Court, Gracechurch Street during February-April, 1976, located two early medieval pits which had been cut through 1st—early 2nd century Roman levels and the underlying brickearth subsoil into the gravels below. The borehole record indicates that there are other large pits over much of the rest of the site (0.22 hectares), the purpose of which is unknown. However, it seems that the two pits that were investigated were not rubbish pits, because the backfill material closely resembled the Roman made ground through which the pits were cut, but that they were for the extraction of brickearth and gravel.



GREEN GLAZED ROMAN MORTARIUM (A) AND STAMP (B)

The pit at the northern end of the basement area was 6.05 deep (the bottom was at 8.15m above O.D. approximately) and at least 7.00m in diameter, and amongst the 12th century and residual Roman pottery recovered was found a substantial fragment of a mortarium of Brockley Hill form and fabric<sup>1</sup> having a fragmentary potter's stamp which was probably that of Marinus<sup>2</sup>, and dating to the late 1st—early 2nd century. The sherd has green glaze (indicated by stippling) on the upper surface of the rim and on part of the fractured edge of the body, and its external surface is covered by glaze containing a high proportion of impurities. The core instead of being the typical oxidised buff colour is black for the most part and has laminated close to the internal surface. On that part of the fractured edge where the green glaze occurs, the glaze has found its way into the fabric via the laminated core.

The 'reduced' core indicates that the sherd has been refired, and the deposit of glaze on the fractured edge shows that the glaze was deposited after the mortarium had been broken.

Clive Orton and Christopher Green (Dept. of Urban Archaeology, Museum of London) are of the opinion that the sherd has been reused in the production of green glazed pottery, the sherd being seated on its rim (in which position it is quite stable) with the internal surface shielded — hence the glaze on the rim is untainted by impurities. Conversely, the external surface is covered by a rough glaze and would evidently have been more directly involved in the process of firing. If this sherd has been used as kiln furniture it is unlikely to be far removed from the kiln, and it therefore raises an interesting point as to the location of the kiln site. Forthcoming contractors' excavations on the Lombard Court site will be observed by the author and the green glaze on the mortarium sherd will be scientifically analysed for comparison with similar Roman and medieval glazes.

ACKNOWLEDGEMENTS

Thanks are due to Peter Marsden for his help and Clive Orton and Christopher Green for their comments.

NOTES

1. S.A. Castle 'Roman pottery from Brockley Hill, Middlesex, 1966 and 1972 — 4' *Trans. London Middlesex Archaeol. Soc.* 27 (1976) 214 Fig. 6 MS 41.
2. S.S. Frere *Verulamium Excavations I* (Oxford 1972) 13. Rep. Res. Com. Soc. Antiq. No. 28, 373.

# A LATE 15th CENTURY ACCOUNT FOR A WHARF AT VAUXHALL, LONDON

NIC WOODWARD-SMITH & JOHN SCHOFIELD

This article concerns the construction of a timber wharf at Vauxhall by carpenters and labourers over a period of five weeks during the year 1476-7. The building account<sup>1</sup> which itemizes its construction is significant as detailed contemporary evidence of costs of construction and labour. With this evidence and the information gained from recent excavations of wharfs in the City of London, it will be possible to speculate on its construction. The account also throws an interesting sidelight on the type of work performed by the medieval carpenter.

The account belongs to a series of annual account rolls covering the years 1376-1532 kept by a monastic official, the Custodian of the New Work, at Westminster Abbey. Henry III had rebuilt the choir, the transepts and the first five bays of the nave at Westminster Abbey between 1245 and 1272. For over 100 years, the remaining bays of the original Norman abbey church built by Edward the Confessor were joined rather uncomfortably to the new work. It was Cardinal Langham, an ex-abbot of the Convent, who around 1370, gave the initial impetus to the completion of the project started by Henry III. During both periods of building activity, one of the main building stones to be used was quarried from the upper greensand bed which surfaces below the southern slope of the North Downs, in the area around Redhill and Reigate. It can be inferred from the rolls of the New Work that it was taken by cart through the gaps in the North Downs and up to the Thames, and there it was transferred to barges and taken to the Abbey's main wharf near its mill, close to the present site of the Victoria Tower. From there, it would have been dragged or carted to one of the masons' lodges at the building site.

Between 1376 and 1532 there were three main sites along the south bank of the Thames where the stone was handled. The first was at Battersea, which is mentioned as a transfer point between 1376 and 1451<sup>2</sup>; the second was at 'Wandlesworth' which is mentioned in the accounts between 1461-74.<sup>3</sup> These two manors were held by the Abbey. The third site was at 'Fawkeshall' and is the subject of this article. Between 1474-76 it is referred to either as 'Fawkeshall'<sup>4</sup> or 'Lambith'<sup>5</sup>, but in all probability they refer to the same place. After 1476, it is consistently referred to as 'Fawkeshall'. The fact that the site was used before the new wharf was built would seem to imply that there was an old structure present which had to be taken down or added onto in building the new wharf. Although rent was paid from 1475,<sup>6</sup> the lease<sup>7</sup> was signed on the tenth of February 1478, for a term of fifty years, between the Prior of Christchurch, Canterbury, as the Lord of the Manor, and Westminster Abbey.<sup>8</sup> From this lease we can derive a certain amount of information about the land<sup>9</sup> (see Fig. 1). In area it was just over three-quarters of an acre, with an annual rent of three shillings and fourpence. Because Vauxhall was a manor of the Priory, we are able to trace further references to it in the Beadles Accounts<sup>10</sup> up to 1528. In one of these accounts, the wharf was said to be at 'Cokkesbrugge'<sup>11</sup>. Coxbridge spanned a common sewer at the junction of four roads.

Using the Thomas Hill map of 1681,<sup>12</sup> which shows details of the division of the demesne lands in Lambeth, the most likely site has been marked (see Fig. 2). Firstly, the shape of the plot accurately represents the details of the lease, and secondly, a road runs along the south side of the property up to the waterfront. It would have been essential to have had reasonable road access to the river, with a large number of heavy carts using the site each year. Thirdly, this property on its east side backs onto what the lease ambiguously termed the 'via regia' but which Hill specifically calls the Kings high Way.

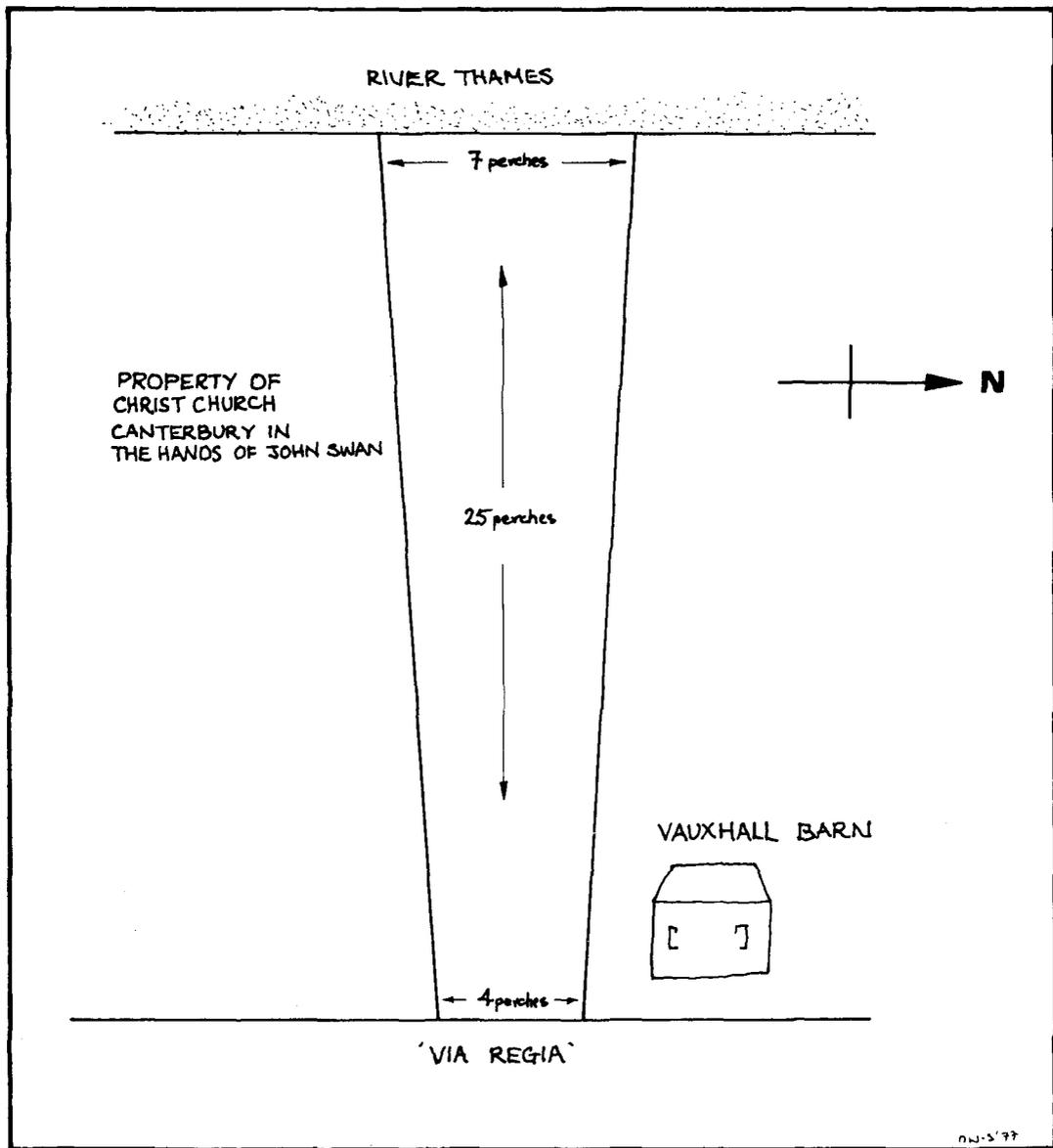


Fig. 1 — A late 15th century wharf account, Vauxhall: Information on wharf in the lease of 1478.

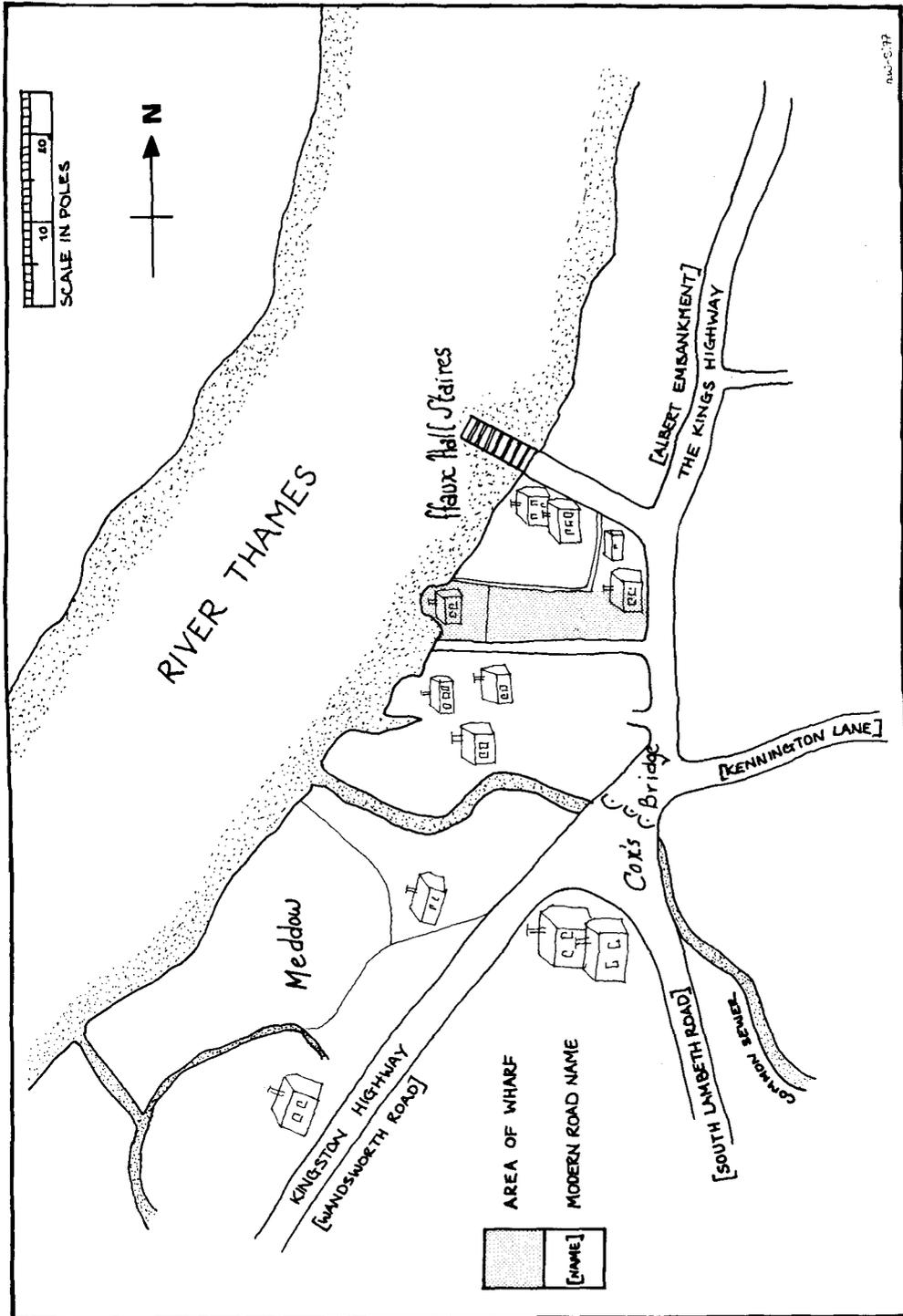


Fig. 2 — A late 15th century wharf account, Vauxhall: Location map for the Abbey Wharf at Vauxhall (Part of Thomas Hill's map 1681 showing the manor of Christ Church Priory in Faux Hall).

The possible reasons for moving the site from Wandsworth to Vauxhall also need to be discussed. There are two separate issues: firstly the reasons for leaving Wandsworth, and secondly why Vauxhall was chosen from among all the possible sites on the south bank of the river for the new wharf. We will concentrate in this article on the first of these issues. It seems unlikely that the move was caused by the expiry of a lease on the Wandsworth site, mainly because the land was in the hands of the Abbey Almoner, who would not have dealt that severely with a brother obedientiary if the site had been ideal for his purpose. One explanation for the move is afforded by the yearly totals of Reigate stone purchased by the Abbey. The handling of this stone is the only activity mentioned in relation to these wharves. The amount of stone purchased in any one year depended upon the stage the building operation had reached, and other variables such as the enthusiasm of both the Abbot and Custodian for this project. The table below (Fig. 3) sets out the yearly totals of cartloads of Reigate stone handled by the wharves together with some of the other factors affecting purchase. It seems likely that the move to Vauxhall was made because larger premises were needed, due to the increase in volume of material handled, and therefore it will be necessary to look briefly at the move to Wandsworth in order to assess the relative size of its wharf. The wharf at Battersea was capable of coping with large volumes of Reigate stone<sup>13</sup> for they rented a 'garden called Briggecourt' in which they stored the stone. The handling figures for Battersea in the ten recorded years between 1445-60, reveal decreasing activity: the overall average per year was twenty cartloads. However, by taking the average between 1455-60, it dropped to twelve carts, and between 1458-60 no stone at all was purchased. Because of its capacity it would have been far too large for the input during this period. It seems likely, therefore, that the move from Battersea to Wandsworth was a move to smaller premises. Looking at the table, we note that the year before this move, John Redyng was appointed as the Abbey's Master Mason. Under the abbacy of Kirton (1440-62) there was very little practical commitment to the work of finishing off the church, so that Redyng may have decided to choose a site more suitable for the limited activity to be expected. This remained true for the first two years at the Wandsworth site, then the quantities began to pick up when Norwych became Abbot (1462-9). The Abbots seem to have played a considerable role in setting the pattern of activity. For example, under Millyng's abbacy (1469-74) a consistent average of around 60 cartloads per year was maintained, except for the unusually high figure in 1467-8 which must itself have caused problems on a small site. This increase at the

YEAR COMMENCING	14 60	61	62	63	64	65	66	67	68	69	14 70	71	72	73	74	75	76	77	78	79	14 80	81	82	83	84	85	86	87	88	89	14 90	91	92
TOTAL CARTLOADS OF STONE	0	10	0	18	31	x	74	115	58	48	56	80	59	169	148	193	120	242	425	206	120	142	87	100	x	x	85	66	x	244	120	132	44
ABBEY MASTER MASON	← JOHN REDYNG →											← ROBERT STOWELL →																					
CUSTODIAN OF NEW WORK	RUSHTON av. 27 carts						MILLYNG av. 74					EASTNEY av. 153																					
ABBOT	KIRTON		NORWYCH			MILLYNG					EASTNEY																						
WHARF SITE	← WANDSWORTH TOTAL CARTLOADS 866 (av. 66) →															← VAUXHALL TOTAL CARTLOADS 2013 (av. 155) →																	

NW S. 77

Fig. 3 — A late 15th century wharf account, Vauxhall: Yearly totals of Reigate stone related to other factors.

beginning of his term as abbot was caused by a large amount of walling that had to be finished off so that part of the nave roof could be started. Then, when Eastney became abbot (1474-98), the volume trebled immediately due to his vigorous building policy. It was perhaps the experience of trying to handle treble the volume of stone on a relatively small wharf, coupled with a new commitment to finish the work on the Abbey by both Millyng and Eastney, that generated the move to a larger site. Taking the total amount of stone handled during the thirteen years at Wandsworth and the total for the first thirteen years at Vauxhall, one can see that Vauxhall coped with well over twice as much stone. It seems likely that it was a considerably larger wharf.

Since this account is part of a sequence of *Novum Opus* Rolls, one or two further advantages accrue in our attempt to understand the context of ownership and use of the Vauxhall wharf. We may deduce both the pattern of work at the wharf, and the methods used for the actual transfer of the stone. When the quantity of stone being loaded and unloaded was large, for example at Battersea in the last decade of the 14th and the first two decades of the 15th centuries, a garden was rented at Bridgecourt in Battersea, near York Bridge, specifically for storing stone. The method of transferring stone from the south side of the river to the north, does not seem to have changed over the time of the accounts dealt with here. At Battersea, in 1393-4, the Abbey built one large structure or a series of smaller ones to shelter the Reigate stone from the rigours of the climate. From the point of view of handling large quantities of stone, the structure must have been a tiled roof supported on timber uprights, without the hindrance of side walls. In the account for this year, some 10,000 tiles were purchased 'pro domo petrarum', while the placing ('ponend') of them was paid for as task work.<sup>14</sup> Also in the account, there are references to the enclosing of the garden and the making of a new gate. All these pieces of evidence suggest that the actual activity of transferring the stone onto barges and taking it up river to the Abbey did not happen every day of the year, but rather that the stone accumulated as the carts made their slow return journeys from Reigate, and that once there was a sizeable quantity of stone, labour and barges were hired for a brief flurry of activity. This interpretation is also borne out by the accounts, where the breakdown of the costs for the stone show that a small number of labourers were employed for a few days each year on this work. This remains the pattern right through the rolls of the *Novum Opus* (1385-1532). It is more explicitly stated in later accounts, where, for example, in 1480-1,<sup>15</sup> three labourers were working with the 'Showtemen' loading the showtes at Vauxhall and unloading them at the mill, ('onerandum le Showtes apud ffawkeshall et exonerandum apud molendinum'), and then loading the stone onto 'le carres' at the mill and unloading them again at the church, for thirty three days, at 4d a day each. How were the labourers able to shift 120 cartloads of stone at least twice in the space of thirty three days? In some years they seem to have been helped by the masons (1436-7), but this was not common.<sup>16</sup> The Abbey buildings make it clear that the stone blocks were large, so some form of mechanical lifting device must have been necessary. Although the accounts are not specific about the type of lifting machine the Abbey possessed, we know from various references, that there was a big 'gynne' at the Abbey mill for lifting stone from the showtes, ('magno gynne apud molendinum').<sup>17</sup> As Salzman says 'the principle of all the 'gins', or machines, was a rope running over a wheel or pulley fixed above the position to which the stone, or timber, was to be delivered'.<sup>18</sup> Since the stone to be raised could be quite heavy, it would be reasonable to suppose that some sort of axle arrangement was used as a winding gear in this case. If a 'gynne' was needed to offload the

stone, another was in all probability needed to load the boat originally. So the Vauxhall wharf must have had a lifting gear on its jetty. The movement of the stone on land was made easier by the use of two-wheeled hand barrows or 'carres', and the occasional use of sledges.<sup>19</sup> Also in the accounts concerning the moving of stone are entries indicating the carriage of baulks of timber ('plancorum') to and from the mill. It would seem that a method of unloading stone which is frequently used nowadays has its provenance at least as early as the 15th century. When lifting or lowering heavy stones, the stone is often made to slide up or down on two thick pieces of timber, so that it cannot swing round. Since the timber forms an inclined slope, it makes it easier to lift. Without this slope a straight upward lift would be necessary and would need far more effort to achieve. It is striking how much effort and organisation went into what was, after all, only one small part of the total operation of rebuilding the nave of the Abbey.

EXPEN' CIRCA LE WHARF APUD FAWKESHALL 1476-7  
(WAM 23547/8)

Solut' Johanni Russell operanti super le Frame pro dict' wharf pro xxxiiij dies capienti per diem viijd. — xxij. Et solut' Johanni Darry et Johanni Freman operantibus ibidem pro xxxiiij dies capientibus per diem utrique eorum vijd. — xxxviijs. vjd. Et in xxxij poles fossat' in fossand' et hayand' prec' pole ijd. ob' — ixs. ivd. Et in vj carectis Spinarum et Rayles et Stakes prec' carect' xxd. — xs. Et solut' pro uni veteri cumba vocat a Showte pro dict' wharf pro expulsione aque — xxiijs. ivd. Et in <sup>iiii</sup>/<sub>xx</sub> pedibus meremij empt' prec' carect' vjs. viijd. — xs. viijd. Et in <sup>iiii</sup>/<sub>xx</sub> pedibus meremij de Hendon de stauro officij. Et in tribus carectis de Scaffold Tymber pro pyles de stauro officij. Et in C plancheborde quercium — ijs. vijd. Et in CCC clavis centena ad vid. — xviijd. Et in C clavis — xd. Et in xx pedibus meremij sarrat' pro le gate postes prec' ped' ijd. — iijs. ivd. Et in viij pedibus meremij querc' pro le spores eiusdem porte prec' ped' ijd. — xvjd. Et in dim' C planchborde et viij legges sarrat' — iijs. Et in iv henges et iv hokes et iij staples ponderant' xxxiiij lib' prec' lb jd. ob' — vs. ivd. ob'. Et in C clavis — vd. Et in j hangynglok et j stoklok — xijd. In Regardis datis ibidem operant' ad diversis vices — xxd. Et in Cariag' dicti meremij et asserum ab ulnis usque molendinum et a molendino usque le wharf — ijs. ijd. Et solut' v laborariis pro xxx dies cuilebet eorum cap' per diem vd. — lxijs. vjd. Et solut' Willelmo Bolebek pro viij dies — ijs. viijd. Et solut' uni Bigatori pro ij dongcartes cum iv equis ad cariend' lutum zabulum et arenam ad perficiend' dict' wharf pro vij dies capient' per diem ijs. ivd. — xvjs. ivd. Et solut' pro una Cumba pro xxx dies — ijs. vjd.  
Summa £xj. xijd. ob'

*Translated text*

*Payed John Russell for working on 'le frame' of the said wharf for 34 days at 8d/day — 22s. Payed John Darry and John Freman working on the same for 33 days at 7d/day — 38s 6d. And for 32 poles dug, ditching and hedging it at 3½d./pole — 9s 4d. And for 6 cartloads of spurs, rayles and stakes at 20d/the cartload — 10s. And payed for 1 old barge called a Showte for the said wharf for expelling water — 23s 4d. And for 80ft timber bought at 6s 8d/cartload — 10s 8d. And for 80ft of timber from Hendon from the official store. And for 3 cartloads of 'scaffold timber' for 'pyles' from the official store. And for 100 plancheborde of oak — 2s 7d. And for 300 nails at 6d/100 — 18d. And for 100 nails — 10d. And for 20ft of timber sawn for the gateposts at 2d/ft — 3s 4d. 8ft of oak for the spurs of the doors at 2d/ft — 16d. And for 50ft plancheborde and 8 'legge' sawn — 3s. And for 4 'henge et 4 hokes et 3 staples' weighing 43 lbs at 1½d/lb — 5s 4½d/lb — 5s 4½d. And for 100 nails — 5d. And for '1 hangynlok' and '1 stoklok' — 12d. Payments for the said works at various times — 20d. And for carriage of the said timber and boards of elm to the mill and from the mill to the wharf — 2s. 2d. And payed 5 labourers for 30 days each of them at 5d/day — 62s 6d. And payed William Bolebek for 8 days — 2s 8d. And*

- 15 *payed 1 carter for 2 'dongcart' with 4 horses for carrying mud, sand and gravel to finish the said wharf for 7 days at 2s 4d the day - 16s 4d. And payed for a barge for 30 days - 2s 6d.  
Total: £11 1s 0½d*

Four men are named in the text but no details are given about them. It is possible however to build up a picture of them and their work from other entries in the rolls. Russell, Freman and Darry were obviously carpenters. The first two are explicitly stated to be so in other accounts, and Darry, since he was linked with Freman and given the same pay, may also safely be assumed to be a carpenter. Russell had been employed by the Abbey during the previous seven years, 1476-7 being the last time he is mentioned for ten years. In 1486-7 he was employed on the construction of five new timber-framed tenements in Tothill Street, Westminster. His name occurs infrequently on the rolls thereafter. There are a number of carpenters called Russell mentioned in the account rolls at the end of the 15th and the beginning of the 16th centuries. John Harvey ascribes family links to two of them: John and Richard Russell.<sup>20</sup> If they were related, it is difficult to be certain what their relationship was. Richard's son, John, (not the same as the one mentioned above) became the King's Master Carpenter from 1532-66. Both John Russell senior and John Russell junior worked at Westminster in 1517-18, the former on St. Margaret's church, the latter on the Abbey nave. Freman began a twelve year association with the Abbey in 1476. There is no further mention of Darry in the Novum Opus Rolls.

From the fact that John Russell was employed slightly longer on this job and was paid more, attests both to his experience and known worth, as well as to the fact that he was more likely to have been the designer and foreman of the project. His pay and that of his two men compare well with the rates paid by the King for work to the royal manor of Eltham in Kent, three years later in 1479. There, the chief warden received 10d a day, the under-warden 8d, and the carpenters 6d.<sup>21</sup> This reinforces the suggestion that Russell was the foreman and would have been expected to shoulder responsibility for organisation of the project and probably the design as well.

It is perhaps worth noting the scope of the carpenters' work when employed by the Abbey. In looking at the other work John Russell performed in its pay, we find him building a bridge, felling and stripping trees, journeying around Kent selecting timber, working on the nave roof, putting up scaffolding and making a 'tymberhaw'.<sup>22</sup> John Freman performed an equally catholic selection of jobs. His main work was on making scaffolding and centring for the new masonry vault being erected in the nave of the Abbey around 1481. We also find him making four new ladders, building and placing 'gynnes', felling and stripping trees, and repairing the gable end of the nave roof and the big tread wheel used for raising the heaviest of the masonry for the vaulting. He was employed not only by the New Work but also by the Sacrist<sup>23</sup> in repair and construction work. From an Abbey leasebook of 1499<sup>24</sup> we find that sometime earlier John Freman, carpenter, had rented a house and large garden from the Abbey and had also built four cottages within the sanctuary of the monastery. Both men were employed in repairing the Abbey tenements at various times.

The only other name on the account is that of William Bolebeke. From other New Work accounts, he is found as a labourer working for both carpenters and masons. His pay of 4d a day seems low in comparison with the other labourers. When looking at other years in the

accounts as well as glancing at the King's wage rates at Eltham, we find 4d a day to be the usual rate. The fact that five labourers were paid 1d a day more for 30 days, the majority of time taken for the job, must indicate either some extra degree of skill required of them, or, far more likely, the unpleasant nature of their work in the Thames mud.

That two carpenters could turn from framing the roof of Westminster Abbey to the building of a small wharf confirms the theories of Cecil Hewett, that the timber jointing of cathedral roofs and timber water fronts spring from the same tradition and were designed and cut by the same craftsmen.<sup>25</sup>

The materials mentioned in the account fill in some of the background to the construction of a timber wharf of the general type found at several sites along the northern bank of the Thames in the City of London, further downstream: Custom House, Seal House, and Trig Lane.<sup>26</sup> The Vauxhall account may be interpreted by comparing the archaeological evidence from these three London sites with the terminology of construction described in L. F. Salzman's *Building in England down to 1540*, the prime source book for such terms.

