

Transactions
Volume 31 1980



London & Middlesex Archaeological Society

Hon. Editor:

Lawrence S. Snell, M.A., F.S.A., F.R.Hist.S.; F.R.S.A.
Newman College
Bartley Green
Birmingham B32 3NT
Telephone: 021-476 1181 (College), 021-472 2588 (Home)

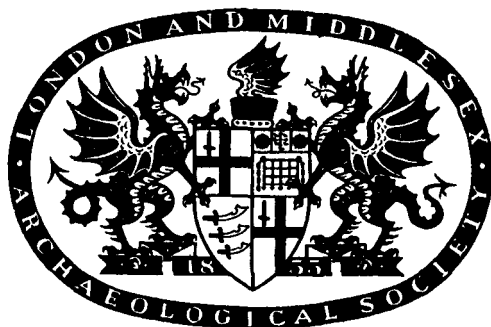
Assistant Editor:

Hugh Chapman, B.A., Ph.D., F.S.A., A.M.A.
c/o Museum of London
London Wall, London EC2Y 5HN
Telephone: 01-600 3699

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incorporating the
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incorporating Middlesex Local History Council

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incorporating Middlesex Local History Council

124th ANNUAL REPORT OF COUNCIL FOR THE YEAR ENDING
30th SEPTEMBER 1979

In addition to the usual three numbers of the Newsletter, two publications were issued, Volume 29 of *Transactions* appearing in March 1979 and two volumes on *Southwark Excavations 1972-74*, the first part of a proposed series to be published jointly with the Surrey Archaeological Society, in February.

The Presidential Address by Mr. M. G. Hebditch at the Annual General Meeting on 23rd February was on *The Antiquity of Parish Boundaries in Middlesex; the need for new work*. Of the other lectures of the season, four explored the theme of Anglo-Saxon England: *Anglo-Saxon and Early Norman Canterbury* by Tim Tatton-Brown on the 17th November, *Saxon and Early Norman England—the Architectural Heritage* by Edward Biffin on 15th December, *Anglo-Saxon London, a Review in the Light of Recent Evidence* by John Schofield on 27th April, and the George Eades Lecture, *Anglo-Saxon England; some Problems in Interpretation* by Professor Henry Loyn on 19th January. The others covered some eighteen centuries of London, from *The Roman Forum of London—Recent Discoveries* by Peter Marsden on 20th October, through *Whatever Happened to Anne Mowbray?* by Brian Spencer on 28th September, to *The Story of Marylebone: from Country Village to the Great Estates* by Dr. Anne Saunders on 23rd March.

The Stow Commemoration Service at St. Andrew Undershaft took place on 11th April, the address being given by Professor Valerie Pearl, and the Pepys Service at St. Olave Hart Street on 5th June, the speaker being Dr. Maurice Ashley.

Seven visits were arranged during the season. In London the places visited were *The Petrie Collection* on 14th October, *St. Bartholomew's Hospital* on 2nd December, *Westminster Abbey Conventual Buildings* on 24th March, and *17th and 18th-century Churches in the East of the City* on 17th February—this last visit producing an attendance of some 70 members, the highest for many years. Further afield day-tours were made to *North-West Kent* on 5th May and to *Winchester* on 16th June, whilst a new departure for the Society was a successful four-day tour of *North Wales* based in Conway from 14th to 17th September. Programme Guides were produced by the Director of Meetings for four of the visits.

Archaeological Research Committee

The Society continued throughout the year to administer the archaeological units in Inner London (whose work is reported on below) and in Staines, where post-excavation work continued and the report on the Friends Burial Ground site was submitted for publication. There were negotiations with the Surrey Archaeological Society and the Surrey County Field Officer concerning the proposed transfer of work in Staines to the County Field Officer and his staff; since Staines now lies in the administrative county of Surrey the Committee believes that this would be in the best interests of archaeology there.

In West London, pressure was exerted by the Committee to ensure that the Museum of London could continue its commitments in the area, and may have contributed to the additional appointment that was made.

The Working Group set up by the Committee to look into the conditions and employment of archaeologists working in Greater London submitted its final report to the D.o.E. which is investigating the need to re-organise London's archaeology

Meetings of the Borough Secretaries continued throughout the year co-ordinating the needs of the local societies and providing liaison with the full-time units within Greater London.

The 16th Annual Conference of London Archaeologists was held at the Museum of London on 31st March. The morning session covered aspects of current excavations in London, while the afternoon session was taken up with one theme, 'Medieval London—Recent Research into Some Aspects of the Medieval City'.

Inner London (North) Archaeological Unit

Excavations were carried out on Tower Hill, in Westminster and elsewhere. On the north side of the Tower the well-preserved remains of the medieval Tower Postern were revealed; these are to be conserved and opened to the public. Near Bond Street tube station a masonry structure, one of conduit-heads feeding the medieval City's water-supply, was investigated. Other minor excavations and site-watching continued.

The Unit also organised evening-classes at the City University, and members of the staff gave talks on the work of the Unit to a number of societies and study groups.

Historic Buildings and Conservation Committee

Regrettably during the year Alasdair Glass, M.A., F.R.I.B.A., had to resign from the Committee due to a change of job. He was responsible for reviving the Committee in 1975 and since then has been a most knowledgeable and enthusiastic Secretary. We acknowledge with gratitude his contribution to the Committee's work. Fortunately Mrs. J. Birchenough stepped into the breach to keep things going for the time being.

During the year the Committee considered 68 applications for demolition or alteration to listed buildings. Many of these did not merit any action but in a number of instances demolition was opposed, each case being investigated by a member of the Committee. We know that in many cases, in concert with other bodies, we were successful in our opposition; in many applications however, it takes a considerable time before the results are known.

Further volunteers as local investigators to assist the Committee would still be welcome.

Local History Committee

The first major event of the year was, as usual, the Annual Conference for local historians, held in November at the Museum of London. The theme of the conference—the thirteenth in the series—was commercial nurseries and market gardening, a topic of great relevance to many students of local history in the area, especially those in parishes near London and on the fertile soils of the Thames flood-plain. The principal speaker was John Harvey, a well-known authority on nurserymen of the past, who talked about the development of commercial gardening from the 17th century onwards. The short talks were by Miss E. J. Willson on *Nursery Gardens of West London* and by Mrs. Nicholson on the work of the Tradescant Trust, which aims to establish a museum of the history of gardening at St. Mary's Church, Lambeth. It was pleasing to see that many of the exhibits by local societies were on the same theme, a good example of the way in which local history can benefit from the study of one subject in many different areas.

This idea of mutual co-operation between individuals and societies is one which the Local History Committee is anxious to foster, and 1978 marked the collection of material for the third list of research and publications in Greater London which the Committee has been sponsoring over recent years. The list was due to be issued late in 1979.

Membership of the Committee was depleted during the year, and there has so far been little response from either societies or individuals to appeals for new members to help in the work of fostering the study of local history in London and Middlesex. This dearth of members makes it difficult to develop the work of the Committee, and it is to be hoped that the situation improves in the forthcoming year.

Youth Section

This was an active year for the Youth Section, with outings, talks, films and further issues of the Newsletter. August has become the month for a two-day course giving the children more opportunity to study a particular theme, and this year a day was spent on site recording

information, using tape-measures, plan-grids, plumb-lines and 'dumpy' levels. The second day was spent in West Ham on an Industrial Archaeological walk, visiting Abbey Mills and Three Mills. In the late afternoon, on both days, there were films on archaeology and on the Industrial Revolution.

Earlier in the year a group from Young Rescue was invited to join our members in a day's activity, which included talks on the Museum of London's collections by Hugh Chapman and John Clark, while in January a visit was paid to the *Frozen Tombs* exhibition at the British Museum after a morning spent studying Roman pottery with the help of Geoffrey Marsh.

The membership increased to 73, though some of the older members have 'graduated' to adult history and archaeological groups.

Membership and Finance

Total membership at 30th September 1979 was 910, made up of 649 Ordinary Members, 49 Life Members, 9 Honorary Members and 36 Student Members, together with 123 Institutional Members and 44 Affiliated Societies

Despite a temporary fall in investment income, the financial result for the year was satisfactory. Bulk sales of the Society's *Special Paper No. 2*, coupled with generous grants towards publication of that paper and of the *Transactions*, assured the success of this important aspect of the Society's work. The programme of meetings and visits has once again been organised very economically and no change in the present rate of subscription is contemplated.

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

By direction of Council

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	1978	Liabilities	1979	1978	Assets	1979
£	£		£	£		£
		Accumulated Funds:			Equipment:	Cost Depreciation
	1,249	Subscriptions Compounded	1,249	—	Projector and Screen	149 —
		General Fund		—	Proton Magnetometer	150 —
247		Balance at 30.9.78	353	—	Library Shelving	30 —
107	354	Add: Surplus for the year	426	779		
	1,603			2,028		
		Youth Section:				
15		Balance at 30.9.78	23	1,127	Investments at Cost:	
24		Income during the year	17	100	£2,524.49 4% Consols	849 1,127
					£100 8½% Savings Bonds	100 100
39	23	Expenditure during the year	40			
16		G. E. Eades Memorial Fund	—	6,095	Sundry Debtors	254
100		Add: Accumulated Income,	100	5,778	Bank and Cash Balances	17,425
36	136	less Expenditure	35	7,525	Building Society Deposit	7,910
				135		
		Grants Unexpended:			Note: No value has been attributed to the Society's library, stock of publications or sundry equipment	
2,528		Future Publications	9,940			
15,173		Archaeological Projects	13,644			
373	18,074	Wheatley Bequest	408	23,992		
	789	Sundry Creditors	621			
	£20,625		£26,816	£20,625		£26,816

(Signed) O. T. ALLEN, F.C.A.
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20th February, 1980

LONDON & MIDDLESEX ARCHAEOLOGICAL SOCIETY

Expenditure		1977/78		1978/79	
	£	£	£	£	£
Publications:					
Transactions: Volume 29	9,556	4,964			
Special Paper No. 2	8,000	13,190			
Newsletter	<u>543</u>	<u>623</u>		18,777	
Lectures and Visits	131			228	
Conferences: Grant Expended	60			—	
Commemorative Services	21			27	
Library	39			22	
Postage, Printing and Stationery	<u>511</u>			620	
Subscriptions and Donations	—			26	
Sundry Expenses	26			45	
Depreciation of Equipment	<u>7</u>			—	
	18,894			19,745	
Excess of Income over Expenditure	<u>107</u>			<u>426</u>	
Added to Accumulated Funds	<u>£19,001</u>			<u>£20,171</u>	

THE OCCURRENCE OF BRONZE AGE METALWORK IN THE THAMES: AN INVESTIGATION

MARGARET EHRENBURG

SUMMARY

This paper examines the possible explanations for the vast amount of Bronze Age metalwork which has been found in the Thames, and other rivers. Data from Thames Conservancy Board records for the river above Teddington are examined and the effects of dredging are discussed. The hypotheses that the material is the result of accidental loss, of votive offerings or burial practices and of the erosion of riverside sites are considered. No firm conclusions are reached.

The dense concentration of Bronze Age metalwork, and particularly of weapons, found in the river Thames, and to a lesser extent in the other major east coast rivers of Britain, has long been recognized.¹

This is shown both on Bronze Age distribution maps of the whole country, where the concentrations in the river valleys are clear² and on larger scale maps of individual river valleys (Fig. 1). For example, well over half the bronze age spearheads from Berkshire, Buckinghamshire and Oxfordshire come from the rivers Thames and Kennet, and over 80 per cent come from within two miles of the river banks. In *The Personality of Britain*, Fox³ suggested that this distribution showed that the rivers, and particularly the Thames, were very important trade highways, with dense settlement along the banks. In general terms he must have been right, but perhaps it is worth attempting to be more specific about the processes by which the material actually entered the water. Burgess, Coombs and Davies, Davey⁴ and others have favoured the hypothesis that they were votive or ritual offerings, while Rowlands⁵ has put forward the possibility that the erosion of land sites containing metalwork might be responsible. Although Torbrugge⁶ has considered this phenomenon in Europe as a whole, the various hypotheses for the concentration of metalwork in British rivers have not been examined with the thoroughness they deserve.

THE IMPORTANCE OF DREDGING

Before examining other theories systematically, it is worth considering the possibility that the present record of materials found in rivers is the result of modern dredging and other factors rather than an accurate reflection of the real distribution of bronze implements.

The Thames has been dredged almost continuously since the mid 19th century, to allow vessels of increasingly large size to travel up the river, and it has now been completely scoured upstream as far as Oxford. Many thousands of artefacts of all periods have been found in the river by dredger crews. Fig. 2

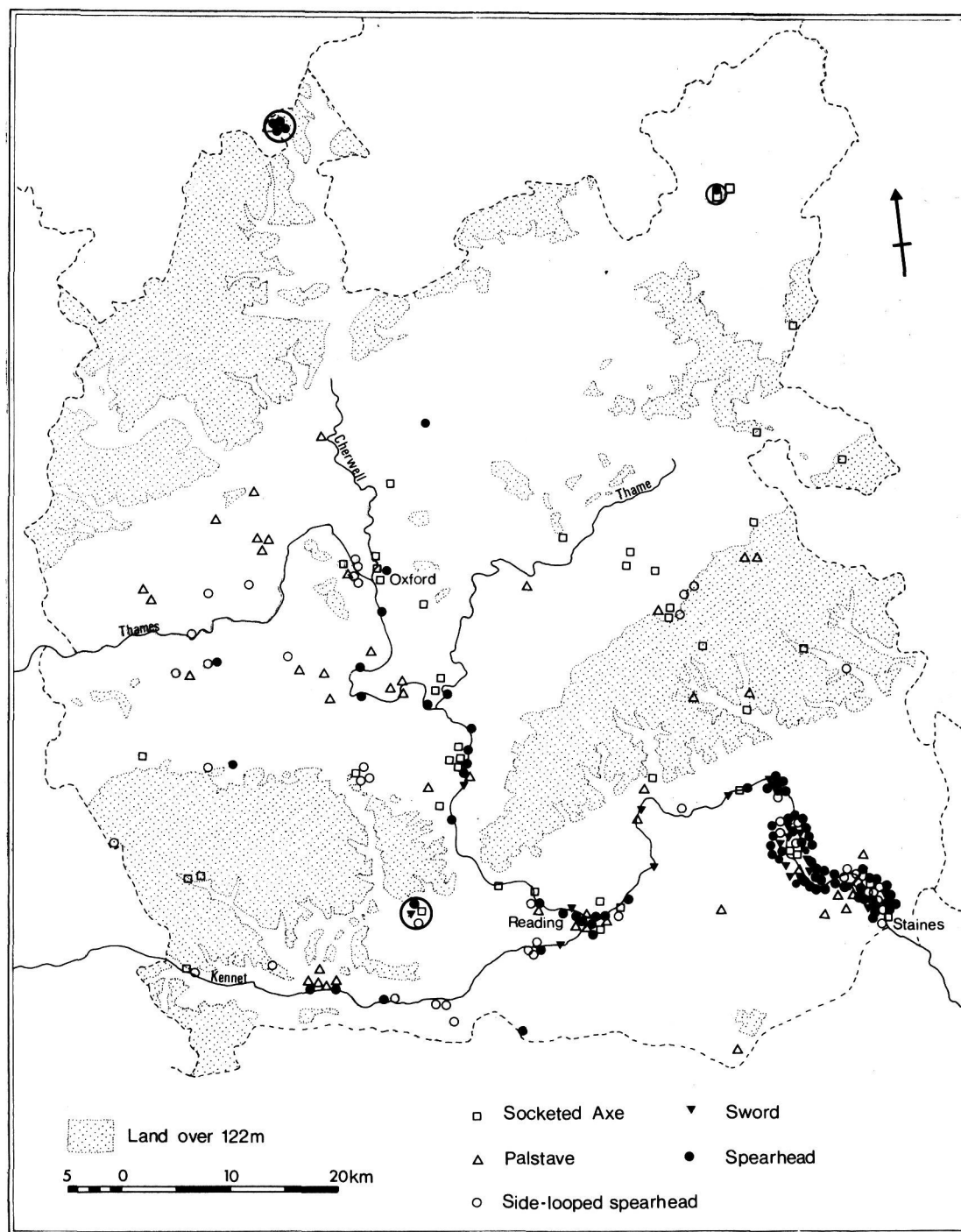


Fig. 1 Bronze Age metalwork: The distribution of selected Bronze Age types in Berkshire, Buckinghamshire and Oxfordshire.

