

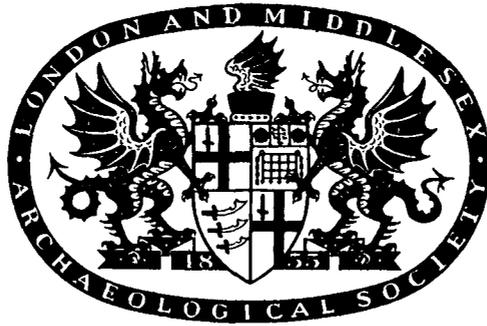
Transactions  
Volume 32 1981



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**London & Middlesex Archaeological Society**

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*Transactions of the*  
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# London & Middlesex Archaeological Society

*incorporating Middlesex Local History Council*

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# London & Middlesex Archaeological Society

*incorporating Middlesex Local History Council*

125th ANNUAL REPORT OF COUNCIL FOR THE YEAR ENDING  
30th SEPTEMBER 1980

Volume 30 of *Transactions* was published in August 1980 and the Special Paper No. 3 on recent excavations in the City *The Roman Riverside Wall and Monumental Arch in London* in June, with the support of substantial grants from the Department of the Environment and the Museum of London. Three issues of the Newsletter also appeared.

The Presidential Address by Mr. M. G. Hebditch at the Annual General Meeting on 22nd February was on *The Museum of London and archaeology: the future*. The Society also welcomed the newly appointed Director of the Social and Economic Study of Medieval London, Dr. Derek Keene, who gave a lecture on *Winchester: Documents and Archaeology* on 7th December. Lectures about London were *The Meeting Houses of the City of London* of J. S. Wellsman on 23rd November, the George Eades Lecture, *Some Problems of Alfredian and Late Saxon London* by A. G. Dyson on 18th January, and *Roman Southwark* by Harvey Sheldon on 26th September. London also provided two of the topics at the Symposium meeting on 28th March, with *St. Paul's Cathedral and The Temple of Diana* by John Clark, and *A Case for Centuriation in the London Area* by Nick Farrant; the third contribution was provided by Edward Biffin with *Military Indigestion? or how members . . . have seen . . . fifty fortified sites in the last twelve months*. Other lectures were *Celtic Art* by Geoffrey Marsh on 26th October, and *The Archaeology of Woodlands* by Dr. Oliver Rackham on 25th April.

The Stow Commemoration Service at St. Andrew Undershaft took place on 23rd April, the address being given by Philippa Glanville, and the Pepys Service at St. Olave Hart Street on 3rd June, the speaker being Steve Race.

Eight visits were arranged in the year, one more than last year. Six of these were in the London area – to *Westminster School* on 6th October, to *Vintners Hall* on 19th November, to *Walthamstow and West Ham* on 1st December, to *Some Churches on the Waterfront, mainly 17th century* on 16th February, to *The Passmore Edwards Museum* on 19th April, and to *Beddington, Carshalton and Cheam* on 10th May. A full day coach tour was made to *Northamptonshire and Huntingdonshire* on 14th June, and the Autumn four-day tour, started last year, has now become a fixture, this year's excursion being to *North Yorkshire* based on Ripon. Three of the visits were complemented by Programme-Guides produced by the Director of Meetings.

At the Annual General Meeting on 22nd February Max Hebditch retired as President and we welcomed Professor Valerie Pearl as his successor. Our gratitude is due to Mr. Hebditch for his efforts on behalf of the Society during his three years as President, and to him also, as Director of the Museum of London, for the continuing co-operation and generous provision of facilities by the Museum.

## **Archaeological Research Committee**

On 1st January 1980 the Surrey County Council assumed responsibility for the Staines Archaeological Unit, which had been administered by the Society for many years; the Society's involvement with the Inner London Unit, reported on below, continued.

In December 1979 Miss Alison Laws (Mrs. Parnum), who had served the Committee admirably as Secretary, resigned on leaving her post as Assistant Field Officer at the Museum of London; her replacement in that post, Jon Cotton, took on also the position of Secretary to the Committee. During the year the Committee's strength was increased by new members having links with the Greater London Council and with the Institute of Archaeology.

Much of the Committee's time was spent on discussions of the Ancient Monuments and Archaeological Areas Act (1979) and the reorganization of the archaeological coverage of Greater London which is being considered by the GLC.

The seventeenth Annual Conference of London Archaeologists was held at the Museum of London on 26th April. The morning session was devoted to various aspects of current work in London, and the afternoon to the theme '*Late Roman London – Some Problems*'.

### **Inner London (North) Archaeological Unit**

During the year the Unit undertook five excavations, as well as its day-to-day vetting of planning applications, site-watching, finds-processing and so on. A high level of voluntary support was very welcome to the hard-pressed full-time staff.

Further work was carried out at the Tower Postern, discovered the previous year and opened for public view by the leader of the Greater London Council in April 1980. A researcher was appointed to study the documentary evidence for the building and history of the Postern.

Other excavations included sites at Stepney Green and Old Ford, and in Harrow, outside the Unit's normal area, where work was carried out on behalf of the Department of the Environment Inspectorate of Ancient Monuments on the earthwork of Grim's Dyke, in the (unfulfilled) hope of obtaining conclusive dating evidence for its construction.

At Richmond Terrace, Whitehall, the Unit was enabled, following lengthy negotiations, to carry out a small-scale investigation, which yielded evidence of medieval reclamation of the Thames foreshore.

### **Historic Buildings and Conservation Committee**

During the year the Committee was sorry to receive the resignation of Mr. M. H. Port; it was however joined by Mr. R. H. Adams, who also represents the Society on the City Conservation Areas Advisory Committee, and seven more members were added from the London Boroughs of Brent, Barnet, Bromley, Islington, Merton and Wandsworth. Notices of 74 applications to alter or demolish listed buildings were received; many of these proposals were fairly innocuous and some commendable. Where objections were lodged they were in many cases successful. Some cases take a long time to resolve and a number remain unsettled.

The Committee continues to work amicably with the national amenity societies and has had useful contacts with the CBA on the matter of historic buildings.

### **Local History Committee**

Following some rather fallow years, this period marked a welcome steady progress for the Committee. As usual, the first major event of the year was the Annual Local History Conference, the fourteenth in the series, held at the Museum of London in November. The principal speaker was Sir John Summerson, doyen of London's architectural historians, who spoke about his latest researches into the life and work of John Nash. The other speakers were Mr. MacMichael, whose subject was the fascinating archives of Westminster Abbey and their value to local historical research, and Jim Slade, who gave an illustrated account of the history of Putney Bridge, 1729–1979. About twenty local societies mounted excellent displays of their work and publications.

At the beginning of 1980, Mr. H. E. Robins, who had been Secretary of the Committee since its inception, relinquished his general duties to concentrate on the planning and running of the annual conference. The Committee wishes to record its thanks for all his hard work over the years. His place as Secretary was taken by Mr. J. Slade. Three other new members were added to the strength of the Committee during the year, representing new areas of London and Middlesex, and helping to make its work more effective.

A major innovation was the meeting of delegates from local societies held in May. More than twenty societies were represented, and there was a wide-ranging discussion on matters of mutual interest, including informal local groupings of societies to exchange views and hold joint meetings – a system in operation for several years in north-west Middlesex and more recently in north-west Kent. The problems of local history publishing were also discussed, and it was agreed to hold a meeting of local editors later in the year.

Lastly during the review period, material was collected for the fourth survey of local research and publications.

### **Youth Section**

The Youth Section had a quiet Autumn, a Newsletter being sent out in early November, which contained reports and articles on the Summer's special activity, on members' holiday trips and on new additions to the Museum of London's collections, among others.

However, the New Year was brought in with a crash of clay flower pots for the day devoted to repairing pottery with Fred Dungey of the Museum's Conservation Department. Participants learnt the proper use of sand trays, the correct adhesives and how to tape the pot together again – though some pots at the end of the day did look slightly asymmetrical!

As is now traditional the Youth Section invited Young Rescue to share a day of activity. This year the morning was spent on an archaeological dig in Southwark, followed by a discussion session back at the Museum of London on the significance of archaeological finds. Two more events were organized in June and August, the latter being the Summer Special which this year lasted three days and, with the aid of a grant from the parent Society, involved a day trip to St. Albans and Wheathampstead.

Membership figures remained healthy, many members joining in regularly with the outings or contributing to the Newsletters.

### **Membership and Finance**

Total membership at 30th September 1980 was 895, a slight decrease on the previous year, made up of 660 Ordinary Members, 48 Life members, 9 Honourary Members and 26 Student Members, together with 112 Institutional Members and 40 Affiliated Societies.

A new feature of the Accounts which accompany this report is the establishment of a Contingency Fund. This has been created by the appropriation of the bulk of the surplus income arising in the year from the temporary investment of unexpended grants. It was felt by Council that this surplus, arising as it does from the abnormally high interest rates prevailing in the year, should be treated in a way which reflects its non-recurring nature. Although costs have inevitably risen, the increased income also makes it possible for subscription rates to remain unchanged for a further year, the present rates having applied since 1st October 1977.

Council wishes to place on record its thanks to the Honorary Officers and to the Committees for their works during the year.

By direction of Council  
C. H. J. FARTHING, O.B.E., B.A.,  
F.S.A., Chairman of Council  
J. A. CLARK, M.A., F.S.A., A.M.A.,  
Honorary Secretary

# PROBLEMS IN THE QUATERNARY DEVELOPMENT OF THE THAMES VALLEY AROUND KINGSTON: A FRAMEWORK FOR ARCHAEOLOGY

J. S. PENN and J. D. ROLLS

## INTRODUCTION

Man's changing activities in the Thames Valley during both prehistoric and historic periods have taken place within a landscape that itself shows change in response to fluctuating climatic conditions. The area of the Middle Thames around Kingston lies about 20km south of the furthest limit of Anglian ice (see Fig. 1) and so may be expected to bear the imprint of that episode, while the cold Wolstonian and Devensian stages, when ice lay much further north, were probably associated with periglacial activity. The warm interglacials, Hoxnian and Ipswichian, were periods of 'temperate' surface activity, repeated on a small scale during the Upton Warren interstadial of the Devensian. This range of conditions affected both the nature of hillslope processes and the behaviour of the Thames, which may have been further modified as a result of the oscillating sea levels of the Quaternary. Recent investigations in the Kingston area have revealed evidence throwing light on the latest events in the history of the Thames, and show that environmental change has continued to the present day. The evidence of landscape alteration is largely contained in the succession of gravels and terraces left by the Thames.

## PRINCIPLES OF TERRACE DEVELOPMENT

Most rivers that are neither aggrading nor incising their channels to any marked degree flow in sinuous fashion across a floodplain of their own alluvium. This material is normally laid down as a point bar deposit left behind on the low energy convex side of a bend as the stream swings away. The thickness of such alluvium is normally equal to channel depth at the bankfull stage, which is defined as that stage when the channel is completely filled with flowing water. A greater thickness of alluvium suggests that the stream has recently aggraded its channel. A vertical section through river alluvium may show a dominance of well bedded sands and silts, together with fine gravel, the whole being capped by a thin horizon of fine silts and clays laid down during infrequent periods of over-bank flooding. A change in environmental conditions may cause incision, with the result that the former floodplain now becomes a terrace. If, over time, incision has been the dominant process (as opposed to aggradation) a flight of terraces may be left behind as evidence for reconstructing the stream's history. Chronological problems are often complicated by phases of aggradation when 'old' terraces may be overrun by new alluvium, and in the case of the Thames glacial intervention must also be taken

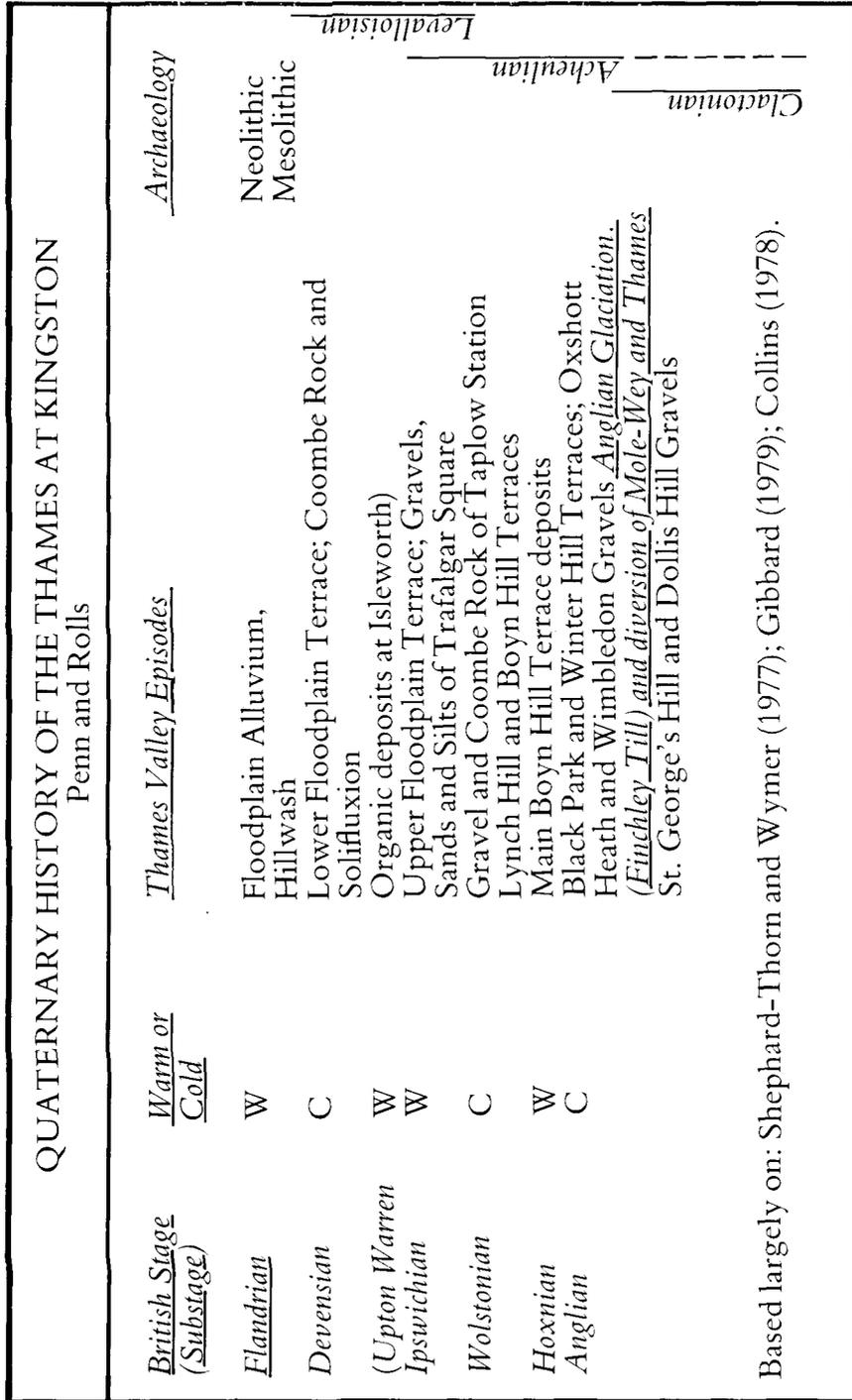


Fig. 1. Tentative event sequence for the middle Thames.

into account. Morphological, sedimentological, palaeontological and archaeological studies are combined in the reconstruction of event sequences through terrace investigation.

#### THE NATURE OF THE EVIDENCE IN THE KINGSTON AREA (see Figs. 2 and 3)

Morphological and sedimentological investigations of the terraces have yielded information bearing on chronology. The heights and profiles of the lowest terraces imply that they are continuations of the appropriate terraces both up and down valley, but the status of the higher Wimbledon and Kingston gravels is less readily determined. Wooldridge (1938, 639) suggested that they were associated with the Winter Hill stage of the Middle Thames. However, Zeuner (1959, 154) pointed out that a correlation of the Wimbledon gravels with the Winter Hill Terrace involved an unacceptably steep descent of the Winter Hill from near Uxbridge. He suggested that the Wimbledon gravels formed a separate spread called the 'Kingston Leaf'. Hare's detailed mapping (1947, Pl. 13) of the terraces west of the Colne revealed a further unit between the Winter Hill and Boyn Hill spreads, and which he called the 'Black Park Terrace'. Wooldridge and Linton (1955, 134) accepted as preferable the correlation between the Black Park Terrace and the Wimbledon gravels, and Gibbard's recent investigations (1979, 39) have confirmed this correlation.

Investigations of ancient river gravels have thrown light on the conditions of their deposition, and have helped to place the associated terraces in chronological order. The Wimbledon gravels which reach a maximum thickness of some 7–9m are lithologically variable. They contain much material that is foreign to the London Basin syncline, including quartzites from the Bunter Pebble Beds of the Midlands, igneous material, and chert probably derived from the Lower Greensand beds of the Weald. Wooldridge and Linton (1955, 133) identified a contrast between the southern and northern units of the Wimbledon complex. They pointed out that the southern unit, at Kingston Hill, was largely made up of 'southern' debris, i.e. flint, Lower Greensand chert, and ironstone, with only about 10% of 'northern' constituents (Bunter quartzites and igneous rocks). This contrasted with the constituents of the northern unit, in Richmond Park, which were made up of some 50% 'northern' material. Wooldridge (1938, 660) suggested that the northern unit was derived from glacial outwash, but Solomon (in Wooldridge 1938, 664) asserted that the 'total absence' of 'Eastern Drift' material from the Wimbledon gravels ruled out a correlation with that glacial event. Work by Green and McGregor (1978, 153) and by McGregor and Green (1978, 203) on the Middle Thames and the Vale of St. Albans has suggested that high frequencies of far travelled material in pre-Anglian gravels may imply glaciations in the upper catchment of the Thames, and so it may be argued that the character of the northern Wimbledon unit relates to events in the upper Thames rather than locally. Gibbard (1979, 39) has pointed out that the Kingston-Wimbledon gravels may be correlated with the Oxshott Heath gravels to the south-west, and that the Dollis Hill gravel of the Finchley

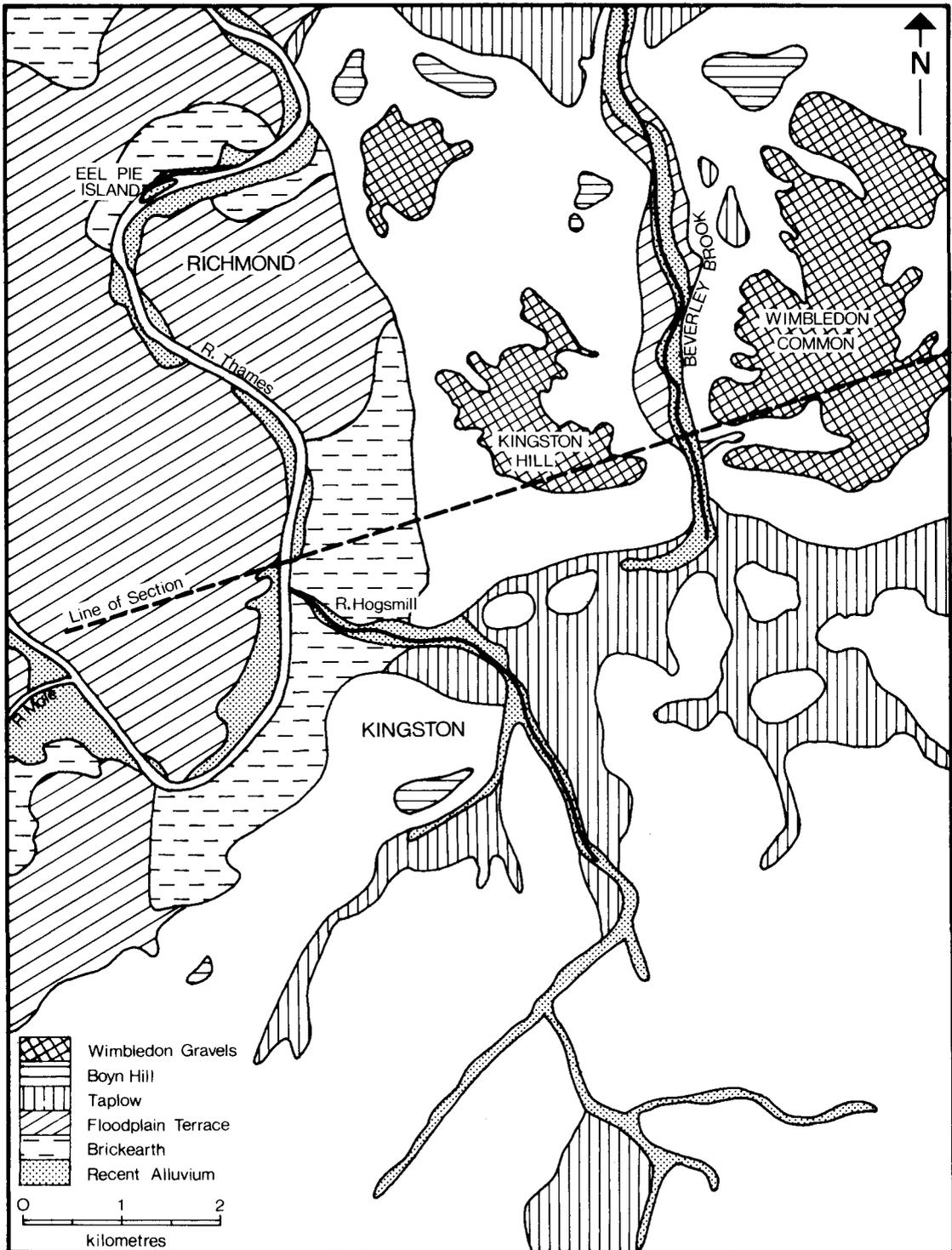


Fig. 2. Terraces and associated deposits in the Kingston District. (Based on O/S Geol. Surv. map of S. London, 1975).

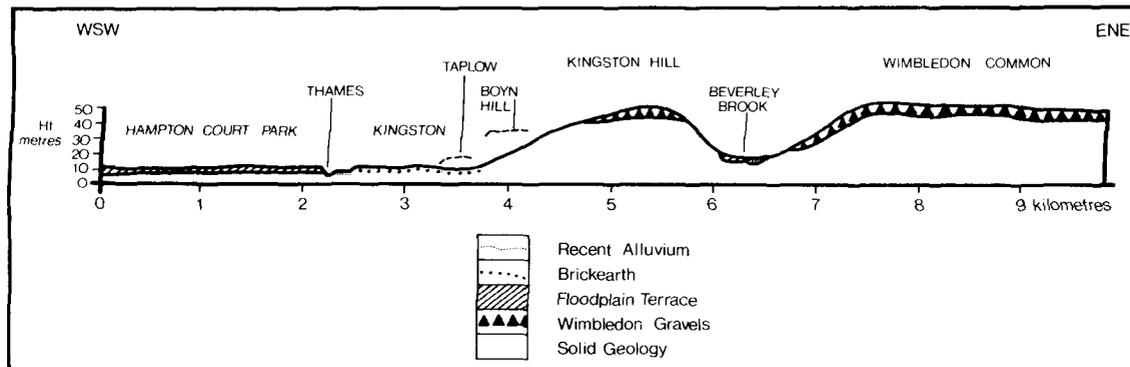


Fig. 3. Section showing terraces in the Kingston area and relative position of local Boyn Hill and Taplow deposits. (Based on O/S Geol. Surv. map of S. London, 1975).

Depression is a continuation of the St. George's Hill gravels south-east of Weybridge.

The constituents of the lower terraces in the Kingston area have received less examination. At Willments Pit, Isleworth (TQ 157746) plant remains from a silt bed beneath gravel of the Flood Plain terrace have yielded a  $C^{14}$  date of  $43140^{+1520}_{-1280}$  BC (Shotton and Williams 1973, 454). This suggests that Flood Plain Terrace deposits in the locality may belong to the Upton Warren interstadial of the Devensian. And at Brentford brickearth of the upper floodplain deposits have yielded 'Ipswichian' hyaena, hippopotamus, red deer, giant deer, bison and straight-tusked elephant (Zeuner 1959, 162, 324).

## CHRONOLOGY

The evidence suggests that the terraces of the Kingston area may be placed in chronological order but problems still remain over the dating of events and over details of river behaviour.

The classic investigation of Wooldridge suggested that the Thames was diverted to approximately its present course in two stages: from the Vale of St. Albans to the Finchley Depression, and then to its contemporary route. More recent work (e.g. Gibbard 1977, 473) suggests that the river was diverted directly from its St. Albans line towards its modern route by the action of Anglian ice. Gibbard has also (1979, 39) described the development of south bank tributaries. The St. George's Hill gravels may be correlated in terms of height and lithology with the Dollis Hill gravels of the Finchley Depression, and they support the view that the Wey and Mole were confluent near Weybridge and then flowed north-east in early Anglian times. The evidence of the younger Oxshott Heath gravels, of southerly origin, and their continuation as the composite Wimbledon gravels, suggests that the combined Mole-Wey met the Thames in the vicinity of Wimbledon during late Anglian (Black Park) times.

This phase was followed by a period of incision and the accumulation of Boyn Hill gravels at a new lower level. The local Boyn Hill bench is 9–12m

below the bench of the 'Kingston Leaf' at Richmond. There is little evidence in the Kingston area as to environmental conditions during Boyn Hill times, but investigations at the type site (Barnfield Pit, Swanscombe) have yielded much information (see, for example, Shephard-Thorn and Wymer 1977, 38). Clactonian and Acheulian artifacts have been recorded for the lower Stage I and Stage II deposits at Swanscombe and these, together with floral and faunal evidence, suggest accumulation under temperate conditions. It appears that deposits of these stages represent distinct phases of a Hoxnian complex separated by a cold period. The upper deposits suggest the arrival of cold conditions, perhaps Wolstonian in age. However, correlation between Swanscombe and Kingston may be open to doubt (Collins 1978, 22) especially in the light of a possible crossing of the Black Park and Boyn Hill Terraces in the Lower Thames area (Bridgland 1980, 21).

The Boyn Hill episode was succeeded by erosion and then by the deposition of gravels of the Taplow stage. This is well displayed from Norbiton Common to Merton Park, and from East Sheen Common to Putney. The position of this stage within the chronology of the Thames Valley has again to be determined by reference to localities outside the Kingston region. Evidence suggests that the Taplow gravels were deposited under cold conditions. In 1854 a musk ox skull and bones of woolly rhinoceros and mammoth were found at the type site (near Taplow station, SU 919816). This evidence, together with the variety of palaeolithic artifacts, implies that the gravels were deposited under cold conditions, probably during the Wolstonian.

The Taplow stage was followed by erosion, and then by the accumulation of the Floodplain terrace gravels. This terrace is well developed along the borders of the contemporary Thames near Kingston, forming a band up to 5km wide between West Molesey and Mortlake. Its height above the modern floodplain is variable, and it may be subdivided into at least two levels. Early investigations of the Flood Plain Terrace gravels (Dewey and Bromhead 1921, 50) showed that the deposits had a composite origin. Early Flood Plain gravels had been dissected by a buried channel which was then aggraded to almost the same height. It was also suggested that, at least locally, a small bluff separated the two formations. King and Oakley (1936, 68) also describe both an upper and a lower floodplain terrace. Allen (1978, 9) has written that 'two different types of topography, which would seem to be equated with the upper and lower flood plain deposits . . . are undoubtedly present'. This may be illustrated by the situation within the great bend of the Thames at Kew, where the normally flat nature of the Flood Plain Terrace is diversified by a set of low, whale-backed ridges that rise to about 8m and which are separated by shallow valleys. These are former eyots: a modern analogue is Eel Pie island, Twickenham. A mantle of brickearth veneers the Flood Plain Terrace, especially between Long Ditton and Kingston.

The term 'brickearth' refers to fine-grained deposits of varying origin. It is used to describe wind-blown material, or loess, laid down at the margin of former ice sheets. Such material may then be reworked by hillslope processes, with the incorporation of coarser material, but it is still referred to as

'brickearth'. The term has also been used to describe the fine-grained sediment laid down in standing water.

Recent Flandrian (post glacial) alluvium occupies only a narrow strip bordering the Thames and its major local tributaries. Work on post Devensian changes has suggested that the Thames may have moved both laterally and vertically (Devoy 1979, 389) during the Flandrian. A lateral rate of shift of 1km/1000 years has been suggested by Nunn (pers. comm.) for Central London, and by inference the Thames at Kingston may have migrated by a significant amount.

### PROBLEMS OF RIVER BEHAVIOUR

Although a chronology has been devised which has a measure of support, there is much less agreement about the circumstances of terrace accumulation and incision. Several models have been proposed. Prior to Zeuner's work (1959, 45) most British workers had accepted a model that changes in sea level (a frequent Quaternary phenomenon) were felt throughout the basin: King and Oakley (1936, 54) attached particular importance to glacially controlled fluctuations of sea level. Aggradation was believed to occur as sea level rose during interglacials, and incision as it fell during glacial episodes. The presence of cold faunal elements in the Taplow gravels at Taplow is inconsistent with this interpretation, and later American work (Leopold, Wolman and Miller 1964, 261) showed that rises in base-level were felt only a short distance upstream. It now appears that during interglacial sea level 'highs' the Thames was only affected to the tidal limit of the time, and it may be inferred that the Kingston area was involved.

A second important model requires that beyond the marine influence the river's behaviour was controlled by climatic fluctuations (Zeuner 1959, 45). During periglacial phases large quantities of debris were supplied to the Thames, partly as a result of active hill slope processes. The river would be unable to transport this material due to a reduction in discharge. Aggradation would consequently have occurred, followed by incision during the next warm phase, producing a terrace. This theme has been developed in recent years by Wymer (1968, 24) and in a recent synthesis by Green and McGregor (1980, 196). These authors have elaborated the complex nature of river response to changing climate: Green and McGregor proposed eight distinct stages of river behaviour in the passage from interglacial to periglacial and then back to interglacial conditions.

Other writers have focused attention on the way in which channel pattern (and by inference depositional and erosional behaviour) may vary. Clayton (1977, 156) suggested that many alluvial gravels were deposited by meandering channels adopting a 'cut and fill' behaviour. Dissection then followed, with the development of terraces. Briggs and Gilbertson (1980, 63) in their work on the Upper Thames suggested that the river responded to periglacial and interglacial conditions by adopting contrasting channel patterns. Periglacial conditions gave rise to aggradation and braiding. The resulting sediments were angular to sub angular in shape and plane-bedded, reflecting hillslope transport with only

slight river reworking. Cross-bedding would be rare. Interglacial conditions were characterised by the deposition of sands and silts in discrete, meandering channels.

A consensus seems to be emerging that the Thames behaved in braided fashion during its more active phases. A braided stream (see e.g. Miall 1973, 3) consists of a number of rapidly shifting channels and mid-channel bars, some of which may be stabilised by vegetation to become islands. It has a relatively steep gradient and tends to be wide and shallow. Sediments are coarser than for other stream types, and are dominated by sands and gravels. The major causes of braiding appear to be ample bed load of variable size, strongly fluctuating discharge, and a steep gradient.

### CHANGES IN THE THAMES AT KINGSTON

If the Geological Survey Map, Sheet 270 (South London) 1975 is examined it will be seen that between Thames Ditton and Petersham the right bank of the Thames is bordered by gravel. This strip varies in width from 500m to nearly 2km and over most of its length the gravel is labelled as Flood Plain Gravel. At Richmond a cliff of London Clay comes down to the river.

In places and notably between Long Ditton to just north of Kingston this gravel is overlain by brickearth. In Kingston this material ranges from a true silt to a clayey fine sand and may have been laid down in quiet water or as an overbank deposit. It should not be thought of as implying periglacial conditions. What is certain, however, is that the broad divisions of the 1:50,000 Geological Map do not reveal the details of the post Flood Plain Gravel and Brickearth sedimentation in the Kingston area. If this is true of this area, then it is equally likely to be true of other areas adjacent to the river in this part of the Thames valley.

Redevelopment of central Kingston since the early 1960s has provided much information on this pattern of sedimentation. It is only the linking of several sites together over a period of years which has enabled a reconstruction of stream pattern to be made. Various contractors have made their sites available for inspection, and in some cases have provided bore hole records as well. Their kindness is gratefully acknowledged.

In 1965 excavations in Eden Street, Kingston (Loc. 1 Fig. 4) exposed a variety of sediments channelled into coarse gravels. This was interpreted, on the basis of a limited section, as being a cut-off stream channel, probably belonging to the Hogsmill (Penn 1968, 2).

Later excavations during 1974–77 on Eden Walk (Loc. 2 Fig. 4) revealed much more of the sediments and confirmed the presence of a channel. They showed that the channel was much larger than originally thought and that it contained a sequence of archaeological deposits from the Neolithic period onwards. This major channel has divided the area containing All Saints Church and the Market Place from the land to the east.

There are gravels (those cut by the channels deposits) underlying the Market Place and these were not only seen in trenches in the Market Place but were also seen at the Bishops Hall Site, 29 Thames Street (Loc. 3 Fig. 4) and further north in Vicarage Road (Loc. 4 Fig. 4).

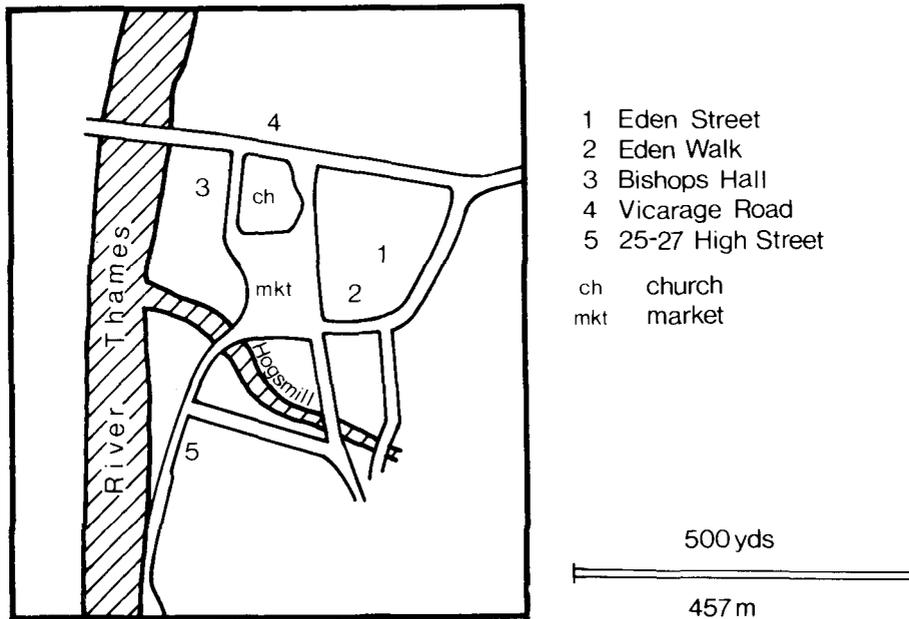


Fig. 4. Central Kingston location map.

Another important site was examined at 25–27 High Street, to the south of the Market Place (Loc. 5 Fig. 4). This showed Flood Plain gravel in situ in the southern part of the site. In the north eastern part, easterly dipping, ripple-drifted sands with fine clay stringers were found, perhaps representing late flow and deposition by the Thames.

It is probably these sites which give the clearest indication of the pattern of events in Kingston from about 3000 BC onwards. Analyses of sediment and fauna are not included in this account but the sequence suggested here is consistent with these results. It is possible, however, that the examination of later sites may alter at least part of this interpretation.

The proposed sequence is perhaps best explained by means of diagrams (Fig. 5 nos. 1–3). It is envisaged that instead of a single channel, the Thames was split into two channels by a gravel eyot. This eyot is an accretional feature accumulated around a local high point in the underlying London Clay, and is the area of gravel now occupied by the Church and the Market Place.

In the earliest situation (Fig. 5 no. 1), water was flowing in both branches of the river and the Hogsmill joined the Eastern branch. The erosive contact between the channel sediments and the Flood Plain Gravel described from the Eden Street site (Penn 1968, 1) strongly suggests flowing water in the early stages.

In the next stage (Fig. 5 no. 2), the eastern channel was abandoned as flow shifted to the western channel, this being the typical behaviour of a braided system. Flow would become intermittent and occur only at times of flood in the eastern channel, depositing relatively fine materials.

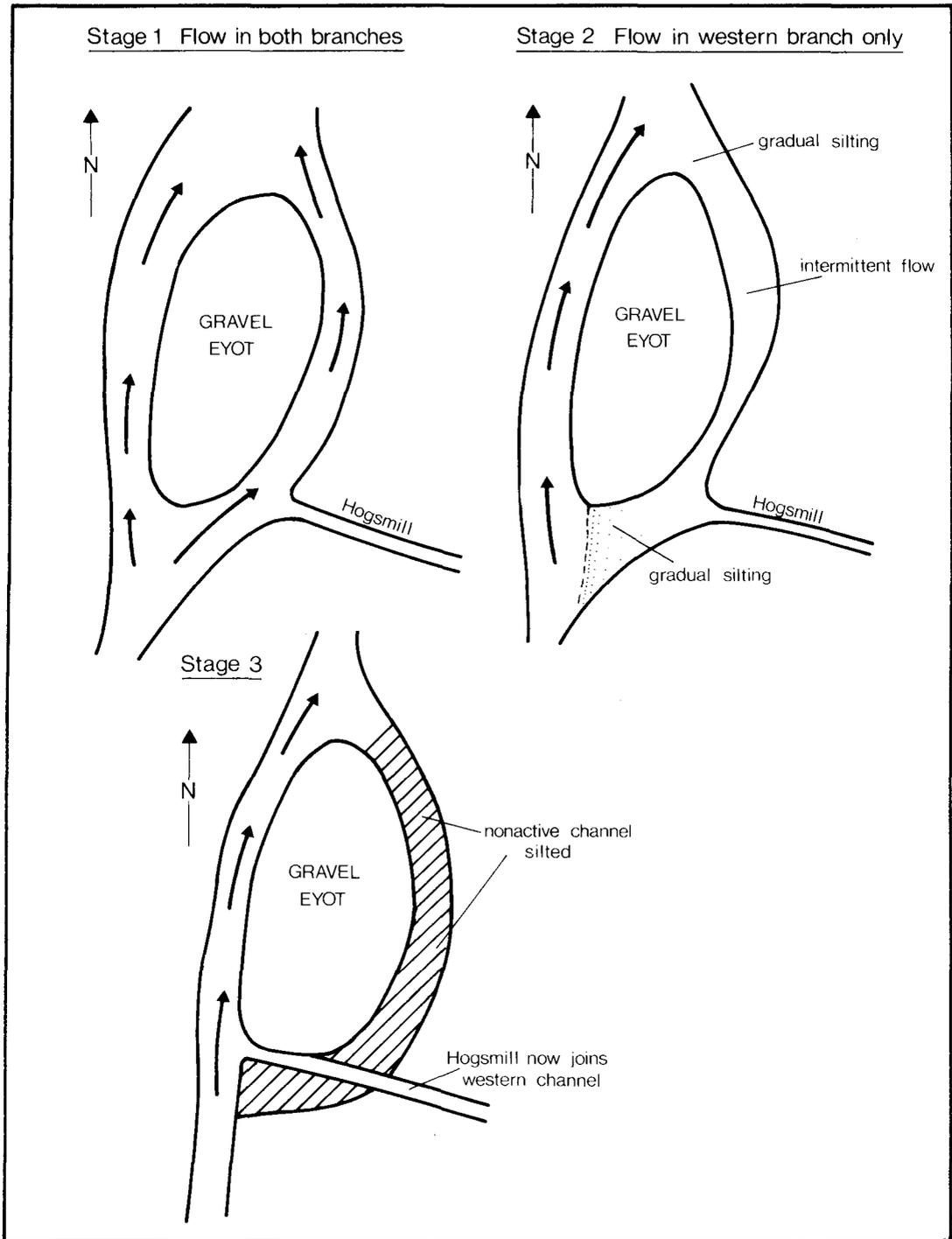


Fig. 5. Channel development in Kingston.

There is a two-fold vertical division of the channel fill at the Eden Street site. A lower unit is dominated by a molluscan fauna which prefers quiet water conditions, and an upper unit is dominated by a fauna preferring standing water. The silty sands, sandy silts and clays which form a major part of the deposits, as well as the organically rich, blue black muds correspond to the cut-off channel fills of Fisk (1944, 69; 1947, 70). They are also consistent with the views of Briggs and Gilbertson (1980, 63) regarding channel behaviour under non glacial conditions. All this suggests a closing of the eastern channel.

In the third stage (Fig. 5 no. 3) the western channel is the only active channel. The eastern channel is largely filled by muddy material from flood deposits and organic deposits from the growth of vegetation.

The sands overlying gravels seen at 25 High Street may represent late flow in the eastern branch before this became blocked. It may however represent a spread of material deposited by the Hogsmill as it joined the single active Thames channel.

Stage One may represent a time immediately pre-dating the Neolithic deposits found in the eastern channel, as a spread of archaeological material is found in the base of the channel. Stages Two and Three are much more difficult to date but closure may have occurred in Neolithic times if the faunal sequence is to be believed. The eastern channel has a sequence of archaeological deposits from Neolithic onwards, including Saxon and Mediaeval material, and the area almost certainly remained badly drained for a long period, perhaps into the 15th and 16th centuries.

The gravels at the southern end of the eyot, i.e. south of the Market Place, yield no evidence of occupation and the earliest material found to date on the gravels occurs on the Bishop's Hall site and is 9th-10th century in age. On the eastern side of the eyot the earliest material appears to be late Medieval. It is not surprising that little archaeological material has been found on the gravel area, for unless pits or something of a similar nature are dug, then very little material is likely to accumulate naturally.

Movement within the Thames itself should not be forgotten, for it is probable that some erosion of the right bank would be now still taking place as this is the concave side of the channel, were it not embanked. The left bank (above Kingston Bridge) is probably an area of deposition with a lateral rate of accretion of about 200m during 250 years.

## CONCLUSION

This paper has attempted to outline the varying behaviour of the Thames during the Quaternary, and to show that important changes have occurred locally well into historic times. It is believed that an awareness of landscape change is an essential element in our understanding of archaeological events.

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# A THAMES PICK FROM UXBRIDGE

COLIN BOWLT

A Thames pick was discovered in April 1979 by Mr. P. Fieldman in his garden at 4 Colndale Road, Uxbridge (TQ 057850) two and a half feet down under a fallen tree. The find spot is on the 150' contour on the steep slope 50' below the Plateau Gravel capping Uxbridge Common. The pick was reported to have been found with some pebbles at a depth of 1' down into the London Clay. None of the pebbles showed any signs of working but one or two were heat crazed. The find spot had been filled in before it was examined and it is not known whether the pick and pebbles are truly associated.

The pick is 188mm long and approximately 40mm thick and weighs 410gm. It is of pale fawn to grey flint and of fresh unrolled appearance. No cortex is present. The cutting edge is of typical tranchet type. The butt has been thinned on one side and a thick flake knocked off the opposite side. If hand-held there is only one comfortable right-hand grip position with the chisel edge at 90 degrees to the body. The slightly less comfortable left-hand grip results in the cutting

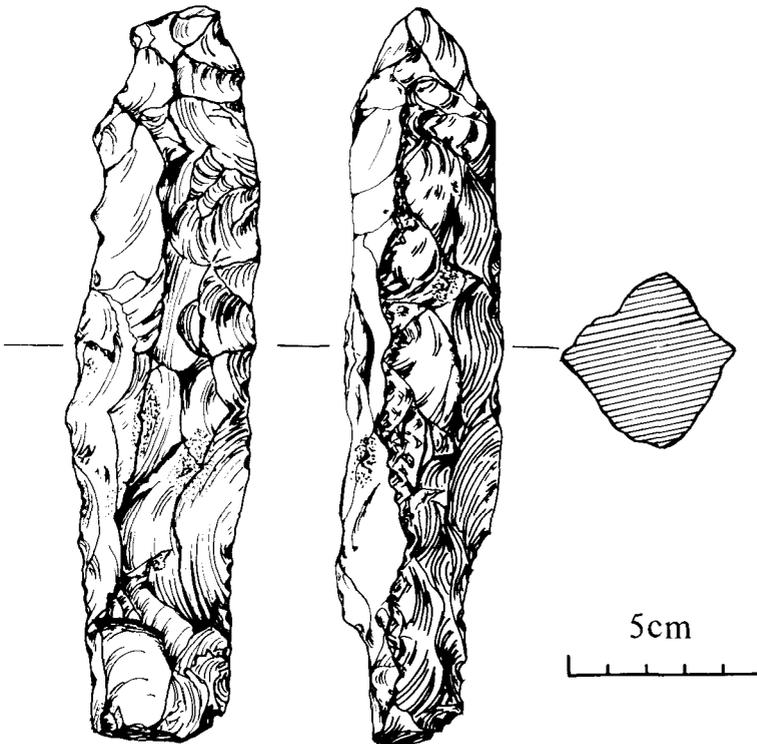


Fig. 1 A Thames Pick from Uxbridge (1/2).

edge at 45 degrees to the body. However, although no mesolithic flint axes with hafts are recorded from Britain, it seems likely – as many authorities suggest<sup>1</sup> – that some at least were mounted in wood or antler.

In south Scandinavia, flint axe or adze blades of Boreal age have been found set in sleeves of root-wood and red-deer antler with shaft-holes to take wooden handles.<sup>2</sup> Comparable antler artefacts from the London area, some difficult to distinguish from neolithic ‘crown antler’ mace-heads with little internal tissue have been identified as mesolithic-type hafting sleeves.<sup>3</sup>

Known mesolithic sites have been found just over a mile distant to the north at Dewes Farm, and to the south-west at Sandstone.<sup>4</sup>

The axe has been retained by Mr. and Mrs. Fieldman. I should like to thank Miss Jean Macdonald of the Museum of London for discussing the find with me and Margaret Wooldridge for providing the illustration.

#### NOTES

1. E.g. J. G. D. Clarke *The Mesolithic Age in Britain* (London 1932) 17, 66 & 67, Fig. 34, 1.
2. J. G. D. Clarke *The Earlier Stone Age Settlement of Scandinavia* (London 1975) 116, 126–7, Fig. 16, 1, 2.
3. A. D. Lacaille ‘Mesolithic facies in Middlesex and London’ *Trans. London Middlesex Archaeol. Soc.* 20, Pt. 3 (1961) 135–6, Fig. 7, 6.
4. A. D. Lacaille ‘The Mesolithic Age’ *V. C. H. Middlesex* Vol. 1 (1969) 22; and M. Bowen *The Archaeology of the Colne Valley Park* Research Memorandum Greater London Council (London 1977) 10.

# A LATE NEOLITHIC MACEHEAD FROM KINGSTON UPON THAMES

D. FIELD and J. PENN

Petrological examination of a Late Neolithic mace head from Kingston upon Thames<sup>1</sup> provides a useful addition to those listed by Roe.<sup>2</sup> It would be described by Curwen as an 'egg-shaped macehead'<sup>3</sup> while its more angular outline might allow it to fall into Roe's category 'Ovoid B'.<sup>4</sup>

The implement was found in 1965 during deep excavations for a multi-storey car-park in the town centre of Kingston. It was described by the developers<sup>5</sup> as being found about 15ft. from the back wall of Marks and Spencer Ltd.,<sup>6</sup> and about 16ft. deep in clay. This would place it firmly within the sediments of the ancient river channel discovered by archaeological investigations on adjacent sites.<sup>7</sup> Found close to the macehead was a pebble<sup>8</sup> and an ox bone.<sup>9</sup>

The implement is 90mm in length, 57mm wide, and 64mm thick, with a sub-circular section. It weighs 440 grms. The shafthole, placed slightly off centre, is generally circular, and is funnel-shaped with a minor chamfer at either end. Minimum diameter of the hole is 16mm, though upper and lower diameters are greater, at 28mm and 31mm respectively. The significance of the funnel-shaped hole is not clear. It may have accommodated a sleeve to aid hafting, or possibly allowed for a wedge to be driven into the shaft end to tighten the grip. Alternatively a tapered shaft may have been used to provide additional strength immediately below the head, the point most open to stress.

Excavations at Eden Walk in 1977, some 100 metres to the southwest produced sherds of Mortlake ware and other occupation material that may be attributed to the same period as the macehead. This was recovered from the channel at a similar depth to the macehead and was sealed by organic peat with a radiocarbon date of  $1610 \pm 90$  bc,<sup>10</sup> though it must be stressed that they are not necessarily stratigraphically related. Amongst flintwork from the same site an oblique tranchet derivative arrowhead would provide a more conservative association.

Within South-East England a cluster of macehead finds occur along the west London stretch of the Thames. Most of these are of the 'Thames Pestle' type,<sup>11</sup> including one from Kingston itself,<sup>12</sup> though a number of Ovoid maceheads of flint have been recovered.<sup>13</sup> Land finds are rare. Surrey provides the nearest parallels to the Kingston example, with stone Ovoid types from Weybridge<sup>14</sup> and Ash,<sup>15</sup> while others are recorded from Colne Engaine and Braintree Mill in Essex, and Friston in Sussex.<sup>16</sup> Both Piggott<sup>17</sup> and Roe<sup>18</sup> have emphasised the association of stone maceheads with Grooved Ware pottery. Roe lists seven examples of Ovoid macehead associations with Grooved Ware, and only two possible associations with Peterborough Wares. Artifacts attributable to the

Late Neolithic and Early Bronze Age periods in the London Basin perhaps need investigating in further detail. Implements such as 'Scamer' flint axes, and 'Duggleby' adzes have been linked with the Grooved Ware–Machead complex,<sup>19</sup> and numbers of these have been found in the area.<sup>20</sup>

Surprisingly, with the exception of a few possible sherds from the Thames and one from Putney,<sup>21</sup> no Grooved Ware has been found. Peterborough Wares however occur in greater quantities,<sup>22</sup> especially in riverine locations in west London.

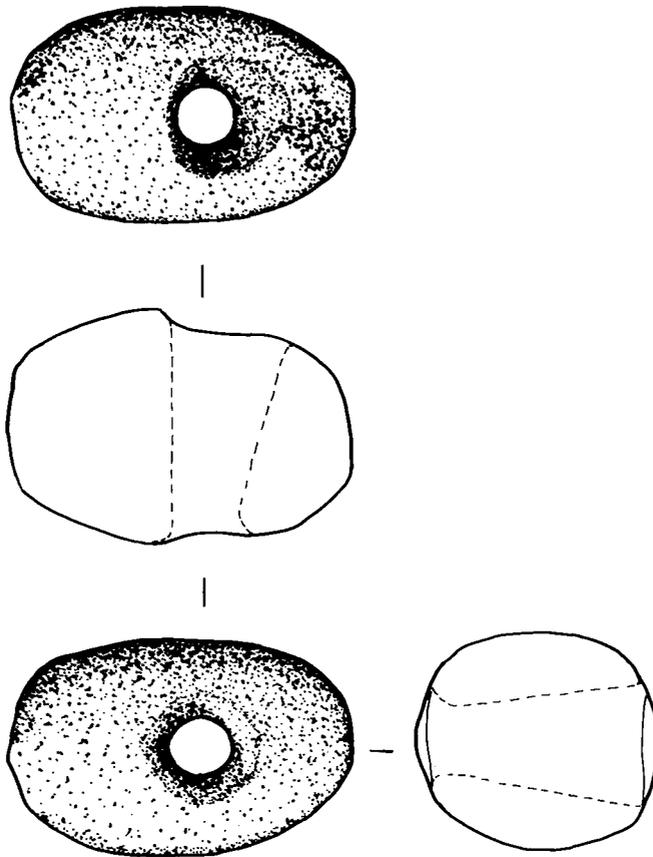


Fig. 1. Late Neolithic stone machead from Kingston upon Thames (1/2).

#### ACKNOWLEDGEMENT

Many thanks are due to Mrs. M. Hinton at Kingston Museum for allowing the machead to be sliced, recorded and published.

## APPENDIX: PETROLOGY

The fresh colour of the rock is blue-grey with prominent white feldspar phenocrysts and patches of dark minerals. In thin section the ground mass consists of short intergrown feldspar laths with some amphibole. It is difficult to determine the composition of the plagioclase feldspar since the whole rock is severely sericitised and altered. The feldspar phenocrysts are zoned, very turbid and subeuhedral and range from 3mm to 5mm in length. The patches of dark mineral were seen to be clots of small biotite crystals replacing hornblende. There is some sphene and magnetite present as minor constituent. The rock appears to be an andesite and the overall composition and texture suggest a source somewhere in the Breidden Hills of North Wales. An outcrop near Shrewsbury seems a likely source.

## NOTES

1. Kingston Museum Acc. No. 2035.
2. F. Roe 'Typology of stone implements with shaft-holes' in T. McK Clough and W. A. Cummins, eds., *Stone Axe Studies*, C. B. A. Res. Rep. No. 23 (London 1979).
3. C. Curwen 'An Egg-shaped Mace-head' *Antiq. j.* 21 (1941) 337-341.
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10. HAR-2498. D. Hinton, pers. comm.
11. F. Roe *op. cit.* in note 4.
12. British Museum Acc. No. WG96.
13. F. Roe *op. cit.* in note 4.
14. Guildford Museum Acc. No S7666. Sliced ovoid macehead of Tuff.
15. *Surrey Archaeol. Collect.* 1946-7 (50) 137. Ovoid macehead of Bunter quartzite.
16. C. Curwen *op. cit.* in note 3, 341.
17. S. Piggott 'Neolithic Cultures of the British Isles' (London 1954) 331.
18. F. Roe *op. cit.* in note 4.
19. T. Manby *Grooved Ware Sites in the North of England* British Archaeol. Reports No. 9 (Oxford 1974).
20. Jean MacDonald, pers. comm.
21. S. E. Warren Excavation of a Neolithic Site at Sefton St., Putney *Trans. London Middlesex Archaeol. Soc.* 28 (1977) 9.
22. E.g., Gazetteer in S. Piggott 'The Neolithic Pottery of the British Isles' *Archaeol. J.* 88 (1931) 67-158.

# BRONZE AGE POTTERY FROM WOOD LANE, OSTERLEY

JONATHAN COTTON

A number of sherds of Middle Bronze Age pottery were discovered by George Chambers of the West London Archaeological Field Group in August 1979, during the burial of a dog in the back garden of 'The Cottage', 160 Wood Lane North, Osterley (TQ 1545 7745).<sup>1</sup> The sherds were found at a depth of 790mm below the present ground surface, and at a point 430mm into the natural brickearth. No fragments of calcined bone or charcoal were associated with them, although several pieces of worked flint were found in the topsoil of the same garden by Mr. Chambers, and are considered separately below.<sup>2</sup>

## LOCATION

Wood lane, which formerly ran to meet the London Road a kilometre to the south of of the findspot, is now divided into two—Wood Lane North and Wood Lane South—by the Great West Road (A4) which links London with Bath. Wood Lane North strikes just west of north to join Jersey Road, which skirts the south-eastern corner of Osterley Park. 'The Cottage' is one of a row of detached houses fronting the west side of Wood Lane, and is situated 200 metres to the north of the brow of a low ridge which runs SW-NE a few metres to the north of the Great West Road. The site of the former Wyke House and its grounds, now occupied by a sports ground and a nursery, lies across the road to the east, while further open ground lies at the rear of the garden to the south-west.

The findspot is situated above the 25 metre contour on the Taplow terrace of the Thames gravels,<sup>3</sup> which is here overlain by an undulating sheet of silty, reddish-brown brickearth, lithologically similar to some of the loess soils of northern Europe.<sup>4</sup> The junction between the Taplow and Flood Plain gravels lies 800 metres away to the south-east, with the Thames a further kilometre beyond. The ground slopes gently down to the river Brent a kilometre to the north-east, allowing a panoramic view of Ealing and the surrounding districts. Further views across the Thames flood plain may be obtained from the brow of the low ridge to the south.

Although topographically advantageous, much of the locality has been retained as public open space, which may help to explain the general paucity of known finds of relevant date in the immediate area. However, pottery described as 'Bronze Age' is recorded from Seward's Pit, Hanwell, a kilometre and a half to the north,<sup>5</sup> an otherwise Middle Bronze Age metalwork hoard containing a Late Bronze Age bronze axe-mould is known from Southall,<sup>6</sup> Middle Bronze Age palstaves are recorded from Southall<sup>7</sup> and Hounslow,<sup>8</sup> and quantities of Middle Bronze Age artefacts have been recovered from the

Thames between Isleworth and Kew.<sup>9</sup> In addition, Late Bronze Age metalwork is known from Hanwell and Hounslow,<sup>10</sup> while other undated, or dubiously dated, local sites include the much disturbed sub-circular enclosure with a single south-eastward facing entrance, lying 800 metres NNE,<sup>11</sup> and a circular earthwork in Osterley Park one kilometre to the NNW.<sup>12</sup>

### CIRCUMSTANCES OF THE DISCOVERY

Measuring  $1 \times 1.50$  metres, the dog's grave is the latest in a series of six or seven such dug in the same area by Mr. Chambers since about 1950, and is sited in a flower border on the north side of the garden, against the wooden fence which separates the garden of No. 160 from that of No. 162. The sherds were recovered from the northern section of the grave, at a point more or less directly beneath the fence line. The fence itself is provided with substantial wooden supports spaced at *c.* 3 metre intervals, each set in pits dug through the topsoil and 100–150mm into the underlying brickearth. There were no indications to suggest that the sherds had been disturbed during the erection of the fence, although equally neither was there any sign of a contemporary feature such as a pit or ditch in which they might have been deposited either.<sup>13</sup>

### THE POTTERY (*Fig. 1*)

Altogether, twenty-eight sherds were recovered, representing at least three, and possibly as many as five or six hand-made vessels belonging to the southern British Deverel-Rimbury tradition of Bronze Age pottery. The forms include bucket urns (Nos. 1, 2 and 4), a weakly-shouldered and possibly biconical urn (No. 3), and a globular urn (No. 5). None of the vessels bear any trace of applied or impressed decoration.

Visual examination suggested the presence of two distinct fabric groups, with twenty-two sherds belonging to one group, and the remaining six to another, separate, group. However, closer scrutiny under a binocular microscope of  $\times 20$  magnification revealed merely two variations of the same basic fabric.

The larger group, represented here by Nos. 1–4, consists of a coarse, heavily flint-tempered sandy fabric, with surface colours ranging from red-brown to grey-black. The second, to which the six sherds represented by No. 5 belong, is similar, but generally finer. The flint temper is crushed smaller and more evenly sorted, the vessel walls are thinner, and the external surfaces have been coated with a thin slip which has been burnished.

Although now conventionally dated to the Middle Bronze Age,<sup>14</sup> recent work has suggested that the origins of Deverel-Rimbury pottery should be sought within the indigenous late Neolithic and Early Bronze Age ceramic sequence.<sup>15</sup> A development of this line of enquiry has allowed Barrett and Bradley to argue for contemporaneity between the Deverel-Rimbury cremation cemeteries and the classic Wessex II burials,<sup>16</sup> whose largely complementary distributions have been noted by several earlier writers. This has led, in turn, to the suggestion that the cremation cemeteries represent a lower, and perhaps more egalitarian, stratum of society living in the areas surrounding

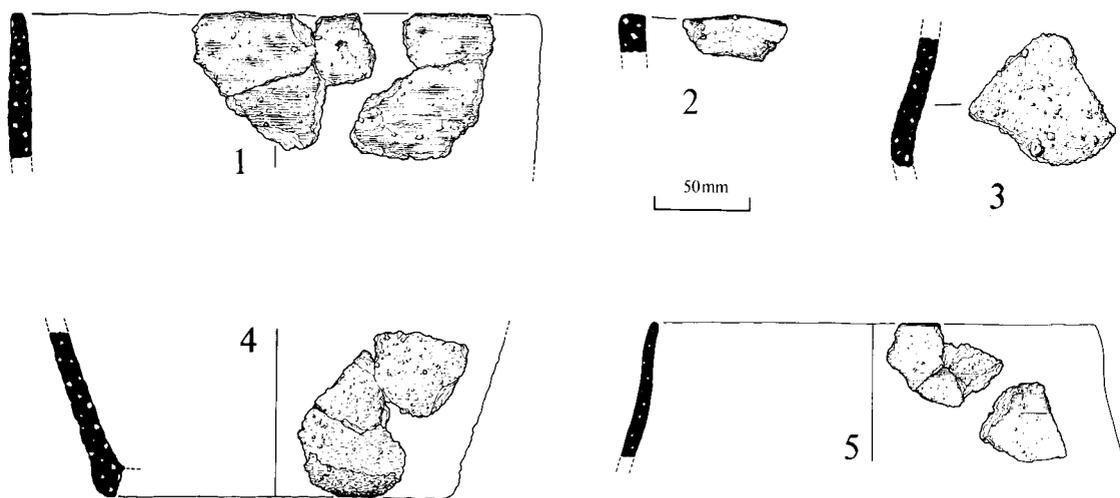


Fig. 1. Osterley: Bronze Age pottery.

1. Five sherds of a large bucket urn with a simple, upright rim, of minimum diameter 280mm. Both exterior and interior surfaces bear traces of wipe-marks, and the interior surface in particular is covered with a network of fine contraction cracks. Coarse, sandy fabric with an abundant crushed calcined flint temper, the largest inclusion of which measures 8mm across. The core is dark grey-black in colour, with a brown margin. Surface colours range from brown to black.
2. Single sherd of a large bucket urn with a simple, upright, flattened rim. The size of the sherd makes any exact determination of the rim diameter impossible, although it is at least as great as, if not greater than, No. 1. All surfaces bear traces of wipe-marks, and there are contraction cracks on the exterior. Coarse, sandy fabric similar to No. 1, although the calcined flint temper is sparser, and has been crushed finer. The core is dark grey-black, with a dark brown margin.
3. Single sherd from a large, weakly-shouldered and possibly biconical urn, with badly eroded surfaces. Although the coarse, sandy fabric is similar to that of Nos. 1 and 2, the calcined flint temper is less evenly sorted, with individual inclusions as large as 10mm across, and this, together with the abraded condition of the sherd, makes the vessel appear even coarser than it probably was. The core is dark grey-black with a brown margin.
4. Three conjoining sherds of a large, straight-walled vessel with a minimum basal diameter of 180mm. Both interior and exterior surfaces are somewhat eroded, and the interior surface has a number of contraction cracks, which are densest at the junction of base and wall. Coarse, sandy fabric with an abundant calcined flint temper. The core is dark grey-black with a dark brown margin. Surface colours range from red to brown on the exterior and from brown to black on the interior. It is possible that this is the same vessel as No. 1.
5. Four sherds, three conjoining, of a large globular urn with a simple rounded rim, of minimum diameter 230mm. The interior surface is somewhat eroded, while the exterior has been treated with a fine slip, fired red-brown, which bears traces of burnishing. There are no contraction cracks visible. Sandy, grey-black fabric with a well-sorted crushed calcined flint temper.

the Wessex heartlands, and that it was in these areas that the earliest, and fullest, development of Deverel-Rimbury material occurred.<sup>17</sup>

Following Calkin's pioneering work in the Bournemouth area,<sup>18</sup> a number of regional ceramic groups have been defined within the Deverel-Rimbury complex. The pottery from Osterley belongs to the lower Thames group, which is characterised by the presence of large bucket urns and a scarcity of the finer globulars.<sup>19</sup> The occurrence of one of these latter vessels within the small collection under consideration is thus of some interest. Further, the lack of any sharp division in fabric between this 'fine' globular and the 'coarse' bucket urns, mentioned above, serves to link the Osterley material with that from Sussex studied by Ellison.<sup>20</sup>

The lower Thames valley is particularly notable for its Middle Bronze Age cremation cemeteries—a number of which have been discovered in the west London region—with those situated on the Taplow terrace gravels at Acton and Yiewsley lying only 4.7 kilometres to the north-east and 8.5 kilometres to the north-west respectively.<sup>21</sup> Domestic sites are scarcer, although one, and perhaps two palisaded enclosures are known from Thorpe in Surrey,<sup>22</sup> while early settlement debris has been recovered from Petters Sports Field, Egham,<sup>23</sup> Sipson,<sup>24</sup> Staines<sup>25</sup> and possibly Kempton Park.<sup>26</sup> Further sites may be suspected, however, as a number of excavations in the London area have produced scatters of abraded, flint-tempered pottery which could be relevant here. One such, at Busch Corner, Syon Park, lies only one and a half kilometres to the south-east of the present finds.<sup>27</sup>

## THE FLINTWORK (*Fig. 2*)

by Margaret Wooldridge

Three pieces of struck flint were found in the topsoil of the back garden of 'The Cottage' by Mr. Chambers, but they cannot be strictly associated with the pottery described above. It is impossible to date them precisely, although parallels for the denticulated pieces Nos. 1 and 2 exist in the late Neolithic and Early Bronze Age flint assemblages from Durrington Walls<sup>28</sup> and Fengate,<sup>29</sup> and in the probably Middle Bronze Age flintwork from the Itford Hill cemetery-barrow.<sup>30</sup>

## DISCUSSION

Taken together, the pottery and flint are indicative of further prehistoric activity on the Thames gravel terraces to the west of London, a point which should by now occasion little surprise. The nature of the activity they attest is, however, difficult to determine from the limited evidence available here. The flintwork is typical of the generally undiagnostic material regularly recovered during fieldwork in the area,<sup>31</sup> and is thus not particularly helpful. The pottery is of potentially greater significance in this respect, although its true status remains doubtful. The absence of calcined bone, together with the number of vessels apparently deposited in a restricted area would certainly seem to indicate a *domestic* rather than a funerary context, although the circumstances surround-

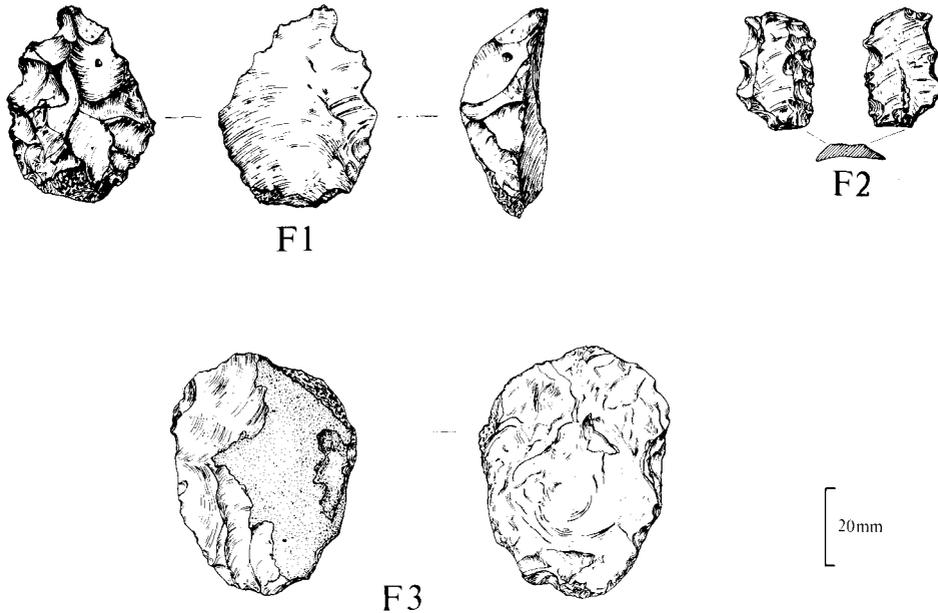


Fig. 2. Osterley: Flintwork.

- F1. Heavy, squat flake of coarse, mottled grey-blue (?)chalk flint. The dorsal face has been worked over with steep retouch giving a rough, markedly indented working edge. The ventral surface is unretouched.
- F2. Small blade fragment of translucent grey-brown (?)gravel flint. There is a hinge fracture at the distal end, while the proximal end has been snapped and retouched. One edge of the dorsal face has a coarse, blunting retouch, while the opposite edge has two steeply retouched notches.
- F3. Undistinguished and undiagnostic fragment of battered grey-brown (?)gravel flint with some cortex remaining on the dorsal surface. Probably waste material.

ing the discovery do not allow the idea to be pressed too far. Bearing in mind the general scarcity of Bronze Age settlement sites in the region, it must be hoped that future work in the vicinity of the findspot will clarify the situation further.

#### ACKNOWLEDGEMENTS

My thanks are due to the finder, George Chambers, and to the owners of the property, Mr. and Mrs. W. N. Robinson, for answering many queries relating to the circumstances of the discovery; to Bob Salanson of the Museum of London for undertaking the conservation of the pottery; to Margaret Wooldridge for illustrating and reporting on the flintwork; to Kevin Crouch and Alison Laws for kindly supplying unpublished information; to John Barrett and Stuart Needham for their help with the pottery, and to the latter for allowing me to consult the National Bronze Implements Index held in the British Museum. I am further indebted to George Chambers and Stuart Needham for reading and commenting on the text.

## NOTES

1. Museum of London Archaeological Finds Index D232
2. The finds have since been generously presented to the Museum of London by the owners of the property, Mr. and Mrs. W. N. Robinson, and may be examined there.
3. H. B. Woodward 'The Geology of the London District' *Mem. Geol. Surv.* (2nd edition 1922).
4. S. W. Wooldridge and D. L. Linton 'The Loam-Terrains of South-east England and their relation to its early history, *Antiquity* 7 (1933) 297-310; J. A. Catt 'The contribution of loess to soils in lowland Britain' in S. Limbrey and J. G. Evans (eds.) *The Effect of Man on the Landscape: the Lowland Zone* CBA Research Report 21 (1978) 12-20.
5. C. H. Compton 'Palaeolithic implements from Hanwell' *Journ. Brit. Archaeol. Assoc.* 63 (1907) 123.
6. C. H. Read 'Hoard from Southall, Middlesex' *Proc. Soc. Antiq. London.* 16 (1896-97) 328-330.
7. Single example found in 1900 during the construction of the canal 'between S(outhall) and Slough'. Information in the National Bronze Implements Index, British Museum.
8. Two examples found 'with' other Bronze Age metalwork by labourers digging in a field in Hounslow (C. E. Vulliamy *The Archaeology of Middlesex and London* (London 1930) 110). The famous hoard of Iron Age animal figurines was found in the same field (*ibid.* 133-135).
9. E.g. G. F. Lawrence 'Antiquities from the Middle Thames' *Archaeol. J.* 86 (1929) 78-81.
10. National Bronze Implements Index, British Museum and also Museum of London Archaeological Finds Index.
11. *The Victoria History of the Counties of England: Middlesex* 2 (London 1911) 4 and Museum of London Archaeological Finds Index I 62. It is described as a 'homestead moat' in *An Inventory of the Historical Monuments in Middlesex: Royal Commission on Historical Monuments, England* (London 1937) 86.
12. Vulliamy *op. cit.* in note 8, 273, and Museum of London Archaeological Finds Index I 52. This too is described as a 'homestead moat' in *R.C.H.M. ibid.*, 86.
13. Points confirmed by the finder.
14. C. B. Burgess 'Chronology and Terminology in the British Bronze Age' *Antiq. J.* 49 (1979) 28.
15. J. C. Barrett 'Deverel-Rimbury: Problems of Chronology and Interpretation' in R. Miket and C. B. Burgess (eds.) *Settlement and Economy in the Third and Second Millennia BC* B.A.R. 33 (1976) 289-307. (However, in a more recent assessment of the ceramic problem, Barrett has suggested that in some areas (e.g. the Upper Thames basin and Wessex) Deverel-Rimbury material carries on into the ninth century BC (J. C. Barrett 'The Pottery of the Later Bronze Age in Lowland England' *Proc. Prehist. Soc.* 46 (1980) 314)).
16. J. C. Barrett and R. Bradley 'Preface: the Ploughshare and the Sword' in J. C. Barrett and R. Bradley (eds.) *Settlement and Society in the British Later Bronze Age* B.A.R. 83 (1980) 10.
17. J. C. Barrett 'The Evolution of Later Bronze Age Settlement' in Barrett and Bradley *ibid.* 82ff.
18. J. B. Calkin 'The Bournemouth area in the Middle and Late Bronze Age with the 'Deverel-Rimbury' problem re-considered' *Archaeol. J.* 119 (1962) 1-65.
19. J. C. Barrett 'Four Bronze Age cremation cemeteries from Middlesex' *Trans. London Middx. Archaeol. Soc.* 24 (1973) 119ff.
20. A. Ellison 'The Bronze Age pottery in E. W. Holden 'A Bronze Age cemetery-barrow on Itford Hill, Beddingham, Sussex' *Sussex Archaeol. Collect.* 110 (1972) 112.
21. Barrett *op. cit.* in note 19, 116-119.
22. B. Johnson *Archaeology and the M25* (Surrey Archaeol. Soc 1975)
23. *Ibid.*, 12; M. O'Connell and S. Needham 'A Late Bronze Age hoard from a settlement at Petters Sports Field, Egham, Surrey' *London Archaeol.* 3 (1977) 123-130.
24. Salvage work conducted on behalf of the Museum of London by the present writer and the West London Archaeological Field Group during earth moving activities preceding gravel extraction in Sipson Lane, London Borough of Hillingdon, revealed several features containing *inter alia* a cylindrical loomweight and sherds of heavily flint-tempered pottery.
25. K. Crouch *The Friends Burial Ground, Staines, 1975-76* Joint London Middx. Archaeol. Soc. and Surrey Archaeol. Soc. Special Paper 2 (forthcoming).
26. R. F. Sheppard 'Two Bronze Age urns from Kempton Park' *Trans. London Middx. Archaeol. Soc.* 26 (1975) 281-2.
27. Information from Alison Laws.
28. G. J. Wainwright and I. M. Longworth *Durrington Walls: Excavations 1966-68* Rep. Res. Comm. Soc. Antiq. Lond. 29 (1971) 156ff.
29. F. Pryor *Excavation at Fengate, Peterborough, England: The Second Report* Royal Ontario Museum Monograph 5 (1978) 104ff; F. Pryor *Excavation at Fengate, Peterborough England: The Third Report* Northants. Archaeol. Soc. Monograph (1980) 106ff.
30. R. Bradley 'The flint industry' in Holden *op. cit.* in note 20, 93ff.
31. M. C. Wooldridge 'The flintwork' in R. Canham 'Excavations at Shepperton Green, 1967 and 1973' *Trans. London Middx. Archaeol. Soc.* 30 (1979) 122.