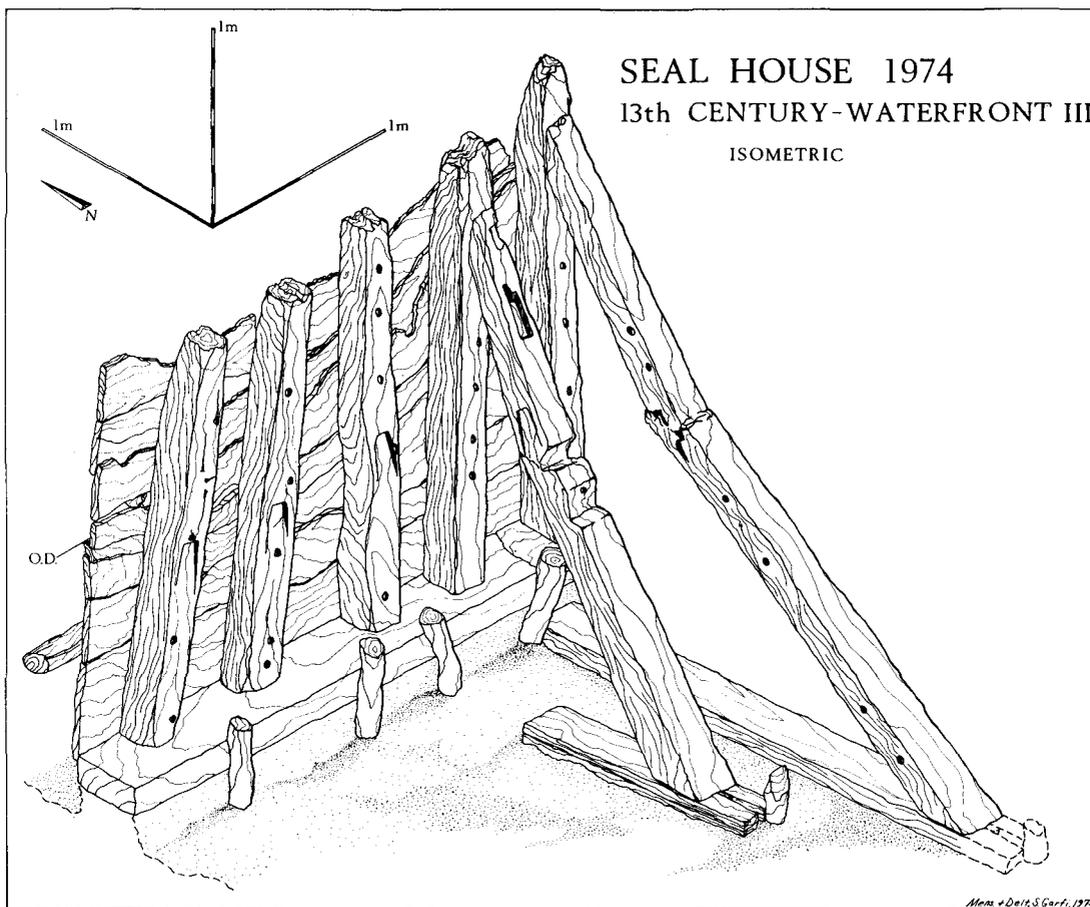


Fig. 4 — Seal House, City of London: early 13th century diagonally-braced waterfront.

Unfortunately the terms of the account are not consistently specific as to the dimensions, number or function of the timbers, and thus reconstruction may take at least two forms. One suggestion is that the wharf was of the diagonally braced type found in the 13th and 14th centuries on all three waterfront sites in the City, and in the 15th century also at Seal House.<sup>27</sup> The wharf at Seal House dated by dendrochronology to  $1220 \pm 5$  years<sup>28</sup> is here reproduced for comparison (Fig. 4). The type consisted of a sillbeam held by piles, into which vertical posts were jointed at regular intervals; these held back domestic rubbish by means of planks pegged or nailed against their landward side, the rubbish acting as an anchor for the whole structure. The posts, and the inevitable riverwards pressure of the backfill, were in turn supported by diagonal braces going down to piled soleplates in the river gravels. This type of structure may not have been a wharf for mercantile traffic, but the revetted end of a riverside property; certainly boats would have lain at anchor outside the diagonal braces, and the cracks seen on the surviving braces in excavation may be the result of boats moving against them.

The second possible reconstruction would have been braced internally, thus removing the obstruction of the diagonal riverward braces: the example is the early 14th century wharf at Trig Lane (Fig. 5). This type shares the basic structure of piled sillbeam, here with an edge-halved scarf for continuation of timber, vertical posts and planks pegged from the rear (north). The manner of bracing was by anchor-beams, incorporating at their northern ends a technique for steadying timber structures in soft ground known as far back as Viking times in cruck house building.<sup>29</sup> The anchor beams were pegged with stakes into the backfill itself — a circular process which probably contributed to the frequent collapse and need of repair of the wharves. At the riverward end, opposed trenching of the beam fitted between slightly trenched verticals. This type of wharf superseded a diagonally-braced type at Trig Lane, and probably reflects the increased mercantile use of the wharf in the early 14th century.<sup>30</sup>

With these two possible models in mind, we may return to the account of building the Vauxhall wharf. Immediately we come upon a problem: the interpretation of 'ditching and hedging' the wharf (line 3); a length of 32 poles (156m or 528ft). This must mean establishing the boundaries of the property, but there is no immediately evident combination of distances on the available maps (Figs. 1 & 2) to equal this distance. It is possible it refers to the east and south sides, a total of 29 poles, with 3 poles along the north side, i.e. some were already hedged and ditched.

Six cartloads of *spurs*, *rayles* and *stakes* (lines 3-4) were now supplied. *Spurs* are mentioned in a contract to build a landing-place on the sea shore at Tilney in Norfolk, for the Abbot of Bury, in 1434;<sup>31</sup> they were long poles, the shere-legs of the ram used to knock in the piles. If these were for making a ram, the other component parts would have been noticed in the account. The purchase or hire of one is not mentioned either, and the small piles for the excavated waterfronts could be knocked in with a sledgehammer. The amount of timber accords with diagonal braces, if anything, which were often of old or re-used timber. The Seal House figure shows one of the braces bearing a 'scotch' or rearing mortice from its former use, possibly in a building on dry land. The use would then be similar to '17½ft of tymbre for to spore the walles in the garden' of the Carpenters' Company in 1486.<sup>32</sup>

An old barge 'called a showte' (line 4) was bought; not hired, like the ordinary barge for 30 days at the end of the account (line 16). A shout, scout or schuit was a flat-bottomed river boat, possibly of Dutch origin, used for short sea voyages, but more often for carriage of bulky cargoes inland.<sup>33</sup> In the London Eyre of 1244 every shout (*shuta*) putting in at

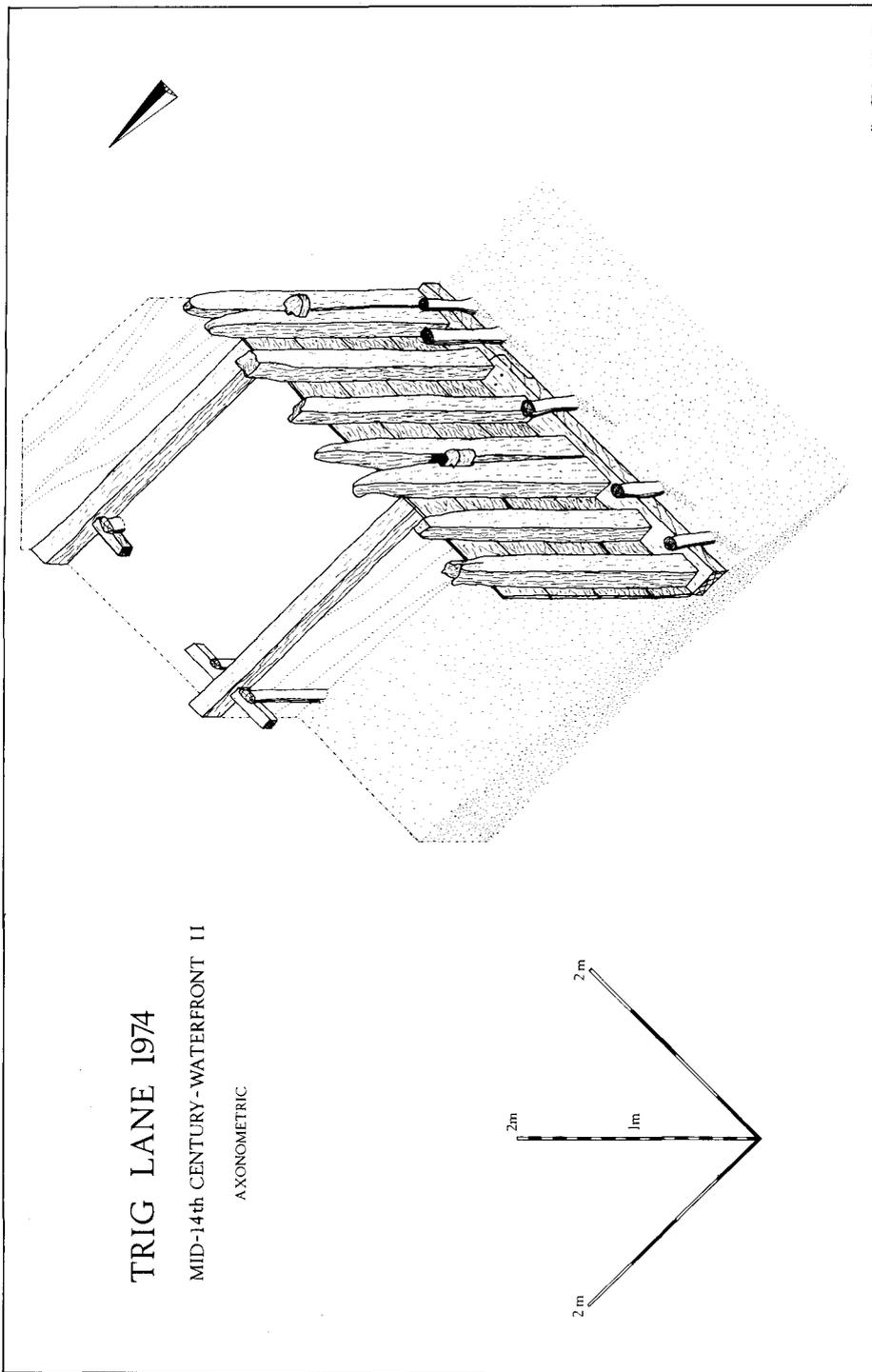


Fig. 5 — Trig Lane, City of London: early 14th century anchor-beam waterfront.

Queenhythe with corn was charged 3½d; if laden with brushwood without corn, 1d.<sup>34</sup> In 1384 piles for London Bridge were brought from Waltham in a showte,<sup>35</sup> and in 1386 two shipwrights were paid for working on one belonging to the Bridge itself.<sup>36</sup> Old boats have been found re-used for planking in medieval waterfronts at the Custom House and Trig Lane sites, and at Lincoln;<sup>37</sup> but here it was specifically bought 'for expelling water' (line 5). Possibly the barge was broken up and used as a crude coffer dam as work progressed between tides.

Timber, unspecified, was brought from two sources, one the Abbey oak-wood at Hendon. Two kinds of timber were specified: three cartloads of scaffold timber for piles (line 7) and a hundred plancheborde of oak (line 7). The scaffolding timber could have been oak or alder, which was extensively used for scaffolding in the medieval period, or elm,<sup>38</sup> alder and elm, especially the latter, have been found as piles for the waterfronts so far excavated. *Plancheborde* were standard size oak planks, first mentioned (according to Salzman) at the Tower in 1324, 10ft x 1ft 6in, about 1½in thick.<sup>39</sup> Two such boards, cut from the same tree, formed the base of the planking on the Seal House waterfront (Fig. 4) with lighter, probably re-used timber higher up. The planks behind the Trig Lane wharf were regular but not quite of the standard size. If the Vauxhall planks were the standard size, a hundred would give 1,000ft of timber; since the length of wharf has been reconstructed from the map (Figs. 1 & 2) as about 7 poles (115½ft, about 35m), we may suggest that the boards would give a height to the wharf of about ten feet. This is however presuming that all the boards were used on the face. There is a possibility that some were used as flooring for the structure, especially since a heavy commodity such as stone was to be loaded. There is at present no evidence for wooden flooring on the excavated quays, the surface being of beaten earth or gravel.

There is no mention of timber for either the sillbeam or the verticals, which must have formed part of the design; perhaps they were among the load of timber from Hendon or bought separately. Since the first load of 80ft of timber took one and a half carts to carry, it would have been fairly substantial and may have contained the sillbeams. The verticals may also have come from the load of spurs.

Boards were attached to the verticals with 400 nails in two sizes. The cheaper nails, at 6d a hundred, were probably 'plank nails', well known in many medieval accounts.<sup>40</sup> The more expensive nails at 10d a hundred which follow cannot be specified further, as the nomenclature for medieval nails is confused. They might also have been bought by the long hundred, of 120.

In lines 13-18 follow items necessary for building a gate. The twenty feet of gate post timber must have been sawn in two to make a gate ten feet high, of two leaves, since four hinges were required. The fifty foot of plancheborde needed for its surfacing indicates an area of 75 sq. ft. or a gate 7ft 6in wide if the leaves were one board thick. At the back were the eight *legge*, square sectioned bars crossing either at right angles or diagonally on the inside of the leaves.<sup>41</sup> The *henge at hokes* (line 10) are of the type universal on church doors. The hook, an iron wedge, has a round iron pin rising from its broader end, carrying an eyed piece of iron attached to the door, and is itself inserted into the door frame.<sup>42</sup> The three *staples* were also of iron, and may have been staples in the modern sense of binding together the planks of the gate; Salzman presumes this word to mean the side pieces of the framing,<sup>43</sup> but since the three staples, the hinges and the hooks together weighed 43lbs, perhaps lighter pieces are meant. A hundred nails were used; presumably the type well-known as doornails.

Two locks were employed. The '*bangynglok*' (line 11) was a padlock, as at London in 1490 — where *ij stapulis* are also mentioned.<sup>44</sup> A '*stoklok*' (*ibid.*) was the type buried under a block of wood fastened to the door itself.<sup>45</sup>

The mention of the carter and his two *dongcart* (line 15) is of great value to the archaeologist. The carter must have backfilled the space behind the plank-wall of the wharf with mud, sand and gravel, and — if the archaeological examples from the crowded city are anything to go by — a good deal of rubbish including horse manure, cobblers' clippings, broken pottery and a whole range of objects in wood, leather and bone. This would be rammed down and used as the working surface of the quay. It is of importance to learn that although the rubbish would be collected from many places, and be of varying dates, it would be laid down as a deposit behind the quay in as short a time as a week. It may be possible in future excavations to sort out one cart load from another, if the soil or rubbish-types are radically different.

Apart from the 1476-77 account, there are six further mentions in the *Novum Opus* Rolls of the wharf at Vauxhall and its repair. In 1479-80<sup>46</sup> the substantial sum of £6 was paid for the wharf, some on constructing 'le pale', presumably a boundary fence. Possibly these repairs were occasioned by the heavy traffic in stone of 1476-9 (see Fig. 3). A new door was made in 1492-3;<sup>47</sup> the remaining references<sup>48</sup> do not specify the nature of the repairs, except that in 1481-2,<sup>49</sup> details of materials and labour are given. "Repairs made at 'lambuthe' on the wharf. 90ft of oak — 6s 8d. 100ft of plancheborde — 2s 6d. 100 nails — 10d. 20 'spikyng' — 20d. 2 carpenters for 6 days at 7d — 7s. 2 labourers for 6 days at 4d — 4s. River transport for carpenters and labourers at various times — 8d. Total £1 3s 4d."

The account can be compared with other documentary information about the construction of medieval wharves in the London area. Three contracts are so far published, all by Salzman. In 1347 the Dean and Chapter of St. Paul's contracted with a carpenter, Richard Coterel, to rebuild part of their wharf near Brokenwharf in the City. The instructions for building are scanty, but mention vertical posts or 'needles' (which had a hole in the upper end to receive a transverse timber) 12 feet in height, a bridge with steps down to the water in the middle of the quay, and a shed at each end.<sup>50</sup> A wooden fence 10 feet high was to surround the whole plot, and this may be analogous with the length of ditching and hedging required at Vauxhall and the later reference to 'le pale'.

A contract of 1387-8 describes work to be carried out in rebuilding two water-mills belonging to Henry Yevele, the master mason, and John Clifford, also a mason, near the mills of the Abbey of Battle in Southwark. A wharf is to be built east of the dam of the mill-pool; and the carpenters '*pitcheront mettront & seieront*' the timbers, which Salzman translates as 'they will pitch (i.e. drive in the foundation piles), assemble and ?saw, but the translation of the third word is not certain'.<sup>51</sup>

A further contract of 1389 describes a length of stone wharf to be erected for the King at Tower Wharf. The walls, 8 feet thick at the base diminishing to 5 feet at the top, were to be 16½ft high, based on piles.<sup>52</sup> This is very similar to the construction of the stone quay wall at the Trig Lane site which eventually replaced the timber quays, and is dated by documentary evidence to 1481/2.<sup>53</sup> This kind of stone quay wall has been found at the Baynard's Castle, Trig Lane and Seal House sites in the later medieval period, and seems eventually to have replaced timber at many points along the City bank of the Thames, since it can be seen on 16th century drawings and panoramas,<sup>54</sup> and also perhaps on the Southwark bank.<sup>55</sup>

The two reconstruction figures show both diagonally-braced and internally braced (anchor-beam) alternatives, and it is difficult to suggest which is the more likely from the internal evidence of the account. While the nature of the traffic suggests, on the whole, a straight-fronted anchor beam structure of the Trig Lane type (Fig. 5), we must ultimately remain uncertain as to the precise nature of 'le frame' on which John Russell worked.<sup>56</sup>

## NOTES

- The authors wish to express their gratitude to the Dean and Chapter of Westminster for allowing them to publish the account (Westminster Abbey Muniments (hereafter referred to as WAM) 23547 & 23548). They also wish to thank the following for their help: Mr N. McMichael, especially for help in checking the original transcript, and Mr H. Nixon at the Westminster Abbey Library; Miss A. M. Oakley of the Cathedral Archives & Library, Canterbury; and Dr Caroline Barron, Tony Dyson and John Clark for their criticism. Figs. 4 and 5 are the work of Sal Garfi, John Burke-Easton and Chrissie Milne.
- Between 1451 and 1460 either no Reigate stone was purchased or no mention is made of which wharf was used.
- WAM 23526-23542.
- WAM 23543/4.
- WAM 23545/6.
- It is noted under 'Necessary Expenses': "In regard date J Pargrave collect' reddite prioris ecclie' Xte Cantuar' pro suo favore habend pro terris conducend' apud ffawkeshall ad faviend' unum wharf ad imponend' petrae de Reygate — 3s 4d" WAM 23545/6.
- Canterbury Archives (hereafter referred to as CA), F.55.
- The land was later leased to Robert Brandon, Goldsmith, who was Chamberlain of the City of London, on 29 March 1587, for 21 years. By this lease, the City of London could discharge its rubbish on this site, "landinge, bestowinge & laying of the donge, myer, rubbishes & soyle to be conveighed from the cite aforesaid by water thether, which is not onlye to the fermors & tennents of the said Dean & Chapter but also of others nere there inhabitinge for the dongynge & compostinge of their grounde" (CA). It can be traced down to the 18th century through various leasebooks.
- "... unam peciam terre iacentere infra dominu' de fawkeshalle in parochia de Lambith in Com' Surr' et dicta vacua pecia terre extendit et continuet in longitudine a via regia ex parte orientali usque ripam Tamisie ex parte occidentali viginti, & quinque perticas et latitudine ex parte boriali juxta orren' de ffawkeshalle quattuor perticas et ex parte australi juxta terra date Prioris et conventus modo dimiss' John Swan in latitudine super ripam Tamisie septem perticas". CA F.55.
- CA Misc. Accounts 15 Pt 1 (18 to 22 Henry VIII).
- CA Misc. Accounts 31 f 39v.
- This map is catalogued as Map 18 in the Cathedral Library, Canterbury. Our figure 2 is a selected version of Hill's map only showing information relevant to our discussion.
- e.g. 1394-5, 585 cartloads of Reigate purchased. WAM 23464.
- WAM 23463.
- WAM 23554.
- e.g. WAM 23508.
- e.g. WAM 23571.
- L. F. Salzman *Building in England down to 1540* (Oxford 2nd ed. 1957) 324.
- e.g. WAM 23551 & 23520.
- J. H. Harvey *English Medieval Architects* (London 1954).
- Salzman *op.cit.* (in Note 18) 77.
- J. Harvey suggests that John Russell senior also worked on the construction of the centring for the vaults on Kings College Chapel, Cambridge, c.1513 under another member of the family, Richard. See Harvey *op.cit.* (in Note 20) 231.
- e.g. 1478-9: WAM 19727.
- Lease Book I; 114-114b.
- Forthcoming reports on the Trig Lane waterfront; cf. also C. Hewett's *Development of Carpentry 1200-1700* (Newton Abbot 1969); and *English Cathedral Carpentry* (London 1974).
- T. Tatton-Brown 'Excavations at the Custom House site, City of London, 1973' *Trans London Middlesex Archaeol. Soc.* 25 (1974) 117-219 Figs. 12-18; J. Schofield 'Seal House' *Current Archaeology* 49 (1975) 54-7; Mark Harrison 'Trig Lane' *ibid.* 57-9.
- On the watching brief of early 1976. The full site report is forthcoming as a special paper from the London and Middlesex Archaeological Society.
- Analysis by Ruth Morgan; for interim, see 'Tree-ring dating of the London Waterfronts', *London Arch.* 3 no. 2 (1977) 40-5.
- F. W. B. Charles 'Scotches, lever sockets and rafter holes' *Vernacular Architecture* (1974) 21-4 and Fig. 2b; reference to work of I. F. Saefal in NW Europe.
- Full report on Trig Lane forthcoming from G. Milne of the Museum of London.
- Salzman *op.cit.* (in Note 18) 504 (B M Add Ms 14848, f 74v).
- B. Marsh (ed.) *Records of the Carpenters' Company: II, Wardens Accounts 1438-1516* (Oxford 1914), 72.
- D. Burwash *English Medieval Shipping 1460-1540* (London 1947) 138-40.
- The London Eyre of 1244* ed. H. M. Chew and M. Weinbaum, London Record Society 11 (1970) no. 261.
- C.L.R.O. Bridge Accounts Roll 4/6/vii.
- ibid.*, 6/6/i-iv, xxvii. We are grateful to Brian Spencer for these two references.
- Tatton-Brown *op.cit.* (in Note 26) Figs. 12-13; on Trig Lane, information from Peter Marsden. On Lincoln, information from M. Jones, Lincoln Archaeological Trust; at Dickinson's Mill.
- Salzman does not mention oak as a scaffolding timber; but it is used in 1413-16 at the Abbey (WAM 23492) and throughout the 15th century; elm is first mentioned as scaffolding in 1461-2 (WAM 23526), brought from Abbey woods at Hyde and Knightsbridge.
- Salzman *op.cit.* (in Note 18) 242.

40. *ibid.* 304-17.
41. *ibid.* 254.
42. *ibid.* 295.
43. *ibid.* 258.
44. *ibid.* 303.
45. *ibid.* 302.
46. WAM 23552.
47. WAM 23568.
48. WAM 23559 (1483-4); 23570 (1493-4); 23579 (1500-1).
49. WAM 23556.
50. St. Paul's MSS nos. 980, 1239; Salzman *op.cit.*, (in Note 18) 43-5.
51. Magdalen Coll MSS, Southwark 33; Salzman *op.cit.* (in Note 18) 467-9, n.6.
52. Exch. K. R. Accts. 502, no. 10; Salzman *op.cit.*, (in Note 18) 469-70.
53. Documentary evidence for forthcoming report by Tony Dyson, Museum of London.
54. e.g. the copper plate map of *c.* 1558 attributed to Wyngaerde (M. Holmes 'An Unrecorded Map of London' *Archaeologia* 100 (1966) 105-28); Norden's view of the Bridge *c.* 1600 (G. Home *Old London Bridge* (London 1931) P1. opp. p.136).
55. See the background of the drawing *The Procession of Edward VI from the Tower of London to Westminster* (in Society of Antiquaries; Sharf Add. no. 71 [Hist. Print no. 4]).
56. The authors have located the site of the wharf, immediately to the north of the present Vauxhall bridge on the 'south' side of the river. At the time of writing (May 1977) the site is open ground.

# THE FIRST LONDON RAILWAYS

MICHAEL ROBBINS, C.B.E., M.A., F.S.A.

This article is concerned with the first railways constructed to deal with London's own traffic, not about those which carried passengers and freight *between* London and places quite outside it. In respect of the chronological "first", the London & Greenwich of 1836 (the date here and hereafter given is that of first opening to public traffic, not that of promotion or authorisation or completion), the description "the first railway in London" or "the first London railway" suits equally well, for it was both at once; but the second London railway, the London & Blackwall, was not the second to reach London but the seventh. (This is counting the London & Croydon of 1839 as a line whose traffic was not wholly pertaining to London itself.) This is, therefore, a brief sketch of the origins and fortunes of the Greenwich and Blackwall railways, followed by an indication of some of their features which appear to have been characteristic and significant, either in themselves as features of railway undertakings or in respect of their impact on London.

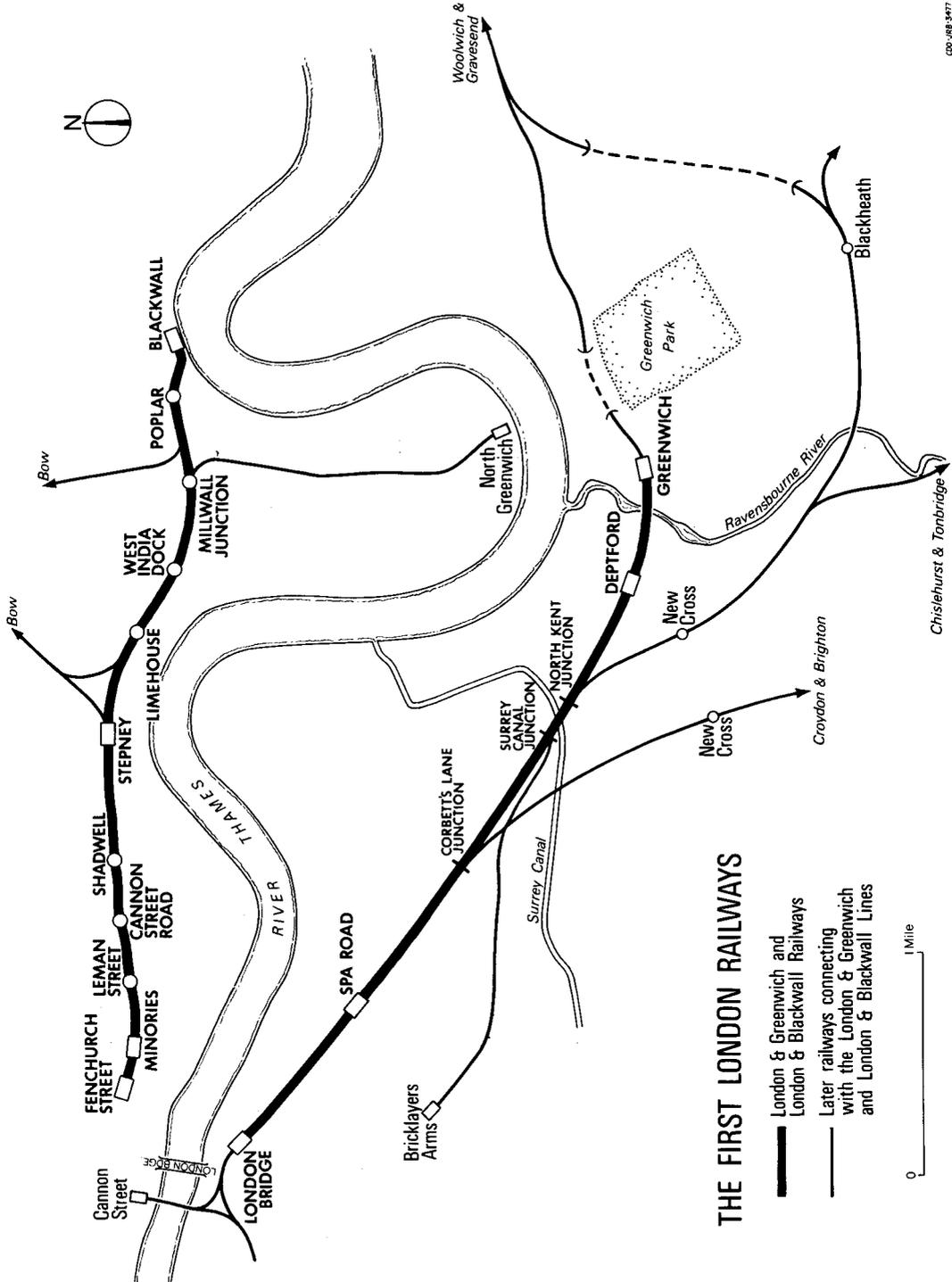
The claims of certain earlier installations to count as "first railways" must be disallowed, being excluded by the definition originally put forward by Mr Charles E. Lee, and slightly expanded by myself a few years ago, as follows:

"Broadly, the modern railway may be regarded as a combination of the following main features, namely:

- (a) specialised track;
- (b) accommodation of public traffic;
- (c) conveyance of passengers;
- (d) mechanical traction;
- (e) some measure of public control."