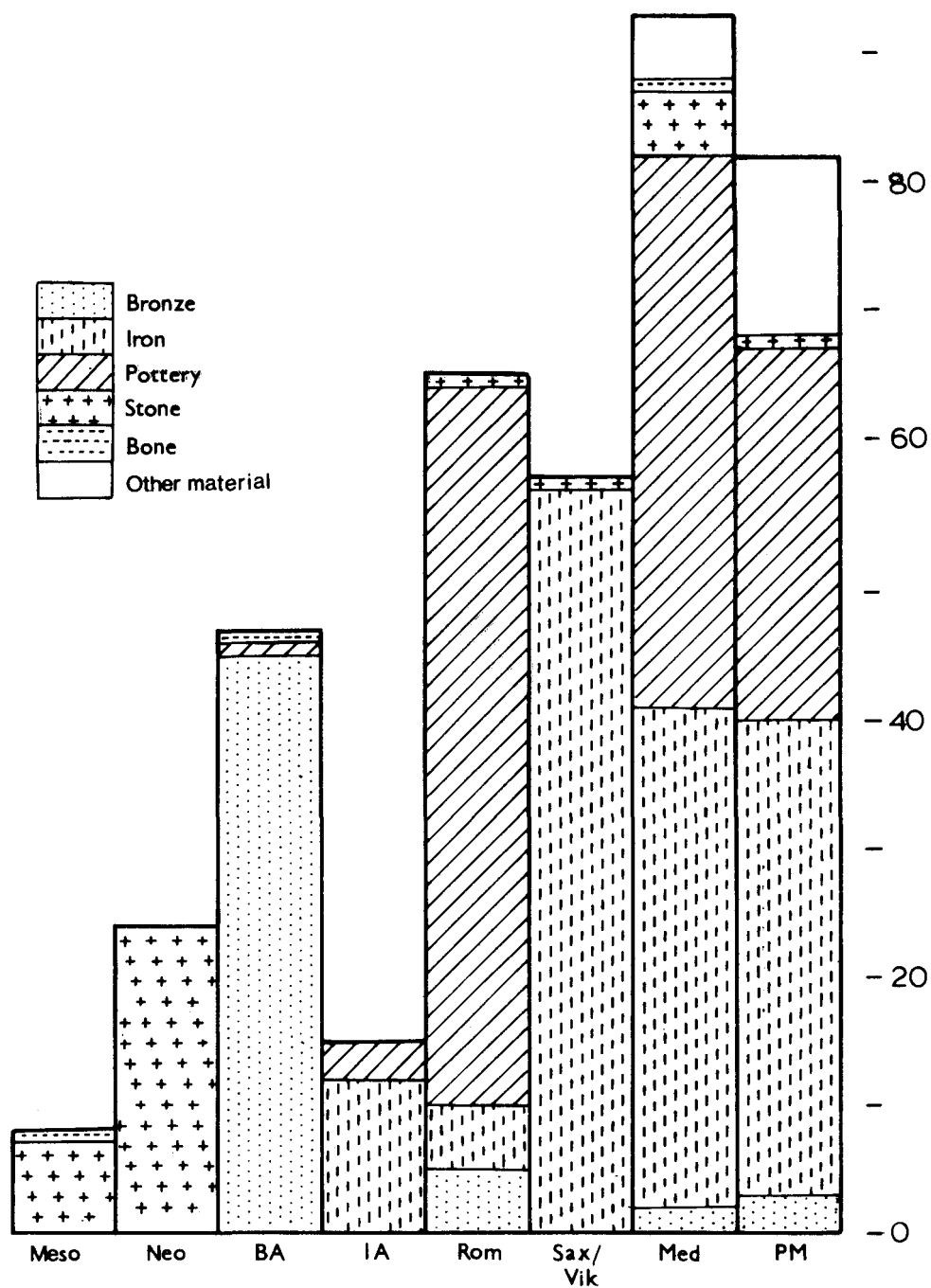


Fig. 2 Bronze Age metalwork: Material dredged from the Thames above Teddington 1932–1972.

shows the material, grouped by period, which has been dredged from the Thames above Teddington by the Thames Conservancy Board since 1932, when records were initiated;⁷ this clearly demonstrates that the Bronze Age metalwork is by no means the largest class of artefacts found in the river, but rather that the increase in finds with time correlates with the increase in population and greater variety of material possessions.

In the latter part of the 19th century and the early decades of this century, collectors such as G. F. Lawrence⁸ and T. Layton, both of whom collected in the London area, specialized in acquiring archaeological material from the dredger crews; not surprisingly bronze and iron 'collectors' items' were of especial interest to these men, although their notes show that pottery, bone and timber were also being found by the dredgers. Most of these finds from the river were made before accurate records were kept, which in the Thames Conservancy Board reaches, above Teddington, began in 1932. For example, only 27 out of 132 finds of Bronze Age metalwork from the Berkshire stretch of the river Thames have been made since that date. Since then, all finds from that part of the river should have been reported to the Thames Conservancy Board, and dredgermen have been given a small sum of money for each find, regardless of its value. In 1969 an officer was appointed to take charge of archaeological finds and it is noticeable (Fig. 3) that since then the total number of finds

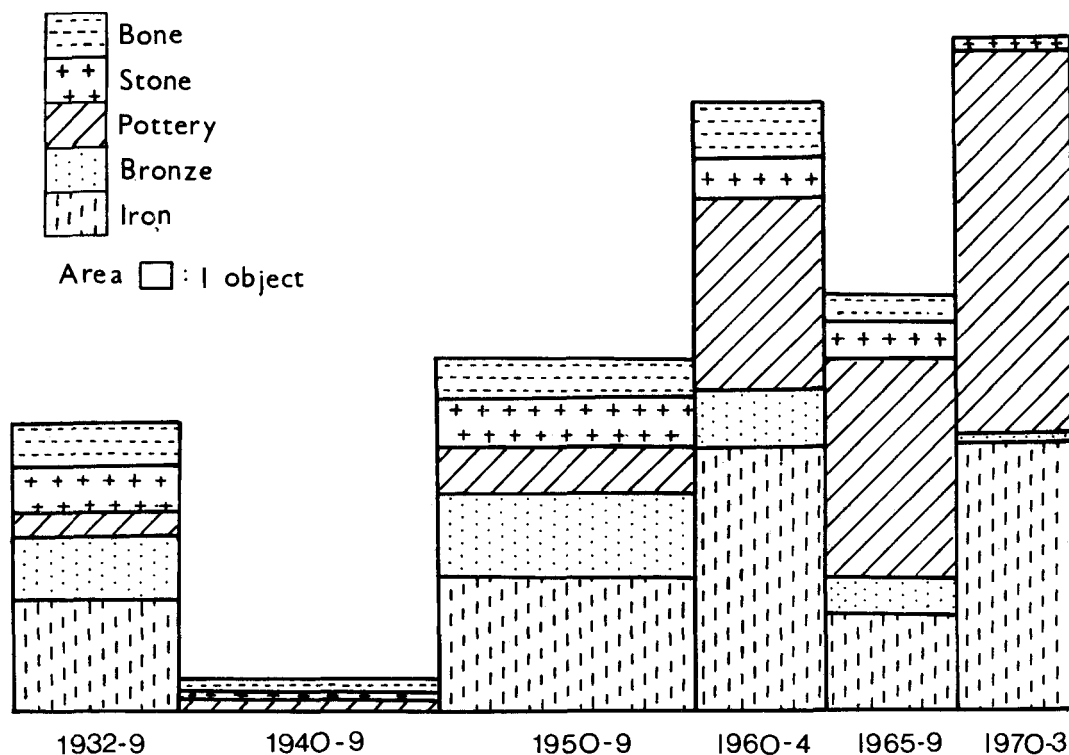


Fig. 3 Bronze Age metalwork: Material from the Thames above Teddington, by date of dredging.

recorded has increased and many more sherds of pottery, in particular, have been kept; this suggests that the earlier numerical supremacy of finds like Bronze Age metalwork was the result of selective policy by the dredger men or the antiquaries.

Other rivers which have been regularly dredged show similar concentrations of artefacts. The Witham, for instance, has produced a great deal of metalwork of Bronze Age and Iron Age date.⁹ On the other hand only about ten finds of bronze implements have come from Welsh lakes and rivers¹⁰ but almost no dredging takes place in Wales.

THE DISTRIBUTION OF RIVER FINDS

In the past, concentrations of finds at points along the river have usually been interpreted as marking the position of fords, or of settlement or religious sites along the banks. However, this needs to be examined more closely.

On the one hand, when an implement with a large wooden haft enters the water, it may float some distance before it becomes waterlogged, or caught up in the river bank, and sinks. It may then be moved downstream a short distance by the river currents. Both the excellent state of preservation of most of the river finds and the few detailed records of exact location of the artefacts suggests that an object will often become embedded in several feet of silt and gravel of the river bed¹¹ and thus be protected from erosion.

Secondly, few of the provenances of the artefacts from the Thames are exact. There is little doubt, that until recently the dredger crews would note the provenance only in terms of the nearest town or bridge which might be two or three miles away; for example 'Thames at Taplow' may refer to anywhere within a reach three and a half miles long, from Cookham to Bray, and a number of finds thus provenanced may have come either from the same ten yard stretch of the river or from quite different find-spots. This could be particularly confusing since all the finds from one dredging campaign would almost certainly reach the museum at the same time. There seems, therefore, no way of knowing whether the river finds, apparently from the same provenance, and even with successive museum accession numbers, were, for example, a hoard, or were individual deposits spread over a large area and time.

Lastly very little information is available about differential amounts of dredging. The earlier records of the Thames Conservancy Board¹² are not sufficiently detailed to be able to attempt to correlate them with the number of finds from any particular reach. Because of differing local geological conditions and other factors some reaches become silted more rapidly than others and therefore need more frequent dredging. Figure 4 shows the comparative distribution of Bronze Age spearheads and of Neolithic axes and Saxon spearheads¹³. As no systematic dredging of the Thames above Reading was carried out until the 1950s, it is not surprising that few finds of any period have been found there. The greatest known concentration of Anglo-Saxon material in the area is in the Upper Thames, and this seems to be reflected to a certain extent in the Saxon spearhead distribution. The high positive correlation between the Neolithic axes and the Bronze Age spearheads, shown particularly

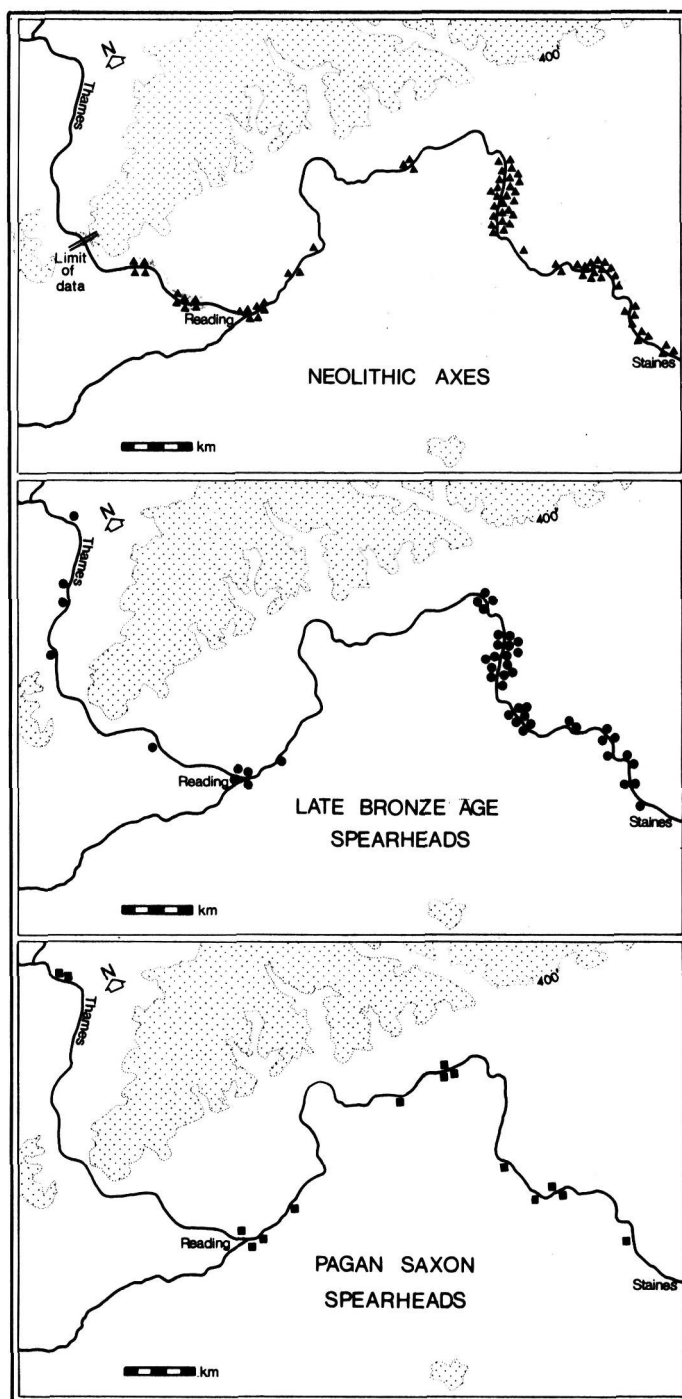


Fig. 4 Bronze Age metalwork: Comparative distributions of Neolithic axes, late Bronze Age spearheads and pagan Saxon spearheads from the Thames above Staines.

in the marked increase in density below Taplow, could be related either to more intense prehistoric activity further downstream, or to the more intense dredging recorded in the middle reaches of the Thames.

To some extent, dredging may also be responsible for the different proportion of various types of Bronze Age artefacts found at land sites and in the river. Fig. 5 clearly demonstrates that the vast majority of weapons found in Berkshire, Buckinghamshire and Oxfordshire come from the river, while the vast majority of tools come from land sites. Tools such as axes and gouges are, on average, considerably smaller than weapons, and may have been missed by dredger crews, although even if this is so the larger tool types, such as palstaves, should be more frequently found. It is noteworthy that the proportion of weapons which were found near to the river banks is also disproportionately high.

In the same way as intensive field work along the route of a new road, or other special area may vastly increase the number of known archaeological sites or finds, and so distort distribution maps, by stressing those areas, so dredging has concentrated attention on the quantity of artefacts in the river. In particular the proportion of archaeological material lost or dropped in rivers, to that lost or dropped on land may be grossly distorted. Nevertheless the number of implements from rivers, and especially the Thames, is surprisingly large, and the mechanism by which they entered the river has been the subject of much speculation.

ACCIDENTAL LOSS

The easiest way for a community living beside a river to dispose of its rubbish would undoubtedly have been to throw it into the river. Along with large amounts of organic refuse, broken objects, such as potsherds would have found their way into the river and large proportion of the Roman and Medieval material from the Thames probably comes into this category.

Some of the implements were probably lost accidentally. In most cases it would be easy to retrieve an object dropped on land, but this would rarely be possible in a river. This would apply, for instance to objects lost at fords, although Rowlands¹⁴ and Coombs¹⁵ have both recently pointed out that the apparent concentrations of Bronze Age metalwork do not in fact coincide with known fording points, as had sometimes been previously stated.