# EXCAVATIONS IN THE CITY OF LONDON SECOND INTERIM REPORT, 1974–1978

TONY DYSON and JOHN SCHOFIELD

## INTRODUCTION

*This second report on the Museum of London Department of Urban Archaeology's excavations in the City of London is designed to serve two purposes. It is intended primarily to outline the main findings of the three years 1976–8, and secondly to provide a general synthesis of the results and conclusions arising from the whole excavation programme since 1974. Such a treatment frequently requires some further consideration of the earlier sites described in the First Interim Report (Antiq. J. 67 (1977) 31–66), and it has also been thought useful to include relevant evidence derived from the more recent excavations of 1979–80 where issues of particular interest, such as the evolution of the Roman waterfront and defences or the redevelopment of the city in the later Saxon period, have been significantly advanced.*

*'Main findings' and 'issues of particular interest' are somewhat arbitrary terms, and call for explanation. At the time of writing (Spring 1981), a total of fifty-three sites has been excavated or observed, while the records of exactly twice as many sites again, investigated by the Guildhall Museum before 1974, have also to be assimilated and written up. Quite apart from the uneven progress in the post-excavation treatment of individual sites in such a programme, a report of the present kind is necessarily selective in several respects. Only a limited discussion of the finds evidence as such is possible. The overall approach is largely topographical, although the material has been chosen and arranged to illustrate discernible historical developments of a more general significance. For this reason many sites have been omitted altogether, and it is hoped that a coherent treatment of the post-medieval period will be possible in a subsequent report. In the cases of many of the sites which are discussed the detailed archaeological description has been deliberately restricted; where possible, some recompense is made in the illustrations and references.*

## I ROMAN

When the Department was set up at the end of 1973, proportionately more was known of the archaeology of Roman London than of any other period, and as recently as 1965 the subject had been disciplined and rendered accessible by a book which was, and remains, a classic of its kind.<sup>1</sup> Thus particular problems and obscurities were already conveniently defined, many of them primarily topographical: the nature of the road system, for example, of the Forum, and of the waterfront (of which virtually nothing was known until the Custom House excavation of 1973). Since 1974 much more has been learnt about some, though by no means all, of such topics—notably the waterfront, forum and defences—while three large scale excavations in the north-west quarter of the City have provided a coherent outline of the development of London in the first and second centuries. Each of these will be reviewed but each also contributes to questions of a different and more general order. The discovery of the late 4th-century riverside wall, for example, has given a fresh perspective to the problematic character of late Roman London. Ultimately, enquiries of this kind depend upon the establishment of a comprehensive and reliable framework of reference for the dating of artefacts, and in this respect the setting up of a

pottery type-series which at present contains sherds representative of over 2000 distinct types has already proved an invaluable tool. Thus a recent reassessment of material recovered both before and since 1974 has contributed to a general reconsideration of the nature of the early settlement of London.

### EARLY SETTLEMENT

In the absence of any evidence of permanent pre-Roman settlement it was assumed until recently that, like the bridge upon which it depended, London originated in, or immediately after, AD 43 from a military supply base which played an important part in the early campaigns north of the Thames. This conclusion is now less certain. In the first place it receives little support from an examination by the Department of (literally) some tons of excavated material, which shows that in no instance is it possible to ascribe pottery groups to the AD 40s and that, indeed, groups predating AD 60 are notably uncommon.<sup>2</sup> The absence of such groups and the rarity of individual Claudian vessels is remarkable: a Claudian group might be expected to include the mortarium *Camulodunum* 191, a widespread flagon *Camulodunum* 161, and certainly early types of *terra rubra* and *terra nigra*.<sup>3</sup> Of these only the mortaria are known, and in extremely small quantities. Samian shows a similar pattern, and although previous collections of 'Arretine' ware have been cited as evidence of early occupation, much of these is now recognised as not of London origin;<sup>4</sup> from among huge collections of samian the earliest types found in Britain seem to be very uncommon in percentage terms.<sup>5</sup> The ceramic evidence, then, would suggest that the Roman settlement was founded around AD 50, or perhaps a little later, rather than as the immediate result of an invasion crossing in AD 43. A similar conclusion has been reached by the Southwark and Lambeth Archaeological Excavation Committee, whose examination of two roads converging upon the southern bridgehead suggests that they were constructed in the period *c.* AD 50–65.<sup>6</sup> This might imply that the river was originally crossed by a ford between Westminster and Lambeth—on which the established courses of Watling Street north and south of the Thames are aligned—particularly as one of the two excavated roads also led in the direction of Lambeth. Finally, a reassessment of the earliest London coinage has revealed a high proportion of irregular Claudian imitations, suggesting a foundation date of *c.* AD 50–55.<sup>7</sup>

### BASILICA AND FORUM

Were it indeed the case that the Roman settlement began not earlier than AD 50, and therefore after the military phase which immediately followed the invasion, the origin of London is more likely to have been primarily administrative and commercial—the latter much as Tacitus described the city of AD 60. Decisive evidence, however, is still lacking, even in the area to the north of the bridgehead where it is clear that the earliest settlement lay, regulated by an elementary street plan, and including what was to become the site of the basilica and forum on either side of the modern Gracechurch Street (Site 1).

Much of the complexity of this structure, or structures, was compounded until recently by the inherent problems of collating evidence derived from numerous excavations, scattered over a huge site and conducted at different times by a variety of observers over the last century. Even so, in 1965 Ralph Merrifield was able to distinguish between three separate phases: a small, pre-Boudican and possibly public building with stone foundations beside a main east-west road; a much larger group of buildings, almost certainly public, constructed after the destruction of AD 60 on a slightly different alignment; and, finally the replacement of this by a vast basilica and forum not completed before the reign of Hadrian.<sup>8</sup> More recently, this outline has been further refined concurrently by excavation and by Peter Marsden's and Sara Parfitt's careful replotting of the disparate structural evidence on an enlargement of the 50 inch Ordnance Survey in preparation for a detailed report on the site. Checked by measurement on the ground, this exercise has removed many of the discrepancies in the alignment of related structures, sometimes of up to 6m, which had arisen from the use of different plans of varying accuracy on different sites (Fig. 2). The resulting reconstruction has now made possible a more positive interpretation of the successive building phases. In particular, it seems that the post-Boudican 'second phase' building represents an early basilica and forum which predated a far larger rebuilding in the early second century.<sup>9</sup> Meanwhile, Departmental excavations supervised by Andy Boddington in 1976 at 160–2 Fenchurch Street (Site 2) located the debris of the first phase of buildings destroyed in AD 60, as well as the south-east corner of the second forum, while in 1977 observations conducted by Peter Marsden in a Post Office service tunnel beneath Gracechurch Street further identified and fixed the relative positions of previously encountered structures across the length of the whole site.

#### *First Phase (pre-Boudican)*

This comprised a large gravelled area in the southern half of the site which extended south to the main east-west street of the city, beneath the modern Fenchurch Street. After an initial phase of occupation represented by traces of timber-framed buildings, a major redevelopment occurred which featured a range of timber, clay and brick buildings some 75m long and 27m wide, fronting onto the street to the east of the gravelled area. The buildings were first located by Brian Philp in 1968,<sup>10</sup> and again found further east at 160–2 Fenchurch Street in 1976; the gravel surface was recorded in the Post Office tunnel in 1977. Little definite can be said of the nature of this phase. No certain trace of specifically military activity has been found in any part of the site, and although it is possible that the main street and gravel spread had their origin beside the *principia* of an invasion period camp, it is more likely, since the buildings to the east were of a non-military character, that the open area served as a market place. One of the rooms encountered at 160–2 Fenchurch Street contained a large quantity of burnt grain, c. 1m thick, and almost certainly of Boudican date; analysis by Peter Boyd suggests that it was possibly a Mediterranean import, intended for sowing. If so, this might also indicate that the use of these buildings was commercial.

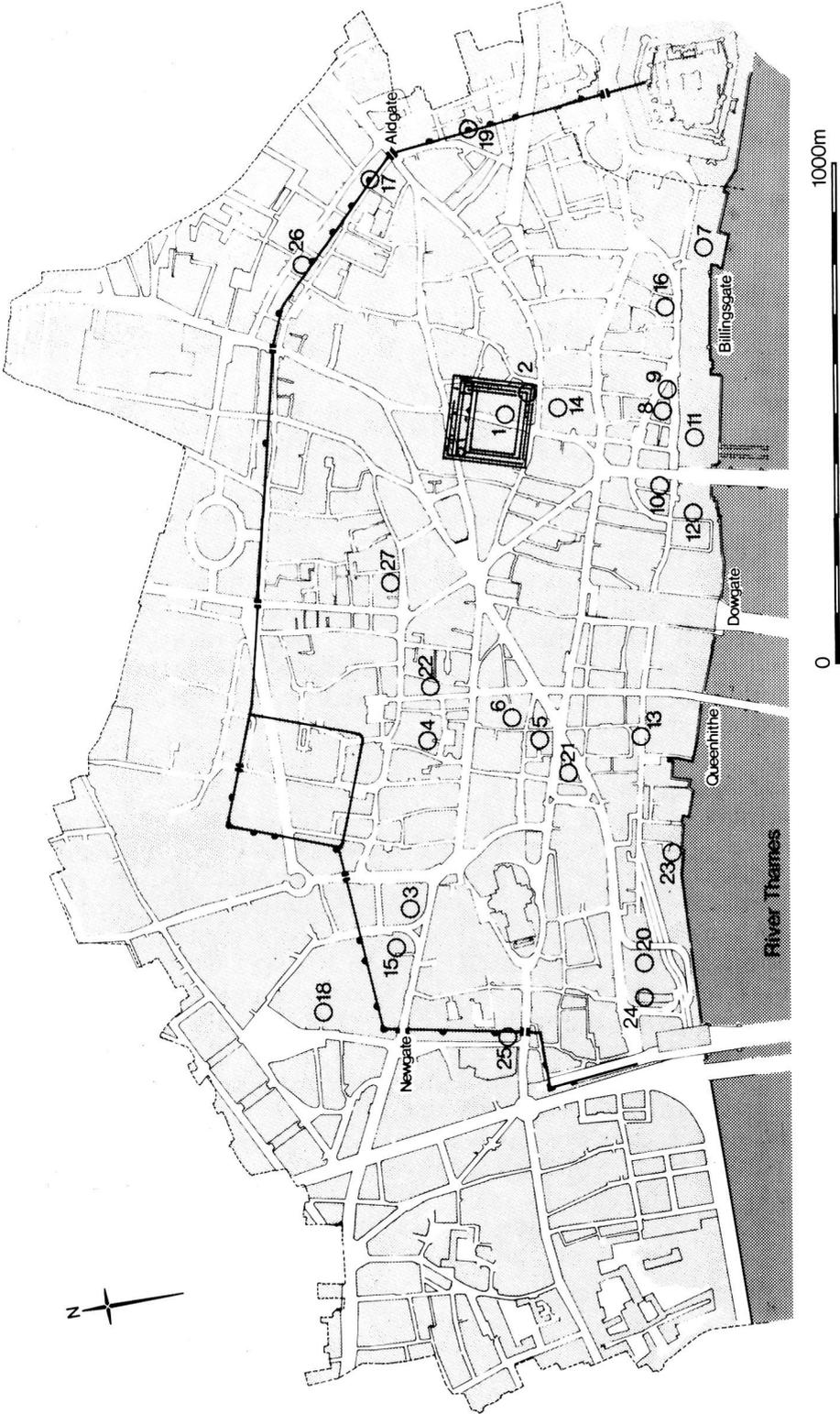


Fig. 1. City of London: Sites investigated 1974-80.

*Second Phase (? first basilica and forum) (Fig. 2)*

Within some thirty years of the fire of AD 60 the first complex was built, measuring overall 104.5m north to south, and 52.7m east to west. Except for the south wall it was characterised by buttressed outer walls and by particularly deep foundations whose construction is unusual in Roman London. To the north was a hall, 44.5m long and 22m wide, comprising nave, side aisles and tribunal. The elongated court was surrounded by ranges of rooms, while the south wing apparently featured an outer portico which fronted towards the street. Other streets apparently lay to the east and west; the eastern being of minor character and *c.* 4m wide. The date of this second phase appears to be Flavian; a coin of Vespasian was found by Frank Cottrill among Flavian pottery in a rubbish pit below the north-east part of the complex,<sup>11</sup> while Philp also located Flavian pottery below the eastern road.

Several problems arise from the interpretation of this building. Its basic plan would suggest a basilica and forum,<sup>12</sup> but this would imply an early municipal status for London for which there is no other evidence at this period. The basilica would seem to compare more closely with Gaulish than with British exemplars, and the whole complex was notably small when compared, for example, with the fora of Silchester and Wroxeter and, indeed, with its own successor, which was over four times larger. Though the building is unlikely to have stood longer than some fifty years, it nevertheless required partial modification which still conformed to the same plan. Finally, the whole complex lay on an orientation which differed from that shared by both the first and third phase buildings, but which was also shared by other structures to the south of the main street, outside the complex.

*Third Phase (second basilica and forum) (Fig. 3)*

The second complex occupied an area of *c.* 170m square. Its central feature was a large courtyard surrounded on three sides by a colonnaded inner portico 9m wide. Beyond this lay a range of large chambers, presumably shops, while a second portico 5.5m wide lay outside. The south-east corner of this forum and the junction of the outer portico of the south and east wings were revealed during the excavations at 160–2 Fenchurch Street in 1976 (Pl. 1). On the fourth side lay the basilica, of which the floors of the nave and side aisles were encountered in the Post Office tunnel in 1977 (Pl. 2). The hall was at least 30m wide, and comprised a nave at the east end of which (and probably at the west end also) was an apsidal tribunal. Beyond the north aisle lay ranges of rooms which no doubt accommodated the city council. The floor of the forum courtyard was another feature observed in the service tunnel where it was represented by a patchy surface of mortar gravel and earth level with the floor of the basilica. Near the centre of the courtyard, the tunnel penetrated a small structure with stone walls, a sunken floor and a lining of stiff clay which appears to have served as a shallow ornamental pool. The entire building occupied its own *insula*, the forum facing the main east-west street, while new north-south streets, the eastern of which apparently led to Bishopsgate, flanked its sides.

The date of this phase cannot be closely established. Various excavators have

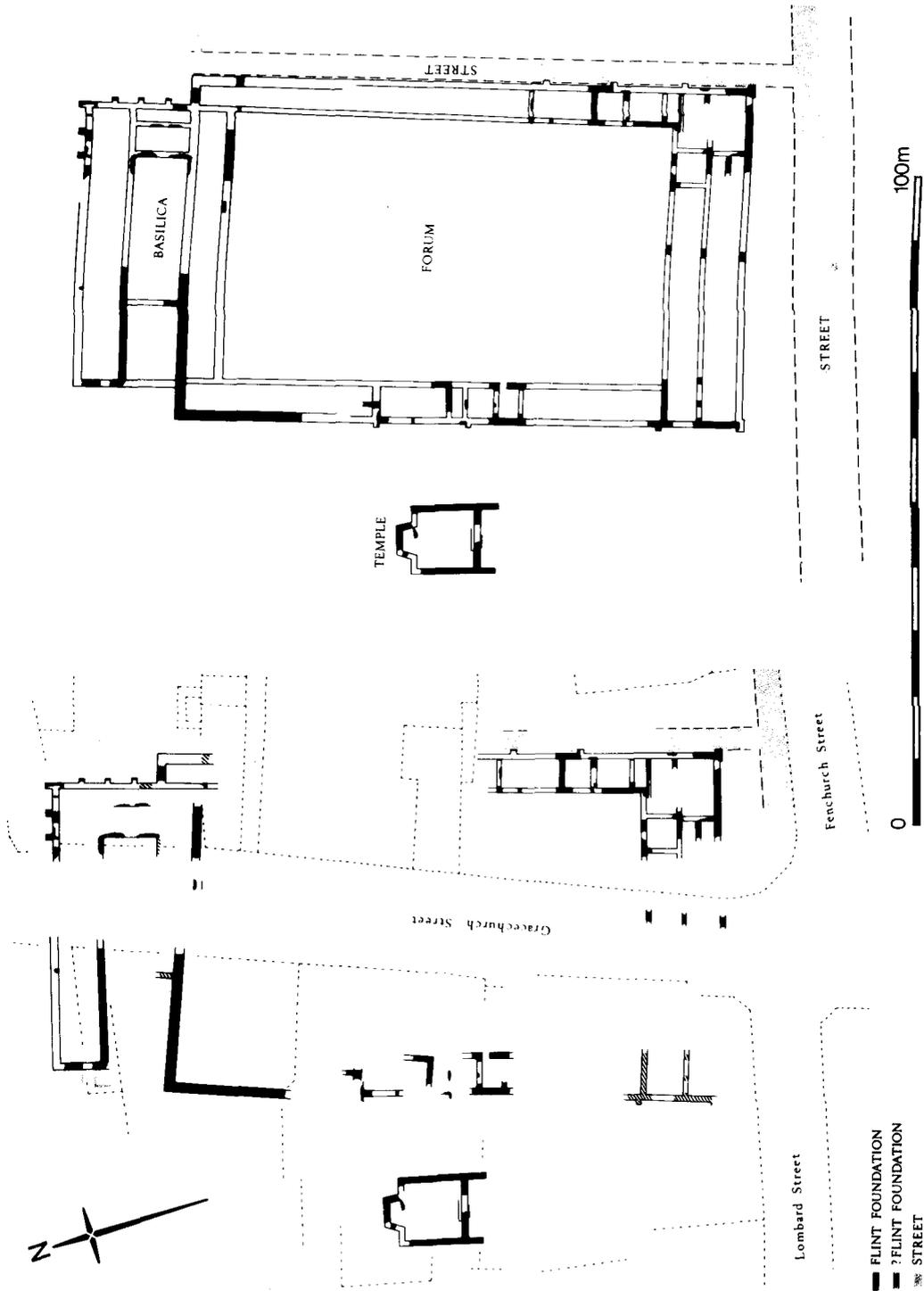


Fig. 2. Plan of the Flavian *forum* and *basilica*, before (left) and after (right) replotting.

observed that nothing later than the end of the 1st century was found beneath the structure, but pottery and a coin of Hadrianic date (unpublished) were recovered by Adrian Oswald in 1939 above the demolished walls of the previous building and beneath the white concrete floor then identified as part of the third phase. The available evidence thus indicates that this basilica and forum was not completed before the reign of Hadrian.

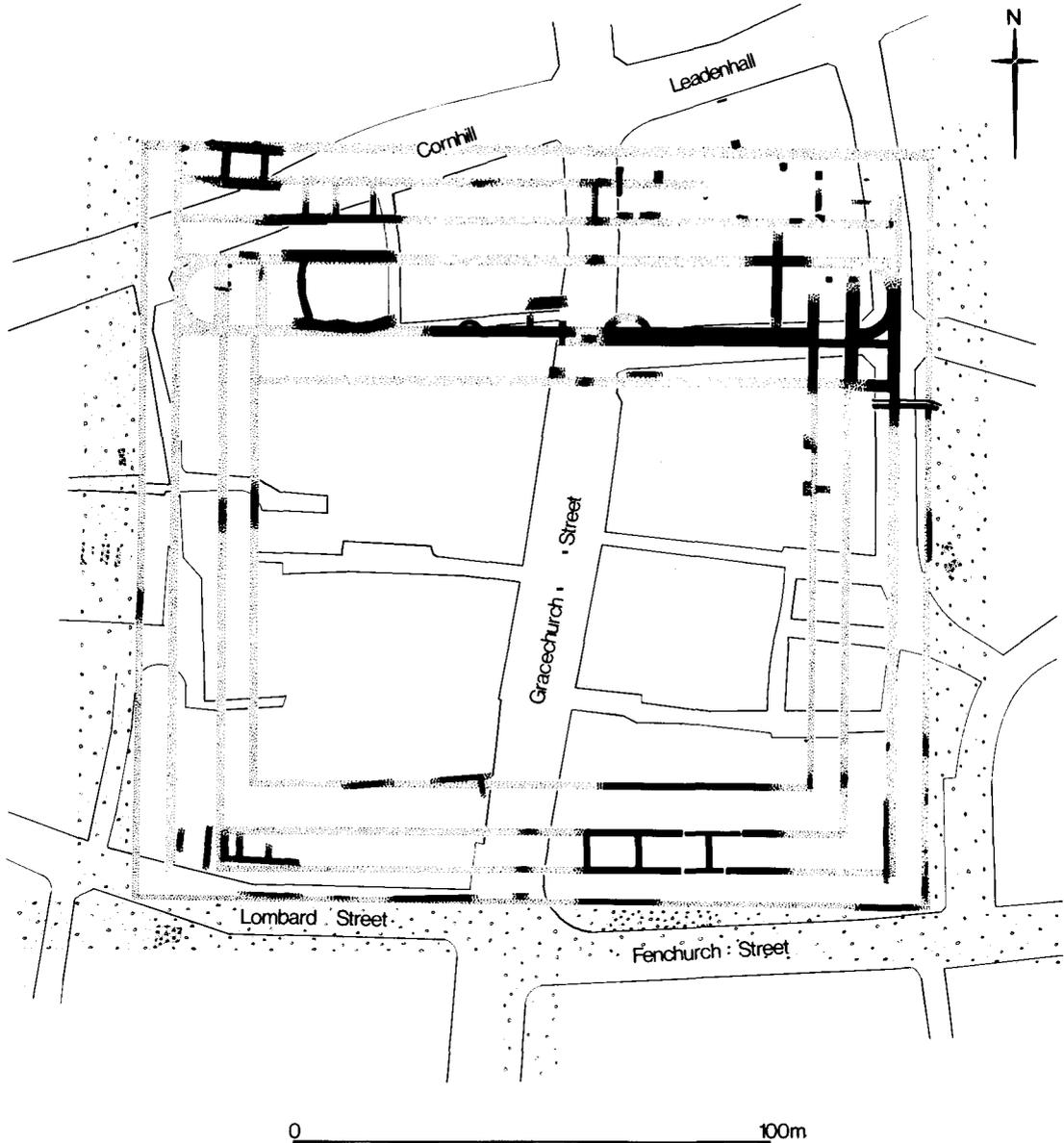


Fig. 3. Plan of the Hadrianic *forum* and *basilica*.

## THE GPO, MILK STREET AND WATLING COURT SITES

Of the three distinct phases of the basilica and forum site, at least two, the pre-Boudican and Flavian, are also reflected in excavations conducted since 1974 on sites which, though somewhat humbler, were recorded more systematically and in greater detail. They will first be considered separately.

*The GPO Site, Newgate Street* (Site 3), supervised by Steve Roskams, lies some 200m within Newgate on the principal Roman road to the west (now represented by Newgate Street), and in a district thought to have been outside the official urban limits until the late 1st or early 2nd centuries.<sup>13</sup> The earliest activity at the south end of the site, closest to Newgate Street, was represented by a fragment of a circular hut bounded to the north by a ditch, beyond which were traces of quarrying in the natural brickearth. Perhaps ante-dating the setting out of the street to the south, these features are provisionally dated to the AD 50s, and were apparently almost immediately replaced by two rectangular, timber-framed buildings and, further north, by several sub-circular huts of wattle and daub construction (Fig. 4a). These timber buildings were aligned with the street, on to which they would have fronted, and were founded on sill beams set into the ground. All these buildings were destroyed by fire which, in view of their spacing, was not accidental: the dating evidence would suggest the context of the Boudican revolt.

By the early Flavian period, following an interval represented by pits and gullies, further substantial timber-framed buildings were erected on two property strips marked by north-south pathways. Their sills were set directly upon the ground; towards the street the buildings were contiguous, while further back they separated. An integrated development is suggested, although the internal arrangements in each building differed. At the north-east corner of the site a large brickearth quarry observed the limits of the eastern property; discarded bricks found in its lower fills suggest that brick-making took place nearby. The quarry was subsequently used for the disposal of organic waste, probably derived from the occupation of the building to the south. The western structure was later removed, the party wall being modified, while the eastern probably remained in use into the early 2nd century.

Replacing these buildings, two new timber-framed structures extended over the whole area of the excavation (Fig. 4b). An alleyway lay between them, though the size of the sills suggested that this was covered at first floor level, the load of the eastern side of the western building being taken on the west wall of the adjacent property. Thus they would have presented a continuous façade at the front. A lane was set out bounding them in the east, and also giving access to the street. The plan of these strip structures suggests shops, or commercial premises, at the front, with larger rooms behind, some of which contained substantial hearths implying an industrial function (Pls. 4, 5). At the rear were smaller rooms, containing less imposing hearths, presumably for domestic heating: these could have been used for either industrial or domestic purposes. In later phases the western building was modified and extended to the north, becoming separated from its eastern neighbour at the end of its life. The latter

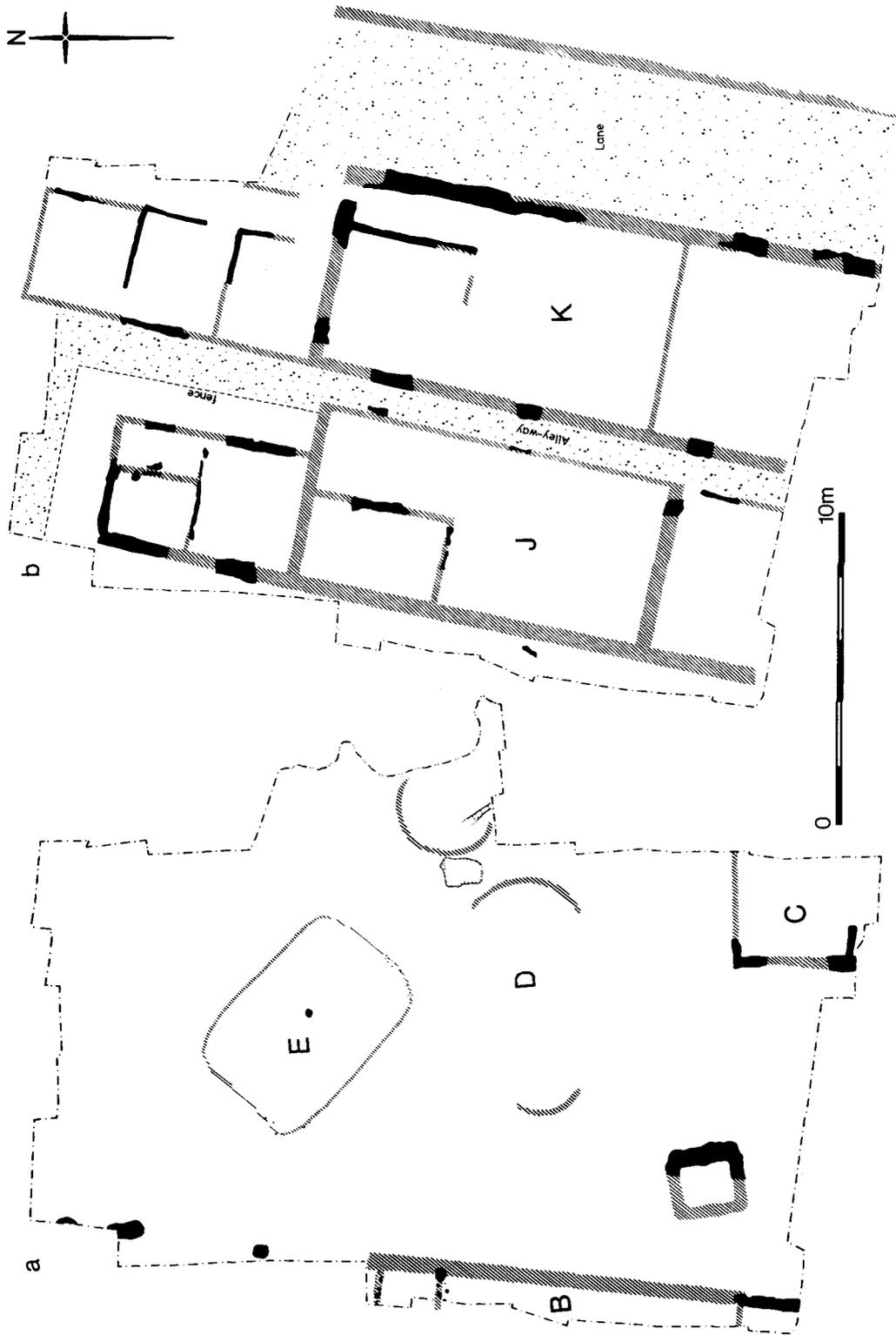


Fig. 4. GPO Newgate Street: Roman Buildings; a, mid 1st-century building destroyed in the ?Boudhican Fire; b, early 2nd-century buildings destroyed in the Hadriamic Fire.

was largely unaltered when both structures were destroyed in the Hadrianic fire of *c.* AD 125. The resulting debris, spread across the whole site, incorporated partially articulated fallen walls of dried and fired bricks which had collapsed from internal and external frameworks respectively (Pl. 3).

The two buildings appear to have been replaced immediately by structures of exactly the same plan and purpose: evidently the plots were too valuable to be left vacant for any length of time. These were dismantled by the end of the 2nd century, and were sealed by a thick stratum of dark earth into which the foundations of the church of St. Nicholas Shambles were to be cut in the 10th or 11th centuries.

At *Milk Street* (Site 4), supervised by Steve Roskams in 1977, the earliest occupation was represented by a series of slots cut into the natural brickearth, which seems to have been extensively deturfed for the purpose. Their profile, position and consistency of depth suggest foundations for a large timber building, though no coherent plan could be recovered. Their alignment, however, differed from that of the known street pattern, which is presumed to be later. The building was systematically dismantled and the slots were found to be filled with brickearth containing finds of *c.* AD 70. Above the slots was a late Flavian domestic building of high quality. Of timber-frame construction, it was set on brickearth sills and featured concrete and tessellated floors as well as, in its destruction debris, painted plaster. In plan it comprised a northern and western range of rooms flanking a gravelled area to the south-east. In addition a sequence of sixteen north-south rammed-gravel metallings, up to 2m deep and flanked by a series of drainage ditches, represented a Roman street which bounded the site to the east. This street, recorded some 30m further south on the Cheapside bath-house site,<sup>14</sup> was aligned with the late Flavian structure, suggesting that the gridding of this part of the city took place in the late 1st century, thus ante-dating, and perhaps determining the position and alignment of, the late 1st to early 2nd century Cripplegate Fort. The depth of the metallings cannot be explained by traffic wear alone, and presumably also reflects the need to keep pace with the constantly rising ground level of the successive buildings which adjoined the road.

Early in the 2nd century the site was partly occupied by much flimsier timber buildings and elsewhere was used for rubbish tipping. One set of these structures was destroyed in the Hadrianic fire of *c.* AD 125. This was soon replaced by a timber structure, containing a mosaic floor of Antonine date (Pl. 6), which, when dismantled *c.* AD 170, was in turn replaced by a deposit of dark earth up to 1m thick.

*Watling Court* (Site 5), supervised by Dominic Perring, the third of this group of excavations, disclosed two rectangular timber-framed structures aligned north-south and apparently fronting onto a road to the south, off site. No pre-existing ground surface survived, and it seems probable that the site had been cleared, if not terraced, beforehand. These buildings were destroyed by fire, probably in AD 60–80.

Little evidence survived for the period immediately after the fire, but by the end of the 1st century the site had been completely redeveloped. Evidence of three main buildings and three alleyways was retrieved (Pl. 7), which apparently respected the boundaries established by their predecessors. In places the walls survived to a height of over 1m above the contemporary ground surface. In construction they varied considerably, though all were built of mudbrick or puddled clay, usually infilling a timber frame. Most walls were plastered, and some of these decorated. Traces of three mosaic pavements were uncovered, along with five *opus signinum* floors patterned with impressed *tesserae*, two of which featured mosaic roundels not paralleled in Britain (Pls. 8, 9). Like *tesserae* found in an early 2nd century context at Cannon Street,<sup>15</sup> these appear to date well before the main phase of mosaic-laying in Britain, *c.* AD 150–200.<sup>16</sup> All the buildings were destroyed by fire in the early 2nd century, probably in *c.* AD 125.

Thereafter, the site was fully redeveloped, although the new buildings were less substantial than those they replaced. Again, however, they appeared to respect pre-existing property boundaries. A third fire, possibly of Antonine date, destroyed these buildings; no late Roman activity was identified, and finds of the 3rd and 4th centuries were scarce. As elsewhere, the late Roman to middle Saxon periods were represented by a thick horizon of dark earth. A similar layer, up to 0.5m thick, sealed a sequence of 1st and 2nd-century buildings recorded at Well Court, close by, in 1979 (Site 6). These fronted on to a north-south aligned road, between 6 and 8m wide, on average 4m to the east of Bow Lane.

These three major sites, similar in size and scale of excavation, serve as a significant indicator of the main outline of the development of early Roman London. Each lay in the north-western quarter of the city, one of them outside the original urban limit. Within that area they were fairly widely separated, so that they need not necessarily be expected to share similar characteristics, and it would be inappropriate to impose too rigorous a pattern upon them. Nevertheless, a fairly consistent outline emerges. All three produced evidence of early buildings (only at the GPO site were these definitely pre-Boudican) of uncertain usage, so that, as is also the case with the Forum site, there is again no conclusive evidence of specifically civilian or specifically military occupation. The buildings at the GPO site were aligned with Newgate Street, a major and early thoroughfare which led to the west.

On each site at some point in the Flavian period substantial buildings of a very pronounced character, whether domestic or (as at the GPO site) industrial, were installed. At Milk Street and Watling Court these were accompanied by streets and, at the GPO and Watling Court sites, by alleys also. At these last two sites as well the boundaries, and even the plan, of the Flavian buildings were reproduced by their successors after the fire of *c.* AD 125, and at Watling Court possibly pre-Flavian boundaries were perpetuated. Where this phenomenon occurs it seems that, once established, the original type of occupation remained essentially unchanged, though the quality of the buildings themselves varied. In all three cases the Flavian period seems to have witnessed

the most remarkable development. At the GPO and Watling Court sites the Flavian buildings survived until the fire of *c.* AD 125, and at the latter site were replaced by structures of poorer standard, as had already been the case at Milk Street before the fire. Thereafter the relative status of each site varied widely before all fell out of use by the end of the 2nd century.

### THE WATERFRONT

Before assessing the problems of the later 2nd-century occupation of these three sites, it is convenient to review the evidence from the early waterfront of the City. To the extent that London's character was determined by its role as a port it was always clear that the waterfront area south of the modern Thames Street should provide an archaeological paradigm of the development of the city at large. Before 1973, however, no opportunity for excavation in this area had arisen, but in that year the examination of the Custom House site (Site 7) by Tim Tatton-Brown for the Guildhall Museum (before the present Department was established) underlined the archaeological potential of this zone as clearly as it indicated an encouragingly high degree of preservation and survival. There was evidence of two distinct phases of waterfront development of which the first was represented by a series of horizontal east-west beams supported in front by posts and planks. Pottery from the clay, mortar and chalk packed behind these timbers dated from the later 1st century or the first quarter of the 2nd, and seemed to indicate that the structure was built by the early part of Hadrian's reign.<sup>17</sup> In the second phase, some 6m to the south, a much more elaborate box-timber quay, resembling that at Xanten, was erected, according to pottery evidence, in the second half of the 2nd century.<sup>18</sup> From 1974 a whole series of waterfront sites was made available by redevelopment, notably in the bridgehead area, and in broad outline produced further evidence of these two distinct phases of development. Generally speaking, the late 1st and early 2nd-century phase consisted of hillside revetments and a substantial quay on the north side of Thames Street, while the later 2nd or early 3rd-century structures lay to the south of the street and represented extensive quays. In fact, the interposition of Thames Street presents a grave practical problem as in no case has a complete section been obtained across the whole waterfront zone, linking the early foreshore with the hillside revetments behind.

The evidence for 1st-century activity on the waterfront should be forthcoming from recent excavation and observations at Peninsular House (Site 8) and Miles Lane (Site 10) on the north side of Thames Street. At the former, supervised by Gustav Milne, a massive timber-framed structure has been found, traced for 15m across the southern edge of the site, which comprised four horizontal tiers of timber baulks each up to 400mm × 600mm in section. To the north, a series of tie-backs braced the revetment, which was backfilled with packed, redeposited, clay and river gravels; below it and to the south riverlaid deposits were recorded. Subject to further finds analysis, a quay of 1st-century date appears to be indicated. On the higher ground behind, the Billingsgate Buildings excavation (Site 9), supervised by David Jones, produced evidence of three successive artificial terracings of the hillside.<sup>19</sup> These were represented by three sets of oak posts supporting horizontal planks which

retained dumps of building rubble, soil and domestic refuse. They were installed in the late 1st and early 2nd centuries, and were all buried and destroyed by the late 2nd century. No buildings of this period were found on the site, though several are recorded close by, and it is unlikely that the building debris dumped behind the revetments was brought in from any great distance.

A clearer notion of the relation of revetments to buildings emerges from the excavations on the east side of Miles Lane (Site 10), supervised by Louise Miller, immediately upstream of the approach to the present London Bridge (Fig. 5). The potential of this site had been apparent since 1920 when Frank Lambert observed part of a Roman building, timber structures and a drain.<sup>20</sup> The present excavation, like the work at Billingsgate Buildings, revealed no trace of the river's edge, but the terracing, consolidated by timber revetments, was of early Flavian date. Set upon this was an imposing Flavian building of possibly official character, perhaps a warehouse, 23m × 9m, with masonry foundations 1m wide and 1.30m high. Above these the walls, of Kentish ragstone with tile courses at intervals, survived to a height of 1.2m. Along the west side of the building lay a timber-lined drain which, on the evidence of pottery found within it, had first silted up in the early 2nd century. Traces of a second, much slighter, masonry building of Flavian date were found to the south. This was demolished in the late 1st century, possibly when a second revetment, *c.* 0.8m above the first, was installed. Beyond the drain a gravel surface was laid by the end of the 1st century, and probably represents a street believed to lie beneath Miles Lane beyond the western limit of the site.

At Miles Lane, Peninsular House, and at the Roman Palace site east of Dowgate,<sup>21</sup> the revetments were designed primarily to provide level terraces for the accommodation of buildings. These three sites would also suggest that the southern extremities of each series of revetments terminated in a waterfront.<sup>22</sup> The levels of the 2nd or 3rd-century quay surfaces—so far as they can be estimated—were at + 0.3m O.D. at Seal House (Site 12) and at + 1.0m O.D. at New Fresh Wharf, whereas on the north side of the street the corresponding points of the structures were generally in excess of 1m higher. Despite these problems, there can be little doubt of the general intensity of activity on the waterfront in the late 1st and early 2nd centuries, corresponding with a peak in private and public development at the same period in the rest of the City.

To the evidence for the spectacular timber wharfs of 'box' construction found at both Custom House and New Fresh Wharf (Site 11) discussed in the First Interim Report, 34–7, can now be added further information from subsequent observations at New Fresh Wharf, and from a Post Office tunnel below Upper Thames Street between Dowgate and Garlick Hills (Site 13). At the former, a further 8m of the box quay was recorded, making a total length of 42m east to west on this site, which lay immediately downstream of the bridge (Fig. 6). A considerable number of structural piles found to the north suggest that the commonest method of construction was to lay tie-back beams approximately 2m apart at right angles to the quay wall. A contemporary post and plank structure some 4–5m to the north of the quay revetted made-up ground for a distance of 30m east-west (Fig. 7). Into this ground were driven piles for a wall whose date and construction compares closely with the late

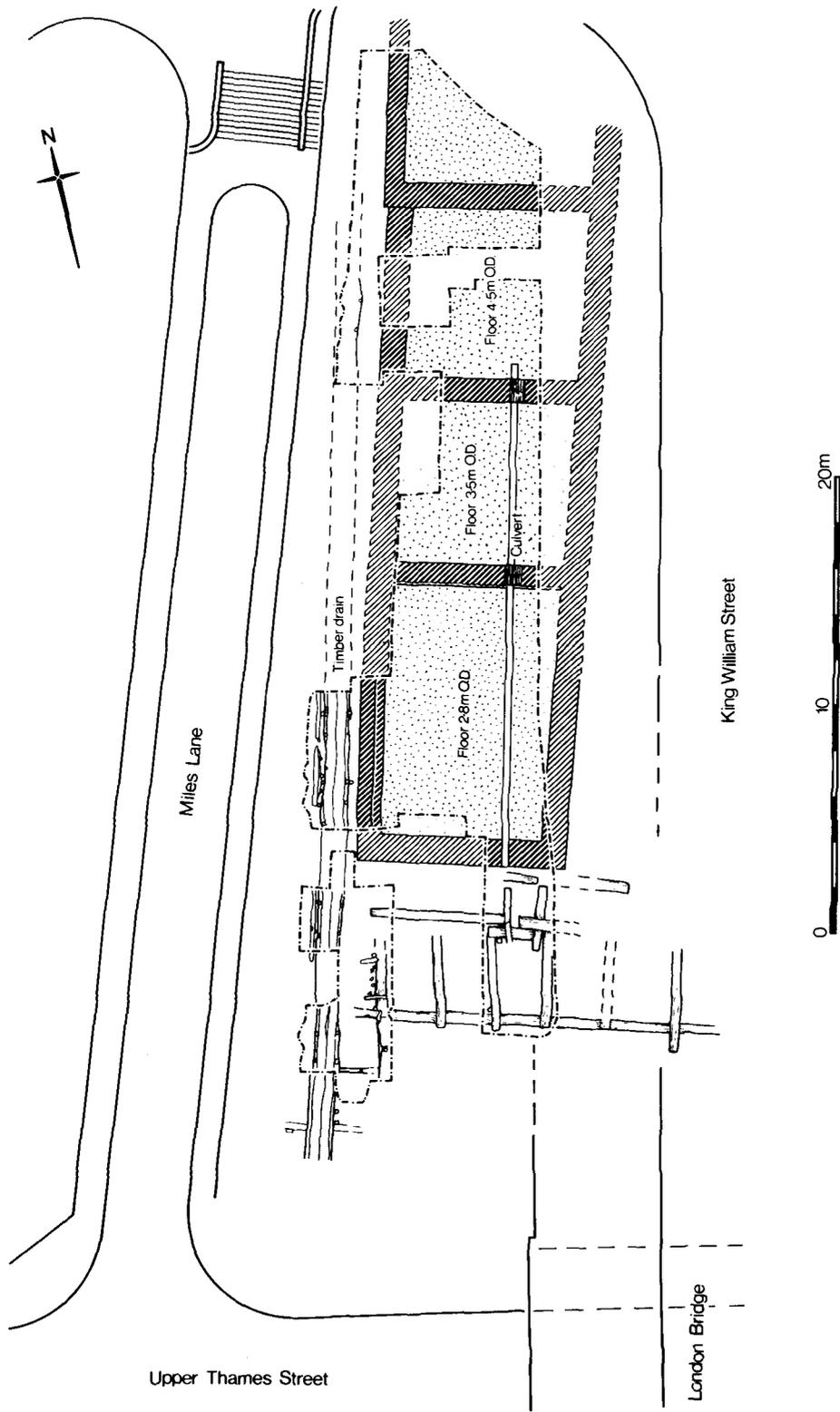


Fig. 5. Miles Lane: Plan of Flavian building and revetments.

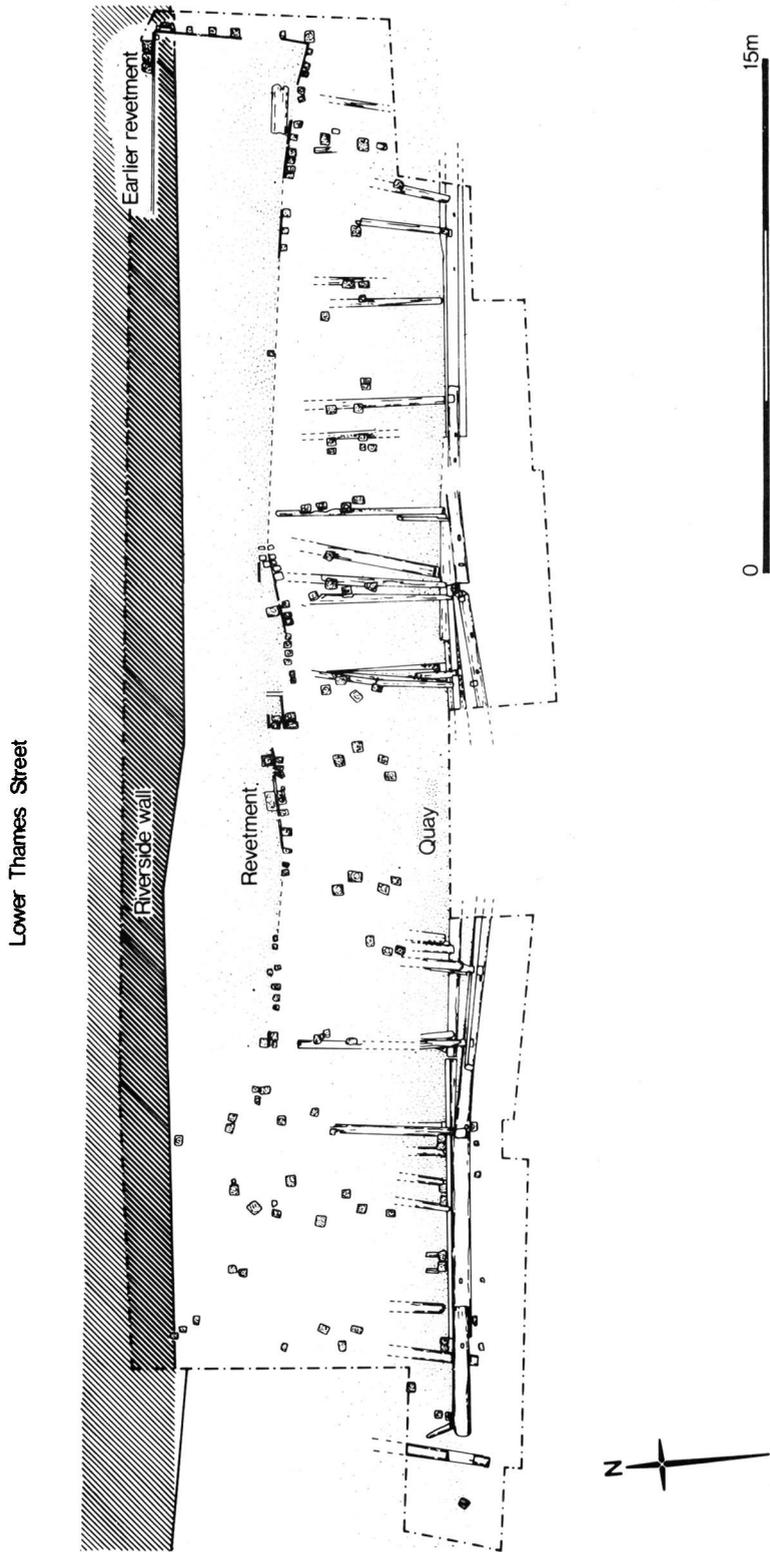


Fig. 6. New Fresh Wharf: Plan of second Roman waterfront..

4th-century river wall now located elsewhere in the city (see below, pp 46-8) Neither on this site nor at Seal House further downstream was any sign of a Roman bridge abutment found, so that the likelihood that the bridge lay on, or very close to, the line of the medieval stone bridge is thus increased. Secondly, in the Post Office tunnel below Upper Thames Street (Site 13), supervised by Kevin Flude, and at a point to the west of Queen Street, two sections of a box-type construction were recorded (Pl. 10). This was the first occasion when such structures have been found at any point upstream of the Walbrook, although they are now known to have fronted the Roman palace site immediately downstream.<sup>22</sup> They included massive timbers, approximately 0.4m square in section, to which tie-back beams had been half-lapped. The structures differed in that whereas at the foot of Garlick Hill the baulks ran north-south with rough lap-joints cut in the upper face of the main timbers, to the south of St. James Garlickhithe they were more neatly finished, and the major baulk ran east-west; its joints were finer, and the lap housing was contained in the bottom face of the main timbers. Three revetments of unknown purpose were found aligned north-south; one of horizontal planking set edge to edge and supported by upright posts, a second of closely spaced uprights only, and a third, seen only in cross-section, comprised of an upright timber braced with a diagonal member. These structures were sealed, not always directly, by a series of brown clay deposits which, since fragments of masonry found to the south may represent part of the late 4th-century riverside wall, might be interpreted as dumping behind the wall. However that may be, the main consideration is the similarity of these structures with those found below London Bridge.

## THE LATE SECOND AND THIRD CENTURIES

The box quays at New Fresh Wharf and Custom House present two problems which may not be unrelated. On pottery evidence, both belong to the second half of the 2nd century or the opening of the 3rd. The former appears to have silted up in the 3rd and 4th centuries, while at the latter the surface planking was no longer intact in the 4th century. On the other hand, C14 analysis of timbers from the Seal House and New Fresh Wharf quay timbers indicate an approximate average felling date of *c.* AD 300 which, if verified, would amount to a discrepancy of about a century compared with the pottery datings. The shortcomings of the radio carbon techniques for this period are recognised,<sup>23</sup> however, and it is notable that a felling date of *c.* AD 200, or soon after, for the New Fresh Wharf timbers is indicated by correlation with the dendrochronological dating of five timbers from an archaeologically established late 1st-century context at Watling Court.<sup>24</sup> Although dendrochronological sampling of these sites has provided a 'floating' time-scale of 282 years,<sup>25</sup> a suitable reference chronology against which this data can be matched, and fixed absolutely, is still lacking.

The second problem is that, given a late 2nd or early 3rd-century date, these elaborate and extensive box-timber quays were built at a time when, according

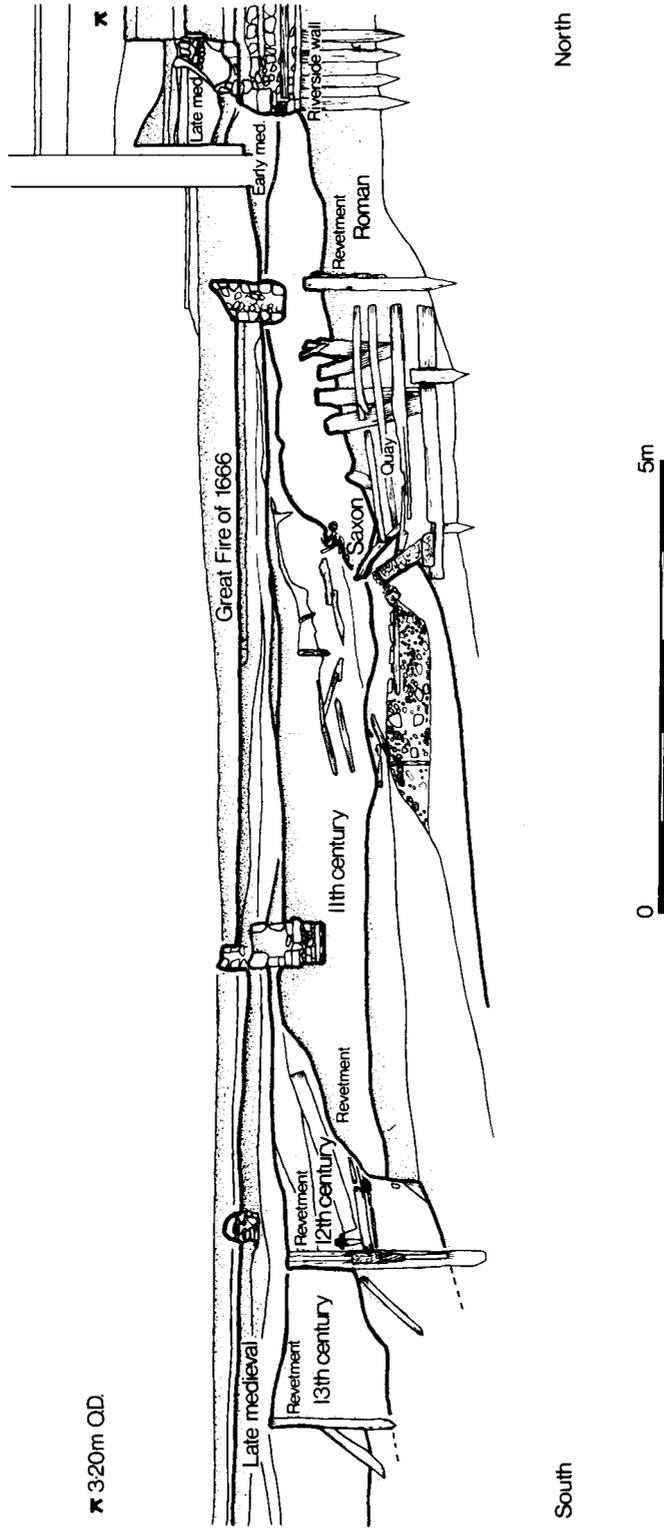


Fig. 7. New Fresh Wharf: Composite north-south section, looking west.

to most of the evidence, and certainly the most recent, the Roman city at large was undergoing a fundamental change. On the evidence of the GPO, Milk Street and Watling Court sites, the post-Hadrianic buildings, whether or not destroyed in later conflagrations, had gone out of use by the end of the 2nd century and were replaced by thick layers of dark earth (Pl. 11) which contained Roman residual material, and on which nothing more was to be built until the middle to late Saxon periods. Such phenomena are by no means confined to these three sites alone. At 2–3 Lombard Court (Site 14), supervised by John Maloney, some 50m south of the forum site, 2m of 1st to early 2nd-century stratification was found to include a substantial burnt layer which contained a collapsed brick wall with a painted plaster face, and the remains of a tessellated floor. The fire debris compared closely with the record of an adjacent site<sup>26</sup> which was dated to the early 2nd century and very possibly resulted from the Hadrianic fire. No evidence of occupation between the 2nd century and the early medieval period was found. Observation by Paul Herbert of a small Post Office excavation at Christchurch Greyfriars (Site 15), just west of the GPO site—with which the evidence was closely comparable—revealed a layer of burnt daub, indicating the presence of timber buildings which seem to have burnt in the Hadrianic fire, and nothing subsequent. A similar pattern was recorded by Professor Grimes on seven of the seventeen ‘Roman minor sites’ which he investigated after the war,<sup>27</sup> and also at Southwark where only one site has produced evidence of continuous occupation until the end of the 2nd century, and where there is in fact no trace of activity of any kind between *c.* AD 200 and 250.<sup>28</sup> At the Cannon Street palace, the ‘state’ rooms to the north were demolished, and only the southern wings appeared to have survived beyond 270,<sup>29</sup> while the two bath-houses at Cheapside and Huggin Hill were demolished by about the end of the 2nd century, and not replaced by public buildings.<sup>30</sup>

Some reflection of a change in the economy at this period can be seen in the results of a systematic examination of large layer groups of pottery, which has already done much to identify and date pottery sources.<sup>31</sup> Figs. 8–10, which record the state of London’s pottery supply at those periods, show how trade patterns can be determined. The results, based on larger groups of *c.* 25 to over 80kgs, make it clear that the particularly high levels of imports (mainly samian and amphorae) in the later 1st century fell away thereafter, the bulk of samian in the Hadrianic/Antonine levels (Fig. 9) being residual material. By contrast, Romano British sources are remarkably local in the earlier period but by the 4th century (if not earlier) no local sources are known at all, those shown in Fig. 10 again representing residual pottery. It might be argued that the main local producers (the Brockley Hill-*Verulamium* region<sup>32</sup> and more local greyware kilns like Highgate Woods<sup>33</sup>) ceased production in the later 2nd century because of the collapse of the London market.<sup>34</sup>

It therefore seems clear that in the second half of the 2nd century a major change overtook the character of Roman London, so that sites which had previously been highly developed were now apparently abandoned. The dark earth which replaced them is only beginning to be analysed, but it has recently

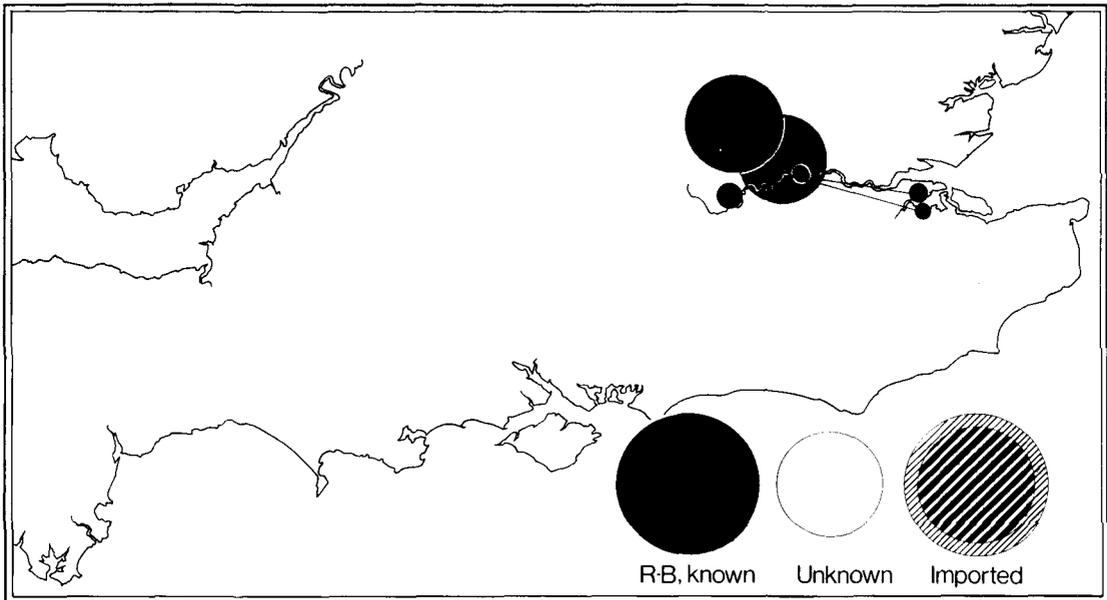


Fig. 8. Sources for the pottery from late Flavian layers, Billingsgate Buildings. In this and Figs. 9–10, the proportional circles of the same area indicate the same absolute quantity of pottery, as measured from the surviving portions of the rim. Solid circles indicate Romano-British types whose sources are reasonably well known; the open circle indicates types of unknown source (probably mainly fairly local Romano-British vessels), while the hatched circle indicates imports, the proportion accounted for by samian being emphasized. No attempt has been made to exclude residual pottery.

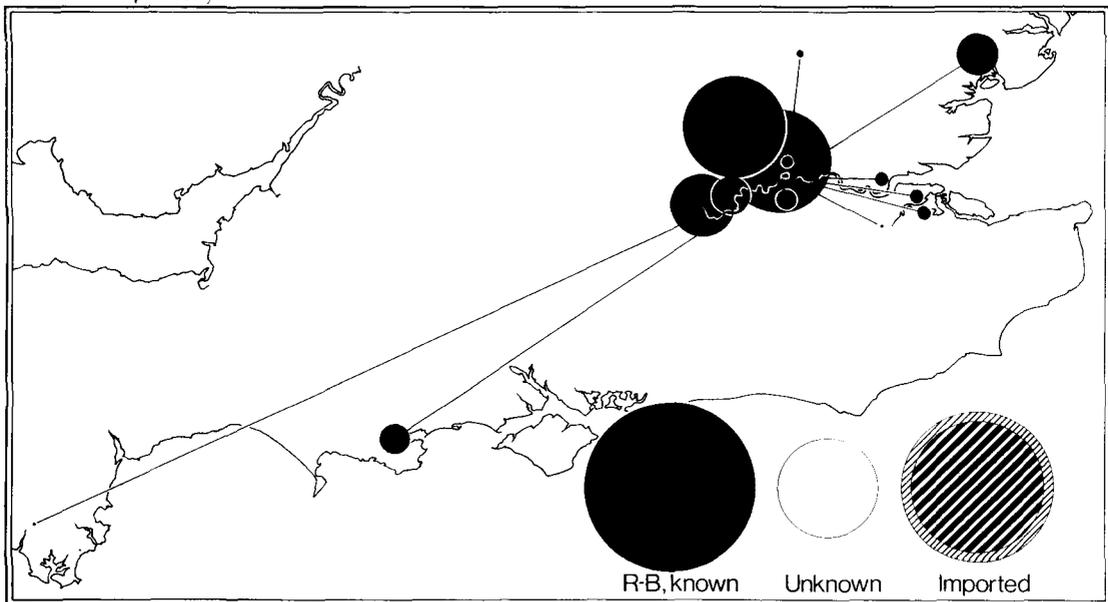


Fig. 9. Sources for the pottery from Hadrianic to Antonine layers, Billingsgate Buildings. In uniform with Fig. 8.

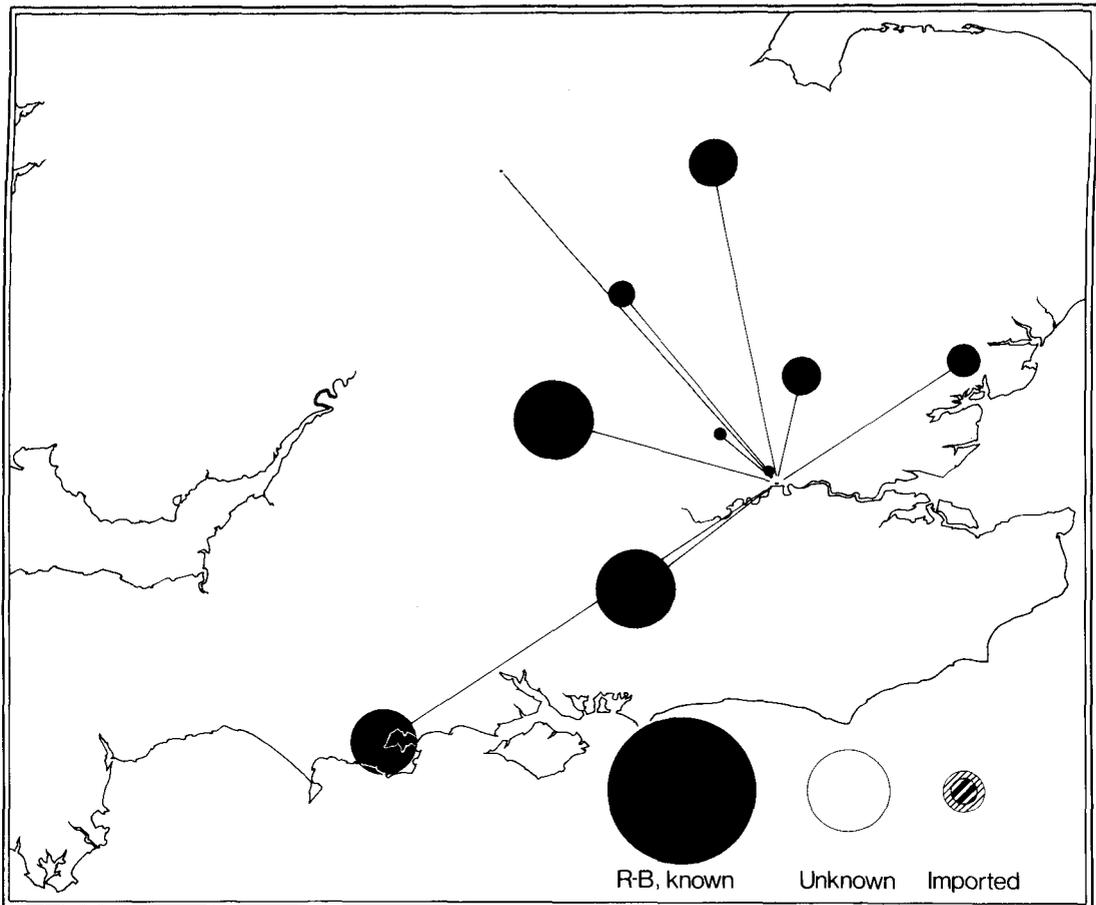


Fig. 10. Sources for the pottery from a 4th-century layer group from Angel Court, Walbrook. In uniform with Figs. 8 and 9.

been recognised in its own right as a research topic of the highest importance. The 1m thick deposit at Milk Street was featureless and contained highly abraded pottery, its dark colour apparently originating from a carbon source (Pl. 11).<sup>35</sup> When carefully examined on site in plan and section it revealed no signs of tip lines or horizontal strata.<sup>36</sup> Its purpose is often considered to be horticultural, though it is hard to envisage the scale of operations required for so widespread a deposition. Moreover, its organic content is low, and it shows none of the vertical differentiation which might be expected in soil, whether cultivated or left fallow. It would not be difficult to find political explanations for these developments in the increasingly unsettled conditions of both Britain and Gaul caused, or least characterised, by dynastic rivalries in the late 2nd and especially 3rd centuries. But such explanations do not, however, satisfactorily take into account the not inconsiderable evidence of late 2nd and early 3rd-century development in London, much of it of a markedly prosperous character. Apart from the impressive quays, there is the testimony of such earlier excavations as Ironmonger Lane, and Professor Grimes' findings in the

middle Walbrook, epitomised by the Mithraic temple.<sup>37</sup> The late Roman phase of occupation in Southwark, which appears to date from the mid 3rd century, is distinguished by buildings of stone which were more widely spaced than the clay and timber structures they replaced.<sup>38</sup> Excavations in London since 1974 have produced relatively little evidence for the 3rd and 4th centuries, but more than sufficient to illustrate the point. The Harp Lane site (Site 16) revealed three Roman stone buildings associated with terraces which date to the 3rd century or later, and which appear to have been occupied in the 3rd and 4th centuries; the Billingsgate bath-house close by had already been shown to be occupied well into the 5th century (First Interim Report, 54–6). In particular, the carved stones recovered from the riverside wall included parts of a lavishly ornamented monumental arch probably erected not earlier than the late 2nd or early 3rd centuries, and of a ‘screen of gods’ which cannot at present be dated more closely than the 2nd or 3rd centuries, and a relief of four Mother Goddesses probably of 3rd-century date. It is quite likely that all these monuments derive from a development, otherwise unrecorded, in the south-western area of the city, possibly of Severan date.<sup>39</sup>

## THE DEFENCES

Confronted by the contradiction between the abandonment of several private properties and the flourishing of public undertakings by *c.* AD 200, it seems safer to account for the testimony of the GPO, Milk Street and Watling Court sites in terms of ‘change’ rather than of ‘decline’. The urban defences, which would hardly have been erected in order to fortify a moribund city, were built at some date later than AD 183–4, and earlier than AD 225.<sup>40</sup> The cutting of a pedestrian subway across the line of the wall at 2–22 Dukes Place has provided an opportunity of excavating a section through the whole defensive sequence from Roman to post-medieval date on the eastern side of the city (Site 17, supervised by John Maloney).<sup>41</sup> The earliest dated feature of the site was a shallow, flat-bottomed cut in the natural subsoil, located at two points some 50m apart (Fig. 11). It measured 4m wide and barely 0.6m deep, and had remained open long enough for a layer of soil to accumulate at the bottom. The backfill above the silt contained pottery of *c.* AD 120, and the articulated remains of two human skeletons. Too slight to have been a defensive ditch, and unlikely to have been a drainage channel or a remnant of brickearth quarrying, its most remarkable aspect was its relation to the later wall, with which it ran parallel less than 2m distant from the external face. No evidence has been found to suggest that London had a defensive circuit prior to the late 2nd century, but since some of the major cemeteries in use from the Flavian period were located just outside the limits of the wall, it is likely that the *pomerium* was already formally marked out, possibly by some such feature as this.<sup>42</sup>

On top of this feature was a large dump of brickearth (Fig. 11, Context 468) which yielded pottery of *c.* AD 180. Through this deposit was cut the trench for the foundations of the city wall. Above the clay and flint foundation a ragstone rubble footing, 1.15m high, supported the main body of the wall, which survived to its full width, 2.7m, and to a height of 1.70m above the plinth.<sup>43</sup>

The pitch of the ragstone masonry, seen in longitudinal section (P1. 12), indicates that this portion of the wall was constructed from east to west. Both sides of the wall were faced with blocks of ragstone, which retained a rubble core of ragstone, laid in courses, each of which was capped with a layer of concrete which only partially percolated between the stones, thus leaving voids. The ornamental red sandstone plinth, with a chamfered edge, on the external face of the wall was mirrored by a triple facing course of tiles on the internal face. Four courses of ragstone above this level a triple course of bonding tiles was carried through the full thickness of the wall. On the internal face, between the top and second tile, was an offset which reduced the width of the wall by 0.12m.

While these details conform to a common pattern,<sup>44</sup> an unusual feature of the construction of the wall at Dukes Place was the fact that the base of the plinth was apparently not level with, or just above, the contemporary ground surface. On both sides of the wall, at the juncture of the clay and flint foundation with the masonry footing, was a layer of mortar on which the internal bank was formed and which must therefore indicate the contemporary ground surface. Presumably the level was unusually low at this point since, even after a substantial preparatory dumping of brickearth, the plinth was still 1.15m above the mortar surfaces which resulted from the construction work. Another unusual feature of a nearby section of the wall, briefly observed, was an offset between the top and second tile of a triple bonding course on the *external* face. This observation may indicate that different stretches of the wall were built by different gangs.<sup>45</sup>

The bank against the internal face had clearly formed after the construction of the wall; its full height was not seen, but it was recorded tailing off 4m away from the wall.<sup>46</sup> Pottery from the bank, like that found below and above the mortar spread, dates to *c.* AD 180, and therefore further corroborates the general *terminus post quem* for the construction of the land wall.