This list contains a mixture of technical, economic, and political elements; and I have argued elsewhere that all five elements have to be present together to form the real Railway — with a capital R — which was the agent of immense social change and one of the principal economic detonators of the 19th century.<sup>1</sup>

If however only the first feature in the list were to be required to qualify — the technical device of a specially-formed track consisting of parallel rails which can be used only by vehicles having wheels of appropriate shape at the right distance apart — then the London area (without defining that too narrowly) can show some examples earlier than the Greenwich and Blackwall railways. Such railed ways, to use that term to distinguish them from the Railway as earlier defined, were most fully developed in the English north-east, on Tyneside, as adjuncts to the business of getting and marketing coal; they were usually called "wagonways", sometimes "tramroads".<sup>2</sup> Such a line was the Surrey Iron Railway, from Croydon to Wandsworth, built under an Act of 1801 for conveyance of public freight traffic and brought into operation in 1803, with a branch to Hackbridge in the next year. It was extended by the Croydon, Merstham & Godstone Railway which, like so many later promotions, failed to reach one of the places mentioned in its title — it got as far as the Greystone Lime Works at Hooley, fairly near Merstham, in 1805 but never Godstone. A short connecting line at Pitlake (West Croydon) to the Croydon Canal was laid about 1811.<sup>3</sup>



THE FIRST LONDON RAILWAYS

- London & Greenwich and London & Blackwall Railways
- Later railways connecting with the London & Greenwich and London & Blackwall Lines

0 1 Mile

Quite a different sort of thing was the demonstration of Richard Trevithick's steam locomotive *Catch me who Can* on a circular track in Euston Square, put on in 1808 like a side-show in an exhibition or a fair-ground roundabout, not a serious transport proposition. (It is a curious parallel that the first practical electric locomotive was similarly demonstrated on a circular track, by Werner von Siemens at the Berlin exhibition of 1879.)<sup>4</sup> It is suggested that underground railroad tracks were used for the clearance of spoil from the so-called Thames Archway (really a driftway or tunnel) in 1807, which was partially built under Richard Trevithick's direction and then abandoned.<sup>5</sup> There must also have been short lengths of railed way in the Thames dock system, rapidly expanding after 1800, and in the dockyards (a tramway with engine is recorded at Deptford Victualling Yard in 1810),<sup>6</sup> and perhaps in Woolwich Arsenal.

There was certainly a stone tramway from the West India Dock gates along the Commercial Road to Whitechapel, constructed by James Walker and completed in 1829;<sup>7</sup> and a quaint device, something like a suspended mono-rail though rather a continuous trestle, invented by H. R. Palmer, the principal founder of the Institution of Civil Engineers, was used inside the Royal Victualling Yard at Deptford, as well as between Cheshunt in Hertfordshire and the Lea Navigation.<sup>8</sup> But all these were mere adjuncts to other processes and not Railways in their own right.

The first two real railways built to meet London's own transport requirements were the London & Greenwich and the London & Blackwall. Both of them started close to the City's boundary and ran, one north of the river and the other south of it, to points of significant riverside development some miles downstream. Why were these the first lines to be chosen for London railway development? One has to look back a few years behind the 1830s, and to another form of transport, to find the answer.

The first commercially successful application of steam power to the propulsion of ships — or at any rate, to river and estuary craft — in Europe took place on the River Clyde in 1812. A steamer began to ply on the Thames in 1815, and there was rapid growth thereafter: first up-river to Richmond and Twickenham, then with larger vessels down to Gravesend, Margate, and Ramsgate.<sup>9</sup> In 1831 a member of Parliament declared (with a degree of exaggeration not unique in Parliamentary debates) that these places had been 'recently built to accommodate the citizens [of London], a great majority of whom took advantage of steam communication'. Students of Robert Surtees' works will not need to be reminded of Mr. Jorrocks's aquatic excursion to Margate in William IV's reign on board the *Royal Adelaide* steamer. Not only Gravesend but Greenwich and Woolwich provided traffic to sustain half- or quarter-hourly services, which ran after dark in winter; and in 1837 the secretary of the Woolwich Steam Packet company, which had carried 250,000 passengers in twelve months, claimed: 'Nearly the whole of the Government departments and I should say nineteen persons out of twenty in the town who want to come to London for business, use this mode.' At holiday times traffic was very heavy; the Greenwich fair at Easter and Whitsuntide was an attraction for all classes, and hair-raising examples of overloading came to light. There were other shortcomings: boarding was hazardous, there were alarming navigational accidents, and in bad weather river travel was unattractive, if not positively repulsive.

Thus by the early 1830s a highly favourable opportunity presented itself to enterprising promoters to carry passengers in fairly large numbers between the City and a point down the river by some method superior to the steamboat services in point of speed, comfort, and reliability, if not of cost as well. An overland route, avoiding the difficulties and hazards of

weather and navigation, could take a shorter course than that imposed on the steamboats by the windings of the river in the reaches between London Bridge and Woolwich. On the south side, relatively open country extended to within a few hundred yards of the south end of London Bridge; on the opposite bank, although settlement was fairly dense in the East End districts, there was no high-class development by estate owners such as made acquisition of land for railways in the northern and western districts so difficult. Enough had been demonstrated by steam railways in the north of England to encourage certain groups of commercial men to try their hand at the first promotions of essentially local passenger railways in Great Britain.

The London & Greenwich,<sup>10</sup> which emerged as London's first railway when it began operations in 1836 (to Deptford only — throughout to Greenwich in 1838), was indeed a purely local railway for the conveyance of passengers; but this was not its original design. The first scheme for a railway to cover this ground, which was one of those spawned in the so-called First Railway Mania of 1824-5, before even the Stockton & Darlington was opened, was called the Kentish Railway (sometimes referred to as the London & Dover), to run from London near the Bricklayers Arms at the top of the Old Kent Road via Deptford, Greenwich, and Woolwich on to Gravesend, Chatham, Canterbury, and Dover, with branches to the principal towns in Kent. It was proposed to build the London end first and to open as far as Woolwich as soon as that portion was completed, the expected receipts (based on observations of the existing short-stage coach traffic) being very considerable. It was of this proposed railway that the *Quarterly Review* for March 1825 wrote: "We should as soon expect the people of Woolwich to suffer themselves to be fired off upon one of Congreve's *ricochet* rockets, as to trust themselves to the mercy of such a machine, going at such a rate . . . We will back Old Father Thames against the Woolwich rail-way for any sum."<sup>11</sup> The Kentish Railway was premature, and it disappeared from view, as so many of the 1825 mania schemes did, after the issue of a couple of prospectuses (the first bearing Thomas Telford's name as engineer,<sup>12</sup> the second H. R. Palmer's) and a single mention in Parliamentary records. But the very formulation of the scheme at so early a date indicated that the proposed line of route was one that had evident attractions; and, like most of the 1824-5 schemes, including the London & Birmingham, for example, it emerged again after only a few years.

Late in 1831 a group of City men and a retired Lieutenant-Colonel of the Royal Engineers, George Thomas Landmann, launched a scheme for a railway to run from the foot of London Bridge (Rennie's new bridge, opened in August 1831) practically straight to Deptford and then with a north-east curve to Greenwich. It was to be carried entirely on a viaduct of brick arches, almost wholly through open, in places marshy, country except in the Bermondsey area close to the London Bridge terminus which was a teeming and insanitary slum. A footpath along each side was to be provided at ground level, for use of which a toll would be charged. These were referred to as "dainty boulevards" or an "esplanade".

There was lively opposition, particularly from coach and omnibus proprietors, among them the unlucky pioneer of London omnibuses, George Shillibeer, who was concentrating on the London, Greenwich, and Woolwich route after giving up his original Paddington-Bank service. Navigation interests, not on the Thames but on the Surrey Canal and the Ravensbourne River which both had to be crossed, insisted on extensive measures of protection; and the two turnpike trusts in south-east London, the Bermondsey, Rotherhithe & Deptford and the New Cross, could apprehend serious abstraction of their revenues.

But it appears that none of the opposing interests felt that there was any serious danger of the railway being built, even if authorised, and the Bill had a smooth passage through Parliament in 1833. It was more difficult to raise the £400,000 of capital authorised — and some of the methods adopted were found afterwards to be of dubious propriety; but in the event the viaduct of 878 arches, carrying two lines of railway practically level throughout, was opened to passenger traffic in three sections — from a temporary terminus at Spa Road to Deptford in February 1836, into the London Bridge station in the presence of the Lord Mayor of London in December, but to Greenwich only in December two years later, owing to difficulty in securing agreement about the crossing of the Ravensbourne. It was always hoped by the promoters that the line would be prolonged to Woolwich and farther into Kent. The Astronomer Royal was hesitant about the effect of any railway close to the Royal Observatory, but even after his doubts were removed there was still opposition from the Admiralty and the vicar and churchwardens of Greenwich, and these authorities managed to delay eastward extension beyond Greenwich station until 1878; Gravesend had meanwhile been reached round the back of Greenwich Hill through Blackheath and Woolwich in 1849.

The Greenwich railway, with a fifteen-minute train service, was highly successful in carrying large numbers of passengers (there was no goods traffic), and overcrowding at holiday times was notorious. The viaduct approach to London Bridge, so close to the City, was an enormously valuable asset, which the company used (or abused, in the view of some other railways) to the full by charging tolls on the trains of the London & Croydon Railway which came on to its line at Corbett's Lane junction, in south Bermondsey, from June 1839, followed by those of the London & Brighton from 1841 and the South Eastern in the next year. After much unpleasantness between all the parties, involving the building by the South Eastern of a line and new terminus at Bricklayers Arms in order to avoid use of the L. & G. tracks altogether by their trains, the L. & G. property was taken over by the South Eastern in 1844 in consideration of a 999-year guaranteed rental. The London & Greenwich company remained in existence until the Southern Railway was formed in 1923, simply in order to receive the annual rent of £45,000 and distribute it as dividend. Almost all the arched structure of the viaduct remains, now mostly hidden by later arches carrying additional tracks on either side of the originals. At London Bridge a very few features of the old Greenwich station survived until the recent reconstruction. There are some remains of the footpaths, especially near Deptford, where one portion is named 'Mechanic's Path'. The Greenwich end of the viaduct was totally reconstructed for the descent to the lower level required by the 1878 extension in tunnel, and the present station there, though similar to that of 1838, was wholly built at that time.

The story of the London & Greenwich has been admirably covered in Mr R. H. G. Thomas's book *London's First Railway* (1972); there is no call to go into it further here. But some facts, derived from this book, may be mentioned, not only for their anecdotal interest but as showing some enduring features of London's urban railways which were already present in the first manifestation. The method of construction, on viaduct, is one which became highly characteristic of lines in inner south and east London. It had been hoped to use the arches for shops and for dwelling-houses; a very few were so adapted and let in the earliest days, but the arches were not watertight and the experiment was unsuccessful. Nevertheless, almost every one of the arches is occupied today with scrap depositories, sawmills, and timber stores, a few modern factories, and many of those activities such as light-metal working

especially for motor-car repairs which, though apparently essential to the functioning of a city, today's planners do not provide for.

In 1839 the board, having run trains all day on Sundays since 1837, decided to suspend them during morning church service — a practice which became normal on local London railways and which could be detected in the timetables of the Metropolitan District and North London railways, for example, some way into the twentieth century. The Greenwich engaged two pews at St. George's church, Bermondsey for the accommodation of their men, which did not become a normal railway company practice, though several railways urged on their staffs the propriety of attending places of worship on Sunday and one, the Taff Vale, stated that such behaviour would be "the means of promotion when vacancies occur".<sup>13</sup>

Smoking in certain carriages was allowed by the L. & G.R., originally it appears in first-class carriages only and later in second class as well; when the South Eastern took over in 1845 they tried to put an end to the practice. Quarterly season tickets, quaintly described as "free tickets", were sold from the opening to London Bridge in December 1836, for all three classes: not however, as Mr Thomas suggests they were, quite the first railway season tickets ever issued — the Canterbury & Whitstable certainly had them in 1834, though they were quite specifically for a season only, from Lady Day to 1st November. Children's fares, at second-class rate for children between the ages of four and nine inclusive, were introduced in 1842. Only children travelling first-class benefited. Again, the Canterbury & Whitstable had been first with reduced fares for children under 12, from 1830.<sup>14</sup> London's railways entered this tricky field of commercial policy with hesitation, and the fare tables were changed several times in the Greenwich's short life.

The business of running a railway called for skills, especially in the mechanical department, that London itself, with all its available labour, found it difficult to provide. The L. & G.'s first driver, Thomas Millender, came down from the north, where he had been on the Liverpool & Manchester for seven years (i.e. since before its opening for traffic), and it is said that all the first engine drivers came from the L. & M. similarly. Certainly the locomotive superintendent, Simon Fenwick, had been a driver on the L. & M.<sup>15</sup> The engineer, Colonel Landmann, has already been mentioned; he died in 1854 and left memoirs of his military career but not of his connection with the Greenwich railway. The only other railway project that he appears to have been connected with was in Lancashire; he prepared plans for the Preston & Wyre Railway and the first dock at Fleetwood in 1835-6. George Walter, Secretary of the company from 1831 and "resident director" from 1835, resigned in 1837 in a cloud of financial distrust, but was presented with a handsome medal by a committee of supporters late in 1839. J. Y. Akerman, his successor as secretary, stayed in the service of the South Eastern Railway until 1847. He had previously been William Cobbett's secretary. He was a noted antiquary and numismatist, secretary (or assistant) to Lord Londesborough (the first president of the London & Middlesex Archaeological Society), founder of the *Numismatic Journal*, and secretary of the Society of Antiquaries from 1848 until 1860.<sup>16</sup>

The London & Blackwall Railway's history may be briefly outlined as follows.<sup>17</sup> An Act of 1836 incorporated the Commercial Railway Company with power to build a line from a terminus at the Minories to a station alongside Brunswick Wharf, Blackwall, a distance of 3¾ miles. A further Act, of 1839, changed the name to the London & Blackwall Railway and authorised a short extension from the Minories to Fenchurch Street. Operation began on the original section on 6th July 1840 and to Fenchurch Street on 2nd August 1841.

This bald account conceals a number of interesting matters. Two competing lines were originally promoted, planned to cover more or less the same ground: the Commercial Railway, for which Sir John Rennie was engineer, and the London & Blackwall Railway & Steam Navigation Depot Company, with George Stephenson's engineering advice, but under the more direct supervision of his son Robert Stephenson and of G. P. Bidder, once well known as the "calculating boy", a mathematical infant prodigy. The former company won the Parliamentary contest but proved unable to raise the necessary capital, and the rival took over the undertaking — hence the change of name in 1839. The delay in securing powers for the extension to Fenchurch Street was due to an altogether more interesting complication: the Corporation of London decided in March 1836 to petition Parliament against both the Commercial and the London & Blackwall Railways (then in competition for the powers to build), and indeed against the establishment of all railways whatever within the City boundaries.<sup>18</sup> The Corporation was moved in the matter largely by a petition that had just been presented to it by fourteen householders of the parish of St. Botolph-without-Aldgate. They alleged that the projectors of the Blackwall Railway were seeking powers to buy and demolish 120 houses, inhabited by more than 850 people; the Commercial Railway wished to pull down 177 houses, besides warehouses and other buildings, and to remove a population of up to 2,000 people. The Corporation in its petition to Parliament added two other arguments: that the formation of railways in the City would prevent the completion of plans for street-widening in order to relieve congestion in the streets, and that the constant passing of steam engines and trains would make the occupation of nearby houses scarcely endurable.

These "environmental" arguments, as they would be called today, were perfectly respectable; but some members of the Corporation had more commonplace commercial considerations in mind. They were afraid for the trade of the Pool of London if the new West and East India Docks were presented with an easy access from the City, cutting out in the latter case the river passage round the Isle of Dogs. In 1837, indeed, when having been curtailed at the Minories in 1836 the Blackwall company was back in parliament again, this time for an extension of 600 yards to Leadenhall Street ("bringing to the very threshold of the Royal Exchange the quickest, safest, and cheapest mode of conveyance known in the world"), the City's debate was dominated by the question whether or how far this would injure the trade of the Pool. In the end, the City agreed to a 415-yard extension as far as Fenchurch Street, and this was built at a cost of a quarter of a million pounds — and the Blackwall Railway's traffic was reckoned to have been increased by 50 per cent as the result.<sup>19</sup> The extension was completely covered in, though this feature disappeared in subsequent widenings of the line. William Tite was the railway's architect; his Fenchurch Street station was replaced in 1852 by the present structure, but the good-looking building at Blackwall lasted until the Second World War.

As Sir John Clapham observed, "the locomotive engine did not win an altogether easy victory: nor, in its early form, did it deserve one".<sup>20</sup> On Robert Stephenson's advice (which showed remarkable openness of mind in the great exponent of steam locomotive traction whose *Rocket* had been the winner of the Rainhill contest on the Liverpool & Manchester Railway, in 1829) the London & Blackwall was opened with a peculiar form of traction — by cable, wound in one direction by stationary steam plant at Blackwall and in the other by engines at Minories. The last few yards into and out of Fenchurch Street were not equipped with cable; trains started by gravity (assisted by a push from the porters) and completed their

inward journey by the momentum they had acquired while attached to the rope. The two lines were not “up” and “down” but were worked separately, alternate trains using the northern and southern tracks. The intermediate stations were originally Shadwell, Stepney, Limehouse, West India Docks, and Poplar; Cannon Street Road came later, to be replaced in turn by Lemn Street; Millwall Junction was added much later, in 1872, after the cable was given up. Carriages for certain stations were dropped off the main train and braked to a stop; they started again when the rope began to move in the opposite direction, and arrived at the terminal from which they had started singly, not as a train. Thus passengers could travel throughout, or from or to certain intermediate stations, but not between any pair of intermediate stations. The arrangements are not wholly clear from contemporary descriptions, and there were probably variations of practice. The signal to start was transmitted simultaneously by electric telegraph on Cooke and Wheatstone’s patent; the Blackwall was the first British railway to be so worked from end to end.

There was a good train service, every quarter of an hour from 8 a.m. until 9.45 p.m. (the first London railways did not cater for early-morning workmen’s traffic, nor did the omnibuses), interrupted on Sunday between 10.45 and 1, being the hours of church service. Trains were not operated between Minories and Fenchurch Street on Sundays until a clause in the 1839 Act was repealed in 1842.

The original fare was 6d. first class, 4d. second class, with through bookings to Woolwich for an additional 2d., though there were later changes. Steamboats named *Railway*, *Blackwall*, and *Brunswick* were operated to Gravesend in conjunction with the railway from 1841 onwards; these were apparently the property of certain directors of the railway company, in their personal capacity. There had been no difficulty in making arrangements for Blackwall-Greenwich services by existing steamboat lines, but the Gravesend boats had all boycotted Blackwall. Traffic on the line was heavy — over 1¾ million passengers in the second six months of 1846; and in June 1844 well over half of the steamboat passengers arriving at Gravesend were from Blackwall, most of these presumably having arrived there by the railway. But the line in its first form with cable haulage was only a moderate commercial success; freight traffic was not carried during this period.

By 1849 the Blackwall had had enough of cable haulage, and of the peculiar 5ft. gauge which it had adopted at the outset. The Eastern Counties Railway (nucleus of the later Great Eastern), originally a 5ft.-gauge line, had been converted to standard in 1844; and as the Blackwall was beginning to sense the advantage of its City terminus and the possibilities of linking with other lines, in the first place by a link of its own promotion from Stepney to Bow on the Eastern Counties line, it changed over to standard gauge and steam traction in April 1849. Sir John Rennie complacently observed that his rivals had at length, after expensive experience, adopted his original ideas; and the Blackwall began to derive a large part of its revenue from tolls paid to it by the Great Eastern, North London, and London, Tilbury & Southend companies for the valuable access its line provided into the City at Fenchurch Street. Its own line was leased to the Great Eastern after 1866, but the company continued in existence until 1923. It seems that roofless third-class carriages were run on this line until the early 1860s — if so they must have been the last, or among the very last, in Britain.

The only persons of note to be connected with the Blackwall railway were the engineers Rennie, Stephenson, and Bidder, already mentioned. Included in the earliest printed membership list of the London & Middlesex Archaeological Society, dated December 1857,

was the name of F. W. Spooner, Esq., Blackwall Railway, E.; he was the company's accountant.

Some features of these two railways were particularly characteristic and significant; and some of their activities foreshadowed lines of development for the greatly intensified railway activity in the London area which was to take place in the decades following the 1840s.

First, physical alignment and construction. Both railways demonstrated the advantage of entering London by an approach which was not already occupied by high-class and expensive property, and also the significance for the future of their most precious asset. This was not, as it turned out in both cases, their value as lines earning revenue from the traffic they were designed to carry but the access they provided for trains from longer distances to get in to reasonably well sited London terminals. After the findings of the Royal Commission on Metropolis Termini of 1846, which virtually declared an embargo on future railway construction within an area roughly bounded by the Edgware Road, New (now Euston) Road, City Road, Bishopsgate Street, and Lambeth Road (the South-Western's authorised extension to Waterloo excepted), the value of London Bridge and Fenchurch Street as terminals rose very high, and the fortunate owners sat back to enjoy their toll revenue without the fatigues and less certain return of being in the business of operating. The Blackwall directors allowed themselves the hope that "Fenchurch Street would at no distant date become the London terminus for all the lines north and east of the Metropolis".<sup>21</sup> But the dam burst in the late fifties and early sixties, when Victoria, Charing Cross, Blackfriars, and Cannon Street, with their river bridges, were approved; Broad Street came in the sixties and Liverpool Street in the seventies.<sup>22</sup> The lesson had been pointed by the pioneers — a remote terminus like Euston, Paddington, or Nine Elms was no good for regular daily London rail journeys, even if the long-distance passenger might put up with the omnibus or cab journey. Similar extensions nearer to the heart of cities were seen at Liverpool (1836), Birmingham (1854), and Glasgow (1876 and 1879).

Construction on viaduct became a feature of most south and east London approaches; a close pattern of streets could not be crossed continually on the level. So London railways had to go up above the streets level with the chimney-pots, or, as the Metropolitan of 1863 showed could be done, down underground. One other technical point: the Greenwich, with standard gauge and ordinary steam locomotives, presented no special difficulty in becoming assimilated to the main system of the country; the Blackwall had to scrap its wider gauge and cable haulage before it could reap the benefit of its location. Non-conforming railways have hardly ever been successful, except on mountain-sides.

The Greenwich, and later the Blackwall, began to face the perennial problem of railway managers with city terminals — how to allocate a limited line capacity between trains from the inner area and those from farther away. Echoes of the arguments arising from this dilemma are still frequently heard.

In the commercial field both lines began to face some of the problems in the fixing of fares and provision of services which have persistently bothered railway managers ever since. How many classes? What fares for children? What through bookings to other operators' services? What trains to run on Sundays? How to deal with great influxes of traffic at holiday periods? Since, with all the benefits of information available to modern managers from sophisticated marketing techniques, it cannot be asserted with any confidence that the last word in railway commercial policies has yet been said, it is no surprise that the two railways under notice changed their minds about some of these things in the 1840s.

Financially and economically the two companies concerned were rather outside the usual run of English railway experience at the time. Construction costs were exceedingly high, and compensation claims on the Blackwall turned out to be very high. The directors, it was reported, had daily to submit to demands for compensation, compared with which the exactions of county gentry were liberal arrangements. One recent scholar has gone as far as to write: "There were very obvious advantages, in terms of speed and simplicity, to negotiations with great proprietors; and the railways always, for preference, dealt with them rather than with a multiplicity of small owners." If this was so, it was partly because of the Blackwall's early experience, which permanently strained the finances of the company. It was one of the two railway company accounts which gave the London & Westminster Bank "much trouble" — the bank eventually had to accept debentures to pay off the overdraft. For a time it had a loan of £25,000 from the Globe Insurance Company.<sup>23</sup> The capital of both railways was raised, as far as I can discover, wholly within the City of London, and until the lease and rent-charge arrangements were made, it did not receive any large return in interest. After that it was secure but modest, away below the high dividends of some of the freight-carrying lines like the Taff Vale in South Wales or the Maryport & Carlisle in north-west Cumberland. Investors in the public transport of London have on the whole done much more for the public than for their own pockets. There were financial scandals about both lines. The case of Walter on the London & Greenwich has already been referred to; one of the Blackwall's directors, Mr Alderman Humphery, was loudly accused of improper trading in the company's shares in 1841, but was able to show that his actions were rather indiscreet than dishonourable.<sup>24</sup>

There are some curious parallels between the London & Greenwich and the first railway in Paris, the Paris and St. Germain, authorised in 1835 and opened in 1837.<sup>25</sup> The French pioneer suburban railway was soon followed by two more lines in the south-western sector of Paris, to Versailles (*rive droite*, 1839; *rive gauche*, 1840). As on the Greenwich, the St. Germain's traffic was highly seasonal, with little regular commuting; and the great hope of Emile Péreire, its principal promoter, was that his entry into the city would become the Paris railhead for all of northern and western France. There were four tracks, partly in tunnel, in the Batignolles area leading to the station at the Place de l'Europe to provide adequately for other companies' trains; and in the result, though the Nord made its own entry, St. Lazare (not the Madeleine, as Péreire had hoped) did become the terminus of the Ouest system established in 1855. The St. Germain company, like the Greenwich, did very well out of tolls charged on other owners' trains.

The physical impact of these two railways on the topography of London was obvious; but their independent lives were too short to allow any conclusion to be drawn about their effect on the communities in the places that they served. The L. & G. must almost certainly have promoted residential development which would not otherwise have taken place at Deptford and Greenwich, but this cannot be proved. It was, however, without doubt very helpful in providing facilities for the development of Mr. J. Stone's business from that of a Deptford coppersmith to that of a large general engineering firm, for Mr. Stone, who rented two Greenwich railway arches in 1842, proceeded to occupy more arch space until 1881, when he built a factory beside the line. We can be sure that the railways continued and enlarged the familiar process of immigration into the capital from other parts of the country, as with the Liverpool engine drivers; and indeed from Ireland also — the original L. & G. contractor, McIntosh, employed many Irish navvies and lodged them separately off Tooley Street;

English Ground is the name of an alley off Battle Bridge Lane, Irish Ground is (or was until recently) not far away, segregation being required in the interests of good order.

The City's original opposition to the Blackwall railway had raised certain questions of policy as between the legislature and the railways, which were to be settled, on the whole in the railways' favour, in the ensuing decades. But clearance of working-class property, although not much was said about it in the 1830s (indeed, in some ways it was regarded as a beneficial activity), became an increasingly difficult point for the railways to meet as Parliament's requirements in this regard became stiffer. In the early sixties the institution of cheap workmen's tickets was hit on and adopted as a supplementary obligation, in addition to the original payment of compensation, to be borne by the railways benefiting from large metropolitan clearances.<sup>26</sup>

It is to be noted that these two railway schemes secured Parliamentary authority without serious difficulty; even the Blackwall, with its audacious proposal to penetrate the City, got virtually all it was seeking after only a year's delay. There had been opposition to both, with a considerable amount of outcry from vested interests; but the significant thing is that, although the squawks of protest were loud, the railways did get what they wanted. Historians of railways have sometimes confused loudness of protest with effectiveness of opposition; but in London at any rate, and also I suspect throughout Britain (except perhaps in Wordsworth's Lake District, and in other areas of national beauty which, on second thoughts, seemed not to promise much in the way of revenue returns), the loud noises did not have much, or very lasting, effect. As the railway companies projected their developments in the London area in the ensuing years and decades, the results turned out very similar to those of the thirties; sometimes they did not get all they wanted at the first time of asking, and sometimes they had to pay amounts that seemed to them extortionate, but generally they got where they wanted to. It was *opposition from another railway*, not from other kinds of interests or from public bodies, that was to be feared, for that could be very effective.

The contrast with the experience of tramway promoters in London is striking.<sup>27</sup> Parallel rails were successfully prevented from appearing in the streets of the City, Westminster, Marylebone, Kensington, and Chelsea, not only at the first attempt but always. If the railways had been subject to local authorities' veto, as tramways were, the railway map of London might have looked very different; but they were able to obtain their sanction from Parliament, and there they usually prevailed (at a cost).

Finally, a few words from a passenger of the past proclaiming a heartfelt grievance that is not absent from the London railway scene today.<sup>28</sup>

“Greenwich Railway

“Sir, I went yesterday by the above Railway, and as they profess to go every quarter of an hour, I was at their London entrance at about 35 minutes after four, hoping to leave at the quarter to 5. I bivouacked about 5 minutes over a coke fire, when the person who received the checks said (alluding to the engine) ‘Here she comes’, and I was directed by another person to get into a carriage. I did so. It soon filled, and it was presumed that the train would have started. Five o’clock came — a quarter after passed — still we were all kept at London. On asking the cause for not going, no satisfactory reason was given. Passengers were still arriving; sixpences were taken; continued application was made for seats in the overloaded carriages, and, at half-past-five we moved. Having proceeded

about 200 or 300 yards, the whole train returned to hook on to the half-hour train (the half-past-five), and we got to Deptford, after a very slow passage, at a few minutes before six.

“It is understood that an accident occurred by the breaking down of an up-town train; and what I complain of is, that knowing that assistance was sent off, no intimation was given to those who might be in a hurry, no explanations, no apology for the delay, except, on arrival at Deptford an assistant accounted for the delay by the train being overloaded.

“. . . the concern has got your money, and then they laugh at you. Should this be? . . .”

This is the authentic voice of the London passenger: “At least tell me how long the delay is going to last, then I can decide what to do”. The management of 1838 had a lot to learn about him. Nearly 140 years later, he still runs true to the form set by his ancestors and is rarely reticent in informing the managers how they could improve the running of their railways. Even if we don’t retire into the escapist cliché “plus ça change, plus c’est la même chose”, we can still accept that some fundamental attitudes and principles persist over centuries with surprisingly little real change.