Some implements may have been lost from boats capsizing. Over thirty boats of various kinds, but definitely of prehistoric date, have been recorded from Britain and Ireland¹⁶, and cross-channel links, which must have involved the use of sea-going boats, were clearly important throughout the Bronze Age;¹⁷ it seems likely that boats would also have been in frequent use on the river, as a means of communicating between settlements along the length of, and across the river. The advantage of river transport for the bronze smith, or merchant carrying his heavy goods, must have been appreciated. Equally certainly accidents must have happened, and capsized cargoes will account for some of the bronze implements even if this is only a small number.

Both these explanations would apply to finds of all periods, and would not

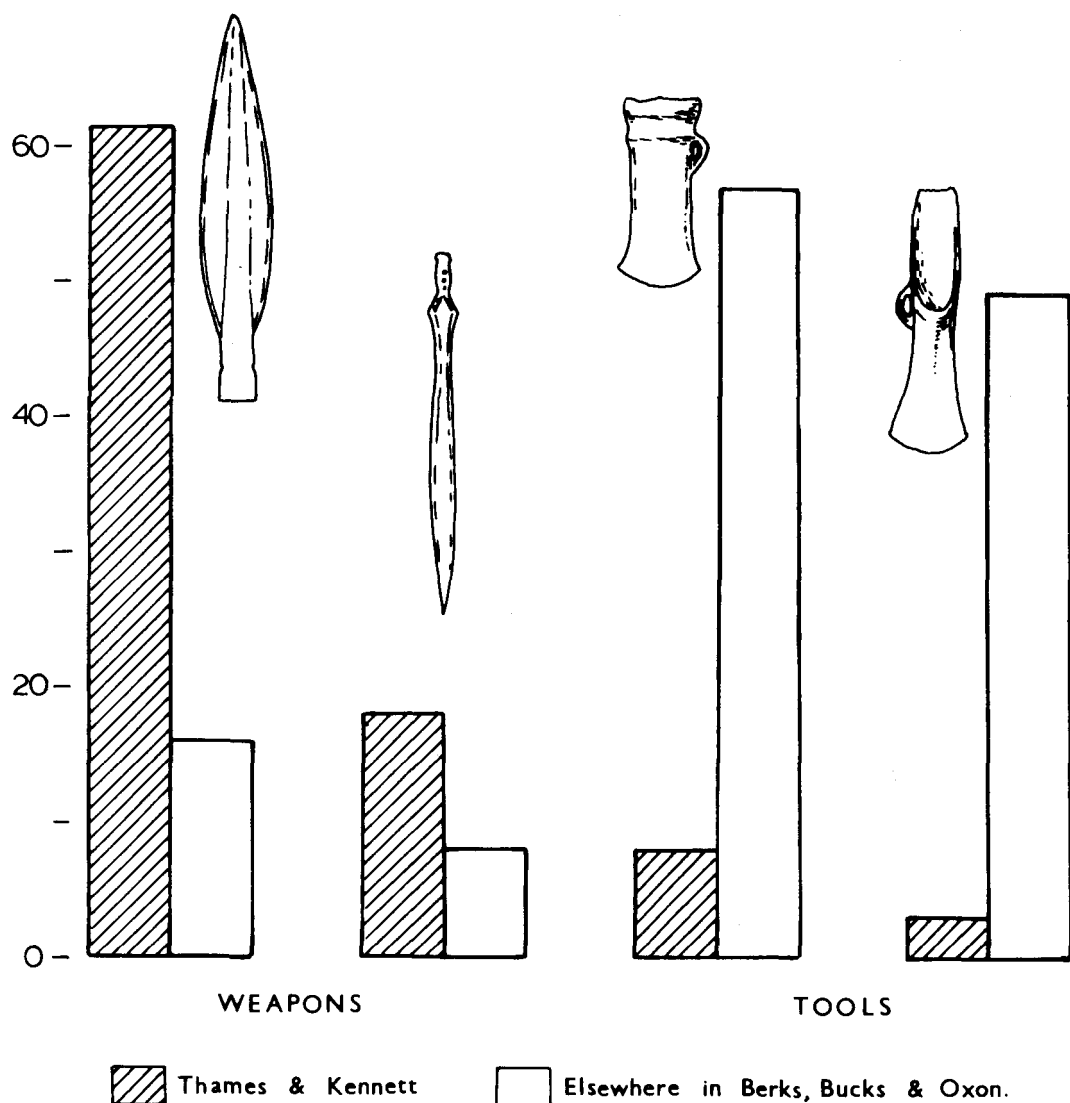


Fig. 5 Bronze Age metalwork: Weapons and tools from the Thames and Kennett, and from land provenances in Berkshire, Buckinghamshire and Oxfordshire.

account for the preponderance of Bronze Age weapons over tools which occur in the Thames.

It has been suggested¹⁸ that many of the Saxon and Viking weapons found in the river would have been lost during battles at river crossings, and it is possible that such an explanation may account for some Bronze Age weapons too. Since rivers are obvious natural boundaries, they would always have been a common site for battles, and for the historic period there are a number of references to fighting at rivers; the Olaf Saga, dating from the 11th century AD tells of a

Viking attempt to capture London from the river. The eighth century Irish saga, the *Tain*,¹⁹ describing events probably of the first few centuries AD has references to individual combat actually taking place in the water, and weapons lost in a river battle are unlikely to be recovered, whereas even if the owner of the weapon is killed or forced to retreat suddenly, the victor of the land battle may pick up the weapon as spoil. After a battle a high proportion of weapons might be damaged but damage to weapons might also occur for a religious motive, and it is interesting that most of the Thames prehistoric weapons are in good condition.

Accidental loss could account for most of the Bronze Age material in rivers, but it may not satisfactorily explain the predominance of weapons.

VOTIVE INTERPRETATIONS

The interpretation most usually accepted of the Bronze Age metalwork from the Thames is that it was thrown in as votive offerings to appease or propitiate the gods. However the evidence for this must be examined very closely. Most often cited are the documentary references to the ritual deposition of rich objects in watery places at later periods. Later mythology and tradition make it clear that rivers were among the many natural features sacred to the Celtic world, and inscriptions to water deities occur in Britain during the Roman period.²⁰

The existing documentary evidence for the deposition of objects in water again refers to later periods. For example, Strabo²¹ writes of 1st-century BC Gaul,

'The country came to have treasure in many places in Celtica; but it was the lakes most of all that afforded the treasures their inviolability, into which the people let down heavy masses of silver and gold.'

Hoardings of Iron Age metalwork from watery places, such as Llyn Cerrig Bach in Anglesey, are almost always interpreted as votive offerings.²² The Llyn Cerrig Bach find consists not only of rich ornamental La Tène metalwork, including weapons, horse and chariot fittings, and other iron and bronze objects, but also bone and wood. The find is very similar both in content and context to the fairly numerous bog finds from Southern Scandinavia. Most of these date from the early centuries AD, but a few, such as the find from Hjortspring, in Schleswig,²³ belong to the first century BC or earlier; the ritual nature of some of these, such as the find from Ejsbøl Mose²⁴ is thought to be clearly shown by the distribution of finds, which suggests that all the objects were thrown in from one spot, with the lighter objects near the shore, and the heavier, and more easily thrown objects, more sparsely distributed further out. A recurrent feature of the Danish bog finds, shared by the Llyn Cerrig Bach find, is that many of the objects seem to be deliberately broken, and this also seems to be the case in the Roman period, when figurines, with limbs amputated and deliberately mutilated occur in large numbers in the Thames.²⁵ However this phenomenon is rare amongst Bronze Age river finds, and it is not certain that we are dealing with the same or even a related ritual.

Perhaps the very rich Iron Age objects dredged from the Thames and other major rivers are more relevant to the problem. Items of superb quality, which were probably too precious, or not strong enough to be used as weapons, such as the Battersea or Witham shields, are hard to interpret as anything other than votive offerings. But for the most part the Bronze Age weapons are more common and less elaborate.

None the less the votive hypothesis has much to commend it. Accepting the current arguments that the beginning of the Iron Age was not marked by any large scale movements of population or any sudden change,²⁶ there is little reason to suppose that a change of religion took place at that time. Either the water cults documented later began sometime during the Iron Age, or before it. Burgess²⁷ has related the increasing climatic deterioration, suggesting that a change in religion might be an attempt to appease water gods, following increased rainfall, flooding and waterlogging.

Perhaps the most important argument for ritual deposition is the very high proportion of weapons among the river finds, suggesting special choice, and therefore, presumably deliberate deposition.

RIVER BURIALS

An alternative hypothesis,²⁸ which perhaps deserves more consideration than it has hitherto received is that the river finds might be part of a human burial ritual which otherwise leaves no trace in the archaeological record. Perhaps the dead person, or his cremated remains, were thrown into the river with his prized weapons. It is perhaps noteworthy that the proportion of weapons in the river becomes significant at the time when burial under round mounds ceased to be usual (Fig. 6). Apart from a very small number of later Bronze Age burials²⁹ there is virtually no evidence for a regular burial rite at that time. It may also be significant that in the Early Bronze Age the majority of the most common weapon type, the dagger, is found in burial mounds, while the tool types such as the flat and flanged axes rarely occur in such contexts. This same feature has already been noted above with regard to Later Bronze Age weapons and tools from the Thames. The rite could have continued into the Iron Age and may explain the very rich Iron Age objects and the lack of 'high status' burials.

THE EROSION OF SETTLEMENTS

One other explanation for the river finds exists—that land sites containing the artefacts such as settlements, hoards or stray finds have been eroded into the river.

It is difficult to estimate the actual amount of erosion of the river bank which has taken place since any given point in the past, although freshly exposed sections which can be seen at many places along the bank show that erosion is still taking place. A comparison of the first (1866–1880) and latest editions of the 25ins. Ordnance survey maps show that over the last hundred years changes in the course of the Berkshire stretch of the river of over a hundred yards have occurred in places.

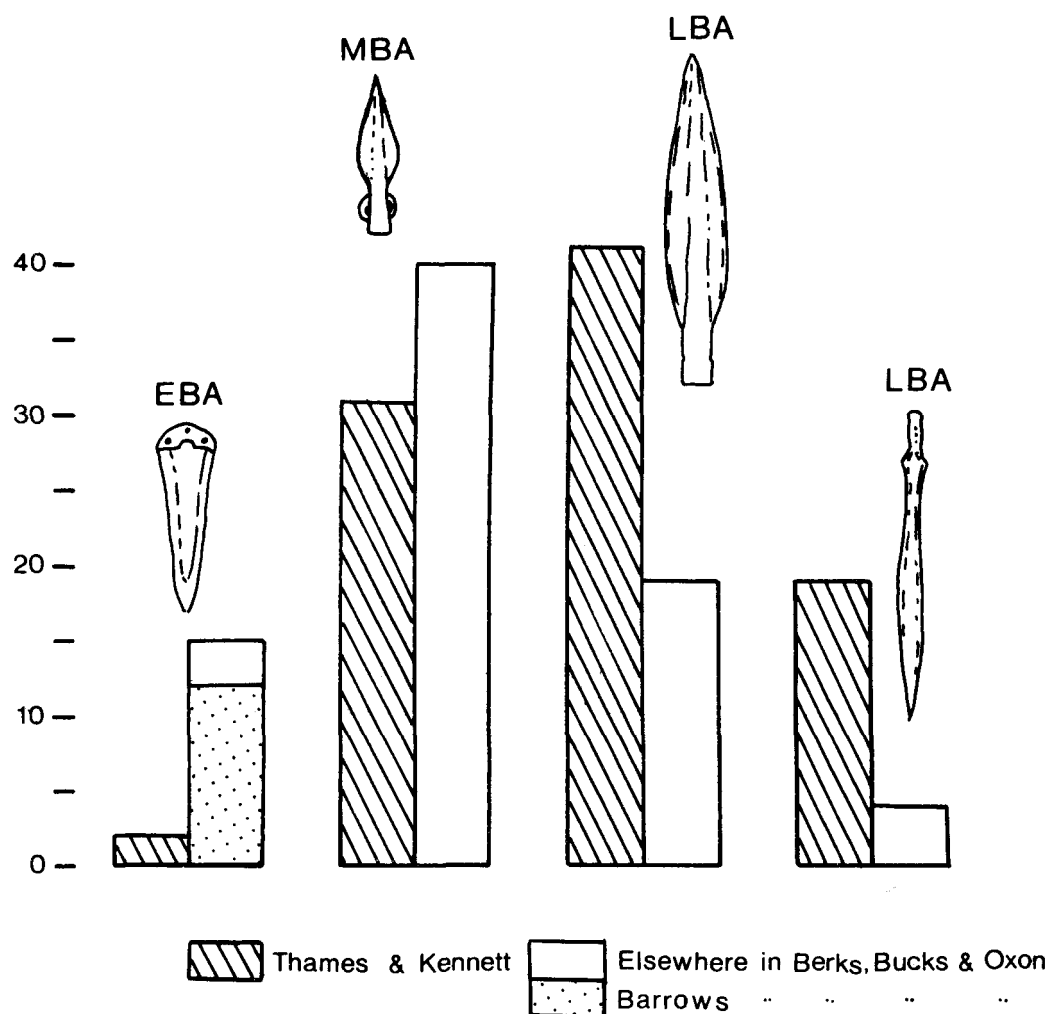


Fig. 6 Bronze Age metalwork: Weapons by period from Berkshire, Buckinghamshire and Oxfordshire.

The spread of alluvium on either side of the river also gives a guide to the changes in the course of the river, varying from almost nothing, where erosion has been the most recent dominant factor, to several hundred yards.³⁰ Some alluvium is much older than the Bronze Age, but elsewhere it is certainly later; for example, a three foot deposit of alluvium at Wallingford covers late Bronze Age material³¹ and at New Palace Yard, Westminster, it is of Roman date.³²

Changes have also taken place in the river level since the Bronze Age, although estimating the extent of the changes is rather complex. In the lower Thames area³³ the more or less constant rise in sea level during the post-glacial period has caused the Thames to be tidal further and further upstream; therefore any Bronze Age settlement on the river banks would now be flooded. In the

Upper Thames factors such as the depth of the river channel and the amount of water taken out of the river in recent years must also be taken into account, but it seems certain that since the Bronze Age the river has risen and fallen considerably at various times and the course of the river was then far more abraded with islands in between numerous channels of shallow water.³⁴

So if Bronze Age settlements did exist close to the river banks any evidence for them would now either be under several metres of water, or of alluvium—and thus would not be visible on any aerial photographs, or be disturbed by most kinds of recent activity, for example, agriculture—or would be completely eroded into the river.

However, there are a number of indications that such settlements did exist. The clearest is the growing number of Bronze Age sites known in the Thames valley such as Runnymede Bridge³⁵ and Aldermaston.³⁶

Secondly, of the vast number of early sites known in the Thames valley from aerial photographs³⁷ comparatively few are dated and it is possible that some may belong to the Bronze Age. Quite a significant proportion of the non-Thames metalwork comes from the numerous gravel quarries near to the river, apparently as stray finds, but in at least some cases these could be construed as the most tangible remains of settlements.

Most specifically and significantly, there is direct evidence of a small number of sites which have been observed either in the river or in the process of being eroded.

Two Neolithic sites were described by Stevens in 1883.³⁸ At Reading workmen digging a trench in an angle between the Thames and a tributary found two Neolithic axes five foot below the surface, along with 'stout oak timbers deeply embedded in the silt of the river bed', and animal bones. At Taplow, dredgers at Garton Eyot brought up two stone axes with three human skulls, and bones and horns of various animals were found in the river bank. Oak posts were also found there. The author seemed to be of the opinion that the site was actually built in the river, or perhaps that it was a settlement built close to the river bank, which was brought to an end by flooding.