Outside the walls, little is known in detail about the cemeteries of London; few of the graves or cremations have been accurately recorded. Recently, however, the opportunity arose to examine a small area of the cemetery to the north-west of the city in the area now occupied by St. Bartholomew's Hospital (Site 18), supervised by David Bentley. Eighteen burials, including four children, were excavated, all aligned with their heads to the west. Seven appeared to have suffered from osteoarthritis. The majority of the arthritis occurred in the vertebrae and occasionally in the hip joint.

The second most common pathological condition was periostitis in the tibia: an inflammatory reaction following either an injury or infection. One woman had seven Roman bronze bracelets and two finger rings on her chest, perhaps hanging from her neck, and in the grave was a small bronze bell. Coins with some of the other burials indicate that this part of the cemetery was in use from the late 2nd century and as late as the reign of Constans. It is possible that some of these burials are Christian.

At Dukes Place, the fill of the V-shaped ditch, normally associated with the wall and whose inner edge is usually found *c.* 3.5m from its external face (Fig.

11), was found to contain a coin of Constans (AD 341–6). Although the deposit was not sealed, the coin may have some bearing on the date of the adjacent Bastion 6, which projected forward from the wall by *c.* 5.8m and would therefore have necessitated the backfilling of the ditch. More recently at Crosswall (Site 19), also supervised by John Maloney, the V-shaped ditch was seen to be cut by a broad ditch. Further north, the foundation of a previously unrecorded bastion (to be known as 4A) was revealed to be rectangular: 6.7m wide, it projected 5.7m from the wall.

The bastions, which were added to the land wall at a later date, have always presented a problem. Where examined, those on the western side of the city are of post-Roman date, and most were probably built in the early 13th century when there is ample evidence of concern with the defences at large. In view of the testimony of William fitzStephen, writing in the late 12th century just before this activity, that there were already ancient ‘towers’ along the land wall, the possibility remains that some were Roman. There is, indeed, less doubt about the group of solid-core bastions on the eastern side of the city, which was more directly exposed to the danger of raids from the sea. These included much Roman material in their construction, notably monuments from the extramural cemeteries, which must have been salvaged at a period when they were still visible on the ground. It has always seemed likeliest that these bastions share the same date as the bastions added to the walls of most Roman towns in Britain after the mid 4th century.

The evidence of the coin of Constans from the ditch close to Bastion 6, and of coins of Magnentius or Decentius (AD 351–53) and of Gratian (AD 367–75) in layers lying over the footing of the bastion,<sup>47</sup> seems to confirm this likelihood, for which considerable support has also been provided by the discovery of the riverside wall at Baynard’s Castle (Site 20, see First Interim Report, 45–51) in 1974–6,<sup>48</sup> at the Tower of London (by the Department of the Environment) in 1977,<sup>49</sup> and at New Fresh Wharf in 1978. On the eastern part of the Baynard’s Castle site, and also at New Fresh Wharf, the wall was founded upon a ‘raft’ of rammed chalk, itself supported upon parallel rows of oak piles driven vertically into the ground. Samples from the Baynard’s Castle piles indicated a felling date of *c.* AD 330 in radio carbon terms which, when calibrated, would bring the wall’s construction closer to AD 400; while a section of the later phase of the wall, which lacked chalk and pile foundations, also discovered at the Tower produced coinage of Valentinian II (AD 388–92) in material dumped against its internal face very soon after construction.<sup>50</sup> The river wall, moreover, shared distinctive characteristics with the construction of the eastern bastions of the land wall.<sup>51</sup> Unlike the land wall itself, both contained re-used material—most particularly monumental stonework and both, also unlike the land wall, made use of chalk, both in the core of the walls and to provide a platform for the foundations. Patches of pink mortar, found with crushed tile and reddened flints in the riverside wall, have also been recorded in the bastions.

There is now, therefore, considerably stronger reason for supposing that the defences of Roman London were greatly strengthened in the second half of the 4th century by the addition of the eastern bastions, at much the same period as

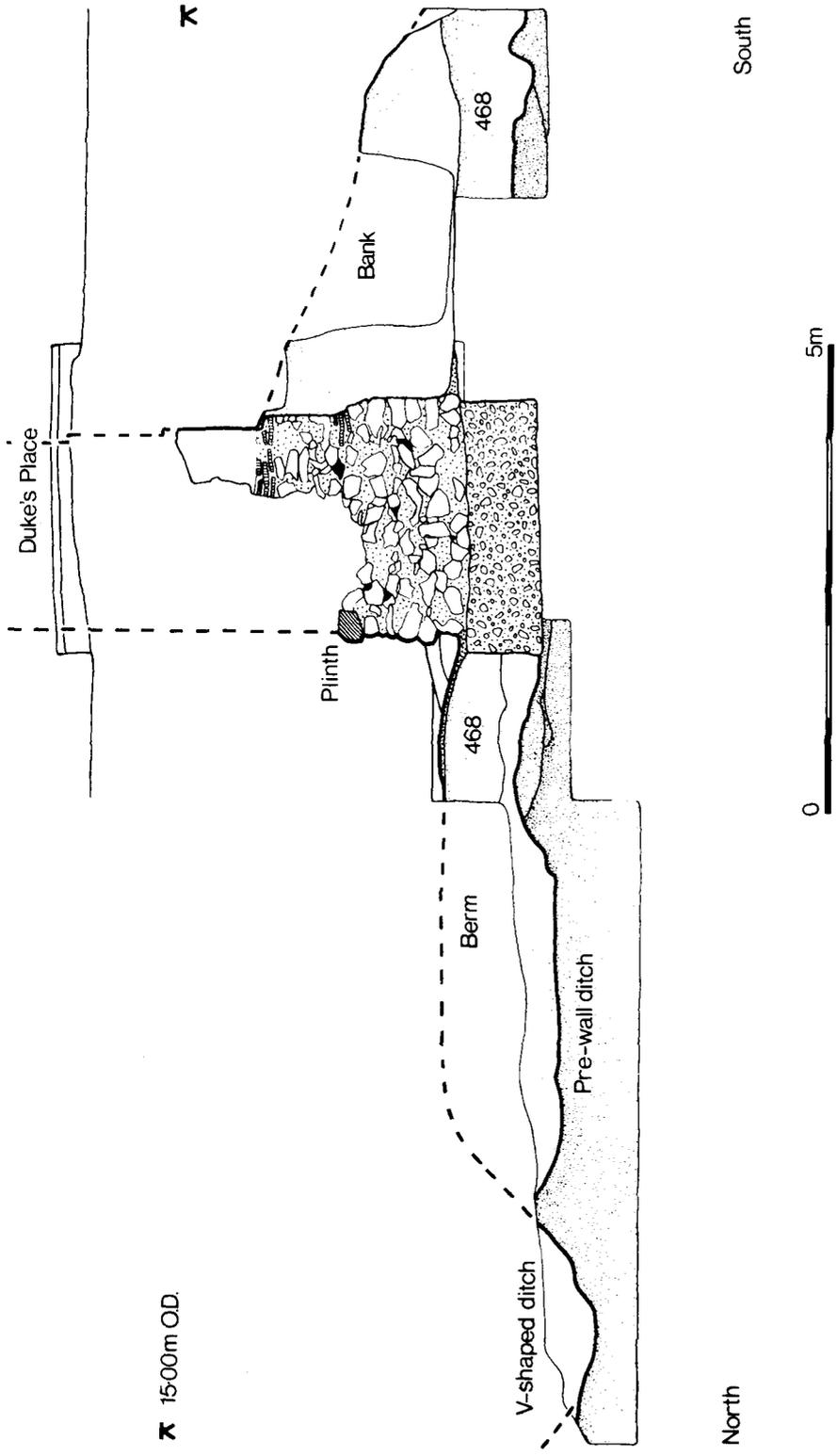


Fig. 11. Duke's Place: Section across the Roman city wall and defences.

the construction of the riverside wall. The precise date (or dates) is less certain; the evidence from the Tower would suggest that one phase of the wall, at least, was the work of Stilicho (between AD 395 and 399), following the edict of Arcadius and Honorius which in AD 396 authorised urban authorities to undertake fortification using, where necessary, material from disused temples and other buildings. Since, however, the whole programme would have been a huge undertaking, the possibility might also be considered that some of the work was undertaken by Constans, who visited Britain in AD 342–3, or by Theodosius who, having relieved London, ‘restored the cities and the defences’ in the early 370s. At all events, though relatively little is known of the character of intramural London at this period, it is clear from the attention paid to its defences that the town was still considered to be a place of consequence by those who would defend it, and presumably by those who would attack it, within two decades of the final withdrawal of Roman troops from the province.

## II SAXON

The mysterious dark earth which on several recent sites was found to have replaced earlier buildings by the end of the 2nd century, as well as accentuating the uncertain nature of the later Roman occupation of London also epitomises the problem of Dark Age and early Saxon settlement.<sup>52</sup> On the one hand, the earliest structures to appear on, or partly within, this material date only from the 8th/9th century or later; on the other, documentary references to London, though scarce, do at least make it clear that by the last quarter of the 7th century the city was already a notable urban centre, an established port and market accessible to Continental traders.<sup>53</sup> Only to a very limited extent is this discrepancy redressed by pottery evidence. Sherds of grey pimply hand-made vessels in the Roman tradition, found in the destruction layers of the Billingsgate bath-house, may well prove to be of 5th-century date.<sup>54</sup> The only securely stratified finds of early Saxon date include a hand-made, chaff-tempered urn and were recovered from a dumping layer which preceded the collapse of the Roman riverside wall.<sup>55</sup> From some unrecorded location a biconical pot with rouletted decoration has been tentatively attributed to a German provenance of the late 6th to early 7th century; another is thought to be from northern France and of the second half of the 6th century.<sup>56</sup> At least ten stratified sherds of mid-Saxon Ipswich ware have recently been recovered from Peninsular House (Site 20).<sup>57</sup> Similar finds are recorded from Battersea, and from Arundel House and the Savoy, both in the Strand.<sup>58</sup>

## THE WATERFRONT

It is perhaps worth noting that, rare as they are, a high proportion of these early finds has been found in the immediate vicinity of the Thames. This accident is suggestive of an earlier analogy: what on inland sites could be taken as evidence for a 2nd-century depopulation and decline was nevertheless accompanied at the turn of the 2nd and 3rd centuries by distinctive and confident new development on the waterfront. As a test of conditions in the

Middle Saxon period, the excavations at New Fresh Wharf (Site 11) supervised by John Schofield and Louise Miller, close to the medieval and—almost certainly—earlier bridges, as well as to the Peninsular House and Billingsgate bath-house finds spots, were inconclusive. It could certainly be shown that from the 5th century the Roman timber waterfront had been allowed to silt up and decay, but it was difficult to attach a firm date to the subsequent partial dismantling of the Roman structures to accommodate a bank of timber-laced rubble (First Interim Report, 35–7) (Fig. 7, 12). At one point the bank was covered by birch logs dated by C14 to AD 760 ± 100, and these in turn supported layers of planks, some of them from a clinker-built boat, to form a surface or ‘hard’, subsequently seen to extend for 19m towards Billingsgate. Mainly to the west of the bank, though partly overlapping and apparently contemporary with it, a large number of vertical oak posts, arranged in fourteen rows from north to south and in nine rows from east to west, formed a grid of stakes which may have extended farther out into the river beyond the southern limit of excavation. The stakes, which were chamfered and bore pointed tops, were comparatively short to the north but towards the river projected up to 2.5m from the contemporary shore. They were dated by C14 to AD 870 ± 60<sup>59</sup> and though only one was suitable for dendrochronological analysis it was seen to be *c.* 65 years earlier than samples from a succeeding embankment (see below, p. 61), dated absolutely to felling dates in the second half of the 10th and the early years of the 11th centuries,<sup>60</sup> and by C14 to AD 940 ± 80.<sup>61</sup> Thus a date in the late 9th or early 10th century seems to be indicated for the stakes and for the rubble bank contemporary with them. An analogy with similar stake installations at Hedeby, for which both defensive and anti-erosive purposes were suggested, would also favour this general date, although the date of the birch logs may also indicate earlier activity.

For the development of the Saxon waterfront generally one of the most interesting aspects of the New Fresh Wharf excavations and subsequent observations of the site was that the 19m long bank was only the extremity of an installation which evidently continued beyond the eastern limit of investigation. More recently, the discovery of an elaborate section drawing of 1875 which records the stratigraphy below the western wall of the Billingsgate Market building, revealed that both the rubble bank and its late 10th or early 11th-century successor still exist at a point 59m to the east of the New Fresh Wharf site, and within 30m of the site of medieval Billingsgate to which they almost certainly continued. Billingsgate, first recorded *c.* 1000,<sup>62</sup> was one of three specific places on the waterfront to be mentioned in, or as dating from the Saxon period, and it is notable that, like its companions, Queenhithe and Dowgate,<sup>63</sup> it was to maintain a distinct pre-eminence as a landing place throughout the medieval period. This in itself would suggest that the earliest Saxon activity on the river was concentrated at these three locations, while the fact that in the Billingsgate and Dowgate areas were situated the only London churches to be built south of Thames Street—St. Magnus Martyr and St. Botolph Billingsgate, and All Hallows the Great and Less—would again imply that at an early date the principal activity of these particular districts was



Fig. 12. New Fresh Wharf: the two main stages of Saxon waterfront development.

centered on the Thames. Queenhithe, Billingsgate and Dowgate thus represent the likeliest locations for the port recorded by the end of the 7th century, but Queenhithe and Dowgate (the latter in 1959–60 producing evidence of the pottery-strewn late Saxon foreshore and revetments<sup>44</sup>) no longer survive archaeologically intact. A fuller understanding of the development of the Saxon waterfront is crucially dependent on the excavation of the Billingsgate lorry park site, to the east of New Fresh Wharf, intended for redevelopment in the near future.

Of relevance to a probable late 9th early 10th-century date for the first Saxon embankment at New Fresh Wharf, on the periphery of Billingsgate, Queenhithe has recently been reassessed in the light of two purported land grants of Alfred.<sup>45</sup> Though the existing texts are late in date and irregular in form, and have consequently often been dismissed individually as fabrications, they appear in quite different sources, and can be shown to derive from originals of at least late 10th-century date in one case, early 10th in the other. One of them, dated 898/9 and issued in the specific context of a discussion of the restoration of London, conferred on Archbishop Plegmund of Canterbury and Bishop Waerferth of Worcester, two dignitaries closely associated with Alfred's work, the right of mooring at adjacent properties at what later became known as Queenhithe. In the case of Bishop Waerferth, this grant supplemented an earlier award of 889, three years after Alfred's recapture of London from the Danes. On this occasion market rights were granted close to the 'trading shore' (*ripa emtoralis*) and, although no specific location is given, measurements are provided from which the proportions of the plot can be shown to correspond most closely with a medieval 'insula' immediately north of Queenhithe. The fact that measurements are given at all would suggest that the north-south lanes leading to the river and mentioned as bounds in 898/9 did not yet exist in 889. Between them, the two grants were clearly concerned with the promotion of riverborne trade, a conclusion which is reinforced by Bishop Waerferth's involvement with the fortification of his own town of Worcester and with the establishment there of a market on terms which closely resemble those applying to London. At Worcester, moreover, Waerferth was collaborating with the Mercian *ealdorman* Ethelred, to whom Alfred had entrusted the custody of London, who had attended the restoration council which resulted in the grant of 898/9, and whose name was then shared by Queenhithe (*Aetheredes hyd*) itself.

This demonstration that London, and in particular its waterfront, was significantly involved in Alfred's general programme of urban restoration might provide a context for the stake installations and embankment at New Fresh Wharf. The stakes lay within 45m of the site of the 12th-century stone bridge, itself in all probability close to the line of its late Saxon predecessor which is first recorded *c.* 1000. There is reason to suppose that this bridge was constructed at the turn of the 9th and 10th centuries, a period when both Alfred and Edward the Elder were concerned with establishing opposing defences across rivers at several strategic points in the east Midlands, where at Nottingham at least a bridge was built between them.<sup>46</sup> The defences at

Southwark, a place for which there is no evidence of any significant settlement earlier in the post-Roman period,<sup>67</sup> are recorded (as *Suthringa gewearch*) in the *Burghal Hidage*; their appearance in this document strongly suggests that they were part of the Alfredian reformation of London, and it would be difficult to explain what useful purpose they might have served if it was not to secure a southern bridgehead.<sup>68</sup> In that event the New Fresh Wharf stakes may have been intended to close a gap between the northern bridgehead and the end of the first, rubble, embankment near Billingsgate, a short distance downstream.

## MID TO LATE SAXON BUILDINGS AND STREETS

Away from the Thames and provisionally dated from at least the early 9th to the 11th centuries overall, a series of timber buildings has been found on six different sites since 1974. All these buildings would appear to conform to one of three distinctive types, which will first be identified with their exemplars. Apart from structural variety, however, it is apparent from the relation of most of these buildings to Roman or to later streets (or in at least one case to both) that uniform developments of a more general and perhaps more significant nature were occurring on many of these sites; some in the 9th or 10th centuries, and in one case in the mid-Saxon period. Because of this, and because very often two types of building were found on a single site, it will also be necessary to summarise each excavation in turn, noting the interim pottery dates currently available and the relation to streets before finally attempting any general conclusion.

The three distinctive building types are termed 'ground-level', 'sunken floored' and 'large cellared':

1) Ground-level, exemplified at Peninsular House (Site 8), Milk Street (Site 4), Well Court (Site 6) and GPO (Site 3; First Interim Report, 52, Fig. 14). The foundations of the GPO building, which measured at least 9m × 4m, were represented by timber slots in the contemporary ground surface, and by 'post-in-trench' construction. The latter technique was also in evidence at Well Court, where the holes of a double line of posts were detected for a short distance against the gravelling of the contemporary road surface. Inside the building was evidence of baking, and ovens were also found on the internal surfaces at Peninsular House, again close to a contemporary street, but where no evidence of external walls was recovered. The regular intervals between the ovens at Peninsular House (Fig. 13) suggested a form of 'strip' development in which individual properties were of an equal size. Neither walls nor floor surfaces were found at Milk Street, but the existence of party walls at right angles to the street may be indicated by the distribution of pits. Except at the GPO site, all buildings of this type fronted immediately on to adjacent streets. The date-range was wide: mid-Saxon and later at Peninsular House; 9th century for the two building phases at Well Court; and 10th and 11th century at Milk Street and GPO.

2) Sunken-floored; Bread Street (Site 21; First Interim Report, 54), and Milk Street. Buildings of this category featured floors set at c. 0.5m below the contemporary ground surface, and, as they survived, were less than 5m long.

Structure 1 at Milk Street (Fig. 15) was lined by planks held in place by uprights set into circular post-holes. The Bread Street building survived as a series of irregular post-holes set against the cut faces of the pit; projecting from the western side were traces of a porch whose floor lay at an intermediate level between the exterior ground surface and the floor of the pit.<sup>69</sup> Though the porch faced towards Bread Street, the building lay some 11m distant from the medieval and modern frontage and was not aligned with it; it may not be later in date than the mid 9th century. The Milk Street structure was set against the edge of a Roman street from which it was probably entered, and is dated by pottery to the 9th century; a second phase would appear to date from the late 9th or early 10th centuries.

3) Large-celled; Watling Court (Site 5); Well Court (Site 6). The floors of buildings of this type lay at up to 2m below the contemporary ground surface, and were substantially longer than those of the simple sunken-floored variety: up to 13–15m. The construction of the Watling Court examples was notably more elaborate: a characteristic double lining of horizontal planking, fixed both inside and outside the posts, was recorded, and there was evidence of sill beams set into the floor of the pits, and of joists and floor planking (P1. 13). A further case of this general type was found by Professor Grimes at Cannon Street, and was dated to the 10th and 11th centuries;<sup>70</sup> a comparable date is suggested in these cases; an 11th-century date seems to be indicated at Watling Court. In all cases, these large-celled buildings lay at least 4–8m distant from the nearest medieval and modern streets.<sup>71</sup>

#### *Peninsular House (Site 8)*

On the site, supervised by Gustav Milne, on the west side of Botolph Lane and to the north of Thames Street close to the New Fresh Wharf-Billingsgate area, both the earliest buildings and levels of Botolph Lane, separated by 2m of later intrusion, overlay a grey, sandy silt deposit up to 0.4m deep. Though there was insufficient time for a complete investigation of features sealed beneath this deposit, it was clear that no surfaces existed below of the type found above it. Sherds of Ipswich ware of the mid-Saxon period were recovered from the lowest levels of the deposit; while pottery from the upper levels was invariably Roman, suggesting that the material was redeposited rather than a gradual accumulation (Fig. 14). The surface had been levelled and rammed firm; above it, beaten earth and brickearth surfaces interpreted as internal floors were associated with the remains of domestic hearths and ovens and with several further sherds of mid-Saxon pottery. Some ovens included walls strengthened with wattlework. Altogether fourteen Saxon buildings, not all contemporary, were identified in three separate areas: six were apparently destroyed by fire. In each area the sequences differed, suggesting separate building plots whose individual widths appear to be reflected by the intervals of c. 4m between the hearths excavated (Fig. 13). Like the hearths and ovens, the floors showed considerable evidence of wear, repair and replacement. The dates of the later phases have not yet been established, but are probably 10th century. Three sections across Botolph Lane were examined over a distance of 14m; overlying the grey silts were deposits of compacted gravels, stones or cobbles,

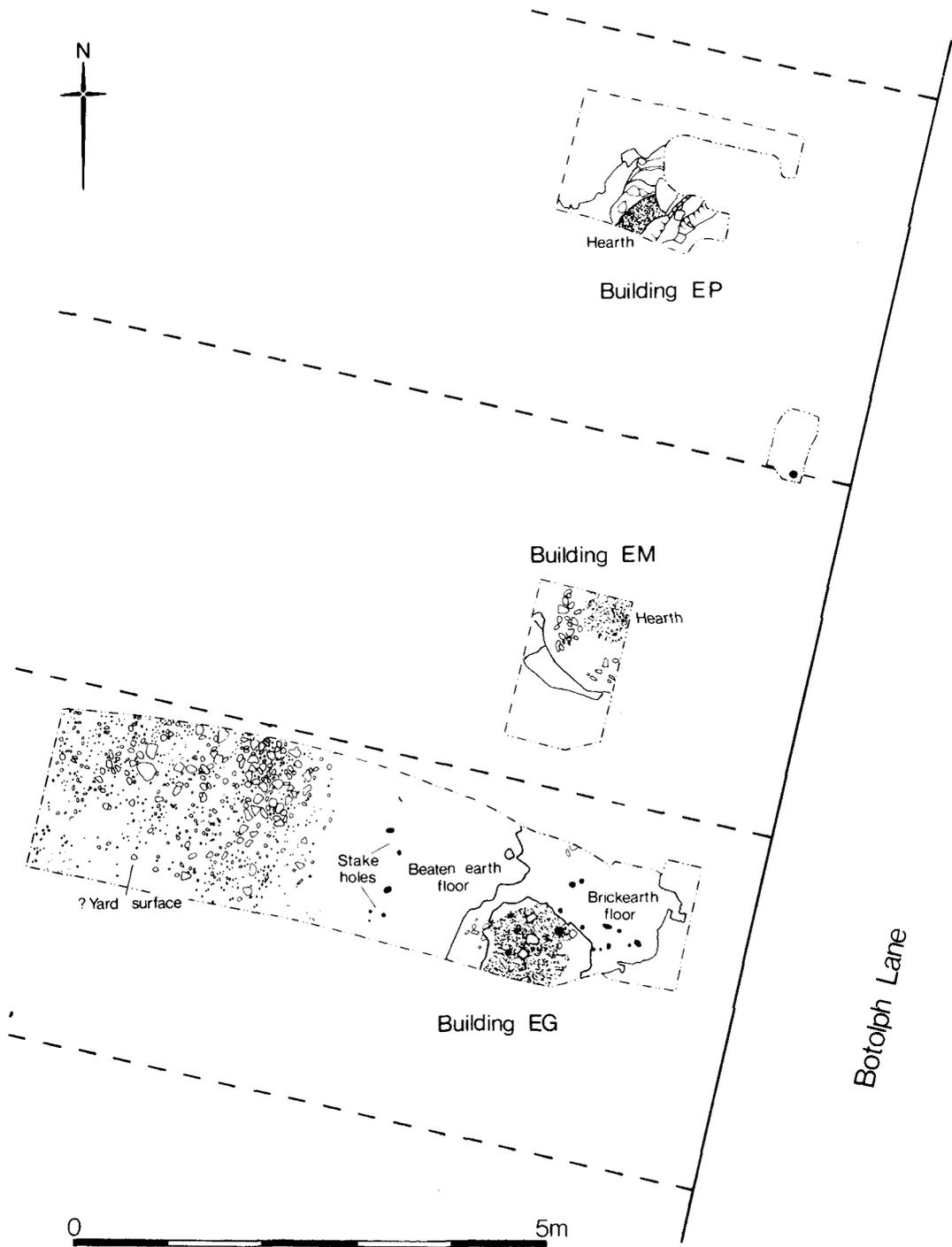


Fig. 13. Peninsular House: plan of Saxon hearths alongside Botolph Lane.

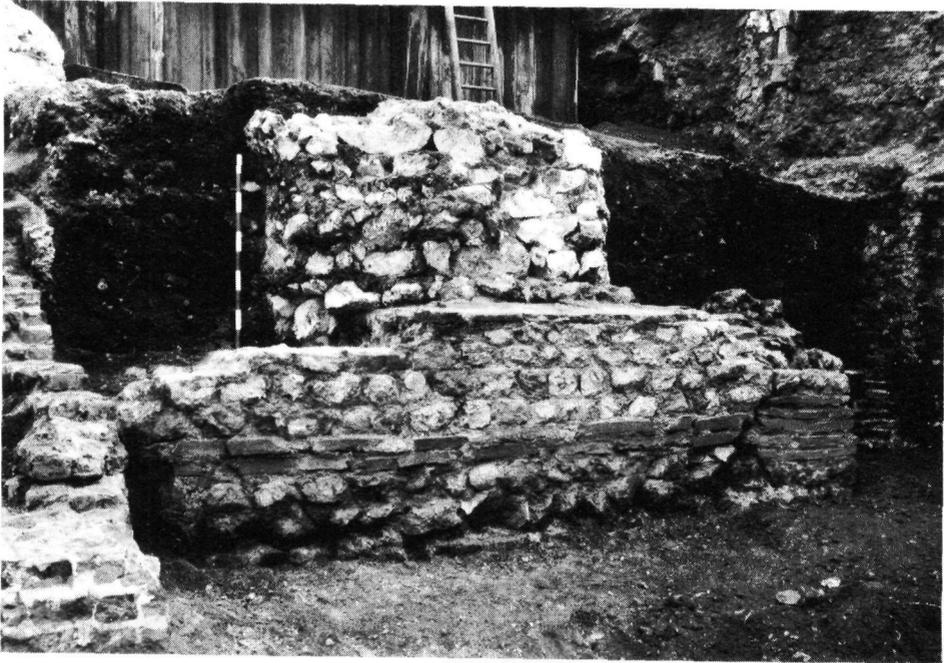


Plate 1. Roman *forum* at 160–2 Fenchurch Street: The outer wall of the S portico of the second *forum*, looking S. The pier above is part of the foundations of St. Dionys Backchurch.



Plate 2. Roman *forum*, Gracechurch Street tunnel: two mortar floors of the nave of the second *basilica*, the upper overlaid by building debris probably of the building's destruction.



Plate 3. GPO Newgate Street: collapsed brick infill of wall of building destroyed in Hadrianic Fire (c. AD 125–30).



Plate 4. GPO Newgate Street: possible industrial hearth in early 2nd-century commercial premises.



Plate 5. GPO Newgate Street: interior of early 2nd-century Roman building, showing domestic hearth with ash spread (right), burnt studs of timber framework (middle) and chevron internal wall decoration (left).



Plate 6. Milk Street: 2nd-century mosaic.

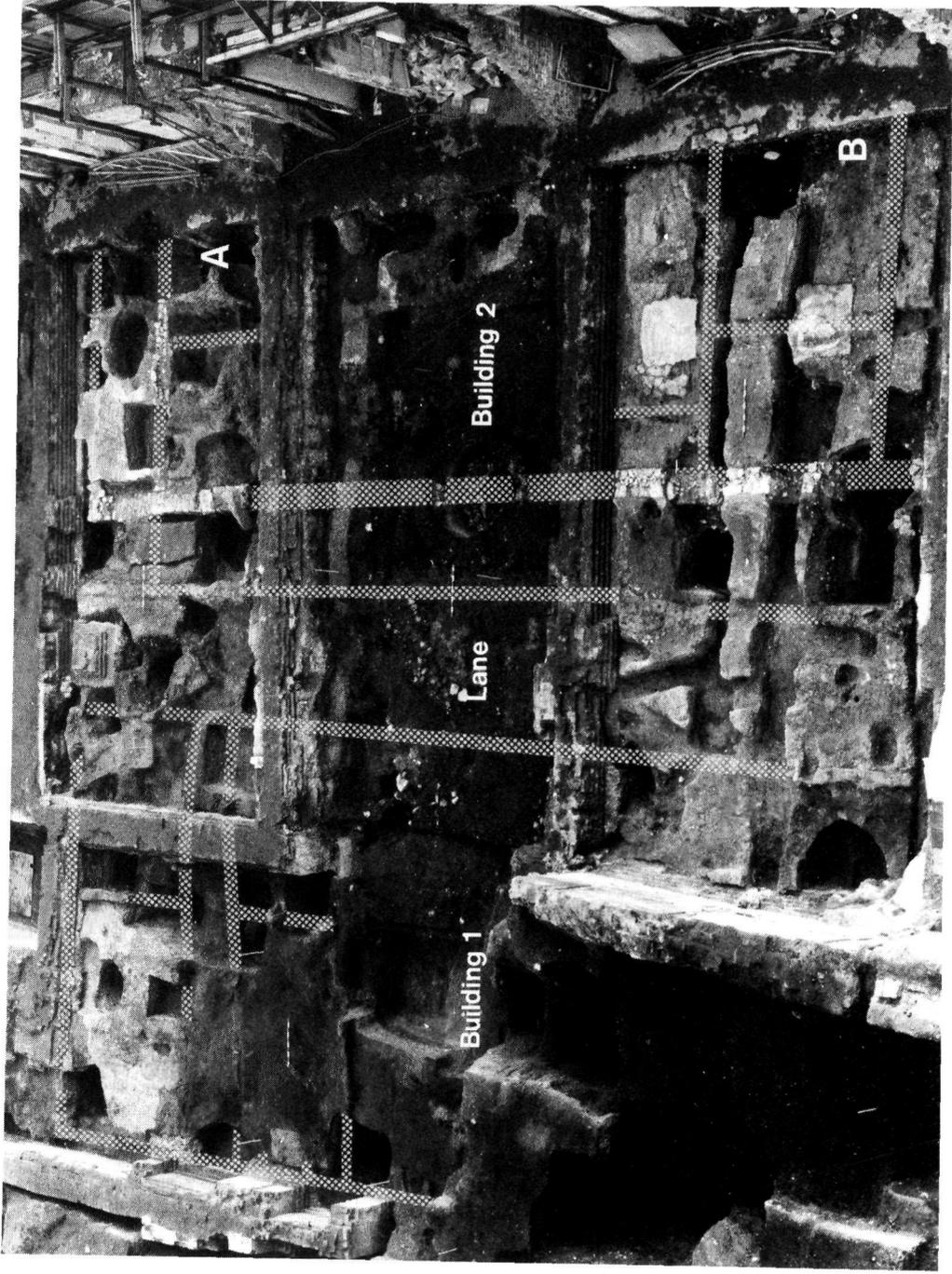


Plate 7. Watling Court: late 1st/early 2nd-century buildings, looking E. points A and B indicate the positions of mosaic and *opus signinum* floors shown in Pls. 8-9.

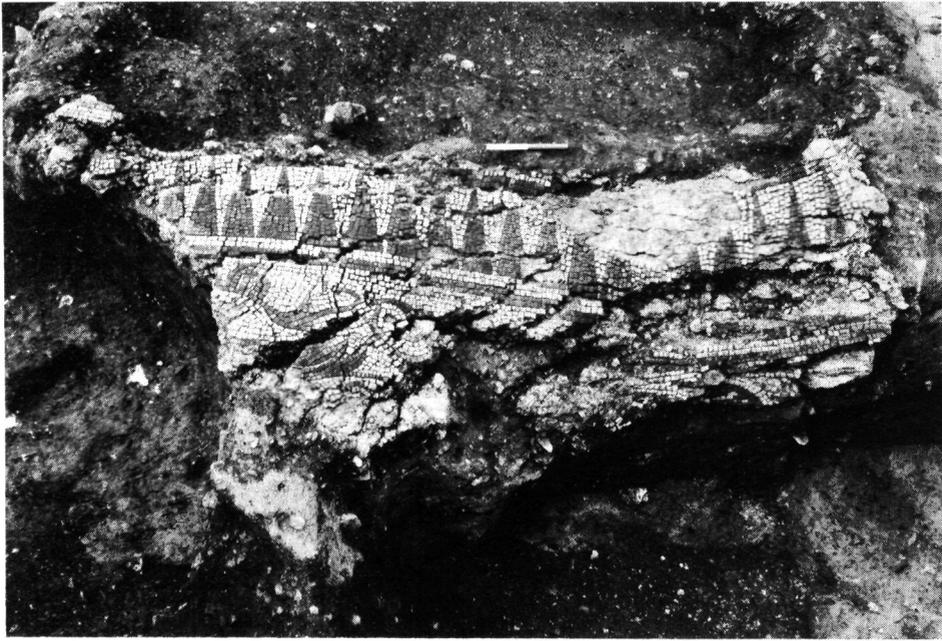


Plate 8. Watling Court: black and white mosaic fragment at point A on Pl. 7, looking N.

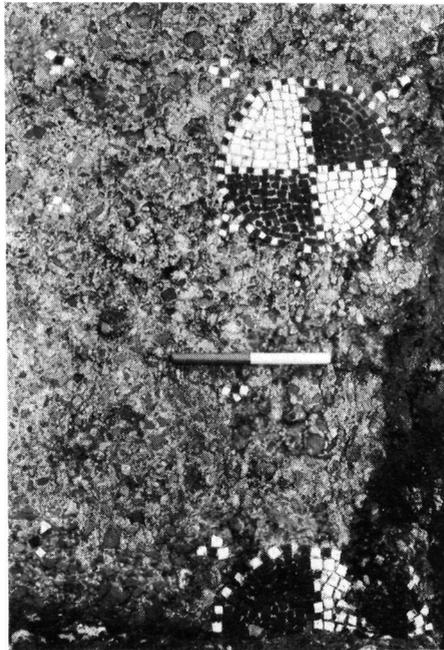


Plate 9. Watling Court: *opus signinum* floor with inlaid mosaic roundels, at point B on Pl. 7, looking N.



Plate 10. Thames Street tunnel: Roman timber structure at bottom of access shaft, looking E.



Plate 11. Milk Street: the dark earth, overlaying the mosaic shown in Pl. 6 (arrowed), with traces of late Saxon buildings above (higher arrow).



Plate 12. Duke's Place: longitudinal section through Roman city wall, showing construction.



Plate 13. Watling Court: S end of Building 3, one of the smaller late Saxon sunken structures, earliest phase. Positions of vertical timbers are indicated by arrows.



Plate 14. New Fresh Wharf: clay and timber embankment forming 10th-century reclamation around the stakes of the late 9th or early 10th century, looking E. The river is to the right.



Plate 15. Milk Street: early medieval undercroft foundations, looking S.

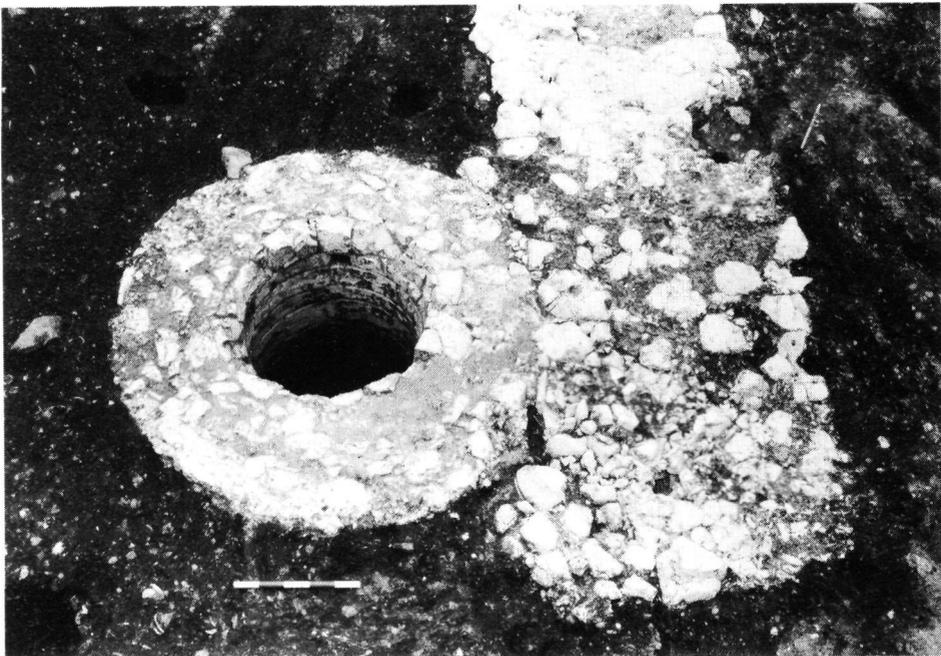


Plate 16. Watling Court: medieval foundation, possibly the rear of a house, and adjacent chalk well, of a property fronting onto Basing Lane (now lost).



Plate 17. Watling Court: northern part of the site looking E, showing medieval and later cesspits arranged at the N ends of properties N of Basing Lane (off the site to the right), backing onto the medieval alley which ran up the middle of the area shown.



Plate 18. Duke's Place: medieval doorway inserted into the city wall, probably by the adjacent Holy Trinity Priory, 13th or 14th century.

contrasting with the brickearth floors *c.* 2m to the west (Fig. 14). Though no dating evidence was recovered from the road itself, the lower surface incorporated a higher proportion of ragstone and *tegulae* fragments than the upper surfaces in which a corresponding increase in the use of large, water-worn flint cobbles was recorded, perhaps comparable with the crushed flints used for the streets at Winchester attributed to an Alfredian refounding.<sup>72</sup> Layers of silt *c.* 100mm thick, representing an accumulation of mud or rubbish, overlay two of the earliest surfaces but were absent from the later, more compacted, metallings.

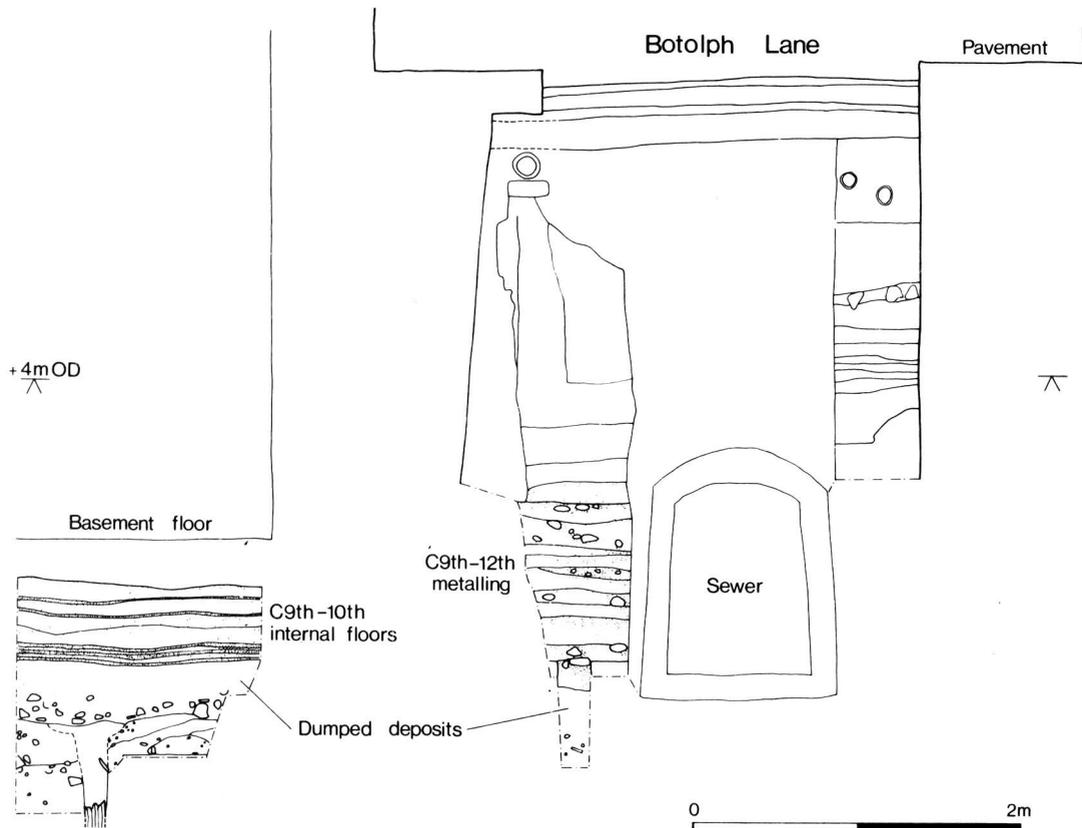


Fig. 14. Peninsular House: section through Botolph Lane, looking north.

#### Milk Street (Site 4)

On the eastern side of the site, excavated by Steve Roskams, the first phase of a sunken Structure 1 was represented by a pit *c.* 4.5m north-south  $\times$  3m east-west which cut *c.* 0.5m into the existing stratigraphy to reach a stabler, late 2nd-century Roman surface (Fig. 15). Only on the south side did the posts survive to be recorded; here three vertical internal posts set into circular holes retained a plank lining against the face of the cut. The central post was retained in the second phase, perhaps implying that it supported a ridge pole. The

eastern side of the building coincided with the inner edge of the ditch on the west side of the Roman road, from which an entrance into the pit was represented by a sloping hollow and a step. In a second phase, the two outer posts on the southern side were replaced, and a hearth laid near the middle of the north end. Fragments of Structure 2, of unknown size, lay further south and were recorded 3m west of the Roman road. The dark earth had been cleared over an area larger than the intended building; the shallow cut, whose base also coincided with the latest Roman horizon, was lined with brickearth. Structure 3, 3m × at least 2.5m, cut the south-east corner of Structure 1 and occupied the middle of the Roman road. An initial cut 0.8m deep was sealed with silt and

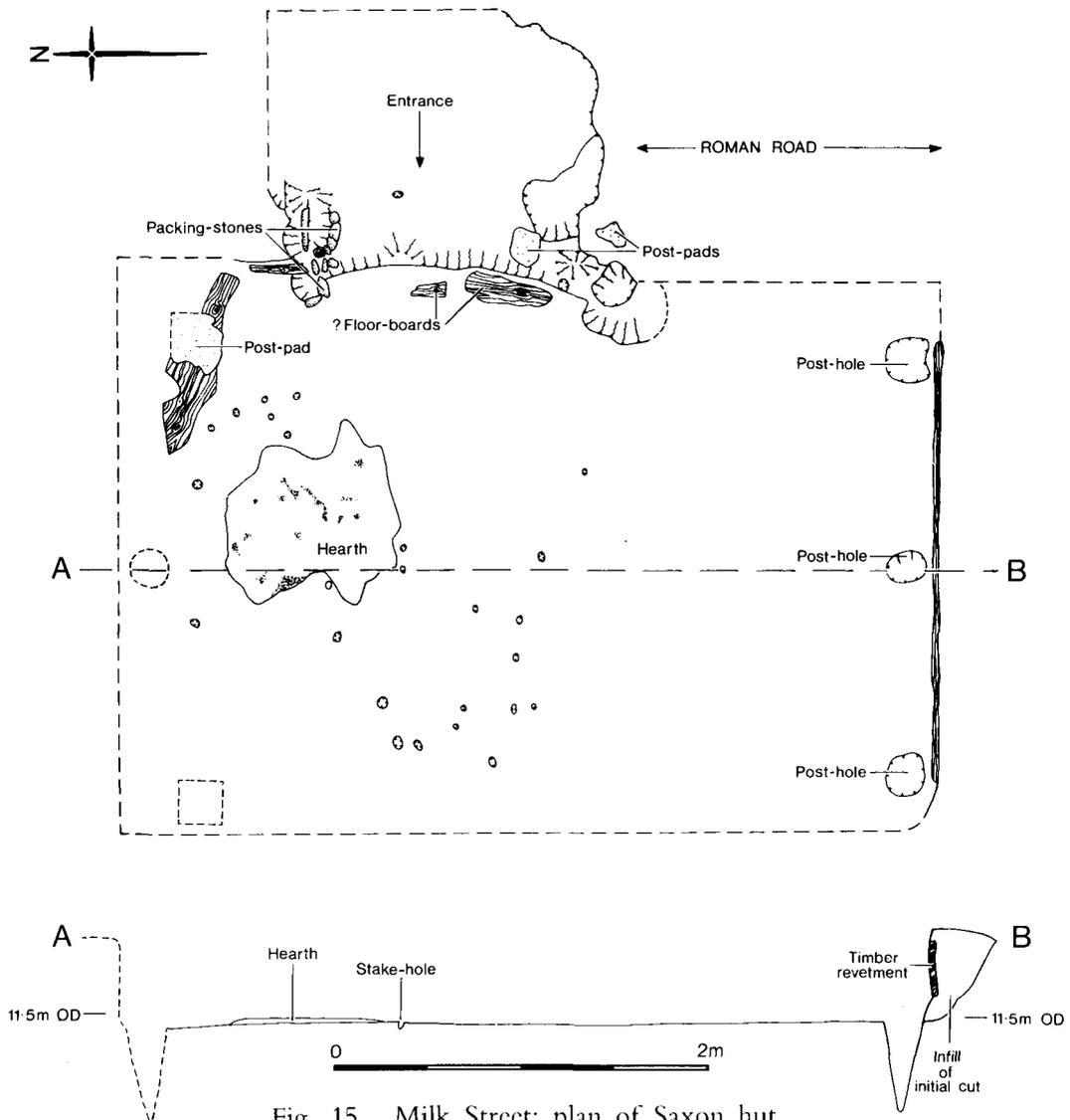


Fig. 15. Milk Street: plan of Saxon hut.

layers of brickearth. On the evidence of pottery similar to that recovered from the first embankment at New Fresh Wharf, Structure 1 is of probable late 9th to early 10th-century date. Structures 2 and 3 are undated, though Structure 3 was later than Structure 1, of which it may have been a replacement. On the western side of the site, against Milk Street, the dark earth was overlain by traces of cellarless buildings of the 10th and 11th centuries, dated by pottery which seems to indicate a change from shelly wares to the hand-made, sand-tempered wares which predominated in the 11th century. Their alignments, indicated by the patterns of successive pits, suggest that they were served by Milk Street rather than by the Roman street which probably served the 9th to 10th-century sunken-floored structures on the east side of the site.

#### *Well Court (Site 6)*

Observations by Peter Cardiff, John Millner and Dominic Perring on the east side of Bow Lane revealed road gravelling laid over the dark earth, 0.6m above the latest Roman level and extending *c.* 1.5m–1.7m to the east of the present frontage. The Roman street, which evidently converged with the present street further south, lay *c.* 4m to the east of Bow Lane below the dark earth. Level with, and immediately against, the edge of the metalling were two parallel lines of post-holes set within a trench. Both lines were slightly bowed in plan, perhaps to accommodate an internal feature; just inside were found an oven, carbonised grain and fragments of querns, suggestive of a bakehouse. The road could not be dated, but 9th-century pottery was recovered from the demolition phase of the building which was replaced, also in the 9th century, by a structure fronting onto the present frontage of Bow Lane. This was also set in a trench, and a large number of small stake-holes were found between the load bearing post-holes, though no daub was found.

To the east of these structures, a building of large-celled type was recorded in section. Aligned north-south, its western limit lay between 13 and 15.5m from the present Bow Lane frontage: it extended east by at least 4.1m but by less than 6.5m. Its pit cut into the dark earth by 1m, though elsewhere on the site the dark earth was 1.3m deep. A trench was found at the foot of the sloping cut—either for a sillbeam or for ‘post-in-trench’ construction. Possible evidence for an entrance on the eastern side in the form of an upward slope might indicate that access was other than from the buildings on Bow Lane. No dating evidence has yet been identified.

#### *Watling Court (Site 5)*

On the west side of Bow Lane excavations supervised by Dominic Perring revealed three sunken buildings. The north, south and east limits of Building 1 survived; the western limit was cut by a modern intrusion *c.* 2m wide. No evidence was found on the far side, and the building covered an area 15m north-south  $\times$  ? *c.* 6m east-west. The cut was slope-sided, and at its foot was a continuous slot cut. In the sillbeam, where located, were rectangular slots for studs set regularly within extremes of 0.85m to 1.05m between the centres of the studs. The outer plank wall was 0.5m inside the cut, and a second plank

lining was attached to the inner faces of the studs: the internal dimensions were 13.65m north to south and *c.* 5.4m east to west. Half-split timbers of 'D' section, laid horizontally and longitudinally down the centre of the floor presumably represented joists which stopped *c.* 1m short of either end. Other longitudinal joists were also found near the sides. Though smashed when the pits were backfilled, further planking was apparently laid above the joists as a floor. No hearths or other internal features were observed in the 60% of the interior of the building examined. The surviving depth of the cut was 0.6m, but 1.3m to the west of the structure the dark earth survived to at least 2.25m above the level of the base of the cut, indicative of depth. The occupation debris was of late 10th and more definitely 11th-century date; the building was backfilled in the 11th century. To the south the cut was 4–5m north of the modern Cannon Street frontage, and presumably still further from the medieval Basing Lane which Cannon Street replaced when extended in the last century. The building was precisely aligned with medieval frontages on all sides.

Building 2, 7m to the north of Building 1, was of identical construction; only the south and east limits were located and its area was in excess of 5.6m north-south  $\times$  6.4m east-west. The area between the planked double-lining was 4.8m+ north-south  $\times$  5.6m+ east-west. The cut survived to a depth of 0.7m, though a total depth of 1.6m–1.8m is likely. The backfill was of 11th-century date, and the building itself cut other features of the same date, including Building 3. Building 3 lay immediately to the east of Building 2, and was heavily cut by later intrusions. The north and south limits were intact; its width was *c.* 4m, and its length was traced for 1.4m from east to west. The construction was not identical with that of Buildings 1 and 2; no sill beam was found, and the uprights were circular in section. There was some evidence of plank lining, though whether 'double' is uncertain. The uprights, which were set in a trench, were spaced between 0.6m and 0.85m apart (Pl. 13). The floor level was 0.4m higher than that of Building 2, and 1.05m higher than that of Building 1. Building 3 was cut by Building 2 and itself cut a pit containing 11th-century material; it is possible that originally, though not in its later use, it served as a porch of Building 2.

On the basis of these excavations and of provisional pottery dating, ground level buildings can be said to date from at least the 9th to the 11th centuries. The rarity of this form of construction in London, compared with many other late Saxon towns, is most probably to be attributed to the destruction of the higher levels by the ubiquitous Victorian cellars. Sunken-floored buildings would appear to date from the 9th or early 10th centuries, as in the case of Structure 1 at Milk Street, although it is possible that others persisted as an archaic type, suited to some particular function or locality, at a later date. The large-celled buildings date consistently from the (? late) 10th and 11th centuries. In no one case where more than one type was found on a single site has it been possible to record any direct relationship between them; to establish, as for example at Well Court, whether the ground-level and large-celled buildings existed contemporaneously, or as parts of a single property. The only topographical constant which applies to these categories is that the large-celled buildings were

invariably found well away from street frontages, perhaps for ancillary storage. Street frontages, on the other hand, seem to have been favoured by ground level buildings which, as at Peninsular House and Well Court, contained hearths and/or ovens and may thus have served a commercial or domestic purpose: some of the pits at Milk Street were of primarily industrial function.

Of especial interest is the question of the relation between buildings and streets, whether Roman or more recent. At Milk Street a Roman road at the eastern edge of the site probably survived to serve a late 9th or early 10th-century structure whose subsequent extension or replacement effectively blocked it; while on the western side of the site buildings which originated in the 10th century were aligned on the present Milk Street. This would appear to indicate the substitution of a new street 25m to the west of the Roman metallings. Current excavations at Ironmonger Lane (Site 22), supervised by Jennie Norton, have shown that an east-west Roman street, *c.* 80m north of Cheapside, survived intact until it was partially encroached in the 9th century; by the end of that century it was apparently crossed by a building which probably fronted on the new north-south alignment of Ironmonger Lane. Elsewhere new streets were laid out where Roman thoroughfares had evidently not survived in this way. At Well Court buildings of probable 9th-century date constructed against the earliest metallings of Bow Lane overlay a deposit of dark earth 0.6m deep beneath which a Roman street lay on a slightly different alignment, at this point *c.* 4m to the east of the present lane. No Roman predecessor was found to underlie the south end of Botolph Lane, and none was found to the west of the lane on the Peninsular House site. To the extent that the Bread Street building, which may be of mid Saxon date, lay on a different alignment from that of the street, it may predate it.

This evidence of the widespread establishment of new streets and adjoining properties, occasionally replacing Roman thoroughfares, in the late Saxon period calls into question the origin of the overall medieval and modern street plan of London. Here, particularly in the area to the east of St. Paul's cathedral, the elements of a rectangular 'grid' system have been discerned, and the suggestion made a decade ago that, as elsewhere, this pattern arose from the Alfredian restoration of towns at the turn of the 9th and 10th centuries.<sup>73</sup> This possibility is now clearly strengthened by the close comparison between the new streets at Winchester, superseding the Roman pattern and attributed to the Alfredian refounding of the city,<sup>74</sup> and the present evidence from London, notably at Milk Street and, though less clearly, at Bow and Ironmonger Lanes. At the same time a general context is provided by the documentary evidence of commercial activity, and apparently of new streets, at Queenhithe in the late 9th century. Provisionally at least the comparison is also supported by dating evidence, though it is clear that more work is required before an absolute sequence can be more satisfactorily established. In any case, it should be stressed that no single date can be applied to all these sites: Botolph Lane (closer to the waterfront, and in particular to the Billingsgate area) can be securely dated to the mid Saxon period, which implies that to some extent these developments were foreshadowed in the 8th or early 9th centuries. While the two early

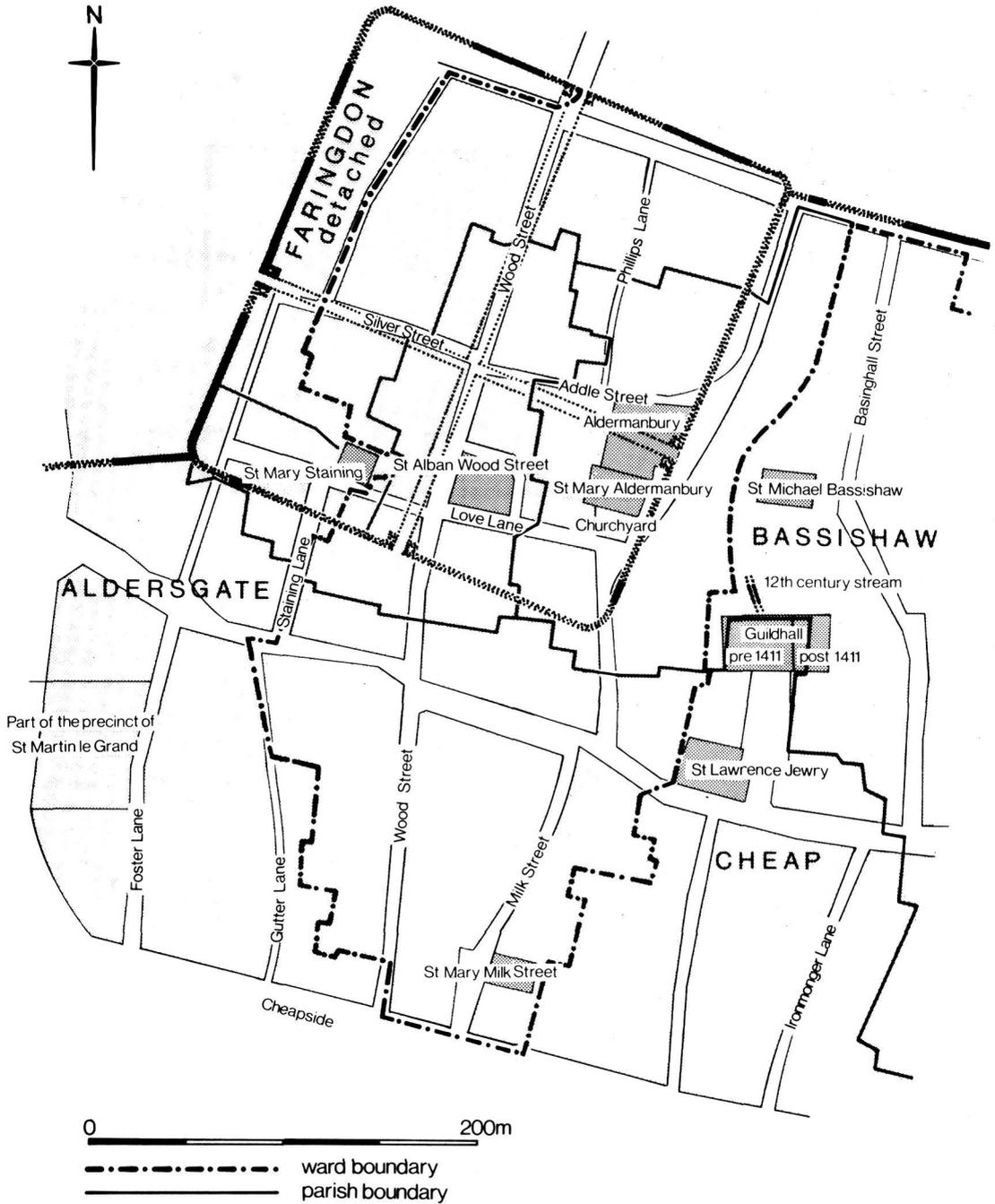


Fig. 16. Aldermanbury: the tenement in relation to parish and ward, the Roman Cripplegate fort and the medieval Guildhall.

building phases at Bow Lane are both 9th century, the second represented an encroachment on the original line of the lane, which is itself undated: the earlier phase may well be pre-Alfredian.

### III LATE SAXON

Apart from the later building phases at Peninsular House, and the complex sequences of interlocking industrial and refuse pits at Milk Street, both of which can be expected to yield much additional information as post-excavation work continues, the single most important archaeological discovery of this period was the later of the two embankments at New Fresh Wharf. The stakes and bank of probable late 9th or early 10th-century date were consolidated by two layers of clay dumped around a core of rough boxes of logs and planking laid upon the brushwood matting of the existing embankment (Fig. 12, Pl. 14). These dumps extended south from the Roman river wall, below the present southern edge of Thames Street, for a distance of some 20m. Further dumps of clay, stone and timber raised the bank by some 2m, and in form as well as date it closely resembled the Anglo-Scandinavian bank along the river Foss at York, which prevented flooding and possibly served for unloading boats. The London bank appeared to extend across the width of at least five properties, distinguishable both by the posts and planks of fences aligned north to south, and by slight differences in their individual construction. Dendrochronological analysis of samples of timber from the boundary fences indicates felling dates of  $964 \pm 9$ ,  $976 \pm 9$ ,  $1000 \pm 9$ ,<sup>75</sup> compared with a C14 date of  $AD 940 \pm 80$ .<sup>76</sup> This would imply the existence of separate properties in, or soon after, the later 10th century, and it is notable that one of the property divisions was seen to coincide with the line of a medieval alleyway for which there is documentary evidence by the mid 12th century.

No doubt distinct from the humbler buildings excavated, there are occasional references from the mid 9th century to individual *hagas* and *burhs* in London, some given specific names such as *Ceolmundingachaga* near the 'Westgate', given to Worcester cathedral in 855, or the '*burh* of St. Paul's' mentioned c. 975. These apparently record the residences or estates of prominent individuals<sup>77</sup> or of communities, some based outside the city. *Staeningahaga*, together with its parent manor of Staines (Middlesex), was given to Westminster Abbey by Edward the Confessor, and can be identified with the parish of St. Mary Staining, recorded in 1190 as *ecclesiam de Stainingehaga*. *Staeningahaga* would seem to represent a case, very common by the time of the Domesday survey, of a rural estate holding property in the local urban centre. So also might *Basingahaga*, first mentioned in 1160–80 and now represented by the uniquely coterminous ward and parish of Bassishaw, except that the name apparently derives from Basing in Hampshire, two counties distant from London. *Staeningahaga* and *Basingahaga* are however the only two names of this type recorded in London, and they are linked by two curious coincidences. Both Basing and Staines lay on, or close to, the course of the Roman road which led from Newgate, close to the *hagas*, to Silchester, and the *hagas* themselves lay just outside the lines of the east and south walls respectively of the Roman

Cripplegate fort. Since the discovery of the fort, whose north and west walls had been incorporated within the Roman city wall, its enclosure (assuming that the internal walls survived) has often been suggested as a likely location for the Saxon royal palace which, according to two very late but independent medieval traditions, lay in the Aldermanbury area, close to the east wall of the fort.<sup>78</sup>

The potential interest of the fort site in the post-Roman period, and the subject of *burhs* and *hagas* generally, is currently being reassessed in the course of documentary work on the medieval tenement of Aldermanbury, 'the fortified manor of the alderman', which gave its name to the present street to the east, and to the parish at whose centre it stood immediately to the north of the church of St. Mary Aldermanbury (Fig. 16). It is clear that the church originally belonged to the tenement, and as late as the 14th century the two were directly connected by a postern. In c. 1127 Aldermanbury was described as a soke, or private jurisdiction, in a context which shows that it ranked in size or importance with the City wards, while in the mid 13th century the local ward, later to be known as Cripplegate, was referred to as *Aldermanesgarde*. The extensive privileges attached to the tenement at this period, exceptional for any secular property, can only be compared with a handful of franchises granted to such specially favoured religious institutions such as St. Paul's cathedral and the priory of Holy Trinity Aldgate: they would appear to be equivalent to those of the wards themselves. This unusual prominence may perhaps be related to two further circumstances, themselves probably connected. The frontage of the tenement, which still projects conspicuously into the street of Aldermanbury, corresponds precisely with that of the assumed east gatehouse of the Roman fort, and whereas elsewhere modern streets within the former enclosure closely followed the lines of the Roman streets, Addle Street by the late medieval period had been redirected by some 30m from the gatehouse site to run along the north side of the tenement. This would suggest that at some date after the demolition of the wall the gatehouse still survived to serve some purpose which justified the diversion of the street. No date can be put to this development, but Roman gatehouses are known to have survived the Dark Ages as residences for local dignitaries—for a bishop at Trier and, it would seem, for kings and earls at York.<sup>79</sup>

A possible link with a London palace is strengthened by the fact that in the years during and after the completion of Edward the Confessor's new palace at Westminster, a considerable amount of land in the Cripplegate area was awarded to various beneficiaries including Westminster Abbey (which received *Staeningahaga* and Staines) and the royal college of St. Martin le Grand. A late 11th-century source quoted by Matthew Paris notes that the liberties of the former palace site adjacent to St. Alban Wood Street were preserved by a 'small house', an interesting statement in view of the exceptional early-medieval soke of Aldermanbury, its name and its proximity to the Guildhall 90m to the south-east, where the medieval aldermen convened at the court of Husting. A comparison with Winchester, where the *gihalda* of 1148, supervised by a royal official, was also established on the boundary of a recently abandoned royal palace,<sup>80</sup> perhaps at one of its gates, provides an analogy for the close

institutional—and topographical—connexion between royal and civic government in the late 11th and early 12th centuries. While decisive evidence is lacking, it could be suggested on circumstantial grounds that when a new palace was built at Westminster much of the old site was disposed of, but that part of the area, with its eastern gatehouse and the palace liberties, was reserved for a royal official, the alderman, needed to supervise the king's interests in London. This might be considered as an intermediate stage before the establishment of the Guildhall on its present site, probably in the 1120s when the citizens also won the right of electing a sheriff, as a centre of government for the leaders of the wards, themselves now called aldermen. Professor Grimes' excavation of the site of St. Mary Aldermanbury produced no definite evidence of the date of the original church,<sup>81</sup> while his investigation of the nearby church of St. Alban Wood Street uncovered stone foundations not inconsistent with Matthew Paris's claim that it existed in the 8th century.<sup>82</sup>

The recent examination of the south end of the GPO site (Site 3), supervised by Alan Thompson, revealed the church of St. Nicholas Shambles, first recorded *c.* 1187 and demolished in 1551. The earliest structure was two-celled and measured at least *c.* 20m × 8.5m. The foundations consisted of alternating courses of lightly pounded gravel and fragments of Roman building material; ragstone, *opus signinum* and roofing tiles, set into the underlying dark earth. This material had not been recovered from the immediate vicinity since the Roman buildings below the dark earth were of brick earth and timber. Because so much of the archaeological deposits had been removed by the insertion of modern basements, the dating of this first phase is difficult; it is provisionally set at the 10th or 11th centuries. An early alternative dedication was St. Nicholas Aldred, and it is notable that the same personal name occurs in Aldersgate, 200m to the north-east, which was recorded as *Ealdredesgate* in *c.* 1000. The recovery of one charcoal burial from the northern cemetery admits the possibility that some of the earlier burials may be associated with the first church.

#### IV MEDIEVAL

Compared with the quality of the archaeological evidence for the Roman period, or even in recent months for the Saxon period, in London generally the medieval findings have so far proved disappointing. In the inland area of the City only deeper medieval features such as cess pits and wells normally survive (Pl. 16). These can, however, as at Watling court (Pl. 17), indicate the layout of medieval tenement plots and so be compared with the documentary evidence. Occasionally, the deeper foundations of stone undercrofts are also recorded; in this way a 12th or 13th-century undercroft with additional foundations, perhaps indicative of a rear stair, has been traced at Milk Street (Fig. 17, Pl. 15). Close to London, a 13th-century analogy of almost identical dimensions survives under the Angel Hotel at Guildford,<sup>83</sup> but it is clear that at London at least such buildings were regarded as a comparative rarity in the early 13th century. Medieval occupation or ground surfaces rarely survive, though an important exception, currently being analysed, is the northern and middle



Fig. 17. Milk Street: plan of early medieval undercroft.

areas of the GPO site where remains of 13th-century buildings were recorded below the gardens of the adjacent Greyfriars. There can be little doubt that the poor survival of the medieval levels is largely a consequence of the insertion of deep cellars favoured by Victorian and modern buildings, and the point is emphasised by the two exceptions, the waterfront and the defences, with which this section of the report is almost exclusively concerned. On the waterfront in particular, the relative height of the water table has usually discouraged the provision of basements, and the raising of the level of Thames Street after the Great Fire contributed further to the preservation of underlying structures and deposits.

### THE WATERFRONT

Of those waterfront sites which produced evidence of Roman or Saxon activity, only New Fresh Wharf (Site 11) just upstream of Billingsgate, exhibited any recognizable continuity of occupation into the medieval period. Here the late Saxon embankments of the 9th–10th, and 10th–11th centuries, the latter divided into individual properties by fences of which some coincided with later tenement boundaries (Fig. 12), were extended in the early or mid 12th century to the line of the first vertical revetment, *c.* 8m further south. From the beginning, the embankments were built out from the surviving courses of the riverside wall, which at this point lay along the south side of Thames Street. A similar arrangement is suggested by another late Saxon embankment found in a comparable position south of the street at Dowgate in 1959–60.<sup>84</sup> At Queenhithe, the third of the recorded pre-Conquest harbour areas, the late 9th-century mooring places were separated from their property plots by the ‘city wall’, almost certainly the Roman riverwall on the line of Thames Street.<sup>85</sup>

Elsewhere on the waterfront, however, excavation to the south of Thames Street has failed to produce evidence of occupation or activity earlier than the 12th, or even 13th, century. Investigation at Seal House (Site 12), supervised by John Schofield, revealed no late Saxon embankment such as occurred at New Fresh Wharf or Dowgate: the earliest post-Roman structure was a mid 12th-century timber revetment found at *c.* 21m south of Thames Street. The first such structure at Custom House (Site 7) dated from the late 13th century,<sup>86</sup> and it is perhaps significant that until this period the enrolled deeds of the local parishes of All Hallows Barking and St. Dunstan in the East reveal that the property market was notably more active in the northern, Tower Street, area than on the waterfront, where relatively large properties still held by a handful of owners would also suggest minimal capital development.<sup>87</sup> A similar pattern emerged at the opposite end of the waterfront at Baynard’s Castle (Site 20), where the earliest revetments dated from the late 12th or early 13th centuries.<sup>88</sup> The likelihood is thus increased that the earliest post-Roman riverfront activity was largely confined to the three pre-Conquest havens of Queenhithe, Billingsgate and Dowgate, while the possibility that west of Queenhithe and east of Billingsgate, at least, the laying out of Thames Street proceeded in tandem with the development of the waterfront is suggested by the fact that at Baynard’s Castle the earliest level of the street, based on the collapsed

river-wall, roughly coincided with the date of the revetments to the south<sup>80</sup> (First Interim Report, 59).

Of the three early centres, Dowgate, first mentioned in connexion with French and German merchants, seems to have been a largely private preserve for the use of particularly active continental traders. In this case, and also with the more general public landing places at Queenhithe and Billingsgate, there was always a marked concern by Crown and City to ensure that goods coming into London should land at the appropriate place. This was primarily for ease of taxation and supervision, but also because landing and trading facilities ultimately derived from jealously guarded royal prerogatives;<sup>81</sup> similar restrictions were still evident as late as 1559, when the number of 'licensed' quays in London was limited to nine. The clear implication would seem to be that outside the authorized centres, and apart from the smaller private franchises granted for example to prominent ecclesiastics, there was no automatic right of mooring except for non-taxable cargoes carried by small, local vessels. Confirmation of this was supplied by the Trig Lane tenements (Site 23) which can be regarded as typical private citizens' holdings: none of the successive revetments was high enough to accommodate any but the smallest vessels, such as could alone negotiate the three river stairs 6 to 7m apart which project from the 14th and 15th-century frontages. It is notable, too, that with the necessary exception of fishmongers, a high proportion of the occupants of the private riverfront tenements in the medieval period consisted of metalworkers, dyers and tilers. For such trades location on the waterfront is more likely to be explained by their constant need for water and their obnoxious working conditions than by any special need for immediate access to riverborne traffic.

The important distinction between the functions of the ordinary private waterfront tenements—the vast majority—on the one hand, and both the public and specially privileged private landing places on the other, has been obscured by the usual medieval practice of describing all indiscriminately as 'wharves' or 'quays'. At this period, however, these terms were applied less exclusively to harbours and mooring places than subsequently became the case. They could also denote the basic river frontages designed primarily to contain the highest tides and which, being in the interests of the city at large, were customary and approved: even a riverside church could have one. Different from these in degree rather than in kind were revetments which contained sufficient new ground for additional buildings, as in the phrase *kayum domorum*, and which more specifically denoted land reclamation: where these extended into the current of the Thames, however, they were illegal, presumably because they obstructed, or threatened to compete with, the official landing places. For while each of the three phenomena described by the terms 'wharf' and 'quay' were physically similar as being the point where land and water met, once distinguished they reveal the complexity and variety of motivation which contributed to the gradual southward progression of the London waterfront.