## NOTES

1. C. E. Lee, *The Evolution of Railways* (1943), 104; M. Robbins, *The Railway Age* (Penguin ed., 1965), 12-17.
2. C. E. Lee, “Tyneside Tramroads of Northumberland”, *Transactions of the Newcomen Society*, 26 (1947/8/9), 199-229; B. Baxter, *Stone Blocks and Iron Rails* (1966); M. J. T. Lewis, *Early Wooden Railways* (1970).
3. C. E. Lee, “Early Railways in Surrey”, *Transactions of the Newcomen Society*, 21 (1940-1), 49; C. E. C. Townsend, “Further Notes” on the same, *ibid.*, 27 (1949-51), 51.
4. H. W. Dickinson and A. Titley, *Richard Trevithick: the Engineer and the Man* (1934), 105-13; F. J. G. Haut, *History of the Electric Locomotive* (1969), 23; J. Pécheux, *L’Age d’Or du Rail Européen* (1975), 84.
5. Dickinson and Titley, 93.
6. E. A. Forward, “Simon Goodrich and his work as an Engineer”, *Transactions of the Newcomen Society*, 18 (1937-8), 16, 27; but the 1810 railroad can hardly have been of Palmer’s suspended type which was not patented until 1821.
7. F. Wishaw, *The Railways of Great Britain and Ireland* (1842), 256; “the granite blocks of which tram remain to this day”, J. C. Jeaffreson, *Life of Robert Stephenson* (1864), i, 227.
8. C. von Oeynhausen and H. von Dechen, *Railways in England 1826 and 1827* (1971), 75-7; M. Robbins, “H. R. Palmer: a forgotten railway pioneer”, *Railway Magazine*, 99 (1953), 658 (reprinted in *Points and Signals* (1967), 36); J. B. Ashby, “The First Suspension Railway”, *ibid.*, 96 (1950), 270; C. F. D. Marshall, *History of British Railways down to the Year 1830* (1938), 171-4.
9. H. P. Spratt, *The Birth of the Steamboat* (1958), 87, 95-6; G. Body, *British Paddle Steamers* (1971); for the whole paragraph, T. C. Barker and M. Robbins, *History of London Transport*, i (1963), 40-3.
10. R. H. G. Thomas, *London’s First Railway* (1972), is an admirable study, with full references to original sources; see also T. C. Barker and M. Robbins, *History of London Transport*, i (1963), 44-8.
11. *Quarterly Review*, 31 (1825), 362.
12. A. Gibb, *Story of Telford* (1936), 320; not mentioned in L. T. C. Rolt, *Thomas Telford* (1958).
13. D. S. Barrie, *The Taff Vale Railway* (1939), 29.
14. R. B. Fellows, *The Canterbury & Whitstable Railway* (1930), 46.
15. R. H. G. Thomas, *London’s First Railway* (1972), 102 and 254 n.21, citing “Veritas Vincit”, *Railway Locomotive Management* (1847), no page given; Simon Fenwick, driver of L.M.R. Goliab, *ibid.*, 30.
16. On Landmann, see *Dictionary of National Biography* (in which his connection with the Greenwich railway is not mentioned); Preston & Wyre, J. Marshall, *Lancashire & Yorkshire Railway*, i (1969), 81, 83; on Akerman, D.N.B. and J. Evans, *History of the Society of Antiquaries* (1956), 255-6.

17. There is no published study of the London & Blackwall Railway similar to Mr. Thomas's on the London & Greenwich. The subject is well worth detailed treatment, from archives and contemporary printed sources. Particulars in the text have been drawn from scattered secondary sources, as follows:  
 F. Wishaw, *Railways of Great Britain and Ireland* (1842), 255-69; J. C. Jeaffreson, *Life of Robert Stephenson* (1864), i, 227-31; *Autobiography of Sir John Rennie* (1875), 293-4; H. G. Lewin, *Early British Railways* [1925], 46, 89, 117; *id.*, *The Railway Mania and its Aftermath 1845-1852* (1936), 22, 99-100, 112, 133, 143; G. A. Sekon, *Locomotion in Victorian London* (1938), 143-5; *id.*, "1825-1925: a Centenary of Railway Steamships, Docks, Hotels, etc.", *Railway Magazine*, 57 (1925), 469; E. Course, *London Railways* (1962), 117-36; T. C. Barker and M. Robbins, *History of London Transport*, i (1963), 48-52; G. Body and R. L. Eastleigh, *London & Blackwall Railway* (1964); J. R. Kellett, *Impact of Railways on Victorian Cities* (1969), 41-2, 259-60, 269-72; A. A. Jackson, *London's Termini* (1969), 128-30; T. R. Powel, "London's Loneliest Line", *Railway Magazine*, 79 (1936), 47; C. E. Lee, "The London & Blackwall Cable Railway", *ibid.*, 87 (1941), 424; anon., "Some Notes on the Blackwall Railway", *ibid.*, 94, (1948), 185; the roofless thirds, A. R. Bennett, *The First Railway in London* (1912), 24.
18. J. Simmons, "Railway History in English Local Records", *Journal of Transport History*, 1 (1954), 163. This article has been cited by later writers in support of the incorrect assertion that the houses of 2,850 people were jeopardised by the railway; in fact, it was either 850 or 2,000: H. J. Dyos, "Railways and Housing in Victorian London", *Journal of Transport History*, 2 (1956), 12, wrote "2,850 people were threatened"; F. H. W. Sheppard, *London 1808-1870: The Infernal Wen* (1971), 134, followed this wording; H. J. Dyos and D. H. Aldcroft, *British Transport* (Penguin ed., 1974), 191, "the L. & B.R. threatened nearly three thousand houses in 1836".
19. A. Wightman, traffic superintendent, L. & B.R., to Royal Commission on Metropolitan Railway Termini (1846), Q.1123, cited by J. R. Kellett, *The Impact of Railways on Victorian Cities* (1969), 40-2; H. G. Lewin, *The Railway Mania and its Aftermath* (1936), 133.
20. J. H. Clapham, *Economic History of Modern Britain*, i (1926), 381.
21. Half-yearly report, 1847, quoted by H. G. Lewin, *The Railway Mania and its Aftermath* (1936), 142.
22. For some observations on this turn of events, M. Robbins, "London Railway Stations", *London Journal*, 1 (1975), 240.
23. J. C. Jeaffreson, *Life of Robert Stephenson* (1864), i, 278; J. R. Kellett, *Impact of Railways on Victorian Cities* (1969), 272, 333; M. C. Reed, *Investment in Railways in Britain 1820-1844* (1975), 232, 245, citing T. E. Gregory, *The Westminster Bank through a Century* (1936), i, 267.
24. J. Francis, *History of the English Railway* (1851), ii, 13.
25. P. Dauzet, *Le Siècle des Chemins de Fer en France 1821-1938* (1948), 38-42, 47-8; *Histoire des Chemins de Fer en France* (1963), ch. 2, (by J. Falaize); B. M. Ratcliffe, "Origins of the Paris-St. Germain Railway", *Journal of Transport History*, n.s. 1 (1972), 197; *id.*, "The Building of the Paris-St. Germain Railway", *ibid.*, n.s. 2 (1974), 20; *id.*, "Railway Imperialism", *Business History*, 18 (1976), 66.
26. H. J. Dyos, "Railways and Housing in Victorian London", *Journal of Transport History*, 2 (1956), 11, 90; *id.*, "Some Social Costs of Railway Building in London", *ibid.*, 3 (1958), 23; J. R. Kellett, *The Impact of Railways on Victorian Cities* (1969), esp. ch. 2 and pp. 324-36; on workmen's fares, C. E. Lee, *Passenger Class Distinctions* (1946), ch. 7.
27. T. C. Barker and M. Robbins, *History of London Transport*, i (1963), 178-97; ii (1974), 15-34, 88-9.
28. *The Times*, 17 February 1838.

# JOHN STOW

AN ADDRESS DELIVERED IN ST. ANDREW'S UNDERSHAFT AT THE ANNUAL  
JOHN STOW COMMEMORATION SERVICE, 20th APRIL, 1977

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John Stow, chronicler and antiquary, was born about 1525 in the parish of St. Michael, Cornhill. From about 1570 he lived in a house near Leadenhall and worshipped regularly in this church to which his mortal remains were committed for safe keeping on 8th April, 1605, 372 years ago. His life extended over five reigns from Henry VII to James I, one of the most momentous periods of our history.

Stow in early life was a tailor and until his death an honoured member of the Merchant Taylors' Company but from 1560 onwards his time was mainly spent in the collection of printed books, legal and literary documents, and charters, and in the transcription of MSS dealing with English history, archaeology and literature. His researches certainly established his reputation amongst the notable scholars of his age. He was a friend of Archbishop Parker and the leading antiquaries of the day — William Lambarde, Henry Saville, Camden, John Dee the astrologer, and Robert Glover, the Somerset Herald, and when the old Society of Antiquaries was founded c.1572 under the patronage of Parker it was natural that Stow should become a member. Stow made great use of City and other records and it is to Stow and others like him that we owe the preservation of so many records from the monasteries which were suppressed when he was young. His private collection of MSS was a considerable one and included not only the registers of many important London monasteries such as Holy Trinity, Aldgate, the Nuns' Priory and Hospital of St. John at Clerkenwell, and St. Augustine Papey, but also the Liber S. Bartholomei, a history of St. Bartholomew's Priory, and the works of many of the great medieval historians like William of Malmesbury, Henry of Huntingdon, and Roger Hovenden.

His publications, which all had the long titles so customary in his day, included his 'Summarie of Englyshe Chronicles conteynyng the true accompt of yeres wherein every Kyng of this Realme . . . began theyr reigne, howe long they reigned, and what notable thynges hath bene doone, duryng theyr Reygnes. Wyth also the names and yeares of all the Bylyffes, custos, maiors, and sheriffes of the Citie of London sens the Conqueste, dyligently collected by J. Stow' which was published in 1565, and The Chronicles of England in 1580, which re-appeared a few years later as The Annals of England. In addition to these, which were the results of his own historical studies, he saw through the press editions of Matthew of Westminster's 'Flores Historiarum'; Matthew Paris's 'Chronica Majora'; Thomas Walsingham's 'Historia Anglicana'; Holinshed's 'Chronicle' and 'The Workes of Geffrey Chaucer, newly printed, with divers addicions whiche were never in printe before'. The best known result of his own researches was, however, the famous 'Survey of London conteynyng the Originall, Antiquity, Increase, Moderne estate, and description of that City, written in the year 1598 by John Stow Citizen of London.'

What Stow saw he recorded with painstaking thoroughness and fidelity. He was immensely proud of his City, of the characters and achievements of its citizens, of its history, its traditions and its institutions. We are left in no doubt, for example, as to his love for London's river. Stow calls the Thames 'the most famous river of this island . . . by which all kind of merchandise be easily conveyed to London, the principal store-house and staple of all commodities within this realm',<sup>1</sup> and in the section which he entitles 'The enumeration of such benefits as redound to the Prince and this Realme by this City' he includes 'By the benefit of the river of Thames, and great trade of merchandise, it is the chief maker of mariners, and nurse of our navy; and ships (as men know) be the wooden walls for defence of our realm.'<sup>2</sup>

Stow describes the churches of London, great and small, with tremendous affection. He writes: 'There were in this city, and within the suburbs thereof, in the reign of Henry II, thirteen great conventual churches, besides the lesser sort called parish churches, to the number of one hundred and twenty-six, all which conventual churches, and some others since that time founded, are now suppressed and gone, except the cathedral church of St. Paul in London, and the college of St. Peter at Westminster.'<sup>3</sup> What loving care he devotes to his description of old St. Paul's, the foundation, the building, the chapels, the Chapter House, the charnel house, the cloisters, and, above all, his painstaking listing of the numerous monuments in this and other churches, many of them now, alas, lost for ever.

In St. Paul's Stow mentions about one hundred monuments by name with the qualification 'these, as the chief, have I noted to be buried there'. They include numerous kings, bishops, and mayors, and such *great Elizabethans* as *Sir Philip Sidney*, *Sir Francis Walsingham*, principal secretary and chancellor of the duchy of Lancaster, and *Sir Christopher Hatton*, lord chancellor of England, knight of the Garter, the latter buried under a monument of such size and magnificence that it prompted the verse:

'Philip and Francis have no tombe,  
For great Christopher takes all the roome.'<sup>4</sup>

In the same way he enthuses over 'the famous monastery of Westminster', giving details of its foundation, its rebuilding under Edward the Confessor, and the addition of Henry VII's 'sumptuous chapel' with its altar and sepulture made and finished in 1519 by one Peter a painter of Florence.<sup>5</sup> He lists those whose tombs he saw there, kings, queens, bishops and other notables. Indeed, every church in London, great and small, was visited and all noteworthy monuments carefully described. His pride in them all is clearly shown by the enthusiasm of his descriptions.

Stow shows equal enthusiasm for the schools and places of learning connected with London. He regrets that 'as to me it seemeth, by the increase of colleges and students in the universities of Oxford and Cambridge, the frequenting of schools, and exercises of scholars in the city . . . hath much decreased.'<sup>6</sup> He tells us that 'The three principal churches which had these famous schools . . . must needs be the cathedral church of St. Paul for one . . . The second, as most ancient, may seem to have been the monastery of St. Peter's at Westminster, whereof Ingulphus, Abbot of Crowland, in the reign of William the Conqueror, writeth thus: 'I, Ingulphus, an humble servant of God, born of English parents, in the most beautiful city of London, for to attain to learning, was first put to Westminster, and after to study at Oxford' . . . The third school seemeth to have been in the monastery of St. Saviour at Bermondsey in Southwark.'<sup>7</sup>

Concerning 'schools more lately advanced in this city' he goes on to tell us that St. Paul's School was refounded and 'largely endowed, in the year 1512, by John Colet, Doctor of Divinity, Dean of Paul's, for one hundred and fifty-three poor men's children'<sup>8</sup> and that 'in the year 1553, after the erection of Christ's hospital, in the late dissolved house of the Gray Friars, a great number of poor children being taken in, a school was also ordained there at the citizen's charges.'<sup>9</sup> He tells us also that 'in the year 1561, the Merchant Taylors of London founded a notable free grammer school, in the parish of St. Laurence Poultney by Candleweeke Street.'<sup>10</sup>

Still on education he goes on to regret that 'the meeting of the schoolmasters on festival days, at festival churches, and the disputing of their scholars logically . . . was long since discontinued; but the arguing of the schoolboys about the principles of grammar hath been continued even till our time; for I myself, in my youth, have yearly seen, on the eve of St. Bartholomew the Apostle, the scholars of divers grammar schools repair unto the churchyard of St. Bartholomew, the priory in Smithfield . . . amongst others, the masters and scholars of the free schools of St. Paul's in London, of St. Peter's at Westminster, of St. Thomas Acon's hospital, and of St. Anthonie's hospital; whereof the last named commonly presented the best scholars, and had the prize in those days.'<sup>11</sup>

Schools were also founded in connection with chantries, hospitals and other religious foundations. Stow tells us that 'The honourable and famous merchant, Simon Eyre . . . once mayor of this city, citizen and draper . . . (who) departed out of this life, the 18th day of September . . . 1549, and . . . was buried in the parish church of St. Mary Woolnoth, in Lombard Street . . . gave by his testament . . . three thousand marks to the drapers on condition they should, within one year of his decease, establish perpetually a master or warden, five secular priests, six clerks, and two choristers, to sing daily Divine service . . . in his chapel of the Leaden hall; also, one master with an usher, for grammar, one master for writing, and the third for song, with housing there newly built for them for ever . . .'<sup>12</sup> St. Anthony's hospital, mentioned earlier for the standard of its debating, was, according to Stow 'founded in the parish of St. Bennet Finke, for a master, two priests, one schoolmaster, and twelve poor men . . . (and) amongst other things was given to this hospital, one messuage and garden, whereon was built the fair large free school . . .'<sup>13</sup> Later Henry VI gave to the Master of St. Anthony's hospital . . . property and pensions . . . towards the maintenance of five scholars in the University of Oxford, to be brought up in the faculty of arts . . . the sayd scholars (to) be first instructed in the rudiments of grammar at the college of Eton, founded by the said Henry.'<sup>14</sup>

Stow also gives many examples of schools founded in other parts of the country by citizens and mayors of London, but we shall have to be content with the mention of a few. For example 'William Sevenoke, grocer, founded in the town of Sevenoke, in Kent, a free school for poor men's children'<sup>15</sup> 'Sir John Percivall, merchant taylor, mayor, 1498, founded a grammar school at Macklefield in Cheshire, where he was born' . . . 'The Lady Thomasine, his wife founded the like free school, together with fair lodgings for the schoolmasters, scholars and other, and added twenty pounds of yearly revenue for supporting the charges, at St. Mary Wike in Cornwall, where she was born,'<sup>16</sup> and 'Stephen Gennings, Merchant Taylor, Mayor, 1509, founded a fair grammar school at Ulfrimhampton in Staffordshire . . . and also built a great part of his parish church, called St. Andrew's Undershaft in London.'<sup>17</sup> In the realm of higher education Stow tells us that 'Sir Thomas White, Merchant Taylor,

mayor, 1554, founded St. John's College, Oxford'<sup>18</sup> and that Sir Thomas Gresham, mercer, 1566, amongst his many benefactions, made provision for lectures in a variety of subjects.<sup>19</sup> Of the houses of students in the Common Law he writes: 'there is in and about this city, a whole university, as it were, of students, practicers or pleaders, and judges of the laws of this realm . . . fourteen houses (or Inns) in all'.<sup>20</sup> Stow was proud of the schools of London and of the contribution of Londoners to the development of education in sixteenth century England.

In addition to describing the river, the churches and schools already mentioned Stow takes us on a perambulation of the city ward by ward, street by street, even into courts and alleys, describing city walls, gates, castles, towers, hospitals and lazar houses, telling of the orders and customs of the citizens as well as their sports and pastimes, even giving a description of the livery of the mayor and sheriffs and the order of precedence of the Companies of London at the Lord Mayor's feast. Although the book contains many errors it is because of Stow's observations and descriptions that we are able to visualise medieval London as it appeared before the destruction of the Great Fire — sixty-eight years after the publication of the Survey.

It is evident that his researches cost him a great deal of effort and money. Of his Summary in 1598 he writes: 'It hath cost me many a weary mile's travel, many a hard-earned penny and pound, and many a cold winter night's study.' The same must have applied to all his work, but there is little evidence that Stow made much out of his writings. We know that the Merchant Taylors' allowed him a pension of £4 a year as early as 1579, and that this was increased later to around £10. The Merchant Taylors' also paid him a fee of ten shillings in 1603 for 'great pains by him taken in searching for such as have been mayors, sheriffs, and aldermen of the said company'. In 1595 Stow is referred to as the 'fee'd Chronicler' of the Corporation, but his pecuniary difficulties grew with the years, and were at length brought to the notice of the government. On 8th March 1603-4 letters patent were issued authorising Stow to 'collect voluntary contributions and kind gratuities' but although Stow set up receptacles for alms in the streets, the citizens were not over-generous with their contributions. Three months before his death it is recorded 'that there was gathered, in the church of St. Margaret, Lothbury, by the King's letters patent for John Stow, cronaklemacker, the sum of 5s.3d.' So much for a lifetime of labour.

However, just as he loved to praise famous men and rejoiced in their good deeds, so we have no hesitation today in praising him for his unique contribution to our knowledge of the history of this famous city.

#### NOTES

1. John Stow. *The Survey of London*, ed. H. B. Wheatley, Everyman 1970, p.13.
2. *ibid.* p.496
3. *ibid.* p.433
4. *ibid.* p.302.
5. *ibid.* p.407.
6. *ibid.* p.66.
7. *ibid.* pp.66-7.
8. *ibid.* p.68.
9. *ibid.*
10. *ibid.*
11. *ibid.*
12. *ibid.* p.139
13. *ibid.* p.165.
14. *ibid.*
15. *ibid.* p.99
16. *ibid.* p.101-2.
17. *ibid.* p.102.
18. *ibid.* p.103.
19. *ibid.* p.70 & p.104.
20. *ibid.* p.70.

# THE BRASSES OF MIDDLESEX

## *Part 18: HORNSEY (including Highgate)*

H. K. CAMERON, M.A., Ph.D., F.S.A.

### HORNSEY

There is at present no parish church of St. Mary at Hornsey. The tower of a church rebuilt at the beginning of the 16th century remains, though now closed as a protection against vandals. The church itself was demolished and replaced in 1832 by one built in white brick to a design by G. Smith. The original tower was heightened and became part of the new church. This church in turn became too small to serve the parish needs of the late 19th century and a 'new' church was built further to the east to a design of James Brooks in 1889. A west porch was added in 1911, but the intended new spire could not be put up because of the unstable nature of the soil. Smith's church was left to decay, being finally pulled down in 1927. After much structural trouble the 'new' church had to be demolished in 1969/70. A new church is to be built, but there have been long delays in accepting the new designs and the consequential escalated cost has meant yet further delay. Meanwhile the brasses have been moved from church to church and finally to the Rectory, where they are now preserved.

I. Richard Ruggenale and wives Isabella and Alice; inscription only.

An inscription plate, 15 3/4 inches wide and 2 1/2 inches high is engraved with two lines of blackletter, reading:-

Hic iacent Ricūs Ruggenale et Isabella ac

Alicia uxores eius quor aiābs ppicietur deus Amē

The style of the script suggests a date in the first half of the 15th century; Mill Stephenson has put it about 1420. The name has not been found in any references or records so far examined.



Fig. 1 — Richard Ruggenale and wives; mid 15th century. Hornsey.

II. John Skevington, a child in chrysom robes with inscription; shield lost; c.1520.

The small figure, seven inches high, is a good example of this type of portrayal of children



Fig. 2 — John Skevington c.1520. Hornsey

in which a newly-baptised infant was swathed in a chrysom robe and in which it was buried if it died within the month. The face on this example appears disproportionately small. On the inscription plate, 10  $\frac{3}{4}$  inches wide and 2 inches high, is the following in two lines of blackletter:-

Jhū criste mari is son have  
mci o the soul of Johū Skevington

Lysons<sup>1</sup> has no more to say of the brass, but adds that the Skevynghons were an ancient family, settled at Bromfield in this parish. In the copy of Lysons in the Guildhall Library there is bound in a drawing by Fisher of this brass showing a shield below the inscription.

There is no indication of parentage on the brass. The most likely descent is from Sir John Skevyngton who held property in the County of Middlesex, as well as in Staffordshire, Holderness in Yorkshire, Skevington in Leicestershire and in the City of London. In his will<sup>2</sup> made on the last day of December, 1524 he describes himself as knight and citizen and alderman of the City of London and merchant of the Staple at the Town of Calais. He asks for his body to be buried in the high quire of the conventuall church of the Crossed Friars beside the Tower of London 'in such a convenient place there as my right trusty frends Benjamyn Digbe mercer Richard Farmer merchant of the Staple aforesaid Robert Shethes and Guy Rawlynson mchaunt tayllours citizens of London', whom he appoints his executors, shall think most expedient; provided that he dies within the city or within a circuit of ten miles of the same. He divides his total wealth into three equal parts 'according to the ancient laudable custom of this City of London.' One part goes to Dame Elizabeth his wife. A second part goes to his son William 'forasmore as Elizabeth my daughter hath her preferment before the day of making this my present testament by reason that I married her unto George Griffith sonne and heire apparant of Sir Walter Griffith knyght.' If William should die before reaching the age of 21 his portion is to be distributed 'in good and charitable deeds most acceptable to God for the profit of my soul, the souls of my fater and mother, my childrens souls and all christian souls.' The third and last part is to be 'reserved to myself' for accomplishing his many bequests of which the following are pertinent. He leaves £50 to the Prior and convent of the Crossed Friars for their new building and he 'wills that my said executors shall cause to be made over the place of my sepulture a convenient tombe of marble for me w<sup>th</sup> myn ymage or pictur and w<sup>th</sup> the picture of my saide wife if it shall like her to have her corps there to be buried under the same Tombe with the pictures of our Children at our feet.' He leaves money to the church of St. Michael Cornhill where he was at one time a parishioner and to St. Mary Woolnoth where he now is a parishioner; also to five of his sisters and their children; to his nephew Mathewe Skevyngton £10 and to his nephew Leonard Skevyngton £5. He also leaves to his nephew Matthew 'oon of my best dubletts and jaketts both of black velvet' and to Anthony and Thomas his nephews, brothers of Matthew, a black gown each. To his apprentice Cristofer Vavasour he leaves £10 and 'at my cost and charge he shall be made free in Flaunders of the Feliship of merchaunt adventurers of England.' £5 goes to each of his other apprentices; £20 to his brother Thomas and twenty shillings to 'Maister Cristofer Skevyngton parish priest of St. Mary Woolnoth. To the parish church of Skevington (co. Leics.) 'where I was born' a vestment and 'myn armes to be sett on the crosse thereof.'

There is no direct evidence from this will that Sir John had property in Hornsey, but the name is unusual. Evidently only two children were living at the time the will was made and the surviving son was not called after his father. How unfortunate that the Crossed Friars church and its monuments have not survived, for there the children were 'pictured' at the feet of their parents.

The link with the baby John seems reasonably assured from the arms depicted in Fisher's drawing and Lysons own tricking of the shield in the margin of the Guildhall copy of his book. Both drawings show a quartered shield. The first quarter is shown by Lysons as *argent three bulls' heads erased sable* (Skevington); Fisher's bulls' heads are very indistinct and look more like demi-crabs! The second quarter is *azure a bend cotised between six mullets or*, for Oldbeiffe, correctly shown in the Lysons margin; the Fisher drawing has no cotise to the bend while the field appears to be black rather than blue, perhaps a change of the paint with time.

Both drawings show *argent three Cornish choughs sable*, which is the third quartering in the Lysons margin, but the fourth on Fisher's shield. Lysons fourth quarter is three spades ends; the Fisher third quarter does not appear to show spades, but could be *sable three garbs or*.

The pedigree of Skevington is to be found twice in the Visitation of the County of Leicester made by William Camden in 1619.<sup>3</sup> These two, while in agreement with one another, are clearly in considerable error on the evidence of Sir John Skevington's will quoted above. According to the Visitation Sir John was second son to Sir William Skevyngton who was Master of the Ordnance and Viceroy in Ireland in Henry VIII's reign and he (Sir John) is said to have died without issue; Thomas the third son is credited with two children, Elizabeth who married George Griffith and William. In the will however Elizabeth and William are clearly the children of John, who among other bequests leaves money to his brother Thomas. Sir John moreover appoints as overseer of his will his *brother* Sir William. Bequests to sisters, nephews and others confirm that John was indeed brother and not son to this Sir William. The Visitation describes thirteen components of the arms of Skevington in one of the pedigrees and eight in the other. Four of these are quartered on the shield formerly at Hornsey: 1. Skevington, 2 Oldbeiffe, 3 *Sable three garbs or* (Cambridge), 4 *Argent 3 Cornish choughs sable* (Jenney).

The pedigree shows that Sir John's son William, who was not of age when the will was made, ultimately married Joan Leveson and had seven children, of whom the second son James appears to have lived at Hornsey.

Later in the century there is record in Chesters London Marriage Licences that James Skevington of Hornsey married Anne Cockeram of Hampstead, widow of William Cockeram, on 28th August 1588. Also there was in the church of St. Stephen Coleman Street on the south side of the chancel 'a fair gravestone with epitaph in brass' to George Skevyngton who died in 1581. He too is described as a merchant of the staple (see Stowe/Strype; also his will: P.C.C. 28 Darcy).

III. Thomas and Thomas Priestley, children, 1615; inscription only; palimpsest, on reverse, parts of three civilians, c.1600.

It is recorded in the Appendix to Mill Stephenson's List (1939) that this inscription was found in the crypt of the 'old' church in 1926. A rubbing of both sides in the Cambridge collection made on 4th September 1936 indicates that the brass was then on the wall on the north side of the old tower arch.