The site at Old England, Brentford is well known.³⁹ The earliest material from the site is a considerable quantity of Late Bronze Age material, including swords, spearheads and various tools, which were dredged up from one fairly confined spot 10–20 feet from the present water mark. In and on the surface of the river gravel, below the present low tide, Wheeler found twenty or more fragments of coarse hand-made pottery, of Late Bronze Age type.⁴⁰ Unfortunately no structures of this period were found, although it seems likely that this was a settlement site. Nearer to the shore were the remains of a rectangular Romano-British hut, very similar in structure to the Glastonbury huts⁴¹ built in a manner suggesting marshy ground, but not necessarily in the river itself.

Another relevant site is known at Wallingford⁴² where part of the Berkshire bank of the Thames collapsed in the winter of 1948–9, and a freshly eroded section was observed by a passer-by and reported to Reading Museum. At a depth of about one metre below the surface, covered by pale brown alluvial soil, there was a dark brown earthy deposit, about ten centimetres thick, which

contained many animal bones, two fragments of human skull, bronzes, pottery and a spindle whorl. The bronzes included a complete tanged chisel, a broken socketed sickle and two pieces of the same or different spearheads. The pottery is of 8th to 6th-century date.⁴³ Had the site not been noticed in the bank section, the material would have been rapidly washed into the river, as, presumably had part of the site before it was noticed. Even if the pottery and bones had not been destroyed by river action, they would probably not have been noticed in subsequent dredging, whereas the bronzes may have been found. It is perhaps possible that many bronzes from the river, and indeed artefacts of other periods too, entered it by such a process.

However, the settlement theory poses several problems. While it would account for the wide chronological range of the Thames material the very large number of Bronze Age implements from the river is hard to explain. Although the number of sites on which Bronze Age metalwork has been found is growing, none have produced complete tools or weapons in large quantities. But if a settlement was built on marshy ground close to the river banks, where it was not often possible to recover objects dropped onto the wet ground before they sank, more objects might be found. This would seem to be the situation in the Swiss Lake Dwellings, where vast quantities of Neolithic and Bronze Age implements have been recovered.

The disproportionate percentage of weapons to tools from the river is also problematical, but a number of solutions might be proposed. On the one hand the richer, weapon-using elements of society may have lived close to the river, while the tool-using agricultural communities lived inland.⁴⁴ Also these weapon users might be likely to have considered that the river had some special or religious significance, and therefore might make offerings to it and they would be more likely to lose things accidentally in the river, or to bury hoards beside it. Alternatively there is some evidence of manufacturing processes, and from the contrasting distribution patterns of tools and of weapons⁴⁵ which suggests that smiths may have specialized in either tool or weapon production. It is possible that the weapon smiths chose riverside locations for their workshops, which would be ideal for communication, for importing raw material, and exporting the finished products. Perhaps the Hallstatt D daggers which Jope⁴⁶ suggests were made in workshops in the area should be seen as a continuation of a tradition of weapon manufacture in the area. The river finds might represent the eroded workshops of these smiths, or the caches of finished goods awaiting distribution.

CONCLUSION

There is little firm evidence in support of any of the hypotheses proposed above, and what there is can be used to support contradictory arguments: it therefore seems unreasonable to take any one hypothesis for granted. Accidental loss may account for only a small proportion of the Bronze Age metalwork from the Thames. Two hypotheses may account for the majority of material. On the one hand, votive offering, perhaps the precursor of the known Iron Age and Roman ritual, or more appealingly as part of a burial rite, may be

the cause; or secondly the material may have been eroded from river bank sites, such as settlements, workshops or hoards. In either case the importance of the Thames is clear and the metalwork deposited in the river may be considered as a facet of the increasing body of evidence which suggest that there was a considerable population living in the Thames valley in the later Bronze Age.

ACKNOWLEDGEMENTS

The data which forms the basis of this paper are taken from the records of archaeological objects dredged up by the Thames Conservancy Board, which are held on loan in Reading Museum. I would like to thank the Thames Conservancy Board and Mr L. Cram, Reading Museum for access to these records, and Mr Greenaway, T.C.B. for interesting discussions on various aspects of the Board's work and methods since the 1850s. I would also like to thank J. C. Barrett and J. Price who have read and commented on this paper, thought I must take responsibility for the ideas expressed here.

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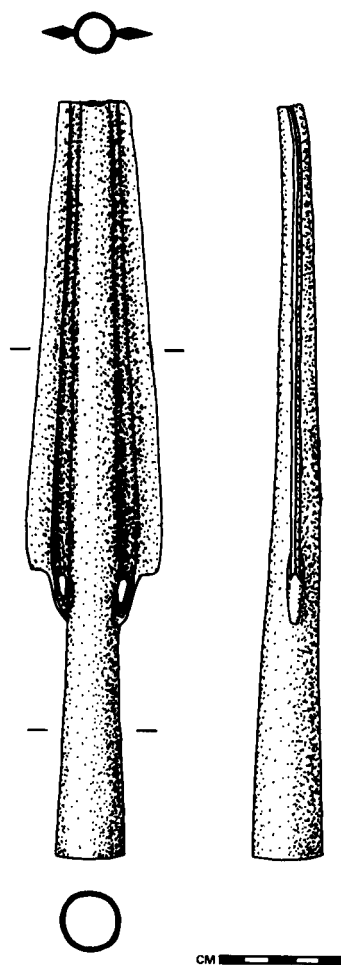
BASAL LOOPED SPEARHEAD FROM THE THAMES AT EEL PIE ISLAND

DAVID FIELD

A basal looped bronze spearhead was recently taken into Kingston Museum for identification. The owner¹ stated that it was found by his father in 1949, and that it was dredged from the clay bed of the Thames immediately upstream of Eel Pie Island (c. TQ 16357300).

The spearhead is 320mm in length, though the tip is missing, evidently an ancient break. Total length would probably have been about 400mm. The weight is 235 grammes. It is triangular bladed with a straight blade base and is channelled either side of the circular midrib. No rivet hole is present. The owner has suggested that the implement was not patinated when found and that its present coppery appearance may be due to frequent polishing with tomato ketchup. A number of small pits in the casting however retain a black patina while the interior of the shaft displays a patchy, green patina. The spearhead is of Rowlands Group 3.²

Leaf shaped basal looped spearheads are present during the Taunton-Barton Bendish phase (MBA 2) of the Bronze Age, while the triangular bladed examples are considered slightly later and attributed generally to the Penard (MBA 3). Recently both Rowlands³ and Ehrenburg⁴ have discussed dating and chronology so there is little point in re-covering that ground here. In addition Rowlands has considered distribution, and apart from groups in Lincolnshire and East Anglia noted the almost exclusive concentration of Group 3 types in the Lower Thames area. Forty-four examples come from this part of the Thames, all but three from the river itself. The present find adds one more to that number.



(1/3)

ACKNOWLEDGEMENTS

Many thanks are due to Marion Hinton at Kingston Museum for bringing the find to the writer's attention, to Stuart Needham for most usefully commenting upon the draft and offering welcome encouragement, and to Mr. H. G. Hastings for kindly allowing the find to be recorded.

NOTES

1. Mr. H. G. Hastings of Kingston, who retains the find.
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EXCAVATIONS AT CROMWELL GREEN IN THE PALACE OF WESTMINSTER

PETER S. MILLS

SUMMARY

The earliest features on the site were a number of Iron Age gullies and postholes. There was evidence of general flooding in the late Iron Age/early Roman period following which some small gullies were cut, possibly indicating late Roman occupation in the vicinity. Further flooding followed, and the bed of a 7th/8th-century stream was located. Three medieval soakaways and the foundations of the 17th-century Treasury were identified at the south end of the site.

INTRODUCTION

An excavation was carried out from March to May 1978 by the Inner London Archaeological Unit on behalf of the Department of the Environment at Cromwell Green in the Palace of Westminster prior to a programme of landscaping the area. The site (TQ30187953) lay on the west side of Westminster Hall (Fig. 1) within the bounds of Thorney Island, the sand and marsh delta formed by the bifurcation of the river Tyburn. Previous excavation¹ beside the Hall indicated that though most of the medieval levels had been destroyed during the 19th century some medieval features survived, and, in addition, there was slight evidence for earlier occupation.

Two trenches were cut, the north trench being 9m by 1.5m and the south trench being 19m by 1.5m with two extensions, east and west, both 4m by 1.5m. Considerable disturbance had been caused by service trenches for the Houses of Parliament, particularly in the south trench where the east extension had to be abandoned due to modern intrusions. Dating evidence was sparse and all dates must be regarded as tentative.

PHASE I

This phase consisted of features cut into the natural sand and sealed by a dark grey water-deposited sand, F80 in the south trench and F213 in the north trench.

In the south trench (Fig. 2) lay a sloping sided round bottomed gully F82 (excavated length 2.06m, width 0.64m, depth 0.28m) with a rounded terminal. Its fill, fine grey sand with scattered charcoal flecks L83, contained worked flints and fragments of Iron Age pottery.

To the south of the gully lay a subcircular posthole F87 filled with mottled grey sandy clay. On the west side of the bottom of the posthole was a post socket. A similar posthole with socket F89 lay to the north of the gully F82 but its stratigraphic position had been destroyed by a modern pipe trench.

To the west of the gully lay three other postholes F114, F116, and F122 all filled by grey sand and charcoal flecks but dissimilar in size and shape and probably unrelated.

Further west of the gully was an irregular depression F108 (max. depth 0.2m) sealed by the waterlain clay F21 not the grey sand F80. Stratigraphically it could belong with either Phase I or Phase III but having produced several cores and flint flakes it is included in Phase I.

SITE LOCATION

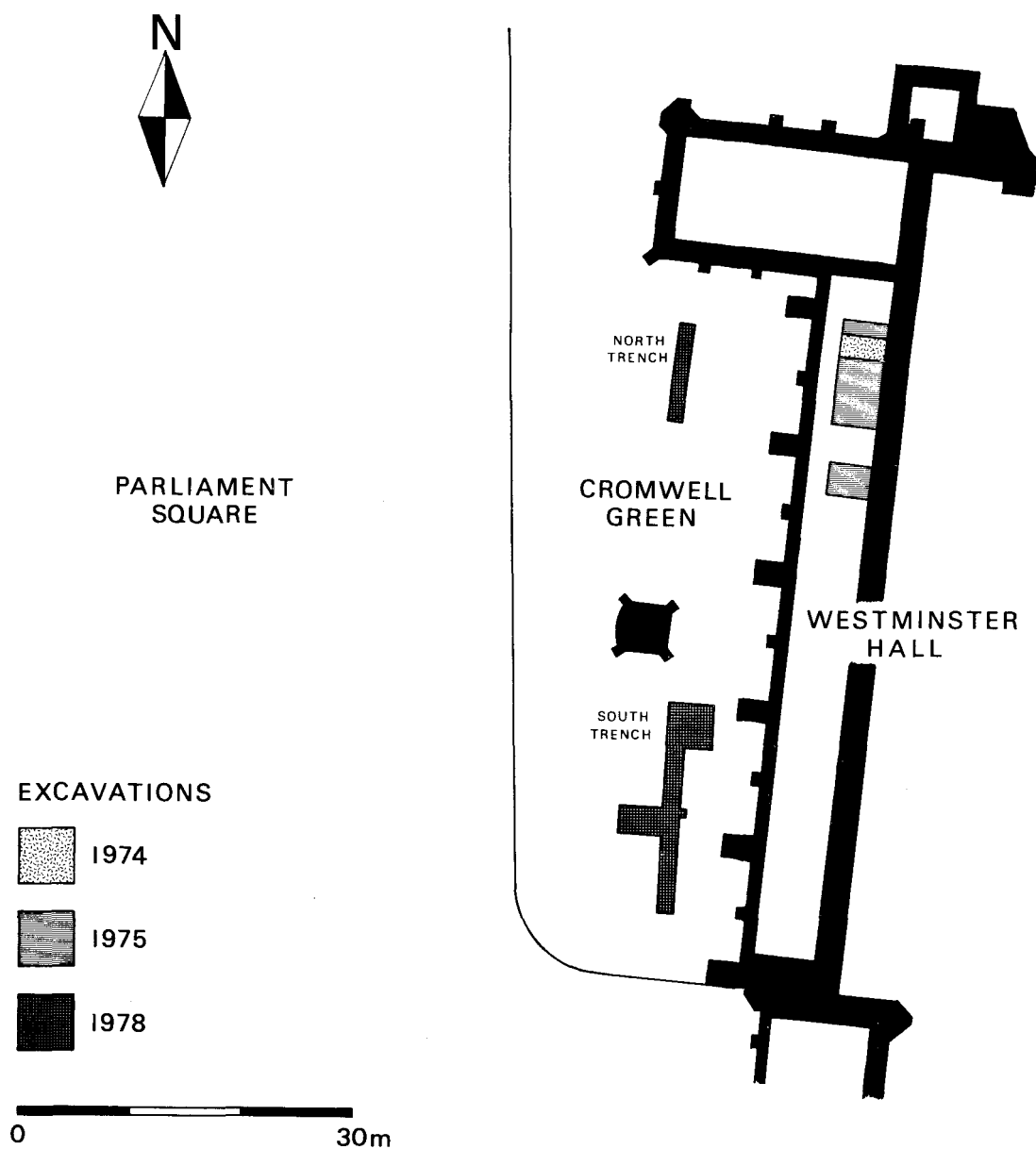


Fig. 1. Cromwell Green: site location plan.

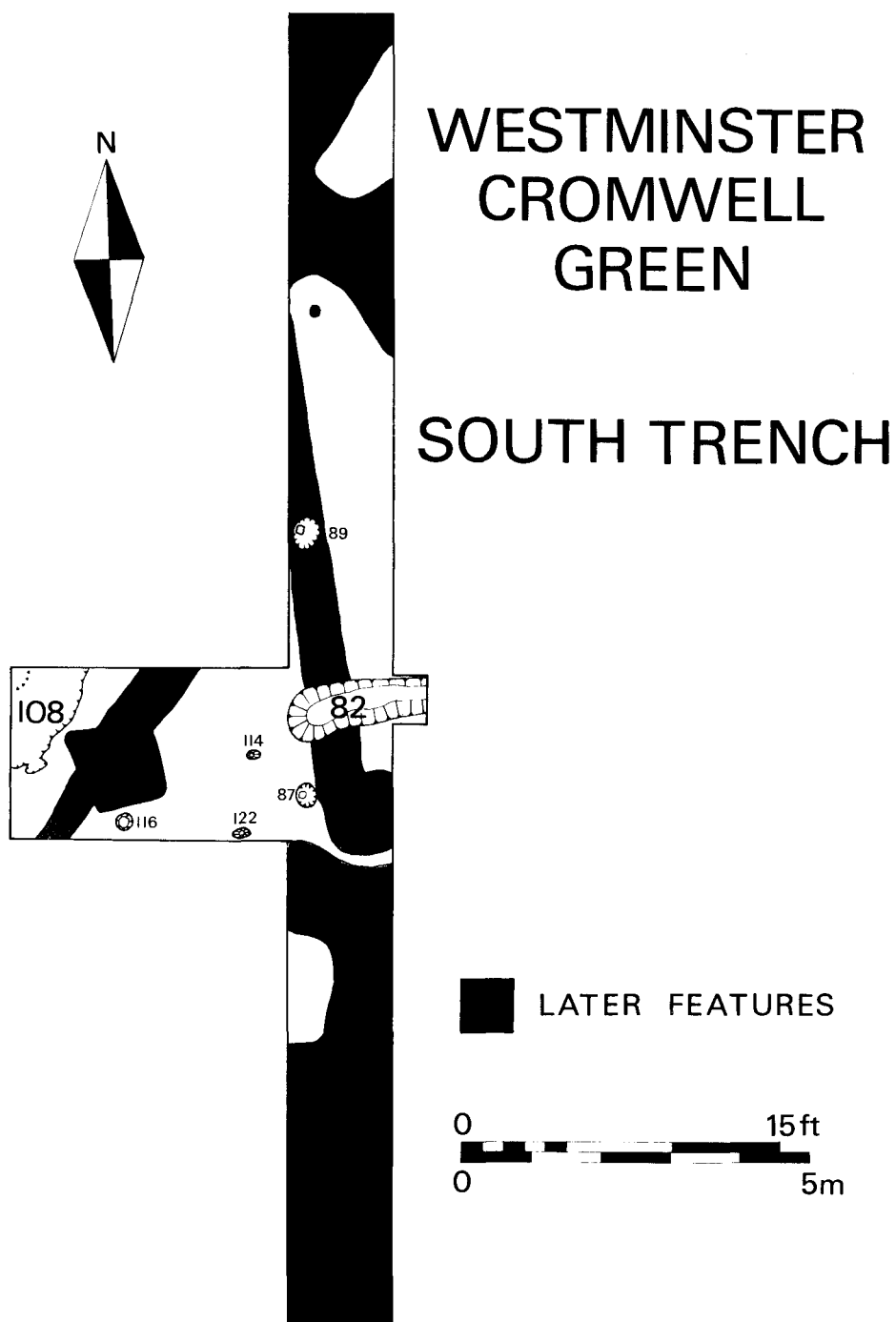


Fig. 2. Cromwell Green: south trench, plan of Phase I.