Extending from c. 20m south of Thames Street (at Seal House and New Fresh Wharf) by the mid 12th century to an average distance of between 50–100m by the mid 17th century at the latest, this process was achieved by means of a

succession of revetments, almost all of timber and each backfilled by refuse to form a level surface. Often surviving to heights of 2m or more, the revetments are characterized by a vertical arrangement of posts, as distinct from the 'horizontal' tradition typified at Bryggen in Norway.<sup>91</sup> The London examples fall into front and back-braced varieties (Fig. 18), except for cases at the Mermaid Theatre site (Site 24) and at Trig Lane (Site 23: Group 3, *c.* 1295) which were braced both in front and behind. The front-braced type, as also at Trig lane, Seal House and Custom House, were current until the turn of the 13th and 14th centuries, after which the back-braced variety predominated—though a more sophisticated form of front-brace at Custom House dated from the later 14th century. Three 14th-century revetments at Trig Lane employed a system of edge-trenching at the junction of the horizontal tie-back (Group 7) or back-brace base plate (Groups 10 and 11) with the vertically set posts or staves (Fig. 18). The intractable joint of exceptional strength thus produced is unparalleled in any medieval building on dry land, the closest analogy being the joint between the beam and ribs of such vessels as the *Bremerkogge*, which was contemporary with the Group 11 revetment of *c.* 1380. Free tenons were sometimes seen to join adjacent stave members on the Group 10 structure, which also bore a series of assembly marks incised upon the face of the timbers, demonstrating that it was a prefabricated structure installed from west to east.

Until recently it was generally assumed that the waterfront progression achieved by these means largely arose from the need to acquire extra land at the expense of the river. It now seems more likely, however, that this motivation was principally confined to the period up to the late 13th century and that thereafter, as was demonstrated by the excavations supervised by Gustav Milne at Trig Lane<sup>92</sup>, quite different factors prevailed. Here, well away from the central section of the waterfront and 150m upstream of Queenhithe, 48m of the total progression of 60m had been reclaimed by *c.* 1280, the date of the northernmost revetment (Group 2) in the area excavated. Documentary evidence supplies some clues as to the formation of the intervening zone, some of it possibly of natural strand, between the northern limit of the site and Thames Street. The line of an earlier frontage *c.* 18m to the north of the Group 2 revetment seems to be indicated in late 17th-century plans by parallel deflections in the courses of Trig and Boss Lanes on either side of the site, deflections matched by kinks in the intermediate property boundaries. Moreover, it can be shown that by 1256 one, and by 1273 two, of the three tenements into which the area between the lanes had been equally divided were now also subdivided into northern and southern portions. It is at least likely that this subdivision was occasioned by an earlier phase of reclamation, possibly from the line of deflections shown by the post-medieval plans. Indeed, since that line was itself *c.* 30m south of Thames Street, more than one phase may have been involved before *c.* 1280: well before the end of the 12th century, Kingsgate, at the foot of Boss Lane, had been an established landing place for the king's wine. Elsewhere, reclamation appears to have begun by the mid 12th century, when the earliest Seal House revetment was established at 21m south of Thames Street. It is notable that in both distance and date this structure

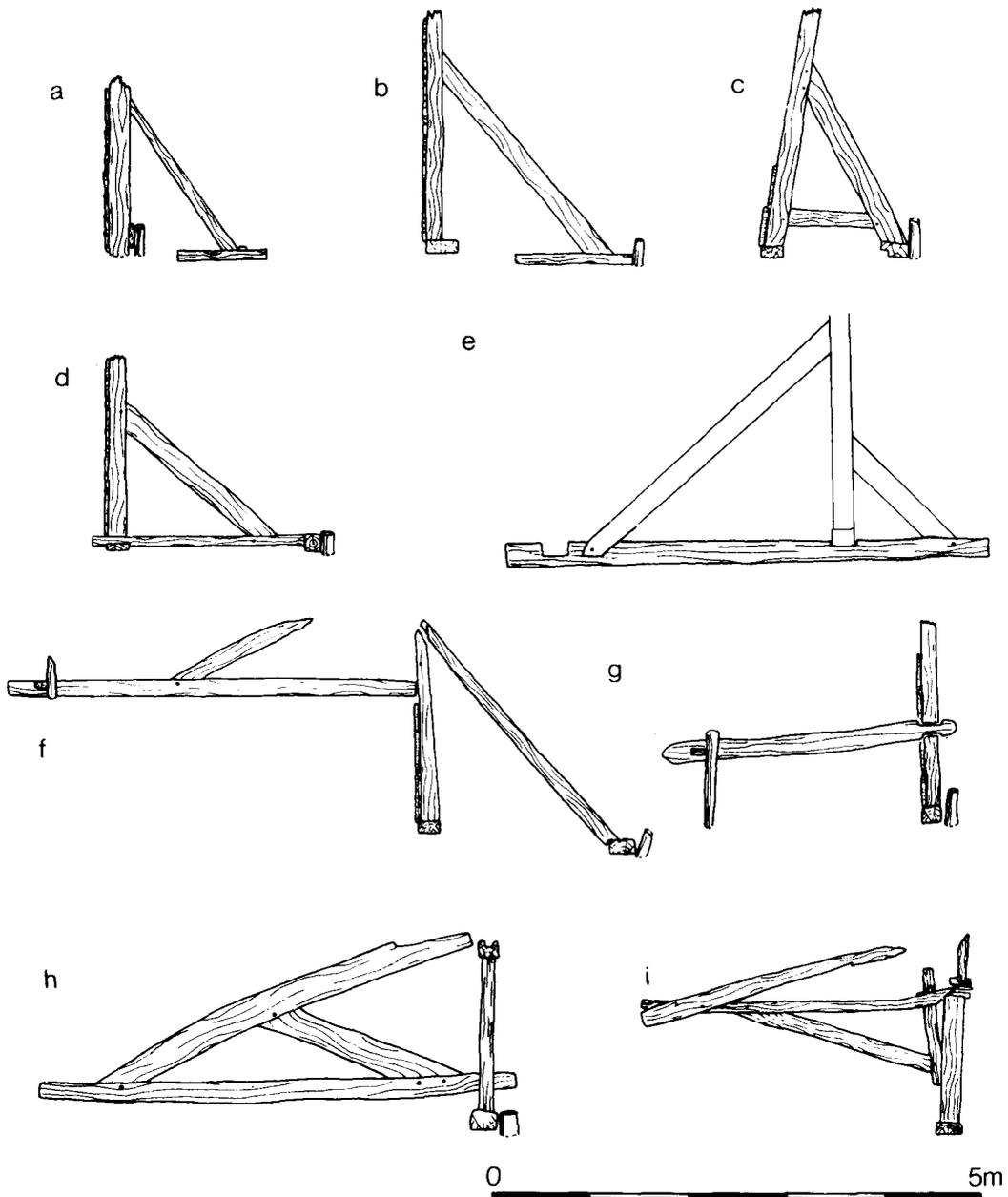


Fig. 18. Medieval riverfront revetment types in London (river to right). Front-braced (13 to 14th century): a, Custom House I; b, Seal House III; c, Trig Lane G6; d, Custom House II. Front and Back-braced (13th century): e, Mermaid Theatre; f, Trig Lane G3. Back-braced (14th to 15th century): g, Trig Lane G7; h, Trig Lane G11; i, Trig Lane G12.

closely compares with the earliest vertical revetment at New Fresh Wharf, 7m south of the late Saxon embankment on the far side of London Bridge. As no revetments of earlier than 12th-century date have yet been found it may be that this period marked the beginning of the process of reclamation elsewhere than at Queenhithe, Billingsgate and Dowgate.

From the end of the 13th century, however, it is apparent that the excavated revetments at Trig Lane were no longer intended to enclose such large areas of newly recovered land. Of the fifteen distinct modifications to the Trig Lane waterfront between *c.* 1280 and *c.* 1440 only four involved any significant progression; three amounting to 3m apiece and the fourth to 6m. The Group 10 revetment of *c.* 1365 was seen to supersede a much repaired and fundamentally unstable frontage which comprised sections of the Group 3, 4 and 6 revetments. Since it would have been difficult to replace this structure *in situ*<sup>93</sup>, the easier and sounder solution was adopted of installing an entirely new revetment a little further to the south. Moreover, the new Group 10 revetment, like the Group 11 revetment of *c.* 1380, was built at two distinct levels of which the upper was replaceable, while the Group 12 structure also replaced the upper stage of the Group 10 revetment some sixty years after the lower had been built. This facility was evidently intended to reduce the decay to which the upper staging was especially vulnerable from the constant rise and fall of the tide. Thus at Trig Lane the modest progression of the riverfront from the late 13th century, far from being intended to acquire additional ground or access to deeper water for berthing, was caused by the persisting need to maintain the frontage against tidal action. Even for this purpose considerable pains were taken to postpone the construction of new revetments by the provision of replaceable staging.

How far this restraint was imposed by general legal restrictions or by the financial limitations of individual occupants is uncertain. In part the case of Trig Lane may well reflect the sharp fall in economic activity, demand for property and density of settlement in London after the Black Death.<sup>94</sup> On the other hand, even when limited to maintenance, there was little overall consistency in the rate of progression even between the three Trig Lane tenements. Documentary evidence shows that the tenements, though usually under single ownership, were almost invariably in separate occupation. Excavation suggested that the decision to extend a revetment was that of the individual occupant: on any one occasion one or two tenements might be involved, but rarely all three. Thus a uniform frontage seems almost to have been accidental, and here, no doubt, the authorities' concern to check the rate of progression was confronted by a fundamental problem. The man who lawfully extended his frontage to maintain it in good order invited a similar response from his neighbour, if only because of the insanitary consequences of an indented riverwall. In the 15th century, and doubtless much earlier, the City was compelled to admit that these constituted justifiable cause for levelling up the waterfront.<sup>95</sup> The ultimate solution to this dilemma seems to have been provided by the general introduction of stone walls, much less susceptible to decay or erosion. It is significant that the installation of stone quays, as at Trig Lane in *c.* 1440 and at Seal House by the late 15th century, or as at Dublin by the early 14th,<sup>96</sup>

effectively marked the end of the progression process. This consequence, however, presumably depended upon a fairly consistent provision of stone revetments along the waterfront as a whole. Though a stone revetment existed immediately to the west of the timber revetments at Trig Lane as early as the outset of the 14th century, their continuing advance was to render it redundant: by the mid 15th century, however, both the fully excavated tenements and their neighbour to the west were fronted by a continuous stone wall on the same alignment.

#### WATERFRONT BUILDINGS

No doubt because of the relative distance of the Trig Lane site from Thames Street, comparatively little coherent evidence survived of the medieval buildings constructed above the level of the revetments.<sup>97</sup> A more comprehensive impression of waterfront buildings and tenements was available from Seal House (First Interim Report, 37–9), and particularly from New Fresh Wharf (Site 11); since the latter also represent the best preserved medieval domestic structures so far excavated in London they call for special attention. In the medieval period the New Fresh Wharf site comprised seven tenements situated between the churches of St. Magnus Martyr to the west and St. Botolph Billingsgate to the east; excavation disclosed the northern halves of tenements 2–7 (Figs. 19, 20). The first extension of the later Saxon embankment occurred in the early 12th century, and four of the tenements (Nos. 3–6) involved the provision of the earliest vertical revetments; the wharf surfaces may have been cobbled, as indicated at one point, or planked. Also in the 12th century, or possibly in the early 13th when the wharves were again extended southwards, stone building foundations were laid upon, or cut into, the reclamation deposits.

Buildings of this period included Building A-B on Tenement 4 (Fig. 19) which comprised two rooms 6m and 8.5m long, the larger to the south, which were linked by a door; these were ground level undercrofts since the medieval Thames Street was subsequently seen to be level with their floors. This wharf, double the size of the neighbouring properties, may be identified with the two wharves at *Roderesgate* recorded in 1147/67. Building D on Tenement 6, whose revetment was aligned with the front-braced revetment of Tenement 5, and possibly with that of Tenement 4, was a substantial 12th-century stone building which occupied over half the property: a yard or wide alley to the west did not quite reach the street. Two rooms were indicated: a smaller chamber to the north, and to the south a main undercroft measuring internally 8.3m × 4m, whose floor, in contrast with Building B, was *c.* 1m below contemporary street level. On Tenement 7, nearest St. Botolph Billingsgate, was a similar but larger undercroft, Building C, also of 12th-century date. This comprised one cellar, possibly vaulted in 3 × 2 bays, which extended across the full width of the property: a door leading to the quay stood at the south-east corner. In the early 13th century the revetments of Tenements 3–5 and 7 were extended *c.* 10m further into the river, and consisted of a stone river wall which protruded at least 1.95m beyond the line of Tenement 6. Its level was slightly lower than that of the street.



Fig. 19. New Fresh Wharf: plan of early medieval buildings.

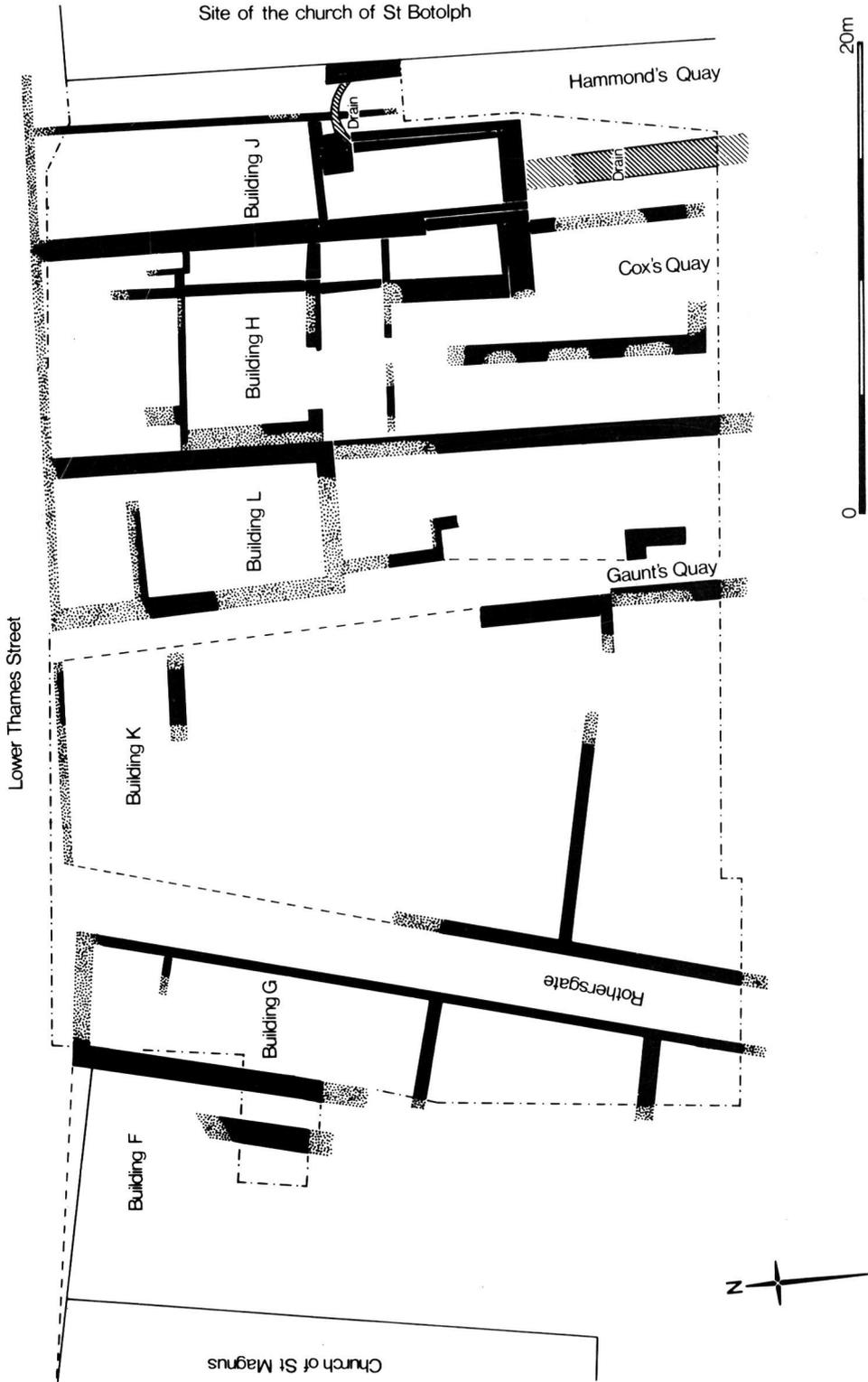


Fig. 20. New Fresh Wharf: plan of later medieval buildings.

Most, if not all, of the seven tenements appear to have been rebuilt in the late 13th and early 14th century (Fig. 20). In the west, the boundary between Tenements 2 and 3 was re-established, and with it the first recognizable buildings on Tenement 2 were represented by two parallel foundations of arched construction based on timber piles. One formed the tenement boundary, while its neighbour to the west marked the internal side of a private alley (Building F) which still existed in 1666. A new building, G, on Tenement 3 comprised four rooms, or a large subdivided cellar with two rooms behind; access was from Rothersgate to the east. Each cellar had a slightly different floor level: that at the front was 0.5m below the contemporary Thames Street, perhaps to allow for illumination from windows on the street side. Building G is recorded as having a wharf in 1278, while Building F to the west was described as a newly-built house in 1293; both were probably rebuilt at about this period.

Tenement 4, to the east of Rothersgate, was rebuilt in the early 14th century and at least eight rooms of the resultant Building K were traced during excavation. No internal alley was observed and, as with Building G, access was presumably from Rothersgate. The alley implied in 1349 by the reference to Tenement 5 as *le Brodegate* appeared fragmentarily along the west side of Building E, and of its replacement, Building L. These surfaces, like Building L, dated from the late 13th century, and apparently consisted of two rooms running back from the street. Behind the larger front room the alley widened alongside a second room, possibly the kitchen, with a hearth against the alley side, and a further room to the south. Building D on Tenement 6 was radically rebuilt to form Building H in the first half of the 14th century. The undercroft was demolished and was replaced by a new building of two rooms similar to Building L: the alley now lay down the east side, rather than the west as previously. The walls of the rear cellar were faced in a chalk and knapped flint chequerwork, one of the earliest instances of this fashion. Beneath the alley was a garderobe pit, fed by an intramural chute, which served the upper storey above. Behind the main house, which was probably of three storeys on cellars, further cellars flanked the alley. Other rooms to the south were apparently later and perhaps arose from the partition of the property; by 1589-1615 the tenement was divided laterally.

Building J on Tenement 7, the rebuild of the 12th century Building C, dated from the first half of the 16th century. Almost certainly there was an intermediate rebuilding or adaptation of the 13th or 14th centuries which was not archaeologically detectable: in 1407 the tenement included chambers bounded on one side by an alley next to the hall, and on the other by a wooden staircase leading to the wharf. Building J was a house of two rooms founded upon the undercroft of Building C, and was flanked by an alley on the eastern side. Alongside this, to the rear, were subsidiary rooms to the nearest of which, and to the house itself, a stair well gave cellar access. The original brick floor of the rear room was replaced by pine boards which, with staging against the east wall, were buried in the debris of the Fire of 1666.

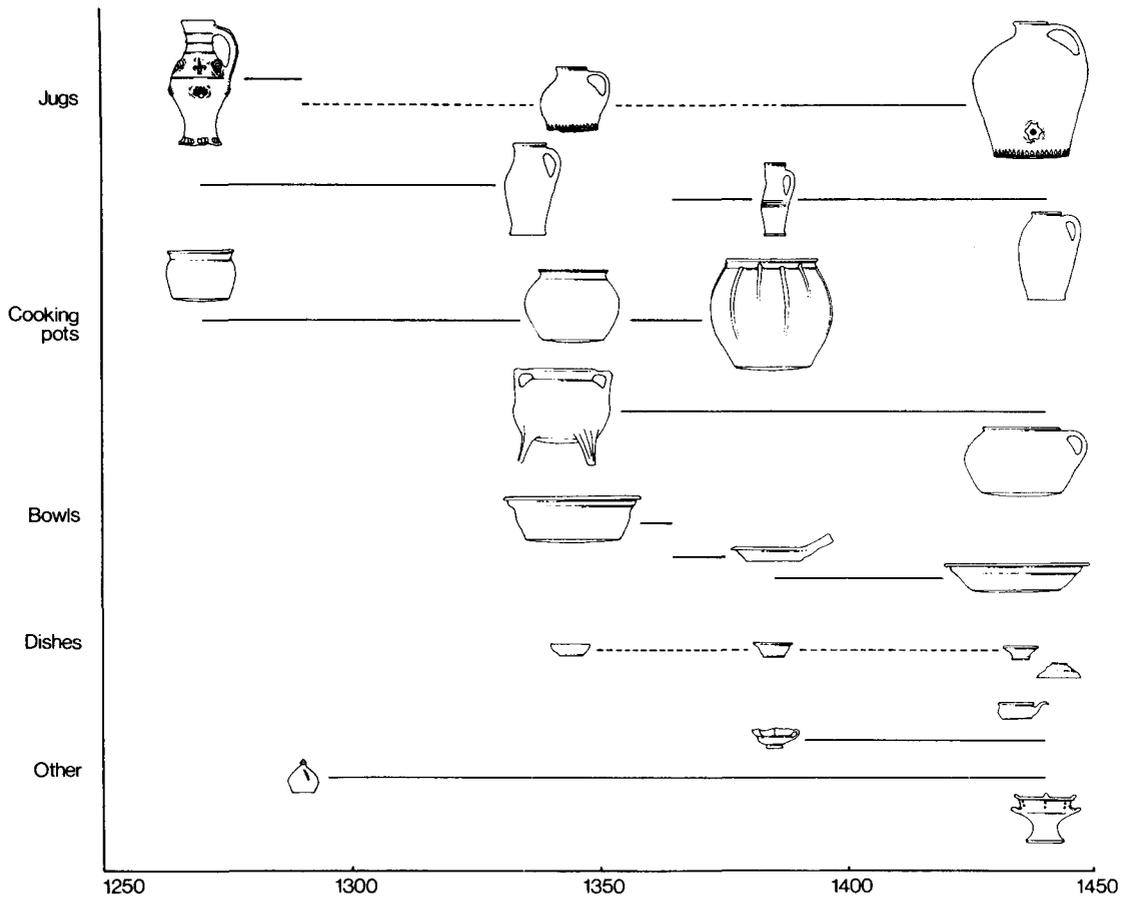


Fig. 21. Medieval pottery: common types of Surrey ware at Trig Lane.

The New Fresh Wharf buildings may be summarised thus. In the 12th and early 13th centuries stone vaults existed south of Thames Street, the most substantial on the two eastern properties, nearest Billingsgate. These were either at ground level (D) or up to 1m below the contemporary street. Perhaps in conjunction with the extension of the wharves five, possibly six, of the tenements were rebuilt in the period *c.* 1270 to *c.* 1350. Except for the two tenements on either side of the public lane of Rothersgate, each new building featured an internal alley down one side. These buildings were apparently of a common design: a street range two rooms deep, the alley widening behind to serve as a light-well and to give access to a further range of buildings which in one case probably included a kitchen. In one case lateral subdivision of these properties is recorded by 1326: subsequent rebuilding was confined to extensions and minor alterations, at least at cellar level, with the exception of Tenement 7 which was redeveloped in the early 16th century.

One further consequence of the waterfront excavations has been the revision of the chronology of medieval pottery types.<sup>98</sup> From dated contexts at Trig Lane several groups of pottery, some very large, have received preliminary sample study in order to produce a series of dated cross-sections of London's pottery, and to compare conventional pottery dates with those obtained from dendrochronology.<sup>99</sup> The main results of this study are summarised here.

Seven groups have been examined, ranging in date from *c.* 1270 to *c.* 1440 (Fig. 21). By far the most common type of pottery present is Surrey white ware,<sup>100</sup> which comprised about 25–30% of all the pottery in the 13th-century groups, 60–80% in the 14th and 80% or more in the 15th, presenting an excellent opportunity to study the development of the Surrey white ware over a period of about 170 years. At least four centres of production are represented: Chcam (pottery present from the late 13th century to end of the sequence), Kingston (pottery present from the start of the sequence to the late 14th century), Farnborough Hill (?) (pottery dominating the late 14th and 15th-century groups) and an unknown source producing fine sandy fabrics, mainly in the 13th century.

The most common types of vessels produced in the various Surrey white wares are jugs and pitchers, cooking pots, bowls and small dishes or 'lids', which are found through the sequence. Other types which occur less frequently are lobed cups, dripping pans, money boxes, skillets and chafing dishes. Distinct chronological trends can be seen in the forms of the more common types, and are illustrated in Fig. 21. Each illustration is a 1/12 reduction of a vessel found in a dated group (except the lobed cup, money box and chafing dish), although the reconstructions may be based on more than one vessel of the same type. The horizontal lines give the date ranges of these forms, *i.e.* they link all the dated groups in which they are found. Broken lines indicate areas of doubt. This figure can be used to show suggested date ranges of the forms present, or 'typical' assemblages at different dates. Future work, especially on pottery from Seal House (First Interim Report, 37–9) will extend the range of groups dated by dendrochronology back to the early 12th century, thus providing a reasonably secure dating framework for much of London's medieval pottery.

## THE DEFENCES

In addition to the excavation of Roman and later city ditches to the north of Ludgate (Site 25; First Interim Report, 44–5), two investigations have been conducted on the north-east sector of the wall between Aldgate and Bishopsgate: Dukes Place (Site 17), supervised by John Maloney, and 47–56 Houndsditch (Site 26), supervised by Charlotte Harding.<sup>101</sup> Neither site produced any evidence of Dark Age or Saxon activity, but both indicated the presence of two ditches of medieval date, while Dukes Place (P1. 18) also featured a private postern, built into the fabric of the Roman wall between the mid 13th and mid 15th centuries. At Houndsditch the earlier of the two ditches was observed within *c.* 12m of the external face of the wall. It had been dug into the natural brickearth and extended for 8.5m to the northern limit of the

excavation; the greatest recorded depth was 1.5m and its alignment was approximately parallel with the line of the wall. The profile was platter-shaped, and the fills consisted of a homogenous deposit of dark clays with bands of silt and sand. An examination of samples indicates a slow-moving, unpolluted environment in the lower levels, and more stagnant conditions in the upper levels where discolorations in the clay represented decayed vegetable matter. The earlier ditch at Dukes Place, which lay 18.45m from the wall and extended 4.8m to the limit of excavation, contained a similarly homogenous fill from which was recovered a single sherd of late 13th-century date.

The later ditch survived to a depth of 1.35m at Houndsditch, where the outer edge was *c.* 17m from the wall, compared with a depth of 2.3m and an inner edge less than 5.8m from the wall at Dukes Place: the Houndsditch profile was flat-bottomed with straight sides at 30° to the horizontal. At both sites the fills consisted of fairly clean silts and sands along the sides and bottom, the central fills being mainly of contaminated silts with bands of humus, sand and silts with molluscs. The fills yielded a quantity of late 15th and early 16th-century pottery; the levels of the bands of mollusca indicating that the ditch was half-filled by the early 16th century in the course of rain-washed silting and refuse dumping. A pit dug through the backfill at Dukes Place, presumably later in date than the original function of the ditch, provided six whole pots of late 16th to early 17th-century date, and a stoneware sherd dated 1591.

The early ditch, whose outer edge lay at a distance from the wall of at least 21–22m and with no sign of an external lip, was presumably that to which there are several references at the beginning of the 13th century and which briefly anticipated a series of murage grants from 1221; attention to the defences was one of the demands made on King John by the Londoners in 1215.<sup>102</sup> The later ditch was not as extensive, being at least 12m, but probably no more than 18m, wide. On the evidence of pottery recovered from the upper fills at Houndsditch it was dug some time after the early 14th century and before the late 15th, the date of pottery found in its fill. One possible context is the casting and cleansing of the ditch by Mayor Joceline in 1477, who is recorded at the same date as organizing the repair of the wall between Aldgate and Aldersgate. Further support for this attribution was provided by three brick arches abutting the internal face of the wall at Dukes Place, and part of a series which continued beyond the sides of the excavation. The upper layers of the trench which enabled the footings of the arches to be founded upon the Roman bank contained pottery of 15th-century date. These brick arches also compare with a similar series extending over 61m between Aldermanbury and Coleman Street which were discovered by Professor Grimes, who first suggested this date;<sup>103</sup> both cases bore exactly the same relationship to the wall and the Roman bank.

The reinforcement of the inner face of the Roman wall by brick arches also put an end to the use of a private postern, represented by moulded greensand jambs and bearing traces of iron hinges, which had been inserted into the fabric of the wall so that its threshold rested upon the first triple-tile course above the plinth. A sherd of Saintonge pottery embedded in the mortar of the doorway indicated that it had been constructed after the mid 13th century. The area

inside the wall was occupied from the early 12th century by the priory of Holy Trinity Aldgate, and the position of the postern aligned with the jamb of a second doorway, its threshold 0.65m lower, found in a wall 4m to the south. The position of this second wall appears to correspond with the north end of the priory's dormer range, as recorded in a plan of 1592, which is known to have possessed a vaulted basement. The doorway in the city wall represents the only known case of the kind in London, and was presumably intended for direct access to the priory's extensive extra-mural properties, which included the ward of Portsoken. In 1122, Holy Trinity was given permission to encroach upon the public right of way between the wall and the precinct, and between 1264 and 1274—closer to the date of the postern—the prior is recorded as having enclosed part of the highroad from Aldgate to Bishopsgate. This highway still survived after the Dissolution, and is presumably represented by the 4m interval between the city wall and the priory buildings in 1592.

### CHURCHES

Though by no means all the hundred or so churches which London possessed by the mid 13th century were rebuilt after the fire of 1666, and several failed to survive the Reformation, the accident of modern redevelopment has provided only limited opportunity for their investigation. The most comprehensive examination took place in 1977–8 at St. Nicholas Shambles<sup>104</sup> (Site 3, supervised by Alan Thompson) which had been demolished in 1551 when the congregation was transferred to the former church of the Friars minor (Christchurch Greyfriars) nearby. The pre-Conquest phase of St. Nicholas' has already been described (above, p. 63); the earliest structure of the 10th or 11th centuries was extended by the early 12th century by substantial chalk and gravel foundations which elongated the existing chancel to the east, though on a slightly narrower plan. It is probable that this extension comprised the new chancel, the earlier structure being modified to serve as the nave. The third phase, dated to the late 12th to early 13th centuries (the church was first recorded *c.* 1187), was represented by the enlargement to the north of both chancel and nave, the walls of which were carried on foundation arches of ragstone and flint set in mortar. In this phase the enlarged chancel (or the old chancel with a chapel) now measured *c.* 6m × 9m, while an aisle *c.* 5m × 9m to the north of the nave was truncated at its western end by the insertion in this or the previous phase of a parsonage in the north-west corner of the churchyard. The overall dimensions of the church at this date were *c.* 26m by 13m. The fourth and final phase, given a provisional date in the second half of the 13th or early 14th centuries, consisted of a rebuilding of the east end of the church with massive foundation arches of ragstone and chalk in a matrix of hard, yellow mortar. Protruding from the north west corner of the chancel was located a small structure measuring 4.0m square, possibly a sacristy or chapel. Most of the southern side of the church was inaccessible, but foundations revealed at the south-east corner of the excavation suggest that a south aisle may also have existed in the fourth phase.

The northern churchyard produced over 300 skeletons in six basic grave-types, of which the commonest was simple interment. Other types

included pillow and cist-graves and one charcoal burial possibly associated with the Phase 1 church. There was no correlation between the grave-types and either age or sex; perhaps the rudimentary cist forms, in imitation of stone coffins, were the exceptional cases their numbers suggest. Data from the 226 articulated skeletons is being tabulated to provide statistics on skull form, dental condition, etc., within the various age and sex groups. Bone measurements from 29 immature skeletons are being correlated with the results of similar work on bones from St. Bride Fleet Street, carried out by Mrs. Rosemary Powers (British Museum, Natural History). Other pathology from the group includes benign osteomata of cranial vaults and long bones, osteoarthritis—mainly at the spine and hip joints—a high incidence of periostitis and osteomyelitis on tibiae and fibulae shafts, and slight bone changes caused by vitamin deficiencies. The articulated skeletons exhibited traces of caries on only 6% of the examined teeth (as against 22% in modern British populations); just over half (52%) of the teeth examined had calculus deposit on them; 40% of the teeth exhibited periodontal disease, with evidence that it grew worse with age. Abscesses were most prevalent in the mature (35–45 years) group.

Analysis also suggests that 76% of the sample died before the age of 35, and only 5% reached 45, with no difference in death-rates between the sexes. This contrasts strongly with the documentary analysis of a medieval London population group, 97 rich merchants drawn from the whole city who died in the period 1448–1520, studied by Professor Thrupp.<sup>105</sup> The sample may not be strictly comparable, as no member was below 22; but it is striking that 82% reached 35 and 61% reached 45: 10% died in their seventies, and the mean life expectancy was 49–50 years. The mean life expectancy of the St. Nicholas group will probably be found to drop when unarticulated bones are considered, since this will include a high proportion of infants whose bones are more susceptible to disturbance and dispersal than adult bones.

On the far side of King Edward Street a 5m sq. excavation (Site 15), supervised by Paul Herbert, was conducted in the southern aisle of the conventual church (constructed 1302–50) of the Greyfriars, subsequently the parish church of Christchurch Greyfriars until its destruction in 1940. The excavation complemented an investigation of the east end of the church in 1973.<sup>107</sup> Any Saxon deposits had been removed by twelve rubbish pits which went out of use in the early 13th century, but between that date and the erection of the conventual church at least five buildings were constructed; the floors were composed of gravel, crushed chalk and brickearth, the walls of chalk and mortar and, later, of timber. It is probable that they represent early activity by the Friars minor who held land in the area from 1225. On the north side of the trench an octagonal ragstone column foundation with a square base was exposed, while, on the south side, the foundations of the south wall of the conventual church was found to be constructed upon arches and resting on natural ballast. As noted in several of his other city churches, Wren's post-Fire church was built directly upon the medieval foundations.

At St. Margaret Lothbury (Site 27), observations by Alan Thompson in the course of repair works at the north-east corner of the church revealed the north,

and part of the east, wall of the original fabric, first recorded in *c.* 1197. The most interesting observation was the lengthening of the north wall as part of an extension of the east end of the church across the course of the Walbrook recorded in 1440; both the large arch in the foundation of the wall and part of the culvert which it spanned were noted. The wall had been repaired in the 17th century when the church was rebuilt on the existing foundations after the Great Fire.

## NOTES

1. R. Merrifield, *The Roman City of London* (London 1965); complemented by his *Roman London* (London 1969) in which a thematic treatment, often in greater detail, is adopted.
2. Reported by Chris Green, Finds Section.
3. Personal communication from Valery Rigby.
4. T. Davies-Royce and F. Oswald 'Roman London: its initial occupation as evidenced by early types of terra sigillata' *Archaeologia* 78 (1928) 73–102. But see now G. Marsh 'Nineteenth and twentieth century antiquities dealers and Arretine ware from London' *Trans. London Middlesex Archaeol. Soc.* 30 (1979) 125–9.
5. Personal communication from Geoff Marsh, Museum of London.
6. Eds. J. Bird, A. H. Graham, H. Sheldon and P. Townend *Southwark Excavations 1972–74* London Middlesex Archaeol. Soc. & Surrey Archaeol. Soc., Joint Publication No. 1, 1 (1978) 20–28.
7. *Ibid.*, 2, 587–600.
8. Merrifield (*op. cit.* in Note 1) 138–40.
9. P. R. V. Marsden 'The discovery of the civic centre of Roman London' eds. J. Bird, H. Chapman and J. Clark *Collectanea Londiniensia: studies presented to Ralph Merrifield*, London Middlesex Archaeol. Soc., Special Paper 2 (1978) 89–103.
10. B. Philp 'The Forum of Roman London: Excavations of 1968–9' *Britannia* 8 (1977) 9–15.
11. Marsden (*op. cit.* in Note 9) 100–1.
12. *Ibid.*, 96–8.
13. Cf. P. R. V. Marsden 'Two Roman public baths in London', *Trans. London Middlesex Archaeol. Soc.* 27 (1976) 47–8.
14. *Ibid.*, 42, 45–6; Fig 11.
15. A. Boddington & M. Rhodes 'Excavations at 48–50 Cannon Street . . . 1975' *Trans. London Middlesex Archaeol. Soc.* 30 (1979) 7, 24–6.
16. A. Rainey *Mosaics in Roman Britain* (Newton Abbot 1973) 14.
17. T. Tatton-Brown 'Excavations at the Custom House Site . . . 1973: Part 1' *Trans. London Middlesex Archaeol. Soc.* 25 (1974) 122.
18. *Ibid.*, 122–28.
19. D. Jones & M. Rhodes *Excavations at Billingsgate Buildings ('Triangle'), Lower Thames Street, 1974* London Middlesex Archaeol. Soc., Special Paper 4 (1981) 2–7, 17–18.
20. F. Lambert 'Some Recent Excavations in London' *Archaeologia*, 71 (1921) 62–72.
21. P. R. V. Marsden 'The excavation of a Roman palace site in London, 1961–72' *Trans. London Middlesex Archaeol. Soc.* 26 (1975) 62; Fig. 17A.
22. P. R. V. Marsden 'The excavation of a Roman palace site in London: additional details' *Trans. London Middlesex Archaeol. Soc.* 29 (1978) 99.
23. J. A. Campbell, M. S. Baxter & L. Alcock 'Radio carbon dates for the Cadbury massacre' *Antiquity* 53 (1979) 31–36.
24. R. A. Morgan & J. Schofield 'Tree rings and the archaeology of the Thames waterfront in the City of London' in *Dendrochronology in Europe*, ed. J. M. Fletcher, British Archaeol. Reports, International Series, 51 (1978) 223–38.
25. Communication by J. Hillam, University of Sheffield. Much progress has now (July 1981) been made in applying absolute dates to this scale; see J. Hillam & R. Morgan 'Dendro dates from Sheffield' *Current Archaeol.* 80 (1981) 286–7.
26. P. R. V. Marsden 'Some discoveries in the City of London, 1954–9' *Trans. London Middlesex Archaeol. Soc.*, 22 (1968) 32–8.
27. W. F. Grimes *The Excavation of Roman and Medieval London* (London 1968) 118–50.
28. *Southwark Excavations, 1972–4* (*op. cit.* in Note 6) 1, 36–9.
29. Marsden (*op. cit.* in Note 21) 77–8.
30. Marsden (*op. cit.* in Note 13) 46, 51.
31. Reported by Chris Green, Finds Section.
32. C. Saunders and A. B. Havercroft 'A kiln of the potter Oastrius and related excavations at Little Munden Farm, Bricket Wood' *Herts. Archaeol.* 5 (1977) 109–56.
33. A. E. Brown and H. L. Sheldon 'Highgate Wood: the pottery and its production' *London Archaeol.* 2, no. 9 (1974) 222–31.
34. A possibility suggested by P. Marsden.
35. Reported by Peter Boyd, Environmental Section.
36. Confirmed by P. R. Taylor of the Institute of Archaeology, University of London.
37. Grimes (*op. cit.* in Note 27) 98–117.
38. *Southwark Excavations 1972–4* (*op. cit.* in Note 6) 39–40.
39. R. Merrifield in C. Hill, M. Millett and T. Blagg *The Roman Riverside wall and monumental arch in London*, London Middlesex Archaeol. Soc., Special Paper 3 (1980) 203–4.
40. Merrifield, *Roman London*, 118–20.
41. For a full interim account of these excavations see J. Maloney 'Excavations at Dukes Place: the Roman defences' *London Archaeol.* 3, No. 11 (1979) 292–97.
42. Cf. J. S. Reid *The Municipalities of the Roman Empire* (London 1913) 29–30; A. L. F. Rivet *Town and Country in Roman Britain* (London 1964) 78.
43. The full height of the wall was probably 'at least 6.0m'; see R. Merrifield *A Handbook to Roman London* (London 1968) 19.
44. Merrifield (*op. cit.* in Note 1) 104–5.
45. For evidence that the walls of Rome were constructed in lengths of 4.5m–6m, see M. Todd *The*

- Walls of Rome* (London 1978) 31.
46. This is probably indicative of its normal width.
  47. P. R. V. Marsden *Roman London* (London 1980) 172.
  48. Now published; see Note 39 above.
  49. G. Parnell 'Excavations at the Tower of London, 1976-7' *London Archaeol.* 3, no. 4 (1977) 97-9, and 'An earlier Roman riverside wall at the Tower of London' *London Archaeol.* 3, no. 7 (1978) 171-76. See also J. Hillam and R. Morgan 'The dating of the Roman riverside wall at three sites in London' *London Archaeol.* 3, no. 11 (1979) 283-8.
  50. G. Parnell, *ibid.*
  51. Hill, Millett and Blagg (*op. cit.* in Note 39) 68-9.
  52. The most recent account of the evidence for Saxon London is in M. Biddle, D. Hudson & C. Heighway *The Future of London's Past* (Worcester 1973) 16-25. See also J. Clark *Saxon and Norman London* (London 1980).
  53. T. Dyson 'London and Southwark in the seventh century and later: a neglected reference' *Trans. London Middlesex Archaeol. Soc.* 31 (1980) 83-95.
  54. P. Marsden (*op. cit.* in Note 47) 180-6.
  55. M. Rhodes 'The Saxon Pottery', in Hill, Millett and Blagg (*op. cit.* in Note 39) 97-8.
  56. V. Evison *A Corpus of Wheel-thrown pottery in Anglo-Saxon Graves*, Royal Archaeol. Inst. Monograph, 1979, Figs. 14f and 15h.
  57. Peninsular House and New Fresh Wharf: M. Rhodes pers. comm; Baynard's Castle, M. Rhodes (*op. cit.* in Note 39).
  58. Battersea: in L. E. Webstern and J. Cherry 'Medieval Britain in 1977', *Medieval Archaeol.* 22 (1978, 142-188) 148; Arundel House: J. Haslam in M. J. Hammerson 'Excavations on the Site of Arundel House in the Strand, W.C.2, in 1972' *Trans. London Middlesex Archaeol. Soc.* 26 (1975, 209-251) 221; Savoy Place: M.O.L. Acc. No. A27145; see J. G. Hurst in 'Anglo-Saxon Pottery - A Symposium' *Medieval Archaeol.* 3 (1959, 1-78) 20, 23.
  59. Harwell 1422.
  60. Communicated by J. Hillam, University of Sheffield.
  61. Harwell 2542.
  62. Ethelred II, Code IV: A. J. Robertson *The laws of the kings of England from Edward to Henry I* (Cambridge 1975) 71 ff.
  63. H. A. Cronne and R. H. C. Davis *Regesta Regum Anglo-Normannorum 3* (Oxford 1969) no. 502.
  64. Communicated by P. R. V. Marsden.
  65. T. Dyson 'Two Saxon land grants for Queenhithe' in eds. J. Bird, H. Chapman and J. Clark, *Collectanea Londiniensia: studies presented to Ralph Merrifield* London Middlesex Archaeol. Soc., Special Paper 2 (1978) 200-15.
  66. M. Biddle 'Towns' in *The Archaeology of Anglo-Saxon England* ed. D. M. Wilson (London 1976) 135-6.
  67. *Southwark Excavations 1972-74* (*op. cit.* in Note 6) 48.
  68. T. Dyson (*op. cit.* in Note 53) 68-93.
  69. P. R. V. Marsden, T. Dyson and M. Rhodes 'Excavations on the site of St. Mildred's church, Bread Street . . . 1973-4' *Trans. London Middlesex Archaeol. Soc.* 26 (1975) 181-85.
  70. W. F. Grimes (*op. cit.* in Note 27) 157-60; Figs. 34-5.
  71. Preliminary statement on structures at Bailgate (*Lincolnshire Museums Information Sheet: Archaeological Series 20* (1980)).
  72. Ed. M. Biddle, *Winchester in the Early Middle Ages* (Oxford 1976) 450.
  73. M. Biddle and D. Hill 'Late Saxon planned towns' *Antiq. J.* 51 (1971) 83.
  74. *Winchester* (*op. cit.* in Note 72) 277-9, 450.
  75. Communicated by J. Hillam, University of Sheffield.
  76. Harwell 2542.
  77. F. M. Stenton 'Norman London' in *Preparatory to Anglo-Saxon England* ed. D. M. Stenton (Oxford 1970) 35-6.
  78. Cf. Biddle, Hudson & Heighway, (*op. cit.* in Note 52), 20.
  79. York Archaeological Trust *Two Thousand Years of York: the archaeological story* (York 1978) 13.
  80. *Winchester* (*op. cit.* in Note 72) 336.
  81. *Medieval Archaeol.* 13 (1969) 251.
  82. Grimes (*op. cit.* in Note 27) 206-7.
  83. M. Wood *The English Medieval House* (London 1965) 87.
  84. See above p. 51, communicated by Peter Marsden.
  85. T. Dyson (*op. cit.* in Note 65) 202; and in Hill, Millett and Blagg (*op. cit.* in Note 39) 9.
  86. T. Tatton-Brown (*op. cit.* in Note 17) 128.
  87. T. Dyson in T. Tatton-Brown, *ibid.*, 144, 147, n.19; and in *ibid.*, 'Excavations at the Custom House Site . . . 1972, Part 2' *Trans. London Middlesex Archaeol. Soc.* 26 (1975) 110-13.
  88. Hill, Millett and Blagg (*op. cit.* in Note 39) 16.
  89. *Ibid.*, 46, 72-3.
  90. For this, and the following, paragraph see, T. Dyson 'The terms "quay" and "wharf" and the early medieval London waterfront' in *Waterfront Archaeology in Britain and northern Europe*, eds. G. Milne and B. Hobley, CBA (1981) 37-8.
  91. G. Milne 'Medieval riverfront revetment construction in London' in *The Archaeology of medieval ships and harbours in Northern Europe* ed. S. McGrail, British Archaeological Reports, International Series 66 (1979) 145-53.
  92. A preliminary account of the Trig Lane excavations has been published: G. and C. Milne 'Excavations on the Thames waterfront at Trig Lane, London, 1974-6' *Medieval Archaeol.* 22 (1978) 84-104, in which the dating of individual groups has now been revised. The final report has now been completed, and publication is expected in 1982.
  93. G. Milne 'Medieval waterfront reclamation in London' in *op. cit.* in Note 90, 32-6.
  94. Communicated by Dr. D. J. Keene, Institute of Historical Research, University of London.
  95. *Calendar of letter Book L . . . of the City of London*, 180.
  96. G. Milne (*op. cit.* in Note 90) 36.
  97. G. & C. Milne 'Medieval Buildings at Trig Lane' *London Archaeol.* 4 (1981) 31-7.
  98. By Clive Orton, formerly of the Finds Section, who contributed this summary.
  99. C. Orton, 'Surrey Ware' in Milne and Milne (forthcoming); see Note 92.
  100. J. Haslam *Medieval Pottery* (Aylesbury 1978) 20-2.
  101. A provisional account of these sites has been published by J. Maloney and C. Harding 'Dukes Place and Houndsditch: the medieval defences' *London Archaeol.* 3 no. 12 (1979) 347-54.
  102. M. Bateson 'A London Municipal Collection' *English Hist. Review* 17 (1907) 726.

103. W. F. Grimes (*op. cit.* in Note 27) 79–84.  
104. See also A. Thompson 'St. Nicholas-in-the-Shambles', *Current Archaeol.* 6 (1979) 176–79.  
105. T. Johnson 'Excavations at Christchurch Newgate Street, 1973' *Trans. London Middlesex Archaeol. Soc.* 25 (1974) 220–34.  
106. S. Thrupp *The Merchant Class of Medieval London, 1300–1500* (Michigan 1977 ed.) 194–5.

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# ARCHIVE REPORTS OF ARCHAEOLOGICAL EXCAVATIONS IN THE CITY OF LONDON FROM 1973

JOHN SCHOFIELD

An archive of the records of archaeological excavations undertaken in the City of London since late 1973 by the Department of Urban Archaeology of the Museum of London (until June 1975, of the Guildhall Museum) has been set up in the Museum, under the supervision of the Head of Documentation, and is available for inspection by appointment. The purpose of this note is to put on record the available archive reports (termed 'Level III reports' in *Principles of Publication in Rescue Archaeology* (Department of the Environment, 1975)) on individual sites, since it is likely that the detailed publication of these sites by conventional means will take some time, and the economics of publication suggest that some of the smaller sites will remain at archive level for the foreseeable future.

For the sites listed below, archive reports are available as copies either in xerox form or in microfiche; the cost of copies in either form may be obtained from the Head of Documentation (Museum of London, 150 London Wall, EC2Y 5HN). The reports detailed here cover excavations of 1973–8, and deal for the most part with the structural aspects. Enquiries concerning the finds or environmental material should be directed to the Finds Research Officer and the Environmental Section of the DUA respectively. Certain sites (*e.g.* parts of the GPO Newgate Street site) excavated in this period have not yet reached archive level, and will be reported with later sites in a subsequent year.

For each of the sites a brief summary of the main results and a bibliography of interim statements and final publication is given. Overall summaries may be found in Hobley and Schofield (1977), Schofield and Dyson (1980) and Dyson and Schofield (1981). Researchers are advised to consult the published interim reports as a preliminary to consultation of the archive.

Each site is listed alphabetically by address, but is prefaced by the name by which it is generally known, in capitals.

ALDGATE, 62–70 Aldgate High Street (rear), 1974 (AL 74), (A. Thompson). 17th-century buildings, clay-pipe kiln, other post-medieval industrial processes. For interim, see Thompson (1975, 1978 and 1981). There are archive reports on the mammalian and bird bones by P. Armitage.

ST. MILDRED'S CHURCH, Bread Street, 1973 (MIL 73), (M. Guterres). 1st-century building, mid or late Saxon hut, fragmentary foundations of medieval and Wren church. Published; Marsden, Dyson and Rhodes (1975).

9, BRIDEWELL PLACE, 1978 (BRI 78), (D. Gadd). Medieval pre-palace dumping, foundations of part of E range of main courtyard of Bridewell Palace (1515–23), E end of S

- range and foundations of staircase. For interim, see Gadd and Thompson (1979); for publication, see Gadd and Dyson (1981).
- WATLING COURT, 39–53 Cannon Street, 1978 (WAT 78), (D. Perring). 1st- and 2nd-century Roman buildings, late Saxon sunken structures, medieval foundations and well; medieval and post-medieval cesspits. For interim, see Perring (1981); for publication, see Perring and Roskams (forthcoming).
- 48–50 CANNON STREET, 1975 (CS 75), (A. Boddington). Roman drains, possible Saxon building, Saxon and medieval pits. For interim, see Boddington (1976). Published; Boddington (1979).
- PLA Warehouses, CUTLER STREET (now Cutlers' Gardens), 1978 (CUT 78), (S. O'Connor Thompson). Roman inhumations; medieval pond; 17th- and 18th-century buildings with a variety of industrial waste. For interim, see Armitage and O'Connor Thompson (forthcoming).
- 2–14 DUKE'S PLACE, 1977 (DUK 77), (J. Maloney). A section across the city defences, showing pre-wall Roman boundary, early 3rd-century wall, bank and ditch, medieval and later ditches; postern of adjacent Holy Trinity Priory and medieval foundations; late medieval strengthening to city wall. For interim, see Maloney (1979, 1980 and forthcoming (a) and (b)), Maloney and Harding (1979).
- 47–55 HOUNDSDITCH, 1978 (HOU 78), (C. Harding and D. Gadd). Medieval and later city ditches, late medieval tenter grounds. For interim, see Maloney and Harding (1979).
- 3–5 JEWRY STREET, 1975 (CAS 75), (D. Woods). Late 1st- and 2nd-century Roman buildings. For interim, see Hoblely and Schofield (1977, 57).
- LLOYDS, 13–19 Leadenhall Street, 1978 (LLO 78), (K. Flude). 1st-century Roman buildings, later pits.
- AFRICA HOUSE, 40–8 Leadenhall Street, 1973 (AFR 73), (D. Woods). Roman buildings, medieval foundations and pits. Published; Woods, Rhodes and Dyson (1975).
- NEW FRESH WHARF, 2–8 Lower Thames Street, 1974–8. The excavations on this site were in three stages: New Fresh Wharf, 1974 (NFW 74) (G. Clewley); St. Magnus, 1975 (SM 75) (a trench to the W of the church, but not concerned with it) (J. Schofield); and Fresh Wharf 1978 (FRE 78) (L. Miller). The main findings were the early 3rd-century Roman quay, the Roman riverside wall, Saxon embankments, medieval and post-medieval buildings and reclamation; now brought together for archive as New Fresh Wharf (L. Miller and J. Schofield). For interim, see Schofield and Miller (1976), Miller (1977) and Schofield (1977); for publication, Miller and Schofield (forthcoming). For exotic seeds, see Wilcox (1977); dendrochronology, Morgan and Schofield (1978), and Hillam and Morgan (1981). There are archive reports on painted wall plaster by M. Rhodes and the mammalian and bird bones by P. Armitage and G. Carey from SM 75.
- CUSTOM HOUSE, now Sugar Quay, Lower Thames Street, 1973 (CUS 73), (T. Tatton-Brown for Guildhall Museum). Roman and medieval quays, Custom House of 1381 located and planned. Published; Tatton-Brown (1974, 1975).
- HARP LANE, 78–84 Lower Thames Street, 1974 (HL 74), (R. Jones and A. Boddington). Roman buildings, post-medieval cellars including medieval moulded stones. Archive includes separate report by R. Lea on moulded stones.
- BILLINGSGATE BUILDINGS, 111 Lower Thames Street, 1974 (TR 74), (D. Jones). Terracing of late 1st- and early 2nd-century date; later piled foundations, Roman or Saxon pits, Saxo-Norman well. Published; Jones and Rhodes (1981). For a Roman mule jaw bone from this site, see Armitage and Chapman (1979).
- 10–14 MASONS AVENUE, (MAS 78), (P. Herbert). Roman drains.
- 1–6 MILK STREET, 1976 (MLK 76), (A. Boddington, S. Roskams and J. Schofield). 1st and 2nd-century Roman buildings and street, 'dark earth', late Saxon structures, early medieval stone undercrofts and pits. For interim on the Roman levels, see Roskams (1978); on the post-Roman, Roskams and Schofield (1978).
- CHRISTCHURCH GREYFRIARS, Newgate Street, 1976 (CHR 76), (P. Herbert). Early medieval buildings on site of Greyfriars church; medieval and Wren foundations of choir. For interim, see Herbert (1979).

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# SKULLDUGGERY IN ROMAN LONDON?

GEOFF MARSH and BARBARA WEST

## INTRODUCTION (G.M.)

Ever since the early 19th century, excavations in the Walbrook Valley, particularly across the stream itself, have produced large numbers of human skulls. General Pitt-Rivers (then Augustus Lane Fox) has the credit of being the first person to record their findspots in detail and to preserve some, which survive today (Pitt-Rivers, 1867). Discoveries continued throughout the 19th century and reached a peak in the early years of this century. Since the First World War the only major find was from the site of the Bank of England and only two have been recorded since 1938. However, the discovery of these skulls may go back much further and help to explain a curious story told by Geoffrey of Monmouth in his *Historia Regnum Britanniae*, V,4. He records how a group of Romans were besieged in London by Asclepiodotus, Duke of Cornwall and how:

When the Romans saw they were being slaughtered one after another, they persuaded Gallus to surrender together with his men and to beg the mercy of Asclepiodotus, so that they might be able to depart with their lives. Almost all their number had been killed already, leaving one single legion, which was resisting as best it could. Gallus agreed to this request, surrendering himself and his men to Asclepiodotus. Asclepiodotus himself was prepared to have mercy on them; but the Venedoti advanced in formation and in one day decapitated the lot of them, beside a brook in the City which from the name of their leader was afterwards called Nantgallum in Welsh, or in Saxon Galobroc.

It seems quite probable that Geoffrey may have actually witnessed the discovery of some skulls from the Walbrook and made up his story to account for them or it is possible he saw earlier discoveries, perhaps preserved as relics in a City church.<sup>1</sup>

Whatever the exact source of Geoffrey's story over fifty skulls survive in various museums and form the largest group of early Roman skulls from Britain (Pl. 1). In 1980 the two writers examined all the surviving material in order to carry out a proper anatomical study and to try and establish their real significance. The following list details the various discoveries in chronological order and individual details of the surviving skulls are included in Appendix 1. Full detailed anatomical reports may be consulted either at the Museum of London or the British Museum (Natural History).

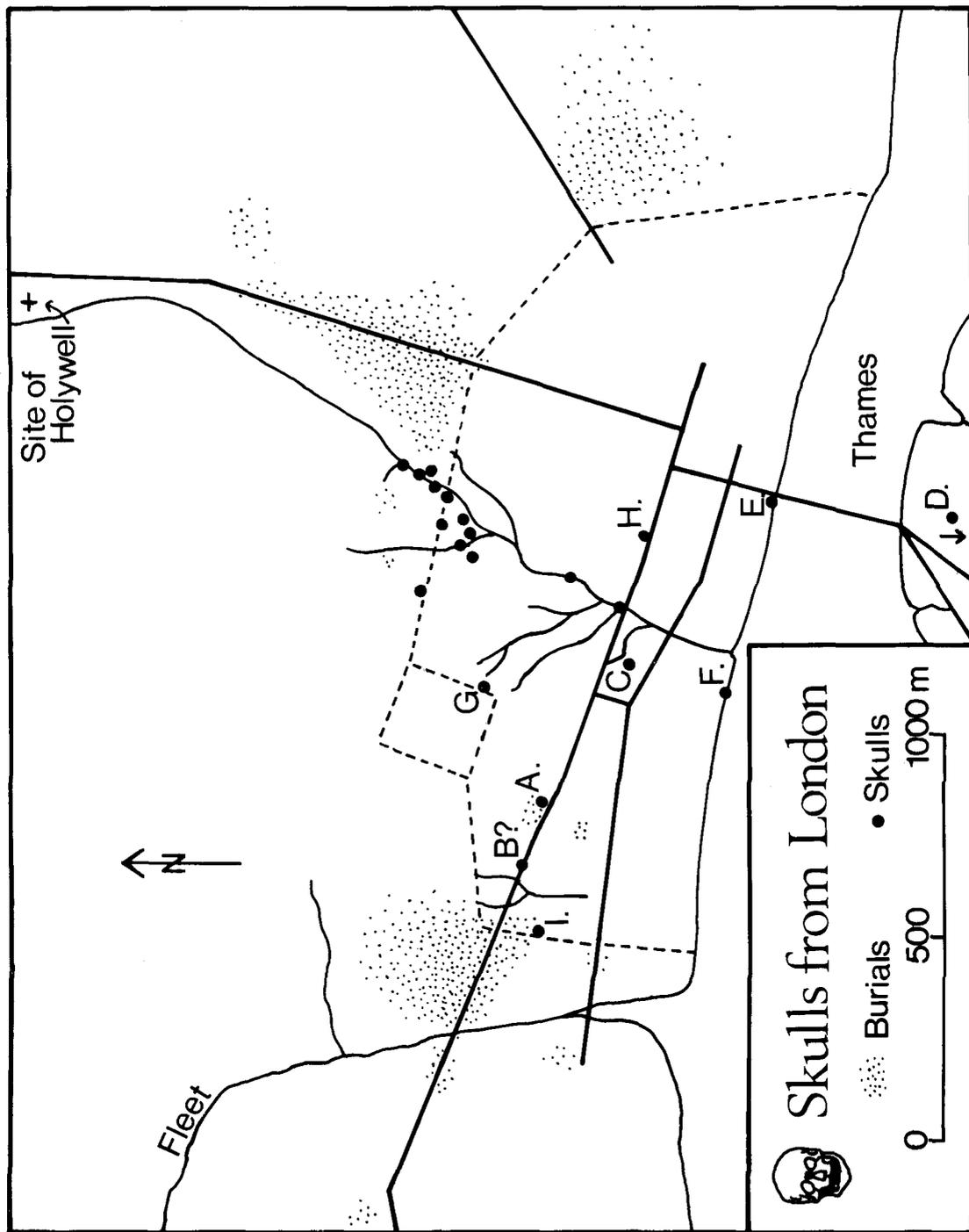


Fig. 1. Finds of isolated skulls in Roman London.

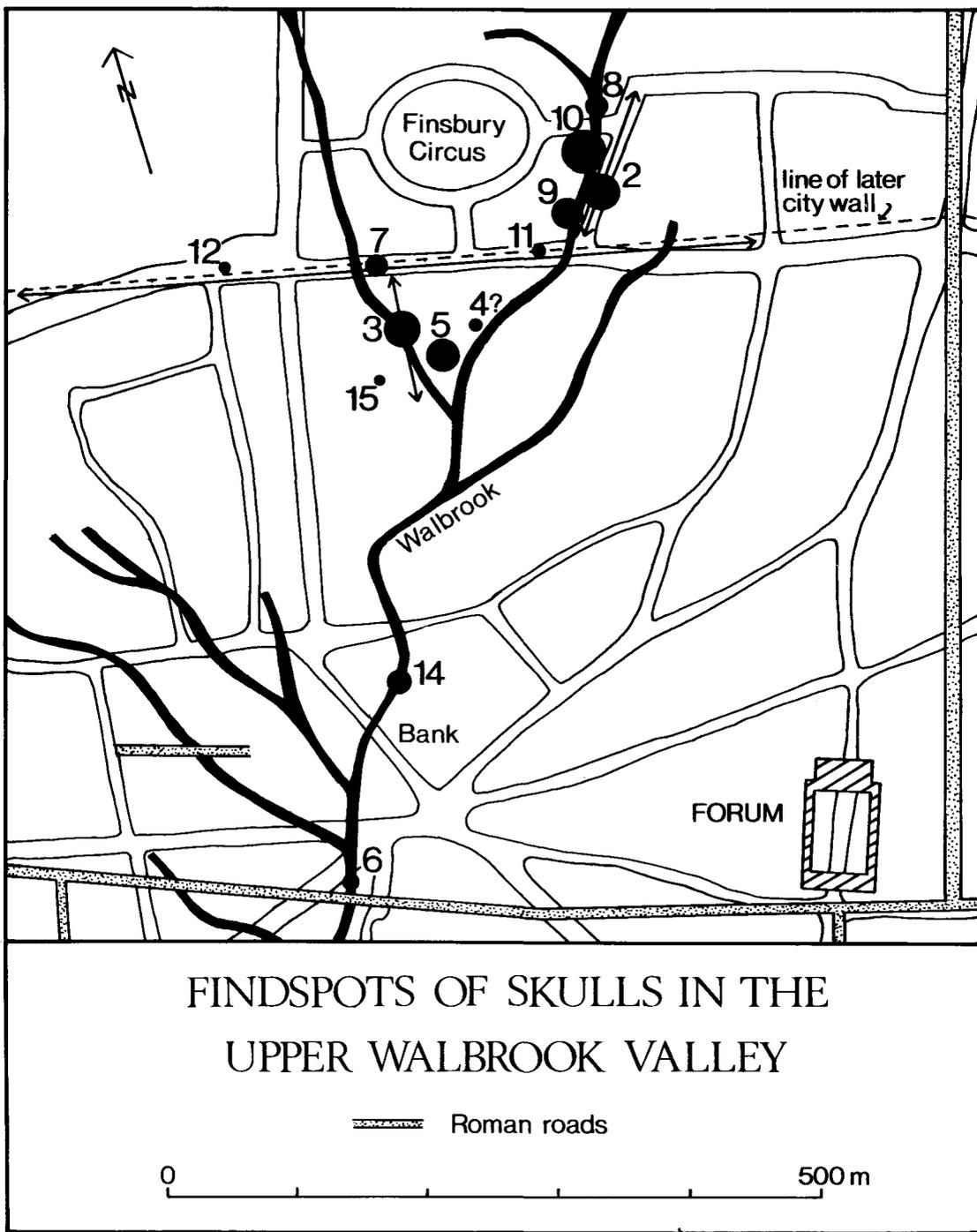


Fig. 2. Finds of skulls in the Walbrook Valley.

## DISCOVERIES OF HUMAN SKULLS IN THE WALBROOK VALLEY (Fig. 2)

1. Unknown before *c.* 1136. Geoffrey of Monmouth.
2. Blomfield Street 1838. City Sewer Records and Smith (1842) 152–3. ‘. . . it may be mentioned that an immense number of human skulls were found throughout this street.’ None survive.
3. Road from London Wall to New Court/Little Bell Alley (now Copthall Avenue) 1851–1852. City Sewer Records. ‘. . . We also found human heads in the same line of work.’ None survive.
4. Site adjoining Gooch and Cousens Wool Warehouse 1862. Pitt-Rivers (1867, lxxvii). Two skulls discovered neither of which survive.
5. Gooch and Cousens Wool Warehouse 1866. Pitt-Rivers (1867). Seventeen crania and three mandibles recovered, now in Pitt-Rivers Museum, Oxford.
6. National Safe Deposit Company Site (N.S.D.C.) 1872–3. Price (1873). The Museum of London has a skull and mandible from this site which exhibit the characteristic staining of the Walbrook skulls and which may come from the stream although Price (1873) makes no mention of them in his report.
7. London Wall (exact site uncertain) before 1885 when purchased by Royal College of Surgeons (unpublished). Five skulls now in the British Museum (Natural History).
8. Old Moorfields Chapel *c.* 1900. Reader (1903, 201). Six skulls discovered, none survive.
9. London Wall Estate Office, Finsbury Circus 1902–3. Reader (1903). ‘. . . large numbers were found . . .’ of which Norman and Reader 1906, 176, record 13 in the Guildhall Museum and three held by Mr. Kennard. The Museum of London now has eleven of the former and one of the latter.
10. Finsbury House, Blomfield Street *c.* 1905. Norman and Reader (1906, 176). ‘. . . upwards of 100 (skulls) were discovered on that site at the bottom of the stream filling, while other bones were almost wholly absent. No effort was made to preserve these’. During minor alterations in 1938 two more skulls were found which are now in the Museum of London. Part of another skull was found by workmen in October 1981, but has not yet been studied.
11. London Wall, outside Carpenters’ Hall 1905. Norman and Reader (1906, 176). Two skulls excavated neither of which survive.
12. 122 London Wall, 1920. Lambert (1921, 75). One skull found now in Museum of London.
13. ‘Walbrook’ exact site uncertain possibly Blomfield Street, before 1925. Unpublished. One skull in Museum of London.
14. Bank of England 1928–34. Unpublished. Nine skulls survive, eight in the Museum of London and one in the Bank’s own collection.
15. 13 Copthall Avenue, 1967. Unpublished inf. Mr. P. Marsden. A human skull, which does not survive, was recorded by Mr. N. Cook from the southern part of the site in a layer of black mud.

## LOCATION AND DATE OF THE SKULLS

Figs. 1 and 2 show the location of the sites known to have produced skulls. It is immediately apparent that the finds concentrate in the upper reaches of the Walbrook valley, particularly in a natural ‘amphitheatre’ in the area of London Wall/Finsbury Circus. This area was well north of the main occupation area of the Roman settlement during the 1st century. No skulls are definitely recorded south of the N.S.D.C. site, where the Walbrook stream cuts down to the River Thames, and the finds from this site are not absolutely certain. Almost all of the discoveries are as a result of workmen’s excavations but it is certain that most of the finds are from the Walbrook stream or the nearby banks. Specific details of location survive for sites 5, 9, 10 and 11 and it is clear that in all four cases that the skulls were found in the lowest level of stream fill, overlying the natural gravel. This layer is described as sand and silt on sites 9 and 11, and peat on site

5, although skulls from the latter site were described as being filled with brown silt. A *terminus ante quem* for the deposition of the skulls is provided at site 9 where the layer was sealed by dumped earth, nearly four feet thick, with associated timber revetments and a plank lined tank (Reader 1903, 194). A quantity of pottery from this level survives in the Museum of London and is almost entirely of early-mid 2nd-century date. This material suggests the skulls from this site at least were deposited before *c.* AD 100.<sup>2</sup> A *terminus post quem* is almost impossible to fix due to the lack of any associated material. However, the total lack of any Iron Age material from the Walbrook suggests that deposition occurred after the Roman conquest.

### CONDITION OF THE SKULLS

A detailed report is included below but a few general comments can be made. Although a certain number of skulls showed damage from picks and spades during excavation, these marks were distinct and easily recognised. Prior to their excavation the skulls had been subject to a number of processes. All the skulls lacked their lower jaws and the four mandibles which survive do not belong to any of the skulls. In addition, about half the skulls lacked their facial bones. Close examination suggested that, apart from the loss of teeth, this was their original condition on discovery and not the result of damage during excavation. The absence of abrasion marks on the skulls and the fact that they have not come apart or become crushed suggests that they had become rapidly filled with silt and were then completely buried in stream deposits. All the skulls are stained in a characteristic manner, ranging from tan to dark brown in colour and often have a shiny surface. This colouration is completely different from the pale yellow of Roman and medieval human bone excavated in London from graves. None of the sites produced any other human material, except a shoulder blade of uncertain date from site 5.

### THE EXAMINATION OF THE SKULLS (BW)

- 48 skulls and 4 mandibles (representing 52 individuals) were examined:
  - 26 from the Museum of London
  - 20 from the Pitt-Rivers Museum, Oxford
  - 5 from the British Museum (Natural History)
  - 1 from the Bank of England Museum

The determination of gender was based on standard criteria as outlined by Brothwell (1972b), Genoves (1969), Anderson (1962) *et al.*, and age was estimated using dental attrition (Brothwell, 1972b). Cranial suture fusion was not used, since this method has proven to be thoroughly unreliable in several studies (Singer, 1953; Cobb, 1955; Brooks, 1955; McKern and Stewart, 1957).

Of the 47 individuals whose gender could be determined, 39 were male and 8 female. Of the 43 individuals whose age could be estimated, all were young to middle-aged adults except one (a child aged 10–11 years). It may be of interest to note here that the average life expectancy of earlier populations was approximately 19 years from birth (which includes the high infant mortality rate) and 40 years if only adults over 19 are considered (Brothwell, 1972a).

However, it does not necessarily follow that anyone over the age of 35 was regarded by his fellows as ancient. It was, instead, a matter of being 'carried off in one's prime' by one of any number of infectious diseases.

The investigation of pathology shed little light on the problem of the original deposition of these skulls, as they proved to be a fairly representative assemblage with a typical distribution of dental anomalies, metopism, osteoporosis, etc. There was no evidence of ante-mortem injury to any of the skulls.

Of particular interest were the 32 skulls which were sufficiently complete to be aged, sexed and measured. Measurements from these specimens (comprising 26 males and 6 females) were compared with those from 32 other British and European populations (Brothwell, 1972b; Buxton, 1935; Dawes & Magilton, 1980; Goodman & Morant, 1940; Keepax, 1979; West, forthcoming). Until the entire body of data has been subjected to multivariate analysis, however, only the following general and tentative observations can be offered.