A rectangular plate, 16 1/2 inches wide and 6 1/4 inches high, has upon it the following six lines in Roman capitals:-

THOMAS PRIESTLEY THE ELDER BORNE YE 11<sup>TH</sup>  
 MARCH 1611 AND BURIED THE 23<sup>TH</sup> IVNE 1613  
 THOMAS PRIESLEY (sic!) YOUNGER BORNE THE 4<sup>TH</sup>  
 APRILL 1614 AND BVRIED YE 23<sup>TH</sup> IVNE 1615  
 BEINGE YE SONNES OF W<sup>M</sup>PRIESTLEY CITTI=  
 ZEN AND MARCHANT TAYLOR OF LONDON

So factual and brief a memorial to two young children, dying soon after one another at the age of two and one, promotes a sympathetic curiosity at the circumstances surrounding their parentage and whether they were the only children of the marriage. That William Priestley the father, identified as a citizen and merchant tailor of London, was a man of some substance is evident from his will made on 2nd May, 1620.<sup>4</sup> He asks to be buried in 'Allhallowes

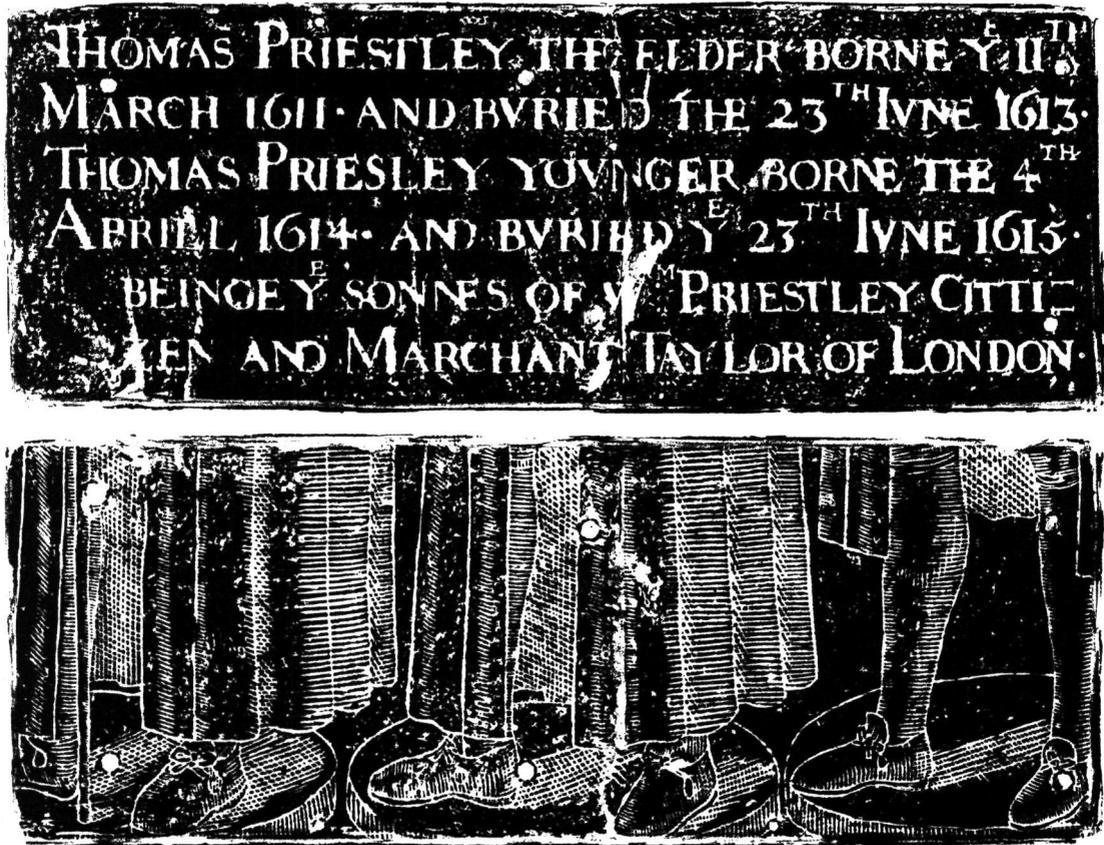


Fig. 3 — Thomas and Thomas Priestley, 1615 with lower part of three civilians, c.1600, on reverse. Hornsey.

church, Breadstreete in the Isle where my two wives lye buried.' After payment of all his debts he leaves to his son William and daughter Elisabeth 'accordinge to the custome of London one moity and halfe parte of all my goodes, chattells, wares and debts equally to be devided between them.' From the other moity many bequests are made, some of small amounts up to £10, often for the purchase of a ring; £2 to the poor children in Brydewell; £50 to the children of Christchurch hospitall in London. The more important bequests are £200 to his brother Robert Priestley; £50 to his sister Marye Gomes Davela; and £1000 to his daughter Martha Cutler 'to be payde to the handes of her husband within a yeare and a half,' putting it in security with the executors 'to leave it to the use of his wife and their children after his decease equally to be divided between them at their dayes of marriage or one and twentie yeares of age.' He also leaves 'to William Cutler the younger and Edward Cutler sonnes of my daughter Cutler, each of them £100 to be paid to William Cutler the father upon security given to my executors. He shall enjoy the benefit until they come to the age of 21.' To the Master and Wardens of the Merchant Taylors Company he leaves £250 in trust for the maintenance of 8 poor men for ever 'allowing each of them fower nobles a yeare'

to be paid quarterly. Four of these men are to be chosen by the Master and Wardens 'of the poore of the said Company'; the other four to be of the parish of Hornesey in the Countie of Middlesex, to be appointed at the discretion of the parson and churchwardens. He also leaves to the Wardens and Company of Merchant Taylors 'one peece of Plate, beinge a Shippe Bason and Ewer of silver and gilt and Mother of pearle, to remaine in the said Company as a perpetual remembrance of me amongst them, and I give unto them the £5 I put into their sayde Hall for provision of corne according to the use.' He also gives £30 'to be bestowed for a dynner for them.'

Other bequests are £30 to two preachers of Godsword to be distributed by them to poor preachers about the City of London 'who want meanes and living'; £15 to the overseers of his will for discharge of small debts among the prisoners in the two prisons of the courts of London; and to Mr. Oswald Moseley and Francis Moseley his brother £10 'to distribute to the poore of the Towne of Manchester where I was brought uppe.'

To his daughter Elisabeth he leaves the lease and term of years 'of the house I now dwell in at Hornesey, two Tenements and the feilds belonging' and the lease and term of yeares 'I have of the groundes which I hold of Mr. Lake in the said parish of Hornesey' with all the household stuff and implements of all sorts in the house at Hornsey. He also bequeaths her the lease and term of years 'which I have and hould of the Company of Goldsmiths in Breadstreet London for term of her natural life' and after that it is to go to his son William. William is to inherit his father's two messuages and tenements in the city of Bristol and at Wyldhill in Hertfordshire and property near to Brewham in the parish of Waltham Abbey in Essex 'and all others in the Realm of England'.

The executors appointed are his son William and 'my brother John Cason of London Grocer.' The latter is entrusted with the care and upbringing of Elisabeth for which a sum of £60 is allocated and John Cason gets £50 for his pains. As overseers of his will he 'desires, entreates and appointe my beloved kinsman Sir Edwarde Prestley knight and Richard Stocke preacher.'

In the Survey of London (Stow/Strype, 1720) there is no mention of William Priestley's benefactions to the Merchant Taylors Company, nor any mention of a monument in All Hallows, Breadstreet. The account of this church does describe the monument erected there to the memory 'of that worthy and faithfull Minister of Christ, Master Richard Stocke, who after 32 Yeeeres spent in the Ministry . . . deceased April 20, 1626.'

On the reverse of this inscription plate is part of an engraving of three civilian figures, each standing on a circular pediment. The two dexter figures both wear long gowns reaching to the ankles; the third figure wears a shorter coat and the legs in hose are exposed from the knees down. The feet of all three are shown in shoes with tied bows. The style of this engraving suggests a date not much earlier than that of the Priestley inscription on the obverse.

## HIGHGATE

In the Survey of London (Stow/Strype, 1720 edition) on page 134 of Appendix 1 we read: "A little farther stands the pleasant town of Highgate, very loftily situated, according to the Import of its Name . . . It hath a Chapel belonging to the Parish of Hornesey: In which are Monuments for divers Persons.'" Seventy five years later Lysons writes that 'This was built

as a chapel of ease for the inhabitants of Highgate and was adjoining the school . . . On floor of the nave are the tombs of Elizabeth, widow of John Jaques Esq., 1624; . . . This 'tomb' was an inscription plate in brass, long since lost. In the library of the Society of Antiquaries is a rubbing of it on which is written in ink 'Highgate 1833', the year in which the chapel was pulled down<sup>5</sup> (Cansick). The rubbing is of a rectangular plate, 10 3/4 inches high and 23 1/4 inches wide on which in eleven lines of Roman capitals is engraved:

HERE LYETH INTERRED (IN ASSURED HOPE OF A IOYFVLL  
RESVRRECTION) ELIZABETH IAQUES WIDDOWE LATE  
WIFE OF IOHN IAQUES ESQ. SHE HAD YSSVE BY HIM FIVE  
SONNES & TWO DAUGHTERS & AFTER LIVED HIS SORROW  
FVLL WIDDOWE NINETEEN YEARES, CLOSING VP HER  
LATEST DAY OF LIFE IN THE 49 YEARE OF HER AGE  
THE 18 DAY OF IVNE AN<sup>o</sup>. DM'. 1624,  
NOE EPITAPH NEED MAKE THIS IVST ONE FAMED  
THE GOOD ARE PRAYSD' WHEN TH' ARE ONLY NAMED  
PIETATIS ERGO KATHARINA SMITH FILIA & THOMA IAQVES  
FILIUS NATV MINIMI MAERORIS POSVERE MATRI SVAE

John Jakes alias Jaques of London, gent. signed his will on 23 October 1605. He left his seal ring with his arms thereon, and also 'my picture in the hall' to his eldest son John, who also inherited the lands and tenements within the City of London and in the town and parish of Waltham Abbey. To his other four sons, Nicholas, Richard, William and Thomas he leaves £40 each and to his two daughters Elizabeth and Katherine £50 each, to be paid on reaching the age of 21 or on marriage. He also gave his youngest son Thomas his copyhold land in Essex and Hertfordshire. To his father-in-law, John Cowper (who also writes the will and signs as Notary and Witness) he grants on behalf of his wife a lease of his house for 21 years at an annual rent of £5. He left 20/- to Mr. Arnold parson of St. Christopher ('or to such as shall preach at my burial'), 40/- to be distributed by the churchwardens to the poor people of St. Christopher's parish; and 20/- each to the poor of the hospitals of Christchurch, St. Thomas in Southwark, and Bridewell. He appointed his wife Elizabeth his sole executrix 'requiring her to be kinde and carefull to my saide children as my truste is in her.' As overseers he appointed his brothers-in-law Richard Boone and John Tey.

1. Lysons, *Environs of London*, Vol. III, p.55 (1795)

2. P.C.C. 40 Bodfelde

3. Harleian Society, Vol. ii, p.7 and also pp.110-112 (1870).

4. P.C.C. 39 Soame

5. Cansick F.T. *Epitaphs of Middlesex*, Vol. 3 p.15 (1875)

#### NEW BOOKS

R. F. Hunnisett: *Editing Records for Publication*, (British Records Association — Archives and the User No. 4.), 1977, 73 pp.2 plates, £4.00.

Intended to replace the British Records Association's *Notes for the Guidance of Editors of Record Publications* (1946) this excellent little book attempts "to formulate and justify simple rules for presenting records in print and to establish from first principles the best ways of resolving the perennial problems involved in editing records". This is a most useful publication which, it is hoped, will lead to greater uniformity in editing practice.

L.S.S.

# A KNIGHT'S FEE AT ACTON, IN THE MANOR OF FULHAM

PAMELA TAYLOR, Ph. D.

The medieval history of much of Middlesex has still been little studied from documentary sources. One reason for this is the difficulty posed by large manors which covered a number of settlements. Local historians have either been daunted to realise that the place in which they are interested is not named in Domesday Book and has no early manorial records of its own, or conversely have been misled by assuming that the boundaries of the named manor corresponded more or less with the boundaries of the parish or borough of the same name. The bishop of London's two large manors of Stepney and Fulham have contributed particularly to this problem. Both are described in Domesday Book as covering a large area with a considerable population;<sup>1</sup> and later evidence confirms that the Book's apparent silence about many settlements with Anglo-Saxon place names is because they were included within these two manors.

The manor of Fulham was assessed at 50 hides in Domesday Book. Five of these were held by the chapter of St. Paul's, and have been identified as Sutton and Chiswick (effectively the land in the loop of the Thames between Old Brentford and Hammersmith).<sup>2</sup> From the evidence of later manorial records the other 45 hides certainly comprised a solid block of land from Fulham and Hammersmith in the east through Acton to Ealing and Drayton in the west, and probably also some land at Finchley. The latter was adjacent to land which was considered part of Stepney, but although the history of this northern block is obscure its allocation between Fulham and Stepney was probably settled before 1066.<sup>3</sup> In 1086, as apparently in 1066, the bishop was holding 40 of these 45 hides himself, but the remaining five were held of him, in 1066 by two sokemen and in 1086 by Fulchered.

No proper attempt has ever been made to identify Fulchered's holding. Feret, who thought it might have been Paddenswick in Hammersmith, and Miss Miles, who suggested Wormholt in Hammersmith, both failed to realise that as the manor of Fulham covered a wider area than modern Fulham and Hammersmith, Fulchered's fee could lie elsewhere.<sup>4</sup> A general study of the bishop of London's estates has shown that in most cases land which was held of him in 1086 was later (and probably then) held by knight service. Equally, although other free tenements sometimes known as manors were created later, they were not normally held by knight service.<sup>5</sup> Within the manor of Fulham there were some of these free tenements, for instance Paddenswick, but they were not held by knight service nor can they have been as large as five hides. The manor of Wormholt was probably created from assarting in the early 12th century and, like many such assarts, it always remained in the bishop's hands.<sup>6</sup> The only land in Fulham which was later regularly recorded as held by military tenure was a five-hide tenement in Acton, held for the service of half a knight. A couple of 14th-century references have been found to premises in Finchley held for a quarter and/or a fifth of a knight, but the lack of earlier and later evidence and the smaller fractions suggest that these may not have been genuine military tenures.<sup>7</sup>

The following account of the five-hide tenement at Acton is still incomplete, and many of the pieces of the documentary jigsaw are missing. It cannot even be proved that this and

Fulchered's tenement were one and the same, although the probability is strong, but some light can be shed on the manorial structure of Acton. Local historians from Lysons onwards have commented on the existence of the main manor, held by the bishop, and of two subordinate ones held respectively by the dean and chapter of St. Paul's and the priory of St. Bartholomew's. But beyond citing a single deed for each sub-manor they have not investigated the relationship between them.<sup>8</sup> It can now be shown that both the sub-manors were formed largely, if not entirely, from the five-hide tenement. The analysis also provides some new information about members of two important families, the FitzAlufs, famous in London history, and a sister of Walter de Merton.

Apart from the absence of records, there are two major difficulties in trying to trace the descent of the tenement. The first lies in the notorious unreliability of medieval land measurement. In Middlesex the hide or carucate traditionally covered 120 acres, but these assessments were originally made as valuations for allocating taxes and other royal impositions, rather than on a strictly areal basis. They were restricted to arable land and continued to exist even when more accurate measurements were known. Deeds which state the number of acres being transferred usually fail to say whether they are conventional or actual, though it is an obvious guess that round figures are more likely to be conventional. In one early 13th-century document to be considered below the donor, having granted 120 acres of arable land and said how many acres lay in each field, adds a croft of unstated size specifically to compensate for the shortfall in the supposed 120 acres.<sup>9</sup> Any attempt to tabulate exactly the amounts of land referred to in the various records founders on this problem, particularly as the tenement contained a considerable amount of non-arable land. On several occasions there are pairs of deeds which must be referring to more or less the same land but which give slightly different totals. Each time it is impossible to say whether the amounts involved varied in fact, in measurement, or even simply through scribal error.

The second problem lies in the complexities of subinfeudation. While the bishop of London, the tenant-in-chief of Acton, could not sell his interest, the actual tenant(s) and any intermediate landlords could sell theirs, even though until the Statute of *Quia Emptores* of 1290 they retained nominal overlordship. The deeds which recorded such transfers usually failed to mention the other landlords, and it is therefore often impossible to obtain any total picture, or to relate individual documents to each other. Our only guideline is that we are tracing a tenement which was originally assessed at five hides, and which owed the service of half a knight to the bishop of London.

After Domesday Book, there are no relevant records until the early 13th century. Although the gap is slightly shortened by references which they make to earlier events, it is the complete silence for the first half of the 12th century which prevents us from proving that it was the Acton tenement which was Fulchered's. The first references to the whole tenement come in 1225 when Peter FitzAluf's tenure of five hides at Acton was challenged by Hamo de Roxeth, who alleged that the land had been held by his grandfather Hamo, his father Ralph and himself. Peter counterclaimed that it had been allowed to remain with his own father, William, by a final concord made in 1179. The extract from the concord entered in 1225 stated that the land was a half-knight's fee at Acton, and that Hamo had quitclaimed it to William and his heirs for a yearly payment of a sore sparrowhawk or 2s. Peter added that this payment had always since been made. When the case was next heard, in Easter term

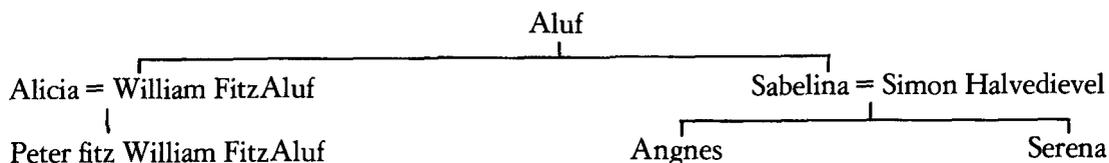
1226, the two parties added nothing to their statements but the bishop of London put in his claim that he held 50 acres of the land himself, and also that Peter held his land from him. Finally, two years later, the jury brought in its verdict: Peter's claim to hold the land of Hamo was stronger than Hamo's to hold it in demesne; the bishop's position was not mentioned.<sup>10</sup>

A few years earlier, in 1211, Peter and his (widowed) mother Alice had been sued for one hide of the land by his cousin Angnes (sic) a grand-daughter of Aluf through her mother Sabelina. Angnes claimed that her mother had held the land at her death, but Peter and Alice replied, successfully, that in the time of Henry II (1154-89) and after the death of Aluf, Peter's father William had recovered it from Sabelina's husband Simon Halvedievel.<sup>11</sup> Sabelina's property would of course have been considered her husband's during their lifetimes.

Both William and Peter were encumbered with debts, and as usually happened at this time they had thus become indebted to Jews. It was in order to meet some of these debts that in the early 1220s Peter sold the bishop of London the 50 acres mentioned in 1226: 40 acres at first and then a further adjacent 10 acres in a field called La Pulle on condition that the bishop paid some of Peter's debts to Aaron son of Abraham son of Auegaie.<sup>12</sup> His father had earlier had to pledge his land to the king. On 13th January 1229 a writ was sent to the sheriff of Middlesex stating that a previous inquisition concerning the lands of William FitzAluf had been insufficient, and ordering him to enquire as to the lands which William had held in the first year of the reign of King Richard (1189-90), which were the king's pledge for debts in Jewry, and as to their present tenant and value. The reply, which is undated, states that in 1189-90 William held 4½ hides and 2s. rent from Ellis de Chicheworth, of which Osbert de Northebrok was now holding 1 hide 13 acres in fee, worth 10s. a year, the bishop of London 50 acres in fee, worth 12s.6d. a year, and Peter fitz William 2½ hides 13 acres in demesne, worth 45s. a year, while three others were holding messuages, two at 16d. and one at 3s. a year.<sup>13</sup> Although the location of William's land is not given, the tenancies confirm that it must have been in Acton: the bishop's 50 acres have already been mentioned, and in November 1230 a foot of fine shows a grant by Peter fitz Alolf of 150 acres in 'Hacerton' to Osbert de Norhtbrok (sic), to hold to him and his heirs of Peter and his by an annual rent of 2s. and performing foreign service.<sup>14</sup> Since medieval inquisitions were notoriously slow it is reasonable to assume that the reply to the writ of January 1229 was not made until after the fine of November 1230 (which could in any case be the written record of a slightly earlier transaction), and that the 133 acres of the former were the same as the round 150 of the latter. Peter, Osbert and the dean of St. Paul's, incidentally, all had debts to the Jews recorded in the Pipe Roll of 1230, which they were paying off in annual instalments.<sup>15</sup>

We therefore know that Peter FitzAluf inherited the tenement from his father William. Exactly how William acquired it is not clear, but it was before 1179. The evidence of the 1211 case suggests that it had been held by William's father Aluf, and also allows one earlier reference to be inferred. In the exchequer lists of knights enfeoffed by the bishop of London in 1166 the Red Book lists 'Simon de Alvedeleye half a knight', but the Black Book gives the name as Simon Alvedevel.<sup>16</sup> No family of either version of the name appears to be associated with any other fee of the bishopric, and it is therefore highly probable that Simon owed the service for his wife's family's tenement in Acton. The next list of knights' fees, made in 1212, unfortunately misses out the bishop's Middlesex fees.<sup>17</sup>

Before turning to the later history of the tenement, it is worth noting that these documents provide the following family tree.



Norman Moore, whose work on the family established that Aluf's father was Fromund and that his own children included Constantine, Fromund, Adam, Arnulf and Alice, guessed that Aluf FitzAluf and William were elder brothers of Constantine.<sup>18</sup> The relationship between Aluf, William and Constantine seems well established: one St. Paul's deed, for example is witnessed by, among others, Aluf fitz Fromund, Aluf FitzAluf and William his brother.<sup>19</sup> As Constantine and Arnulf were active at the turn of the 12th and 13th centuries, and William seems to have been active by 1179 and dead by 1211, Moore's suggestion is probably correct.<sup>20</sup> It is interesting that the same sources which mention the activities of the FitzAlufs also refer to the family of Fulchered. William fitz Fulchered and Robert the brother of Fulchered were both prominent in the early twelfth century,<sup>21</sup> while a list of city rents payable to St. Paul's, made in the first years of the century, records that William fitz Fulchered owed 16d. for land which Teobald had given along with his daughter to Fulchered.<sup>22</sup> There is of course no proof that this is the same Fulchered.

Although the FitzAluf tenancy of the Acton tenement is well established, the question of the immediate overlord is puzzling. The jury in the 1225 case found that the FitzAlufs had held the land of the de Roxeths since at least 1179, while the 1229 inquest reported that in 1189-90 William FitzAluf held it of Ellis de Chicheworth. It is improbable that there were two distinct holdings, especially as the bishop's 50 acres occurs in both inquests, but the absence of any cross-referencing is nevertheless surprising. No later reference to the de Roxeths in Acton has been found, but the de Chicheworths are known to have held land there in the 1230s, when Ellis also witnessed a number of Peter FitzAluf's deeds, and John fitz Isabella de Chycheworth transferred over 100 acres of land there in 1304.<sup>23</sup>

In any event, by the 1220s Peter FitzAluf was disposing of his property without reference to his overlord(s). His sales of 50 acres of land to the bishop of London in the early 1220s and of c.150 acres to Osbert de Northbrook in 1230 have already been mentioned. In both cases he kept his own nominal overlordship, although in 1241 x 1243 after the bishop's land had been transferred to the dean and chapter of St. Paul's, he gave a confirmation which abandoned any claim to rents or services.<sup>24</sup> Meanwhile he sold a large estate to Geoffrey de Lucy, the dean of St. Paul's, and the deeds make it clear that the property was considered as a manor, complete with a manor house and some stock, and not just as isolated parcels of land. There were basically three grants, of which the first two were made in 1229 x 1231 and the third in 1236 x 1239. Several slightly different deeds record the first and main grant, suggesting that it was renegotiated. Finally the dean acquired a house, two gardens, part of a wood, 120 acres of arable of which 80 lay in Northfield and 25 in Eastfield, a croft called Grenestret, three meadows called respectively Bolebrug, La Pulle and Little Meadow, 5 acres of arable land held by a tenant and 2s. annual rent from a tenement (*managio*) held by Walter the parson of Acton. The croft was given in compensation because the supposed 120 acres

was actually less.<sup>25</sup> It is interesting than an earlier version of this grant, which gave the 120 acres and the house, gardens and woodland but not the rest, specifies not only that the dean had paid 60 marks but also that he was to owe the service of a tenth of a knight.<sup>26</sup> This was of course the correct proportion since he was getting one hide of a five-hide tenement for the whole of which Peter FitzAluf owed a half knight. The second grant simply added a piece of land lying between Bolebrug meadow and the Uxbridge Road.<sup>27</sup> The third added 20 further acres of woodland.<sup>28</sup> In 1239 Geoffrey transferred this whole estate, plus 5 acres acquired from Walter de Acton, to the dean and chapter in perpetuity, retaining only a life interest for himself.<sup>29</sup> The dean and chapter had thus acquired a substantial holding at Acton, which was enhanced in the 1240s by the 50 acres from the bishop, and by a grant of three messuages on the north side of the Uxbridge Road. The donor of the latter was Gregory fitz Walter, formerly rector of Acton, but Peter FitzAluf was overlord of the property, and in confirming the grant he waived his right to rents and services.<sup>30</sup>

Peter FitzAluf had thus transferred over a hide of land to St. Paul's and over another hide to Osbert de Northbrook as well as some land to the bishop. He still had the rest of his fee, though, and continued to owe his service of half a knight to the bishop, for which he was listed in the feudal aids of 1242-3.<sup>31</sup> In the next generation William fitz Peter, presumably Peter's son and heir, transferred the fee to Thomas Tayllard and his wife Edith. The documentation is incomplete and although the broad facts are clear some details are missing. In 1256 William transferred one carucate of land to Thomas and Edith, to hold to them and their joint heirs of the chief lords. If they died without joint heirs half was to pass to the other heirs of Edith and half to the heirs of Philip de Conelegh. Thomas and Edith were to pay William 5 marks a year for life.<sup>32</sup> The next relevant deed does not come until 1285, when Thomas and Edith granted a messuage and 2 carucates of land in Acton to William le Seneschal of Evesham, to hold of them and the heirs of Edith, paying them £5 a year during their lifetime and doing other (unspecified) services to the chief lords of the fee. The text seems contradictory, but it suggests that after the deaths of Thomas and Edith William was in fact expected to hold of the chief lords only.<sup>33</sup> In a list of knight's fees dated c.1307 Thomas is entered as owing half a knight's service at Acton.<sup>34</sup> There is therefore no doubt that the Tayllards had received the core of the FitzAluf tenement and, as we shall show, that they passed it on to William of Evesham. Why they received it is less clear since the provisions concerning heirs make it clear that the real recipient was Edith, although as *femme couverte* she could not hold property independently of her husband. The most obvious explanation would be that Edith was William fitz Peter's heiress, but this cannot have been the case as we know that she was one of the six sisters of Walter de Merton, Henry III's chancellor and the founder of Merton College Oxford.<sup>35</sup> Their family pedigree is obscure but even in the highly unlikely event that their father, whose name was William, was the William fitz Peter of Acton, Edith, could not of course have been his heir. There is no sign that any of her siblings had any interests in Acton. Thomas Tayllard was Edith's second husband. She had a son by her first marriage but her only other child became a nun, and she and Thomas therefore had no direct heirs.<sup>36</sup> William le Seneschal of Evesham is also known to have inherited some of her other property.<sup>37</sup>

William of Evesham did not long enjoy his Acton lands. In 1313 he and his wife granted to Adam de Herewynton a messuage, 1½ carucates of arable land, 4 acres of meadow and 15 of wood, and 4s. and 11b of pepper in rents at Acton, to be held (automatically by this date) of

the chief lords.<sup>38</sup> In 1318 two surviving rolls for the barony court of Stortford, which was the court for the bishop of London's tenants by knight service, list Adam 'for Taylard's tenement'.<sup>39</sup> Earlier, in 1309, Adam had also obtained a messuage, 80 acres of land, 2 of meadow and 6 of wood in Acton from John de Paris and his wife Agnes, who had in turn received the messuage, 100 acres of land, 2 of meadow and 6 of wood from John fitz Isabella de Chycheworth in 1304.<sup>40</sup> In 1328 Adam in turn granted to the prior and convent of St. Bartholomew's Smithfield a messuage, 1½ carucates of land, 7 acres of meadow, 60 of pasture and 40 of wood, and rents of 4s.1d. and 1lb of pepper.<sup>41</sup> Although the totals once again fail to match exactly, his grant must have included most, and probably all of William of Evesham's land. In the 1353 and later feudal aids it was the prior of St. Bartholomew's who answered for the half-knight's fee in Acton.<sup>41</sup> The line of descent of the core of the fee on which the service was owed is thus established.

The documents which allow the descent of the tenement to be traced also provide some evidence for its location and add to our general knowledge of the topography of medieval Acton. From their later history, Lysons and subsequent local historians identified the dean and chapter estate as Berrymead (Mill Hill Park), and the St. Bartholomew's holding as Friars Place. Attempts to give the exact boundaries of the former were confused because the true size of the original grant was not realised, and of course the relationship between the two was not understood.<sup>42</sup> The deeds of the 1220s and 30s confirm that much of the land which the dean and chapter received lay in the south-west corner of Acton, between Bollo Bridge (at the junction of Gunnersbury Lane and Bollo Lane) and the Uxbridge Road, and they give us several otherwise unknown field names there: a field and a meadow called La Pulle, meadows called Bolebrug' and Little Meadow, crofts called Wlfrichescroft, New Reding and Grenestret, and pasture called Bruerie. But they also show that the dean and chapter gained land north of the Uxbridge Road, 80 acres in Northfield and 25 in Eastfield. The latter was still partly unenclosed in the 19th century and so appears by name on the 1805 map of the parish, immediately north of the Uxbridge Road and east of East Acton Lane. If it previously crossed the lane it would have included the enclosed land then belonging to the Almoner of St. Paul's, now Acton Park.<sup>43</sup> Northfield had by then vanished, but 20 unenclosed acres are recorded on a map of 1683, lying immediately north of Friars Place, and presumably earlier it covered all the arable land north of East Acton and west of Friars Place Lane.<sup>44</sup> This of course dovetails with the St. Bartholomew's estate centred on Friars Place.<sup>45</sup> The whole tenement was thus distributed over a broad swathe of Acton. The bishop of London was of course overlord of the whole of Acton but he had no demesne land there, and this may well have been because of the existence of the tenement.

The account is still incomplete, and it is to be hoped that further research will add to, and modify it. There are certainly some loose ends, in particular the origins of the two further substantial grants licensed to be made to St. Bartholomew's in the later 14th century.<sup>46</sup> But despite its limitations what has been established provides a better framework for the medieval history of Acton.

#### FOOTNOTES

1. *Domesday Book*, i, ff. 127-127b; in translation in *Victoria County History of Middlesex*, i, London 1969, pp. 120-21.
2. M. Gibbs (ed.) *Early Charters of St. Paul's Cathedral*, Camden Society Third Series vol. 1viii, London 1939,

p.xxiii. This estate also included an outlying piece of woodland, Eldeholt, at Old Oak common: A. Harper Smith, 'East Acton, A Middlesex Hamlet', Essay for London University Extension Diploma in History, 1967, pp.34-36.