In the north trench (Fig. 3) was another depression F226 (max. depth 0.15m) which also produced a scatter of struck flakes. To the south of this depression lay a gully F223 (1.4m wide, excavated length 1.5m, depth 0.9m) with a V-shaped cross-section and an irregularly sloping terminal (Fig. 4).

WESTMINSTER CROMWELL GREEN

NORTH TRENCH

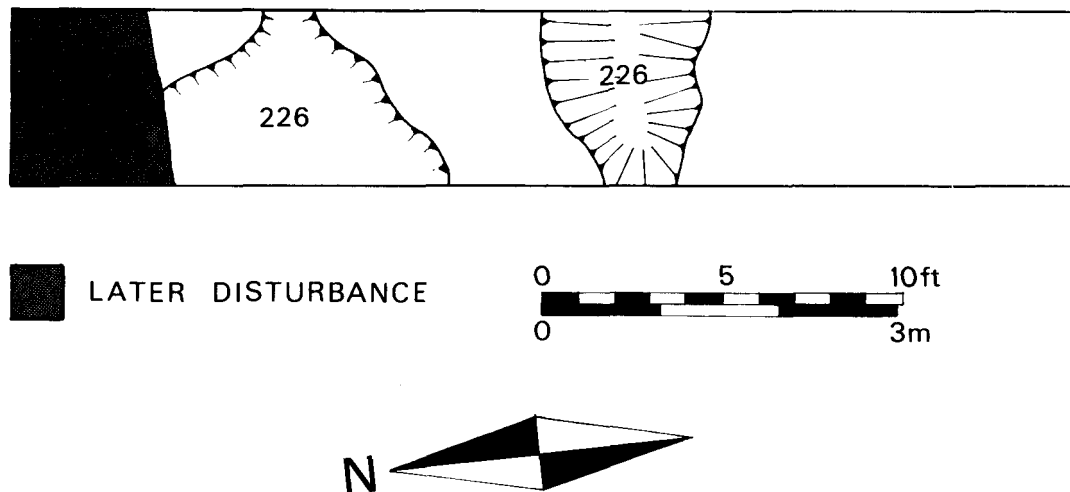


Fig. 3. Cromwell Green: north trench, plan of Phase I.

PHASE II

This phase comprised a layer of water-deposited grey silty sand F80 in the south trench and F213 in the north trench which covered the natural sand. In the south trench a sand bank was formed (max. height 0.45m) sloping east/west. Some late Iron Age material was recovered, suggesting the area was extensively flooded during the late Iron Age/early Roman period.

PHASE III

This phase consists of features cut into the sand F80 and sealed by a layer of sandy clay F21. All these features were in the south trench (Fig. 5).

At the north end of the south trench a sloping sided gully, F84, with a round bottom (excavated length 2.4m, width 0.65m, depth 0.34m) ran NE/SW containing fragments of Roman brick. Cutting through this gully was another gully F91 (excavated length 2.2m, width 1.2m, depth 0.6m) running approximately east/west. This second gully was irregular in outline and was filled with grey sand and clay, containing one abraded sherd of colour coated ware and some thirty struck flints.

South of the gully F91 was an oval posthole F94 which had a circular post socket at its south end.

In the west extension of the south trench was a gully F110 having sloping sides and flattish bottom (excavated length 3m, width 0.6m, depth 0.3m) and filled with grey sandy clay containing fragments of Roman brick. Over the fill of the gully lay the soil stain of an irregular spread of branches and small planks F112.

The gullies F84 and F110 were fairly straight and regular and may have been field boundary

ditches. The other gully F91, showing erosion by flowing water, was possibly a natural channel though originally it may have been a boundary ditch.

PHASE IV

At the extreme south end of the south trench (Fig. 5, 6) lay a stream bed with sloping sides and flat bottom, F118 (excavated length 1.6m, excavated width 4.0m, depth 1.8m). In the gravel and sand L124 at the bottom of the feature two fragments of Roman brick were recovered. Higher up, in a layer of viscid blue clay L120, were two pieces of oak plank dated (HAR-2692 and HAR-2696) to 600 ± 80 ad and 720 ± 80 ad. No other dating material was found. Unfortunately most of the relationships between the stream and the rest of the site were destroyed by later features. Stratigraphically Phase IV could be earlier than, contemporary with, or later than Phase III or Phase V.

The stream was undoubtedly part of the network of river channels that crossed Thorney Island, gradually silting up but remaining a marshy depression for a considerable time.

Pollen, snail and soil samples are being studied by the Ancient Monuments Laboratory.

PHASE V

This comprised a layer of red brown sandy clay F21 in the south trench which sealed Phase III and was cut by a 14th century soakaway (Phase VI). One fragment of Roman tile was recovered. The clay, which sloped down from east to west, was water deposited and seemed to represent another period of flooding in this part of Thorney Island.

PHASE VI

Though most of the medieval and post-medieval deposits were removed during the restoration of Westminster Hall in 1884 some features survived.

In the south trench a series of gravel layers were deposited, apparently with the intention of levelling and draining the site of the silted up stream F118. Three successive soakaways cut in the vicinity of the stream F118 indicate the area still needed draining as late as the end of the Middle Ages. The earliest soakaway F67 was of 14th-century date, the second F100 14th-15th century, and the third F73 was dated to the late 15th-early 16th century.

Cutting through the soakaways F67 and F73 were the substantial post-medieval foundations of a wall F50 composed of large chalk and greenstone blocks set in a creamy white mortar.

In the north trench lay a waterlogged depression F225, possibly a pond, which contained a few fragments of 16th-century pottery. This feature and the area around it were levelled by a dump of blue grey sandy clay F207 which was cut by a land drain F209 filled with tiles and a few 16th-century sherds.

CONCLUSIONS

Other excavations in the area have indicated an Iron Age presence on Thorney Island but Cromwell Green is the first site to have prehistoric features.

If the prehistoric gullies and postholes form part of a land boundary it would suggest a fairly permanent settlement existed in the area rather than merely a transitory riverside camp. However, the exact nature of the settlement could not be determined within the confines of the excavation.

Subsequently Thorney Island appears to have been flooded at some time in the late Iron Age or very early Roman period. Previous excavations in Westminster Hall corroborated this phase of flooding.¹ This also tallies with the rise in the river level found at both Toppings Wharf² and 106-114 Borough High Street,³ Southwark where late Iron Age/early Roman flood laid clay covered prehistoric material and was itself covered by deposits probably dating to soon after AD 43. Other excavations in Westminster⁴ have produced evidence that the island and its hinterland were sporadically submerged during

WESTMINSTER
CROMWELL GREEN
NORTH TRENCH

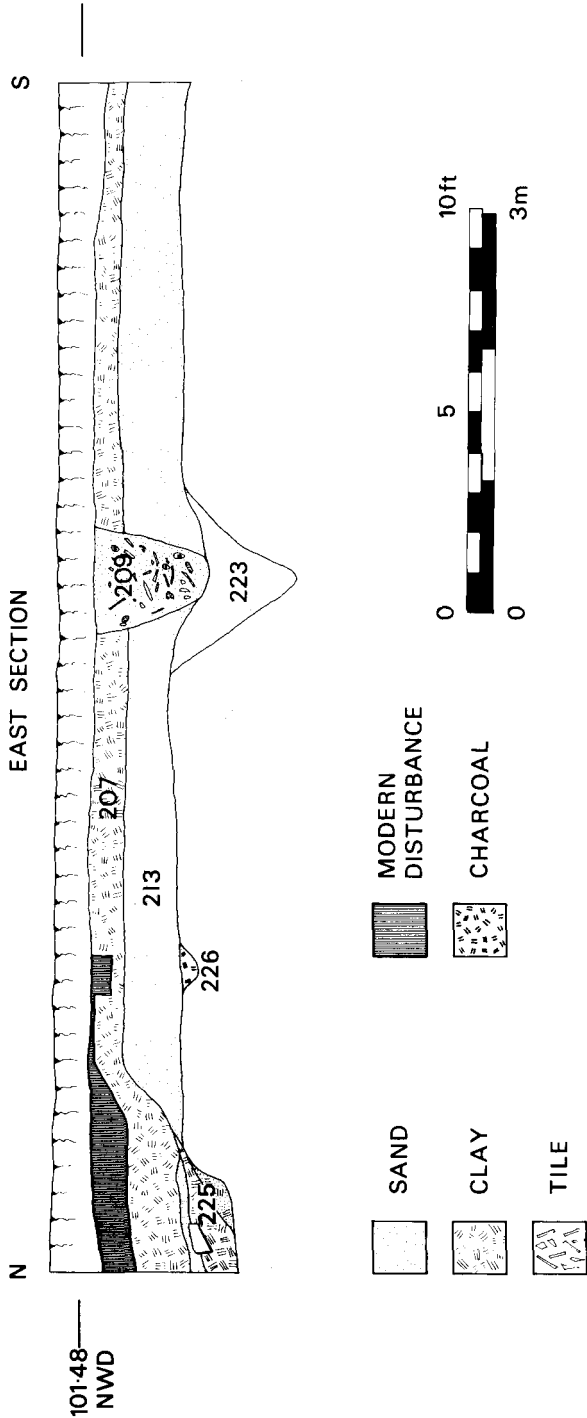


Fig. 4. Cromwell Green: north trench, east section.

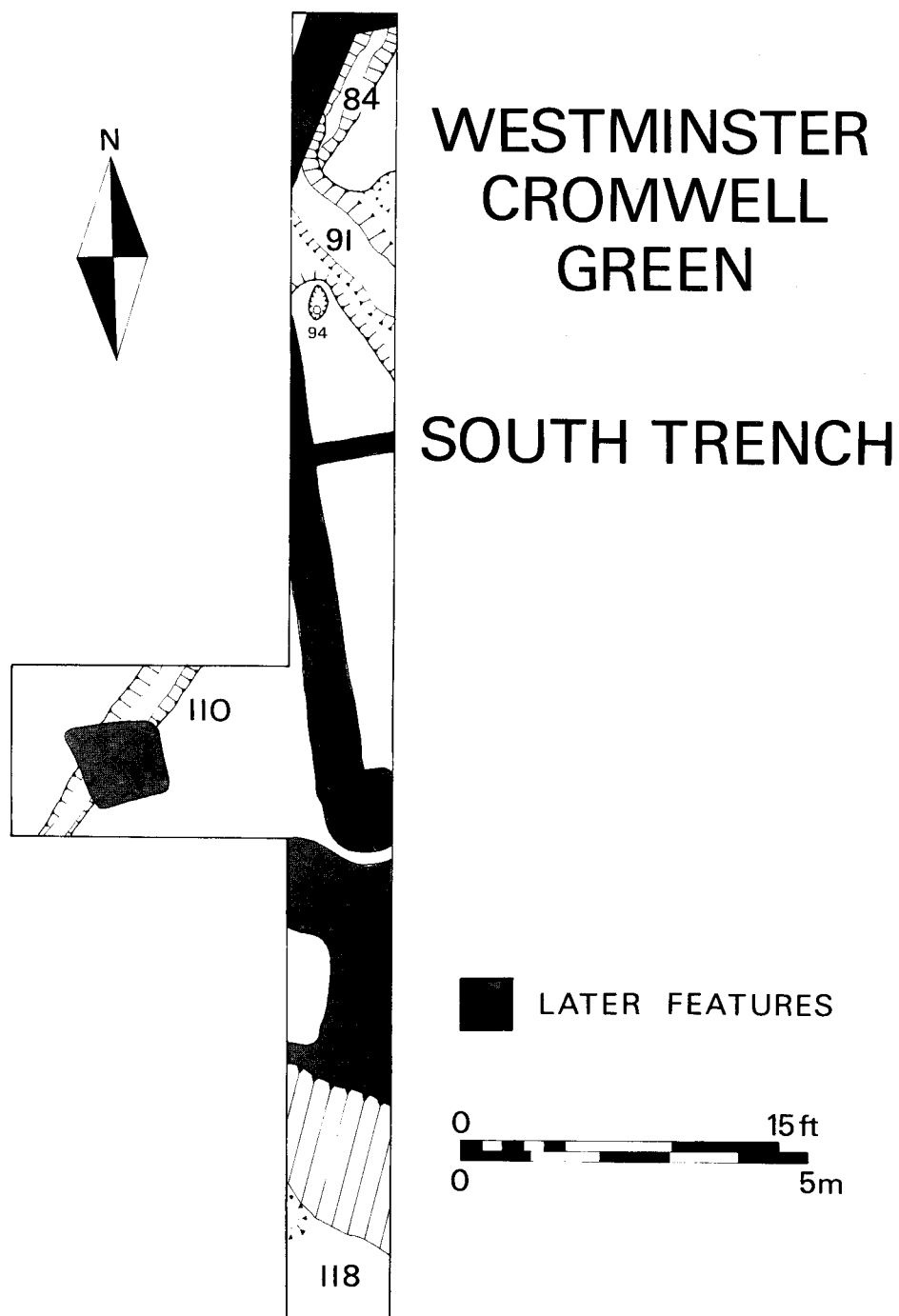


Fig. 5. Cromwell Green: south trench, plan of Phase III and Phase IV.