The three cranial variables illustrated as examples (Figs. 3, 4) are those for which the greatest amount of comparative data is available, and the Walbrook specimens fit quite well into the Romano-British group. Both diagrams illustrate the general tendency of medieval groups toward brachycephalism (round-headedness), and that of Iron Age, Romano-British and Saxon groups toward dolichocephalism (long-headedness). The Iron Age groups also tend to have a greater vault height than the Romano-British. In comparisons with twenty other cranial variables, however, the Walbrook specimens are similar not only to the Romano-British group, but also to the Iron Age populations, particularly those recorded from Wetwang Slack.

## DISCUSSION (GM)

Since the excavations recorded by Pitt-Rivers there has been argument about the reason for the presence of skulls in the Walbrook. Pitt-Rivers, himself, was in no doubt, commenting '... nothing is more clearly proved than that the heads were severed from the bodies before they were thrown into the positions in which they were found' (1867, lxxx). However, this view had been replaced at the turn of the century by the idea that the skulls were the remains of complete bodies which had become disarticulated. Reader (1903, 201) considered that the skulls had sunk while the other bones had been washed away.<sup>3</sup> It was Wheeler, writing in 1928 for the Royal Commission volume on Roman London, who seems to have first suggested that the skulls were the result of the Boudican massacre in AD 60 (R.C.H.M., 1928, 16). This view, though tentatively expressed at the time, has become the generally accepted explanation of the skulls today.

While an obvious solution to the problem it is difficult to accommodate with the results of the present survey. The skulls are clearly not the result of a simple massacre of civilians since they are not a typical cross section of a population, but rather a group of 'selected' individuals. Tacitus (*Annals XIV*) records '... but those who stayed because they were women, or old, or attached to the place, were slaughtered by the enemy', exactly the opposite of the young adult

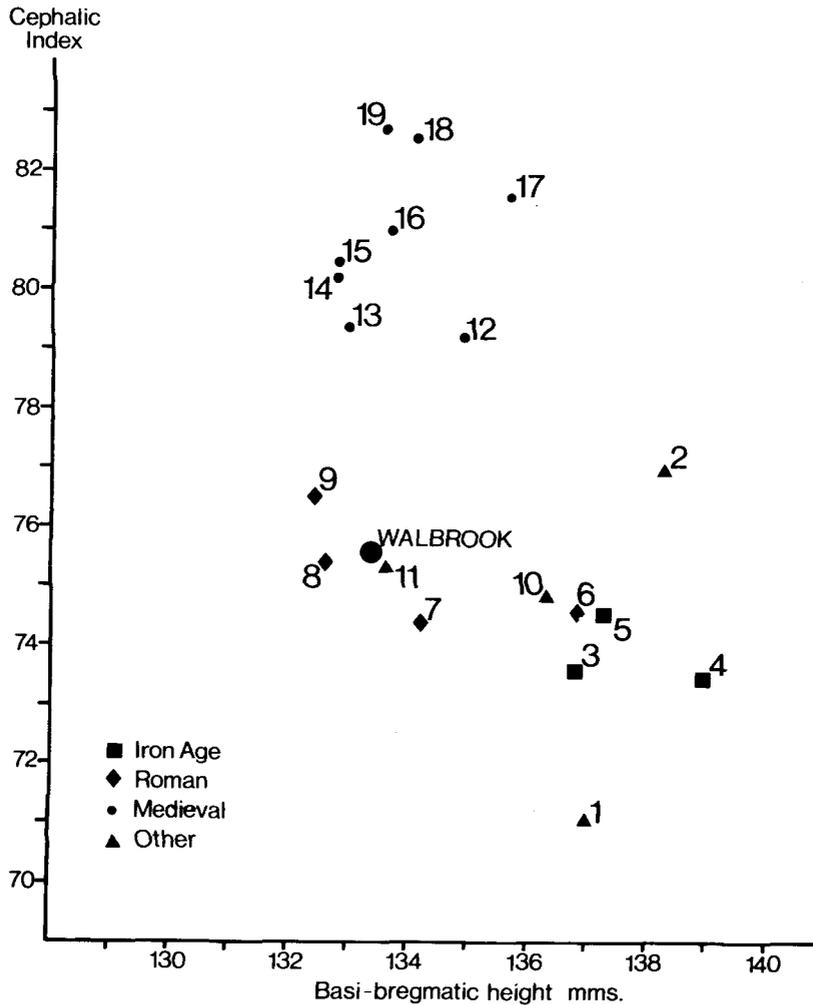


Fig. 3. Comparisons of cephalic indices and vault heights of the male Walbrook specimens with those from 19 other British sites.

*Neolithic*

1 England generally

*Bronze Age*

2 Yorkshire

*Iron Age*

3 Wetwang Slack, Yorkshire

4 Gussage All Saints, Dorset

5 Maiden Castle, Dorset

*Romano-British*

6 York Mount

7 Cranborne Chasc, Dorset

8 Frilford, Oxfordshire

9 Trentholme Drive, York

*Saxon*

10 Bunwell

*Anglo-Scandinavian*

11 York Minister

*Medieval*

12 Abingdon, Oxfordshire

13 St. Helen's York

14 Clementhorpe, York

15 Greyfriars, Chester

16 Rothwell, Northamptonshire

17 St. Mary's York

18 Hythe, Kent

19 York Minster

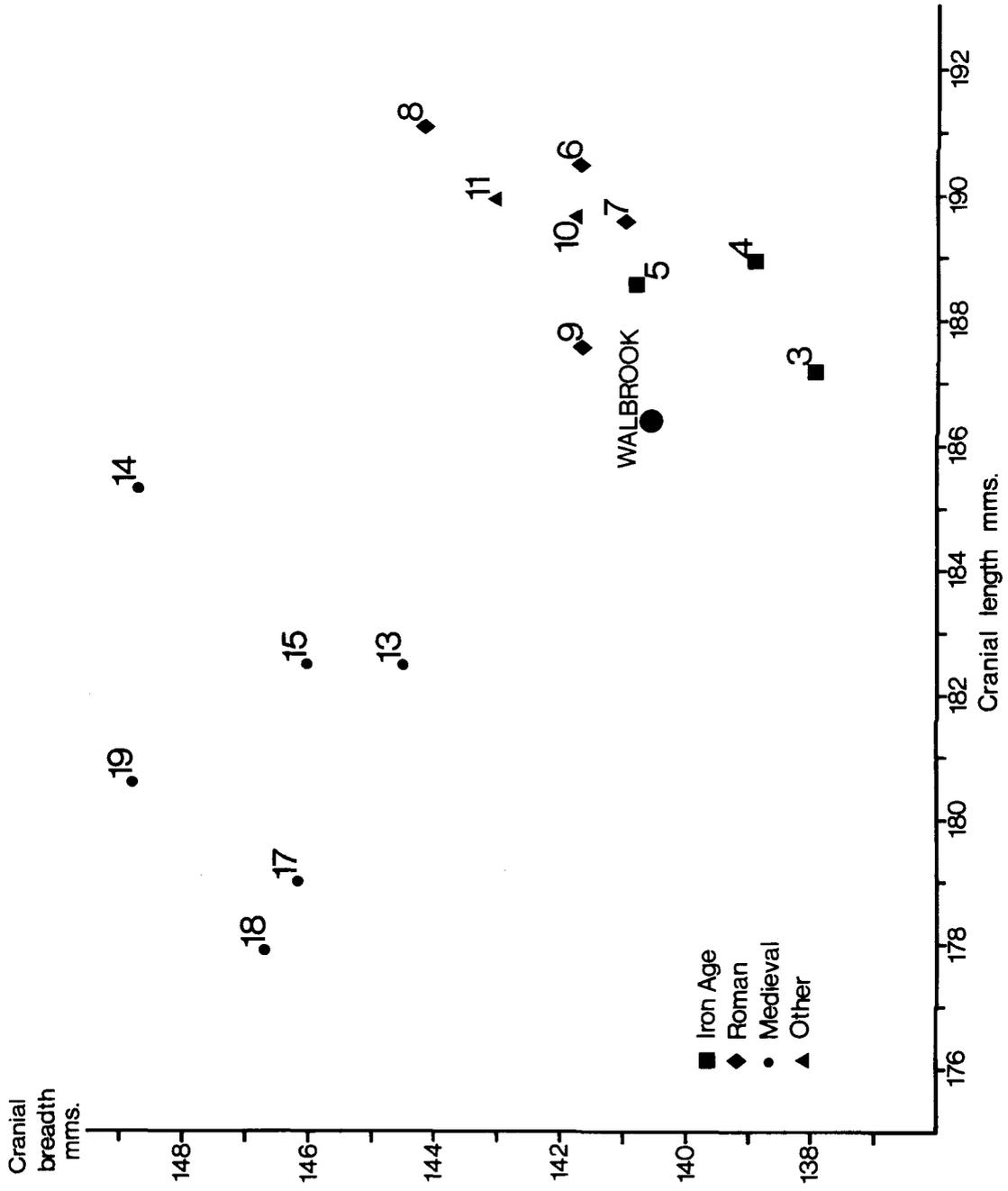


Fig. 4. Comparisons of cranial length and breadth measurements of the male Walbrook specimens with those from 15 other British sites. For sites see Fig. 3.

males attested by the skulls. Moreover, none of the skulls show any evidence of ante-mortem injuries as might be expected. In the Maiden Castle war cemetery (Wheeler, 1943, 351–356), although not completely comparable, a third of the skulls had evidence of wounds inflicted by weapons, while at Worlebury hillfort half of the massacred inhabitants had traces of injuries on the bones (Bulleid and Gray, 1917, 683).

The suggestion of ritual killing is more plausible given Tacitus' (*Annals* XIV) reference to the Britons, who would 'cut throats, hang, burn and crucify'. However, the lack of jaws or upper cervical vertebrae would appear to indicate that the heads went into the Walbrook as defleshed and disarticulated skulls.<sup>4</sup> If exposed, the exact time it takes for a jaw to separate from a skull depends on the weather, but even in summer it might take several months. About half of the skulls lack their facial bones suggesting that they had been exposed for a considerable time before final deposition.<sup>5</sup> Our knowledge of the events of AD 60 is limited but it seems clear that London remained in rebel hands for a few weeks at most (Carroll, 1979, 199–201), far too short a period for the apparent disarticulation to have taken place. It also seems unlikely that the returning soldiers and inhabitants would have left decomposing human remains near one of main sources of water in London. Moreover decapitation at whatever period it was practised seems to have often resulted in damage to the back of the skull. A good example occurs amongst the decapitated victims of the Iron Age camp at Sutton Walls, perhaps executed by the advancing Romans. As Cornwall (1954, 69) comments on one particularly botched effort '... it seems the executioner in this case was more muscular than skilful'. If the Walbrook skulls were the victims of decapitation some at least might be expected to show such damage, but none were found. However, it should be noted that in the Lankills cemetery (Clarke, 1979, 415) seven bodies had had their heads removed by cutting the neck from the front, probably with a knife, leaving marks only on the 3rd and 4th cervical vertebrae.

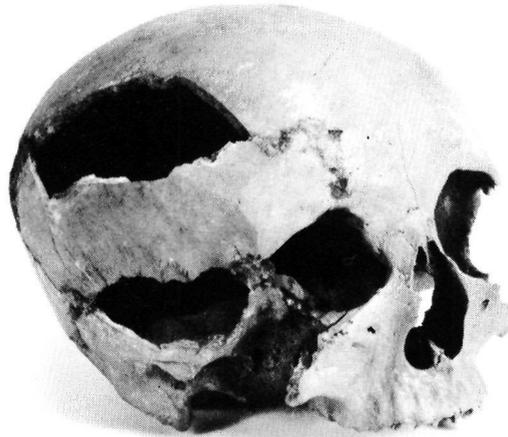
Evidence for hanging is often difficult to recognize, even on a complete skeleton. Nonetheless, Smith and Jones (1908, 335) in discussing a large group of Roman bodies from Shellal, Nubia, indicate that hanging had resulted in characteristic lesions, where the base of the skull had been torn back opening up the occipito-mastoid suture.<sup>6</sup> Again there was no evidence of such damage in the Walbrook skulls.

The necessity of seeking a violent explanation for the skulls has been considerably lessened by the recognition that skull deposition was practiced throughout Britain in the Roman period and, in particular, in London. The evidence from London consists of a number of skulls found in non-funerary deposits.<sup>7</sup> Of the following list the first six, at least, seem to be deliberate depositions<sup>8</sup> (See Fig. 1).

- A. Old GPO, St. Martin-le-Grand (now 161–162 Cheapside) 1926 (Museum of London 12, 372) unpublished. Skull stained brown found without lower jaw. Male 22–24. Exact context unknown but found in natural gravel a few feet from an early cremation burial; probably 1st century.
- B. Newgate (exact site unknown). Found before 1903. (Museum of London 16,157)



Pl. 1. Selection of skulls found in the Walbrook.



Pl. 2. Skull recovered from Roman well on the site of the Bank of London and South America.

- unpublished. Skull stained brown found without lower jaw. Male 22–35. Perhaps from within the same early cremation cemetery areas as find A and probably same date.
- C. Bank of London and South America (B.O.L.S.A.) 1953–4 (Museum of London 21,670). See Marsden (1980, 64 and Pl. 2). Skull lightly stained found without lower jaw. Male 35–45. This skull was found as part of a deliberate filling of an early Roman well. A large post had subsequently been driven into the well filling, smashing part of the skull. Perhaps late 1st or 2nd century in date but the deposit may possibly date up till the 3rd century.
- D. 201–211 Borough High Street, Southwark, 1972. Bird *et al.* (1978, 65 and 176). Lightly stained calvaria. Female *c.* 30 years. Found with two nearly complete samian vessels including a decorated bowl indicating a date *c.* AD 55–70 for deposition. The group was in the base of a ditch which environmental evidence suggested had contained running water.
- E. Regis House, 1929–30. Not survived. MS notes in Museum of London. Report at the time notes ‘Fragmentary skull of middle aged man. The mastoid process is enlarged and pierced by holes which are possibly pathological.’ Found in a massive timber waterfront constructed in the mid-Flavian period.
- F. Upper Thames Street tunnel context 711, 1978. Museum of London, information Mr. K. Flude. Skull stained brown found without lower jaw. Adult male. Although found by contractors the skull was probably associated with a timber waterfront dated to *c.* AD 85.
- G. Aldermanbury, 1965. Museum of London, Marsden (1968). Skull fragment which is not stained but ‘normal’ bone colour. Found with three smashed but complete pots in the filling of the Cripplegate Fort Ditch. Mid second century.
- H. Coutt’s Bank, Lombard Street, 1959. (Museum of London 24901). Unpublished. Fragments of skull which like G are not stained. Male adult. Found in a late 1st-century stratum.
- I. Old Bailey, 1966–69. Museum of London, unpublished. For the site see Marsden (1970). Skull found in late Roman addition to City wall bank. The significance of this find is not clear since the wall cuts across a cemetery area which included at least one inhumation.

Skulls A–F show the characteristics of the Walbrook finds, especially in the absence of the lower jaw. One also wonders how skulls A and B received their staining and it may be, that they were originally deposited in the Walbrook or another stream and then subsequently removed for their final burial. In purpose the finds range from association with a cremation cemetery to possible foundation deposits in the case of the two waterfront finds. The interesting context of the BOLSA skull is suggestive of more complex practices. The date of deposition of skulls A–F is predominantly 1st century although the BOLSA find might take the practice into the 2nd century or even later. The Walbrook skulls, therefore, fit into a wider pattern of skull burial in London.

The Celtic practice of head-hunting is well attested in classical sources (see generally Lambrechts, 1954; Ross, 1967, 61–126; Petres, 1972 and Clarke, 1979, 414–421). The importance of the human head is also indicated by numerous stone and wood carvings and in particular by the famous stone portico and door posts from Roquepertuse, Glanum and Entremont in southern France, which have niches cut in them for human heads. The exact origin of the skulls is not however clear since at Roquepertuse they were all young adults with the implication that they may have been enemy warriors (Gérin-Ricard, 1927, 27) while at Entremont six of the victims were over 45 perhaps suggesting ancestor worship (Lambrechts, 1954, 39). Other evidence for head removal is extremely limited, e.g. a Druid (?) holding a head in his hand on coins (Allen, 1958, 61–2, Pl. 8, 68, 69), and actual physical remains are even more difficult to trace

archaeologically.<sup>10</sup> Appendix B provides a select list of Iron Age and Roman finds of probable ritually deposited skulls and related material.<sup>11</sup> While the list does not pretend to be exhaustive it does give an indication of the range and date of deposits likely to be encountered. The consideration of Iron Age material is made more difficult by the general lack of elaborate funeral rites in Britain (Whimster, 1977) and the resulting possible confusion between ritual and funerary deposits on settlement sites.<sup>12</sup> The finds range from the early Iron Age to the Belgic period and vary between clear cases of war-time head hunting as at Bredon Hill to more enigmatic single finds at Winklebury, Burgh-by-Woodbridge and Bagendon.

After the conquest a few discoveries are probably associated with military executions as at Colchester and Stanwick,<sup>13</sup> but most occur on civilian sites and are particularly associated with the ritual shafts discussed by Ross (1968).<sup>14</sup> Clearly shafts and in particular disused wells were filled with carefully selected objects and the BOLSA find is probably an example of the type. The exact purpose of these skull depositions is unclear but the well finds at Odell and Coventina's Well, Carrawburgh emphasize the link with water and fertility and the same intent can perhaps be ascribed to the Walbrook finds. Perhaps most surprising is the persistence of these cults indicated by the late Roman finds at Wroxeter and Icklingham.<sup>15</sup> The latter site is particularly interesting in the light of its apparent later Christian associations; while the material from Wroxeter throws an interesting side light on one basilica during the Roman period.

If the Walbrook skulls are part of this tradition, carried on apparently on the outskirts of the Roman settlement, it is not unreasonable to ask where the skulls were coming from in such numbers. It is difficult to imagine the Roman authorities encouraging the active collection of such objects. Unfortunately our knowledge of early Roman burial practice in the London area is extremely deficient. Although London fell within the area of a general late Iron Age cremation tradition, which continued until the 3rd century AD, early Roman inhumations have been excavated recently at the Tower of London and in Southwark.<sup>16</sup> Without the detailed examination of early cremations we do not know anything about the treatment of the body between death and eventual cremation. Excavations from 1964–6 at the La Tène I inhumation cemetery at Mont Troté (Ardennes) showed that 32 of the 89 burials studied had their skulls removed shortly after burial, significantly often leaving the lower jaws in the ground.<sup>17</sup> This find shows that skulls could be obtained by other methods than head-hunting in time of war. It is of course not impossible that the Walbrook skulls are far older than their apparent date of deposition would suggest and that they were brought to London from elsewhere after the conquest, but only the radiocarbon dating of some could prove this.<sup>18</sup> Unfortunately the morphology of the skulls by itself is not sufficient to distinguish between the Iron Age and Roman periods, especially as most of the early Roman inhabitants of London were probably of Celtic extraction.

## CONCLUSIONS

While further discoveries in the Walbrook valley may radically alter the

evidence it is the writers' opinion that there is, at present, no need to seek an explanation of the Walbrook skulls in the events of AD 60, but rather in the nature of Celtic religious practices. In the London area rites connected with water religion have a long history (Torbrügge, 1970–1) being attested by numerous finds from the Thames and elsewhere, such as the Battersea shield.<sup>19</sup> Many writers have also noted the vast quantity of other material recovered from the Walbrook, in particular coins, metal objects and various types of pottery which seem to be a result of votive offerings.<sup>20</sup> These perhaps can now be seen as the continuation in a modified form of earlier practices, presumably as Romanisation progressed in London during the late 1st and 2nd centuries. In conclusion one can do no better than repeat Ralph Merrifield's (1965, 149) comments on the nature of 'Roman' London:

'In all respects, Roman London seems to have been a city of contrasts, a curious mingling of civilization and barbarism, of the exotic and the native. . . .'

Since this article was finished excavations (1982) at 2–3 Cross Key Court have produced a lower jaw of an adolescent male from a late 1st– early 2nd-century context. A sliver of bone had been detached from the angle of the mandible consistent with a heavy blow by sword.

## APPENDIX I

### Surviving skulls from the Walbrook.

|    | Museum                           | Accession No. | Site                                   | Sex             | Age         |
|----|----------------------------------|---------------|--|-----------------|-------------|
| 1  | Pitt Rivers Museum, Oxford.      | 1074          | Gooch & Cousens Warehouse, London Wall | Male            | Adult       |
| 2  | "                                | 1075          | "                                      | "               | "           |
| 3  | "                                | 1076          | "                                      | "               | "           |
| 4  | "                                | 1077          | "                                      | "               | Young Adult |
| 5  | "                                | 1078          | "                                      | "               | "           |
| 6  | "                                | 1079          | "                                      | "               | Adult       |
| 7  | "                                | 1080          | "                                      | Female          | "           |
| 8  | "                                | 1081          | "                                      | Male            | "           |
| 9  | "                                | 1082          | "                                      | "               | "           |
| 10 | "                                | 1083          | "                                      | —               | "           |
| 11 | "                                | 1084          | "                                      | Male            | "           |
| 12 | "                                | 1085          | "                                      | "               | "           |
| 13 | "                                | 1086          | "                                      | "               | "           |
| 14 | "                                | 1087          | "                                      |                 |             |
| 15 | "                                | 1088          | "                                      | too fragmentary |             |
| 16 | "                                | 1089          | "                                      |                 |             |
| 17 | "                                | 1090*         | "                                      | Male            | 17–25       |
| 18 | "                                | 1091*         | "                                      | "               | "           |
| 19 | "                                | 1092*         | "                                      | "               | "           |
| 20 | "                                | 1585A         | "                                      | "               | "           |
| 1  | British Museum (Natural History) | 160(4.1021)   | London Wall (exact site uncertain)     | Male            | Adult       |
| 2  | "                                | 161(4.1022)   | "                                      | "               | "           |
| 3  | "                                | 162(4.1023)   | "                                      | "               | "           |
| 4  | "                                | 163(4.1024)   | "                                      | "               | "           |
| 5  | "                                | 164(4.1025)   | "                                      | "               | "           |

## APPENDIX I contd.

|    | <i>Museum</i>    | <i>Accession No.</i> | <i>Site</i>                                      | <i>Sex</i> | <i>Age</i> |
|----|------------------|----------------------|--|------------|------------|
| 1  | Museum of London | 3902A                | National Safe<br>Deposit Co. Site                | Child      | 10-11      |
| 2  | "                | 3902*                | "  | Male?      | 17-25      |
| 3  | "                | 10023                | London Wall<br>Estate Office,<br>Finsbury Circus | Male?      | Adult      |
| 4  | "                | 10024                | "  | Female     | "          |
| 5  | "                | 10025                | "  | Male       | "          |
| 6  | "                | 10026                | "  | "          | "          |
| 7  | "                | 10027                | "  | "          | "          |
| 8  | "                | 10028                | "  | Female     | 17-20      |
| 9  | "                | 10029                | "  | Female?    | Adult      |
| 10 | "                | 10030                | "  | Female     | 18-20      |
| 11 | "                | 10031                | "  | Male       | Adult      |
| 12 | "                | 10032                | "  | "          | 17-21      |
| 13 | "                | 10033                | "  | Female?    | 18-21      |
| 14 | "                | A19600               | "  | Male       | 23-30      |
| 15 | "                | 10762                | 122 London Wall                                  | "          | 18-21      |
| 16 | "                | 15151                | Finsbury House,<br>Blomfield St.                 | "          | over 21    |
| 17 | "                | 15152                | "  | "          | Adult      |
| 18 | "                | 15153                | Bank of England                                  | "          | "          |
| 19 | "                | 15154                | "  | "          | Adolescent |
| 20 | "                | 15155                | "  | "          | Adult      |
| 21 | "                | 15156                | "  | "          | "          |
| 22 | "                | 15157                | "  | Female     | 17-25      |
| 23 | "                | 15158                | "  | "          | 17-21      |
| 24 | "                | 15159                | "  | Male       | 18-25      |
| 25 | "                | 15160                | "  | "          | 25-35      |
| 26 | "                | A27860               | 'Walbrook'                                       | "          | Adult      |
| 1  | Bank of England  | —                    | Bank of England                                  | Male       | 17-25      |

Total: 52

\*Mandibles only

## APPENDIX 2

Select list of discoveries of Iron Age and Roman skulls from non-funerary contexts.

1. All Cannings Cross, Wilts. 1911-22. Cunnington (1923, 40-43). Thirty-two fragments of human skull from settlement site. Four pieces deliberately cut out, of which one was polished and perforated for suspension. Early Iron Age.
2. Hunsbury, Northants. 1882. Parry (1930, Pl.3). Three skulls recovered during quarrying without jaws. Context unknown. One had 3 holes (c. 10mm dia.) drilled for suspension.<sup>21</sup>
3. Glastonbury, Somerset 1892-1907. Bulleid and Gray (1917, 673-682). A number of skulls and other human bones, some with sword cuts found around the settlement area.
4. Winklebury, Hants, 1976. Smith (1977, 78). Skull without jaw found placed in bottom of Pit 2738. Male, 20-30 yrs.
5. Bredon Hill, Gloucs. 1935-7. Hencken (1939, 54). Early 1st century AD. Evidence of Iron Age massacre in gateway with evidence of subsequent skull removal. This was shown by the calculation of maximum number of individuals from bones: 27 cranial evidence, 46 mandible evidence, 64 non-cranial bones. Where identifiable the bodies were male, 25-35 years.
6. Uley, Gloucs. Ellison (1980, 308). Early 1st century AD. The ditch of the pre-Roman ritual enclosure contained a human femur. While human bone occurs on Iron Age temple sites, e.g. Hayling Island and Harlow, complete deposited human skulls seem noticeably absent.
7. Burgh-by-Woodbridge, Suffolk. 1975. HMSO (1976). Early 1st century AD. Skull without jaw found in primary silting of the ditch of a probably defended enclosure. Probably adult female.

8. Bagendon, Gloucs. Clifford (1961, 17). Tiberio-Claudian. Skull without jaw. Male 25–35 years.
9. Thaxted, Essex. Ross (1967, 72). Skull found associated with ?Iron Age stone-head now in British Museum.
10. Hillhead Broch, Caithness. Parry (1930, Pl.4a). Top of skull with three holes drilled in top as with the Hunsbury example.

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11. Colchester, Essex. Crummy (1977, 74). *c.* AD 43–49. A number of human bones with a high proportion of skulls found in legionary fortress ditch by West Gate. Possibly from executions.
12. Stanwick, Yorks. Wheeler (1954, 53–56). Skull and vertebra of middle-aged male recovered from ditch assumed to have been beheaded, after death from other injuries.
13. Newstead, Ross and Feachem (1976). Flavian and Antonine. Four pits (1, 16, 23, 57) contained human skulls. The pits clearly belong to a mass of ritual shafts, rubbish pits etc. *which contain a massive array of objects.*
14. Odell, Beds. *inf.* Mr. B. Rix. Later 1st century. Skull complete with jaw found behind lining of a well. Female 20–25 years.
15. Brislington, Gloucs. 1899. Barker (1901). Several skulls recovered from a well from this villa site. Ross (1968) considers a ritual filling.
16. Heywood, Wilts. Pugh and Crittal (1957). Four skulls recovered from a ritual shaft.
17. Caves Inn, Warwicks. Anon (1953). Antonine. Skull of adult female recovered from a well which Ross (1968) considers a ritual shaft.
18. Caerwent, Mon. Ross (1968) and Boon (1976). One Antonine. (i) Well 2 contained a skull. (ii) Rock cut pit or pool contained 2 skulls and associated Antonine material. 100 feet south of later (4th century) Shrine of the Head.
19. Springhead, Kent. Penn (1960, 121–122). 2nd century. Four six month infants had been buried by the four corners of Temple IV at different periods, presumably as some form of foundation deposit. Two of the burials lacked their heads.
20. Carrawburgh, Northumberland 1876. Clayton (1880). 2nd–4th century. Top of skull recovered from contents of well dedicated to goddess Coventina.
21. Churchill Hospital, Oxford. Young (1973, 16). 3rd century. Head of a decapitated woman found in the filling of a well on the site of a pottery.
22. Icklingham, Suffolk. West and Plouviez (1976). 1st half of 4th century. Six skulls, four with jaws found in base of pit along with collection of unusual decorated roof tiles and a stone column. One of the skulls showed evidence of beheading.
23. Wroxeter, Shrops. *inf.* Mr. P. Barker. Parts of at least nine skulls but only two mandibles found in the Basilica where they had become incorporated in the rubble during the 4th century. The original date and location of the skulls is at present uncertain. Two of the skulls showed sword cuts (? post-mortem) and the cut marks on another suggested it had been scalped. Most of the individuals were young adult males but one was aged about forty and another, aged at least fifty, suffered badly from Paget's disease indicating he was unlikely to be a warrior (Report by Dr. J. L. Wilkinson). The skulls had a ginger colouration which examination showed to be caused by a coating which contained linolenic acid, or a related substance, found in preparations such as linseed oil.
24. Northchurch, Herts. Neal (1976, 14). 3rd–4th century. Adult human skull found in the filling of a well in association with a waterworn stone in the shape of a head.
25. Appleford, Berks. Brown (1973, 201). 4th century. Fragments of adult human skull found in the filling of a well which included a hoard of 24 pewter vessels.
26. Armsley, Hants. Ross (1968). 1st–4th century. Wooden head (8" high) from a ritual shaft.

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## NOTES

1. Fossils were evidently preserved in City churches as Stow (Kingsford edition, 275) records a bone and a tooth hung up in St. Lawrence Jewry. I am indebted to John Clark for this reference.
2. For the dating of the Walbrook generally see Merrifield (1962).
3. The evidence from Wookey Hole where a burial area was eroded by the River Axe indicates that skulls tend to be carried further than the rest of the skeleton (Hawkes *et al.*, 1978, 31).
4. Evidence from Sutton Walls (Cornwall, 1954) and elsewhere indicates decapitation usually results in severance at the 3rd, 4th or 5th cervical vertebra. Mercer has noted at Hambleton Hill the distinction between severed heads, complete with the upper vertebrae, found in the ditch of the outer enclosure and the skulls lacking their lower jaws found in the ditch (ritual) of the causewayed camp (Selkirk, 1981, 148).
5. None of the skulls showed evidence of gnawing by rodents or larger animals.
6. I am greatly indebted to Mr. R. Entwistle for discussing the evidence for trauma in skeletons and for drawing my attention to the Shellal material. At Pákozd, Hungary (Petres, 1972) a group of ritual pits of La Tène C/Roman date produced upper part of an articulated skeleton of a 21–25 year old man, which might possibly be the remains of a body left hanging from a tree for a considerable period.
7. Other bones are also found occasionally in the City. For example fragments of the limb bones of three individuals were recovered from Roman deposits in Lower Thames Street (Jones, 1981, 162).
8. In addition to these finds a human skeleton was found in 1835 in King's Arms Yard during sewer construction and described as 'in very good preservation but quite black' (Norman and Reader 1906, 236).
9. Van Doorselaer (1967, 110–11) notes ten sites in northern Gaul where skulls have been found accompanying cremations as grave goods. The number of skulls range from one to five and at Brunembert (Pas-de-Calais) several burials were found with the same rite. At Bavai the cremation was associated with two skulls in a marble cist. Wells (1977, 86) has suggested after examining a number of burials from Puckeridge, Herts., that 'On balance, a disproportionately small amount of cranial material appeared to be present and this implies the possibility that some of it may have been distributed to family or friends as souvenirs of the departed'.
10. There seems to be more conclusive evidence of large scale head removal from France. Déchelette (1927, 546) records a group of 200 skeletons dumped in a ditch at Moeuveres, near Cambrai all lacking their heads and associated with weapons and ornaments of La Tène II date. Delmaire (1976, 201) notes a pile of skulls found in a Gallic site on the estuary of the Somme at Noyelles-sur-Mer.
11. In addition there is a growing number of late Roman civilian inhumation burials where the skull has been removed and placed elsewhere in the grave, usually between the feet. Clark (1979, 372–5 and 414–21) lists large number of such burials and recent excavations at Dunstable (Matthews, 1979, 311–12) have revealed a dozen examples including a child of 3–6 months. There were also examples of the much rarer 'mutilation' burials. The most unusual burial was a combination of both rites, with the head placed between the knees and the lower halves of the legs put by the arms. At present there is no completely satisfactory explanation for these practices and there is no definite connection with the practice of total skull removal.
12. This material has been fully discussed by Chris Wilson in an undergraduate dissertation at the Institute of Archaeology which will be published shortly.
13. Such executions and head collecting are illustrated on Trajan's Column.
14. Such shafts also sometimes contain human bones apart from skulls and occasionally cremations. In France these shafts are paralleled by the 'puits funéraires' which occur in various areas. One example at Grigny (c. 40kms south-east of Boulogne) was particularly interesting as the cremation, which was in an urn, had been placed at the bottom of the shaft on top of a complete, unburnt skull (Delmaire, 1976, 197).
15. A late 3rd-century site at Viminacium (Kostolac on the Danube in Upper Moesia) produced a votive area with animal bones surrounded by a circle of severed heads, one of which at least was placed on a plate with special offerings. I am indebted to Ralph Merrifield for this information.
16. See Dean and Hammerson 1980. The Belgic cemetery at Prae Wood contained 463 cremations and 18 inhumations (Stead 1969). Six inhumations were recorded from a ditch at Verulam Hills Fields, probably of mid-1st century date. They may have been slaves or even victims of Boudica, see Anthony (1968). The same survival of inhumation can be seen on the other side of the Channel where Delmaire (1976, 93) records the practice surviving in the *Civitas Morinorum* into the early 1st century AD.
17. In another four graves the skulls were found displaced by the side of the body (Ertlé and Rozoy, 1967). I am indebted to Dr. I. Stead for information on this site. Head removal is recorded at several other similar sites e.g. Poix, Sogny (Bretz-Mahler, 1971, 196 and pl.138) and Chassemy and Grandes-Loges (Thenot, 1976, 829).
18. In France, most of the evidence for head hunting/removal appears to be quite early in the Iron Age, viz. Mont Troté or the Celto-Ligurian sanctuaries at Roquepertuse, Entremont and Glanum. However a Roman altar from Apt (in the same area) dedicated to Mars (C.I.L.XIII) is recorded as having eight or nine skulls below it and a Roman carving from Paris shows a stylised tree with heads hanging from it (Espérandieu, 1911, No. 3138) which is discussed by Duval (1961, 205–6), who considers it probably 1st century AD.
19. It is now generally agreed that the Battersea Shield was made in the early 1st century AD under strong Roman influence. Its date of deposition is however another matter and there seems no reason why its deposition could not have taken place after, rather than before, AD 43.
20. The exact significance of this material is difficult to judge since a large proportion of objects of most types from London have come from the Walbrook Valley. In the medieval period the Priory of Holywell was situated north of the City by one of the springs feeding into the Walbrook.

21. An interesting parallel is provided by the skull of Carolan, the famous Irish harpist, who died in 1738. His body was later dug up and the skull had a hole drilled in it with a gimlet through which was tied a piece of green silk ribbon. This skull was subsequently preserved in a chapel and small pieces were broken off, ground up, and boiled in water in the skull as a cure for epilepsy (O'Sullivan, 1958, Vol.1) A skull with a small hole drilled in it, probably for suspension, was discovered in London at 48-50 Cannon Street (Boddington, 1979, 36), but unfortunately it was recovered by building contrac-

tors and its date is unknown. There are many references to drinking from human skulls to cure a variety of illnesses (Ross, 1962, 36-7), especially epilepsy and mental sickness. In the Elizabethan period German workers at the Mint suffering from fumes during silver refining were advised to drink from skulls and traitors' heads displayed above London Bridge were obtained for them (Glanville 1979, 22). The Germans 'found some relief, although most of them died'.

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# A MODEL SWORD FROM BUCKLESBURY HOUSE, LONDON

STEPHEN GREEP

A small object from the site of Bucklersbury House, London, and now in the Museum of London,<sup>1</sup> belongs to a group of Roman miniature swords. It consists of a slender, double edged, blade 106mm long (Fig. 1). The tang of the blade passes through a rectangular sectioned piece of bone, 33mm wide, which is well polished, and decorated with a single groove. This forms the hilt-guard of the sword, above which may be seen a slight continuation of the tang which, when complete, would have retained the handle and pommel.

The identification of this piece as a model sword or dagger is confirmed by a small number of finds from the continent. These show that the completed object consisted of five parts, of which the iron blade and bone guard formed two. The remaining elements were a small ribbed handle, a miniature version of that on the *gladius*;<sup>2</sup> a pommel, not unlike the guard in shape; and a scabbard. With the exception of the iron blade the other pieces are in bone. The only complete example known is from Cologne (Fig. 2, 5).<sup>3</sup> The survival of guard and blade, as at London, is attested at Augst;<sup>4</sup> handle, guard and blade at Trier (Fig. 2, 3)<sup>5</sup> and Augst (Fig. 2, 4);<sup>6</sup> pommel, handle, guard and blade from France.<sup>7</sup> The discovery of isolated miniature ribbed handles is rare, examples are recorded from Verulamium (Fig. 2, 2)<sup>8</sup> and Hedderheim (Fig. 2, 1)<sup>9</sup>. By far the most common element is the sheath, but even these are unusual in Britain only represented by those from Verulamium<sup>10</sup> and Colchester (Fig. 2, 13).<sup>11</sup> On the continent they are known from Trier (Fig. 2, 7, 8, 10, 12),<sup>12</sup> Augst (Fig. 2, 6, 9, 14),<sup>13</sup> Hedderheim (Fig. 2, 11)<sup>14</sup> Autun<sup>15</sup> and Mont Auxois.<sup>16</sup> The sheaths vary quite considerably in size and decoration.<sup>17</sup> They are basically sub-rectangular with a rounded section and two perforated 'wings' at the end where the sheath joins the handle. They are carved from a solid piece of bone, and longitudinally perforated. This hole is enlarged into a double 'key-hole' at the end where the sheath meets the handle to allow for the insertion of the blade. The front of the scabbard is decorated by varying numbers of straight, incised lines. The remaining sides are plain. At the lower end of the scabbard the perforation is circular and is usually plugged with a small piece of bone.

The function of these model swords is uncertain, although in view of the blade and handle elements, their representation is best seen as a *gladius*. They occur mainly on civilian sites and, in view of their subject, their rarity in military contexts in Britain and on the Rhine might seem surprising. The

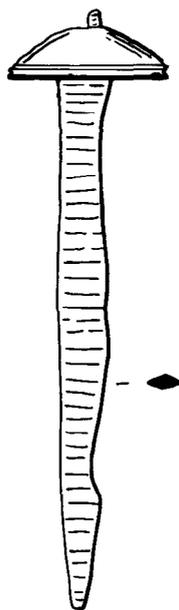


Fig. 1. Model Swords: Example from Bucklersbury House (2/3).

closest parallels are from Trier (e.g. Fig. 2, 15), where a number of similar pieces occur, but which are carved from a single piece of bone, without the iron blade. They are not necessarily related to the small, bronze model series usually interpreted as having some votive function,<sup>18</sup> although bronze miniature swords do occur.<sup>19</sup>

The London model is most likely to be derived from the Walbrook, as are the majority of the Bucklersbury House finds. This places the object firmly in the early Roman period, not after *c.* AD 155 and possibly much earlier.<sup>20</sup> Despite the number of parallels noted few are securely dated. The scabbard from Verulamium is Antonine, whilst one of the Augst sheaths is probably mid second century. The Augst blade, guard and handle is late first or second century. The use of the ribbed handle, most commonly an early Roman type, confirms the dating suggested by the London, Verulamium and Augst pieces. The absence of these forms from both Vindonissa and Pompeii is perhaps surprising in view of the numerous handles from both sites, but it would be presumptive to draw conclusions from such negative evidence. A first or second century date is suggested.

#### ACKNOWLEDGEMENTS

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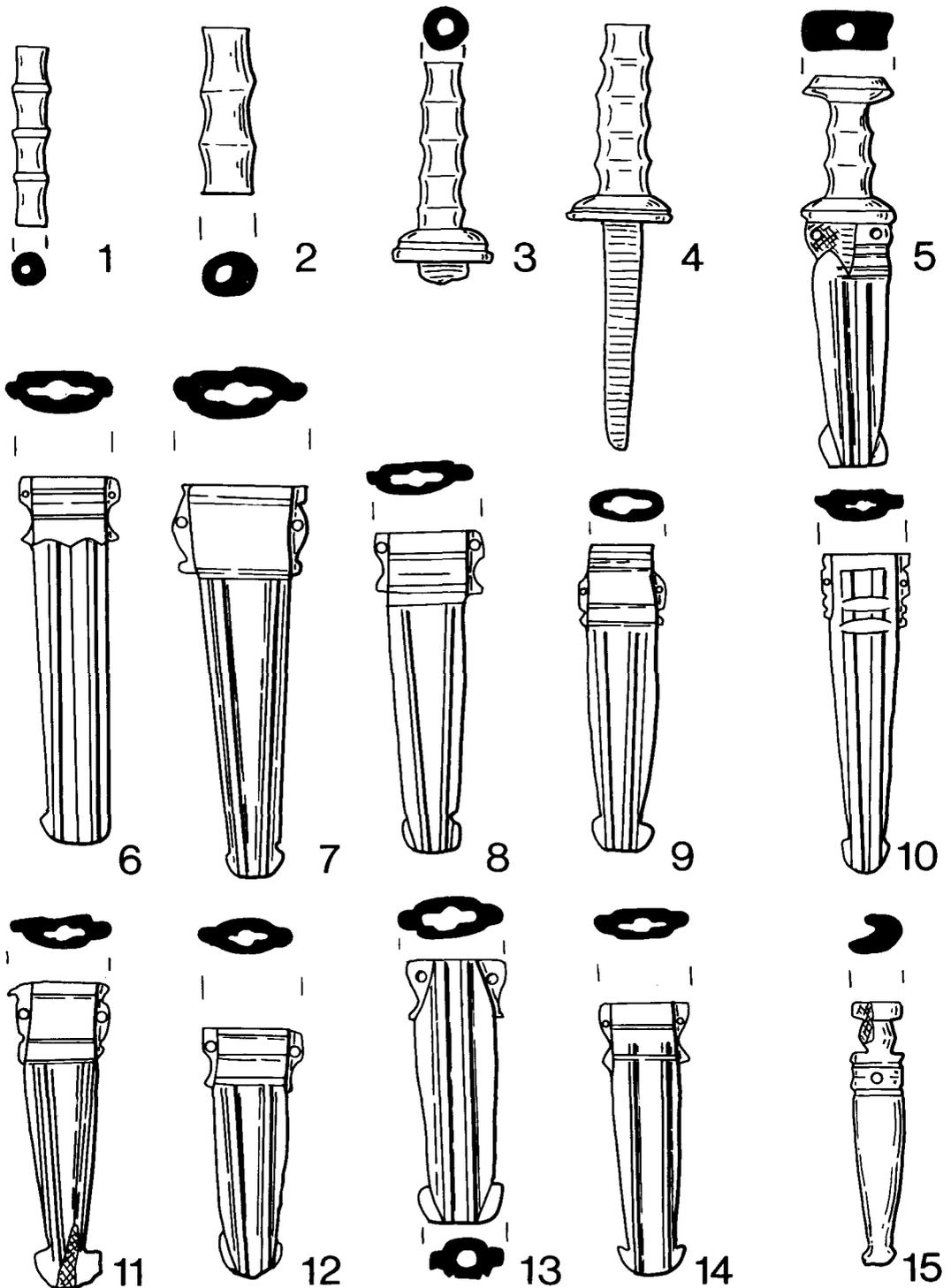


Fig. 2. Model swords: British and Continental parallels (2/3).

## NOTES

1. Accession Number 19637.
2. H. Chapman and A. Johnson 'Excavations at Aldgate and Bush Lane House in the City of London' *Trans. London Middlesex Archaeol. Soc.* 24 (1973) Fig. 22, 12. The model handles copy their full size counterparts closely. The handle form normally served as a grip for the *gladius* as is shown on numerous reliefs, such as on the tombstone of Facilis at Colchester, and in association with *gladii* themselves, as at Rheingonheim, see G. Ulbert, *Des Frühromischen Kastel Rheingonheim* Limesforschungen Band 9 (Berlin 1969) Abb. 3, Taf. 17-18. It is also found, however, with long swords e.g. M. Howe 'From the Museum' *Durobrivae* 6 (1978) Fig. 14 and even daggers e.g. R. Fellman 'Holzerne Schwertgriffe aus dem Schutthügel von Vindomissa' *Helvetica Antiqua* (1966) Abb. 4.
3. F. Fremersdorf, 'Die Denkmäler des römischen Köln' Band 1 *Neuerwerbungen der römischen abteilung des Wallraf-Richartz-Museums während Jahre 1923-7* (1928) Taf. 139.
4. Unpublished, Romermuseum Augst.
5. Unpublished, Rheinisches Landesmuseum, Trier Acc. No. 06, 491.
6. Unpublished, Romermuseum Augst, Acc. No. 69.12885.
7. Unpublished, Musée des Antiquités Nationales, Saint-Germain-en-Laye, Acc. No. 70594.
8. Unpublished, Verulamium museum, Acc. No. 78.169. Found during Wheeler's excavation of the Triangular Temple, in 1933. Unstratified.
9. Unpublished, Museum für-vor-u. frühgeschichte, Frankfurt. Volpert colln.
10. Unpublished, Verulamium museum Acc. No. 79.2062 Bath house site, unpublished excavation Mr. C. Saunders and Mr. A. Havercroft.
11. Unpublished excavation Colchester Archaeological Trust Bkc N233 F84 SF 2258 unstratified.
12. Four examples. Unpublished Rheinisches Landesmuseum, Trier Acc. Nos. 286; 2920; 2921; 01,400.
13. Three examples. Unpublished Romermuseum Augst, Acc. Nos. 1924.427; 1959.1014; 66.1694.
14. Unpublished Museum für-vor-u. frühgeschichte, Frankfurt, Acc. No. 5433.
15. See, *Le Cycle de la material: L'Os* Musée Archeologique Dijon (undated) Pl. 9, 7 & 9.
16. E. Espérandieu, *Les Fouilles de la Croix Saint-Chartres au Mont Auxois* (Paris 1910) Fig. 17.
17. The length of the blade on the London piece (106mm) suggests that the sheath was an unusually large example. The existing scabbards range from 55mm to 88mm long.
18. cf. M. Green, 'Romano-British non-ceramic model objects in south-eastern Britain' *Archaeol. J.* 132 (1975), 54-70; W. Manning, 'A group of bronze models from Sussex in the British Museum' *Antiq. J.* 46 (1966) 50-59; K. Leaby, 'Votive models from Kirmington, South Humberside' *Britannia* 11 (1980) 326-330.
19. Green, *ibid.*, 64 cites model swords from Frilford and Castor, the former of pre-Roman date; and from Chesters cf. M. Green *Small Cult Objects from the Military Area of Roman Britain* British Archaeol. Rep. 52 (Oxford 1976) Pl. 125. A model bronze parazonium was recovered from Verulamium cf. H. Waugh and R. Goodburn, 'The non-ferrous objects' in S. S. Frere, *Verulamium Excavations 1*, Rep. Res. Comm. Soc. Antiq. Lond. 28 (London 1972) Fig. 44, 147, with further references. The use of the sword with an apparent votive significance is also seen on a group of bone spoons from Frocester Court cf. H. S. Gracie and E. Price, 'Frocester Court Roman Villa, Second Report' *Trans. Bristol Gloucs. Archaeol. Soc.* 97 (1979) Fig. 9, 1.
20. R. Merrifield, 'Coins from the Bed of the Wallbrook and their Significance' *Antiq. J.* 42 (1962) 38-52.

# A GROUP OF SAXON AND MEDIEVAL FINDS FROM THE SITE OF THE NEOLITHIC CAUSEWAYED ENCLOSURE AT STAINES, SURREY, WITH A NOTE ON THE TOPOGRAPHY OF THE AREA.

R. ROBERTSON-MACKAY, LYN BLACKMORE, J. G. HURST, PHILIP  
JONES, STEPHEN MOORHOUSE AND LESLIE WEBSTER

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## 1. INTRODUCTION

By R. Robertson-Mackay

This paper describes a small group of post-Roman finds recovered from the site of the Earlier Neolithic causewayed enclosure (TQ024726) at Staines, Surrey (formerly Middlesex), which was excavated under the direction of the author between 1961–63 for the Inspectorate of Ancient Monuments, D.O.E. (then the Ministry of Works), in advance of total destruction by gravel extraction (Robertson-Mackay 1962, 1965). The causewayed enclosure was situated in the middle of the Colne Valley delta (Fig. 1), approximately one third of a mile to the north of the River Thames, half a mile to the north-west of St. Mary's Church, Staines, and two thirds of a mile to the south of Yeoveney Farm. The site lay between the meandering stream known as the County Boundary Ditch and Yeoveney Lodge and within the lands of the former Manor of Yeoveney, which from the 11th century until 1868 belonged to Westminster Abbey. The topography of the area and the later history of the site are both discussed below.

In all a total of approximately 28,500 square feet was excavated on a selective basis within the interior of the enclosure. This revealed a palimpsest of features in all areas, which, although badly eroded by ploughing, produced, in addition to many Neolithic finds, a small amount of Bronze Age and Iron Age pottery, evidence for extensive Romano-British agricultural activity, comprising

various field ditches and a 'D' shaped enclosure, and a small but highly interesting group of Saxon and medieval finds, the majority of which form the subject of this paper. Being outside the scope of the main report on the Neolithic and Romano-British sites, it was felt that these finds would be better placed in the context of regional and local studies, particularly in the field of Saxon pottery, where work on larger groups of a similar date from the town of Staines is now in progress. My grateful thanks are due to all those who have contributed to the present report and also to Lyn Blackmore for undertaking the editorial work. Roger Warren and Christine Sutton of the D.O.E. Drawing Office drew Figs. 1, 2, and 3, and C. Boddington and Sandra Hooper of the D.O.E. Illustrator's Office Figs. 5 and 7. The Saxon pottery was drawn by Philip Jones, the spindlewhorls by Stephen Moorhouse.

## 2. A NOTE ON THE TOPOGRAPHY AND MORPHOLOGY OF THE AREA.

By Lyn Blackmore

In summarising the evidence for the incorporation of earlier land-marks and land divisions in the laying out of medieval furlongs and on the orientation of the plough strips in certain parts of Warwickshire, Ford (1978, 162-3) concluded that 'If it is known that medieval field reorganisation included some pre-existing boundaries while excluding others, and if some minor Roman and prehistoric land divisions have survived in the geography of the present day parishes, then the survival of major boundaries is also feasible'.

In producing evidence for the coincidence of certain Neolithic ditches with two minor, i.e. field, boundaries, and for the juxtaposition of a major prehistoric earthwork with three more important boundaries (namely the western boundary of the medieval manors of Staines and Yeoveney, and of the civil parish of Staines, and the county boundary which divided Middlesex and Buckinghamshire, see Figs. 1, 2), the excavation of the causewayed enclosure at Staines lends further weight to the above hypothesis. While, being outside the original excavation brief, evidence for agrarian continuity on the site is slight, it was felt that attention should be drawn to these phenomena, since although the influence of the topography of the area on the siting and layout of some Neolithic causewayed enclosures has been noted (e.g. Hedges, 1978, 248), and some analysis made of their contemporary environment (e.g. Whittle 1977: Barker and Webley 1978, 161-186) the role of these earthworks in the subsequent morphology of the landscape remains largely unstudied. The purpose of the following note is to place Saxon and medieval finds discussed below within a topographical framework, and to point out the possible relationship between the medieval and post-medieval landscape and the earlier occupations on the site. While the geography of the area was clearly of major importance in the location and form of the Neolithic site, and may subsequently also have influenced the placing of certain later boundaries, the correspondence of the land divisions described below would appear to be more than coincidental, and it is suggested that the role of the Neolithic causewayed enclosure in their evolution may be not only of indirect but direct importance.

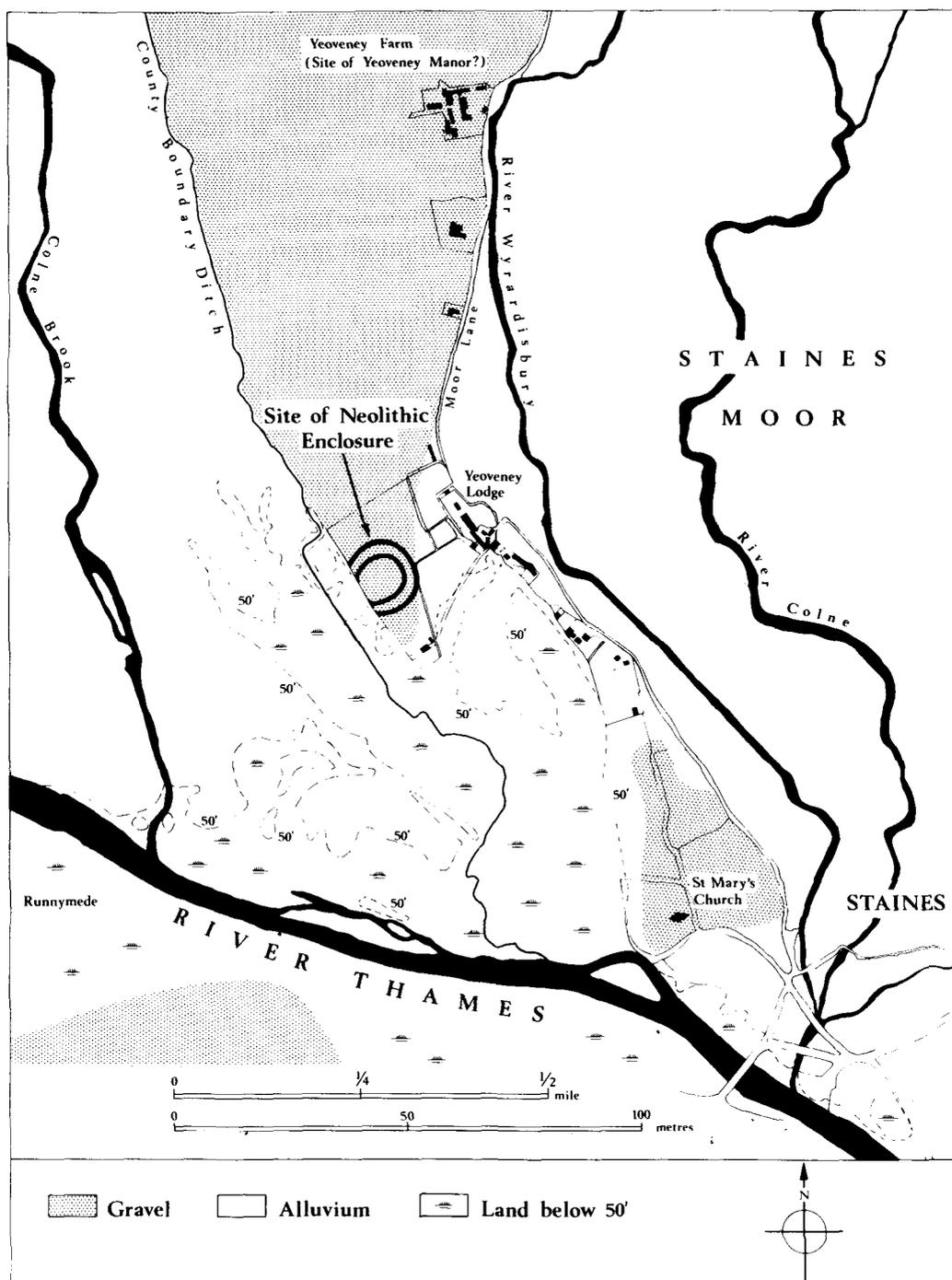


Fig. 1. Staines Causewayed Enclosure: The Location and Geology of the Site. Based on the O.S. Map of 1961 and the Geological Map of 1969. (Crown Copyright Reserved) (The Plan of the Ditches is Diagrammatic only).

### The Field Boundaries

At the time of excavation the Neolithic earthwork lay in a large 'L' shaped field which by its form suggests a connection with an earlier system of open field farming (Figs. 1, 2). This to some extent is borne out by cartographic evidence (see below p. 119). In the 19th century the field was divided by a boundary which ran approximately westwards from Yeoveney Lodge. This bisected the Neolithic site, giving a large rectangular field on the northern side, and a smaller, sub-rectangular field to the south. In the 18th century, however, only the latter (then known as Stern Hill) was enclosed, being apparently surrounded by open fields or common land. The northern boundary of this field then extended as far west as the County Boundary Ditch (then known as the Shire Ditch), but the western boundary of the modern field (Fig. 1) already existed as the division between the arable land to the east and the meadow to the west. Archaeological evidence, however, suggests that this boundary may be of considerably greater antiquity. In 1961 this field division was marked by a lynchet and hedge which ran the whole length of the modern field (Fig. 3). This in itself was not dateable, but when sectioned was found to directly overlie not only the inner ditch of the Neolithic enclosure, but also, just within the line of the latter, and running parallel to it, a Romano-British ditch. There are therefore, at least three phases of boundaries at this point, which cover a period of more than four millenia. There are indications that this may also be the case on the eastern side of the site, where the modern field boundary directly followed the line of the outer ditch of the Neolithic enclosure for some way before turning east towards Yeoveney Lodge (Figs. 2, 3). No excavation was undertaken at this point because of the extant tree line and depth of alluvial deposits, but the parallel course of the two ditches may be clearly seen on an aerial photograph (Fairey Air Surveys No. 1594/002).

The above is in itself already of some interest. That these two modern boundaries should moreover coincide with two apparent adjustments to the otherwise concentric plan of the Neolithic earthwork is remarkable. Neolithic causewayed enclosures are notoriously irregular, and the great majority would appear to have never been complete circuits (Hedges and Buckley 1978, 248), notably where these meet or have been constructed against a natural obstacle such as a river, as at Abingdon (Leeds 1927, 1928), or a steep slope, as at Combe Hill, Sussex (Musson 1950). Others however, such as Robin Hood's Ball, Wilts. (Thomas 1964) and Whitesheet Hill, Wilts. (Piggott 1952) have had an obviously predetermined centre (Smith 1971, 111), but where the ditch circuit has encountered some obstacle, the circumference of the earthwork has been accordingly flattened or adjusted. The latter seems to have been the case at Staines, where the circular course of the ditches was apparently adjusted twice at the points described above, presumably to avoid some obstacle. (It should here be noted that the ditches shown in Fig. 1 are diagrammatic only). The nature of this obstacle may now only be surmised, but, if not of human origin, was probably geological. As shown in Fig. 1 the Neolithic causewayed enclosure was sited on the extreme southern tip of a long island of Lower Thames Flood Plain gravels which rises above the surrounding alluvium

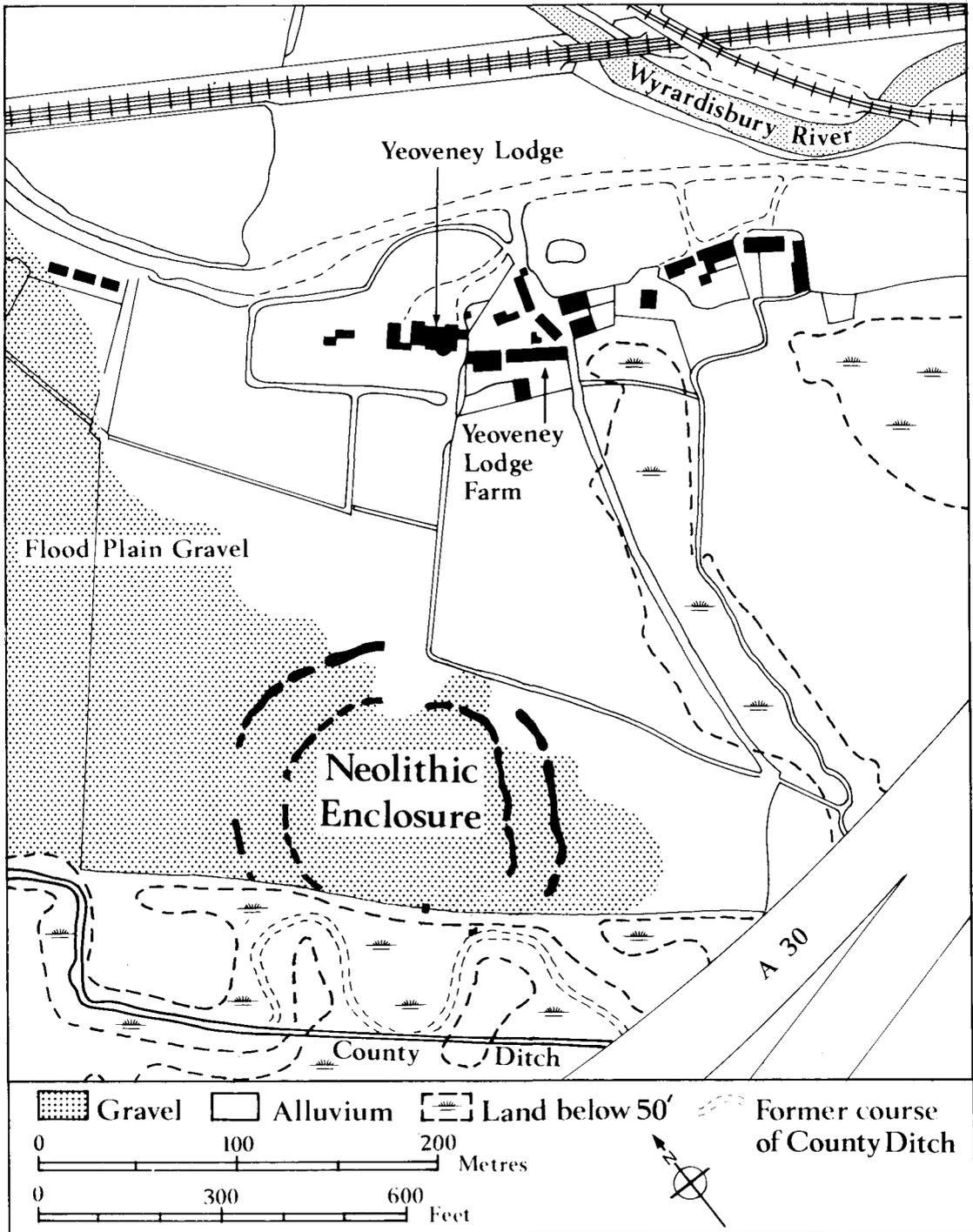


Fig. 2. Staines Causewayed Enclosure: The Location and Immediate Topography of the Site. Based on the O.S. Map of 1961. (Crown Copyright Reserved).

deposited by the various branches of the Colne Brook and the River Colne, a situation which in many respects resembles that of the causewayed enclosure at Abingdon (Leeds 1927, 1928). A fuller geological and topographical account will be included in the forthcoming monograph on the Neolithic and Romano-British aspects of the site. The Staines enclosure lay just above the 50 foot contour O.D., being bounded to the east by the alluvial deposits of the Wyrardisbury River, and to the west by the County Boundary Ditch. These natural features were undoubtedly key factors governing the configuration of the Neolithic earthwork. On the south-western side the outer ditch must have come very close to the original course of the meandering County Boundary Ditch (Fig. 2), and was probably adjusted to avoid either this or the marshy

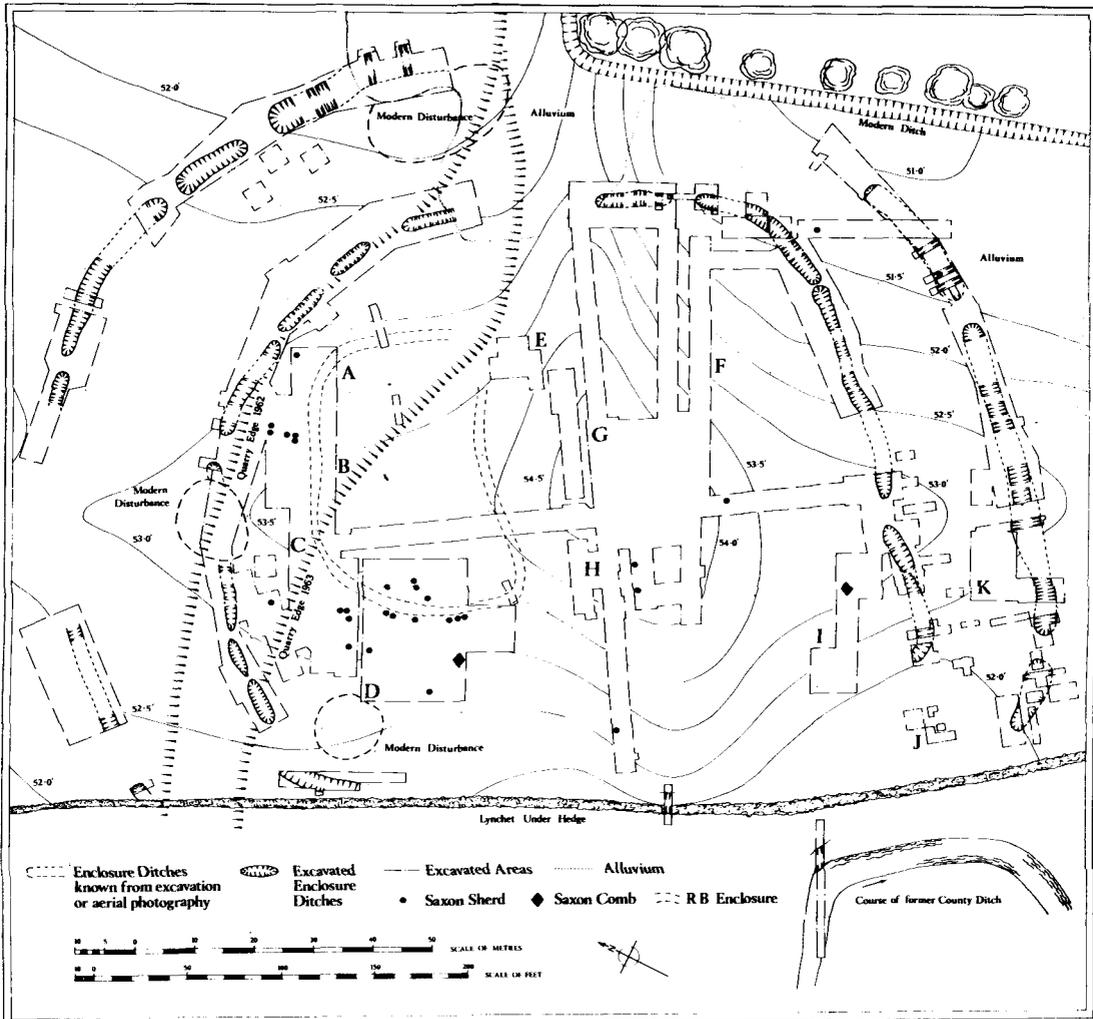


Fig. 3. Staines Causewayed Enclosure: Outline Plan of the Site Showing the Areas of Excavation (A-K) and the Distribution of the Saxon Finds. Based on a Land Survey by M.P.B.W. (Crown Copyright Reserved).

land in the area of this stream. On the north-eastern side of site, the sudden northward swing of the outer ditch was almost certainly occasioned by the increasing depth of alluvial deposits overlying the gravels at this point. From these two irregularities, it would seem that the constructors of the causewayed enclosure were determined to confine their earthwork to the area of gravel available to them in the location they had chosen.

The configuration of the Neolithic site therefore probably conformed to a logic imposed by the topography of the area. The coincidence of the two changes in the plan of the causewayed enclosure and the two modern field boundaries, however, is not so easily explained. Three reasons may be offered: that this coincidence is purely fortuitous; that these boundaries were designated in the prehistoric period and possibly respected as such throughout the intervening millenia; that the modern systems ignore the former land divisions on the site, but conform to the same constraints imposed by the topography of the area. The answer probably lies in a combination of the latter two hypotheses.

The whole area is flat and low-lying, and despite the cutting of extensive field ditches during the Romano-British and later periods, would long have remained marshy and liable to flooding. Even in 1961 the excavation of the outer ditch of the Neolithic enclosure in the lower field was greatly impeded by the high level of the water-table at this point. This in itself may in the Romano-British period have necessitated the creation of a field boundary and the cutting of a drainage ditch just above the 50 foot contour and perpendicular to the majority of Romano-British field ditches, which, as one would expect, ran approximately east-west across the site toward the watercourses on either side. On the eastern side of the field, however, the reason for the coincidence of the Neolithic and modern boundaries is less clear. It may be argued that the latter merely represents the limit of the medieval furlong at this point, and, as on the western side, the division between the arable cultivation on the gravels, and some other use of the alluvial deposits. This, however, is somewhat unconvincing, since this area of the modern field apparently disregarded the variations in the underlying subsoil, and included a considerable area of alluvial deposits, particularly in the northern half of the field, where these extended as an irregular feathered edge over the gravels (Fig. 2). (The representation of the gravel deposits in Fig. 1 is considerably simplified, and represents the deeper, rather than the superficial extent of the gravel island.) If the reason for the eastern boundary of the field formerly known as Stern Hill was geological, why did this boundary not continue across the northern half of the site, but turn sharply westwards? The isolated nature of Stern Hill in the 18th century in itself suggests a sociological rather than a geological reason for the boundaries of this field. Evidence for the influence of Romano-British field systems and enclosures on the arrangement of the medieval open fields is now widespread, and has been recently summarised by Taylor and Fowler (1978, 159–60), citing examples in Cambridgeshire, Yorkshire, Somerset and Warwickshire. At Staines the western boundary of the field known as Stern Hill is known to overlie a Romano-British ditch, while the northern boundary ran approximate-

ly 10 feet to the south of another Romano-British ditch. The presence of a third Romano-British ditch on the eastern side of the field may now only be inferred, but on the evidence of the above is considered to be likely. The origin of Stern Hill would therefore appear to be in at least the Romano-British period. The direct relationship of a Neolithic causewayed enclosure and a Romano-British sub-rectangular enclosure has long been known at Knap Hill (Cunnington 1911–12; Connah 1965), where, although occupying different areas of land, the two enclosures share a common side, the ditch of the later enclosure both intersecting and following for some 180 feet that of the Neolithic enclosure. In discussing the evidence for agrarian continuity on some sites in Warwickshire, Ford (1979, 163) stated that the ‘relationship between ring ditches, barrow sites and headlands of furlongs is such that continuity of some prehistoric boundaries into the medieval period must be given serious consideration.’ At Staines this would certainly seem to be so. At Hambledon Hill (R. Mercer pers. comm.) a Romano-British lynchet was recently found to overlie, and therefore to have utilised, the boundary established by the extant Neolithic bank of the Stepleton enclosure. At Staines however, the banks of the Neolithic enclosure having apparently disappeared by the Romano-British period, it may be assumed that the eastern and western boundaries of Stern Hill are of pre-Roman date. The point at which the latter were first established must remain conjectural, but where these respect the ditches of the causewayed enclosure, the banks of which must still have been visible in the Late Neolithic period at least, it is possible that these boundaries were created in the mid Bronze Age with the further expansion of agriculture, if not in the earliest post-enclosure period.