3. See P. J. Taylor, 'The Estates of the Bishopric of London from the 7th century to the early 16th century' London Ph.D thesis 1976, pp.18-21, 30-31.
4. C. J. Feret, *Fulham Old and New*, London 1900, i, p.12; P. D. Whitting (ed) *A History of Hammersmith*, London 1965, p. 83.
5. Taylor, *op.cit.*, ch.2.3
6. For Wormholt see Taylor, *op.cit.*, *passim*
7. T. E. Tomlins, *A perambulation of Islington*, London 1858, p.69; *Feudal Aids*, iii, p.374
8. The only published history of Acton, W. K. Baker, *Acton, Middlesex*, London 1912, is unreliable for early history. Better accounts are by G. H. Monson, printed in serial form in *Acton Hospital Gazette*, Acton 1934-35, and R. N. G. Rowland, 'The Street-Names of Acton, Middlesex', typescript Acton 1967; bound copies London Borough of Ealing, Acton Reference Library
9. Gibbs, *op.cit.*, no.330
10. *Curia Regis Rolls*, vol. xii nos.489, 1897, vol. xiii no.540
11. *Ibid.*, vol. vi pp.161-62, 283, 309
12. Gibbs, *op.cit.*, no. 329; St. Paul's Cathedral Library MS A32/605
13. *Calendar of Inquisitions Miscellaneous (Chancery)*, 1219-1422 vol. i no.4
14. P.R.O. CP25(1) 146/8 no.79
15. *Pipe Roll 14 Henry III 1230*, Pipe Roll Society NS vol. iv, London 1927, pp.101-02; see also *Pipe Roll 26 Henry III 1241-42* H. L. Cannon (ed), Yale Historical Publications Manuscripts and Edited Texts vol. v, Yale 1918, p.285
16. *Red Book of the Exchequer*, Rolls Series 1896, vol. ii, p.187
17. See Taylor, *op.cit.*, ch.2.3
18. N. Moore, *The History of St. Bartholomew's Hospital*, London 1918, vol. i, pp.288-321 *passim*
19. *Ninth Report of Royal Commission on Historical Manuscripts*, Appendix, p.21b no.1528
20. As well as the deeds above see for instance *Pipe Rolls*, *passim*
21. E.g. *Pipe Roll* pf 1130, and Appendix to *Ninth Report*
22. J. E. Price, *A Descriptive Account of the Guildhall of the City of London: its History and Associations*, London 1886, pp.16-21
23. Gibbs, *op.cit.*, nos.330-33, 335; P.R.O. CP25(1) 148/37 no.303
24. St. Paul's MS A28/232
25. Gibbs, *op.cit.*, no.330; she dates c.1229-37, but from the property descriptions it must have been made before no.331, which she dates 1229-31.
26. St. Paul's MS A32/603
27. Gibbs, *op.cit.*, no.331; this is one parcel of land only
28. *Ibid.*, no.335
29. *Ibid.*, no.333
30. St. Paul's MSS A32/611, A30/427
31. *Liber Feodorum: The Book of Fees commonly called Testa de Nevill*, pp.897, 899
32. P.R.O. CP25(1) 147/19 no.373
33. P.R.O. CP25(1) 148/30 no.138
34. Tomlins, *loc.cit*
35. E. Hobhouse, *Sketch of the Life of Walter de Merton*, Oxford and London 1859; R. H. Hilton, 'Kibworth Harcourt. A Merton College Manor in the 13th and 14th Centuries', in W. G. Hoskins (ed) *Studies in Leicestershire Agrarian History*, published as *Transactions of the Leicestershire Archaeological Society for 1948*, Leicester 1949, pp.17-40
36. Hobhouse, *op.cit.*, p.51
37. Hilton, *op.cit.*, p.26
38. P.R.O. CP25(1) 149/2 no.90
39. P.R.O. CP25(1) 149/40 no.34
40. P.R.O. CP25(1) 150/3 no.11
41. *Feudal Aids*, vol. iii, p.374 *et seq.*
42. Monson, *op.cit.*, p.10, copied by Rowland, thought that Geoffrey de Lucy obtained only 20 acres of arable and 20 acres of woodland from Peter FitzAluf.
43. E. Kelsey, *Map of the Parish of Acton in the County of Middlesex*; copy in London Borough of Ealing, Acton Reference Library
44. Harper Smith, *op.cit.*, map facing p.68. This map was obviously not known to Rowland, whose guess concerning Northfield (*op.cit.*, p.17) is wrong.
45. See Rowland, *op.cit.*, p.18
46. E. A. Webb, *The Records of St. Bartholomew's Priory*, London 1921, pp.169, 358

# THE GERMAN CATHOLIC CHAPEL IN LONDON

T. G. HOLT, S.J., M.A., F.S.A.

On 17th December, the third Sunday in Advent, 1809, Bishop William Poynter, coadjutor to Bishop John Douglass, Vicar Apostolic of the London District, blessed and opened the German Catholic Chapel at 2 Great St Thomas the Apostle, off Bow Lane, Cheapside. Thus began the story of the German Church of St Boniface which exists still though on a different site.<sup>1</sup> The newly-opened building of which the lease had been acquired had previously been a Dissenters' chapel. It required some adaptation and for this and the purchase money funds were being collected in 1809 and 1810.<sup>2</sup>

Catholic chapels were few and far between in the central districts of London at that date. Four of the chapels of the embassies of Catholic states were still open — the Portuguese in South Street, the Bavarian in Warwick Street, the Sardinian near Lincoln's Inn Fields and the Spanish in Spanish Place, Manchester Square; some chapels had been established for the emigrés from France and there were a few others — in Virginia Street off the Ratcliffe Highway, Moorfields, Soho, St George's Fields in Southwark and Salisbury Lane in Bermondsey.

Before the construction of Cannon Street Bow Lane extended further to the south than it does today. The streets then known as Great and Little St Thomas the Apostle led off the east side of Bow Lane. Today Garlick Hill runs further north — up to Cannon Street — and Great St Thomas the Apostle comes into it from the east. No. 2 which at the end of the last century was on the south side of the street had become business premises by 1866 and has remained so ever since (unless the street numbering has been changed) although the building on the site now appears to be fairly modern or at least reconstructed.<sup>3</sup>

It is possible that some German Catholics resident in London may have been accustomed to attending the Imperial Austrian embassy chapel in Twickenham despite its distance from the centre (the ambassador also had a house in Portland Place), and its closure which was announced in February 1808 to Bishop Douglass by the chaplain, Michael Gruber, may have been a reason for the opening of the German chapel in Bow Lane.<sup>4</sup> There must have been at this time a fair number of German Catholics in London and the first step to be taken was the appointment in 1808 to the Virginia Street chapel of a priest to look after them. This was the abbé John Becker, a Swiss by birth. He was of the diocese of Metz and had been appointed chaplain to the infantry regiment of the Baron de Rolls, a regiment in British service, by Frederick, Duke of York, Commander in Chief, in June 1795.<sup>5</sup> By this time he had been discharged on half pay. On the opening of the German chapel he became the first chaplain and remained there until December 1823 when he retired because of ill-health and went to live abroad.<sup>6</sup>

Early in 1810 John Becker was joined by Francis Muth. Born on 6th December 1782 at Hainburg in Austria, Francis Seraphim Muth was the son of Francis and Anna Maria Muth. In a short and rough autobiographical note which has somewhat surprisingly survived he gives, apart from other details about his family, the information that he was christened the day he was born and confirmed in St Stephen's at Vienna at Whitsuntide in 1799.<sup>7</sup> As a boy he was educated at Pressburg and Tyrnau and then went to Vienna for a year to study

philosophy. In 1799 he joined a religious congregation known as the Company of Fathers of the Faith, a body which had been founded in 1797 by an Italian, Nicholas Paccanari, in imitation of the Jesuits who had been suppressed by the Holy See some years before. Young Francis Muth entered the Paccanarists, as they came to be called, at Hagenbrunn near Vienna, *made his religious vows in 1800 and then proceeded to Dillingen and afterwards to Rome for studies in divinity.* The mastery of Italian that he acquired at this time enabled him later when at the German chapel to work among the Italians in London and also to translate documents which his superiors, less proficient in Italian, needed to send to Rome.<sup>8</sup>

The Paccanarists, meanwhile, were opening houses and schools in several countries and a group of priests and students came over to England in 1800 and began a boarding school in Kensington. The school actually commenced in 1801 at Kennington House, Vauxhall but was moved in 1802 to Kensington House which stood at the junction of Kensington Road and Victoria Road where there is now Prince of Wales Terrace. The house was pulled down in 1872.<sup>9</sup> In 1806 Francis Muth joined his colleagues at Kensington House and was ordained to the priesthood at Old Hall Green, Hertfordshire on 23rd May 1807 by Bishop Poynter. By this time, however, the Kensington school which numbered among its pupils the sons of French emigrés who were often unable to pay the fees was in financial difficulties and Paccanari himself in trouble in Rome, and as a result many of his followers in England became affiliated to the Jesuits who had survived in Russia and had been informally restored in England in 1803 by Pope Pius VII. In 1806 or 1807 the Kensington House Academy had to be sold and came under the direction of French emigré priests; it appears to have closed some five or six years later.

The sale meant that Francis Muth's circumstances had changed. On 19th January 1809 Bishop Douglass entered in his diary — 'Mr Muth, late of Kensington Academy, the sole member of the Society of the Faith of Jesus (the Company of the Faith had amalgamated in 1799 with another similar congregation and changed its name) remaining in England has received a letter from Rome . . . informing him . . . that the Pope had suppressed their order . . . that all members in Rome were reduced to the state of secular priests . . .'.<sup>10</sup> As a result Francis Muth was free to be appointed to the German chapel to assist John Becker. After some four or five years at work in Bow Lane he took a decision about a matter which had probably been in his mind for some time. In 1810 a priest in New York, who had known him in Italy and in London, in a letter to England wrote of him as 'an excellent young man, well informed and had always an intention to become a Jesuit. I exhort him to join us (the Jesuits) and apply to your Reverence in case he should make up his mind.'<sup>11</sup> In August 1814 Pius VII publicly restored the Jesuit Order throughout the world; the way was now open for Francis Muth and he wasted little time. A letter from the Jesuit superior in England, Marmaduke Stone, in answer to one from Muth, addressed to him at 12 Garlick Hill, Bow Lane and dated 26th October 1814, declared his readiness to admit him into the Order while pointing out that Dr Poynter who had succeeded as Vicar Apostolic of the London District would have to be asked for his consent. A passage in the letter reads 'if you have (asked him) I should be glad to know what he has said to you on the subject . . . Please to present my best wishes and respects to good Mr Becker'. What Bishop Poynter thought or said is not on record but he would seem to have raised no insuperable objections since Marmaduke Stone wrote again to Francis Muth on 9th February 1815 admitting him among the Jesuits and giving him detailed instructions about how he should perform the spiritual duties of the

novitiate while remaining on the mission in Bow Lane. On 21st June 1817 he made his religious vows as a Jesuit at 11 Poland Street, the residence of the one or two other Jesuits then living in London.<sup>12</sup>

For nearly twenty years he continued to work at the German chapel, in what must have been a somewhat dreary neighbourhood, amid financial difficulties and by himself, it would seem, after John Becker's departure abroad.<sup>13</sup> Only a very little information about him and his work during these years has survived. Thus a letter reveals that Dr Poynter returned a cautious answer to his suggestion that the Emperor of Austria might be asked to help the German chapel financially for the benefit of English as well as German priests and people.<sup>14</sup> A few years later there would seem to have been a rumour that the German chapel might have to be closed. If that happened (another letter shows) it was thought that Francis Muth might do well at Worcester if Bishop Poynter would release him.<sup>15</sup> In 1825 his Jesuit superiors once again thought that he might be the better in health for being moved — this time to Ugbrooke in Devonshire as chaplain to Lord Clifford — but Bishop Poynter thought otherwise and could not agree fearing that 3000 German Catholics would be left uncared for.<sup>16</sup> One can see the Bishop's point of view but it appears that he did hamper Francis Muth somewhat by endeavouring to restrict his activities to work among the Germans and Italians.<sup>17</sup> During his last years in Bow Lane, however, life was made easier by the presence from 1824 near Regent's Park and from 1831 until 1836 in what is now Marylebone Road, on the site occupied by the Royal Academy of Music, of a short-lived school conducted by his Jesuit brethren. In the school diary there are several references to his coming to stay, or dining with his colleagues who in turn visited him in Bow Lane. Thus there is a mention of 'Fr Muth's dinner for the German chapel' — a fund-raising operation presumably, in 1834 — '£130 was collected'<sup>18</sup>

Eventually, in April 1836, he was moved from London (celebrating his last Mass, as he tells us, at the German chapel on 11th April) and travelled to Stonyhurst in Lancashire, to the house of ecclesiastical studies for Jesuit students where he was to lecture in theology.<sup>19</sup> Only five years later, on 5th May 1841, he died in Preston at the church of St. Ignatius; his grave is in the churchyard there. In 1842 a tablet was set up in his memory in the German chapel.<sup>20</sup> 'He was a most pious and religious man' and of great talent wrote one who knew him.<sup>21</sup> The committee of the German chapel, who had in 1838 been raising funds to purchase the freehold (there seems to have been doubt about the future of the chapel unless the necessary money was collected) wrote in their appeal of his 'self-devotedness and heroic perseverance . . . for twenty-seven years amidst numberless difficulties'<sup>22</sup>

This worthy priest from Austria played a significant part in providing for German Catholics in London; the story of the subsequent fortunes of their chapel may now be taken further. Francis Muth's place at the chapel was filled in 1836 by a Polish priest, Gregory Stanciewicz who resigned in 1839 and was succeeded by James Jauch from Strassburg.<sup>23</sup> It was at about this time that the German Catholics with the help of English and Irish friends bought the freehold of the chapel for £1200. Some of the funds raised had to be spent on necessary repairs, and a mortgage for £600 bearing interest at 5% had been given to the party from whom the freehold had been bought. Bishop Thomas Griffiths, then Vicar Apostolic of the London District, Andrew Lynch, Esq., Philip Howard, Esq. and William Lescher, Esq. were appointed trustees. The last-named, who had long been treasurer when the temporal affairs of the chapel had been under the management of a committee, wrote to

Bishop Wiseman (who became Pro Vicar Apostolic on the death of Dr Griffiths in August 1847) in October 1847, by which date another of the trustees had died, of his anxiety about the finances of the chapel. The chaplain had been, and probably still was, in difficulties as a result of what some considered his indiscreet expenditure on extraordinary schemes for the benefit of poor Germans; he had not been able to pay the interest on the mortgage in two successive years and another payment was due at Christmas. Bishop Griffiths had paid the interest for the two years but thought stringent measures would have to be taken. 'It became a question with Dr Griffiths whether its usefulness was of that nature as to require its being continued'. 'Since its establishment', William Lescher wrote, '(it) has been of the greatest service to poor Germans ignorant of the English language . . . and I cannot contemplate its discontinuance without some fear for the state of many who yearly arrive from Germany in ignorance and poverty. But the number of Germans in London is not so great as it was during the war when my father first set on foot the idea of a German chapel . . .'

The writer of this letter was justified in his fears for in December 1847 James Jauch wrote to Bishop Wiseman asking for a loan. The German chapel, he wrote, was quite incapable of supporting itself; he had spent all his own money and had raised more which had been used in purchasing the chapel. He had also founded schools. Bishop Wiseman's reply is not recorded but by 1849 James Jauch had left the chapel and was living in Switzerland.<sup>24</sup>

After some improvements had been made in the chapel in 1856<sup>25</sup> there were once again financial problems and that despite the fact that an allowance paid by the Emperor of Austria had recently been nearly doubled.<sup>26</sup> Things were so bad that the Bow Street chapel had to be sold and premises in Friar Street, Great Carter Lane near Ludgate Circus were taken on a lease of four years and opened in 1859 as the new German Catholic chapel.<sup>27</sup> Friar Street, at the west end of Carter Lane, is short and narrow and runs south to Ireland Yard. It would seem very likely that the building leased was that described in 1855 as St Paul's Temperance Hall, in 1859 as a Literary and Scientific Institution and in 1863 as The Day and Sunday School Mission. It could be that it is the sober-looking building that has survived to this day at the south end of Friar Street on the left-hand side.<sup>28</sup>

Clearly a new chapel would have to be acquired. Accordingly Arthur Dillon Purcell, the chaplain, who was in charge from 1854 until 1871, went abroad to collect funds. He intended to go to Germany where he had been educated and wrote in August 1859 from Finsbury Circus where he was living to Cardinal Wiseman asking for letters of introduction to prominent ecclesiastics and expressing his hopes of organising a lottery under the patronage of the Empress of Austria to raise money.<sup>29</sup> His appeal must have shown very satisfactory results because the Zion chapel in Union Street between Whitechapel and the Commercial Road, originally perhaps a theatre before becoming a Methodist chapel, was bought in 1861 for £3270 and the alterations cost almost as much. It was opened by Cardinal Wiseman in 1862.<sup>30</sup> But in May 1873 came another disaster. The chapel was circular and surmounted by a leaden cupola and this fell in just after the congregation had departed at the end of evening service. The chapel was in ruins.<sup>31</sup> The school had to be used for services.

In 1875 Cardinal Manning laid the foundation stone of a new building on the same site in Union Street (the name was changed apparently about 1914 to Adler Street) and this church, still known as the German church, was in use until it was bombed in 1940 and destroyed.<sup>32</sup> This church is described as having been in the Romanesque style, on the lines of a basilica

without aisles with a semi-circular apse with curved ceiling. The organ and stained-glass windows and some other church furnishings came from Germany. On the exterior wall of the tower, facing the street, was a mosaic frieze showing St Boniface preaching to the heathen.<sup>33</sup>

The foundation stone of the present fine German church in Adler Street was laid by Cardinal Godfrey in 1959.

The priests in charge have been sometimes secular priests, sometimes members of religious congregations including the Redemptorists (c.1852-1854), the Oblates of Mary Immaculate (c.1871-c.1876), the Pious Society of Missions (1904-48) and the Pallottine Fathers (1948 to the present time).

## NOTES

1. See Bishop Douglass' Diary, 2, 168 in the archives of the archdiocese of Westminster (AAW). I am grateful to the archivist for permission to quote from papers in the archives.
2. See Accounts, 1786-1817, in the archives of the English province of the Society of Jesus (EPSJ).
3. Kelly's *Post Office Directory*. According to Alexander Rottman, *London Catholic Churches* (London 1926), 182, the building was, at the time of publication, a warehouse behind Mansion House station.
4. AAW. Missions IIIc.
5. See AAW. Poynter papers, IIIc2 and A46/54.
6. There are several letters from John Becker to Bishop Poynter, written after he retired, in AAW. Poynter papers, IIIc2. The date of his retirement is given in an autobiographical note by Francis Muth in the Province Register in EPSJ.14/2/6. The Land Tax Assessment books in the Guildhall Library for 1808-10 (Mss.11, 316, 328, 331, 334) give the name 'Rev. Mr. Beuthin' in Great St Thomas the Apostle. This could be a mistake for 'Rev. Mr Becker' or possibly the name of the minister of the Dissenters' chapel.
7. This autobiographical note and other information about Francis Muth is in the Province Register in EPSJ.14/2/6.
8. See The 'Re-establishment of the Society of Jesus' an Ms. in EPSJ. by Thomas Glover, 139.
9. Geoffrey Evans, *Kensington* (London 1975) 113.
10. See Bishop Douglass' Diary, 2, 163 in AAW.
11. Anthony Kohlman to William Strickland in Maryland Letters (f.116) in EPSJ.
12. Marmaduke Stone's letters are in the volume of his letters, ff.141, 144 in EPSJ.
13. Volume of transcripts, 14/2/16 in EPSJ. n. 276.
14. Letters of Bishops and Cardinals, 1753-1853, f.258 in EPSJ (1818).
15. Sewall's Letters, f.219 in EPSJ; Nicholas Sewall to Edward Scott, 3 November 1822.
16. Sewall's Letters, f.251 in EPSJ; Nicholas Sewall to John Hughes, 25 January 1825. According to Francis Muth this figure was an exaggeration.
17. Coll. S. Ign. 1750-1854, ff.57-8 in EPSJ; Nicholas Sewall to Edward Scott, 14 February 1822.
18. There is an account of this school in *London Recusant*, 3 (1973) 64-7. It began in what is now Bolsover Street. The diary is in Coll. S. Ign. 1750-1854, ff.95-124, in EPSJ.
19. Autobiographical note mentioned above.
20. H. Foley, *Records of the English Province of the Society of Jesus*, (London 1877-83) vol. 7 p.536. The tablet has been preserved and is at the German church in Adler Street.
21. Coll. S. Ign. Farm Street, f.38 in EPSJ; J. Bird to T. Glover, 3 June 1841.
22. H. Foley, Mss.3 ff.235 v-6 in EPSJ.
23. *Ordo Recitandi* ... (1837 London). Some details about the appointment of the clergy at the German chapel are in the Register of the Clergy of the London District, 1800-51 in AAW.
24. William Lescher's letter from 16 Nottingham Place, Regent's Park is in AAW (W2/2/7/4). William Lescher (1800-65), the son of William also treasurer of the German chapel who died in 1817, was generous in his assistance to Catholic chapels and schools in the poorer parts of London. His business address was in Thomas Street, St. Mary, Whitechapel and his home in Upton and Stratford before he came to live in Nottingham Place in 1845. Either his father or his uncle, Joseph, (who was living in Hampstead when he made his will in 1826) was one of the persons to whom subscriptions for the building of the Catholic chapel of St Mary, Holly Place, Hampstead might be sent. See *Laitly's Directory* for 1815; Catholic Record Society series, vol. 12, 134; *London Recusant*, 5 (1975) 113-4. Letters from James Jauch to Bishop — later Cardinal — Wiseman are in AAW. (R29/18; W1/6/9/4; W2/1/3/9/2 and 3; W2/2/5/1, 2, 3, 4, 5, 6).
25. Anon, *The Catholic Handbook. A History of the Metropolitan Missions* (London 1857) 25.
26. *The Catholic Handbook* 26. In December 1855 Cardinal Wiseman was sent a copy of a petition by the chaplain, Arthur Purcell, to the Emperor of Austria asking him to raise his annual charitable gift. See AAW. W2/2/5/10.
27. Rottman, *op.cit.* 182-3.
28. See Kelly, *Post Office Directory*.
29. The letter is in AAW. (W3/36).
30. Rottman, *op.cit.* 183. In December Arthur Purcell wrote to Wiseman inviting him when on his way to Etloe (his house in Leyton) to inspect some pictures that had recently arrived from Germany (AAW. W2/5/7).
31. Rottman, *op.cit.* 183-4.
32. No papers which might have thrown further light on the history of the church survived.
33. Rottman, *op.cit.* 184-5.

# THE HALF MOON TAVERN, CHEAPSIDE, AND CITY POLITICS

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The importance of the tavern and coffee-house in the 18th century can scarcely be exaggerated. Much attention has been paid to the literary and social significance of these meeting-places, but they played a vital political role as well. It was here that like-minded men gathered to co-ordinate activity. The confrontations in Parliament and elsewhere had frequently been rehearsed with some care by the opposing parties in their respective taverns.

Nowhere were these convivial cabals more evident than in the City of London. Here, as in Parliament, Whigs and Tories waged a long-drawn-out war. But whilst the former maintained the upper hand in Government, the latter usually won the day in the City. The Tories commanded majorities in the meeting of the City's elected representatives, Common Council, and in the assembly of Liverymen, Common Hall. Only in the Court of the twenty-six Aldermen did the Whigs prevail.

The activities of the Tory group obviously deserve the closest attention. Any information about its ale-house gatherings would be most valuable. In fact these City Tories were usually associated with the Half Moon tavern in Cheapside. The Half Moon Club, as it was known, came to be synonymous with the Tory clique.

When the tavern rose to prominence is difficult to say. The first reference yet unearthed occurs in November, 1724 when allegations were made that attempts to impersonate voters on behalf of the Tory parliamentary candidate, Goodfellow, had been organised at the Half Moon.<sup>1</sup> Twenty years later its importance in City affairs was widely recognised. A pamphlet purporting to expose corruption in City government was addressed, with "more Truth, and less Flattery, than is usual in Dedications," to the Half Moon Club: "Gentlemen, As you have had, or least been supposed to have, the principal Direction of Affairs in the Place where this Jobb is said to have been transacted, you are the natural Patrons of the Pamphlet . . ." Elsewhere the Dedication declared that: "Such as direct the Directors of the City are the proper Patrons of an Enquiry for the Benefit of the Citizens . . ."<sup>2</sup>

Little wonder then that the diaries and letters of the mid 18th century are littered with references to the tavern. In 1757 the Lord Mayor, Marshe Dickinson, was asked to call a Common Council for granting honorary freedoms to Pitt and Legge by a group of Common Councilmen who "came as they said, Deputed from the Half Moon . . ."<sup>3</sup> Again, in the following year a meeting was held in the tavern to organise a petition from Common Council in support of Pitt's Habeas Corpus bill.<sup>4</sup> Then in 1761 the Earl of Hardwicke was pleased to be able to report to the Duke of Newcastle that an attempt by the City Tories to relieve the Crown of the right to appoint the Commissioners of the City's Lieutenancy had apparently been defeated. Hardwicke had been shown a draft of an agreeably moderate petition to the King which, his informant told him, would be accepted by the Common Council committee dealing with the matter. From this Hardwicke could only conclude that the "Half-moon Club have come into it."<sup>5</sup>

It was a frequent practice for Tory Liverymen and Common Councilmen to use the Half Moon for what were described as “previous meetings.” At these candidates for forthcoming elections in Common Hall would be selected, tactics at Common Councils discussed, and Representations in the name of the City prepared. In 1765 a surly Address to the King was framed at the Half Moon before it was accepted in Common Council.<sup>6</sup> Addresses from Common Hall in 1773 and 1775 for the redress of various grievances had similar origins.<sup>7</sup> It was also customary to nominate Tory candidates for the main City committees each year in the tavern. Common Council would then vote for a Half Moon list or for a rival Whig one.<sup>8</sup>

The Half Moon itself became a symbol for the City Independents. It was reported that after the return of two Whigs as Common Councilmen for Billingsgate Ward, “Mr. G\_\_\_\_\_ of Botolph-Lane, (with his *usual Modesty*, and by Way of Triumph) carried the HALF MOON on a Black Escutcheon round the Hall, attended by the Hisses of all Well-wishers to this City present; it was afterwards affix’d to the Wall of the Weyhouse Meeting-House, where a great Bonfire was made, that had like to have been attended with bad Consequences . . .” The paper, however, noted that as a result of a further scrutiny of the poll on behalf of the Tory candidates, “Luna’s Horns may yet gore . . .” The same jest was repeated the following year when the Tories were again defeated. “On this Occasion a certain *Wou’d-be Common-Council-Man*, who particularly distinguish’d himself last Year with his dull Reflections on the HALF-MOON-CLUB, attempted again to be witty, and publicly declar’d, *That his Half-Moon was not yet worn out*, tho’ by a merry Wag it was smartly retorted on him, *That it was sadly eclipsed.*”<sup>9</sup>

There can be little doubt then of the tavern’s importance. But, strangely, it has been little studied.<sup>10</sup> To an extent this neglect has been the reflection of unhelpful evidence. Allusions to the Half Moon abound; facts are rare. Very little, for instance, can be said about the nature of the meetings there. One pamphlet<sup>11</sup> does, however, remark of the Address to the Crown in 1765 that:

. . . though an address goes up to the Court with the really respectable name of the city of *London* at the head of it; the sentiments which it contains are, in fact, no more than the private opinions of fifty or sixty very inconsiderable shopkeepers, who consult about the tendency of national measures at the *Half-Moon tavern* in *Cheapside*, and pay an humble Shilling a head to the master of the house (a common-councilman also, but a deserving one) for the evening’s entertainment.

It seems plain that, though there was much talk of a Half Moon *Club*, the meetings were informal affairs. Prominent City Tories would get word of a gathering and simply pay a small sum for their beer and tobacco whenever they attended. There are no signs of restricted membership, a subscription or a set of rules.