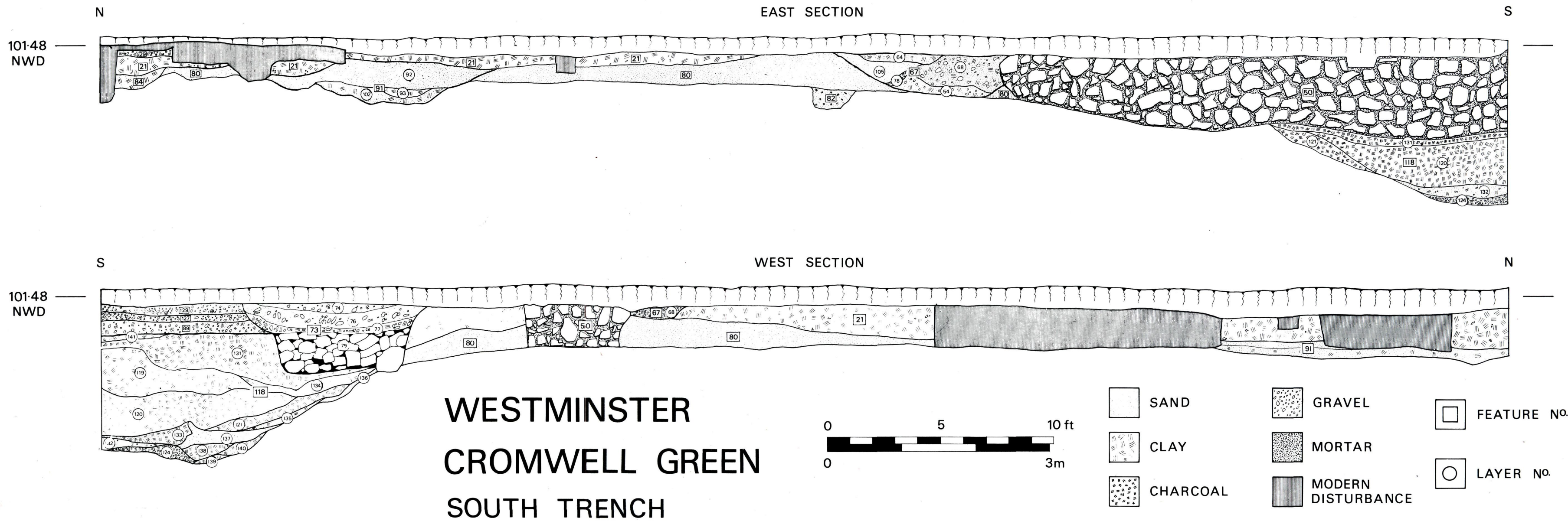


Fig. 6. Cromwell Green: south trench, east and west section.

the Roman period probably resulting from a series of seasonal high tides rather than long term changes in the level of the Thames.⁵

Conclusive evidence for the postulated Roman settlement and river crossing at Westminster is still lacking. The remains of Roman structures were reported during 19th-century building work in and around the Abbey⁶ but the finds remain uncorroborated. No recent excavations on Thorney Island have produced more than a handful of pottery, glass or tile, and that only in association with flood deposits. The gullies of Phase III, which contained a small amount of abraded Roman material, may indicate a late Roman presence in the vicinity after the river level had dropped but the lack of concentrated or unambiguous Roman features and finds would suggest that if a settlement existed it lay elsewhere on the Island. The immediate post-Roman history of the site is unknown. Legends place the founding of the West Minster in the early 7th century (mentioning in passing that the area was flooded during the consecration) and documentary evidence suggests a church stood on Thorney Island from the late 8th century.⁷ The radiocarbon dates from the two planks in the stream F118 are not positive evidence of 7th–8th century Saxon occupation; pieces of timber might be expected to be washed downstream by the Tyburn, probably out of context and possibly long after they were first discarded.

The deposit of flood laid sandy clay (Phase V) was undated apart from a fragment of Roman brick but emphasises the vulnerability of Thorney Island to any rise in the river level.

Despite the risk of flooding and the marshes surrounding it, Westminster became the nucleus of the most important medieval settlement outside London. The pressure for building space near the Palace and Abbey meant that land, which had been left open because it was too marshy and unstable, was drained and built over. Cromwell Green was still fairly marshy in the medieval period because of the stream bed F118 and the deposit of clay F21 which would have retained flood water: the three soakaways cut down to the natural sand would have improved the soil drainage and made the area available for building. Flooding was (and still is) a danger, contemporary chronicles recording the more extreme inundations of Westminster Palace.⁸

Post-medieval maps⁹ show the area west of the Hall was covered by private and government buildings, some remains of which were exposed during the 19th-century restoration of the Palace.¹⁰ The excavation only uncovered the remains of one structure, its foundations having been sufficiently massive to survive the 19th-century site clearance. This has been identified as the Treasury Room, rebuilt 1671–2,¹¹ shown on a plan by Wren *c.* 1710¹² and demolished by 1795.

The area was made into a garden following the restoration of the Hall in 1884.

NOTES

1. (a) B. Shepherd, *Westminster Hall Excavation 1974*. Unpublished.
(b) D. Whipp and E. Platts 'Excavations at Westminster Hall' *London Archaeol.* 2 No. 14 (1976) 351.

2. H. Sheldon 'Excavations at Toppings and Sun Wharves, Southwark 1970–72' *Trans. London. Middlesex Archaeol. Soc.* 25 (1974) 8.
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4. (a) G. Black 'Excavations in the Sub-Vault of the Misericorde of Westminster Abbey' *Trans. London Middlesex Archaeol. Soc.* 27 (1976) 141.
(b) H. J. M. Green 'Secrets of Whitehall Part 1' *Illustrated London News* (29th June 1963) 1004.
 5. See G. H. Willcox 'Problems and Possible Conclusions Related to the History and Archaeology of the Thames in the London Area' *Trans. London Middlesex Archaeol. Soc.* 26 (1975) 289 for similar evidence in the City.
 6. F. C. J. Spurrell 'Early Sites and Embankments on the Margins of the Thames Estuary' *Archaeol. J.* 42 (1885) 274.
 7. H. F. Westlake *Westminster Abbey* Vol. 1 (London 1923) 6.
 8. See for example Matthew Paris for 1236 and 1242 in *History of the Ancient Palace and Late Houses of Parliament at Westminster* by E. W. Brayley and J. Britton (1836) 43, also 'Two London Chronicles' for 1555 in a *London Anthology* ed. N. G. Brett-James (1928) 92.
 9. See John Norden's map of Westminster 1593 (*London Topographical Society*, 1899) and the 'Agas' map (A. Procter and R. Taylor *The A to Z of Elizabethan London* (1979)).
 10. For details of the foundations revealed during the restoration of Westminster Hall see J. L. Pearson, Report of Westminster Hall, Select Committee on Westminster Hall (Restoration) 1884.
 11. History of King's Works Vol. V, 412.
 12. Wren Society Vol. XI (1934), Plate 23.

THE FINDS

INTRODUCTION

The small scale of the site and the difficulties of excavation made it unlikely that substantial amounts of finds would be recovered, but the particularly small quantity, especially from the early stratified deposits, makes the dating of the occupation of this part of Thorney Island extremely hard. The known long 'useful life' of Roman building material does not pinpoint a date for the Roman settlement of Thorney Island. The small quantity of bone retrieved was almost all fragmentary and in any case mostly came from Phase VI: it consisted of the usual range of domestic refuse for the late medieval period. Unfortunately none of the dateable flints recovered could be considered as coming from other than residual contexts, but their date does open the way for conjecture as to the earliest period of occupation of Thorney Island and its environs.

(The environmental evidence from the site is to be considered for publication together with other similar material from New Palace Yard site.)

THE POTTERY

by Elizabeth Platts

The site yielded a very small amount of pottery—just over 200 sherds in all, of which well over half were concentrated in the 19th-century rebuilding layers, and all but 11 of the rest occurred in Phase VI. The small size of the individual sherds and the extreme abrading which the sherds had undergone not only made identification tenuous, but could also imply that almost all the material might be considered residual. It also made it not possible to illustrate any of the pottery, but the material is deposited at Imex House, 42 Theobalds Road, London W.C.1 and may be consulted there.

Phase I

This phase contained most of the flints, although residual flints were found in all succeeding phases. Only two identifiable sherds were recovered, and a few fragments of baked clay. The larger of the sherds (No. i) was 2cm by 1cm and the smaller (No. ii) 1.5cm by 1.25cm, so it was not possible to illustrate either.

- i A reduced dark grey fabric heavily gritted with flint grits, and possibly with indented decoration on the exterior surface. The fabric is quite hard.
- ii A fairly fine sandy friable fabric, with red external surface, and possible indented decoration.

While not exactly paralleled, both sherds and the fragments are similar to the Iron Age pottery found during the excavations at Heathrow in 1969 (Canham (1978) Figs. 13 to 19) and an Iron Age date is suggested for these two sherds.

Phase II

Two sherds of pottery were recovered from the layer of grey silty sand (213) of this phase. The fabric, which was proportionately thick, was reduced, and very coarse with frequent large flint grits (their average size 3mm×2mm). The sherds were very similar to those found during the excavations at Westminster Hall (Whipp and Platts 1976) and are at present dated to the Iron Age.

Phase III

One extremely small sherd (9mm sq.) of Oxfordshire red colour coated ware was recovered from the gully (84). It was so abraded that almost none of the colour coat remained, and the sherd so small that one can only suggest that it may possibly have come from a small beaker (Young, 1977, Types C20 to C39). While the abrasion could mean that the sherd was water-borne to the area, the fact that fragments of Roman bricks were also found in this phase lends support to the suggestion that there was some Roman occupation on Thorney Island, although not on this particular site.

Phase IV

This phase yielded two small fragments of Roman brick which provide only very slight confirmation of the Carbon 14 date.

Phase V

No dating material was found from this phase except for one fragment of Roman tile, which in view of its much abraded condition might perhaps be considered residual.

Phase VI

Most pottery retrieved from the early stratigraphy on the site came from this phase, and almost all of it from the first soakaway (67). However, the group contained no complete profiles, no complete handles, almost no rims or bases, and no identifiable foreign imports. Represented were a number of vessels in 'West Kent' ware, a reduced sandy fabric covered on the exterior surface with a white slip and glazed with a mottled green glaze; and an equal number of 'London' fine sandy oxidised fabric covered with a thin white slip and a sparse yellow lead glaze (Black 1976 and SLAEC 1978). The sherds, insofar as it was possible to judge, came from jugs. No sherds from cooking pots were identified. The lack of highly decorated jug sherds suggested a date after the high point of jug production at the end of the 13th century and the beginning of the 14th century, and the lack of imports makes it unlikely that the deposit can be much later than the 14th century. All sherds were abraded to some extent so that it is possible to consider a date of deposition substantially later than the date of production of the wares.

The second soakaway (100) only contained four sherds, representing three vessels, of slightly later date than the first, as in addition to three sherds of 'West Kent' ware, a sherd of 15th century Surrey/Hampshire white ware was present. The third soakaway (73) only contained one sherd, of late 15th century-early 16th century Surrey/Hampshire white ware (Holling 1971). Of course, it is not possible to provide other than tentative dating on such small amounts of evidence.

The land drain (209) contained two fragments of a 16th century Surrey/Hampshire white ware 'Inns of Court' jug handle (Matthews and Green 1969), and the pottery from the suggested pond (225) amounted to one body sherd of 16th-century Surrey/Hampshire white ware.

FLINTS (Fig. 7)

by Desmond Collins

The several dozen flint artefacts recovered include a number of narrow blades and microblades no doubt removed from blade cores like that in No. 1, of which at least two were present. These would be most in place in a Mesolithic context. The three small scrapers, Nos. 3, 4 and 5 are typical prehistoric tools, and could be Mesolithic but also of later age.

Several microliths strongly indicate a Mesolithic occupation. No. 2 is a bladelet with

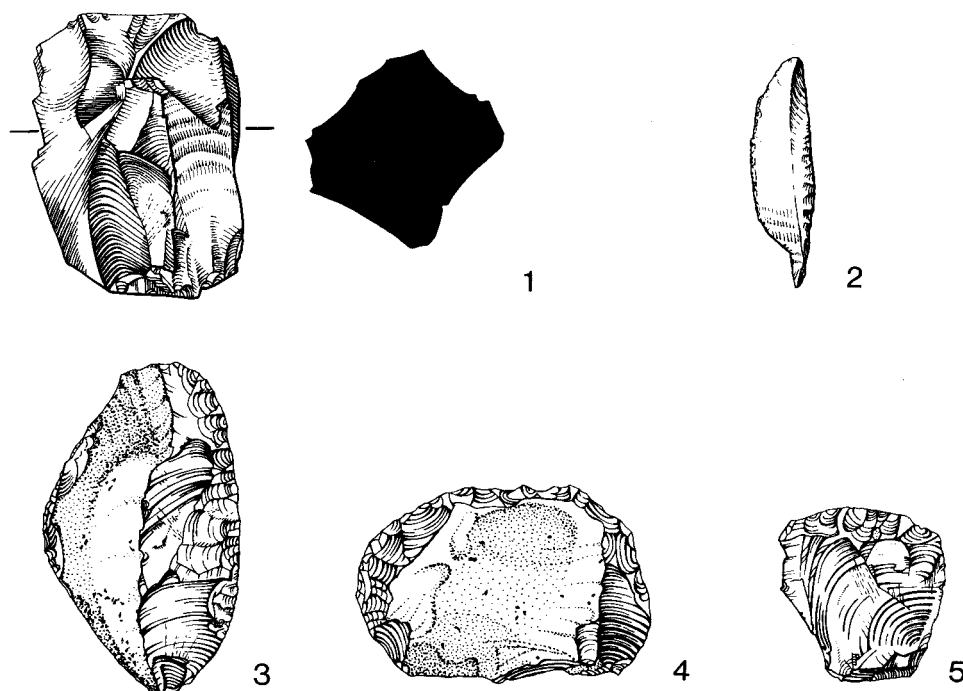


Fig. 7. Cromwell Green: worked flints Nos. 1-5 (1:1).

semi-abrupt retouch of Dufour kind, and is possibly an atypical obliquely blunted point. Two other microliths, not from stratified contexts, are more decisive. One is a small equilateral triangle and the other is a tiny obliquely blunted point. It seems clear that they indicated Mesolithic occupation on the site (possibly late Mesolithic), but the material seems to be all in secondary position.

ACKNOWLEDGEMENTS

I would like to thank David Whipp for his comments, Dorrie Orchard for drawing the flints, Rita Springthorpe for typing the report, and the volunteers who worked on the site: Sarah Adamson, Peter Alton, Derek Craig, Carol Rees and Bill Smith. Thanks are also due to all the many people who have looked at the pottery, particularly J. G. Hurst, Dr. I. Kinnes, Jean Macdonald, C. R. Orton, and Jonathan Cotton especially for showing material from the Sipson Lane excavation before publication; and to Alison Locker who worked on the bones.

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EXCAVATIONS AT GOODMAN'S YARD, 1978

ROBERT WHYTEHEAD

SUMMARY

Excavations at Goodman's Yard uncovered a series of late Roman deposits. These layers appear to have been dumped, probably to fill in a quarried area, in the late 3rd or early 4th century. Near the top of the sequence part of a skeleton and an associated Roman shoe were found. A building with stone foundations was constructed on the site probably in the Tudor period.

INTRODUCTION

The site of Goodman's Yard (TQ33708091) (Fig. 1) lies 100 metres east of the Roman City of London on the Flood Plain Gravels of the River Thames. Excavation by the Inner London Archaeological Unit was carried out alongside the contractors for the Greater London Council Tower Hill Northern Approach Improvement Scheme.

The total area available for excavation extended over 42 square metres of which 22 square metres were undisturbed between 2.00m deep concrete foundations. The excavation was limited to five areas. Area A (Fig. 2) had been exposed by a cut for a subway dug by the contractors and the G.L.C. allowed the Unit two days to investigate this. Further permission was then obtained to excavate in four areas immediately to the east of Area A (B, C, D, E) (Fig. 2) over a period of four weeks in June 1978. Work was hampered by the limited size of the areas under excavation and by the width of the concrete foundations which divided them. These foundations presented difficulties in relating the layers of one area to those of another. Area B was further divided by a sewer trench running east to west. The detailed site notes can be consulted at the Inner London Archaeological Unit's offices, 42 Theobalds Road, W.C.1.

DESCRIPTION OF EXCAVATION

The subsoil at Goodman's Yard consisted of orange sand and gravel with a well-compacted surface. The surface sloped down over 3.80m from south to north, 10.00m+O.D. to 9.60m+O.D. (Fig. 3.)

The first evidence for human activity was discovered in a layer of yellow sandy clay (232, 186) which overlay natural in all areas except B. The layer, which was between 0.02m and 0.20m deep, contained a few small round pebbles, pot sherds and bone fragments, but no other inclusions. This deposit was the lowest layer of those on site, all of which were dated to the late 3rd or possibly early 4th century.