#### The Manorial, Parish And County Boundaries.

As noted above it may be argued that these three boundaries ignored the earlier functions and history of the site, and that they were primarily influenced by the topography of the area, since the complex watercourses, marshes, and alluvial floor of the Colne Valley serve as a natural boundary dividing the gravel terraces on either side. Nonetheless until the recent re-organisation of the county boundaries of Surrey and Middlesex, the southern portion of the county boundary of Middlesex and Buckinghamshire pursued an extremely irregular course, and was obviously influenced by the delineation of the medieval manors, particularly in the area of the adjacent manors of Poyle and Yeoveney (O.S. 1 inch sheet 170). To what extent the manorial boundaries in this area were at Domesday influenced by the Saxon occupation of the area is problematical due to the considerable loss of archaeological evidence as a result of urbanisation and gravel extraction, recently summarised by Longley (1975, 8–12). At Yeoveney the Saxon finds discussed below suggest that there was some form of occupation in the vicinity of the Neolithic enclosure in the 6th–8th century, while the Saxon origin of the place name (see p. 117 suggests that some part of the southern area of the gravel ‘island’ was occupied in the late Saxon period, albeit not the site of the Neolithic enclosure. As argued by Sawyer (1979, 2–3) the omission of a place-name from the Domesday book does not necessarily mean that there was no settlement there, merely that this

paid its taxes through the main manor. Such may have been the case with any settlement on 'Geofa's island' if this were encompassed within the lands granted together with Staines to Westminster Abbey in *c.* 1053–66 (see p. 118). If this were so the boundaries of the Saxon settlement may have influenced or been incorporated in the boundaries of the 11th-century manor of Staines. As in the 18th century the stream known as the Shire Ditch (later the County Boundary Ditch) certainly marked the western edge of the Yeoveney estate, it seems likely that if the creation of Yeoveney manor in the 13th century represented a fragmentation of the original manor of Staines, this stream or the adjacent marshes served as a land boundary not only in the 13th century, but at Domesday, and in the late Saxon period if not earlier.

The coincidence of pagan Saxon burial sites with the boundaries of the ancient parishes, many of which survive in the boundaries of the present-day civil parishes is now well attested (Bonney 1979, 41–51; Canham 1979, 110–113). Documentary and archaeological evidence, however, both show that the boundaries of the Saxons were themselves greatly influenced both by the topography of the area and the existing field monuments of the locality. The Saxon charter for Sunbury-on-Thames, for example, shows that the boundaries of this estate made considerable use of the watercourses and earthworks of the area (Tapp and Draper 1951, 302–5), while in Warwickshire it has been suggested (Ford 1979, 146–8) that the boundary of the 8th-century kingdom of the Hwicce may in part have been defined both by a number of probable pre-Saxon earthworks and a natural no-mans-land of woodlands, wastes and marshes. At Yeoveney natural boundaries are indisputably present in the numerous tributaries of the River Colne and in the Colne Valley itself, while although the earthworks of the Staines causewayed enclosure were almost certainly not in evidence in the 6th–8th century, some areas of the Neolithic banks and ditches may, as argued above, have been fossilised in the Bronze Age and Romano-British landscapes. In the light of recent research, which has produced a substantial body of evidence to demonstrate that the arrangement of many medieval and later parish boundaries, particularly in Essex (Rodwell 1978, 97), and Wessex (Bonney 1972, 169, 171, 174–5, 181–2), have their origins in alignments of earthworks dating to the Bronze and Iron Ages no less than in natural features, the juxtaposition of the Neolithic causewayed enclosure at Staines with, on the western side, a belt of marshes and a stream which until recently served a manorial, parish and county boundary, would now seem to be more than purely fortuitous.

The function of causewayed enclosures is at present far from clear, and has been extensively discussed elsewhere (e.g. Smith 1972), and most recently by Whittle (1977) who suggests that these earthworks probably served a variety of purposes. If so it is likely that their influence on the surrounding landscape will be equally differential. Sites which produce evidence of occupation, such as Staines, however, may be considered potentially influential. While the agricultural possibilities of the immediate area would appear to have been limited by the marshes to the east and west of the site, the economic potential of the extensive river pastures and numerous watercourses of the area was

certainly considerable. The causewayed enclosure at Staines was obviously constructed as a centre of some importance. Strategically placed within a naturally defended environment, commanding the mouth of the Colne Valley, and perhaps exploiting the resources of that valley, the socio-economic possibilities of such a centre may have resulted in the establishment of an estate, and in the Bronze Age if not within the Neolithic period. In Essex it has recently been postulated that certain parishes in the Roding Valley may reflect a series of pre-Roman estates, which although ignored in the Roman period, have nonetheless survived as territorial units in the post-Roman period (Rodwell 1978, 97 and Fig. 11.8). While in the absence of sufficient excavated sites evidence other than geographical for possible pre-Saxon estates in the Staines region is at present severely limited (Canham 1979, 113), it is nonetheless feasible that the Staines Neolithic causewayed enclosure may indirectly, if not directly, have influenced the subsequent development, both physical and administrative, of the local landscape, and caused the selection of a minor stream as a triple manorial, parish and county boundary at this point, rather than the larger watercourse of the Colne Brook, which divides the alluvial floor of the Colne Valley to the west of the site. In this little studied area of the Thames Valley even such slight evidence for the perpetuation of land divisions from the Neolithic to the present day is of considerable interest and potential importance.

### 3. THE LATER HISTORY OF THE SITE

By Lyn Blackmore

Following the Romano-British period the site seems to have been abandoned until the 7th century, and some at least of the Romano-British pits and field ditches left to silt up naturally. As the distribution of the Saxon pottery (Fig. 3) in Area D both follows and crosses the line of the Romano-British 'D' shaped enclosure, it would seem that this ditch had probably disappeared by the early-middle Saxon period. The presence of some sherds and fragments of two Saxon combs on the surface of six apparently pre-Saxon features, however, suggests that these may still have existed as minor declivities in the 7th century.

With the exception of a few isolated sherds and part of a Saxon comb (Fig. 5, No. 2), the Saxon pottery discussed below and part of another Saxon comb (Fig. 5, No. 1) appear to form two or possibly three clusters. Comb No. 2 (see p. 124) lay in the upper fill of a large, irregular, shallow hollow (2.6×1.3m), which may possibly represent the remains of a ploughed out 'Grubenhau'. Although the original Saxon name for Yeoveney, 'Geofa's island' (Ekwall 1970, 519) or 'Geofa's well-watered place' (Gover, Mawer and Stenton 1942, 19-20) may refer more specifically to a centre further north, perhaps nearer the probable site of the 13th-century manor house at Yeoveney Farm, rather than to the gravel island as a whole, the fact that early-middle Saxon domestic pottery has also been recovered from the nearby sites of Wraysbury, Thorpe, Egham, Shepperton Green (Canham 1979), Stanwell (Poulton 1978, 240, 242)

and the modern town of Staines (Jones and Shanks 1976, 101–114; Jones forthcoming) shows that there was a considerable amount of Saxon activity in the area. It is therefore suggested that while no definite Saxon structures were identified in the excavations of 1961–63 (this problem will be more fully discussed in the main report), there may also have been a Saxon settlement in the vicinity of the Neolithic enclosure, if not on the site itself. In this case such a location may reflect some aspect of the economy, such as the exploitation of the adjacent marshes and the facilities afforded by such proximity to the River Thames. The dating of the two combs (see below) as mid 6th–late 7th century, and the pottery, the Ipswich ware having a general range of c. 650–850, the grass-tempered ware a general range of 6th–8th century, all point to an approximate date of c. 650–750 for this occupation.

Throughout the late Saxon and medieval periods, the history of Yeoveney, which was known variously as Giucneya, Gyveneya, Jvenay, Jeveneye, Heveneye, Yeveneyc, Evenay and Iveny (Gover, Mawer and Stenton 1942, 19), was closely associated with that of the manor of Staines. The site of the latter is unknown, but may perhaps have been on the gravel island to the south of Yeoveney, upon which now stands St Mary's church (Fig. 1). The manor of Staines was certainly well established in the mid 11th century, when it was granted by Edward the Confessor, together with its berewicks and soke of 35 hides, to Westminster Abbey. The precise date of this gift is not known, but is believed to have been c. 1053–1066 (Gelling 1979, 121 No. 255; Sawyer 1968, 338 No. 1142). The lands within the soke of Staines are not specified, but may have comprised a number of hides at Exeфорde (Ashford), Leleham (Laleham) and Cerdentone (Charlton) (Pinder 1969, 109). Although not mentioned by name, it is generally accepted that Yeoveney was included in this grant (Harvey 1977, 355; Reynolds 1962, 18–19).

It certainly seems most probable that the western boundary of the later manor house of Yeoveney was already defined at Domesday (see p. 115). Possession of this land, however, may not have been secure until the later 11th century, for there seems to have been some dispute over the land in the reign of William I, when Walter fitz Other, who owned the nearby manors of Stanwelle (Stanwell), Bedefunde and Westbedefunde (East and West Bedfont) tried to gain possession of the Staines estate and thereby a substantial belt of land. The Abbey successfully fought the claim (Pinder 1969, 109; Reynolds 1962, 19), and by Domesday was the undisputed owner of the manor of Staines and its four berewicks. These are not named, but are commonly thought to have been Ashford, Laleham, Halliford and Teddington (Reynolds 1962, 18; Harvey 1977, 394). During the reign of William II, Gyveneya (Yeoveney) is referred to only as '*pastura de manerio de Stanes*' (Reynolds 1968, 18; Pinder 1969, 109). This would suggest that it was not a berewick but part of the commonland of the main manor of Staines, and at that time uncultivated.

According to the surviving records, the population of Yeoveney would appear to have been minimal until the establishment of a new manor house there in the 13th century. At Domesday Staines manor had six mills, one of which may have stood on the site of the medieval mill at Yeoveney, on the

Wyrardisbury River (Reynolds 1962, 21, 22). In the latter half of the 12th century, there was however at least one freehold (Reynolds 1962, 20, 22) which may have been the precursor of the 13th century manor house. By the 13th century there was a chapel at Yeoveney (Harvey 1977, 409), and by the 14th century a substantial complex of manorial buildings, including a hall, gatehouse, various barns and outbuildings and two granges. By this time there were 7½ customary tenements on the estate (Reynolds 1962, 22). The manor of Yeoveney was worked together with that of Staines under one reeve, but as a distinct unit of 200–300 acres. The actual boundary between the two manors is unknown (see below), but the lands of Yeoveney seem always to have lain to the north of St Mary's church, and to the west of Moor Lane (Reynolds 1962, 16) although in the post-medieval period at least they extended across the Lane to the north of Staines Moor. In the 13th century the main product was apparently grain or hay, but in the 14th century the farming became more mixed, although with apparently little division between the meadows and the arable, which was farmed in furlongs supporting a variety of crops at any one time. Further details of the farm may be found elsewhere (Reynolds 1962, 19, 23; Harvey 1977).

The hamlet at Yeoveney had probably disappeared by the end of the 14th century (Reynolds 1962, 22). In 1555 only three tenants are recorded as living on the estate (Reynolds 1962, 23), one of them perhaps near Yeoveney Lodge, where a timber-framed cottage still stands today. The 16th-17th century pottery, spindlewhorl and buckle found on the site may derive from this source.

From 1363 Yeoveney was almost continually leased out by the monks and later by the Dean and Chapter notably to the Durdant family, who were lessees from the late 15th century; the Dolbens, from 1665, and the Gyll family, formerly of Wraysbury, who brought the lease in 1775 (Reynolds 1962, 19). Some of the most useful information regarding the later history of the estate may be gained from three maps held by the Greater London Record Office (Nos. ACC. 325/4; ACC. 1524/7; ACC. 809/MISC/58). Of these the earliest, a fine terrier in water-colours (ACC. 325/4) by George Richardson of Burnham, Buckinghamshire, was presumably commissioned by William Gyll on his acquisition of the estate. This shows the house and outbuildings of Yeoveney Farm, which had been rebuilt by 1758 (Reynolds 1962, 19) as an imposing Georgian residence set in ornamental gardens and orchards, together with the freehold and leasehold properties on the estate, and the areas given over to arable or to meadow. The site of the Neolithic enclosure was at that time leased by two tenants. The southern half of the enclosure, which by then had become known as Stern Hill (see p. 114), possibly because it appeared as a slight rise when seen from the County Boundary Ditch (Fig. 3) was leased by William Gyll, and used for arable in the eastern half, and meadow in the western half by the Shire Ditch. The northern half of the site was leased by a Mr. Holcomb, who also held the land to the north and east of the site, and a few smaller fields within the estate of William Gyll. Although being a freehand representation the accuracy of this map is open to doubt, it is nonetheless interesting to note that

the meander of the Shire Ditch to the west of the Neolithic site was much less advanced on the north-western side of the enclosure than in the 19th century or as shown in Fig. 2, apparently running along the edge of the gravel island as far as the north-western section of the inner ditch of the Neolithic enclosure before entering the first meander.

In 1775 there was virtually no occupation in the area of the Neolithic enclosure, but by the mid-19th century the landscape had changed considerably with the cluster of buildings which had grown up around Yeoveney Lodge, which was built in the first quarter of the century. The basic field systems had changed little but the tithe map and accounts of 1843 (ACC. 1524/7) show that considerably more fields had been enclosed, and that at least 13 people and their dependants were by then living in the area and working the land. The bulk of the estate, including the northern part of the Neolithic site, was leased from Brooke Hamilton Gyll by one R. Stevens, but some of this tenants land, including Stern Hill, was leased directly from Westminster. In 1869, however, the estate was transferred to the Ecclesiastical Commissioners, who later sold it to the farmer in residence at that time. In the 20th century the land passed to the County Council. Throughout the 1930s and 1940s the site of the Neolithic causewayed enclosure was used for market gardening but in 1954 the orchards were removed, the County Ditch canalised (see Figs. 1, 2), and the land once again put under the plough until gravel extraction commenced in 1961, resulting in the total destruction of this multi-period site by 1963, and subsequently that of the greater part of the Yeoveney Estate. Yeoveney Farm and Willow Farm were both demolished in 1965 to make way for the new Staines Reservoir. No excavation was undertaken on the probable site of the medieval manor house, but fortunately a photographic record of the 18th-century house and 17th-century barns of Yeoveney Farm was made by the late Mrs. A. E. Pearce of the Staines Local History Society prior to their destruction. This may be consulted in the Greater London Record Office (PRO/190/12-28), together with four photographs by the National Buildings Record (PR/67/7, 8, 11, 13, 14) showing the house and barns in 1943 and 1957.

The Saxon and medieval finds discussed below are therefore of considerable interest in that they not only enlarge the currently limited knowledge of pre-Domesday rural settlement in the London region, but also provide what is probably the only archaeological, artefactual record of the Saxon and medieval landscape which has now been lost.

#### 4. THE SAXON AND MEDIEVAL POTTERY

By Philip Jones and Stephen Moorhouse

##### (i) Introduction

A total of eighty-eight post-Roman sherds were recovered from the site, either from within the overburden of topsoil removed by bulldozer, or else from the exposed surfaces of infilled features of prehistoric or Roman date. These were examined with the aid of a binocular microscope ( $\times 20$ ) to identify the inclusions within the clay body, using the methods adopted by Peacock

(1977, 26–32). The size, shape and frequency of the inclusions were then quantified and it was found that seven pottery fabric types were present within the assemblage.

Three fabric-types (A, B and C), represented by thirty sherds of poorly-fired, hand-manufactured pottery contained inclusions similar to that of pottery of known Saxon date from within the area. This is confirmed by the forms of some of the more identifiable sherds which are comparable to vessels of Saxon type. All but five of these sherds (Fabrics B and C) are in a grass/chaff-tempered ware (Fabric A).

The four other pottery-fabric types (D, E, F and G) are predominantly tempered with quartz-sand and were manufactured on a fast wheel. All but three of these sherds (Fabrics D and E) were found to be of Surrey white-ware pottery of the medieval and post-medieval period (Fabrics F and G). The majority fabrics within the whole assemblage are medieval white-wares of the 13/14th century, represented by forty-two sherds.

There are therefore at least three separate periods of post-Roman pottery from the site; a Saxon group of mainly grass/chaff-tempered sherds; forty-seven sherds of local sandy wares of the 13/14th century; and 11 sherds of Ash/Farnborough Hill-type white ware of the 16/17th century.

Results of the microscopic analysis of the sherds are itemized below as a fabric type series which incorporates a catalogue of illustrated sherds. This section also includes the dating evidence for the later medieval and post-medieval wares whilst the Saxon pottery is more fully discussed within Section (ii).

#### Fabric A: Grass/Chaff-tempered fabrics.

Twenty-five sherds including the rims of two hemispherical bowls (Fig. 4, Nos. 1 and 2) and the rim and body sherd of a cooking-pot probably of round-based form (Fig. 4, No. 3). Seventeen other sherds were of a fairly standard fabric-type that has also been found in the town of Staines. (Jones, forthcoming, fabric MA 1). This fabric contains frequent inclusions of carbonized chaff that was added to the original clay body as well as rare to sparse sub-rounded quartz grains and even rarer fragments of flint and chalk that more probably characterize the clay source or come from debris on the production site. Only seven sherds were found to contain a higher proportion of quartz-sand that may have been deliberately added along with the organic material to temper the clay. This latter variety is not always easy to separate from the standard type either here or in the modern town of Staines, and the division may be less real than imagined. The pottery was hand-made and most of the sherds have a black or drab brown core with frequently more oxidised brown surfaces. Surface treatment is confined to rough smoothing of the exterior of some of the sherds, and of the interior of the two bowls. (Fig. 4, Nos. 1 and 2).

#### Fabric B: Ipswich-type ware.

Two joining sherds from the sagging base of a cooking-pot (Fig. 4, No. 4). This vessel was hand-made with fairly thick-walls (0.3–1.0cm) and has a smoothed external finish. The colour is a drab blue-grey but is sooted externally on the base. The clay body contains a dense granular ground of very frequent angular quartz grains up to 1mm in size, with rare ironstone flecks and larger angular grits of quartz.

This fabric-type has not so far been found within the town of Staines except for some uncommon vessels produced (somewhat disconcertingly) in the late Roman period. A rim and base sherd of Ipswich-type ware found in excavations at Old Windsor (O'Neil 1958, 183–5), 3 miles north-west of the present site. This was found under microscopic examination to be

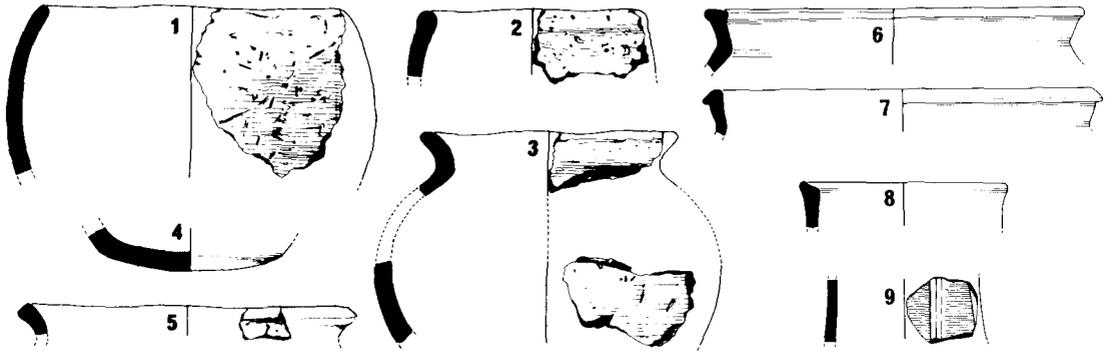


Fig. 4. Staines Causewayed Enclosure: The Saxon and Medieval Pottery ( $\frac{1}{4}$ ).

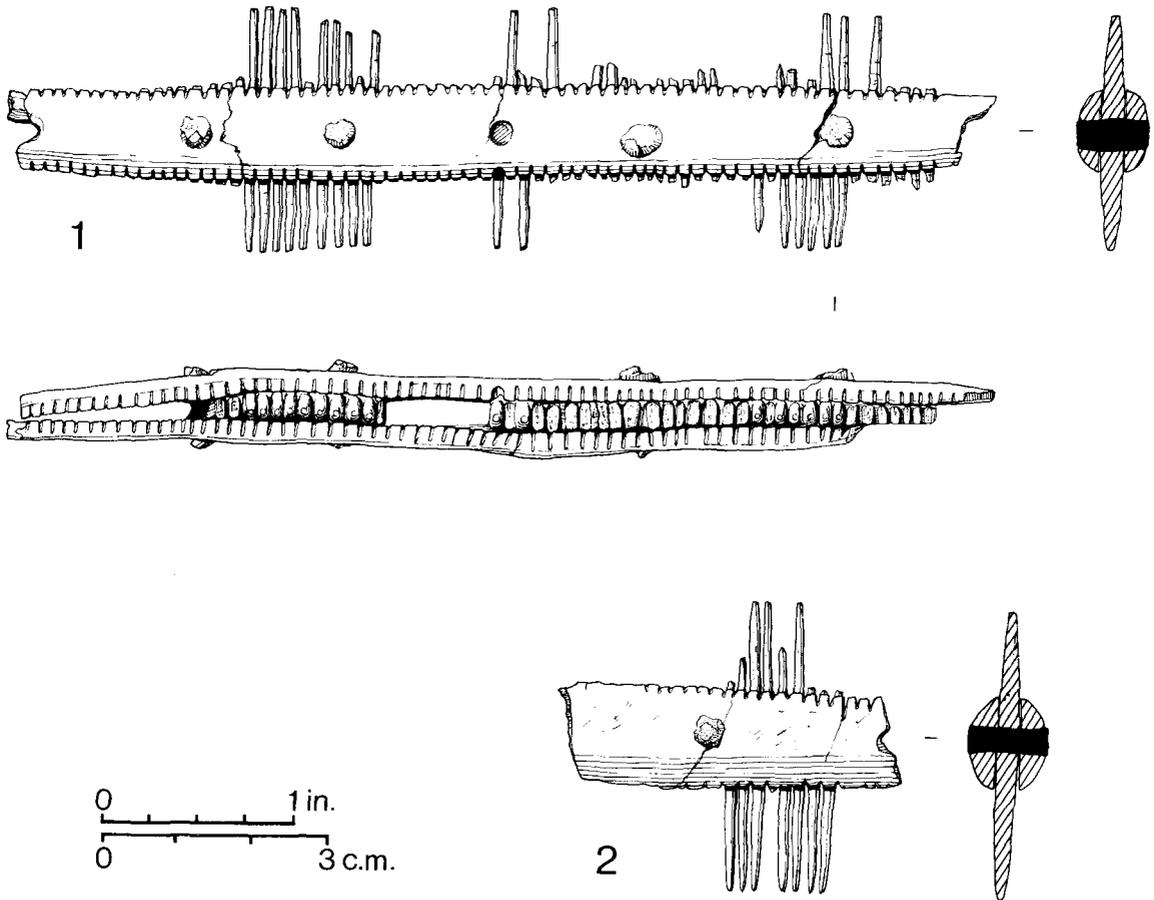


Fig. 5. Staines Causewayed Enclosure: The Saxon Combs ( $\frac{1}{1}$ ).

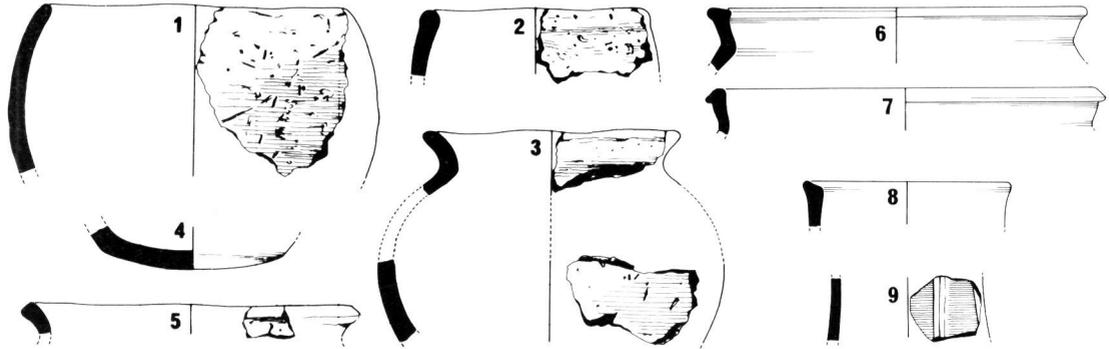


Fig. 4. Staines Causewayed Enclosure: The Saxon and Medieval Pottery (1/4).

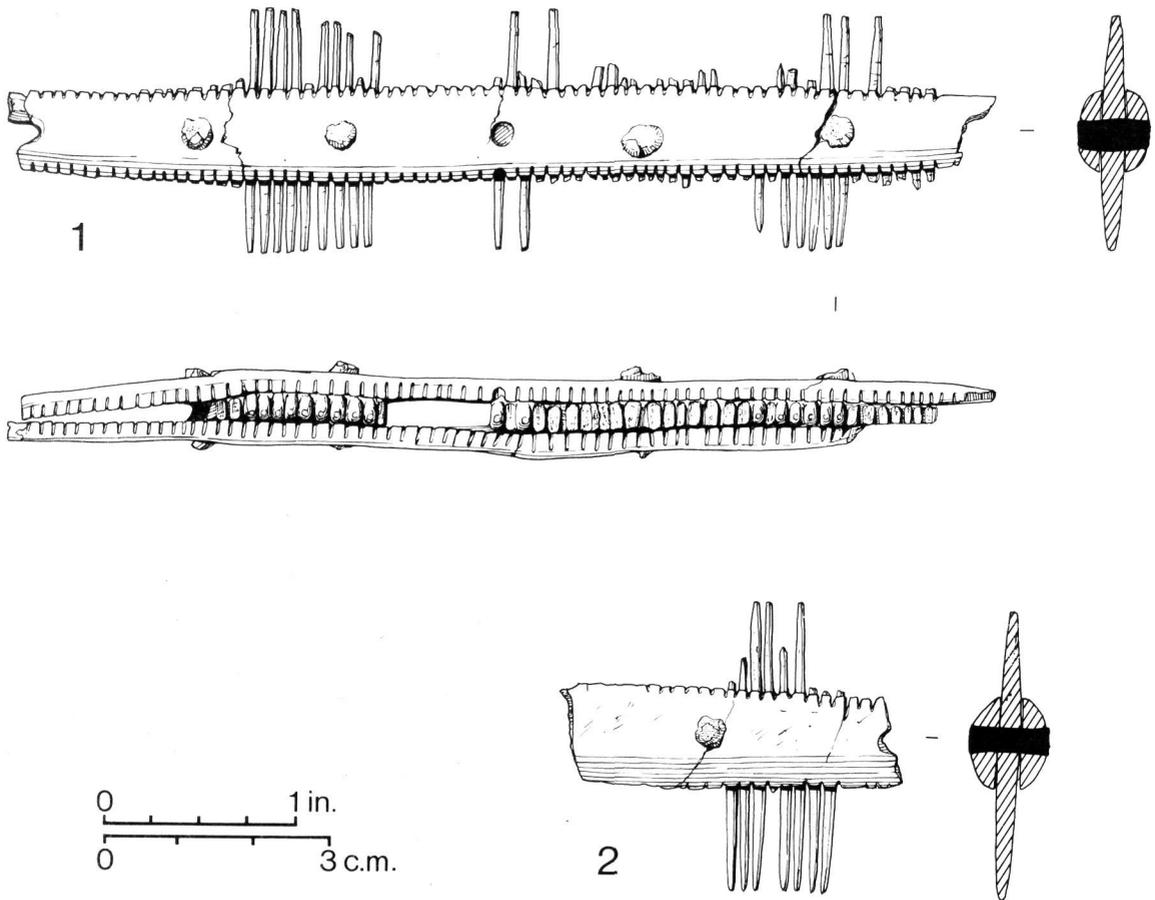


Fig. 5. Staines Causewayed Enclosure: The Saxon Combs (1/1).

dissimilar to the present example in that the fabric included larger quartz grains and was both harder and better made. Other sherds of a similar fabric-type have been found in middle Saxon deposits further east in the Thames Valley, as at the Treasury site, Whitehall, Westminster (Green, 1963, 1004–7), Battersea, S.W. London (pers. comm. S. McCracken) Arundel House, Strand (Haslam 1975, 221 and Fig. 6, No. 1) and Waltham, Essex (Huggins 1976, 104). At the latter site Dr. D. F. Williams identified a sherd recovered from a mid-late Saxon wall foundation as an example of his Ipswich-type ware Group 3 fabric characterized by angular quartz grains with an average size of *c.* 0.1mm. The sherds from the Staines causewayed enclosure could belong either to this variety or to his Group 2 which has a somewhat smaller range of quartz grains. Neither the basal sherds from Old Windsor or from the site of the Staines enclosure were knife trimmed above the base-angle, a common feature of cooking-pot wasters of the Ipswich kilns.

#### Fabric C:

Three sherds (Fig. 4, No. 5) in a pottery fabric of late Saxon/early Medieval type which has also been found within the town of Staines (Jones, forthcoming, fabric MHb). This vessel, probably a cooking-pot with simple everted rim, was handmade and has a glossy black and pimply surface. The inclusions are frequent subangular quartz grains *c.* 4–8mm, with moderate amounts of large angular flint fragments, and rare ironstone and chalk grits. An early date within the duration of this fabric-type may be indicated by its handmade manufacture.

#### Fabric D:

Three joining sherds from a fast-wheeled vessel with relatively thin walls (*c.* 0.4cm). The inclusions are moderate to frequent amounts of ill-sorted quartz grains (2–10mm but with an average size of *c.* 4–5mm) and sparse ironstone grits (*c.* 3–6mm). These sherds have a black core and a red-brown external surface; probably 13th century (not illus.).

#### Fabric E:

Two sherds of grey sandy ware (not illus.), both with external sage green glaze. The inclusions are well-sorted and very frequent subangular quartz grains (*c.* 3–5mm) with some sparse ironstone grits of a similar size; probably 13th century.

#### Fabric F: Medieval White Ware.

Forty-two sherds, including rim fragments of two cooking pots (Fig. 4, Nos. 6 and 7), one of which has splashes of green glaze on the interior and rim-top; one rim-fragment of a jug with external green glaze splashes (Fig. 4, No. 8); one sherd decorated with rilling and vertical grooves covered with an overall green glaze (Fig. 4, No. 9); a fragment of a thumbled base angle (not illus.); part of a strap handle decorated with diagonal slashing along each edge and covered with a green glaze (not illus.); and two sagging-base angles, one of which was glazed internally. Six other sherds display splashes of green glaze.

The fabric contains frequent well-sorted and sub-rounded quartz grains (*c.* 4–5mm, although occasionally larger, up to 7–8mm) mostly of red to pink colour, and sparse to moderate amounts of ironstone (*c.* 4–5mm). Although generally cream to off-white in colour, some sherds from cooking-pots such as Fig. 4, No. 6 are reduced to grey in patches.

Pottery of this type with a preponderance of pink to red quartz grains is typical of the town of Staines in assemblages of the late 13th–14th century (Crouch 1976, 108 and Fig. 19). Although these could possibly be from kilns in the Kingston-upon-Thames area, excavated wasters from the Eden Street kiln (Hinton, 1980, 380) and descriptions of Kingston-type white ware from the Angel Court, London site (Blurton 1977, 82) do not seem to be of the same fabric which is so common in the Staines area.

#### Fabric G: Post-medieval white ware.

Eleven sherds, including rim fragments of two open dishes, one with internal yellow glaze and the other with internal and external apple-green glaze; and a corrugated rim of a bowl with crooked yellow glaze (not illus.). The fabric is fairly smooth with frequent well-sorted quartz

grains of average size *c.* 0.5–1mm and sparse ironstone inclusions. The forms, glaze and fine fabric of this ware are similar to the products of the Ash and Farnborough Hill kilns of the Surrey-Hampshire border area (Holling 1971, 57–88) and a late 16th–17th-century date is likely.

## (ii) Discussion of the Saxon Pottery

More precise dating of grass/chaff-tempered pottery within the early to mid Saxon periods is difficult to assess in the absence of other wares with a more limited period of production. It has been found with decorated pottery of early Saxon type within the immediate area in Staines at the Friends Burial ground (Crouch, forthcoming) and Shepperton Green (Canham 1979, 115) and also at many other sites within the south-east. At Old Windsor, Berks. and Waltham, Essex however, such pottery was a significant element within mid or mid-to-late Saxon assemblages that also included handmade shelly wares and rare sherds of Ipswich-type ware. (O'Neill 1958, 183–5; Huggins 1976, 104 and Fig. 36). The frequently cited survival of the grass-tempering tradition to *c.* 1050 at Old Windsor may more reasonably indicate the accumulation of earlier sherds within 11th century levels as the percentage of this ware declines after Phase IIIb, considered by the excavator to be of or before the beginning of the 9th century. Plain hemispherical bowls similar to Fig. 4, Nos. 1 and 2, have been found on early Saxon sites, as at Dorchester (Frere 1962, Fig. 21, No. 1), and Walton, Bucks. (Farley 1976, Figs. 13, 14 and 15) in grass/chaff-tempered ware or in association with sherds of the same. A bowl very similar to Fig. 4, No. 1 however, was excavated within the town of Staines and bears the scar of an upright lug projecting from the rim, which is a common feature of mid Saxon pottery. Bag-shaped cooking-pots with weak shoulders and simple everted rims typical of Fig. 4, No. 3 seem to have begun fairly early at Sutton Courtenay (Leeds 1947, Pl. 216), but the general form continued to be made throughout the Saxon period and was absorbed into the early medieval repertoire of vessel shapes. Cooking-pots of Phase IIIb at Old Windsor, and therefore late within the duration of grass-tempered pottery manufacture, were however, better-potted than most similar vessels from the area and also have higher, and more pronounced shoulders.

On the basis of the above, the date of the grass/chaff tempered pottery from the site of the Staines enclosure is considered to be of mid Saxon date *c.* AD 650–850, and the presence of Ipswich-type ware confirms this general conclusion. There are some grounds for believing that the material may be early within the period as no shelly-ware sherds were found on the site. These may begin within this area by as early as the late 8th century. The unsophisticated nature of the grass-chaff-tempered vessel forms may also preclude their manufacture after the later 8th or 9th century.

## 5. TWO ANGLO-SAXON COMBS

By Leslie Webster

### i) Stratification (R.R.-M.)

In addition to the pottery discussed above, fragments of two antler combs were also recovered (Fig. 5), of which No. 1 came from the topmost layer of a

pit or gully in Area D and No. 2 from the uppermost layer of a large, shallow oval shaped feature in Area I (Fig. 3).

As the lower layers of both features contained Neolithic flints (presumably residual) and Romano-British pottery but no post-Roman material, these combs are unfortunately not securely stratified. Owing to the heavily ploughed nature of the site, it is not likely however that these relatively delicate objects could have travelled far, if at all.

## ii) Description and discussion (L.W.)

1. A fragmentary double-sided composite antler comb, now consisting of four double-sided tooth-plates held between two undecorated, bevelled median bars. The whole construction is secured by five iron rivets. (L. 130mm, W. 32mm). Site location: Box 77, F201 layer 1.
2. Fragments of a double-sided composite antler comb consisting of (i) a length of undecorated bevelled median bar (L. 45mm) attached to a complete section of tooth plate (L. 38mm) which is fixed to the bar with an iron rivet, (ii) a separate length of median bar as before (L. 28mm) and (iii) a fragment of tooth plate with two adjacent teeth (L. 19mm). Site location: Box 217, F322 layer 1.

Both combs belong to the same well-known class of double-sided composite comb constructed of a series of separate short tooth plates fixed between two horizontal bars riveted together. These are often described as bone in the literature, but antler is in fact the usual medium. The teeth were invariably cut into the tooth plate blanks after the comb was assembled, as the saw marks along the edges of the bars show here (Fig. 5).

The two combs are quite undecorated and since their ends do not survive, there is no means of telling what shape their end plates might have been. Double-sided composite combs occur in continental Germanic and Anglo-Saxon contexts from the first half of the 6th century until the middle of the 7th century, when they are gradually superseded by the single-sided comb.

Similar examples occur at Bradstow School, Broadstairs, grave 77, (unpublished); Buckland, Dover, graves 30 and 110, (unpublished), and Köln-Junkersdorf; graves 159 and 163 (La Baume 1967, 107-8, Pls. 10 and 43, No. 8). More locally, a number of both plain and decorated combs were recovered from the 5th-7th century Saxon settlement at Walton, Buckinghamshire (Farley 1978, 206 and Fig. 20, 216 and Fig. 25).

Close dating of these two combs is not possible beyond a general bracket of mid 6th to late 7th century.

## 6. AN IMPORTED STONEWARE SPINDLEWHORL, WITH SOME PRELIMINARY COMMENTS ON STONEWARE SPINDLEWHORLS FOUND IN ENGLAND, THEIR DATING AND ORIGIN.

By Stephen Moorhouse and John Hurst.

### Introduction

During excavation of the Neolithic causewayed enclosure at Staines a stoneware spindlewhorl was found in the topsoil in Area B (Fig. 6, No. 1). It was not associated with any contemporary occupation on the site and can be regarded as a casual find. The Staines spindlewhorl belongs to a group of

stoneware spindlewhorls whose source of manufacture probably lay in the Rhineland. This note draws attention to imported stoneware spindlewhorls found in this country (Stephen Moorhouse) and to their sources of manufacture and wider date range in the Rhineland and Low Countries (John Hurst).

### STONEWARE SPINDLEWHORLS FOUND IN ENGLAND (S. M.)

This note is based on a very brief survey of material held by the principal London museums, the Ashmolean Museum Oxford and a few sites of post-medieval date in the London area. It was initiated to provide some background dating evidence for the spindlewhorl from the Staines causewayed enclosure, and although no further research work has been carried out since 1972, it was thought worth publishing the material then gathered together to draw attention to stoneware spindlewhorls and encourage further work on their study. At present three types of spindlewhorl may be provisionally defined by their form and fabric:

#### Type 1

This is the most common type found in this country. The wide variation in size and detail is shown in Fig. 4, Nos. 1–12. Although there is some variety in diameter, the diameter to height ratio appears to be consistent. Some are slightly taller than others while the ends of the spindle hole on some examples are chamfered. Horizontal annular girth grooves, either incised or created during manufacture, are a feature of this type. Some of the grooving extends to corrugation, as in Fig. 6, No. 2, resembling the corrugated sides on the Raeren stoneware mugs so common in this country, a source from which many of the spindlewhorls are likely to have originated. The fabric is a uniform fine grained dark grey stoneware covered in a light brown to bronze coloured salt glaze, occasionally with a light grey mottling. In some cases the glaze has partially or completely worn away or decayed due to the material in which the spindlewhorl was deposited when discarded.

#### Type 2

This type is distinguished from Type 1 both in form and fabric. The base is much broader than the top, giving the profile of a truncated cone. They appear to lack intentional girth grooves and are otherwise generally smooth surfaced. The fabric is much lighter in colour and finer than those of Type 1, Nos. 13 and 15, being very similar to the smooth Siegburg products.

#### Type 3

A bi-conical form the diameter of which is much greater than its height. The brief survey revealed only one example of this type, suggesting it is the rarest form.

Few of the spindlewhorls examined have come from a dated context. Most were chance finds. Three stoneware whorls have been found in 16th-century deposits: one came from Waltham Abbey, Essex, in a context dated *c.* 1540–1600 (Huggins 1969, 76 Fig. 26, No. 7; 57, 63, 77–8), a second from a pottery kiln site at Boreham Street, East Sussex, dating to the late 15th or early 16th century (Crossley 1972, 64, note 47) and the third from Barking Abbey, which was dissolved in 1539 (Huggins 1969, 78). The only example of Type 3

(No. 16) so far recognised in this country came from Whitehall Palace in a pit dating *c.* 1530. A recent find of a Type 1 spindlewhorl from Kingston-upon-Thames came from a general layer of the period 1600–1650 (pers. comm. S. Nelson). The only possible evidence for an earlier date comes from the Staines causewayed enclosure, where, although the spindlewhorl was unstratified and unassociated, the majority of post-Saxon pottery on the site is dated to the 13th–14th centuries, with only eleven sherds of 16th–17th century date (see above). While this must remain uncertain it is in keeping with the early evidence for stoneware spindlewhorls now being identified on the continent (see below), although the 16th–17th century buckle (see below) may support a later date for the Staines example.

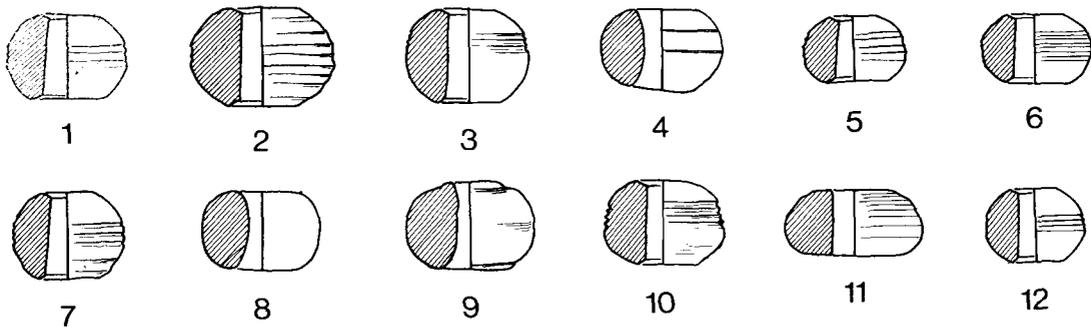
Spindlewhorls were used as fly-wheels on the lower end of the distaff spindle, on which the wool thread was spun from the distaff. They were made in a variety of materials, either purposely as spindlewhorls or fashioned from waste or discarded objects. Those wrought or cast from metal ores could be very ornate and decorative, particularly those made of lead. This is in contrast to the stoneware examples, whose only attempt at decoration is in the horizontal incision or girth grooves found in Type 1. It seems likely that some stoneware forms were copying spindlewhorls in other materials, particularly the biconical form of Type 3 which is commonly found in lead whorls. It is probable that some spindlewhorls made from natural geological materials could be mistaken for stoneware spindlewhorls; and *visa versa*, particularly where the glaze has come off the surface of hard fired fine grained stoneware examples.

Why do spindlewhorls appear to be imported into this country in large numbers during a period when woollen thread was produced mechanically? Although the spinning-wheel appears to have superseded the distaff method of spinning during the 14th century, the earlier method was still retained for fine warp threads, and in many rural areas distaff-spinning was common into the 19th century. This is reflected by the many rural finds of spindlewhorls. Stoneware examples are known from Shefford (Bedfordshire), Burford (Oxfordshire), Halton (Cambridgeshire) and Malton (Cambridgeshire), Fig. 6, Nos. 4, 11, 13 and 15 respectively. There was, therefore, a need for spindlewhorls throughout the post-medieval period, and it seems likely that the stoneware potters took advantage of this ready market.

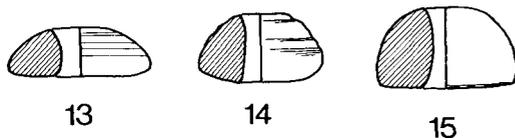
This brief survey of stoneware spindlewhorls is based on about 50 examples mainly from south-eastern England. Many more examples could have been illustrated, particularly from the collections of the former London Museum and Guildhall Museum, now housed in the Museum of London. Museum collections in the provinces should now be examined, the relatively large number of spindlewhorls in the Ashmolean Museum, Oxford, suggesting that other collections may exist elsewhere in the country. Independent dating is needed for their currency, particularly as the continental evidence suggests a starting date in the 14th century while the English material suggests a currency during the 16th century. Further work is required on the validity of the types as defined above, which are based on shape variations, and may modify the types, for example merging Types 1 and 2. Stoneware spindlewhorls, originating

from the numerous German factories, are particularly common in northern Europe, and a closer study of these may provide a better basis on which to define those found in this country.

## Type 1



## Type 2



## Type 3

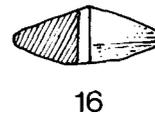


Fig. 6. Staines Causewayed Enclosure: A Stoneware Spindlewhorl (No. 1) and Comparative Examples (1/2).

## SOME EXAMPLES OF IMPORTED SPINDLEWHORLS IN ENGLAND (Fig. 6)

## Type 1

1. Light blue-grey fine stoneware; covered with a light orange-brown glaze, except on the angles, where it has worn away. Staines causewayed enclosure.
2. Grey stoneware with shiny lustrous yellowish brown glaze. The Aquarium site, Westminster. Museum of London. Acc. No. A 9666.
3. Light grey stoneware with dull light brown mottled glaze. London. Museum of London. Acc. No. A 4754.
4. Grey stoneware with light grey-brown mottling. Shefford, Bedfordshire. Ashmolean Museum, Oxford, Acc. No. 1927.5965g, FL 189.
5. Grey stoneware with bright lustrous dark bronze and grey mottling. Horse-shoe Wharf. Museum of London. Acc. No. A 4801.
6. Grey stoneware, dark brown and grey mottling with burnt pimply surfaces. Found in Newgate Street, London. Museum of London. Acc. No. A 5195.
7. As No. 6. Unprovenanced. Ashmolean Museum, Oxford.
8. Light buff fine-grained stoneware with slight patches of clear glaze. Brasenose College, Oxford. Ashmolean Museum, Oxford, Acc. No. 1887.3209.
9. Off-white stoneware, crudely made, chipped in places, with traces of a yellow khaki glaze. Bodleian Extension, Oxford. Ashmolean Museum, Oxford, Rawlinson bequest.

10. Dark brown and grey glaze. Newgate Street, London. Museum of London. Acc. No. A 5194.
11. Light blue-grey stoneware with traces of sparse greeny-brown glaze and a white substance which appears to be under the glaze. Burford, Oxfordshire. Ashmolean Museum, Oxford. Acc. No. 1940. 10.
12. Light grey stoneware with shiny lustrous light grey glaze. 'Blue Eyed Maid' site, Southwark. Museum of London. Acc. No. A 12015.

## Type 2

13. Unglazed light grey very fine smooth stoneware. Harlton, Cambridgeshire, Acc. No. 1927, 5965a.
14. Light grey stoneware with badly rubbed khaki glaze. Angel Inn, Oxford. Ashmolean Museum, Oxford, Acc. No. 1883.45.
15. Unglazed light grey smooth stoneware with dark purple colouring to body. Malton, Cambridgeshire, 1871. Ashmolean Museum, Oxford. Acc. No. 1927.5965b.

## Type 3

16. Light grey stoneware covered all over with shiny lustrous light grey glaze. Whitehall Palace, Westminster, Pit T3. Museum of London. I am grateful to H. J. M. Green for bringing this whorl to my attention, and to J. Charleton for allowing its publication here in advance of the final report.

## KILN SOURCES AND DATING (J. H.)

Quantities of dark grey stoneware spindlewhorls with grey or brown saltglaze have been found in waster heaps excavated at Raeren (pers. comm. Dr O. E. Mayer and H. J. E. Van Beuningen), a large number of which may be seen in the Van Beuningen Collection at Langbroek. They have also been found at kiln sites in Aachen where very similar wares to Raeren were made (Hugot 1977, 251, Pl. 19). At both Raeren and Aachen Type 1 is the most common, but there are also variations of Type 2 (with girth grooves like Type 1) and Type 3 (with a central collar not a plain biconic form). These finds are datable to the 16th century and examples were doubtless exported to Britain with the ubiquitous Raeren stoneware drinking mugs (Hurst 1964, 142–3).

This dating is, however, deceptive because excavations in Amsterdam have produced a range of stoneware spindlewhorls, in contexts ranging from the early 14th century up to the 17th century replacement of the distaff by the spinning wheel; these were mainly of Type 1 but also Type 2, so there appears to be no obvious typological evolution (Baart 1977, 126–9). Type 1 spindlewhorls in the local Low Countries grey ware (Baart 1977, 128–9, Nos. 99–102), and more angular versions of Type 2 in lead were also found in Amsterdam (Baart 1977, 128–9, Nos. 104 and 106). Elsewhere in the Low Countries stoneware spindlewhorls have been reported from Hasselt (dated 14–15th century) and Overijssel (dated second half of the 15th century, (de Jong 1980, 105–6, Nos. 53–5), while in Haarlem blue-grey examples of Type 1 spindlewhorls may be as early as the 12th or 13th century (Van Regteren and Numan 1980, 34 Fig. 4). As the pottery industries at Raeren and Aachen do not seem to have got fully underway until the second half of the 15th century the earlier examples presumably come from Langerwehe which produced a similar dark grey stoneware (Hurst 1977); wasters have, however, not so far been noted from the kiln sites. Light grey stoneware spindlewhorls of Type 1, with both single and multiple grooves, were made at Siegburg in the 14th and 15th centuries (Beckmann 1957, 334 XII 1.26 and Fig. 96 Nos. 7–8).

It is unfortunate that most English finds of stoneware spindlewhorls are undated, but those from Waltham Abbey and Boreham Street (see above) confirm their 16th-century importation. In view of the wide date range, and the presence both of 13th/14th and 16th/17th-century pottery on the site of the Neolithic enclosure, the Staines spindlewhorl therefore cannot be closely dated at this time. More stratified examples are badly needed but it is likely that stoneware spindlewhorls of similar types were imported into Britain from the 14th to the 17th centuries, so they do not provide satisfactory dating evidence.

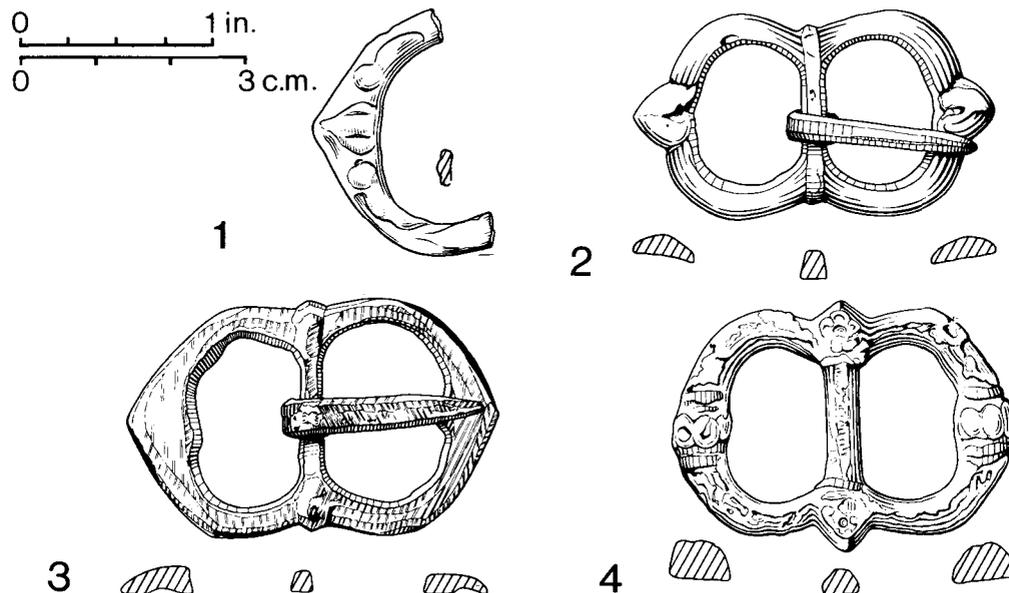


Fig. 7. Staines Causewayed Enclosure: A Bronze Buckle (No. 1) and Comparative Examples (1/1).

## 7. A 16th–17th-CENTURY BRONZE BUCKLE By Lyn Blackmore

Part of an open-cast bronze buckle of 'ogival' or 'heart-shaped' form (Fig. 7, No. 1) was found during the course of stripping Areas A and B. The casting is of a reasonable standard, having no rough edges, but artistically the piece is of inferior quality, being decorated with a devolved Renaissance design in low and indistinct relief. Measuring *circa* 1¼ inches or 3.35 cm across at the widest point, the fragment would appear to be rather narrower than the average shoe buckle, and is probably from a belt or horse-trapping. The nature of the fracture suggests that this may originally have been a double or 'spectacle' buckle, consisting of two loops with a central bar, combining the main stylistic features of three unprovenanced examples in the Museum of London, which are illustrated here for comparison. Of these No. 3 (A4298) is most similar to the Staines example in form, but slightly smaller, undecorated, and apparently cast in a mould. No. 2 (A01711, Layton Collection) bears a similar, but more stylised, 'heart' or 'pip' which forms an addition to, rather than an integral part of, the main loop. Possibly deriving from the terminal knob or leaf on the belt chapes of the 14th century, this design feature may indicate an earlier date for this example, and a later date for that from Staines, where the 'heart' is absorbed into the loop of the buckle. No. 4 (A4308), the most elaborate, is, like the Staines example, open-cast, but decorated in a more neo-classical style.

As a single buckle attached to a strap end, a simpler 'ogival' or 'heart-shaped' form of the Staines buckle was already in use in the 14th century (London Museum Medieval Catalogue No. 7 1940, 272 and Plate LXXV, Nos. 1, 2, 7, 8). Representations of double buckles on memorial brasses show that these were an innovation of the later 15th century, but the majority of these buckles are of post-medieval date. On stylistic grounds the Staines example is probably of late 16th–17th-century date, and therefore likely to be contemporary with the spindlewhorl and the post-medieval pottery discussed above.

Thanks are due to John Clark and the Museum of London for their help, and for allowing these buckles to be studied and published in this paper.

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*The Society is grateful to the Department of the Environment for a grant towards the cost of publishing this report*

#### APPENDIX

Since the completion of the above report two radio-carbon dates are now available for the Saxon activity on the site. Although somewhat later than the probable 6th-7th century date of the two antler combs discussed above, the two uncalibrated dates of a.d.  $820 \pm 40$  (BM-796) and  $900 \pm 70$  (BM-797) are in broad agreement with the pottery dates, which may now be extended to include three sherds of Late Saxon-early medieval shell-tempered ware. Of the two dates, the earlier was derived from a crescent-shaped deposit of charcoal, bone and daub which overlay the outer Neolithic ditch on the northern side of the enclosure (Trench 14). The later date was obtained from the upper fill of a pit within the interior of the enclosure (F32), which produced in addition fragments of daub and two sherds of Ipswich-type pottery (Fig. 4, No. 4).

# THE ARMS OF FITZWALTER ON LEATHER SCABBARDS FROM LONDON

TONY WILMOTT

In the collections of the Museum of London are a number of knife scabbards upon which are engraved shields of arms and other heraldic motifs. It seems hitherto to have been tacitly assumed either that these were purely decorative in intent, or, if representative, that it would be impossible to identify them with any family arms. It is suggested below that in at least one case it is possible to identify a coat of arms with that of a family of particular importance in 13th-century London, the FitzWalters.

The most frequently occurring device on scabbards of this kind is *a fess between two chevrons* (Fig. 1). These arms appear on 6 out of 22 scabbards. They are described below and illustrated in Fig. 2.

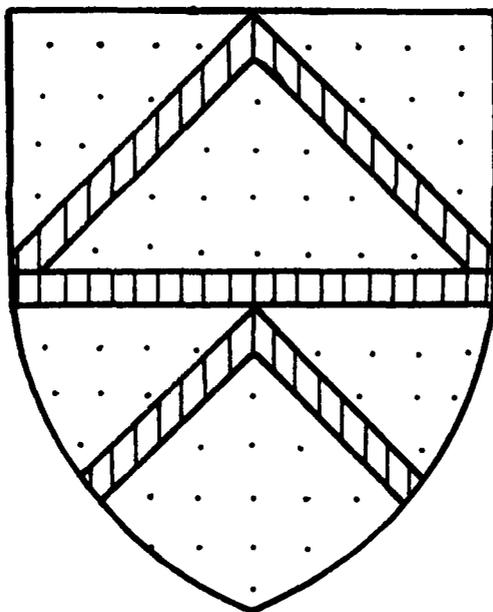


Fig. 1. Arms of FitzWalter: The Arms.

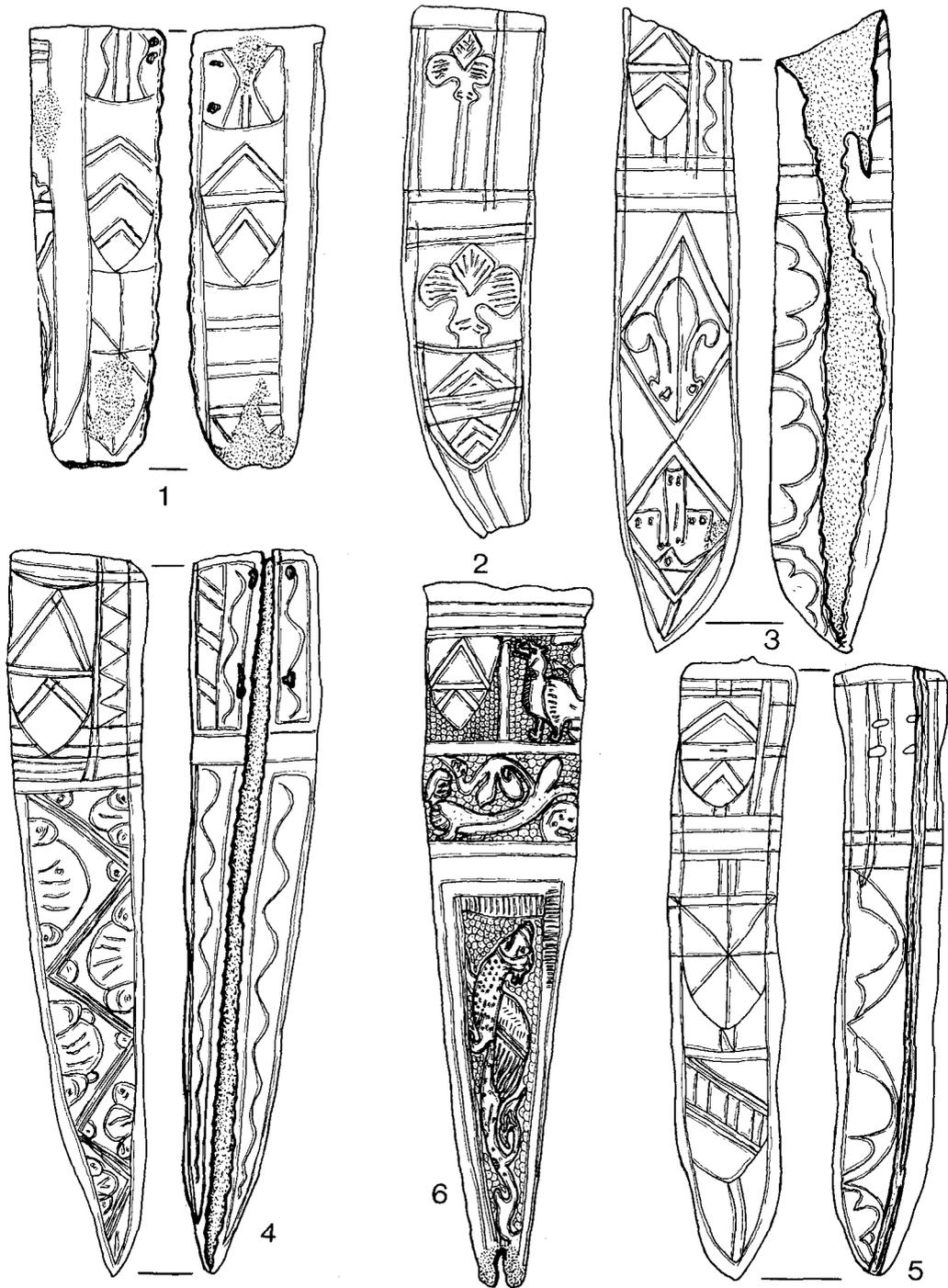


Fig. 2. Arms of Fitzwalter: The Leather Scabbards (1/2).

## THE SCABBARDS

1. Baynard's Castle 3521 Scabbard 125mm long, 35mm wide at the top, side-stitched, with two thonging holes for suspension in front and back. Decorated with two shields on each side placed on a horizontal bar. Shields were blazoned (1) *A fess between 2 chevrons* (2) *3 bars* (3) *3 chevrons* (4) *quarterly, and per bend*.
2. Baynard's Castle 3660 Scabbard 210mm long. Decorated in two zones to accommodate handle and blade. The handle section is 61mm long, and decorated with a shield bearing, *a fess between 2 chevrons*, and a compartment with a zig-zag line. The blade section features zig-zag lines, in each of which is a trilobate design decorated with lines. The scabbard is back-stitched, and has four thonging holes in the back, and a decoration of wavy lines on each side of the seam.
3. Museum Acc. No. 4638 Scabbard 150mm long and 40mm wide at the mouth. This scabbard also is divided into decorative zones for handle and blade. The handle section is 55mm long, and is decorated with a vertical bar terminating in a fleur de lis. A similar bar on the blade section is surmounted by a shield bearing *a fess between 2 chevrons*. The back is decorated with vertical and horizontal bars, and is pierced with four thonging holes. The scabbard is stitched up the side.
4. Museum Acc. No. A.3664. Scabbard 175mm long and 34mm wide. Divided into zones for handle and blade sections. Handle section at the front decorated with a shield *a fess between two chevrons* on vertical and horizontal lines. Blade section has two shields, *gyronny*, and a *bend gobonny cotised*. The back, which is stitched to one side, and pierced with four thonging holes has the blade section decorated with trilobate motifs in semi-circles.
5. Museum Acc. No. 4659. Scabbard 188mm long and 35mm wide at the top, back-stitched. Front decorated in two zones for handle and blade. The handle section is decorated with a shield bearing *a fess between two chevrons* and a compartment with a wavy line. The blade section has two lozenges containing a *fleur-de-lis* and a *triple towered castle*. The back is decorated with a pattern of enclosed trilobate devices similar to those on scabbard 4.
6. Museum Acc. No. 4643 Scabbard 203mm long, 47mm wide at the mouth. The scabbard is back-stitched, with four thonging holes in the back. This is the most highly decorated of the scabbards. It is divided into the conventional decorative areas of handle and blade. In both areas the backgrounds are scaled. The blade part is engraved with a monster, which seems to represent a wyvern, a creature with a dragon's body, an eagle's wings, and only 2 legs. The three panels on the handle section carry (1) a shield bearing *a fess between two chevrons*, (2) a *wyvern statant*, (3) another monster appears to have a human head, possibly intended as a harpy.

Among the designs on the scabbards the only common factor is the representation of the arms of *a fess between two chevrons*. In all cases these arms are placed at the top of the scabbard, except 3, where the arms have prominence on a relatively plain scabbard.

Scabbards of this type appear to be uniformly dated. Armorial sheaths engraved with a blunt tool have been held to be typically 13th century<sup>1</sup>—a date which is substantiated by archaeological evidence. Scabbards 1 and 2 above were found in the dumping predating the construction of the dock at Baynard's Castle, laid down in the early 14th century.<sup>2</sup> The other scabbards listed were not found in dated archaeological contexts, and were chance finds from Thames Street (4), Westminster (5) and Moorfields (6). Though these were not themselves dated they can be compared with other dated scabbards. The Baynard's Castle dock deposit yielded a scabbard engraved with a *fleur-de-lis* like that on scabbard 3, and several scabbards decorated with trilobate designs

like those on 2, 5, and 6. The arms *a bend gobonny cotised* (5) also appear on a scabbard from a cess pit at Dukes Place in the City<sup>3</sup> dated to the late 13th to early 14th century. The *fleur-de-lis* and *castles* in lozenges shown on scabbard 6 are a frequently occurring design, and a sheath bearing this device was found in a context dated to the late 13th to early 14th century at the Custom House site.<sup>4</sup> Other examples of this date from Custom House include a design featuring a monster similar to that on scabbard 4, while monsters also appear in the Baynard's Castle dock group, and on one scabbard from a context at the Public Cleansing Depot also dated to the later 13th to early 14th century.<sup>5</sup>

The scabbards in the above group are, it appears, characteristic of a type of armorial engraved scabbard which has been often found in the City, and which, when recovered from archaeological deposits can invariably be dated to the late 13th to early 14th century. This date range is the date of deposition, when the scabbards were disposed of as rubbish. Thus, perhaps, the date of manufacture and use should be placed in the latter half of the 13th century.

## THE ARMS

The identification of uncoloured representations of arms is a contentious process owing to the wide variety of tinctures which could be applied to a basic linear design.

Parallels have been sought only in rolls of arms contemporary with the period in which these scabbards were in use, up to and including the great Parliamentary Roll of 1312.<sup>6</sup> By this means, modern variants of the arms *a fess between two chevrons* have been eliminated. Alphabetical references given to rolls below are given in accordance with C.E.M.R.A.<sup>7</sup> (Appendix). Variants of the arms appear as follows.

FitzWalter: *Or, a fess between two chevrons gules* (MP, A, B, D, E, H, I, J, K, N, ME).

Filliol: *Or, a fess between two chevrons gules* (N).

Baynard: *Sable, a fess between two chevrons or* (N).

de Pecche: *Argent, a fess between two chevrons sable* (MP, A, B, G, J, L, N).

de Lisle: *Or, a fess between two chevrons sable* (A, D, G, ME, J, N).

Bomstede: *Azure, a fess between two chevrons or* (N).

de Cornerth: *Azure, a fess between two chevrons or* (N).

de Molington: *Argent, a fess between two chevrons azure* (N).

de Galeys: *Gules, a fess between two chevrons or* (G, N).

It is unlikely that the scabbards were intended to depict the arms of the last four families. Three, Sir William Bomstede,<sup>8</sup> Sir Richard de Cornerth<sup>9</sup> and Sir John de Molington,<sup>10</sup> were knights of Essex. The fourth, Sir William Galeys, could be either of two knights of that name in Leicestershire and Worcestershire.<sup>11</sup> None of these men had any known connection with London. The arms of de Lisle are recorded first in 1275, for Sir Robert de Lisle, who died in 1285 to be succeeded by his son Warin.<sup>12</sup> Again no link between this family and London is known.

The most likely family to be represented on the London scabbards are the FitzWalters. The family was founded by Robert FitzRichard (c. 1134), younger son of Richard FitzGilbert the founder of the house of Clare<sup>13</sup> (see Fig. 3). It is usually asserted that the FitzWalter arms of *or, a fess between two chevrons gules* was a differenced version of the de Clare *or, three chevrons gules*, in which the centre chevron became a fess,<sup>14</sup> and that this was a direct result of the family relationship with the de Clares. In 1110–11 FitzRichard received the lordship of Baynard's Castle from the crown, on the forfeiture of William Baynard.<sup>15</sup> This event is of considerable importance in the present context as not only was Baynard's Castle one of the fortresses built to control London for the King,<sup>16</sup> but its lordship included the position of hereditary standard bearer to the City militia.<sup>17</sup> FitzRichard was succeeded on his death by his son Walter FitzRobert, whose son, Robert FitzWalter I succeeded to his lands, and to the Baynard's Castle lordship in 1198.<sup>18</sup> Robert FitzWalter I was of considerable importance in London as one of the leading barons in opposition to John in the early 13th century. The loyalty of Baynard's Castle and the Londoners to FitzWalter was instrumental in bringing about John's capitulation in 1215 leading to the issue of Magna Carta. The Londoners also had their own grievances against John, including the demand for funds to repair the City wall.<sup>19</sup> It is likely that FitzWalter championed this cause, since he, as holder of Baynard's Castle, had a personal interest in the defence of the City. Robert FitzWalter I is also the first member of the family to be recorded as holding the arms noted above (MP II 32).

It is likely that the arms of de Pecche were derived from those of FitzWalter by virtue of a family connection. The first de Pecche armiger, Hamon de Pecche, was Robert FitzWalter I's nephew,<sup>20</sup> and their arms are first mentioned in the same source (MP II, 32, see Appendix).

After Robert I, the various lands and titles of the FitzWalters, including the lordship of Baynard's Castle, descended through Walter FitzRobert (d. 1258)<sup>21</sup> to Robert FitzWalter II.<sup>22</sup> Both men were recorded as holding the arms. Robert II most often.

*'Robert de FitzWalter ke ben sout des armes le mester, se en fesoit kanques in devoit. En la baner jaune avoit fesse entre deus cheverons vermaus'.<sup>23</sup>*

A marital connection with the family of Baynard existed at this time, and it is likely that, as in the case of de Pecche, this was the origin of the Baynard arms. Robert Baynard, the lord of Great Hautboys in Norfolk was married to Maud, Robert FitzWalter II's daughter (Table 1). It is probable, though not definitely established, that a family connection existed between Robert, and Sir Fulk Baynard, his contemporary, part of whose feudal requirements for holding two Norfolk manors of Robert FitzWalter II was to pay 28s every 24 weeks for the guard of Baynard's Castle.<sup>25</sup> It is similarly probable that this family was related to that which forfeited Baynard's Castle to the FitzWalters in 1111.

Another Robert Baynard, a London draper,<sup>26</sup> was the brother of Roger Baynard who witnessed an agreement of Baldwin Filliol of Essex in 1281.<sup>27</sup> Baldwin's son Thomas was the heir to Roger Baynard's lands at Little Maldon,<sup>28</sup> and the Filliol armiger in the Parliamentary Roll. The allocation of

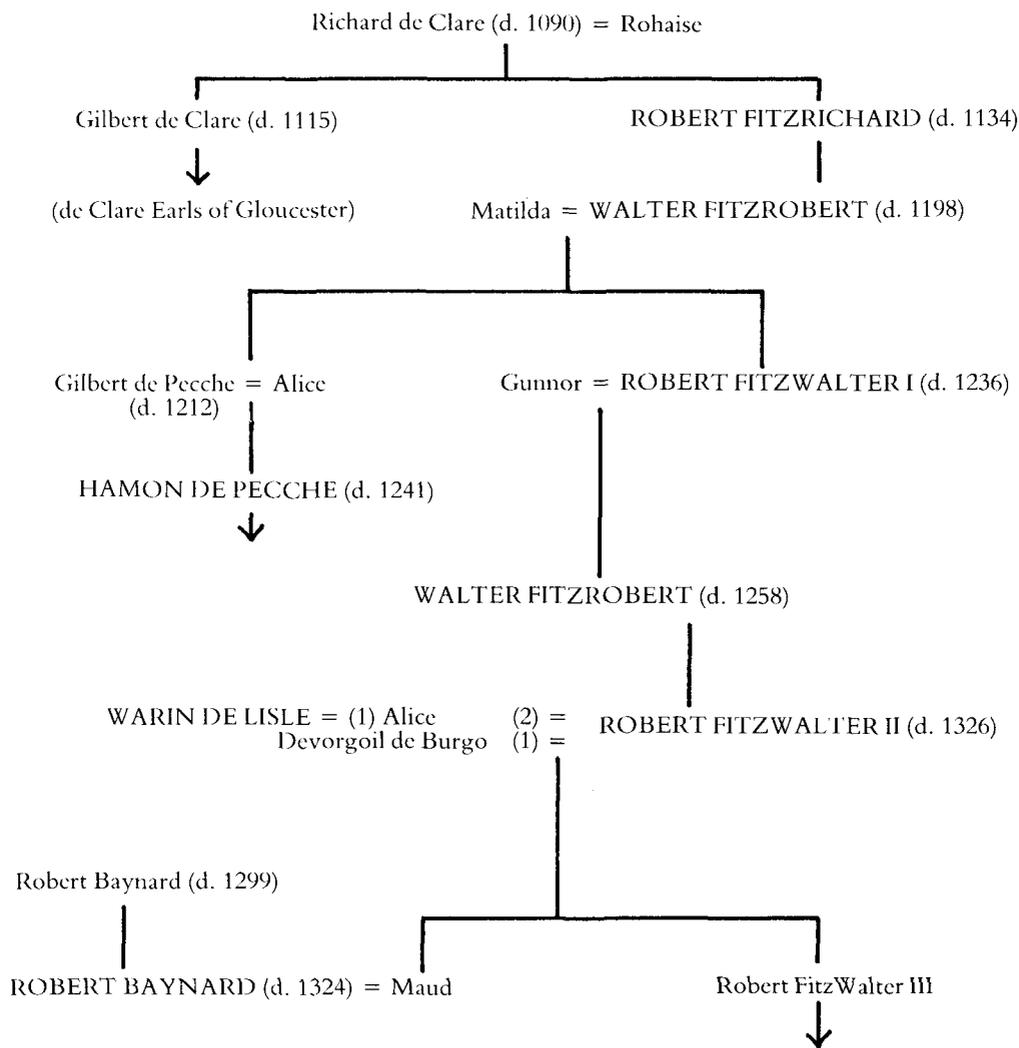


Fig. 3. Arms of FitzWalter: Genealogical Table Showing Family Alliances.

identical arms to Filliol as to FitzWalter is clearly an error. Elsewhere the Filliols are recorded as holding *or, on a fess between two chevrons gules, three trefoils argent*,<sup>29</sup> clearly not the coat represented on the scabbards. Another mention of the Essex Filliols held manors of Robert FitzWalter II by payment of 18s 4d every 24 weeks for guard of Baynard's Castle,<sup>30</sup> and it is probable that the arms recorded above derived from a feudal connection with the greater house. The assumption of arms similar to those of feudal superiors was frequent in the medieval period, and it is not unlikely that the three obscure Essex knights mentioned above, living in an area of great FitzWalter influence, also derived

their arms from those of the FitzWalters. It is further possible that the feudal relationships of the original Baynard family on its Essex properties<sup>31</sup> were transferred to the FitzWalters after 1110–11, and that the families mentioned above were those of Baynard's original tenants, many of whom owed guard duties at the Castle. These duties were later changed to monetary payments like those rendered by Fulk Baynard and the Filliols. These payments would help in the support of a liveried garrison at the Castle. Though the de Lisles assumed their arms a generation before any known link with the FitzWalters (the marriage of Robert FitzWalter II to the widow of Warin de Lisle,<sup>32</sup> mentioned briefly above), it is possible that some link existed before this.