Fortunately more can be deduced about the nature of the tavern itself and its successive Masters. The Half Moon was situated on the northern side of Cheapside between Foster Lane to the west and Gutter Lane to the east. It lay at the northern end of Half Moon alley or court, and on the eastern side of Saddlers’ Hall. It was normally approached from the narrow alley but there were also entrances from Priest’s Court off Foster Lane, and through the tavern from Gutter Lane.<sup>12</sup> The property was leased from the Saddlers’ Company.<sup>13</sup>

The building was evidently a substantial one. The Hand-in-Hand Fire Office valued the property at £1,400, later £1,850, excluding an adjoining apartment. Successive policies speak of sixteen (later fourteen) rooms, and ten (later nine) chimney pieces. There were

“three storeys and garrets”. The ground floor apparently measured sixty-three feet by twenty-four.<sup>14</sup> Like most taverns of the period it had one large Assembly room where meetings could be held. The pamphlet which castigated the cabal which prepared the Address of 1765 suggested that a wealth qualification be introduced to exclude such unworthy Common Councilmen. Then, so it hoped, “the great room at the *Half Moon* would possibly be filled with a number of truly eminent citizens.”<sup>15</sup> Certainly large numbers could be accommodated. Eighty of Pitt’s supporters gathered to support the Habeas Corpus bill in 1758,<sup>16</sup> and one hundred and thirty Liverymen crowded into the tavern in 1771 in order to nominate candidates for Sheriffs.<sup>17</sup>

A large household was required to maintain the establishment. In 1698 the *Half Moon*’s vintner, Charles Cutler, found work for four apprentices, two journeymen and two servants.<sup>18</sup> One of Cutler’s successors, Michael Martindale, took on sixteen apprentices (on seven year terms) between 1726-57. This would suggest that there was work for four apprentices at a time in the house. Martindale is also known to have employed a porter.<sup>19</sup> In fact, business was such that Masters could not confine themselves to the main building and its adjacent apartment. Martindale and others rented from St. Vedast’s parish a brick house at the eastern end of Priest’s Court, next to the northern entrance to the tavern.<sup>20</sup>

There is also the question of the identity of the Masters themselves. In 1666 the old tavern, known as the Mermaid, was destroyed in the Fire, and its successor was renamed the *Half Moon*.<sup>21</sup> In 1671 the Master is recorded for the first time: one Matthew Fowler, who was still there in January 1694/5.<sup>22</sup> By 1698 the proprietor was Charles Cutler who remained until at least August 1703.<sup>23</sup> His successor was Giles Hooper who was living at the *Half Moon* by November 1705 and left in 1709.<sup>24</sup> Thereafter firmer ground is reached. The churchwardens’ accounts of St. Vedast, Foster Lane, in which the house was partly situated, provide an unbroken series of poor rate assessments for the property from 1709. From these it can be deduced that the following were Masters of the *Half Moon*:<sup>25</sup>

Thomas Baldwin 1710-16  
 John Champion 1718-24  
 Michael Martindale 1726-58  
 Michael Robinson 1758-61  
 Christopher Holyland 1761-69  
 Thomas Payne 1770-72  
 Robert Phillips 1778-84  
 Lewis Lewis 1786-1817

A few details about the circumstances of these tenures may be supplied. Baldwin, Martindale, Payne and Phillips all died at their posts, and the widows of Baldwin and Payne filled two of the interregna, in 1717 and 1773-77.<sup>26</sup> Some doubtless bought the remaining years of the lease from the previous Master or his widow, but at least one, Michael Robinson, received the tavern as a legacy, from his uncle Michael Martindale.<sup>27</sup> Another, Giles Hooper, fell on hard times; he had part of his Livery fine returned to him by the Vintners’ Company and he ended his days as a Beadle at the Hall.<sup>28</sup>

But Hooper was happily the exception rather than the rule. The Masters were generally men of some substance. Their unique position at the heart of the City’s political life afforded them considerable influence. Three of them became Common Councilmen for Farringdon Within: Martindale from 1739-58, Holyland 1763-69, and Phillips 1782-83.<sup>29</sup> Martindale indeed was Deputy of his Ward for the last three years of his life, and after his death his

friends were granted permission by the Vestry to set up a monument in his memory.<sup>30</sup>

As alehouse-keepers the Masters were obliged to take up the Freedom of the City in order to obtain the necessary licence, and if Liveried they were therefore entitled to vote in parliamentary elections.<sup>31</sup> Most of them favoured Tory or Independent candidates. Fowler, Cutler, Hooper and Baldwin voted for Withers, Hoare, Newland and Cass in 1710; and Champion for Parsons, Williams, Lockwood and Barnard in 1727. Holyland too recorded a respectably ‘‘Country’’ vote when he polled for Harley, Ladbroke, Beckford and Trecothick in 1768; and only Phillips upset this pattern by siding with the Ministerial Pittite, Atkinson, in opposition to the radical Sawbridge in 1784. Yet even here it should be noted that Pitt was posing as a supporter — albeit a luke-warm one — of parliamentary reform, and that Wilkes (though a spent force by this time) backed the Ministry in the election.<sup>32</sup>

The involvement of the Half Moon’s Masters in City politics may be illustrated elsewhere. In 1689 Matthew Fowler became embroiled in a dispute over the employment of an apprentice. The case revealed that one of the men who had placed the boy with Fowler was Robert Rowland, Common Councilman for Bishopsgate Within from 1680-83 and 1689-1700, who declared that he had known Fowler for twenty-five years. When the matter was put to arbitration, Rowland chose to act for him a neighbour of Fowler’s, one John Johnson, who was then present in the tavern. Johnson was Common Councilman for Farringdon Within from 1681-83 and 1688-96, and was later Alderman of that Ward from 1696-98.<sup>33</sup>

There are other such connections. Shortly before his death, Michael Martindale engaged one Samuel Marriott as an apprentice. Marriott later became Master of the Paul’s Head tavern in Cateaton (later Gresham) street, where Wilkes and his friends were known to spend some of their evenings.<sup>34</sup> Another haunt of the radicals, Holyland’s Coffee House in the Strand, may have taken its name from the son of the Master of the Half Moon.<sup>35</sup> A still more important venue for the Wilkites was the London Tavern at the southern end of Bishopsgate street. It was here that the Society of the Bill of Rights was founded and subsequently held its meetings. It was here that Lewis Lewis was working when in 1776 he took up his freedom in the Vintners’ Company, and when he moved to the Half Moon he changed its name to the New London Tavern.<sup>36</sup>

But even this rather ostentatious association with the City’s politicians did not secure the Half Moon’s future. In fact, the end to its illustrious life came suddenly. In 1817, with the departure of Lewis Lewis and the imminent expiration of the lease, the Saddlers’ Company seriously considered letting its own Hall and adapting the tavern for its meetings and entertainments. But the cost was considered unreasonable and the building was instead let to Messrs. Butler and Son, manufacturing chemists. This new existence, however, was shortlived. In 1821 the tavern and the Hall were gutted by fire and the Company seized the opportunity to redevelop the area. A new and enlarged Hall was erected and the site of the Half Moon was lost for ever.<sup>37</sup>

1. *Post-Man*: 26-28 November 1724.

2. *The City-Secret; or, Corruption at all Ends of the Town; Containing a Succinct History of an 100,000l. Jobb, etc. Being an Examination of the Conduct of several Comptrollers* . . . (London 1744) i, iv.

3. Guildhall Library (G.L.), MS. 100. Dickinson’s Diary: 14 April 1757.

4. P.C. Yorke, *The Life and Correspondence of Philip Yorke, Earl of Hardwicke* (Cambridge 1913) III 45-6.

5. British Library, Add. MSS. 32,918 f.177. Hardwicke-Newcastle: 1 February 1761. For other references to the Half Moon in the 1760s, see J. Brewer, *Party Ideology and Popular Politics at the Accession of George III* (Cambridge 1976) 48, 223.

6. *A letter to the Common-Council of London, on their late very extraordinary Address to his Majesty* (London 1765), 19-20, 40-41.
7. Corporation of London Records Office (C.L.R.O.), Common Hall Book 8, ff.174v., 194.
8. See, for instance, *London Daily Post*: 7 February 1735/6; 4 February 1737/8. The Whig list was prepared at the Fleece tavern, Cornhill. For an example of the rivalry between the two taverns, see the discussion of the alleged jobbery in the building of the Mansion House in *London Daily Post*: 15 December 1738.
9. *Daily Post*: 16 January 1740/1; 22 December 1741.
10. There are some miscellaneous gleanings in B. Lillywhite, *London Coffee Houses* (London 1963) 254-6, no.519.
11. *A Letter to the Common Council*, 40-41.
12. It is most clearly represented, though not named, in R. Horwood's map of London (1795). A copy may be seen in the C.L.R.O. See also the description in W. Maitland, *The History and Survey of London* (London 1775 edition), II 926.
13. Permission was not granted to consult the Company's archives. Another disappointment is the absence of a print of the tavern. The print rooms of neither the British Library nor the Guildhall Library contain one. Contributors to *Notes and Queries* in 1900 drew the same blank (9th series, Vol. VI 168, 257, 356, 413).
14. G.L., MS. 8674 Vols. 46 p.194, 58 p.265, 70 p.183, 82 p.233, 95 p.208, 107 p.123, 113 p.325, 122 p.232 (1733-79). The policy number was 6029.
15. *A Letter to the Common Council*, 43.
16. Yorke, *op. cit.* 45-6.
17. *Public Advertiser*: 24 June 1771. I am indebted to Dame Lucy Sutherland for this reference.
18. Poll Tax assessments: Farringdon Ward Within (Saddlers' Hall and Gutter Lane precinct). C.L.R.O., Assessments Box 69 MS. 3.
19. Vintners' Company, Register of Apprenticeship bindings: G.L., MS. 15,220 Vol. 2, pp.695, 697, 707, 723, 746, 756, 768, 781; Vol. 3, pp.10, 40, 56, 72, 80, 81, 82. His porter is mentioned in his Will (n.27) and in the Churchwardens' Accounts of St. Vedast: G.L., MS. 778, Vol. 3, f.34v. (7 October 1740).
20. For the insurance policy see G.L., MS. 8674 Vol. 100, p.50; and for other references, MS. 778 Vol. 3, *passim*.
21. K. Rogers, *The Mermaid and Mitre Taverns in Old London* (London 1928), 36-44.
22. *Ibid.*, 43, 44; Poll Tax 1694/5: C.L.R.O., Assessments Box 60 MS. 15.
23. Poll Tax 1698: C.L.R.O., Assessments Box 69 MS. 3; *The Registers of St. Vedast, Foster Lane, and of St. Michael Le Quern, London* (Harleian Society Publications Vol. XXX), Vol. 2 (London 1903) 254 (the burial of Cutler's daughter, Elizabeth).
24. *Ibid.*, 258 (the burial of one of Hooper's servants).
25. G.L., MS. 778 Vols 1-7: St. Vedast's Churchwardens' Accounts 1709-1820.
26. *The Registers of St. Vedast*, Vol. 2 268, 295, 299; *Gentleman's Magazine* Vol. XXVIII (1758) 340.
27. Martindale's Will, proved 18 July 1758: Public Record Office, PROB 11/839/224. Robinson already had a one-third share of the business from his uncle.
28. Vintners' Company, Livery Roll: G.L., MS. 15,208 no.42; Vintners' Company Court Book (1721 37) pp.221, 301. Two Masters had connections with the Bell tavern in Friday Street. Both Champion and Holyland had worked there before moving to the Half Moon: MS. 15,210; 15,208 no.139; 15,212 Vol. 1 p.296.
29. C.L.R.O., Lists of Common Councilmen. For Martindale's unopposed election see *London Daily Post*: 21 July 1739.
30. St. Vedast Vestry and precinct minute books, and the Joint Vestry of the united parishes of St. Vedast and St. Michael Le Quern: G.L., MS. 779 Vol. 1, 17 April 1759.
31. Only Payne and Robinson did not take on the Livery of the Vintners' Company: G.L., MS. 15,208 no.s 42, 139, 241, 485, 550, 793, 863; MS. 15,210, List of Liverymen 21 March 1733/4. For Payne's admission to the freedom see MS. 15,212 Vol. 2 p.3. Robinson's freedom has not been traced.
32. All these polls may be consulted in the G.L.
33. C.L.R.O., Mayor's Court Interrogatories: 28 September 1689.
34. G.L., MS. 15,220 Vol. 3 pp.82, 152. See also Wilkes's dinner diary in the Appendix to W.P. Treloar, *Wilkes and the City* (London 1917).
35. The Society for Constitutional Information appears to have met at Holyland's: P. Brown, *The Chathamites* (London 1967) 380.
36. G.L., MS. 15,212, Vol. 2 p.14. That Lewis changed the name on his arrival cannot be proved conclusively, though it seems probable enough. The Churchwardens' Accounts speak of the Half Moon in an entry for 22 June 1781 (Accounts of 1781) and there is no mention of the House by name until 22 August 1786 when it appears as "the Tavern" and then on 1 February 1787 as the "New London" (both entries in the Accounts of 1786). MS. 778 Vol. 5 (no pagination). On the basis of records of Freemasons who met there Lillywhite dated the change of name to 1782-89. He also attempted to establish when "Lewis's" was added to "New London". In fact, the prefix seems to have been added or omitted at will. As late as 1807 Lewis was said to be at (simply) the New London when he took an apprentice. MS. 15,220 Vol. 3 p.347.
37. J. W. Sherwell, *A Descriptive and Historical Account of the Guild of Saddlers of the City of London* (London 1889) 140-42. The changes may also be traced in the Churchwardens' Accounts of St. Vedast's, Vol. 7 *passim*, and 8 pp. 34, 63, 91.

# DRAPER v. CROWTHER: THE PREBEND OF BROWNSWOOD DISPUTE 1664-92

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The prebend of Brownswood in St. Paul's may have existed before the Norman conquest of England. The prebendaries have been listed from the 12th century.<sup>1</sup> Few of them enjoyed national repute or became bishops; those who did held the benefice only briefly on the way to more lucrative preferment. Little is recorded of the prebendal manor before the 16th century and what follows is enlivened only by a remarkable chain of litigation in 1664-92. There were five actions in chancery over the leasing of the manor: the principal suit, in 1681-5, involved a bizarre plea of privilege of university and resulted in the incarceration of the prebendary in the Fleet, where he died in 1689. The unresolved issues were left for further dispute between his trustees, administrators, lessees and successor. His fate was noticed only briefly by contemporary historians<sup>2</sup> and deserves to be better known. The first part of this article traces the progress of the case and identifies the motives of the parties; in the second it is discussed in its historical context.

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The former manor of Brownswood<sup>3</sup> is now divided by the Seven Sisters Road between the London Boroughs of Hackney and Haringey but until 1895 it was entirely in the parish of Hornsey. In the 17th century it comprised all of Hornsey south of the manors of Topsfield and Farnfields, a boundary which appears from later maps to have roughly followed Dickenson and Ridge Roads. Most of it lay between Green Lanes in the east and Stroud Green Road and Blackstock Road in the west, but there were 60 acres in two detached blocks in Stoke Newington. Their isolation was already appreciated by the vestry in 1688-9.<sup>4</sup> This detached copyhold was first to be developed for housing, but the rest of the manor was almost without habitation as late as 1869.<sup>5</sup> Most of the demesne was then pasture as it probably was in 1577. Altogether the demesne represented 313 of the 536 acres of the manor as a whole.<sup>6</sup> On it agriculture was rapidly eroding the Browns Wood (later known as Hornsey Wood), which was reduced from 122 acres in 1548 to 92 in 1649 and only 52 in *c.* 1709.<sup>7</sup> The other major 17th century development was the introduction of the meandering New River in about 1613.

In 1569 John Harrington of Witham (Lincs.) took a lease of the whole manor for 99 years.<sup>8</sup> He apparently assigned it to Thomas Draper (d. 1612), son of the sublessee of the woods in 1576,<sup>9</sup> by his death in 1599.<sup>10</sup> The lease descended to Thomas's youngest son Roger who died aged 61 in 1659 and was buried in the chancel of Hornsey church. As he had no children he devised the lease and his other lands to his nephew Thomas Draper of Sunninghill Park (Berks.),<sup>11</sup> who bought a baronetcy in 1660.<sup>12</sup> In spite of this windfall Thomas challenged his uncle's bequest of premiums to apprentice poor boys of Hornsey on the grounds that there were not enough poor boys, but after litigation chancery established a

trust for the purpose.<sup>13</sup> As he had been called to the Bar Thomas may be presumed to have had some knowledge of the law.<sup>14</sup> Since the lease of Brownswood was due to expire in 1668 Thomas applied to the prebendary for renewal.

Only £18 rent was reserved to the prebendary under the terms of the lease for the first thirty years, £19 for the rest of the term. This was a small stipend in 1569, when it may have represented only a small fraction of the value of the manor. The prebend had been valued at £13 13s. 4d. in 1535 and the demesne and woods but not the rents or issues of court had been let for £16 2s. in 1548-9.<sup>15</sup> Towards the end of the lease, in 1649, it was even less realistic: the manor was then worth £290 13s. 4d.<sup>16</sup> In 1681 the tenant admitted that it yielded £336 above the rent.<sup>17</sup> It was generally accepted that church lands were let below their market value but even so the terms of Brownswood seem exceptionally favourable. In 1649-50 the annual value of forty rectories was found to be more than seven times the rent.<sup>18</sup> In this case the rent was only a fifteenth or 6.5 per cent of the value in 1649. One cannot tell what fine Robert Harrington, prebendary 1561-1610, exacted, but the circumstances suggest that he asked less than the going rate. He let the manor to a brother<sup>19</sup> who found it profitable first to underlet and then to assign the lease and the assigns themselves found it economic to sublet. Like other Elizabethan ecclesiastics he was willing to sacrifice his successors for his own advantage, monetary or otherwise. Since he survived another 41 years he lost most, receiving only the rent and foregoing the fines; his successor John Barkham, prebendary 1610-42, had no fines to supplement the rent of £19; and this was all to which Joseph Crowther was entitled during the 22 years following his collation in 1642. The prebend was abolished in 1649 and in 1650 it was sold for £2,628 to Richard Utber, a London draper.<sup>20</sup> The prebend was restored in 1660 with Crowther once again as prebendary. He was soon approached by the lessee bearing arrears of rent and seeking renewal of the lease on the old terms;<sup>21</sup> not surprisingly Crowther thought that the existing arrangements needed improvement.

The sole source for this first clash is the bill lodged by Sir Thomas Draper in chancery in 1664. In it he made the most of his case and probably over-simplified that of Crowther. Since he wanted renewal of the lease by a deadline he portrayed Crowther's conduct since 1661 as a series of attempts to retard negotiations. This was less than just. When first approached Crowther declared his willingness to renew the lease. Had he wished it to expire he could have refused. It was not possible to repeat the previous lease verbatim because it was no longer legal to grant terms exceeding 21 years. There were other points of disagreement, probably raised by Crowther, including the level of the fine. Consequently Sir Thomas petitioned the king, who interviewed Crowther and persuaded him to accept arbitration by the archbishop of Canterbury (Gilbert Sheldon) and the bishop of London (Humphrey Henchman). In November 1663 they agreed on a 21-year lease from Lady Day (25 March) 1664 at a fine of £1,200; the restrictive covenants were referred to two lawyers with the final word for the Chief Justice of Common Pleas, Sir Orlando Bridgeman. At this late stage Dr Crowther had excluded from the lease a brick cottage near the manor house. On 17 December the referees reported to the king, who ordered completion. The chief justice had approved the covenants and the lease was engrossed by 20 January 1664, when Crowther failed to seal it. It is not known how the awards of referees and chief justice differed from Crowther's wishes, but one suspects that they rejected his principal proposals, whatever they were, and that he wanted to avoid implementing their scheme. Time was short. He may have hoped that by delaying until after Lady Day, when the lease was within three years of expiry

and Sir Thomas would lose the advantage of surrendering his existing lease, he could thus obtain more favourable terms. This was certainly what Draper believed when he exhibited a bill in chancery on 14 February asking for enforcement of the verbal promise of renewal from Lady Day. To strengthen his case he claimed to have undertaken costly improvements in expectation of renewal from which he could not otherwise benefit, that he had bought up the underleases, and that he had lost the interest on the capital set aside for the fine. Chancery could not act fast enough: Crowther never had to reply. It is not known what occurred out of court before the renewal of Draper's lease on 18 January 1665. Evidently Crowther did not exploit his advantage. Neither the fine nor the reserved rent was raised; the lease was backdated to Lady Day 1664; and there were no important changes in the covenants, although an element of rancour appears in stronger remedies to the lessor in case of arrears and the protection of Draper against interference by Crowther.<sup>22</sup> Perhaps Draper successfully invoked the support of king and referees, which Dr Crowther could not resist: later their intervention was mentioned as the *immediate* preliminary to the new lease. What is certain is that tenant nursed distrust for landlord and that Crowther did not obtain all he wanted.

This is confirmed by his unsympathetic reception of Draper's application for renewal after the first seven years of the lease.<sup>23</sup> Such renewals were habitual. The tenant had the advantage, as he had fourteen years to trade in for an extension of only seven years, while the lessor had an offer of a fine to which he was not entitled for fourteen years. The lessor had little leverage to alter the terms of the tenancy. This was why Dr Crowther refused to comply. If he intended awaiting the expiry of the lease he was singularly optimistic: having been born in 1608,<sup>24</sup> he was already 61 and would be 77 before the end of the term. Probably he was already seeking what he sought in 1681.

As Crowther would not compromise and the final years approached, Draper again appealed to the king. On 25 November 1681 the issue was referred to Henry Compton, bishop of London.<sup>25</sup> After seeing both men he reported on 23 November that as preconditions Crowther demanded a terrier of the estate and the surrender of the court rolls. Draper immediately handed over a terrier but demurred over the court rolls, feeling that he was not obliged to surrender them, but declared his willingness to abide the king's pleasure. After hearing the report Charles referred the issue to the bishop, to Dr Stillingfleet dean of St. Paul's, and for advice on legal points to Sir Francis North, Chief Justice of Common Pleas. At the same time he pronounced in Draper's favour on what he (and presumably Draper) thought to be the crux of the matter, the level of fines. He declared that he

'does think fit, that his fine is as moderate as those generally are, which the Dean and Chapter of St. Paul's set on their tenants'.<sup>26</sup>

The referees could not reconcile the contenders. A compromise was reached concerning custody of and access to the court rolls but the main issues were unsolved. Crowther made a new demand. He pointed out the low level of the reserved rent,

'which he thought too small a maintenance [and] he was resolved to resume the manor, which was not above twenty pounds per annum more, for an addition towards the support of the prebendary, which the lease might well bear, it being of very great over value.'

By the manor he meant the royalties and courts, including fines for entry into copyhold tenements. He said that he was willing to leave Sir Thomas the demesne and woods 'at the usual rates of the Church of St. Paul's' but at the true annual value which must first be ascertained. To this Sir Thomas complained of the injustice of losing the manor which was valuable because his forebears had thwarted attempts by copyholders to fix the entry fines. Of

this the referees were convinced by copies of court rolls submitted to them. However, not only had Draper's ancestors acted for their own advantage and reaped the benefit but it was no more than was required in the 1569 lease. Draper also stressed the long tenure of his family and portrayed Crowther's demands as contrary to custom, to which he appealed. While admitting Crowther's right to vary the lease, the referees considered Draper's arguments reasonable, and advised Crowther that it might be 'of great service to the Church to take some certain increase in rent than resume the manor'. By certain they meant fixed. However, finding him adamant, they reported on 8 February to the king, who ordered them to conclude the lease.<sup>27</sup> On 4 March they agreed on a 21-year lease of the demesne and woods at a fine of £1,700 and that Draper should retain the manor until Lady Day 1685, the date of expiry of the existing lease.<sup>28</sup>

Crowther's demands fall under two heads linked by his determination to obtain a realistic price. He was apparently conscious of the effects of inflation that the 17th century, like the present day, experienced. This explains why he chose to resume the manor rather than accept a higher rent. Perhaps he foresaw that a fixed rent would not keep pace with prices and to compensate for its depreciation the lease would again have to expire, but few prebendaries could have resisted a fine after seven years. However, the issues of the manor could be adjusted to inflation by raising the fines at will: by 1821 they averaged £164.<sup>29</sup> His awareness would also explain his insistence on an accurate survey of the prebend, which he realised would have grown in value. His interpretation of the usual rate of fines was to multiply by 5½ times the *current* annual value of the prebend rather than accept £1,200, the fine of 17 years before, as Draper thought he should. Moreover he suspected a greater income than Draper admitted and wanted a fine for that too. His suspicion was justified, however reasonable Draper's later (unchecked) excuses may have been.<sup>30</sup> The fine would be Crowther's own property: naturally he wanted to compensate for his self-denial since 1665.

In spite of apparent success in achieving his aims, Crowther did not complete the lease. Sir Thomas petitioned chancery for enforcement of the agreement of 4 March. He alleged that he had delivered a draft lease to Crowther's agent for engrossing, which was not done; instead the draft was withheld. His petition recited events since 1662 but this time he did not claim loss of investment in improvements, loss of interest on capital, or his expense in buying up underleases. Perhaps he was not faced with such misfortunes, but it was also true that this time his case needed no reinforcing as it concerned a *written* contract, on which he had doubtless insisted. The case went to court. Draper submitted his bill on 21 March 1682<sup>31</sup> and on 27 June Crowther replied. He did not answer Draper's case; instead he pointed out that members of the University of Oxford possessed the right to be sued only at the court of the chancellor of the university and as principal of St. Mary's Hall he claimed this privilege.<sup>32</sup> He had solicited a writ from the chancellor, the duke of Ormond, which is now attached to the record.<sup>33</sup> The point of law was debated in court before the lord chancellor, the earl of Nottingham, who then ruled that the chancellor's court had no jurisdiction as the matter did not arise from the university but concerned land in Middlesex. Crowther was directed to reply to the matters in Draper's bill.<sup>34</sup> He did not. His contempt led on 5 June 1683 to an order to the serjeant-at-arms to arrest him.<sup>35</sup> On 23 August the serjeant reported that he had been to Oxford and encountered Crowther, who had produced a writ of privilege. Consequently he had not arrested him but sought the assistance of the chancellor, which was refused. An attempt to enter St. Mary's Hall was unsuccessful. Accordingly the court

sequestered Crowther's spiritual and temporal possessions,<sup>36</sup> without noticeable effect. Finally on 4 December they issued a writ of assistance to the vice-chancellor of Oxford University,<sup>37</sup> which evidently had the desired effect: on 20 February 1684 Crowther was in custody. On that day he was produced in court but again pleaded privilege: after debate of the question again before the new lord keeper no reason was found to amend the previous decision. He was again ordered to answer the bill.<sup>38</sup> Three times he was fetched from the Fleet under writs of *Habeas Corpus* but each time pleaded the privilege.<sup>39</sup> At last on 14 June the court declared that he had admitted Draper's charges and decreed that he should seal a new lease of demesnes and woods for 21 years from 25 March 1685 according to agreement. In anticipation that Crowther might disobey, the decree provided that Draper would hold the demesnes and woods as if a lease had been sealed and that the fine of £1,700 minus Draper's legal expenses of £123 6s. 8d. would be deposited in chancery until such time as Crowther had sealed the lease.<sup>40</sup> On 26 July 1684 he was brought to the Rolls Chapel to execute the decree but refused, whereupon the contingency plans took effect.<sup>41</sup> Dr Crowther never did relent but remained in the Fleet until his death on 16 December 1689, aged 81.

This change of fortune is astonishing. To comprehend it an insight to Crowther's mind is needed but unfortunately he never answered Draper's bill. The best use must be made of the charges of his enemies and apologia of his friends. This time Sir Thomas thought Crowther was driving a hard bargain rather than being purely obstructive, but he assumed that failure to engross the lease was intended to put off renewal until after Lady Day. That done he feared that a concurrent lease would be granted, the prebend encumbered, or their agreement otherwise overthrown. Presumably he viewed Crowther's contempt as deliberately obstructive, an attitude for which there is justification: not only did Crowther follow the progress of the suit and do his best to avoid arrest but even in default he employed counsel to stave off chancery's recourse to extreme measures.<sup>42</sup> Draper's interpretation may be the right one, but it is hard to conceive what changed the prebendary's mind between 4 and 21 March. Had he disliked the settlement he should not have signed the agreement, even under the duress that was later pleaded on his behalf:<sup>43</sup> his tactics do not suggest that he could be coerced into doing anything against his will. In view of his failure in 1664 he could have had little hope of success. Moreover, the agreement seems to have given him all he sought. Admittedly he had said on 6 February that he offered such favourable terms only out of respect to the king.<sup>44</sup> By this he may have been deferring to Charles's earlier declaration in favour of the customary rate of fine, rather than a higher rate (which it is implied) was intended. However, Draper does not mention this possibility which conflicts with Crowther's earlier readiness to concede it for more important ends.

An alternative explanation is more convincing. Draper's bill says that a clause in the preliminary agreement allowed Crowther a year to discover undeclared revenue and to levy a fine on it.<sup>45</sup> This period had not expired when the bill was lodged, as was later pointed out on Crowther's behalf.<sup>46</sup> In submitting a draft lease to him Draper and North presumably thought this issue could be deferred, but there were reasonable grounds on which to demur: entry fines were customarily paid at the sealing of the lease; the lease might not be valid if not all the lands in it were covered by the fine; and, guaranteed security of tenure for another 21 years, Draper might have delayed completion until after Lady Day and backdated the lease. If this is a correct assessment, why did he not explain it in court, where his tactics gave him no advantage?

By so-doing he would have explicitly accepted the jurisdiction of chancery and admitted a limitation to the jurisdiction of the chancellor of Oxford. He was essentially an Oxford academic, who spent most of his life there from the age of 16, holding office in college and university, until his death.<sup>47</sup> He might be expected to feel strongly about the rights of the university and apparently did, as emerged in the next stage of the dispute in 1686. Unfortunately the bills are lost but the proceedings are described in entry books and later bills. The plaintiffs were his nephews William and Thomas Ryder, sons of his sister and Sir William Ryder, sea-captain. According to them, in 1683 Crowther leased them the whole prebend, comprising not only the demesnes and woods hitherto held by Draper, but also the courts, royalties and the small brick cottage for twenty years at £40 rent.<sup>48</sup> He thereby raised the rent due to himself, as the king's referees had urged, instead of retaining the courts as a hedge against inflation, as he himself had desired. In the light of his consistency hitherto it is likely that this change was forced on him by the lawsuit. The Ryders claimed to be able and willing to assign their lease to Draper without the need for Crowther's consent. As Draper observed, this would have saved him the indignity of surrender.<sup>49</sup> It seems that this was what was intended, as the Ryders apparently confessed.<sup>50</sup> If so, it implies that by 10 October 1683 he realised that he could not win the case by his existing tactics but did not intend to change them. By conveying his rights to the Ryders he might have obtained his rent and fine without abandoning the university's privilege. In their bill the Ryders explained that their uncle was so zealous for it that he would never submit. This tallies with his own statement in court in 1684 'that he could not make any other answer although his counsel advised him to answer the same'.<sup>51</sup>

When confronted by Draper's bill, he denied that he could be impleaded in chancery and pleaded privilege. As he never moved from this position he deprived himself of room for manoeuvre and the case could not advance. It is unlikely that Draper foresaw this. He probably wanted no more than renewal of his lease, although he may have hoped to escape paying a fine on undisclosed revenues: for this we have only Crowther's unsubstantiated claims to set against the sum of £14 13s. 4d. that was declared in Draper's bill. He is unlikely to have anticipated an ending different from that of 1664, when the action was settled out of court. Once the case had begun he was deprived of the secure lease that he sought and had to wait a decade to obtain it.