AREA A (Figs. 3, 6)

The earliest deposit (186), found over most of the site, was deepest (0.20m) in this area (Fig. 3). It was overlain by two layers (184, 180) both consisting of dark grey sandy clay containing oyster shells, charcoal flecks and burnt daub. Overlying these were two layers (175, 176) both

Site Location

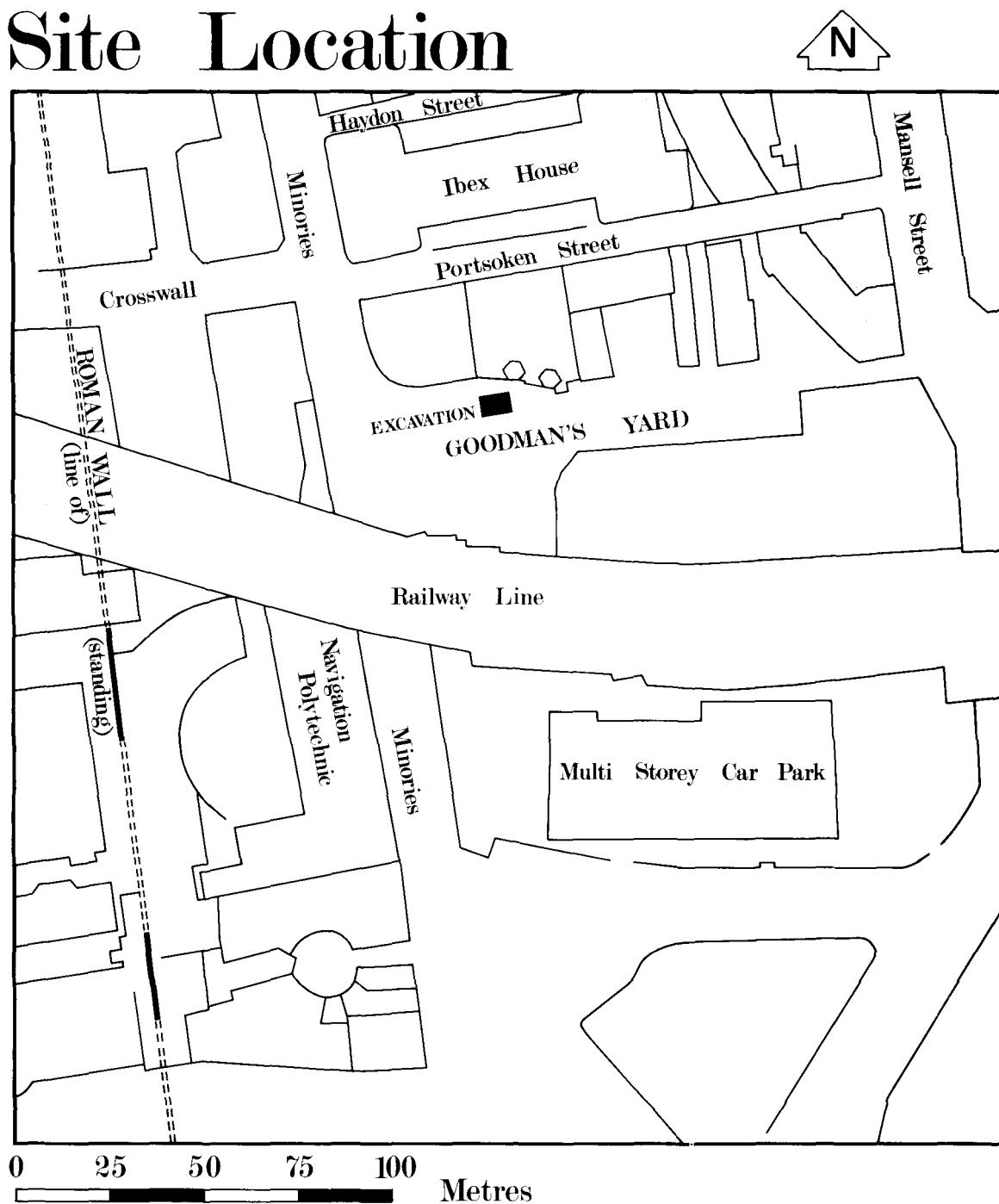


Fig. 1. Goodman's Yard: Site Location Plan.

cut from above by modern disturbance. The lower (175) consisted of grey/green sand containing flecks of charcoal, mortar and chalk and patches of clay. The subsequent one (176) was made up of mottled dark yellow clay with charcoal flecks and oyster shells. It was in turn overlain by a shallow layer (182) which had been heavily disturbed and survived only at the north end of the area. Composed of dark brown clayey sand, layer 182 contained charcoal, chalk, brick flecks and many fragments of wall plaster, one of which was painted, and also the articulated bones of a human left foot. Beside the foot lay one leg bone broken by modern cellar building which had removed the rest of the burial. Adjoining the foot lay the hobnails of a boot which had fallen away from the foot sole uppermost (Fig. 6) [see p. 44]. The surrounding disturbance made it impossible to establish if the remains had been laid in a grave.

AREA B (Figs. 3, 4)

The natural subsoil in Area B was covered by a 0.10m deep deposit of dark yellow clayey sand (258) containing charcoal flecks and a few lumps of *opus signinum* (Fig. 3).

A shallow feature (259) had been cut into the surface of this deposit and ran the full length of the area from east to west, 1.40m (Fig. 4). It was 0.08m wide at either end expanding to 0.15m in the centre, had a 'u' shaped profile, and was 0.08m deep. This appeared to be a gully or slot.

A shallow, rectangular feature (261) adjoined the slot (Fig. 4). It had rounded corners and a flat bottom and measured 0.15m×0.13m×0.04m deep. This may have been the base of a post hole.

The slot (259) was filled with grey sandy clay (260) containing a large amount of charcoal in lumps and flecks, a few burnt daub flecks, and a few oyster shells. This in turn was overlain by a layer of dark grey sandy clay (255) (Fig. 3) which also held a large quantity of charcoal, numerous flecks of burnt daub and mortar and a lump of limestone.

The intersecting arms of what is interpreted as a second slot (257) cut into the burnt debris. Two arms were arranged in a right angle and a third was added to form a 'T' shape (Fig. 4). The east-west arm was 0.20m wide and 0.06m deep. The north-south arm was less well defined. Its western edge sloped gradually to a depth of 0.03m. The addition to the west was 0.18m wide and 0.06m deep, but extended only 0.15m before being lost under the edge of Area B (Fig. 4).

Because of the insubstantial nature of the slots it has not been possible to place an interpretation on them.

A layer of light brown sandy clay (256) containing numerous flecks of chalk, mortar and daub sloped downwards from the south to the north and filled the slot (257). Above this a further four layers, 0.60m deep had been deposited (Fig. 3) (253, 249, 246, 244). These deposits differed from each other in colour and contained varying amounts of charcoal flecks, mortar, plaster, bricks, lumps of burnt daub and chalk and some round pebbles. All the layers below 241 in Area B have been dated to the late 3rd century and appear to be the product of dumping.

Overlying the Roman layers was black, slightly clayey silty sand (241) containing chalk, charcoal and brick flecks with medieval and residual Roman pottery, up to 0.25m deep. It was cut in Area B by a chalk and limestone wall (211) which extended over the full length of Areas B and C (Fig. 2). In Area B the north side of the wall (211) was abutted by a north-south wall (213). In Area C an extension (212) continued the construction southwards. The stone was laid in courses, no more than three deep and although roughly faced was probably a foundation wall.

The stonework was overlain by modern disturbance and remains undated, although a row of buildings along the north side of Goodman's Yard is shown on the 'Agas' map of 1561-1570.

AREA C

The layers in the northern half of Area C were similar to those in Area B and those in its southern half to Area D.

AREAS D and E (Fig. 5)

The fills of these two areas were very similar to each other and would appear to be one major deposit of dumping in the late 3rd or early 4th century. The matrix, a greyish green/brown silt,

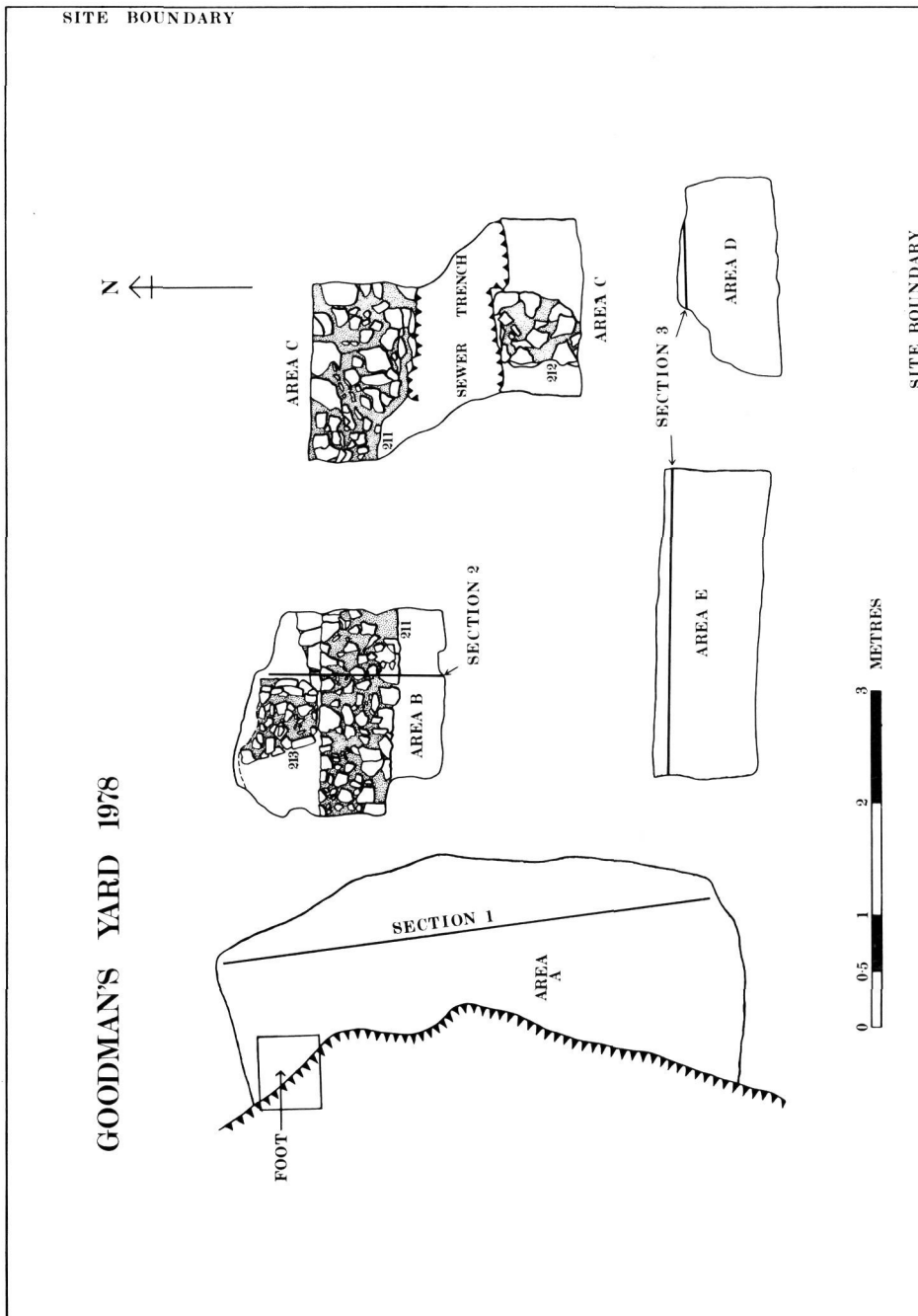


Fig. 2. Goodman's Yard: Plan of areas A-E showing stone wall.

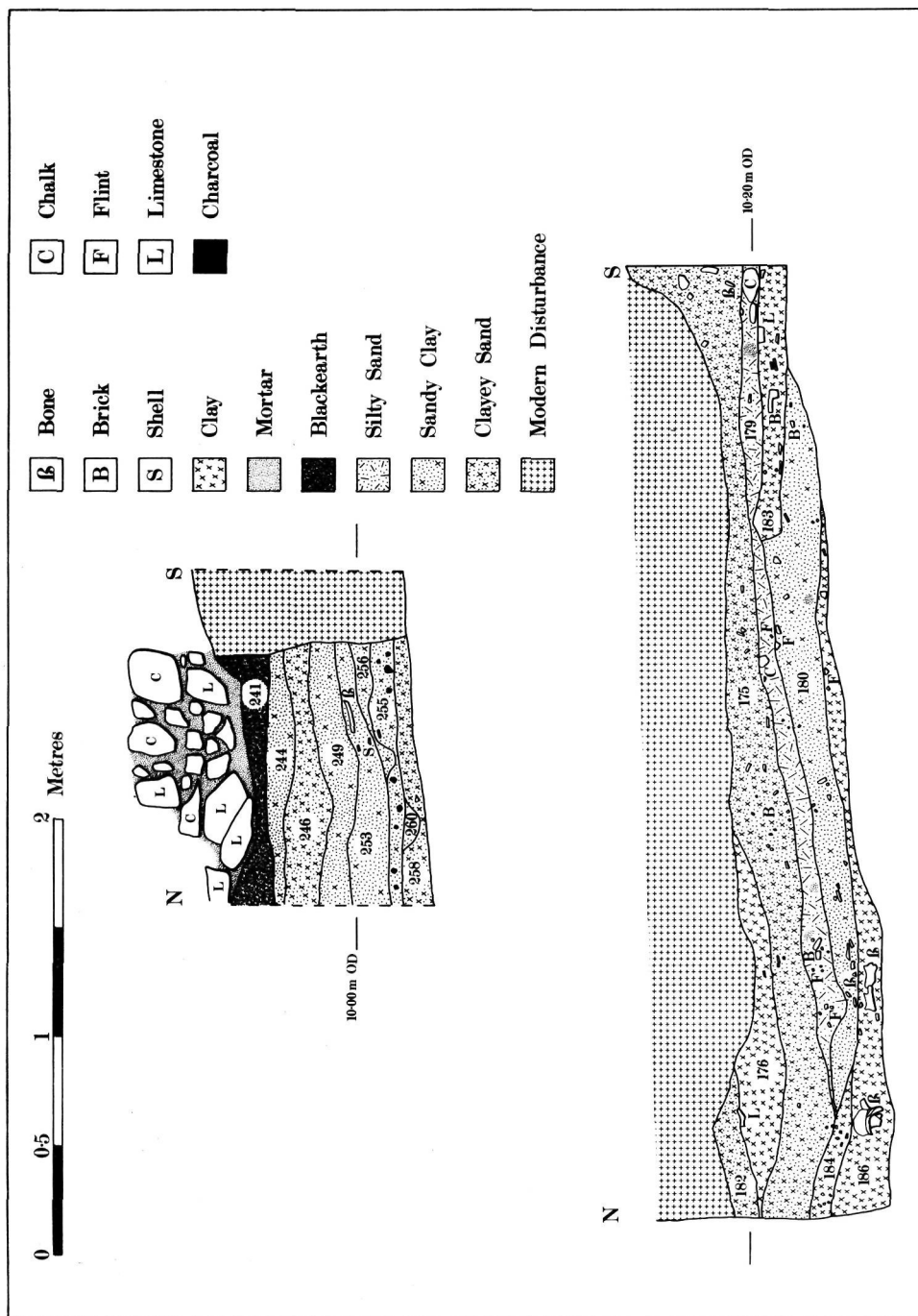


Fig. 3. Goodman's Yard: (above) Section 2 across Area B, (below) Section 1 across Area A.

contained charcoal, mortar, and burnt daub flecks, lumps of plaster, oyster shells, and some lumps of chalk (229, 223, 215).

The three layers of this deposit were separated by four thinner layers of material. One of these thinner layers (226) resembled layers 180 in Area A and 256 in Area B. It was composed of mottled light brown clayey sand containing numerous chalk flecks, some charcoal and burnt daub flecks. A layer of light brown clay (250) with numerous charcoal flecks and some burnt daub, brick and mortar flecks lay to the east of layer 226. The two upper spreads consisted of very compact clay (219) and concentrated charcoal (218) which contained what appeared to be the outline of a burnt plank.