In 1275 Robert FitzWalter II received a licence to demise the site of the first Baynard's Castle at Blackfriars to the Archbishop of Canterbury,<sup>33</sup> but in 1303 was still claiming the position of City standard bearer.<sup>34</sup> He died in 1326.<sup>35</sup>

The discussion above demonstrates that the arms *a fess between two chevrons* were held by a family of considerable importance and influence in London during the period when the leather scabbards under consideration were in use. Other holders of this coat frequently derived it from family or feudal connections with the FitzWalters. The arms of FitzWalter would, as a result of the family's office of the standard bearer, be extremely familiar to Londoners. It is doubtful that the arms on the scabbards would have been mistaken for those of any other family, especially if they were painted in their correct colours, as may have been the case.<sup>36</sup> It is likely that these arms would be displayed as a part of the livery of the paid FitzWalter retainers garrisoning Baynard's Castle, and it is in this context that the scabbards should be seen. It is significant that of the 6 scabbards, 2 were found in dumping at the new Baynard's Castle, which was in the area of the FitzWalter lordship.<sup>37</sup>

In conclusion, it could be suggested that the arms which share the position on the top of scabbard 1, a shield bearing *three chevrons* may represent the arms of the FitzWalter's allied house of de Clare.

I am grateful to my colleagues John Clark, Tony Dyson, Peter Marsden and Brian Spencer for their help in the preparation of this note. All interpretation remains the responsibility of the author.

#### APPENDIX

##### Rolls of Arms

- MP. Matthew Paris shields *c.* 1250–59: ed. T. D. Tremlett in *Rolls of Arms of Henry III*. Publications of the Harleian Soc. 113 (London 1961).
- B. Glovers Roll *c.* 1255.
- C. Walfords Roll *c.* 1275: ed. M. Stanford, London in *Rolls of Arms of Henry III*. Publications of the Harleian Soc. 113 (London 1961).
- A. Dering Roll *c.* 1275: eds. J. Greenstreet and Charles Russel *The Reliquary* XVI (1875) 135–40, 237–40; XVII (1876) 11–16, 209–12; XVIII (1877), 23–28, 89–92, 171–5.
- ME.. Heralds Roll *c.* 1270–80: ed. James Greenstreet *the Genealogist* New Series Vols. III (1886) 148–55, 240–4; IV (1887) 17–22, 197–203, V (1888) 173–9.
- D. Camden Roll *c.* 1280 ed. G. J. Brault in *Eight Thirteenth Century Rolls of Arms* (Pennsylvania 1973) 68–77.
- G. Segars Roll *c.* 1282 ed. (as an ordinary) James Greenstreet *The Genealogist* IV (1880) 50–8, 90–7.

- H. Falkirk Roll *c.* 1298 ed. G. J. Brault in *Eight Thirteenth Century Rolls of Arms* (Pennsylvania 1973) 86–93.
- J. Guillims Roll *c.* 1295–1305 ed. (as an ordinary) James Greenstreet *The Genealogist* 1 (1887) 323–7, 355–62.
- K. Caerlaverock Roll *c.* 1300 ed. G. J. Brault in *Eight Thirteenth Century Rolls of Arms* (Pennsylvania 1973) 101–126. *Rendered into Rime*, C. W. Scott-Giles (London 1960).
- M. Nativity Roll *c.* 1300 ed. G. J. Brault in *Eight Thirteenth Century Rolls of Arms* (Pennsylvania 1973) 94–101.
- L. 1st. Dunstable Roll *c.* 1308 ed. E. Long *Collectanea Topographica et Genealogica* IV (1837) 389–95.
- I. Hollands Roll *c.* 1310 ed. James Greenstreet *Walfords Antiquarian Magazine and Bibliographer* I (1882) 147–9.
- N. Parliamentary Roll *c.* 1312 ed. Sir Francis Palgrave *Parliamentary Writs* (1827) i 410–20.

NOTES

1. J. B. Ward-Perkins *Medieval Catalogue* London Museum Catalogue 7 (1940) 185.
2. I am grateful to Peter Marsden for access to unpublished material from Baynard's Castle.
3. DUK 77 Museum of London, Department of Urban Archaeology excavation. Pers. Comm. John Maloney.
4. Tim Tatton-Brown 'Excavations at the Custom House Site, City of London, 1973' *Trans. London Middlesex Archaeol. Soc.* 25 (1974) 199; 26 (1975) 161–3.
5. Guildhall Museum Excavation Register ER.518.
6. See Appendix.
7. Sir Anthony Wagner *A Catalogue of English Medieval Rolls Of Arms* Publications of the Harleian Soc. 100 (London 1948).
8. C. Moor *Knights of Edward I vol. I* AE Publications of the Harleian Soc. 80 (London 1929) III.
9. *Ibid.*, 238.
10. *Ibid.* vol. III L–O. Publications of the Harleian Soc. 81 (1930) 165.
11. *Ibid.* vol. V T–Z. Publications of the Harleian Soc. 84 (1932) 144.
12. *Ibid.* vol. III, 46.
13. *Dict. Nat. Biog.* vii, 219.
14. Sir Anthony Wagner *Historic Heraldry of Britain* (London 1939) 106.
15. Christopher Brooke. *London 800–1216: The Shaping of a City* (London 1975) 215.
16. *Ibid.*, 30.
17. *Ibid.*, 30. Historical material on Baynard's Castle & FitzWalters also in *London Topographical Record* 10 (1916) 50–63.
18. *Op. cit.* in note 13, 220.
19. Mary Bateson 'A London Municipal Collection' *English Historical Review* 17 (1902) 726. For the career of Robert FitzWalter I *op. cit.* in note 13, 219–23.
20. G.E.C. *The Complete Peerage* 10 (London 1926) 336.
21. *Ibid.* V, 472.
22. *Ibid.* V, 473.
23. 'Robert le FitzWalter, skilled in arms and prompt to wield, in his banner, twixt two chevrons a red fess on yellow field', K. (Caerlaverock Roll) Appendix.
24. *Op. cit.* in note 8, 1, 61.
25. *Ibid.*, 1, 61.
26. G. A. Williams *Medieval London, from Commune to Capital* (London 1963) 338.
27. *Ibid.* 338.
28. *Op. cit.* in note 8, 1, 61.
29. J. Papworth *Ordinary of British Armors* (reprinted London 1961) 812.
30. *Cal. Inquisition Post Mortem* vi, 47.
31. W. Page *London: Origins* (London 1923) 138, 199.
32. *Op. cit.* in note 20, viii, 71.
33. M. A. Harben *A Dictionary of London* (London 1918) 55.
34. *Op. cit.* in note 15, 216.
35. *Op. cit.* in note 8, 11, 65.
36. *Op. cit.* in note 1, 86.
37. *Op. cit.* in note 32, 127.

# THE BRASSES OF MIDDLESEX

## Part 21: ISLINGTON

H. K. CAMERON

The brasses of St. Mary, Islington have suffered loss and destruction, as in so many of our churches. Weever<sup>1</sup> recorded the following in 1631:—

Here . . . John Fowler . . . 1538, on whose soule . . .

Here lieth Alis Fowler the wyff of Robert Fowler Esquire, who died . . . 1540

Behold and se, thus as I am so sal ye be,  
When ye be dead and laid in grave,  
As ye have done, so sal ye have.

Divers of this familie lie here interred, the ancestors of Sir Thomas Fowler, Knight and Baronet, now living, 1630.

Hic sepelitur Thomas Savil filius et heres apparens Johannis Savil Armig. et Margarete uxoris eius, qui in primo limine vite immature mortis celeritate matrem preveniens, ex hac luce migravit 14 die ctatis sue, Anno Dom. 1546.

He quotes also an inscription in English to Robert Middleton and his wife. He was servant to Sir George Hastings, Earl of Huntingdon, and died in 1510. Another inscription, in latin, commemorates Katherine Mistelbroke, here buried, and her husband, William Mistelbroke, Auditor, who died in 1492 travelling in the King's service at Denby in the Welsh Marches.

The old church was demolished as unsafe in 1751 and the present church was built and consecrated three years later. John Nelson<sup>2</sup> in 1811 describing the memorials in the old church quoted Weever and, in addition, recorded:—

Upon a brass plate: 'Mr. William Langham, late one of the prebends of Litchfield, parson of Thurbie, and Doctor of Physic, who died 16 September, 1603.'

On a plated grave-stone in the South aisle: 'Here lyeth the body of John Markham, esq. one of the Serjeants at Arms to our most gracious Sovereign Lord King James, & who dyed the 26th of August, 1610.

Another plated stone was thus inscribed: 'Thomas Draper, de Stroud Green, dum vixit Civis Londinens' . . . Ob. 23 Octobr. anno Dom. 1611.'

Upon a brass plate: 'Here lyeth Thomas Walker, citizen and grocer of London, and Ciccle his wife. Thomas deceased the 25th day of the month of July, the year of our Lord God a thousand CCCCLXXXVI. On whos sowlys J'hu have mercy. Amen.'

Nelson also quotes in full the inscription recorded by Weever to Robert Middleton mentioned above. Whereas Weever gives the date of his death as 1510, Nelson gives MCCCC. . . , indicating that the inscription was laid during Middleton's lifetime; also that Sir George Hastings was created Earl of Huntingdon in 1529.

There was in the old church, according to Nelson, a brass plate or plates commemorating numerous members of the Fowler family and their close relations. It starts with Gregory Charlet, citizen and tallow-chandler whose only daughter, Jane, married Thomas Fowler of Islington. Gregory died in 1593 at the age of 67. Jane had issue two sons, Thomas and Edmund. She was buried on 14 October, 1601. The record indicates that Sir Thomas Fowler then married Mary, widow of Sir John Spencer and she died in 1620, after which Sir Thomas married Dorothea Coape. He died on 14 January 1624. The account is somewhat inconsistent, which may be because the memorial was dedicated by Sir Richard Fisher, Bart. in 1678, 'to the honoured memory of his grandfather Sir Thomas Fowler.' Some pages later Nelson quotes the parish register. This reverses the order of the marriages. Thus: 'Thomas Fowler and Mary Mosse, married March 18, 1571. Mrs. Mary, wife of Thomas Fowler, Esq., buried April 25 1586, first wife of Sir Thomas Fowler the elder, not mentioned in any of the monumental inscriptions. Mrs. Jane, wife of Thomas Fowler, Esq., buried Oct. 14, 1601. Mary, the wife and lady of Sir Thomas Fowler the elder, buried Jan. 6. 1621, at night.' In the early years of the 17th century the register has many entries of baptism of the children of Sir Thomas junior, who was created a baronet in 1628. His younger brother, Edmund, inherited, but on his death the title became extinct. This rapid flowering and extinction of the family name is traced back only to the earlier part of the 16th century.

Nelson described and illustrated 'the boarding school near the bottom of Cross St. kept by Mrs. Clarke, formerly one of the most respectable edifices in the village; it was the mansion house belonging to the family of the Fowlers, Lords of the Manor of Barnesbury.' This manor was the property of Thomas Fowler in 1548 and continued in the possession of this family until 1656 when it passed to Sir Thomas Fisher who had married Sarah the daughter and heir of Sir Thomas Fowler Bart.

In 1842 Samuel Lewis Jr. also wrote a history of Islington. He quoted the monuments in the old church already given by Weever and Nelson, but adds further inscriptions which he found in the Lansdown MSS No.874, fol.73, taken from the Heraldic Collections of Nicholas Charles Esq., Lancaster Herald, of 1610.<sup>3</sup> How many of these are of brass is not stated, but, being mainly of the 15th century, it is likely that they all were.

They are:

'Stephen Hart, ob.1454

'Thomas Lambert, deceased 1470'

'Thomas Spencer, sonne to Sir Robert Spencer, knight and of Elenor his wyfe, daughter to Edward Beauford, late Duke of Somerset, that was slayne at St. Albans.'

'John Roger and Beatrix his wyff, w<sup>th</sup> John deceased 1478'

'John Whright and Elizabeth his wyfe, which John deceased 1482'

'Thomas Heyborne, who died 1485'

'Thomas Gore, parsonne of Isledon and Westhame, who died the 28th Deccember, Ano Dni 1499'

'Dyonis Ashxoll, decessed 1518'

Lewis described and, with line drawings, illustrated two brasses then in the new church; and these two remain there to-day. They represent members of the Fowler family. They were, said Lewis, 'until recently on the floor of the chancel, half covered by pews, and in danger of becoming still more mutilated than they at present are; but in 1836 they were removed to their present positions, against the walls of the north and south aisles, under the direction of John Nicholl Esq., then warden.'

In 1906 Mill Stephenson<sup>4</sup> reported the brasses as insecurely fixed. He learnt that 'at one time the brasses had been taken from their original slabs and fixed on the wall, but at a more recent restoration they had again been replaced in their original slabs; the work of refixing had, however, been so badly done that all were again practically loose.' 'The brasses were removed, cleaned and securely refixed by Mr. W. E. Gawthorp.' This work also revealed that both brasses were palimpsest, that is, they were made from metal sheets that had already been used for earlier memorials, some parts by adaptation and some by turning over and re-engraving on the reverse side.

I. A man of the Fowler family and wife, attributed by Mill Stephenson to Robert Fowler and his wife Alice.

This curious memorial (Fig. 1) represents a man and his wife engraved side by side on one piece of brass, the space between them hatched with short vertical lines. There is nothing remarkable about the figures which are of poor workmanship. He wears armour typical of the early Tudor period. His sword hangs from his left thigh across and behind his body; it is slung from a belt weighed down on the left side. By his right side is a long dagger. He is bareheaded, with nearly straight hair falling to chin level. His wife wears a dress with full sleeves just covering the elbows. The costume beneath has slashed sleeves ending in close-fitting wrist bands. She wears the pedimental headdress. From an ornament in the front of her belt hangs a long cord or chain with an ornament or pomander just above floor level. The date of these styles could be 1535-1545.

The single plate with these two figures is indented at the top edge between their two heads. Fitted into this is now a shield with arms on it. It is in outline evidently of much earlier date than the figures it accompanies and is too large in proportion to them. The figures and shield are beneath a single ogee canopy with four cusps below and crockets on the upper side rising gracefully to a single finial above. This is supported by simple side shafts the pinnacles of which are lost from the springing of the arch upwards. From its style this canopy must be a hundred years earlier in date than the figures, while the shape of the shield could make it contemporary with the canopy. This is clearly an example of the purloining and reuse of material from an earlier brass. It is no



Fig. 1. Man of Fowler family, and wife, c 1540

surprise therefore that the shield is engraved on an earlier shield that has been turned over and recut; or that the curious plate on which the two figures are engraved is also on earlier engraving turned over for reuse.

The overall height of the canopy is 47 inches, of the figures 18 inches and of the shield  $5\frac{3}{4}$  inches. The width of the canopy at the base of the shafts is 19 inches; between and below is evidence of the earlier existence of rectangular inscription plates, long since lost, while there are indents for four missing shields at the corners of the stone.

The one remaining shield has on the dexter side what are meant for the Fowler arms, *azure, on a chevron argent between 3 herons or 3 crosses paty gules*. The birds on this shield do not greatly resemble herons. These arms impale a coat now practically obliterated, but described by Charles early in the 17th century as *a chevron ermine between three birds*.

Mill Stephenson attributed this brass to Robert Fowler and his wife, Alice, who died in 1540. The date is certainly appropriate to its style, but, as Weever records, there were several members of the Fowler family who died around this time. Stephenson connected the brass with the inscription given by Weever, quoted earlier in this paper and with the tricking by Nicholas Charles of the impaled shield apparently against this inscription. If this is indeed their memorial it must have been prepared at his wife's death. Robert survived until 1543. In his will there is no mention of wife or children.<sup>5</sup> However, Weever couples with the factual inscription about Robert and Alice Fowler the lines:— 'Behold and se thus as I am so shall ye be. . .'. This sentiment was not uncommon on brass inscriptions, but is usually found accompanying a figure in shroud. The attribution of this brass to Robert and Alice Fowler is not, in my opinion, entirely convincing.

Mill Stephenson also records (without reference) that Robert Fowler purchased, in 1539, the manor of Barnsbury, in which he was succeeded by his cousin, William Fowler, who sold the manor in 1543 (that is, immediately upon inheritance) to Thomas Fowler.

II. Henry Savill Esq., in armour and wife, Margaret, daughter of Thomas Fowler Esq.

The two figures of Henry Savill and his wife (Fig. 2) are of markedly superior workmanship to the figures described above. They are the products of a well established workshop producing many brasses of great stylistic likeness to one another. Henry Savill is almost identical in detail to the figure of Gregory Lovell at Harlington, described in an earlier paper of this series.<sup>6</sup> The same pattern must have been used for both. Gregory died on 22 October 1545, Margaret Savill on 27 August 1546; the two brasses must have been executed very closely in time together. The facial expression, the posture of the figure and the headdress of Margaret Savill are exactly those of Anne Lovell. Both ladies have a large ornament suspended by a short chain from their girdle; the monogram IHS is inscribed on that of Margaret Savill. The headdress of both is the French hood, these being among the earliest examples of this style on



Fig. 2. Henry Savill and Margaret, his wife, ob. 1546.

brasses. In this respect Margaret Savill is recognisedly later in style than the Mrs. Fowler of the other brass, in her pedimental style headdress. The long suspension of the ornament in front is also of an earlier style than that of Margaret Savill. Yet in the dress worn by the two ladies at Islington there is noticeable similarity; the shape of the slashed sleeves of the main garment and the full and open sleeves just covering the elbows of the outer dress almost suggests that the same costume is depicted and that perhaps the rich garments were passed by will to the younger woman. Margaret's dress is not only much like her relative's, but completely different from that of her contemporary, Anne Lovell, who has large puffed shoulders, but more normal sleeves.

The design of armour did not change greatly for some years. If that worn by Henry Savill is identical with Gregory Lovell, it is also closely similar to that of Mr. Fowler. The only significant difference is that his head is lying on a helm. Otherwise the belt, the hand and placement of the sword and dagger are the same; the stance and attitude of the figures are the same, though the Fowler figure has feet splayed outwards in an ugly and unnatural manner.

Both the Savill figures are 21¼ inches high. Immediately below them is a rectangular plate 27 inches by 4½ inches on which, in blackletter, is a five line inscription which reads:—

Hic sepelitur Margareta Savill, nuper uxor Henrici Savill Armigeri filia Thome Fowler de hac parochia item Armigeri, que tum propter virtutū probitatem, tum propter morum integritatem, amicis charissima, quinto decimo die post plem editam, in ipso Juventutis flore, ex hac vita excessit, Anno etatis sue decimo nono, vicesimo septimo die mensis Augusti Anno dñi millesimo quingentesimo quadragesimo sexto.

By an error of the engraver 'millesimo' in the last line is actually spelt 'millesino' on the brass. Here we find recorded the unfortunate early death of a young woman in childbirth, after a short marriage. They were married on 3 May 1545<sup>7</sup> and at the age of nineteen, she died in August of the following year. It is no wonder that the inscription is tender and full of praises; or indeed that she wears the advanced fashion of the Paris hood. A small figure of the child, at whose birth she died, was below the inscription. Now lost, the indent, 6½ inches high, can still be seen. The child, Thomas Savill, survived but fourteen days, as was recorded (but incorrectly, as he says 'the son and heir of John and Margaret Savill') by Weever. There was evidently a separate brass inscription to this effect.

This brass is laid in a stone 6ft. long and 2½ft. wide. At the corners near to the bottom of the stone are the indents for two missing roundels, while at the top of the stone are two shields (identical in outline to the shields on the brass at Harlington) still preserved, each 7¼ inches high. The dexter shield has on it the arms of Savill quartering Wyatt: *1 and 4, argent on a bend sable 3 owls argent, a mullet in chief for difference (for Savill); 2 and 3, quarterly 1 and 4, per fess azure and gules a horse barnacle argent (for Wyatt); 2, . . . on a fess or 3 lions rampant (gules?) (another coat for Wyatt?); 3, . . . on a bend . . . 2 cinquefoils (roses) or, a bordure engrailed . . . charged with plates or.*

The sinister shield above Margaret has these same arms for Savill, impaling

Fowler, described earlier, but here the birds are correctly shown as herons.

Also on this stone are two curious markings, hardly indents for brass, being two interlocking rings. One of them is above the two figures and the other below the indent for the child.

Following the Dissolution of the monasteries many of the brasses in the monastic churches were torn up. Much of the metal was no doubt melted up and reused for other purposes, but some of the plates found their way to contemporary brass engravers for further use as monuments. This was either done by simple adaptation, as is seen with the canopy associated with brass No.I here at Islington, or more commonly by turning the plate over and engraving it anew on the reverse side. Such palimpsests occur frequently among brasses engraved during the decade or so following the Dissolution. Both brasses at Islington are completely palimpsest (as was the brass at Harlington, mentioned above).

No.I On the reverse of the plate with the two figures is part of a large brass, showing the upper sinister portion of an early 14th-century straight-sided canopy, with beautiful tracery (Fig. 3). The principal feature is an angel, with halo but without wings, swinging a censer high and above the remaining fragment. The style is reminiscent of early French work known to us through the drawings of Gaignières and this piece has long been regarded as a unique remaining piece of French origin.

The shield inserted between the heads of the figures on the above plate has on the reverse another shield, being *lozengy or and . . . , on a fess . . . 3 birds or*.

The canopy has no engraving on its reverse. As described above it has been taken from another brass of early or mid 15th-century date without modification.

No.II The two figures, inscription and two shields comprising the Savill memorial are all palimpsest, coming from five different earlier brasses (Fig. 4). On the reverse of the figure of Henry Savill is a major part of the figure of a priest in cassock, surplice, almuce and cope—from the neck to the feet. The orphrey on the cope is of lozenges containing alternately a quatrefoil and a fylfot cross. A row of buttons decorate the underside of the tight-fitting sleeves of the cassock. The date of this engraving was set at about 1370 by Mill Stephenson, perhaps because of this rather unusual adornment. Behind the lady's figure is the major part of another ecclesiastic, also headless. He wears cassock, surplice with very full sleeves, and a mantle over this. The mantle is drawn together at the neck by a cord from which hangs a long cord ending in a cross and a wheel-type badge of the Order of St. John of Jerusalem.<sup>8</sup> Fragments of other figures with this badge have been found engraved on the reverse of other brasses more or less contemporary with the Savill brass. Thus two pieces of the brass at Harlington, one from a brass at Lambourne, Essex and no fewer than five pieces from Ellesborough in Buckinghamshire, all of date *c.* 1546, have on the back fragments of a similar ecclesiastic with this badge. A fragment of yet another ecclesiastic with this badge has been found, in 1973, on the reverse of a brass to Sir Richard Catesby, *ob.* 1553, at Ashby St. Legers, Northants.<sup>9</sup> It seems not unlikely that the brasses of these various members of this Order were



Fig. 3. Reverse of Fowler brass

taken from their church of St. John, Clerkenwell after the Order was suppressed by Statute in 1540. This fragment at Islington must date only from the early years of the 16th century.

On the back of the Savill inscription is another inscription, virtually complete, also in blackletter, which reads:—

pray for the soules of Clement Byrd and John Skypper & Agnes  
their wyf the whiche John decessed the xxvi day of Novembre the  
yere of o' lord m v<sup>e</sup> & xix on whose soules ihū have mercy Amen.

The shield with the Savill arms is cut from another inscription, the lettering of which is much like that of the Byrd inscription. The following words remain:—

. . . ołl Citezein and . . .  
. . . is wyf whiche . . .  
. . . march the yer of . . .  
. . . ihū have mercy . . .

The other shield has on the reverse the lower corner of a lady's figure, with the hind legs and tail of a small dog. It could be Flemish work of the early 16th century.



Fig. 4. Reverse of Savill brass



Fig. 5. Head of nun, c. 1380, Kilburn St. Mary.

#### KILBURN, ST. MARY

I. There is fixed to the south wall a fragment of a brass, being the head of a nun of late 14th-century date (Fig. 5). This piece was discovered late in the 19th century and was first described in an earlier number of these *Transactions*.<sup>10</sup> J. G. Waller, in an account of the Tybourne and the Westbourne, including the Priory at Kilburn, gave an illustration of this head which had been found 'amongst some human remains near the site of the Priory during recent excavations for some additions to the railway at Kilburn'. Whether the person represented was a prioress as Waller suggested or one of the nuns it is impossible to say from this fragment; it is certainly amongst the earliest of the monastic pieces that remain. Waller pointed out a curious feature; there is a small cord attached to the veil for the apparent purpose of holding up the wimple, a garment usually held up independently.

#### NOTES

1. Weever *Ancient Funerall Monuments* (1631) 538.
2. J. Nelson *History of the Parish of St. Mary, Islington* (London 1811).
3. S. Lewis Jr. *History of the Parish of St. Mary, Islington* (London 1842), 197.
4. M. Stephenson *Trans. Monumental Brass Soc.* 5 (1906) 165-170.
5. P. C. C., 3. Pynnyng.
6. H. K. Cameron 'Brasses of Middlesex - Part XIII - Harlington' *Trans. London Middlesex Archaeol. Soc.* 22, pt.2 (1969) 48-52.
7. Foster *London Marriage Licenses, 1521-1869* (1887) 1190.
8. J. Page-Phillips *Palimpsests* (1980) I, 18; II, 39.
9. B. Egan *Trans. Monumental Brass Soc.* 12 (1975) 101-104.
10. J. G. Waller 'The Tybourne and the Westbourne' *Trans. London Middlesex Archaeol. Soc.* 6 (1890) 276.

# A LONDON TANKARD AND THE DUTCH WARS

ROSEMARY WEINSTEIN

A pewter tankard from the Thames foreshore, in the Museum of London collections (Acc. No. 78.132), bears the inscription, 'John Kennett in Sheerness Fort suttler 1669' (Pl. 1). This is a reference to the small fort at Sheerness begun in April 1666 as a defence during the second Dutch war (1664–1667), a sutler being responsible for provisions. The tall quart pot has twin incised bands and a solid handle. There is a touch mark in the base of a bird between the initials 'WC', and the date 164? This is one in the earliest dated London pewter tavern pots.

Sheerness Fort consisted of a battery of twelve 18-pounders at Garrison Point, Isle of Sheppey (Pl. 2). The uncompleted fort was attacked on 10 June 1667 and then abandoned to the Dutch who destroyed it and carried off the naval stores, completely disorganising the dockyards being established there for the cleaning of large ships.<sup>1</sup> The English version of the incident is recorded in contemporary accounts including that of Edward Gregory, a clerk of the cheque, later a member of the Navy Board and Commissioner for Chatham.<sup>2</sup> Alarming though unfounded reports that the Dutch had landed at Dover, Plymouth and Dartmouth caused panic in London. 'By God', wrote the harassed Samuel Pepys, 'I think the Devil shits Dutchmen'. From Greenwich he could clearly hear the gunfire at Sheerness.<sup>3</sup>

The City, alarmed at events in the Medway, immediately promised a loan of £10,000 for the erection of a strong fort at Sheerness, of which £7,612 6/8d was spent.<sup>4</sup> Operations were supervised by Prince Rupert but workmen were hard to come by and provisions scarce in this ill supplied and remote spot. Application was accordingly made to the wardens of the City Companies of Masons and Bricklayers to provide men so that the fortifications might be completed before the winter. So great was the lack, that workmen and waggons had to be impressed. Men found themselves working three miles from any fresh water or small beer, and with only one house for the purchase of any provisions. There was also a regiment of militia to be provided for.<sup>5</sup>

Work was continuing in the summer of 1669, according to a Major R. Manley in his letters to Charles Stuart, Duke of Lenox and Richmond, then absent from his nearby home, Cobham Hall:

This summer there hath beene made a good progress in ye workes att Sheere-ness, & the Forts att Gillingham & Cockham-wood side, both these are likewise to have Towers in them, which besides the keepeing of Stores are to bee a retreat to the Soldiers in case of necessity; they are to have fifty peeces of Cannon in each of them, the least of which is to carry twenty four pound ball. Sheerness is to bee fortified with 250 gunnes of ye same size.<sup>6</sup>

It was at this period that John Kennett, as sutler, was supplying provisions to workmen and soldiers at the fort—at times a difficult task judging from contemporary complaints at the slowness of victualling ships there.<sup>7</sup>

Sheerness Fort was still in operation during the third Dutch war (1672–1674) with a garrison of some 60 men. Garrison Point Fort (1860–70) and a torpedo defence (c. 1885) was ultimately built on the site.

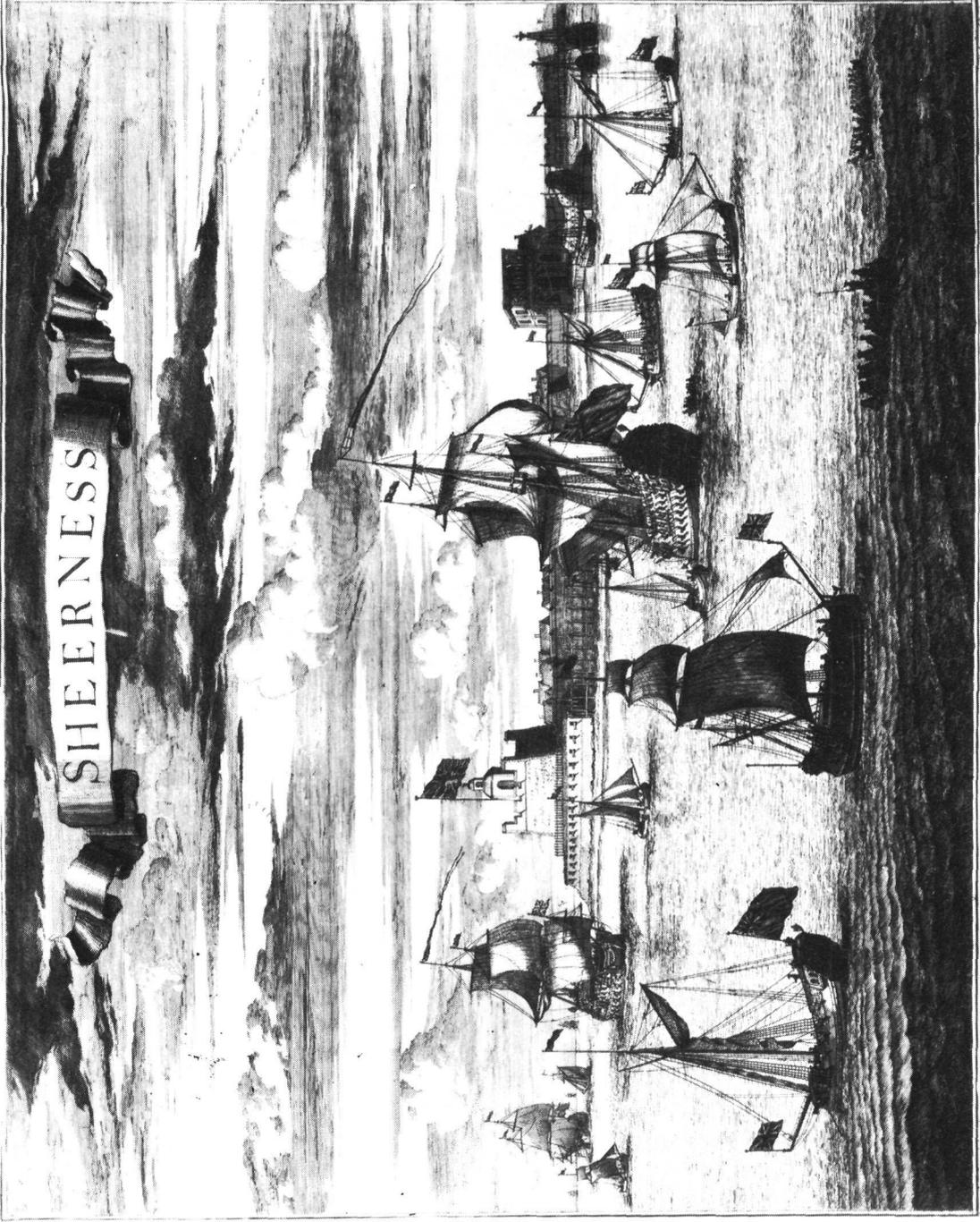
## NOTES

1. A blockhouse was first built at Sheerness c. 1545 as part of Henry VIII's coastal fortification defence scheme. The dockyard and fortifications were subsequently designed and staked out by Sir Bernard de Gomme, the military engineer. Contract, dated 6 March 1666; cost £1,360: BM Sloane MS 2448 f.44.
2. Edward Gregory, reputedly one of the seven men who remained in the fort and subsequently taken prisoner by the Dutch, the rest of the garrison deserting. John Copland *The Taking of Sheerness by the Dutch* (Sheerness 1895) 14.
3. *The Diary of Samuel Pepys* eds. Latham & Matthews 8 (London 1974) 258, 10 June 1667. On 13 June the Dutch fired some ships laying off Chatham dockyard. Much blame for these events was laid on the lack of protection from the unfinished fort at Sheerness.
4. Corporation of London Record Office, Repertory 72, fos. 124, 126b, 135b, 146. Letter to the Mayor 1 July—*Calendar of State Papers Domestic 1667* (London 1890) 256. The King to the same, 12, 20 and 29 July—*Ibid.*, 288, 310, 339. Pepys thought the necessity to borrow such a small sum contemptible, 'a very poor thing that we should be induced to borrow by such mean sums'. The Common Council ordered (13 June 1667) every able-bodied man in the City to enlist, and the same day Charles II reviewed the City's militia on Tower Hill. CLRO Journal 46, f.163.
5. John Evelyn, the diarist, a commissioner for the care of the sick and wounded in Kent, records that fossils were excavated during the building: 16. (July 1668) To Lond: returnd: 19 our Doctor as before. 23. Went to R: Society, where were presented divers *Glossa Petra's*, & other natural Curiosities, found in digging to build the fort at Sheere-Nesse, they were just the same (as) what the(y) bring from Malta, pretending them to have ben Vipers teeth, whereas in truth they are of a Shark: as we found by comparing them to one in our Repository. E. S. de Beer ed. *The Diary of John Evelyn* 3 (Oxford 1955) 511.
6. BM Addtl MS 21947 f.269 18 September 1669: Major R. Manley was one of the witnesses of the will of Charles Stuart, the last Duke of Lenox and Richmond.
7. a) *Calendar of S.P. Dom.* Car. II, 232, No. 37; 5 Jan. 1668: The De Ruyter and Leopard are in danger near Sheerness. Ask an order to the Victualler, being in great straits for victuals for them.  
b) *Calendar of S.P. Dom.* Car. II, 282, No. 32; 14 Jan. 1670: The Adam and Eve has sailed from Sheerness and might have been at Hull, but by the victuallers not having sea victuals eight days were lost. Friction between the naval and military forces is recorded in a quarrel which grew out of the beer selling privileges of the porter of the yard: PRO, Outletter, Orders and Instructions, ADM2, 1, 17 Sept 1673.  
See also *The Victoria County History: Kent*, 2 (London 1974) 326–331.

I am grateful to Victor Smith for supplying dates for Garrison Point Fort and the torpedo defence.



Pl. 1. Pewter tankard; Museum of London collection, from the Thames foreshore.



Pl. 2. Sheerness Fort, engraved by Johannes Kip after Isaac Sailmaker. 1707-1725.  
(*National Maritime Museum*)

# A JESUIT SCHOOL IN THE CITY IN 1688

T. G. HOLT

During the reign of James II the English Jesuits opened two schools in London; one, the larger and better known, at the Savoy in May 1687, the other, in the City in March 1688. Both ceased to exist at the Revolution. It is with the second, the Lime Street or Fenchurch Street school, that this article is concerned.

The story of the school is closely connected with the story of a 'popish' or Catholic chapel in Lime Street. In the reign of Charles II the only Catholic chapels in London, apart from the Queen's chapel at St James and the Queen Dowager's (later the Queen's) at Somerset House, were those belonging to the ambassadors or residents of Catholic states. With the accession of a Catholic King the Chapels Royal at Whitehall and St James's Palace were used for Catholic services, as was, of course, the widowed Queen Catherine's at Somerset House. A chapel was opened at the Savoy in 1687. In addition, the King wished to see Catholic chapels established nearer to or in the City. Thus the Benedictine monks opened one at St John's, Clerkenwell, the Dominican and Franciscan friars in Lincoln's Inn Fields and the Carmelites in Bucklersbury, all in 1687 or 1688. The Lime Street chapel was earlier than any of these and was first used in April 1686.<sup>1</sup>

This chapel is described as having been at the Fishmongers' Hall, not the Fishmongers' Hall in Upper Thames Street, but a building on a site bequeathed to the Fishmongers' Company. Of this building it is recorded:

Sir Thomas Abney . . . kept his mayoralty (1700–1) in a grand old house in Lime Street which seems to have been built by Richard Langton about the year 1600. The site of it had been occupied by Lord Scrope of Bolton and was left by Richard Knight in 1501 to the Fishmongers' Company. From a monograph with measured drawings by G. H. Birch and R. P. Spiers one learns that it was standing in 1872.<sup>2</sup>

This house was on the east side of Lime Street and towards the northern end. It was taken early in 1686 at the King's desire by the representative of the Elector Palatine, James Stanford.

According to one tradition some secular priests opened the chapel here under Stanford's patronage and protection, near to or perhaps in his house. The house had been taken on a thirty-one year lease in 1676 by Dr John Betts, a Catholic physician, and it is possible that three priests, Andrew Giffard, James Dymock and Christopher Tootell, with the assistance of a fourth, John Gother, had opened the chapel before Stanford took over the property.<sup>3</sup> Another possibility

is that Stanford made alterations to a building in the garden at the back and *fitted it up as a chapel appointing the three priests as chaplains. Both traditions may be true.* A chapel in the house was followed by Stanford's chapel in a separate but adjacent building which was opened on 18 April 1686. It seems likely that the site of the chapel would roughly correspond to Nos.3 and 5 Fenchurch Avenue, on the left as one enters from Lime Street, part of the area now occupied by Lloyd's.<sup>4</sup>

The King desired the chapel and so did Stanford. The Elector Palatine, Philip William, pointing out that he was the Catholic ruler of a largely Protestant state, was prudently less than enthusiastic but his objections were brushed aside by the King and he eventually gave his consent.<sup>5</sup> The Lord Mayor and the City authorities complained that as Stanford was English he could have no true ambassadorial status. The London mob made trouble and there were riots the day the chapel was opened. *Some contemporary accounts describe these:*

On Sunday the 18th was a tumult made in Cheapside occasioned by the meeting at the popish chapel in Limestreet, some of the rabble having followed the preists thither; so that the lord mayor and alderman were there with the train'd bands to quell the same; some of the cheif ringleaders were taken; and his majestic . . . sent for the lord mayor and told him to take care of the peace of the city or otherwise he should be forced to send some assistance to them.<sup>6</sup>

A correspondent provided further details:

On Sunday, the London hot-heads were bantering Mr Sandford's Chapel, got away a cross, and set it by a pump, paying very disorderly adoration to it, with halloaing, and then going back and taking a crucifix, and saying they would have no wooden gods worshipped. These frightening the priest, but not hurting him. Then comes the Lord Mayor and commands the peace. The answer was in a scornful way. 'What! the Lord Mayor of our city come to preach up popery! too sure it cannot be.' Then the guard militia was ordered to send the rabble away; and asking what they meant, the answer was, 'Only pulling down popery', and their return was, 'If that be all, we cannot in conscience hinder'. But vespers not going on in the chapel, they dispersed. By next Sunday more matters may occur.<sup>7</sup>

A newsletter of the time reported:

19 April 1686. Some time since Mr Stamford Resident of the Elector Palatine at his house in the city built a chapel there which was lately finished and yesterday being the first day it was preached in the rabble . . . while they were at service assaulted them; it might have had ill consequences had not my Lord Mayor taken all imaginable care to suppress them. The Resident has been to-day to complain to the King of it . . . about 20 of them are taken and in prison.<sup>8</sup>

More trouble was feared about a month later:

Some apprehensions there were that the apprentices designed to be troublesome to Mr Sandford's Chapel these holidays. I do not hear they stir.<sup>9</sup>

In June 1686, for a reason or reasons not now clear, the King had Stanford replace his secular priest chaplains by Jesuit priests. By this time the riots had died down and the popish chapel in Lime Street continued in use, apparently undisturbed, for the next two years.<sup>10</sup>

The Jesuit school started at the Savoy in May 1687 was very successful,

attracting some 400 boys more than half of them not Catholics.<sup>11</sup> And, as a newsletter of December 1687 reported:

A school for maidens in St Martin's Lane erected by the Queen will be opened on St Thomas's day under four women in the habit of nuns. No religious distinction will be made; the poor and rich to enjoy the benefit provided they come in clean and decent habits.<sup>12</sup>

The establishment of these schools drew attention to the need of education for Londoners:

Four [Church of England] bishops design to erect a free school in Lincoln's Inn Fields and the project is afoot in divers other places, the Protestants being resolved not to be outdone in charity by any of a different persuasion.<sup>13</sup>

In view of the success of the Savoy school the King gave orders for the opening of a school attached to the Lime Street chapel and made it an annual allowance of £350. It was opened on 25 March 1688.<sup>14</sup> It seems probable that Stanford was dismissed or retired as representative of the Elector Palatine in February or March and that the Jesuits took over his house and bought another house adjacent to the chapel in which to open the school. Several Jesuits from the Savoy moved in to live in the establishment, Charles Petre, the brother of Edward Petre the Jesuit adviser of the King and privy councillor, being appointed to manage and teach in the school.<sup>15</sup> It was not a large one. Initially there appears to have been only one class but it made progress and was well attended during the eight or nine months of its existence. It is possible that one or two young Jesuit assistant masters were brought over from the Continent as an addition to the staff before the end.<sup>16</sup>

An interesting survival of this attempt to establish a school for Catholics (but not only for Catholics) in the City is what may best be described as its prospectus. It is entitled 'The Rules of the Schools at the Jesuits in Fanchurch-Street' copies of which 'are to be sold by the Cushion-Man at the Chapel in Lime-Street'. The rules are ten in number.<sup>17</sup>

I. The Invention (*sic*) of Opening these Schools is to Teach Youth Vertue and Learning: They shall be Taught *Gratis*; nor shall they be at any farther Charges or Expences than the buying of their own Pens, Ink, Paper and Books.

II. These Schools are common to all, of what condition soever, and none shall be excluded, when they shall be thought fit to begin to learn Latin, and Write sufficiently well: And in the Schools shall be taught Greek and Latin, as also Poetry and Rhetoric, as they shall rise to higher Schools.

III. And altho' Youths of different Professions, whether Catholick or Protestants, come to these Schools; yet in Teaching all, there shall be no distinction made, but all shall be Taught with equal Diligence and care, and every one shall be promoted according to his Deserts.

IV. There shall not be, either by Masters or Scholars, any tampering or meddling to persuade any one from the Profession of his own Religion; but there shall be all freedom for every one to practise what Religion he shall please, and none shall be less esteem'd or favored for being of a different Religion from others.

V. None shall upbraid or reproach any one on the account of Religion; and when any Exercise of Religion shall be practised, as hearing *Mass*, *Catechising*, or *Preaching*, or any other; it shall be lawful for any *Protestant*, without any molestation or trouble, to absent himself from such Exercise, if he please.

VI. All shall be Taught to keep God's Commandments, and therefore none shall be permitted to Lye, Swear, or Curse, or talk uncivil Discourse; Nor shall fight or quarrel with one another; and he who shall be observed to fail in these Duties, shall be punished according to his demerit; And when any one, for these, or other Faults, shall be adjudged to any Chastisement, if he shall refuse to receive such Chastisement quietly, or be stubborn, he shall be Expell'd the Schools, and not be re-admitted again, until he shall have given satisfaction for such his Fault.

VII. All shall be in their respective Schools by a quarter before Eight in the Morning, and shall there stay until Ten and a half; Again at a quarter before Two, until half an hour after Four. And all Parents are earnestly desired to send their Children timely to School, and not easily to stay them at home; for the neglect of some Days may hinder the Profit of many Weeks and Months; And they are to send them decently Clad.

VIII. The other hours of the day they shall Study at their own Homes, and prepare those Exercises, which the Masters in the Schools appoint to be brought, at their next coming to the Schools. And therefore all Parents are desired to allow their respective Scholars such conveniency for their Studies at their own Houses, that they may comply with those Duties, which are appointed them.

IX. All are required to be exact and diligent, in daily frequenting the Schools, and being there, none are to go out without leave of their Master; and when any one shall be absent from School, he shall the next day he comes bring from his Parents a Ticket of the lawfulness of such his absence; Yet they shall have every Week two Afternoons of Recreation, in which they come not to School; unless a Holy-day happen that Week, which shall then be their Recreation day.

X. Such as come from the Writing-School, and have no Entrance in Latin, are to be received but three times in the Year, *viz.* at the beginning of the *New Year*, at *Easter*, and about our *Lady-day* in *September*.

As Professor A.C.F. Beales wrote 'We can see the revolutionary character of these London Jesuit innovations at the Savoy and Lime Street nowhere better than in the *Rules* of this Fenchurch Street school.'<sup>18</sup>

When the Revolution came this school shared the fate of the Lime Street and other chapels. The first disturbances occurred early in October 1688. 'On Sunday last there was a great disturbance in Limestreet at the Romish chappel there, occasioned by the preists scurrilously reflecting on the translation of our Bible.'<sup>19</sup> Shortly afterwards Dr Tenison preached at St Martin's '... this sermon was chiefly occasion'd by a Jesuite, who in the Mass-house on the Sunday before had disparaged the Scripture and rail'd at our translation, which some present contradicting, they pull'd him out of the Pulpit, and treated him very coarsly'.<sup>20</sup> The Jesuit Annual Letters recorded that as the Prince of Orange was waiting for a fair wind. . . .

. . . at first the fury of the mob poured itself out on our City College. At first the preacher was interrupted, presently the priests were disturbed when saying Mass. Soon after the people assembled in crowds, broke down the doors and pelted all who came out with stones. This violence, however, was forcibly repulsed by the Catholics and was afterwards put down by the Mayor by order of the King.<sup>21</sup>

Lime Street and other chapels were threatened again early in November:

Great endeavours are used to prevail with the lads of London to be troublesome under the pretence of pulling down the Popish Chapels in Lime Street, Bucklersbury, and St John's; some scores of them have rendezvoused these last two nights, but upon beat of drum, and appearing of any small part of the Militia have scampered away and by flight provided for their safety.<sup>22</sup>

A month later, on 11 December the end came. It was the night the King left London in flight:

On Tuesday night there was an alarm, occasioned by burning the Papists' Lincoln's Inn Fields Chapel; they did the like to the Chapels of St John's Clerkenwell, and Lime-Street, but not easily breaking into the latter, cried they would down with it, were it as strong as Portsmouth. And accordingly, having levelled them, they carried all the trumpery in mock procession and triumph, with oranges on the tops of swords and staves, with great lighted candles in gilt candlesticks, thus victoriously passing of the Guards that were drawn up. And after having bequeathed these trinkets to the flames, they visited Harry Hills' Printing House, which they served in like manner.<sup>23</sup>

A further detail is recorded in Luttrell, 'The 11th the rabble assembled in a tumultuous manner at St John's, Clerkenwell, the popish monastery there, on account of gridirons, spits, great cauldrons &c to destroy protestants till the horse and footguards were sent to suppress them. . . .'<sup>24</sup>

With the destruction of the Lime Street chapel the school ceased to exist. 'The masters . . . who were teaching the classics in both Colleges left London to cross to the Continent. . . .'<sup>25</sup> Charles Petre was captured, probably at Canterbury and lodged in Dover Castle and . . .

although he was well known to be a Jesuit and to be a brother of the very Fr [Edward] Petre who was pursued with such special hatred, yet he succeeded in so softening the hearts of his keepers that he was most humanly treated and shortly after by an order obtained by petition to the Court was liberated and passed over into Belgium.<sup>26</sup>

Of the other masters the Annual Letters reported 'The four masters who taught humanities in the Savoy College and a laybrother were captured at Canterbury on their way to Belgium, plundered of all they had, and after receiving most brutal treatment both by words and blows were thrust into prison . . . but after a time were set at liberty.'<sup>27</sup>

It is probable that there were in all five or six young Jesuit masters at the two schools that autumn—Richard Plowden, John Hall, John Turberville, Philip Percy, Stanislaus Green and, perhaps, Edward Meredith. If four of them were at the Savoy school it is likely that the others had, as suggested above, been brought over from the Continent to increase the staff at Lime Street.<sup>28</sup>

It is a pity that the opening of these schools in Lime Street and at the Savoy 'was represented at the time, and for long after, as an attack, not on the ignorance of Londoners but on the Protestant religion'.<sup>29</sup> In the circumstances of the time this, though sad, may have been almost inevitable.

## NOTES

1. E. Taunton *The English Black Monks of St Benedict II* (London 1897) 174–5; J. Miller *Popery and Politics in England, 1660–88* (Cambridge 1973) 245. Clerkenwell became the residence of the representative of the Elector of Cologne.
2. T. R. Way and P. Norman *The Ancient Halls of the City Guilds* (London 1903) 53–4; J. Gillow *Bibliographical Dictionary of the English Catholics II* (London 1885–1902) 451; G. Macdonald ‘The Lime Street Chapel’ *Dublin Review* 180 and 181 (1927) who makes use of the despatches of Barillon, D’Adda and the Dutch envoy Van Citter; Stanford’s name is spelt in a variety of ways—Stanford, Stamford, Sandford, Stanford, etc.
3. Gillow *op. cit.* in note 2, II 451; *Dublin Review* 180 (1927) 257–8.
4. *Dublin Review* 180 (1927) 254–5. Dates are Old Style throughout.
5. *Dublin Review* 180 (1927) 261–5 and 181 2–6. The Elector feared Louis XIV and believed that James could influence him.
6. N. Luttrell *A Brief Historical Relation of State Affairs from September 1678 to April 1714 I* (Oxford 1857) 375.
7. H. Ellis *Original Letters Illustrative of English History* 2nd Ser. IV (London 1827) 94.
8. HMC. *Downshire Papers I* 153.
9. HMC. *Downshire Papers I* 172. Further accounts of the riots are in M. V. Hay *The Enigma of James II* 230 (Barillon’s despatch) and *Dublin Review* 181 (1927) 1–2.
10. *Dublin Review* 180 (1927) 257–60 and Miller *op. cit.* in note 1, 246–7. See too the Jesuit Annual Letters (reports on the Order’s missionary work sent more or less regularly to Rome) 1685–90 (transcripts in the Archives of the English Province of the Society of Jesus (EPSJ)).
11. A. C. F. Beales *Education under Penalty* (London 1963) 251; Macaulay *History of England from the Accession of James II II* (Oxford 1931) 85.
12. HMC. *Downshire Papers I* 282, 286; *London Recusant I* (1971) 24–8, 107–12. It is possible that this school was in St Martin’s Le Grand.
13. HMC. *Downshire Papers I* 246; Beales *op. cit.* in note 11, 253; Hay *op. cit.* in note 9, 97–8.
14. Jesuit Annual Letters, 1685–90. There is a reference to the way in which the school was financed in a letter from England (9 April 1691) to the Jesuit Superior General in Rome in the Stonyhurst College Mss. Anglia V f.241.
15. *Dublin Review* 181 (1927) 13; Miller *op. cit.* in note 1, 247; Beales *op. cit.* in note 11, 252. According to the Annual Letters, 1685–90, it was Edward Petre who had obtained the foundation from the King, for Charles Petre see DNB.s.v. Edward Petre.
16. Jesuit Annual Letters 1685–90; *In Supplementum Historiae Provinciae Anglicanae S.J.* (transcript in the Archives EPSJ); Gillow *op. cit.* in note 2, IV, 32. The Jesuit Superior General wrote expressing his pleasure at the opening of the establishment—see *Epistolae Generalium II* (3) f.482 (copies in the Archives EPSJ).
17. A copy of these Rules is in the Bodleian Library—see Beales *op. cit.* in note 11, 252n. The word ‘schools’ is used here for ‘classes’.
18. Beales *op. cit.* in note 11, 252.
19. Luttrell *op. cit.* in note 6, I 465. It may be considered that it was hardly the time for sermons on matters of controversy.
20. W. Bray *Memoirs Illustrative of the Life and Writings of John Evelyn, Esq. I* (London 1818) 614.
21. Annual Letters, 1685–90 (Archives EPSJ).
22. Ellis *op. cit.* in note 7, IV 144.
23. Ellis *ibid.* IV 171.
24. Luttrell *op. cit.* in note 6, I 474 and see also 472, 475, 486. B. Zimmerman *Carmel in England* (London 1899) 326–7, quotes from the *Universal Intelligencer* (15 December 1688) and the *English Current* (14 December 1688) on the destruction of the chapels in the City. See too Bray *op. cit.* in note 20, I 616, 618, 619 on these riots, and also the Jesuit Annual Letters 1685–90.
25. *In Supplementum Historiae Provinciae Anglicanae S.J.* (Archives EPSJ).
26. Annual Letters, 1685–90.
27. Annual Letters, 1685–90; *In Supplementum Historiae Anglicanae S.J.* The order of the Lords Spiritual and Temporal (11 December) for the seizure of all Jesuit priests in the ports of Kent and Sussex is in ‘CSP. Dom. James II (3) 379.
28. *Catalogus tertius Personarum Provinciae Angliae S.J.* for 1689 in Archives EPSJ.
29. Hay *op. cit.* in note 9, 96.

# THE CONTENTS OF A LATE 18th CENTURY PIT AT CROSSWALL, CITY OF LONDON

A. G. VINCE and G. EGAN, with contributions by K. H.  
ARMITAGE, P. L. ARMITAGE, A. LOCKER, J. E. PEARCE, F. A.  
PRITCHARD & B. A. WEST

Edited by J. MALONEY

## SUMMARY

*The contents of a post-medieval brick-lined pit at 8–10 Crosswall, City of London, comprised a large collection of pottery and glassware including many complete profiles and near-complete items, which adds significantly to its importance and interest. Analysis of the material shows that it is a contemporaneous group deposited c. 1770. It is the largest group of this date known from the City and the first to be published in detail. The animal bone assemblage is relatively small but contains the complete skeleton of an Angora rabbit, probably the first example from an archaeological context in this country, and one bone from a linnet (probably kept as a song-bird). Amongst the glassware is the top of a bird-feeder for use in a bird-cage. It is suggested that the objects were disposed of as the result of a household clearance.*

## THE EXCAVATION

G. Egan

During the winter of 1979–80 the Department of Urban Archaeology, Museum of London, carried out excavations on a site at 8–10 Crosswall (TQ 3366 8056) on the NE side of the City (Fig. 1). Part of the Roman city wall and the foundation of a bastion were discovered and have been the subject of a report in *Transactions* (Maloney, 1980).

Two brick-lined pits were found against the external face of the Roman wall, one at each end of the 9m stretch still standing. The pits presumably represent two extramural properties; it was probably the survival of the boundary at the north of these properties (its line being indicated by the pits) that preserved the part of the wall remaining.

Assemblages of pottery and other household items were recovered from both pits. The dating evidence suggests that these were filled and abandoned in the later 18th century. A small group of domestic objects lay among the organic fills of the northern pit; but the southern one (Pl.1) contained a considerable amount of building material and a larger range of pottery, including some less common items, as well as some notable faunal remains. It is the assemblage from the latter pit that is described in this article.

A full description and discussion of the pits is contained in the Crosswall (XWL 79) archival report which is available at the Department of Urban Archaeology, Museum of London.



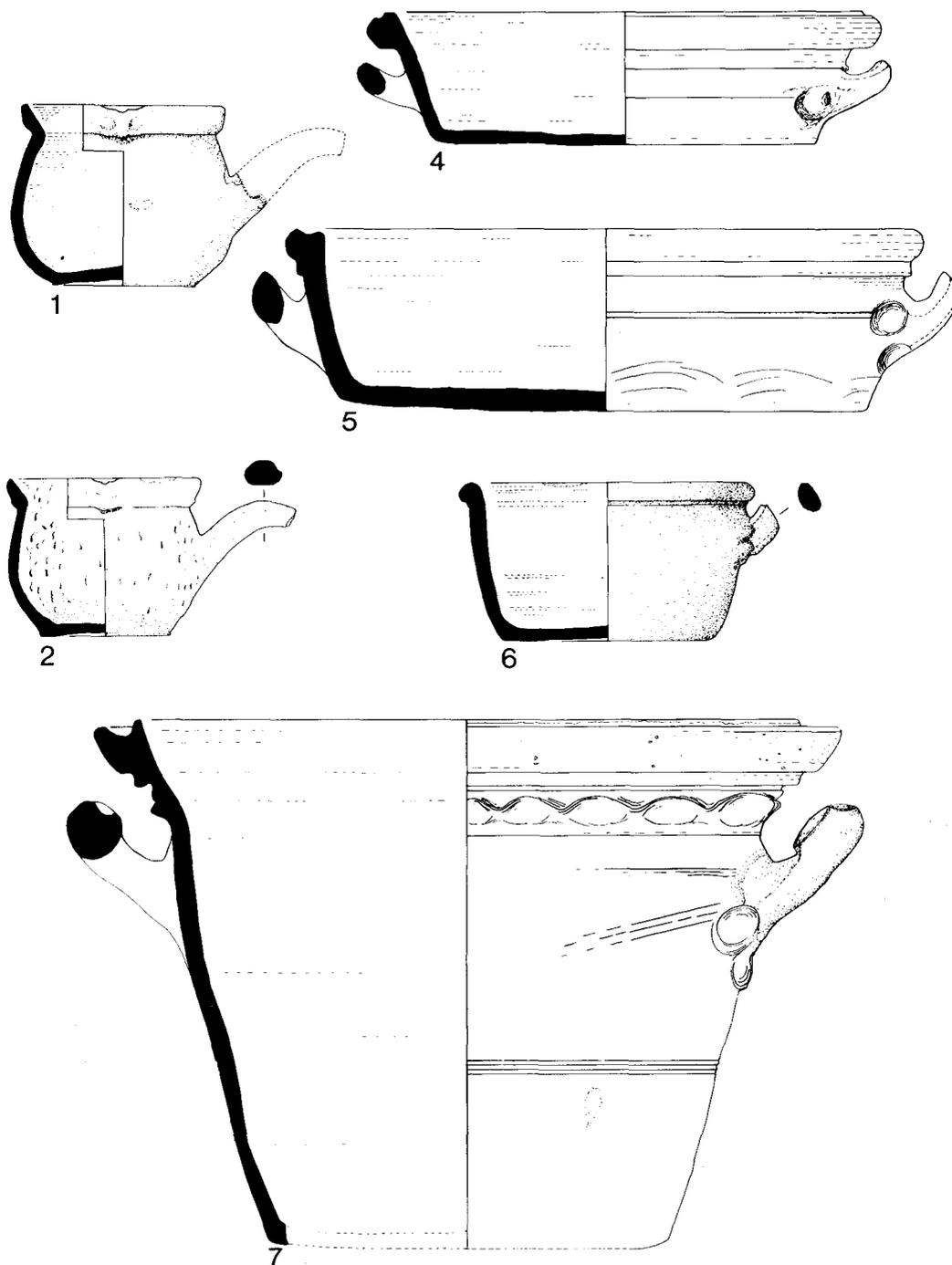


Fig. 2. Crosswall 1979: Post-Medieval Coarse Redware Nos. 1-7 (1/4).

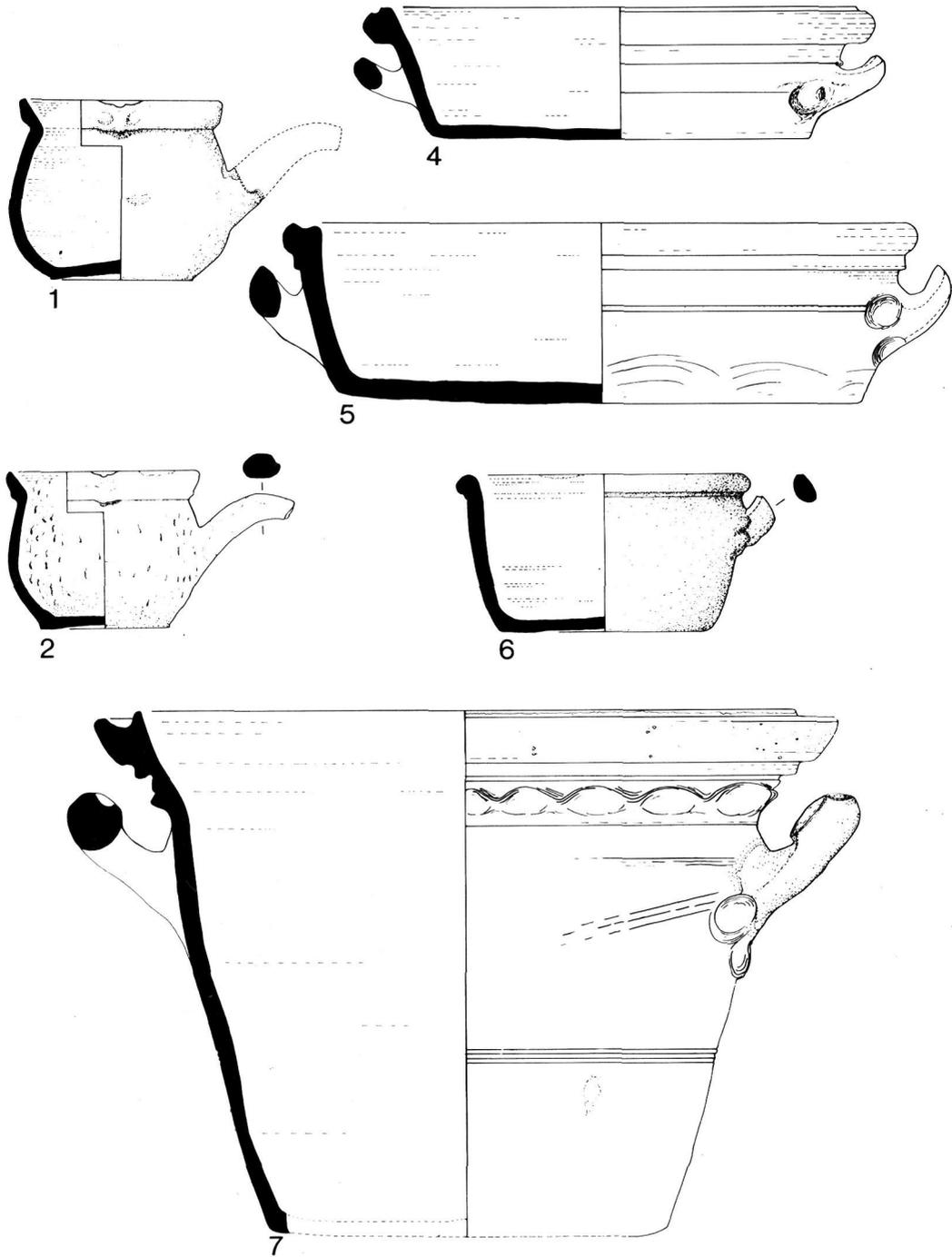


Fig. 2. Crosswall 1979: Post-Medieval Coarse Redware Nos. 1-7 (1/4).

## THE FINDS

## INTRODUCTION

## A. G. Vince

Very few of the finds in the pit appear to be residual. Many of the pottery and glass vessels and one of the clay pipes, though smashed, could be reconstructed. This pattern of survival contrasts with that observed in most groups of the period, in which a large number of vessels are represented but only by a small proportion of the complete item. The reasons for this pattern are not understood, but the archaeological implications are clear: everything in the Crosswall group was probably discarded at the same time. A comparison of the pottery, clay pipe and glass dating evidence indicates that the pit was probably filled *c.* 1770. The association of such a large collection of contemporary finds enables a date to be assigned to the coarse pottery, which cannot be independently dated, and also gives an indication of the period of use of various types of artefact during the 18th century (Vince, 1981, which has photographs of many of the items of pottery and porcelain described herein).

All the finds and the archival record are housed with the Finds Section, Department of Urban Archaeology, Museum of London.

## COARSE POTTERY

## A. G. Vince

*Post-Medieval Coarse Redware* (Fig. 2, Nos. 1–7 and Fig. 3, Nos. 8 & 9)

1. Pipkin, internal glaze.
2. Pipkin, internal and external brown mottled glaze.
3. Fragment of pipkin (not illustrated) *cf.* No. 1. These pipkins differ from the 18th-century examples from Woolwich which are biconical in profile and have no feet (Pryor and Blockley, 1978, 106).
4. Dish, two loop handles and internal glaze.
5. Dish, two loop handles and internal glaze. These large dishes are not represented amongst the Woolwich wasters, but are relatively common in excavated assemblages from the City. Both have a

grooved rim and might therefore have had lids.

6. Bowl, one loop handle, internal glaze.

7. Deep bowl, two loop handles, internal and external glaze, combed decoration and elaborately moulded and thumbled rim. The rim is lid-seated.

8. Jug, external glaze, pulled spout.

9 (?) Paint pot, internal glaze.

This pot is similar in form to a chamber pot, but without a flattened rim. Some 19th-century examples were stamped, for example, J. H. Simpson Colorman 34 London Road, showing that their use as paint containers was sometimes primary (Amis, 1968, No. 50).

The fragments from the nine coarse redware vessels recovered were plain lead glazed, with the exception of one pipkin which had a mottled brown glaze. Two fabrics were present; the dishes, deep bowl and jug were tempered with an ill-sorted medium to coarse quartz sand, whilst the bowl, pipkins and 'paint-pot' contained an ill-sorted fine to medium quartz sand (*i.e.* no inclusions larger than 0.5mm across). Both fabrics were found amongst waste from the Woolwich pottery and the fabric difference does not indicate that more than one source was supplying the coarse redware.

*Border Ware* (Fig 3, No. 10)

10. Stool Pan, green glazed inside and out.

This type of vessel was made to be used in a wooden commode and therefore represents a higher rung up the social ladder than chamber pots. The stool pan was virtually complete and therefore probably contemporary with the rest of the assemblage. It is therefore one of the latest datable Surrey white ware products known.

*Tin Glazed Ware* (Fig. 3, Nos. 11–14)

11. Chamber pot, light blue tin glaze.

Three almost identical chamber pots were found. All are different from the standard late 17th- and early 18th-

century examples. They are squatter and do not have a cordon at the neck.

12. Ointment jar, decorated with horizontal blue lines. The base was pushed up after throwing, an almost universal feature on tin-glazed ware without turned bases. This form developed from the albarello of the late 16th and 17th-centuries, but does not have a restricted neck and base.

13. Plate, floral border, central pattern of spray of (?) flowers.

14. Plate, floral border, central pattern of (?) spray of flowers.

Fragments of several other plates were found, mostly of plain moulded forms represented at Lambeth House (Bloice, 1971, Nos. 25, 28A, 28B, and 29) but also forms with turned bases (Bloice, 1971, 22).

The tin glazed ware in this assemblage is typical of the very latest phase of the industry. The introduction of cream ware in the 1770s immediately brought the production of plates to a halt, although the ointment pots continued to be manufactured into the 19th century.

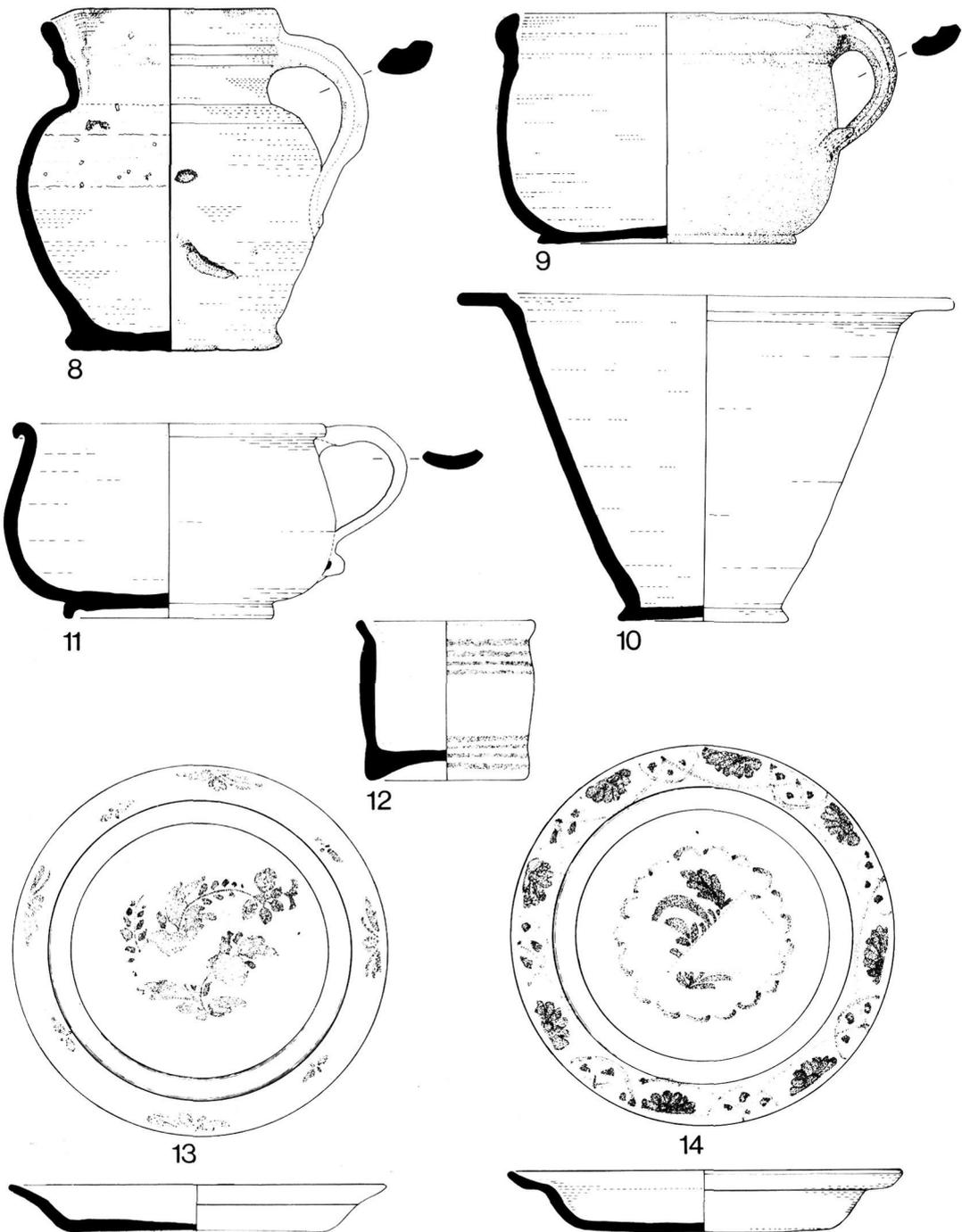


Fig. 3. Crosswall 1979: Post-Medieval Coarse Redware Nos. 8-9; Border Ware No. 10; Tin Glazed Ware Nos. 11-14 ( $\frac{1}{4}$ ).