The decree of 1684 provided that Sir Thomas Draper should hold the demesnes and woods under the terms of the agreement of 4 March 1682. By their bill of 6 November 1686 the Ryders offered to assign their lease according to the agreement, including the clause relating to an increased fine for undisclosed revenues. Draper could have accepted this offer but may have doubted its legality. Anyway he opposed their claims. He pointed out that under his bill of 1682 Dr Crowther should have revealed any incumbrances but had not. The Ryders could not offer a guarantee as secure as Crowther might, nor could they be examined on interrogatories as he ought to have been. Besides their bill was intended to 'elude the justice of this court' and 'would encourage disobedience to their decree and ordinance'. Finally he denied that the Ryders had shown any action of overvalue against him. In view of the collusion admitted by the Ryders it is not surprising that their bill was dismissed on 23 November.<sup>52</sup> Neither chancery nor Draper would accept less than outright surrender. This did not materialise. Crowther, now 78, resigned himself to imprisonment for the rest of his life, his last escape route cut off.

Although aged and probably in-failing health,<sup>53</sup> Dr Crowther made no will. On his death administration was confided to his niece Elizabeth Crowther, wife of George Bromfield merchant of London, as next of kin.<sup>54</sup> The Bromfields wanted to realise all his assets including the fine deposited in chancery, which they petitioned on 12 February 1690. They asked it to review the decree of 1684 in *Draper v. Crowther* and the dismissal of the Ryders' bill in 1686.<sup>55</sup> Guarded replies were made by Draper and the new prebendary Dr Turner, both of whom confined themselves to the specific points raised by the Bromfields.<sup>56</sup> Draper also filed a cross-suit on 2 May 1691, which was admitted by the court on 23 December following,<sup>57</sup> by which all parties were prevailed on to put their cases. The Bromfields offered, if the earlier suits were reviewed, to execute the decree by instructing the Ryders to assign their lease to Draper; they might then collect the fine themselves. Their offer assumed that the decree bound Crowther's successors. If it did not they wanted the arrears of rent, which they denied that Draper had offered or Crowther had refused. Their bill conflicted with the plans of Dr Turner, who did not feel bound by the decree to which he was not a party or by the lease to the Ryders, which he considered illegal. As no lease had been sealed, he had obtained possession of the manor by leasing it to one Thomas Gilbert, who sued for the ejectment of one Paul Howard. Having gained possession, Turner was willing to grant Draper a *new* lease for a new fine. He would not confirm the term commencing in 1685, which he did not recognise: Draper would have to recover the fine for the unexpired years from the administrators of Crowther's estate.<sup>58</sup> This he might have been willing to do, reluctantly accepting the loss of the unexpired years, had not the actions of the Bromfields and Ryders prevented him. The issue was thrashed out in court on 18 February 1692, when all agreed that the lease to the Ryders was invalid, this time because it had not been confirmed by the dean and chapter of St. Paul's. The Bromfields, Ryders and Dr Turner reached an agreement and on 11 June 1692 the court decreed a settlement. The Bromfields were to obtain a surrender from the Ryders of their lease and were to hand it and the court rolls over to Turner, receiving in return £142 in arrears and £500 of the deposited fine. Turner was to receive £76 13s. 4d. of the fine for his kindness to Crowther's sister-in-law and the other £1,000 of the fine for obtaining a surrender of Gilbert's lease and for confirming the remaining fourteen years of Draper's lease. Draper's lease was confirmed but his cross-suit was dismissed.<sup>59</sup> By this arrangement the Bromfields were paid one-third of the fine for the third of the lease that had expired and Turner was paid two-thirds for the two-thirds yet to come. The dividing date was Lady Day 1692 and it was presumably then that the lease commenced which Turner sealed on 4 March 1692. This was before the decree but may be presumed to have been for 14 years and on the same terms as the 1682 agreement, although unfortunately it was not registered in the cathedral chapter's lease book. Finally on 1 September, in return for the surrender of this lease, Dr Turner granted a new one along the lines of that of 1665 and omitting the controversial terms of Crowther's 1682 agreement.<sup>60</sup> Doubtless he felt that he was putting behind him the bad feeling of the previous thirty years and was making a fresh start but he also abandoned without a fight all that Crowther had fought for and, posthumously, won.

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For a full understanding of this struggle it should be considered in the light of contemporary opinion and the career of Joseph Crowther.

Crowther was a Laudian. In 1626 he became scholar and in 1628 fellow<sup>61</sup> of Archbishop Laud's old Oxford college, St. John's, of which Laud's protégé William Juxon was president. From 1629 Laud was himself chancellor of the University, which he moulded to his own views.<sup>62</sup> When Crowther wrote *c.* 1627 his play 'Cephalus and Procris' it was natural for him to dedicate it to Juxon.<sup>63</sup> In return Juxon as bishop of London collated Crowther to the vicarage of Great Dunmow (Essex) in 1639. In 1642 he collated him to the prebend of Brownswood.<sup>64</sup> With such a background it is not surprising that by 1646 he had been ejected from his vicarage by the Puritans;<sup>65</sup> nor that the parliamentary visitors would not allow his promotion to a chair at Oxford;<sup>66</sup> nor that in 1648 they ejected him from his fellowship. By then he was one of the irreconcilable divines who had taken refuge in France at what soon became the court of Charles II.<sup>67</sup> In 1651, as the upshot of a palace feud, Crowther was appointed chaplain to the king's brother James, duke of York, later James II,<sup>68</sup> remaining in his household until at least 1662.<sup>69</sup> The sources mention him several times in exile, in 1654 as preacher of a sermon in the king's chapel, in 1655 encouraging the translation of a reply to Milton's 'Eikonoklastes', and in 1653 vouching for the loyalty of a former colleague of St. John's who was candidate for a chair at Breda.<sup>70</sup> He rubbed shoulders with the most distinguished Anglican clerics of the next generation<sup>71</sup> without achieving equal importance.

He returned to England with Charles II in 1660 and shared in the gradual restoration of the Anglican church. His old patron Juxon became archbishop of Canterbury on 3 September but unfortunately he was old and sick and resigned effective primacy to Gilbert Sheldon before his own death in 1663. Nevertheless he roused himself to install Crowther in a benefice in Worcestershire on 3 July.<sup>72</sup> It was not to Juxon but his fellow exiles that Crowther owed his advancement. As early as 16 June the king presented him to the rectory of Tredington (Worcs.).<sup>73</sup> He joined with four future bishops on 21 August in testifying that Daniel Bullen was 'a preserver of our Church's doctrine and discipline'.<sup>74</sup> When he married the duke of York and Anne Hyde on 3 September he used the forms of the Book of Common Prayer,<sup>75</sup> which had yet to be restored. He was appointed precentor of St. Paul's on 25 August<sup>76</sup> and in December, having already become a D.D. without the usual formalities, he was appointed professor of Greek at Oxford.<sup>77</sup> The king presented him to the seventh stall in Worcester cathedral on 17 March 1661<sup>78</sup> and he was proctor of the diocese in the convocation that commenced on 8 May and as such subscribed to the revised prayer book in December.<sup>79</sup> In spite of such favour he received no more official approval after becoming principal of St. Mary's Hall late in 1664.<sup>80</sup> Perhaps his dispute over Brownswood brought him into disfavour?

Crowther was a Laudian. We may suppose that he was 'high church' in the conduct of services, quite enough to account for him being maligned as a papist in 1678.<sup>81</sup> But is that all? In 1673 he debated with two Quakers, one the formidable George Fox, on whose evidence he seems to have made a poor showing. Fox asked him two questions:<sup>82</sup>

'whether you denied the pope of Rome's sacrament and altar and his consecrated bread and wine which he calls God and Christ and his host with all the rest of his fopperies and inventions; and secondly whether you did deny that the pope had any power to forgive sin. But you would not set your hand to this.'

As there were doctrinal differences among Anglicans and Quakers as well as between both and Catholics it matters precisely how Fox posed the first question. But Crowther's hesitancy on the second one is a reminder that in 1641 he was asked to subscribe the Protestation which affirmed

‘the true Reformed Protestant Religion, expressed in the Doctrine of the Church of England, against all Popery and Popish innovations within this realm contrary to the law of God’.

This may have been aimed at some of Laud’s policies but in taking time to deliberate before subscribing he was exceptional among Oxford dons,<sup>83</sup> many of whom were also Laudians. Taken together these clues suggest that Crowther was one of those extreme followers of Laud who, like Bishop Montague,<sup>84</sup> belittled the differences between the churches of England and Rome.

Besides all this Crowther shared Laud’s desire to revive the economic power of the church. He is said to have written *A Disquisition on our Saviour’s Sanction of Tithes*,<sup>85</sup> in which is argued the divine origin of an institution that was apparently disputed in his parish of Tredington.<sup>86</sup> At Brownswood he fought to regain a realistic, inflation-proofed income for the canon in lieu of occasional fines. At Worcester, where he was a canon, the cathedral was in disrepair<sup>87</sup> and revenues did not cover expenses, yet the chapter estates were let for lives — longer in practice than 21 years. With Crowther’s approval, Charles II had forbidden this practice, but the lessees of two rectories objected and — like Draper — petitioned for royal intervention. Crowther and two other elderly canons of similar backgrounds resisted them. They hoped not only for the augmentation of the vicars’ stipends but for an increase in the salaries of the choir and a contribution towards cathedral expenses.<sup>88</sup> In other words, as at Brownswood, they wanted a higher income and a larger proportion of revenues, for which there was ample room. Ecclesiastical authorities approved such augmentations but not direct clerical management of church estates.

This was what he proposed at Brownswood. Sir Thomas Draper requested a fine at the level current on other chapter estates, which was generally realised to be uneconomic. While admitting he owed his tenancy to the favour of the church, Sir Thomas asserted his leasehold heritage above its freehold, implying that it carried a *right* to renewal to all the estate. Furthermore ‘he insisted that there should be no diminution of that tenant right which all other [church] tenants enjoy’.<sup>89</sup> He claimed beyond the terms of his lease perpetual tenure at very favourable rates. He would not have tolerated such *rights* among his own tenants and at Brownswood denied them to his subtenants. What is striking is that he could look for support not only to fellow tenants but to the king and even ecclesiastical referees. In 1681 Bishop Compton and Dean Stillingfleet found his requests ‘very reasonable’; in 1664 it had been Bishop Henchman and Archbishop Sheldon. Even they recognised that the church had less rights as landlord than laymen. Crowther realised that it was not feasible to raise the fine from the customary level: enough opposition arose without trying to obtain that. The referees’ reason against resuming the manor was that it might prove litigious — an argument that would scarcely have influenced Archbishop Laud, who was not deflected from his purpose by fears of controversy. But he, after all, had not lived through the abolition of the hierarchy and so had no fears of repetition. At the Restoration Laud’s disciples returned to their benefices but deliberately relinquished their economic pretensions, preferring peace with the laity. Crowther was out of step, an anachronism. A bitter controversy *c.* 1731 over realistic revenues for the church from its lands bore few fruit.<sup>90</sup> It was not until the establishment of the Ecclesiastical Commissioners that a businesslike approach was adopted. Even so there remained the assumption,<sup>91</sup> still present today, that the church had not the same rights as the laity. Ultimately Crowther’s stance was adopted; to his contemporaries he was a maverick who hazarded the Restoration settlement. No wonder he never became a bishop.

One should remember that Crowther not only suffered defeat but financial loss in the Brownswood dispute. He lost reserved rent to the sum of £142 and deliberately abstained from £1,700 in fines, less than a third of which was recovered by his heirs. Had the lease been sealed in 1682 he might have obtained another fine before his death which instead went to his successor. His costs are unlikely to have been less than those of Draper. What was the effect of the sequestration of his property in 1682? One should not forget that in opposing long leases of Worcester cathedral rectories he and his fellow canons were foregoing their shares of the fines. He clearly suffered financial loss for the benefit of the church.

On the other hand it may be argued that as he lacked dependants he could afford such eccentricities. It is true that he was a bachelor and had not, as other clerics had, the need to maximise his income to support his children. But he did not lack relatives: most of his numerous nephews and nieces had been consigned to his care by his brother John (d. 1658).<sup>92</sup> A result was that two of John's sons, John and Joseph, began their studies at Oxford at St. Mary's Hall. So did two other Crowthers, presumably more distant kinsmen.<sup>93</sup> Surely this reveals some avuncular affection? At his death he was apparently supporting his sister-in-law. There were kinsfolk among whom he could have distributed his possessions but he did not even make a will, a sign that he attached little weight to material considerations. Would he have acted otherwise with his own children? Rather than speculate on this hypothesis it seems fairer to give him the benefit of the doubt. After all, in one with Catholic sympathies, celibacy might be a principle.

Alternatively he was rich enough to afford it. Edmund Calamy thought that he received £1,300 a year from Tredington, his canonry at Worcester, and St. Mary's Hall,<sup>94</sup> quite apart from other benefices of which he was ignorant. He exaggerated. He said that Tredington was worth £700 a year and that one year Crowther was offered £800 as farm for the tithes,<sup>95</sup> but in 1669 it was valued at only £500.<sup>96</sup> The office of principal was not a source of profit;<sup>97</sup> and on average the canonry produced only £57 10s. 4d.<sup>98</sup> From Brownswood he had £19, from the rectory manor of Bishop's Stortford (Herts.) £46 as precentor,<sup>99</sup> and as chaplain to the duke of York £50.<sup>100</sup> He probably received fines from Bishop's Stortford as well as £1,200 from Brownswood. His ordinary income can have been worth little more than £650, from which were to be deducted the expenses of a curate for Tredington and the maintenance of his residences at Brownswood, Bishop's Stortford, St. Paul's churchyard, Worcester<sup>101</sup> and Tredington. If he received much less than Calamy supposed, he was nevertheless wealthy and able to decline several legitimate sources of income.<sup>102</sup> It had not always been so. Until 1639 he had only his fellowship<sup>103</sup> and if he had £99 from Brownswood and Great Dunmow for the three years to 1645,<sup>104</sup> he then had £19 and afterwards nothing. Doubtless he incurred debts to others than his brother while in exile.<sup>105</sup> He was already 52 in 1660 and had to start again from scratch, yet refused a proffered fine. The fact that he did this shows that he could afford it but it was a sacrifice. Had he less income — perhaps from Brownswood alone, which he considered too small a maintenance — he could not have acted thus but starvation is hardly a choice. Without other benefices he could not have resisted Draper but he poured away their income in costs and forewent fines with little hope of recouping his losses. More he could hardly have done.

Calamy also implied that Crowther was a negligent pluralist, a charge that George Fox echoed.<sup>106</sup> He was certainly a pluralist, which was the fault as much of the contemporary church as him personally, but it is unlikely that he was negligent, although hard to prove. He

was not single-minded in his pursuit of benefices to augment his income. According to Worcester custom that each vacant cathedral living should be offered in turn to each canon, he could have become rector of Doddenham with Knightwick (worth £60) in 1672, of Cleeve Prior or St. Michael's in Bedwardine, Worcester (worth £6 8s. 4d.) in 1673 and of Sedgeberrow (worth £73) in 1680,<sup>107</sup> but apparently declined each. He presumably had scruples, as in the first and last case he had been dispensed to hold them with his other livings.<sup>108</sup> If he was offered any benefices in the gift of the chapter of St. Paul's he declined them too. The most onerous of his benefices was that of precentor of St. Paul's, which involved responsibility for services in the cathedral. Unfortunately no records reveal how frequently he was resident, although he was certainly there sometimes,<sup>109</sup> but from 1666 his duties may have been unusually light as the cathedral was in ashes. At Worcester surviving records show that he not only kept his two months residence each year but exceeded it to such an extent that in 1682 he was excused it to attend to the Brownswood dispute.<sup>110</sup> He frequently attended chapters, signed for his stipend and also officiated as subdean (1663-4), treasurer (1670-1) and receiver-general (1669-70, 1671-2).<sup>111</sup> As principal of St. Mary's Hall he presided over disputations but so fiercely and passionately<sup>112</sup>

'that if the opponent had made a false syllogism, or the Respondent a wrong answer, he bade the next that sat by them *kick their shins*; and became a proverb *Kick shins Crowther*'.

At Tredington he quarrelled with the parish, as Calamy, Fox and Bishop Kennett variously testify. The latter says that his parishioners obliged him to keep a boar for their benefit and that he provided a black one to spite them, so black pigs were henceforth called 'crowthers';<sup>113</sup> while probably apocryphal, the tale may reflect their relations. However, it is more illuminating that on presentation Crowther was resisted by the occupant of the benefice, William Durham; for several Sundays they are said to have preached from opposite ends of the church (there were three) until Durham admitted defeat. A man of parts, he was eventually persuaded by the bishop of London to conform and was given a City living.<sup>114</sup> He was presumably responsible for the strength of dissent. In 1673 George Fox, the Quaker, had a congregation of 400 at a service in a barn.<sup>115</sup> A year later the churchwardens reported that 46 parishioners were Quakers who did not attend church, at least 16 children were unbaptised, many others only took communion at Easter, and only 5 sent their children to catechism. A less detailed report in 1682 mentioned 26 Quakers. As the parishioners withheld wine at Easter, contributions to repairs for the church<sup>116</sup> and, evidently, tithes,<sup>117</sup> their bad relations with Crowther are hardly surprising. While not normally resident himself, he supplied a curate who in 1674 was episcopally ordained, a good preacher, of good life, conversation and doctrine, and respected by his neighbours:<sup>118</sup> as there were three churches, he may however have been overworked. From the fragmentary church records it appears that Crowther did not neglect his charge. He occurs baptising children, attending vestry and nominating churchwardens in 1681 (twice), 1682, 1683, 1688 (twice) and 1689.<sup>119</sup> In 1673 he had reacted vigorously against Fox.<sup>120</sup> Altogether it appears that he was a busy man who tried to divide his time between his various cures. It also seems that he had quite enough concerns without worrying about Brownswood.

Dr Joseph Crowther was an able man, as even his enemies admitted, and was undoubtedly a man of principle. There is much to admire in his stance over the Brownswood leases, which was taken without ulterior motive (or significant approval) for the benefit of the church. Unfortunately, confronted with a choice of principles he gave overriding priority to the privileges of his university and, by refusing to abandon his cause when lost, sacrificed what

was probably a winning case. It was typical of him to behave with rigidity. The anecdotes told of him as an old man do not show him in an attractive light, although he had a gentler side.<sup>121</sup> His outstanding feature was evidently the hot temper which caused him to quarrel with almost everyone. At his death Anthony Wood noted that he died 'as 'twere choked with phlegm'.<sup>122</sup> Sued in chancery he need only have won or lost his case but instead he threw it away in defending the indefensible and suffered the rigours of imprisonment to no good purpose. Hopeless defence of a lost cause hardly makes him a martyr. It is for his aims for Brownswood that he merits remembrance.

## NOTES

- This article is based on material collected for the *Victoria History of the County of Middlesex*, vol. vi (forthcoming). I am indebted to the editor, Mr. T. F. T. Baker, for reading it and making suggestions.
- J. Le Neve *Fasti Ecclesiae Anglicanae St. Paul's 1066-1300* 29-31; 1300-1541 21-2; 1541-1857 21-2.
  - A. Wood *Life and Times 1632-95* ed. A. Clarke (London 1894) iii. 317; W. Kennett *Register and Chronicle Ecclesiastical and Civil* (London 1728) 640; J. Walker *Sufferings of the Clergy* (London 1714) ii. 50-1; J. Newcourt *Repertorium Ecclesiasticum Parochiale Londinense* (London 1708) 102n.
  - The best account is in *Early Records of Haringay alias Hornsey* ed. S. J. Madge (London 1938) 48-51; *Medieval Records of Haringay alias Hornsey* ed. S. J. Madge (London 1939) map facing p. 113.
  - G[reater] L[ondon] R[ecord] O[ffice] (M[idlesex Section]) D.R.O. 20/CA/1.
  - Ordnance Survey Map 6" XII. Middlesex SE. (1863-9 edn.).
  - P[ublic] R[ecord] O[ffice] SP 12/113/37.
  - St. Paul's [Cathedral] MSS. C(Sampson) f. 198v.; F.B.3 f. 15; Guildhall MS. 11816B p.86.
  - St. Paul's MS. C(I Nowell) ff. 320-2v.
  - P.R.O. PROB 11/58 (P.C.C.8 Carew); SP 12/113/37.
  - It is not mentioned, P.R.O. PROB 11/93 (P.C.C. 32-3 Kidd).
  - P.R.O. PROB 11/293 (P.C.C. 356 Pell).
  - Calendar of Treasury Books 1660-7, 229*; G.E.C. *Baronetage* (Exeter 1903) iii. 35.
  - G.L.R.O. (M) D.R.O. 20/H/1 pp.27-30; P.R.O. C10/61/105.
  - He was admitted to Lincoln's Inn in 1644 and was called to the Bar in 1653, *Records of . . . Lincoln's Inn, Admissions* (London 1896) i. 251; *Black Books* (1898) ii. 398.
  - Valor Ecclesiasticus* (Rec. Com.) i. 364; St. Paul's MS. C(Sampson) ff. 198v-199v, 279v-280.
  - Guildhall MS. 11816B pp.86-7.
  - P.R.O.C 10/209/29/1.
  - J.E.C. Hill *Economic Problems of the Church* (Oxford 1956) 7-8.
  - See P.R.O. PROB 11/37 (P.C.C. 1 More); /42A (29 Wells); /90(90 Cobham); /93(32-3 Kidd).
  - P.R.O.C 54/3540/16.
  - P.R.O.C 10/488/73. This is the source of the next paragraph.
  - St. Paul's MS. C(Sancroft) ff. 2-3v.
  - P.R.O.C 10/209/29/1.
  - E. P. Hart *Merchant Taylors' School Register 1561-1934* (London 1936).
  - P.R.O. SP 44/55 p.146.
  - Ibid. p.149. The spelling of quotations has been modernised.
  - P.R.O. SP 44/55 pp.155-6.
  - P.R.O. C 10/209/29/1.
  - Guildhall Library Church Commissioners' MS. 1963. The growing values partly reflect the pull of the London market.
  - P.R.O. C 10/209/29/1.
  - Ibid./1.
  - See also P.R.O. C 33/257 f. 711v.
  - P.R.O. C 10/209/29/2.
  - P.R.O. C 33/257 f. 711v.
  - Ibid./259 f. 528.
  - Ibid. ff. 669-v.
  - P.R.O. C 33/261 f. 176.
  - Ibid. ff. 264, 388-v.
  - P.R.O. C 33/261 f. 628v.
  - Ibid. ff. 628v-9v.
  - Ibid. f. 670.
  - P.R.O. C 33/259 f. 855v.
  - P.R.O. C 10/282/20/3.
  - P.R.O. SP 44/55 p.156.
  - P.R.O. C 10/209/29/1.
  - Ibid./282/20/3.
  - W. C. Costin *History of St. John's College, Oxford, 1598-1860* (Oxford 1958) 54-5; J. Foster *Alumni Oxonienses* (London 1888) i. 359.
  - P.R.O. C 33/268 f. 147; C 10/282/20/3.
  - P.R.O. C 33/268 f. 147.
  - P.R.O. C 10/282/20/1.
  - P.R.O. C 33/261 f. 629.
  - Ibid./268 f. 147.
  - There was a report of his death on 16 July, *Wood Life & Times* iii. 306.
  - P.R.O. PROB 6/66 f.4.
  - P.R.O. C 33/275 f. 373v; C 6/270/22/1.
  - P.R.O. C 6/270/22, /299/10.
  - P.R.O. C 10/282/20/1; C 33/277 f. 99v.
  - P.R.O. C 10/282/20/5.
  - P.R.O. C 33/277 ff. 775-6.
  - St. Paul's MS. C (Tillotson & Sherlock) ff. 118-20.
  - Foster *Alumni Oxonienses* i. 359.
  - H. R. Trevor-Roper *Archbishop Laud* (London 1965) 115 and *passim*.
  - St. John's College Oxford MS. 217.
  - Guildhall MS. 9531/15 ff. 102, 109.
  - W. J. House and F. Robus, *Short History of Great Dunmow parish church* (Dunmow 1926), 52.
  - Walker *Sufferings of the Clergy* ii. 50.
  - 'Restoration visitation of the university of Oxford' *Camden Miscellany* xviii (1948) 13; *Register of the Visitors of the University of Oxford* (Camden Soc. N.S. xxix (1881)) 164.

68. F. C. Turner *James II* (London 1948) 36-7.
69. Hist[oric] Manuscripts Comm[ission] *8th Report* i. 279a. He was paid £50 a year. James did not become a Roman Catholic until c. 1668-9. J. Miller *Popery and Politics in England 1660-88* (Cambridge 1973) 109.
70. *Collection of State Papers of John Thurloe* ed. T. Birch (London 1732) ii. 84; *Nicholas Papers* ii (Camden Soc. N.S. 1 (1892)) 19-20; iii (Camden Soc. N.S. 1vii (1897)) 42.
71. See his relations with Dr Cosin, later bishop of Durham, and Dr Steward, dean of Westminster, *Correspondence of John Cosin* i (Surtees Soc. Iii (1868)) 278, 281.
72. *Calamy Revised* ed. A. G. Matthews (Oxford 1934) 174. He also inducted him to Brownswood again on 5 August, Guildhall MS. 9531/15 f. 130v.
73. P.R.O. C 66/2936/12; SP 29/18/101.
74. P.R.O. SP 29/11/10. See also R. S. Bosher *Making of the Restoration Settlement* (London 1951) 159-61, 160n. 3.
75. *Calendar of Clarendon State Papers* ed. F. J. Routledge (Oxford 1970) v.80.
76. *Newcourt Repertorium* 102.
77. *Wood Life & Times* i. 328, 361. He adds that Crowther neglected it until replaced in 1664.
78. P.R.O. C 66/3002/45.
79. *Kennett Register* 584. He adds that Crowther attended the Savoy conference, *ibid.* 502.
80. A. Wood *History ... of the Colleges ... of the University of Oxford* (Oxford 1786) 672-3.
81. *Wood Life & Times* ii. 421.
82. *Journal of George Fox*, ed. N. Penney (Cambridge 1911) ii. 276-83 esp. 283.
83. *Walker Revised* ed. A. G. Matthews (Oxford 1948) 149.
84. Trevor-Roper *Laud* 74-5.
85. Costin *Hist. of St. John's College* 55. I have been unable to confirm or disprove this attribution.
86. This is suggested by *Fox Journal* 275, 277, 283.
87. *Diary of Henry Townshend* ed. J. W. Willis Bund (Worcestershire Historical Soc. 1920) i. 60.
88. *Calendar of State Papers Domestic 1672-3* 1; letter (1660), Worc[ester] Cath[edral] MS. A76 f. 9v, partly printed in V. Green *History ... of Worcester* (London 1796) i. 133n.
89. P.R.O. SP 44/55 p.156.
90. I. Newton *Tables for renewing leases of cathedral-churches and colleges* (1731); J. Roberts *A true estimate of the value of leasehold estates* (1731); *idem Reasonableness of church and college fines asserted* (1731); *Value of church and college leases considered* (1731).
91. E.g. in 1886 it was thought that Highgate woods could be obtained for the public by forcing the Ecclesiastical Commissioners to surrender them, *North Middlesex Chronicle* 4 Dec. 1886; *The Times* 10 Dec. 1886.
92. P.R.O. PROB 11/294 (P.C.C. 439 Pell).
93. Foster *Alumni Oxonienses* i. 358-9.
94. E. Calamy *Continuation of the account of ejected ministers* (London 1727) ii. 895.
95. *Ibid.*
96. G. Miller *Parishes of the Diocese of Worcester* (Birmingham 1890) ii. 250.
97. Hist. MSS. Comm. 36 *Ormond* viii. 27.
98. Made up of £22 stipend, £2 for repairs and his share of fines, heriots etc. which over 23 years ranged from £7 13s. 6½ d. to £50 10s. 1½ d. and averaged £35 10s. 4d., of which £9 0s. 4d. each year was in kind. His fees as subdean and treasurer were £5 and as receiver-general £10, Worc. Cath. MSS. A76 ff. 143v-4, 147; A125 iii-vi.
99. Lambeth Palace COMM XIIa/12 f. 79.
100. See above p. 340.
101. His house, formerly that of the monastic kitchen, was in disrepair in 1677 and was 'inconvenient' in 1690, Worc. R.O. BA3945/iv; Worc. Cath. MS. A76 f. 152v.
102. See below.
103. For an indication of his prosperity see W. Laud *Works* (Oxford 1853) v. 292n.
104. Great Dunmow was worth £80 in 1650, Lambeth Palace COMM XIIa/8 f. 444.
105. P.R.O. PROB 11/294 (P.C.C. 439 Pell).
106. Calamy *Ejected ministers* ii. 895-6; *Fox Journal* ii. 275.
107. Worc. Cath. MS. A76 ff. 75v, 82v, 111; valuations are from W. Urwick *Nonconformity in Worcester* (London 1897) 165, 171.
108. *Index to the Act Books of the Archbishops of Canterbury 1663-1859* i (Brit. Rec. Soc. 55 (1929)) 205-6.
109. P.R.O. C 33/257 f. 456v.
110. Worc. Cath. MS. A76 f. 119. He was never fined for non-residence.
111. *Ibid. passim.*
112. B. L. Lansdowne MS. 987 f. 116v.
113. *Ibid.*
114. Calamy *Ejected ministers* ii. 895.
115. *Fox Journal* ii. 265.
116. Worc. R.O. BA2289/20 iii.
117. See above p. 342; *Fox Journal* ii. 275, 283; Calamy *Ejected ministers* ii. 895-6.
118. Worc. R.O. BA2289/20 iii.
119. I am grateful to Mr. M. W. Farr, Warwickshire County Archivist, for this information. Crowther also attended chapters and signed accounts after 1685, Worc. Cath. MSS. A76 ff. 143v-4, 147; A28. Presumably he received bail.
120. *Fox Journal* ii. 265 sqq.
121. E.g. his lifelong interest in drama, see above p. 340; *Wood Life & Times* iii. 174.
122. *Ibid.* iii. 317.

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