*Staffordshire White Salt-glazed Stoneware* (Fig. 4, Nos. 15–20)

15. Chamber pot, a similar form to those in tin glazed ware.

16. Bowl, wheelthrown with turned exterior.

17. Miniature dish, wheelthrown, turned exterior.

18. Miniature bowl, wheelthrown, turned exterior. These last two vessels were probably toys (Mountford, 1971, 44 & Pl. 84).

19. Moulded plate, turned exterior.

Two other identical plates were found. This pattern is one of the latest found in salt-glazed stoneware and is

also used on creamware plates.

20. Moulded plates, turned exterior.

An identical design, but used on a oval dish, is illustrated by Mountford (1971, Pl. 147).

*Nottingham Stoneware* (not illustrated)

21. Base of a vessel with turned foot-ring.

*Refined Red Earthenware* (Fig. 4, No. 22)

22. Cup, wheelthrown and turned, glossy brown internal and external glaze.

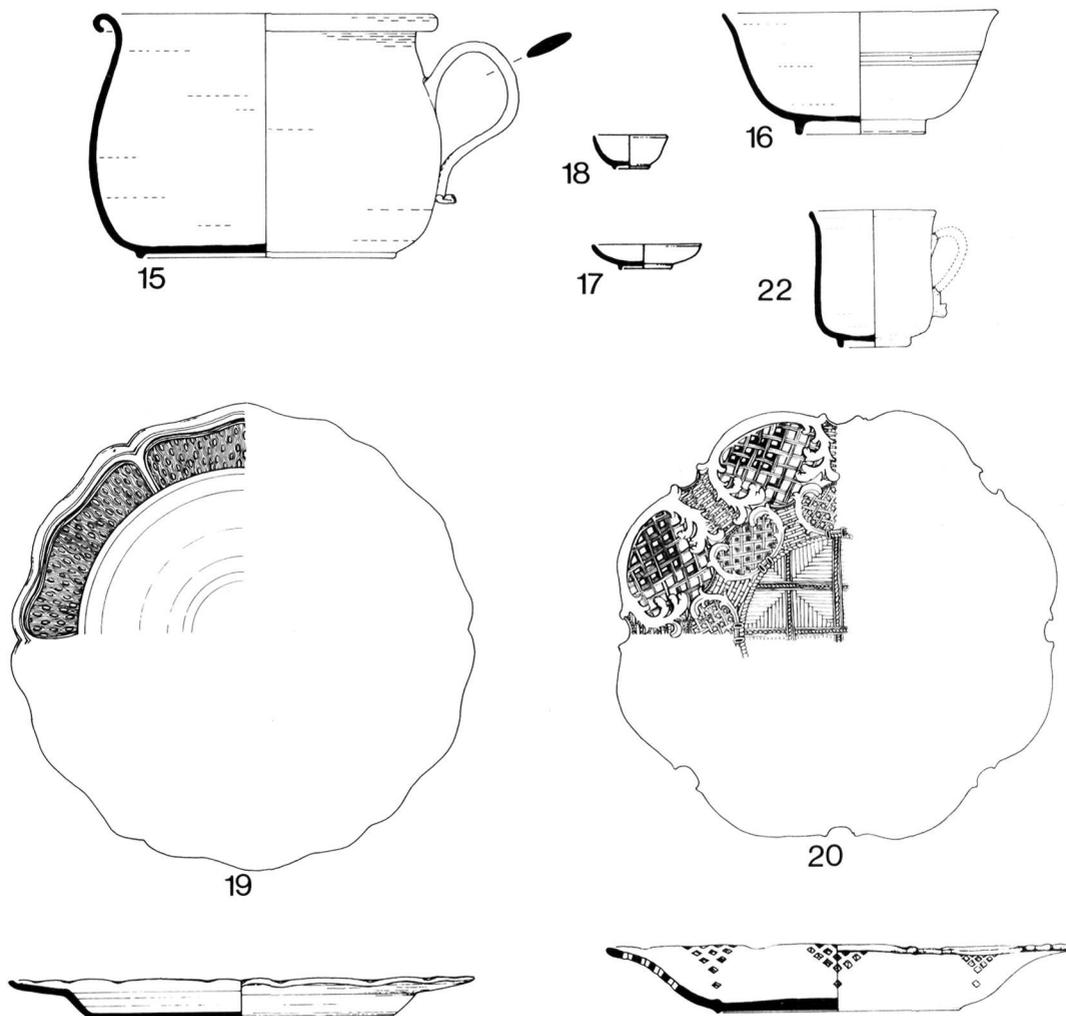


Fig. 4. Crosswall 1979: Staffordshire White Salt-Glazed Stoneware Nos. 15–20; Refined Red Earthenware No. 22 (1/4).

CHINESE PORCELAIN (Figs. 5, 6 & 7)

J. E. Pearce

23. Bowl, inferior quality blue and white provincial porcelain, possibly from Fukien in S. China. The decoration consists of a four-clawed dragon, with cloud scrolls, extending both inside and outside the bowl, coarsely painted in a dull grey-blue. Since this is a long-lasting, cheap, export type, it is difficult to date closely, but is probably late 17th century, and possibly as early as the end of the Ming dynasty (1644), thus predating the rest of the group, and perhaps kept as an heirloom or antique.

High quality blue and white porcelain forms the largest proportion of the group, and is characterised by less clearly defined painting and by greater use of mauve-blue than is found on later pieces. The designs are also more to the Chinese taste, and less formal or stylised

than those later developed to meet European demand.

24. Bowl (not illustrated).

25. Dish, diamond diaper border and scene apparently depicting bird-training.

There are four illustrated dishes of closely similar form with internal decoration and plain exterior (*cf.* Nos. 26, 30, 31).

26. Dish, very thin walls and landscape design (without border).

27. Cup, with foot-ring of early K'ang Hsi type and simple internal diaper border. The development of the decorative border is principally an export feature.

28. Cup, very high quality external landscape design and unusual, thick, unglazed foot-ring.

29. Cup, external sea-weed design (not illustrated).

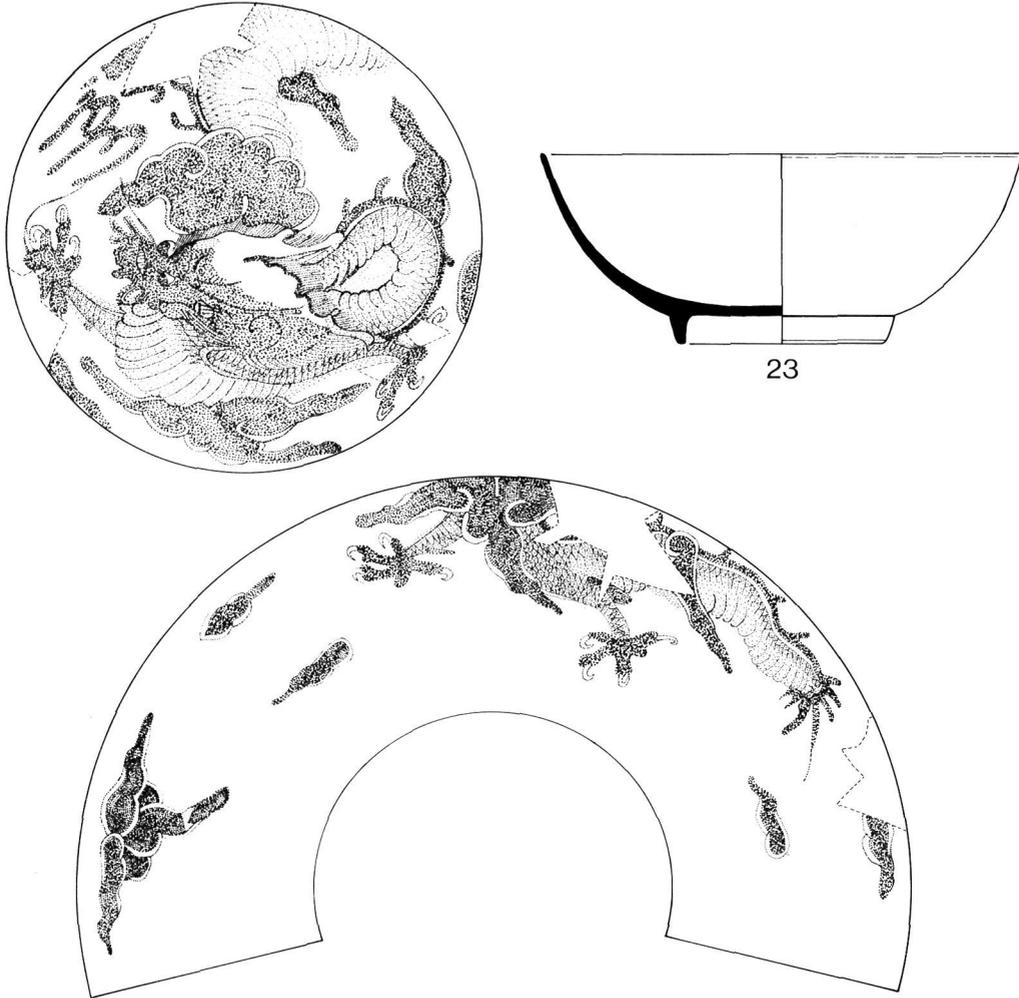


Fig. 5. Crosswall 1979: Chinese Porcelain No. 23 (1/3).

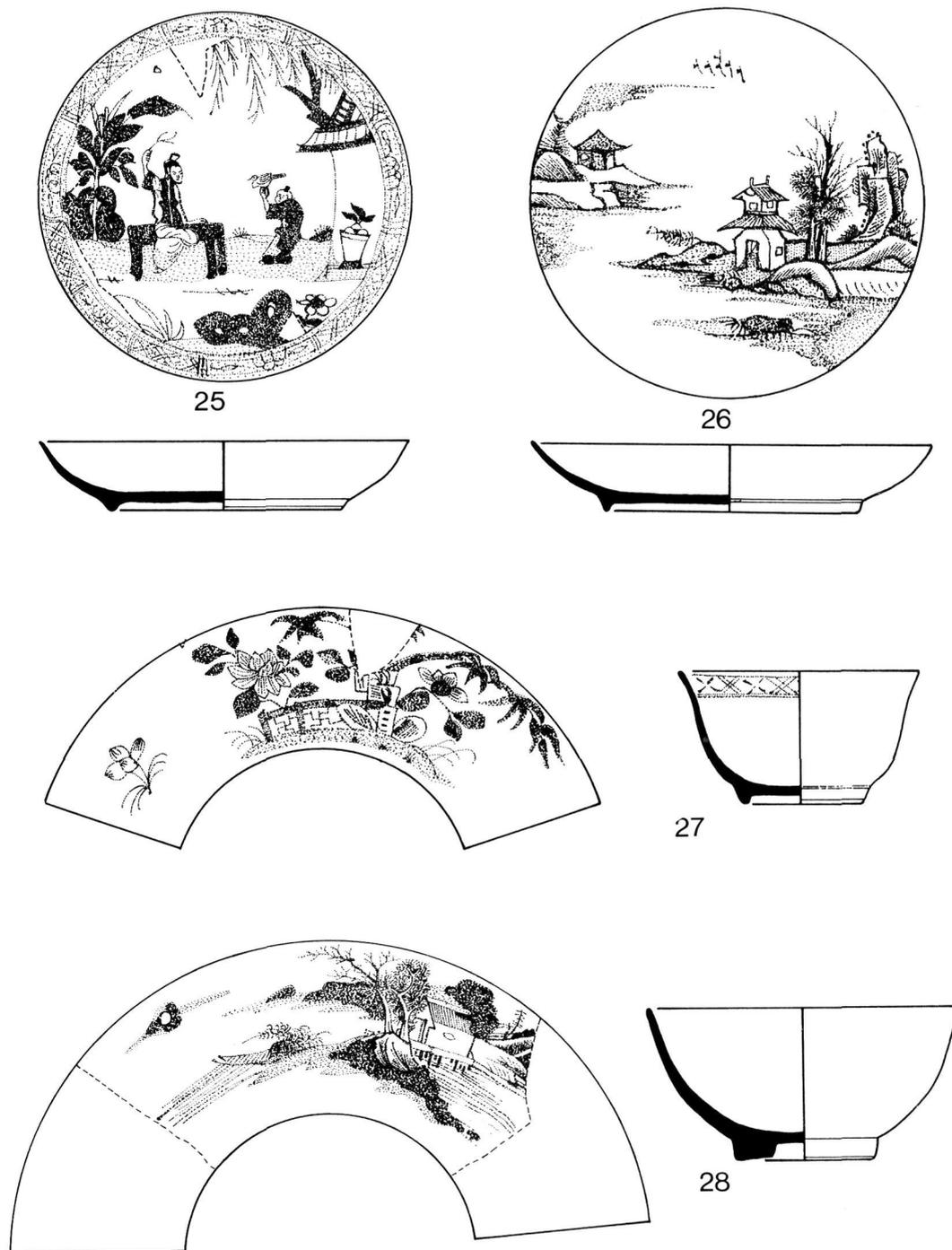


Fig. 6. Crosswall 1979: Chinese Porcelain Nos. 25–28 (1/2).

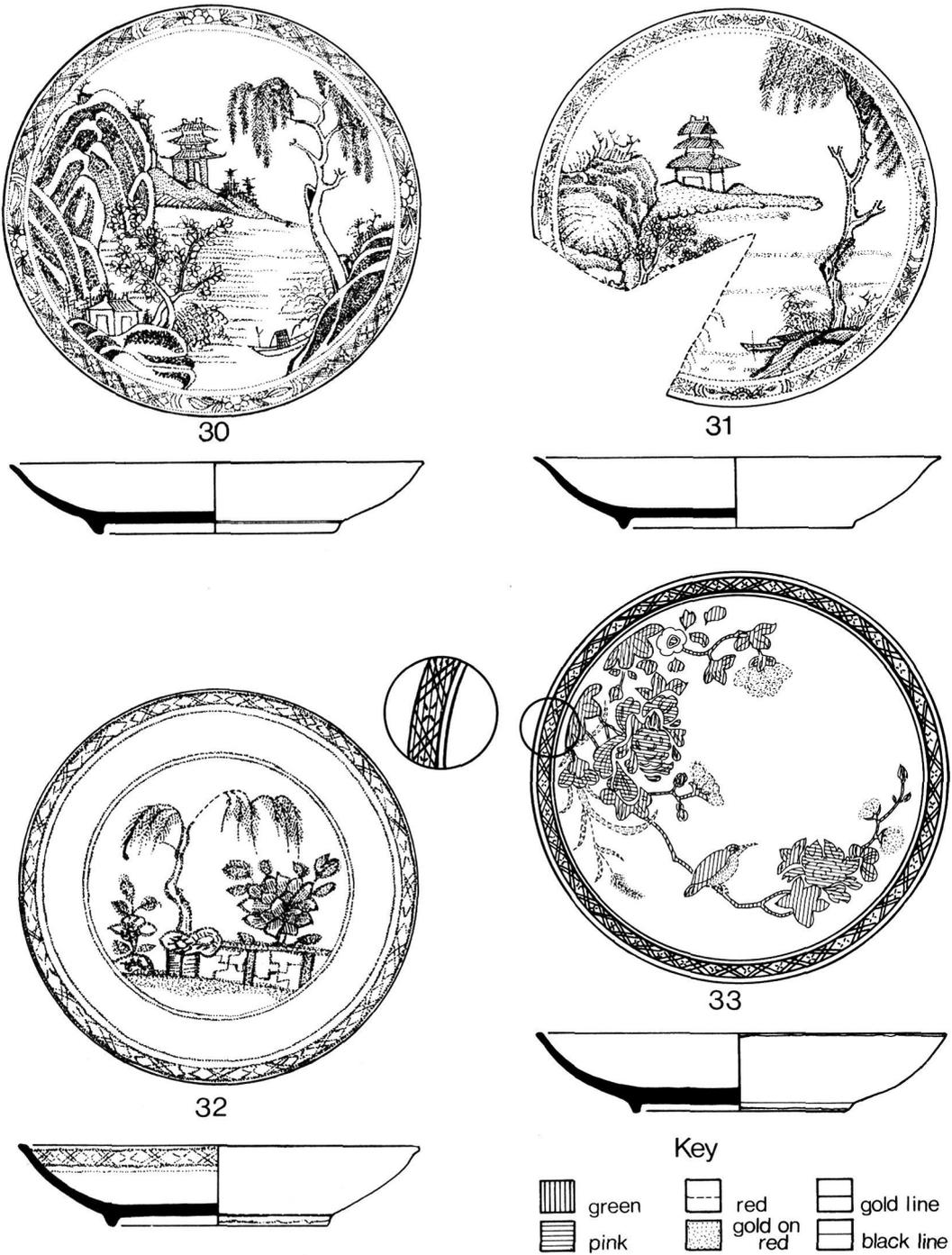


Fig. 7. Crosswall 1979: Chinese Porcelain Nos. 30-33 (1/2).

30. Dish, diamond diaper border and landscape design.  
 31. Dishes, *cf.* No. 30, possibly from a set. These four vessels have external brown enamel, of a tone known as *cafe au lait*, "dead leaf", or Batavian brown, which was first produced during the reign of K'ang Hsi, probably after 1700.  
 32. Dish, internal blue and white decoration, with simple diaper border, similar to No. 25. The external enamel is an unusually deep brown.  
 33. Three dishes, more or less identical and probably from a set. Internal enamelled design of a bird sitting on

a branch, with peonies. The enamels have badly deteriorated, and the colours are therefore difficult to distinguish, although it appears that pink, iron-red or 'rouge de fer', green and gold were applied over a basic design sketched in black paint. This would have required three separate firings, thus making these the most expensive pieces in the group. This type of decoration is dated to c. 1720–30, after which the use of red and pink enamels on export wares, ('famille rose'), becomes increasingly popular at the expense of blue and white porcelain.

This is a group of high quality porcelain, possibly representing a wholesale household clearance, including pieces from at least two sets (Kerr, pers. comm.). With one exception (No. 23), the group as a whole can be dated to the first quarter of the 18th century, the latter part of the reign of K'ang Hsi (1662–1722), the second emperor of the Ch'ing dynasty (1644–1912). This reign saw the revival of production from the 1680s onwards, following the slump in trade caused by the fall of the Ming dynasty.

## GLASS

K. H. Armitage and A. G. Vince

### *Green Bottle* (not illustrated)

Three types of wine bottles were found: onion (34), mallet (35–37) and tall, straight-sided (38–46). None of the bottles were intact when excavated but, like the pottery, were possibly complete, or almost so, when thrown away. It appears from a series of dated examples (Noël-Hume, 1970) that the onion bottle was made in the period 1680–1720, while the mallet-shaped bottles date to 1720–1760, and the tall, straight-sided type started about 1760 and continued throughout the 18th century.

### *Pharmaceutical Glass* (Fig. 8)

47. Pharmaceutical phial, clear glass, rough pontil mark in the upkick.  
 48. Pharmaceutical phial, light bluish-green glass, pointed upkick with very rough pontil mark.  
 49. Pharmaceutical phial, clear glass, rough pontil mark in upkick.  
 50. Pharmaceutical bottle, light bluish-green glass, string rim, high pointed upkick (51mm) with rough pontil mark.  
 51. Bottle neck, function uncertain, light green glass.  
 52. Pharmaceutical bottle, clear glass, cello-shaped, with moulded legend. According to a broadsheet of 1755–7 the authentic legend should read: BY THE KINGS ROYAL PATENT GRANTED TO ROBT. TURLINGTON FOR HIS INVENTED BALSAM OF LIFE LONDON JANUARY 26, 1754, (Noël-Hume, 1969, 43–4).  
 53. Jar, light bluish-green glass, ribbed, pontil mark on the base.

54. (?) Flask, clear glass, slight pontil mark on the base.

Straight-sided pharmaceutical bottles with flat rims were found. They were clear and light bluish-green in colour. Although most examples were incomplete, there seem to be two sizes: short phials, 30–40mm. in diameter and taller phials, 50–60mm. in diameter. The small type occurs only in clear glass, but the taller phials occur both in clear and bluish-green glass. One phial—the taller type—has a much wider rim than normal.

Small, conical-shaped bottles with high kick bases were found in light bluish-green, light green and clear glass. They all have string rims. It has been suggested that these bottles contained oil or vinegar (Noël-Hume, 1970, Fig. 17, No. 9).

Other forms were represented by single examples, notably, the 'Robert Turlington' balsam bottle dated 1754; however, it is known that some of these were contemporary forgeries (Noël-Hume, 1970).

### *Glass Fineware* (Fig. 9, Nos. 55–58)

55. Wine glass, clear, pontil mark on the base. Two parallels, which come from Colonial Williamsburg (Noël-Hume, 1969, Fig. 8, Nos. 3 & 4) are dated to the mid 18th century.  
 56. Wine glass, clear, pontil mark on the base. A similar example comes from Colonial Williamsburg (Noël-Hume, 1970, Fig. 13, No. 2), but this has simple wheel-engraving. It is dated to 1765–1780.  
 57. Tumbler, clear, pontil mark on the base. For parallels see Noël-Hume (1962, Fig. 33, No. 5).  
 58. Tall, cylindrical container, wide-flanged rim, pontil mark on base. (?) Bulb glass (Matthews, pers. comm.)

All the fineware is in clear, presumably lead, glass. Two drinking glasses were found, both with straight stems and folded feet. One of the glasses has a bell-shaped bowl and a tear drop at the base of the bowl and the other has an ogee bowl. Both forms have parallels found in mid 18th-century contexts.

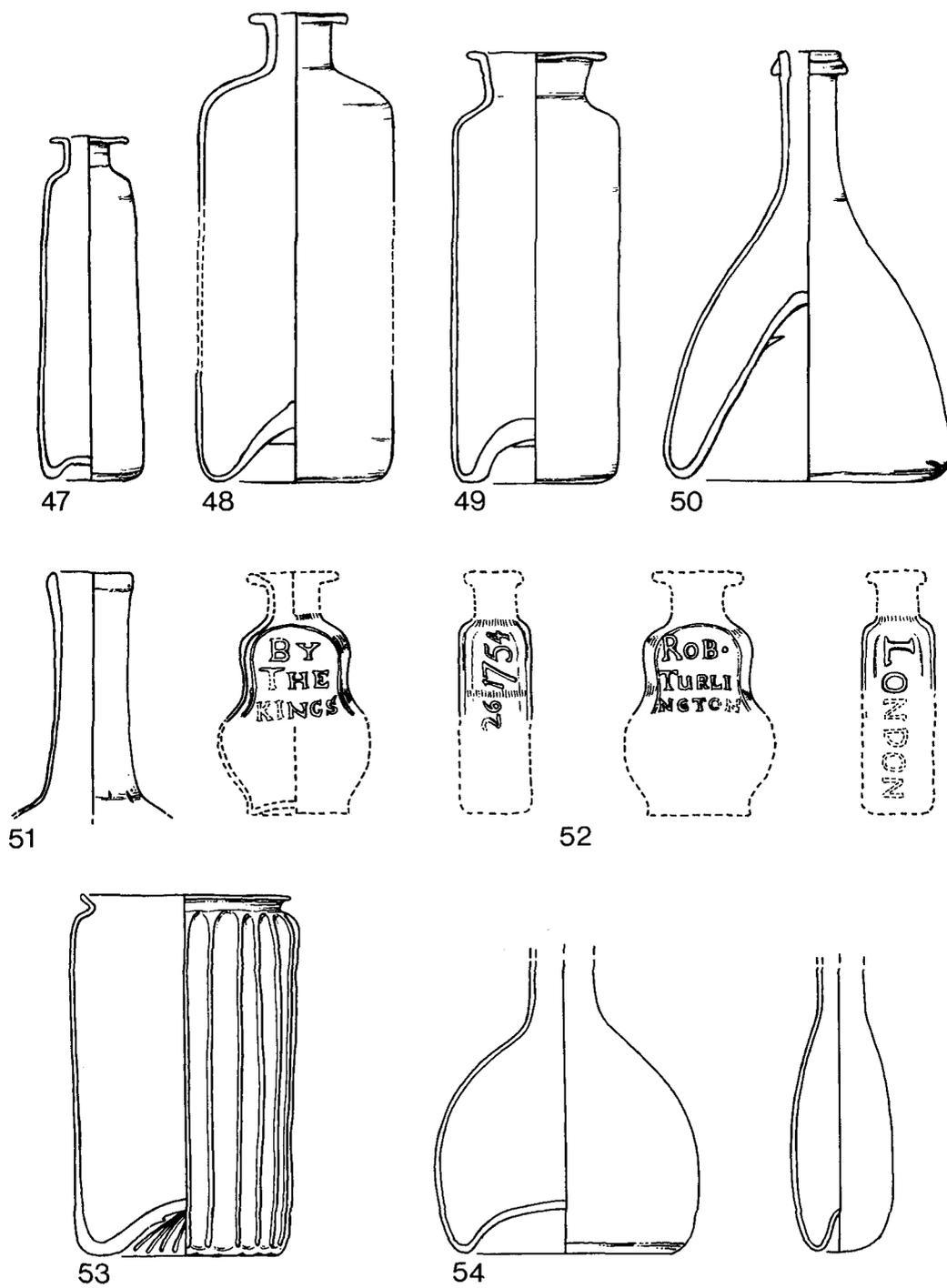


Fig. 8. Crosswall 1979: Pharmaceutical Glass Nos. 47-54 (1/2).

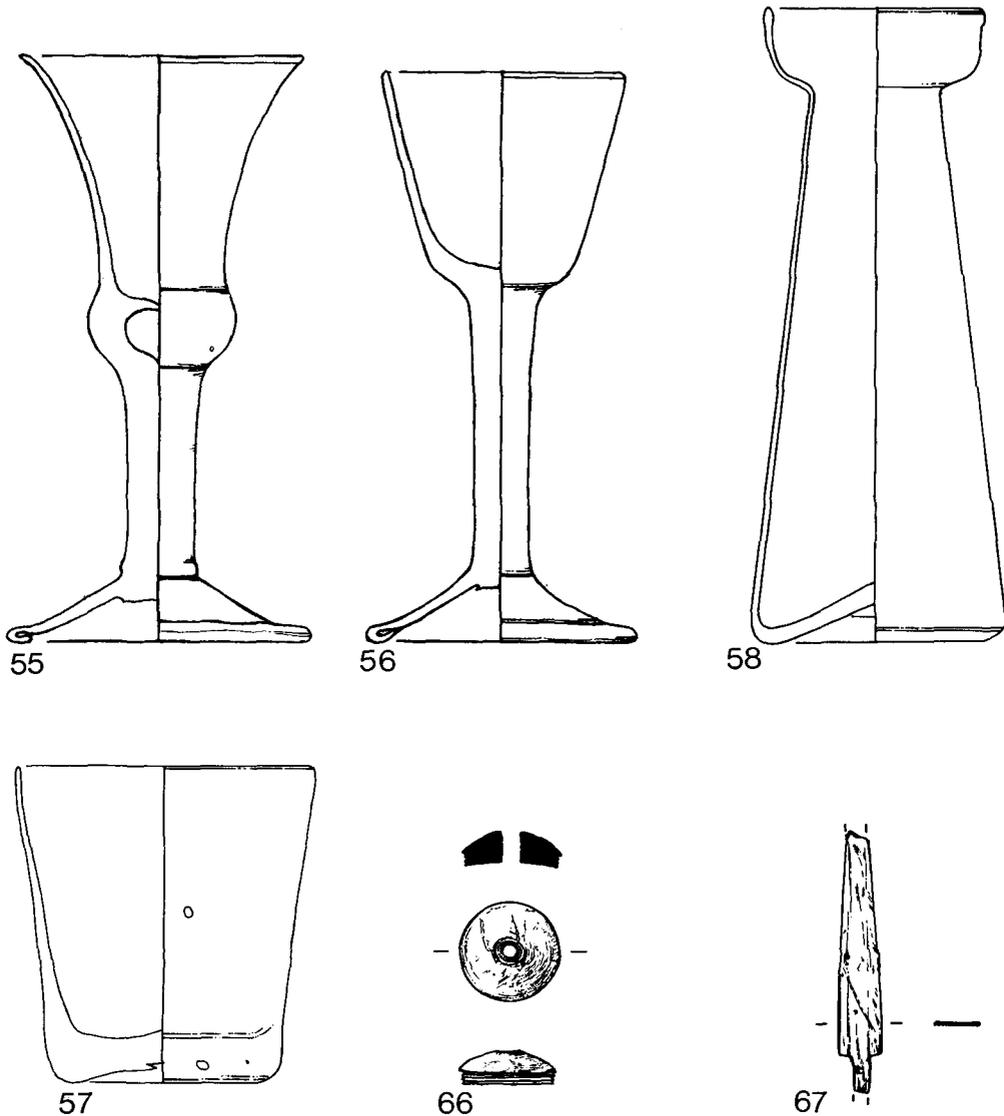


Fig. 9. Crosswall 1979: Glass Fineware Nos. 55–58 ( $1/2$ ); Bone Objects Nos. 66–67 ( $1/2$ ).

*Mirror* (not illustrated)

Several fragments of a clear glass mirror (59) with a silvered back were found. It has scalloped edges and cut-glass decoration. A similar find from Rosewell, Virginia is thought to date to the late 17th-early 18th century (Noël-Hume, 1962, Fig. 33, No. 9)

*Window Glass* (not illustrated)

Two types were found; light green, heavily weathered fragments of spun glass (60) and thicker light blue unweathered fragments (61). In both cases, the glass

came from large rectangular, rather than diamond, panes, but no dimensions could be measured.

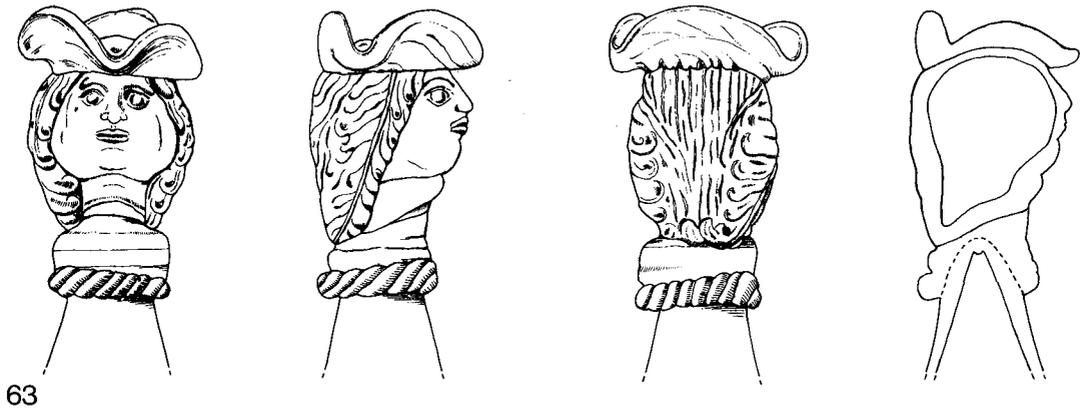
*Roundel* (not illustrated)

62. Roundel, clear glass, rough edges, diameter 38mm, width 3mm. (?) Locket glass.

GLASS BIRD FEEDER (Fig. 10, No. 63)

G. Egan

63. Bird feeder, clear glass; only the moulded head remains. For a similar example see Thorpe (1969, Pl. LXXX11)



63

Fig. 10. Crosswall 1979: Glass Bird-Feeder No. 63 (2/3).

A colourless lead glass finial in the form of a male head, with tricorn hat applied separately. At the base of the neck is a small rod-shaped piece of glass with a series of diagonal lines in a band (like a heraldic wreath), which connects the head to the rest of the object. Most of this lower part of the vessel is missing. A seam from the join of the two-piece mould in which the head was blown is evident on the gathered shoulder-length hair.

This is the top of a distinctive type of conical feeder for caged birds. A number of examples of both male and female heads, in a variety of colours, are known from such vessels e.g. London Antiquities (1908, 163, Nos. vii 1–9): the heads of Nos. A12126 & 5099 (SG173), now in the Museum of London, are probably from the same mould as the Crosswall example; the features on the first are more clearly defined, while those on the second are less distinct than on this most recently excavated case. No. 5106, also in the Museum of London, is very similar, but minor differences in details of the hair and profile suggest that this head is from another mould. Outside London a closely parallel finial was found in Oxford (Leeds, 1938, 156–74 & Pl. XIIB). A few almost complete examples have a rectangular feeding trough at the base, on the opposite side to the face on the finial—e.g. No. 5099, referred to above, a female headed feeder found at Goodwood House, Sussex (Noël-Hume, 1966, 208–9), and a less complete example found in Williamsburg, Virginia (*ibid.*, 210).

Bird feeders of this form appear to have been used throughout the 18th century. An advert of 1706 suggests that they were an innovation then: ‘new fashion Cristal Bird Glasses, which effectively prevent the littering of seeds into the room’ (Buckley, 1925, 143, Appendix No. 95. The maker, T. Meyer, worked at the Bird Cage in Long Acre). Thomas Rowlandson’s version of ‘The Tax Gatherer’ (published 1799) depicts a feeder with the characteristic tricorn hat, fixed to the outside of a bird cage (Noël-Hume, 1966, 210, Fig. 6). Although it has been suggested that the male heads were intended to represent a specific person, e.g. the Duke of Marlborough, they are unlikely to have had any such particular significance (*cf.* Thorpe, 1969, 171, note 3, with Noël-Hume, 1966, 208).

As the 1706 advert shows, the feeders were used for seed. They might perhaps also have been used for water (Noël-Hume, 1966, 209–10), as are their modern counterparts made in plastic (e.g. Petcraft’s Flo-matic Feeder, made by Thomas’s of Halifax, ‘specially designed for seed or water’: 18th century feeders would have used the same gravity-flow principle to replenish the trough automatically as long as the seed or water lasted). It is unlikely that the present practice of cluttering pet birds’ cages with toys of various kinds was foreshadowed by these elaborate glass vessels; the moulded heads faced in the opposite direction from the cage (*cf.* Rowlandson, above), so the anthropomorphism of the feeders was not for the delectation of the pet, but of the owner.

## CLAY PIPES (not illustrated)

A. G. Vince

64. One complete example of Type 27; 361mm long; mark SB crowned, possibly made by Sarah Bett who is recorded in Southwark in 1756 (Oswald, 1975, 132).

65. One bowl of Type 27; mark WK (Atkinson and Oswald, 1969); and 20 stem fragments. Type 27 is thought to have started c. 1770.

## BONE OBJECTS (Fig. 10, Nos. 66 &amp; 67)

F. A. Pritchard

66. Domed circular bone object with central perforation and screwing thread; diameter 25mm, diameter of perforation 5mm. (?) Lid of small container.

max. width 12mm. Plain.

67. Fragments of three bone fan sticks of identical shape with angular shoulders and straight tapering edges;

68. Cylindrical, polished bone handle; diameter 11mm. The terminal is sawn and recessed for the fitment of a decorative (?) metallic knob. Heavily corroded iron tang. (?) Knife or fork (not illustrated).

The above items represent artefacts of a 'bourgeois' character. In the 18th century good quality cutlery was made of silver, but the knife or fork found at Crosswall is only made of iron and the surviving bone handle is undecorated. The fan sticks similarly indicate a relatively cheap type of fan probably mounted with a hand-coloured printed leaf (Mayor, 1980, 53-54). In the 18th century fans were at their most elegant and sophisticated: those of good quality were frequently characterised by intricately carved sticks, which were designed to harmonise with the leaf as a complete decorative entity (Armstrong, 1974, 51). The sticks considered here, however, lack any kind of decoration, being of a mass-produced type. Their tapering shape and squared-off shoulders suggest a date in the second half of the 18th century.

## FAUNAL REMAINS.

## INTRODUCTION

P. L. Armitage

A total of 582 bone elements (191 mammal, 359 bird and 32 fish) were recovered from the late 18th-century pit at Crosswall. A full list with measurements of the faunal remains is available on request, in the form of an archival report, from the Department of Urban Archaeology, Museum of London, where the bones are held in store and may be examined.

The faunal remains are described in systematic order under species:

## MAMMALIAN BONE

P. L. Armitage

A total of 191 mammalian bone elements were recovered; 178 (93.2%) are identified to species and part of skeleton, and 13 (6.8%) remain as unidentified bone fragments. The weight of all the mammalian bone is 1239.9g, of which 1200.4g (96.8%) is the weight of the identified material and 39.5g (3.2%) the unidentified. The following animals are identified; cattle, sheep, pig, rabbit and (?) cat (foetal). Figure 12 lists the bone elements identified for each species.

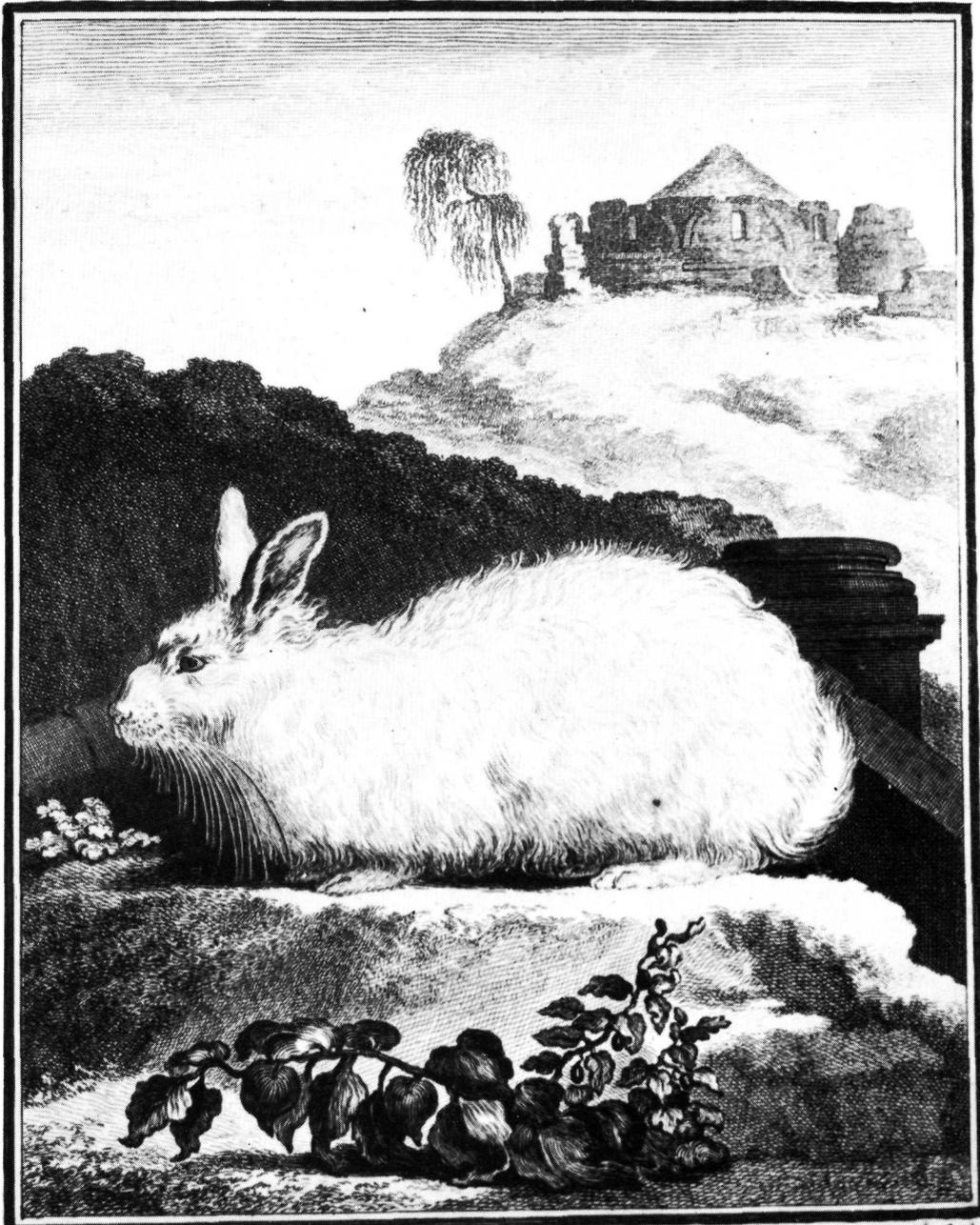
All the bone is in a good state of preservation. With the exception of 7 sheep and pig vertebra, 1 sheep innominate bone and 8 rabbit ribs that are stained dark brown, all the bone elements are pale yellow in colour. Certain bones of the skeleton of the large rabbit (described below) do, however, show brownish streaks on them and appear shiny (waxy); a condition observed in bones that were buried with the flesh still on them and unearthened when the muscle and skin tissues had decomposed.

Many of the cattle, sheep and pig bones show evidence of butchery and are discarded household refuse. There is one group of articulated bones comprising a femur, tibia, astragalus and calcaneum from the left hindlimb of a pig aged approximately two years. Together, these bones are identified as the discarded remnant of a joint of meat which corresponds to the modern 'leg of pork' (Meat & Livestock Commission, 1977).

Parts of the articulated skeleton of a large fully grown adult rabbit were recovered from the cess pit. There is no evidence of butchery and apart from two humeri which have lesions immediately below the proximal epiphysis on the medial side, all the elements of the skeleton appear perfectly healthy. Comparison of the skull of this animal with those of modern wild and domestic rabbits in the collections of the BM(NH) has revealed that the Crosswall rabbit is certainly domestic and that it bears a close resemblance to the Angora; a breed known in England in the later 18th century. Confirmation that the Crosswall skeleton is indeed an



Pl. 1. Crosswall 1979: Brick-lined pit constructed against the Roman city wall.



*De Seve delin.*

LE LAPIN D'ANGORA

*C. Baughey Sculp.*

Pl. 2. Engravings of an Angora rabbit (de Buffon & Daubenton *Histoire Naturelle* 45 (1756) Pl. 53, 340).

Angora rabbit is provided by the narrow width between the supraorbital fissures in the skull (Fig. 11). The value, 11.9mm, for this point of measurement falls within the range established for the series of British wild rabbits in the collections of the BM(NH) (range: 10.6–12.7mm); a characteristic which, according to Darwin (1868) distinguishes the skull of the Angora from those of the other breeds of domestic rabbits. In all other dimensions, the Crosswall skull is considerably larger than that of the largest wild rabbit in the BM(NH) collections, except for the neurocranial width, which is smaller; this last feature is commonly found in the other breeds of domestic rabbit (e.g. Silver-grey, Lop-ear and Flemish giant). The Crosswall rabbit is the subject of special study and a detailed description of the anatomical features of the skeleton of this animal has been published elsewhere (Armitage, 1981).

The soft silky fur of the Angora rabbit, which is either plucked or combed out of the coat, is highly prized and is used in the manufacture of articles of clothing and as stuffing for pillows and cushions. Although it is possible that the inhabitants of the site were involved in the commercial breeding of Angora rabbits for the fur trade, it seems more likely that the Crosswall rabbit was kept as a pet: Angora rabbits (Pl. 2) are said to be 'very quiet and docile' and 'are very tractable as pets', especially suitable 'as ladies' pets' (Knight, 1889, 2–18).

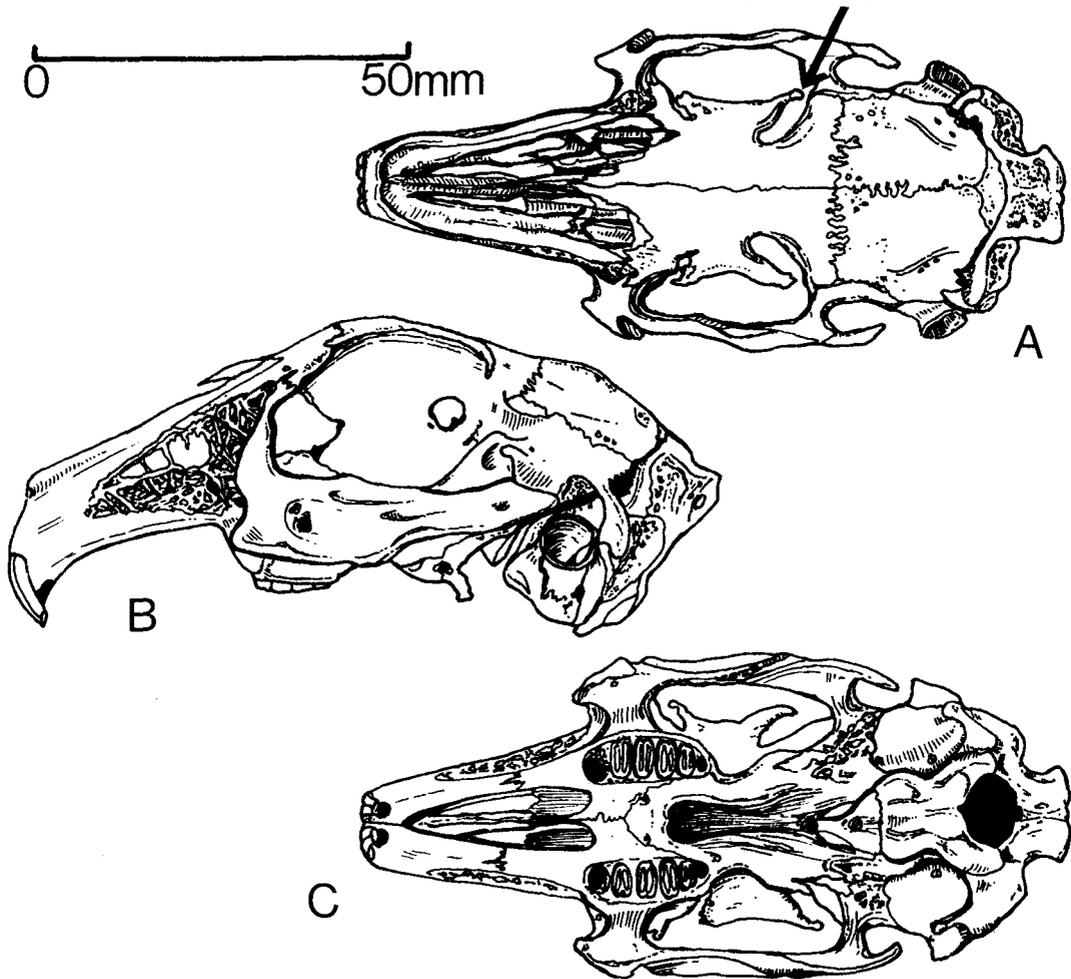


Fig. 11 Crosswall 1979: Drawings of the skull of the Angora rabbit from the late 18th century cess pit: (A) dorsal view; (B) left lateral view; (C) palatal view. The narrow width between the supraorbital fissures (arrowed) identifies the specimen as Angora (1:1).

|   | HEAD  |         |                  | BODY                    |        | FORE & HIND LIMBS |         |        |      |            |       |       | EXTREMITY |           |       |            |           |           | TOTAL NUMBER | WEIGHT (g) |           |
|---|-------|---------|------------------|-------------------------|--------|-------------------|---------|--------|------|------------|-------|-------|-----------|-----------|-------|------------|-----------|-----------|--------------|------------|-----------|
|   | Skull | maxilla | mandibular ramus | vertebra (incl. sacrum) | rib    | scapula           | humerus | radius | ulna | innominate | femur | tibia | fibula    | calcaneum | talus | metapodial | phalanx 1 | phalanx 2 |              |            | hoof core |
| CATTLE                                  | —     | —       | —                | 6(5)                    | 9(5)   | —                 | 1(1)    | —      | —    | 2(2)       | —     | —     | —         | —         | —     | —          | —         | —         | —            | 18         | 403.0     |
| SHEEP                                   | —     | 1       | 2                | 14(14)                  | —      | —                 | —       | —      | —    | 4(2)       | 1     | 4(4)  | —         | —         | 1     | 1(1)       | 2         | 3         | 1            | 35         | 343.7     |
| SHEEP & PIG SIZED                       | —     | —       | —                | 14(14)                  | 18(11) | —                 | —       | —      | —    | —          | —     | —     | —         | —         | —     | —          | —         | —         | —            | 32         | 104.6     |
| PIG                                     | —     | —       | —                | 6(6)                    | —      | 1(1)              | 1(1)    | 1(1)   | —    | —          | 1(1)  | 1     | 1(1)      | 2(1)      | 2(1)  | 1          | —         | —         | —            | 17         | 244.0     |
| RABBIT<br>small sized<br>(1 individual) | —     | —       | 2                | —                       | —      | —                 | —       | —      | —    | —          | —     | —     | —         | —         | —     | —          | —         | —         | —            | 5          | 0.6       |
| large sized<br>(parts of<br>1 skeleton) | 1     | —       | 2                | 18                      | 22     | 2                 | 2       | 2      | 2    | 2          | 2     | 2     | 2         | 2         | —     | 12         | 1         | —         | —            | 72         | 106.2     |
| CAT (foetal)                            | —     | —       | 1                | —                       | —      | —                 | 1       | —      | —    | —          | —     | —     | —         | —         | —     | —          | —         | —         | —            | 2          | 0.3       |

( ) Numbers in parentheses refer to bones showing evidence of butchery

Fig. 12. Crosswall 1979: Numbers of identified mammalian bones.

## BIRD BONE

### B. A. West

There were 339 bones from domestic fowl (*Gallus gallus*), 19 unidentified fragments and one linnet (*Acanthis cannabina*), none of which display butchery marks. The total weight of the identified bone is 485g and the unidentified, 2.6g. In addition to the bird bone, several small fragments of egg shell (?chicken) were found.

The considerable variation in age and size of the domestic fowl bones facilitated the estimation of minimum number of individuals, of which at least 26 are represented.

Of the 209 fowl bones in which age can be estimated by epiphyseal fusion, 137 (65%) are adult and 73 (35%) immature (under six months old).

Gender can be determined in 10 adult tarsometatarsal bones: 8 are unspurred and thus female, 1 bears a spur scar and is also female, while one is spurred and therefore either male or capon (West, forthcoming).

Only one pathological specimen was recovered: a *Gallus* skull with a small lump of irregular deposition on the left frontal process, and, on the right frontal process, an indentation or puncture with a raised circular rim. These injuries suggest that the individual was probably pecked on the head (Cowles, pers. comm.).

Measurements of the limb bones of domestic fowl (Figure 13) were compared with those from six other sites: Southampton (Bourdillon & Coy, 1980), Exeter (Maltby, 1979), Lincoln (O'Connor, 1981, in press), St. Magnus, London (Carcy & Armitage, 1979) Baynard's Castle, London (Carcy, 1979) and Aldgate, London (West, 1980). The study revealed that the Crosswall specimens are much larger than those from St. Magnus (1st–14th century), Southampton (8th–10th century), Lincoln (8th–13th century), and all periods at Exeter except c. AD 1600–1800, to which they are similar. The Crosswall measurements compare more closely with the bird bones from various City deposits, dumped at Baynard's Castle (c. AD 1500–1520), than with those from the Castle itself, which are larger. They are only slightly smaller than those from Aldgate (17th–18th century). Thus the measurements are consistent with those from other post-medieval sites, providing additional confirmation of the general trend toward increased size in domestic fowl from medieval to modern times.

The linnet bone probably represents a cage bird:

'In the 1770's song birds were taken alive on the outskirts of London, with the aid of nets and tame decoys, to be sold not as food but as caged birds' (Wilson, 1973, 117).

And the linnet was highly prized for its song;

'Of all house birds, this, from the softness and flute-like sound of its voice, gives the airs that it is taught in the neatest and most agreeable manner' (Bechstein, 1812, 143).

## FISH BONE

### A. Locker

A total of 32 fish bones was recovered; of these, 29 (90.6%) are identified to species and part of skeleton and 3 (9.4%) remain as unidentified bone fragments. The weight of the identified bone is 17.6g and, of the unidentified, 0.1g. All the fish bones are heavily stained. The following species are identified; cod (*Gadus morhua*), haddock (*Melanogrammus aeglefinus*) and plaice (*Pleuronectes platessa*). Fig. 14 lists the bone elements identified for each species.

The two cod dentaries appear to be a pair and using the D measurement to estimate the length, weight and age relationship (Wheeler & Jones, 1976) the total length of the individual is assessed at approximately 60cm, the age 3 to 4 years and the weight 1.75kg. The P measurement made on the cod premaxilla indicates the presence of a smaller individual approximately 40cm in length, 2 years old and weighing around 0.75kg. One of the cod cleithra has a knife cut suggesting butchery possibly resulting from the removal of the head.

All three species from Crosswall could have been purchased from one of the three main London fish markets of the 18th century: Billingsgate, Fishstreet Hill and Old Fish Street (Defoe, 1724 reprinted 1974 ii;343).

| Bone  | Measurement (after the method of von den Driesch, 1976) |            |                  |                 |                   |             |
|---|---|------------|------------------|-----------------|-------------------|-------------|
|   |   | GL         | Bp               | SD              | Bd                | GL: Range   |
| Femur   | $\bar{X}$<br>N  | 83.4<br>10 | 16.5<br>10       | 7.3<br>10       | 16.9<br>10        | 74.9-94.1   |
| Humerus   | $\bar{X}$<br>N  | 78.2<br>6  | 21.0<br>6        | 7.3<br>6        | 16.2<br>6         | 71.9-85.7   |
| Radius  | $\bar{X}$<br>N  | 63.2<br>14 | —<br>—           | 3.3<br>14       | 6.6<br>14         | 57.5-75.6   |
| Tarsometatarsus<br>(female)   | $\bar{X}$<br>N  | 72.9<br>9  | 13.0<br>9        | 6.1<br>9        | 13.1<br>9         | 64.9-84.6   |
| Tarsometatarsus<br>(male or capon)  | $\bar{X}$<br>N  | 92.8<br>1  | 15.4<br>1        | 8.2<br>1        | 16.9<br>1         | —           |
| Ulna  | $\bar{X}$<br>N  | 70.2<br>12 | 8.4<br>12        | 4.4<br>12       | DiD<br>9.5<br>12  | 64.5-83.2   |
| Carpometacarpus   | $\bar{X}$<br>N  | 39.9<br>8  | 12.7<br>7        | —<br>—          | DiD<br>7.6<br>8   | 35.2-43.8   |
| Scapula   | $\bar{X}$<br>N  | 74.5<br>10 | —<br>—           | —<br>—          | DiC<br>12.7<br>15 | 68.6-81.0   |
| Coracoid  | $\bar{X}$<br>N  | 56.9<br>9  | —<br>—           | Bb<br>15.3<br>9 | BF<br>12.6<br>9   | 51.9-65.0   |
| Tibia   | $\bar{X}$<br>N  | 117.6<br>6 | DiP<br>21.9<br>6 | SD<br>6.7<br>6  | Bd<br>12.2<br>6   | 103.5-132.5 |
| KEY: $\bar{X}$ =mean; N=number; GL=length; Bp=proximal width; SD=minimum shaft width; Bd=distal width; DiD=diagonal of the distal end; DiC=cranial diagonal; Bb=basal width; BF=width of the basal articular surface; DiP=diagonal of the proximal end. |   |            |                  |                 |                   |             |

Fig. 13. Crosswall 1979: Measurements of the limb bones of domestic fowl.

| <i>Cod</i>   | <i>Haddock</i> | <i>Plaice</i> | <i>Unidentified</i> |
|--|----------------|---------------|---------------------|
| 2 d  | 2 v            | 1 h           | 3 b                 |
| 1 p  |                | 4 v           |                     |
| 5 c  |                |               |                     |
| 8 h  |                |               |                     |
| 6 v  |                |               |                     |
| KEY: d=dentary; p=premaxilla; c=cleithrum; h=other head bone; b=branchiostega; v=vertebra. |                |               |                     |

Fig. 14. Crosswall 1979: Numbers of fish bones.

## DISCUSSION

A. G. Vince, P. L. Armitage and G. Egan

The discovery of a large group of household objects (intermixed with a considerable amount of building material) in what was seemingly a brick-lined cess pit, is unusual. Further, it is notable that many of the objects were apparently intact when discarded, even sets of dishes are represented. Everything in the group seems to have been disposed of at the same time, *c.* 1770 (Vince, 1981). A remarkably domestic feature of the assemblage is the presence of pets, indicated by the remains of a linnet, glass bird feeder, Angora rabbit and the (?) cat foetus. The range of the material—evidently not the result of the day to day accumulation of refuse—suggests that it may represent the clearance of a household. Such a clearance might have occurred on the death of the resident or in more unusual circumstances (Huggins, 1969).

A documentary search was carried out but failed to discover any evidence of the property or its owner/resident during the relevant period. However, there are some fairly positive indications of the social status of the household: the keeping of pets such as the caged linnet and exotic Angora rabbit; the presence of at least two sets of high quality Chinese porcelain, including one piece some 70 years old and possibly an heirloom; the fan; the stool-pan for use with a wooden commode and, finally, the evidence of diet (discussed below), consistently suggest a middle-class background.

The information from this group is best interpreted by comparison with that from contemporary groups elsewhere in London. The nearest available comparison is with a slightly earlier group from Cutler Street (CUT 78, 928 & 929: D.U.A. archives, Museum of London), which contained a similar pottery assemblage but little else. Although this is possibly a *real variation it could*, however, be due to differential recovery of the pottery and other artefacts. The only other 18th-century group for which such information exists is from the Aldgate 1974 excavation (AL 74, 1241: D.U.A. archives, Museum of London) and is dated *c.* 1700–1720, at least half a century earlier than that from Crosswall. Nevertheless, a comparison between these two groups is informative.

From the point of view of the faunal remains, the assemblage from the late 18th-century cess pit at Crosswall is most unusual and atypical of the other animal bone groups that have so far been recovered from post-medieval sites in London, for example, Aldgate (Fig. 15). Cattle, sheep and pig bone form the bulk of the assemblage from Aldgate and relatively few bird bones are present (less than 1% of the total weight of the identified bone elements). The faunal remains from the pit at Crosswall, on the other hand, include a very high proportion of bird bone mostly domestic fowl with one bone of a linnet; forming 29% of the total weight of the identified bone elements. With the exception of the linnet bone and skeleton of an Angora rabbit, both thought to be pets, all the mammalian, bird and fish bone from Crosswall is kitchen refuse. The presence of a high proportion of immature cattle, sheep, pig and chicken bones may indicate that the household (or ? households) from which this material originated was reasonably 'well-off': a poorer family would presum-

ably have eaten the cheaper meat from older animals. The suggestion that the linnet may have been kept as a cage bird is substantiated by the presence in the same deposit of a glass bird feeder.

Glassware is ten times more common in the Crosswall pit than the Aldgate assemblage, but differences between the pottery assemblages are less pronounced and mainly reflect the disparity in date (Fig. 15). In both cases the most common ware, by weight, was locally produced (Aldgate 93.5%, Crosswall 83.4%). Non-local pottery is more common in the later group, but this is part of a countrywide trend and the Cutler Street group contains a similar proportion of non-local wares to that from Crosswall. A big difference can be seen in the quantities of imported pottery. Only two imported types of pottery were recovered at Aldgate, Cutler Street and Crosswall: Westerwald stoneware (which declines from 1.0% to 0.2% to absent) and Chinese porcelain (which increases from 0.5% to 2.2% to 5.6%). However, if the pottery is examined by counting the proportions of rims present (Estimated Vessel Equivalents or EVEs), rather than by weight, the results are different. In Fig. 16 the groups are divided into types of wares and quantified in the first column by weight and in the second by EVEs. Since some of the less frequent wares had no rims present they do not feature in the second column. The main difference between the two methods of quantification is in the relative frequencies of coarsewares and finewares. Local red earthenware and Border wares are less prominent by EVEs whilst tin-glazed wares, non-local wares and imported wares are more so. This second method of quantification is more sensitive when comparing the frequencies of small, light vessels which by weight are unimportant. Chinese porcelain is the most common ware by EVEs in the Crosswall assemblage (31% of the group) compared with 2% in the Aldgate assemblage and 12% from Cutler Street. This clearly distinguishes the Crosswall group from the others. The only other significant difference between the wares present in the Crosswall and Cutler Street groups is the much smaller quantity of Border ware in the later group. Perhaps the importation of pottery from this region went into decline in the mid 18th-century.

An intriguing aspect of the porcelain is that the objects found at Cutler Street and Crosswall were some 40 years old when discarded, and coincidentally contemporary with those in the much earlier Aldgate group. It is remarkable that at Cutler Street and Crosswall there are no later pieces, and there is also the question of the reasons for the variation in the quantity of porcelain between the three groups. Clearly, to get much further with the interpretation of this pottery requires more comparative material. A corresponding problem arises when looking at the glassware since although there is much more glass in the Crosswall pit, the relative proportions of the different types of vessels (bottles/medicine phials/fineware) are similar.

Factors which may explain the variations between the three groups are: social differences, diverse methods of rubbish disposal, chronological differences in the material culture of the 18th-century Londoners and, of course, personal taste. To judge the relative strengths of these factors more assemblages need to be examined, preferably in well-documented situations where some of the archaeological variables can be controlled.

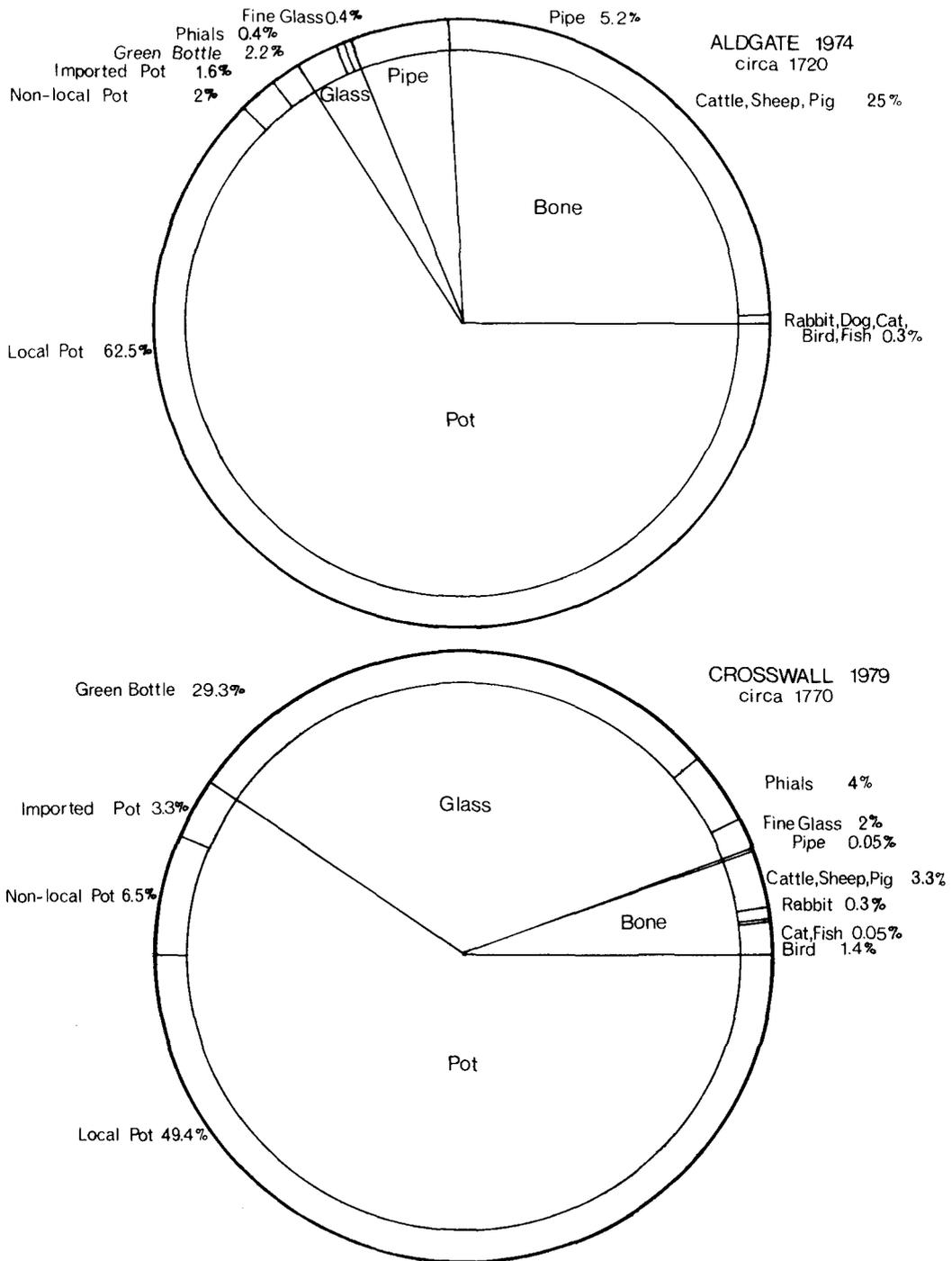


Fig. 15. Crosswall 1779: Statistical analysis of finds from Aldgate 1774 and Crosswall 1779 (percentages by weight).

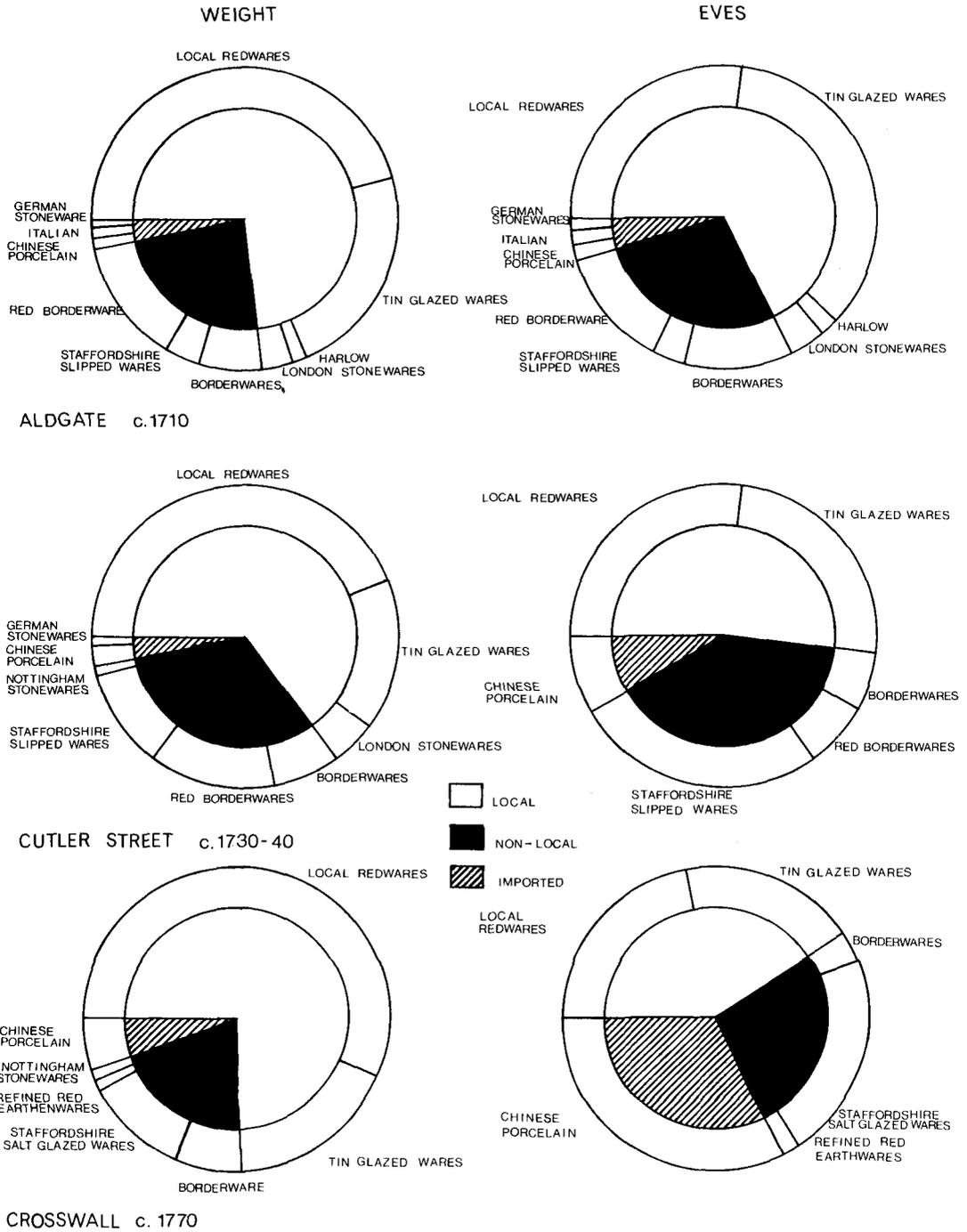


Fig. 16. Comparison of three post-medieval pottery assemblages by (a) weight (b) estimated vessel equivalents.

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REVIEW

PETER MARSDEN *Roman London* (Thames & Hudson) (1980) 224pp. 160 illustrations, £8.95.

A new book on Roman London is only to be welcomed. No definitive work has been published on the history and archaeology of Roman London since 1965, when Ralph Merrifield's invaluable book, *The Roman City of London*, was published (now sadly out of print). So much has happened on London's archaeological scene in the past fifteen years that such a book is sorely needed. This book traces the major excavations and finds from which the history of Roman London is drawn. It includes details from excavations carried out since the establishment of a permanent archaeological unit in 1973.

The book traces the origins of London, putting forward the theory that Roman London was founded by civilians and that it was not a military settlement as has been previously argued—a point still under discussion and needing more evidence either way. It describes the first century with the Boudican rebellion, the city's subsequent rebuilding and its creation as the capital of the Province in the second century. Later chapters deal with the impressive Roman public buildings that have been excavated in the City and the people known to have lived in Roman London. The history continues with the building of the city wall, and the later riverside wall and bastions. It describes the decline in London's prosperity and population and finally what is known of the end of Roman London.

A final chapter traces the stages in the recovery of Roman London from the earliest archaeological efforts of Christopher Wren in the seventeenth century, to eighteenth-century cartographers, the antiquarian collectors of the nineteenth century and the professional archaeologists of the twentieth. This final chapter is particularly worthy of mention, since it is a useful compendium of the antiquarians and archaeologists involved in the discovery of Roman London. More important, it lays blame with the Corporation of London for its lack of interest and financial involvement at the times when the opportunities for excavating Roman London were at their greatest. It cannot be stressed enough that had the Corporation been forced to take archaeological responsibility during the Victorian rebuilding of London or even after the last war, a more systematic approach and indeed a more comprehensive picture of Roman London might have been produced.

This book is well-illustrated with numerous archaeological plans and photographs, some of which have lost detail in their reproduction. Perhaps some of the plans could have been drawn rather more professionally with a uniform house-style, and scales should have been checked before publication. Illustrations of Roman objects and the Sorrell reconstructions of Roman scenes enrich the archaeological content. The book is essential reading for all those studying Roman London.

Jenny Hall

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