CONCLUSION

The deposits were laid directly on the natural sand and gravel. Topsoil must have been removed from the site and possible brick-earth and gravel too. The top of the natural deposits sloped as if cut away, and it seems likely that the excavated trenches lay within an area of quarrying activity. Quarry pits dating to the 2nd and 3rd centuries AD have been found at Cutler Street in Bishopsgate,¹ and, at the east end of Goodman's Yard, a 13th-century gravel pit was revealed during excavation in 1976.²

The possible quarry at Goodman's Yard appears to have been backfilled on the evidence of the coarseware in the late 3rd century or slightly after by a series of layers which contained numerous fragments of building material and other rubbish. This was probably debris cleared from a site(s) in the City. It is difficult to date when the quarry was dug. The earliest deposit filling the quarry, a yellow sandy clay which contained little archaeological material, may have been due to weathering prior to the main backfilling. Most of the pottery

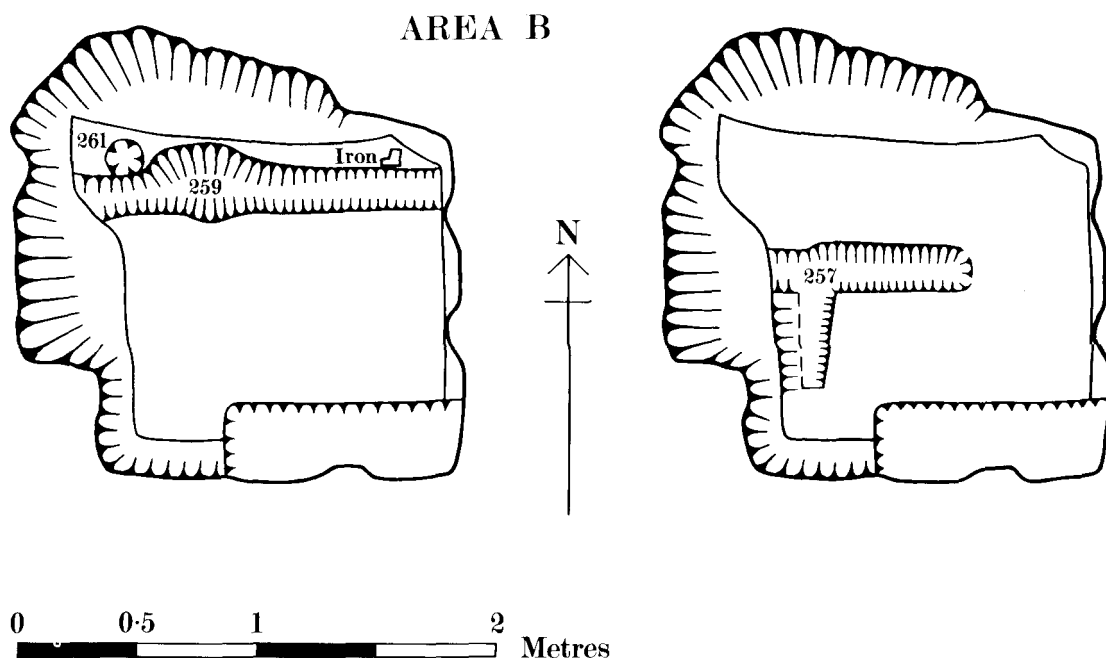


Fig. 4. Goodman's Yard: Area B, Plan of slot 259 and Plan of slot 257.

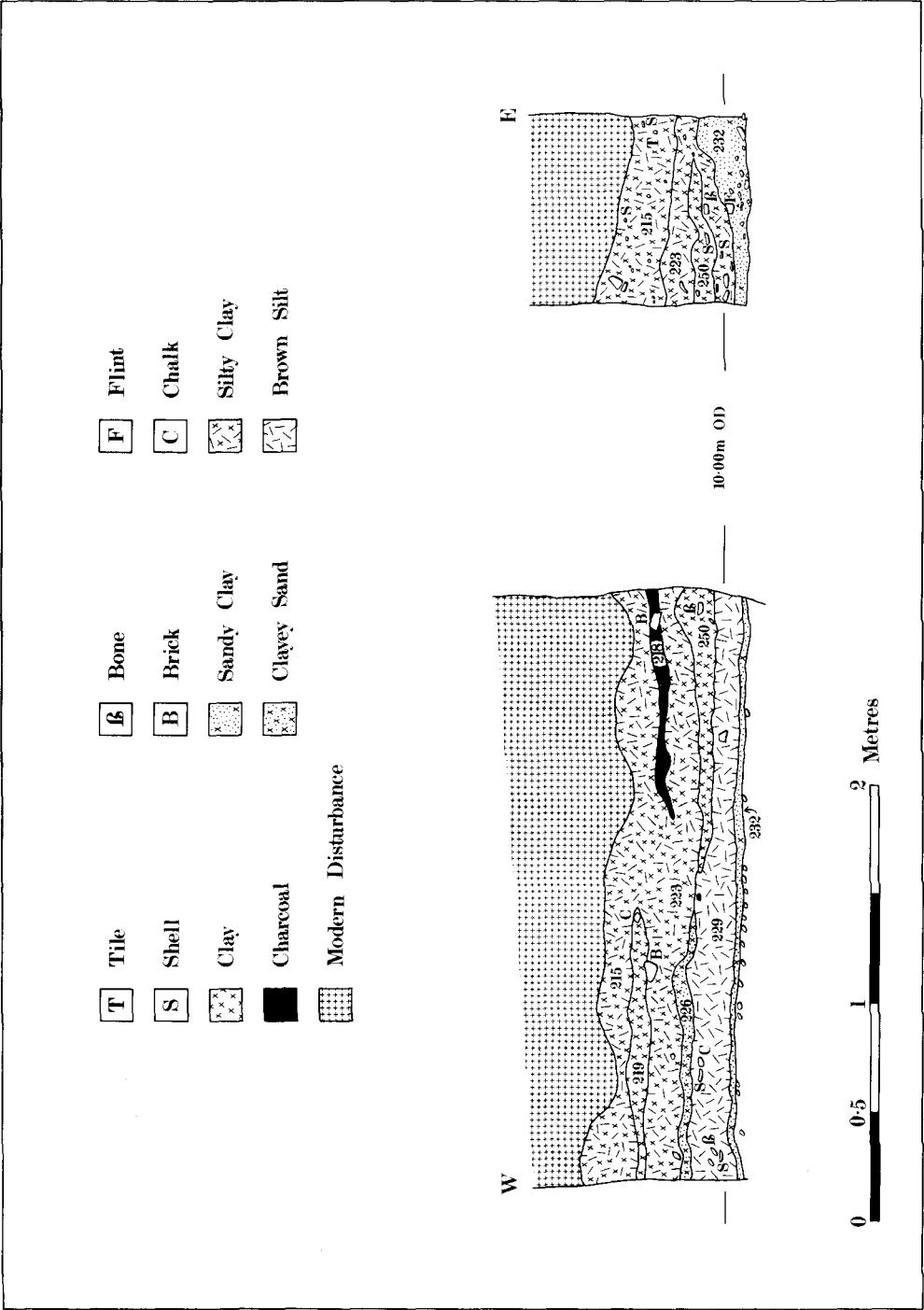


Fig. 5. Goodman's Yard: Section 3 across Areas E and D.

from this early stratum was not datable but there were some similarities between the fineware from this and the overlying layers. This suggests that there was not a long gap between the digging and the filling up of the quarry.

The slots (257 and 259, Area B) lay within layers apparently deposited over a short period of time and there were no signs of floors associated with them. Therefore it seems unlikely that they contained beams for timber buildings. The slots could be simply the imprint of discarded timbers which have completely decayed.

Goodman's Yard lies in the area known as Goodman's Fields, defined by the Royal Commission on Historical Monuments³ as extending from the Minories to Church Lane Whitechapel and from Commercial Road to the Thames. A number of burials have been found in this area. These include both cremations and inhumations and range in date from the 1st to the 4th century AD.⁴ The articulated foot indicates the presence of at least one late Roman inhumation on the site of Goodman's Yard. The grave had been too disturbed to tell if the body had been buried in a coffin, etc. Finds from the vicinity include tombstones from Tower Hill and the Minories,⁵ a glass flask and two ceramic flagons recovered from a grave (burial rite unknown) at St. Clare House which have been dated by Harden and Green to the 3rd century.⁶ Three inhumations were also recorded from this site.

Sometime after the Roman period a building with stone foundations was erected on the northern part of the site. It is possible that these belonged to the buildings depicted on the 'Agas' map (1561–1570).

NOTES

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2. 'Sites Investigated by the Inner London Archaeological Unit 1974–1976' *Trans. London Middlesex Archaeol. Soc.* 28 (1977) 255.
3. Royal Commission on Historical Monuments (England) *An Inventory of the Historical Monuments in London Vol. 3. Roman London* (London 1928) 157–159.
4. R. Merrifield *The Roman City of London* (London 1965) 95.
5. R. G. Collingwood and R. P. Wright *Roman Inscriptions of Britain Vol. 1 Inscriptions on Stone* (Oxford 1965) Nos. 9 and 11. Also No. 12 part of a tombstone re-used in the construction of Bastion 2 of the City Wall.
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ACKNOWLEDGEMENTS

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THE FINDS

SAMIAN

By Geoff Marsh

Trench A

Context 186	Dr. 31	CG	Antonine
189	Dr. 45	CG	Late 2nd century
180	Dr. 45×2	CG	Late 2nd century
	Dr. 18	SG	Flavian
	Dr. 35	Martres?	Early 2nd century (burnt)
	Dr. 37	CG	Part of double medallion and beaded border. Antonine
	Dr. 37	EG	Late 2nd—Mid 3rd century
183	Dr. 38	EG	Late 2nd—Early 3rd century
	Dr. 18	SG	Flavian
178	Dr. 18/31	Martres	Early 2nd century
	CG/EG	Sherd	Late 2nd—Early 3rd century
179	Curle 11	CG	Hadrianic/Early Antonine
	Dr. 33	CG	Antonine
	Fragment of cut glass decoration	EG	Late 2nd century
	CG sherd		
175	Dr. 38	CG	Late 2nd century
	Dr. 38 (at least 4)	EG	Late 2nd—Mid 3rd century
	Dr. 45	CG	Late 2nd century
	2 enclosed vessels	EG	Late 2nd—Early 3rd century
	Dr. 37	CG	Antonine
	2 CG sherds		2nd century
	? Martres sherd		Early 2nd century

Trench B

Context 258	Dr. 38	CG	Antonine
255	Dr. 45?	CG	Late 2nd century
253	Dr. 45	CG	Late 2nd century
	Dr. 38	CG/EG	Late 2nd/Early 3rd century (burnt)
	Dr. 38	EG	Late 2nd/Early 3rd century
	Dr. 37	SG	Rosette tongued ovolo with bands of wreath and band of gadroons below. c. AD 70–85
249	EG?	Sherd	
	CG/EG Sherd		Late 2nd/Early 3rd century
246	Dr. 38	CG	Mid Antonine
	Dr. 45×2	CG	Late 2nd century
	CG Sherd		
244	Dr. 27	SG	1st century

Trench C

Context 251	Dr. 37	CG	In style of Divixtus, an identical design with caryatid (0.1199) and double bordered medallion is shown on S and S, pl 116, 8 c. AD 150–175.
242	Dr. 38	CG	Antonine
	Dr. 38	EG	Late 2nd/Early 3rd century
	CG Sherd		2nd century
230	Argonne sherd enclosed form	Antonine	
248	Dr. 45	CG	Late 2nd century
227	Dr. 18	SG	Pre/Early Flavian
	Dr. 31	CG	Late 2nd/Early 3rd century
	Dr. 38	CG	Late 2nd—Early 3rd century

Trench D

Context 234	Dr. 38	EG	Late 2nd—Early 3rd century
	Dr. 45	CG?	Late 2nd century
	Dr. 33	CG	Antonine
	CG Sherd		2nd century
225	Dr. 45	CG/EG	Late 2nd/Early 3rd century
217	Dr. 45	CG	Late 2nd century
	Curle 21	CG	Late 2nd century
	Dr. 37		Treble bordered ovolo with plain tongue from the Argonne. Antonine
	Dr. 37	EG	Double bordered ovolo with plain tongue, unidentifiable decoration below. Later 2nd—Early 3rd century.

Trench E

Context 229	Dr. 38	EG	Late 2nd–Early 3rd century
	Dr. 45	CG	Late 2nd century (burnt)
226	W. 79	CG	Late 2nd century
228	Dr. 44	CG	Antonine
	Dr. 45	CG	Late 2nd century
	CG/EG Sherd		
250	Dr. 37	CG	Antonine, fragment of decoration
223	Dr. 38	EG	Late 2nd–Early 3rd century
	Dr. 33	EG	Late 2nd–Early 3rd century
	Dr. 37	CG	Antonine
	Dr. 38	CG/EG	Late 2nd–Early 3rd century (slightly burnt)
	CG 2 Sherds	Antonine	
218	Dr. 31	EG	Late 2nd–Early 3rd century
	CG Sherd		2nd century
	EG Sherd		Late 2nd century
219	Dr. 33	EG	Late 2nd–Mid 3rd century
	Dr. 38	EG (Argonne)	Late 2nd century
215	Dr. 37	CG	Double bordered hammerhead ovolo with fragment of panel decoration below c. AD 150–180 (2 sherds)
	Dr. 38	CG?	Late 2nd century (burnt)
	Footring	EG	Late 2nd–Early 3rd century
	Dr. 31?	EG	Late 2nd–Early 3rd century

The material from Goodman's Yard forms an interesting group, probably dating to the early 3rd century with the possible exception of 3 sherds which may be as late as mid 3rd. Samian of this date is uncommon in London and contrasts sharply with that from Tower Hill (see report this volume) which does not extend beyond the later Antonine period.

THE OTHER ROMAN POTTERY

By Wendy McIsaac

Introduction

Most of the pottery illustrated below (Nos. 1–15) is from Trench A, layer 175 which contained the largest assemblage of material. The vessels depicted from 175 indicate the main forms present and similar vessels were found in most deposits on the site. Nos. 16 and 17 were also common forms but appeared in 175 only as tiny fragments. Two other sherds, not from 175, are also included below: part of a 'Rhenish' motto beaker and a fragment of a face jug in a Much Hadham fabric.

The abbreviations BB1 and BB2 have been used for categories of Black Burnished ware. Descriptions were done using a 20× magnification and the frequency of inclusions is indicated as rare, occasional, frequent, or very frequent.

I would like to thank Mrs. J. Bird for her comments on the pottery.

Layer 175

(Fig. 7)

Jars and Beakers

1. Hard black, burnished. Frequent mainly white and colourless quartz, 0.27–0.73mm. BB1.
2. Hard red with grey core. Lighter grey slip, rim and exterior burnished. Slightly burnt. Very frequent quartz, <0.09mm with occasional clear, white and colourless quartz up to 0.27mm. Frequent black iron, <0.09mm.
3. Hard grey with darker surfaces. Rim and exterior slipped light grey and burnished. Zone of roller stamp decoration. Very frequent quartz, <0.09mm with occasional colourless quartz, 0.27mm. Frequent black iron, 0.09mm. A similar type of decoration, termed 'chessboard' was found on vessels in Colchester (Hull 1963). It had been applied to grey ware copies of colour-coated beakers from kiln 28 (c. A.D. 300), an unclassified jar form (Hull 1963, Fig. 6 no. 18) and to several pots from the Mithraeum (Hull 1958, 136 no. 55 and 144 No. 148). There is also an example from Rayne Road, Braintree (Pratt 1976, Fig. 23, no. 55).
4. Hard brownish grey. Frequent clear, white and colourless quartz, 0.27–0.45mm. Rare red iron, 0.27mm.
5. Hard layered grey and red fabric. Dark brown lustrous colourcoat. No visible inclusions. 'Rhenish Ware' (Moselkeramic). (cf. Greene 1978, Fig. 47 No. 1.) Late 2nd–Mid 3rd century.
6. Hard red with buff exterior. Dark brown matt colourcoat with barbotine decoration. Rare-occasional colourless quartz up to 0.36mm. Occasional red iron up to 0.73mm. Probably Nene Valley.

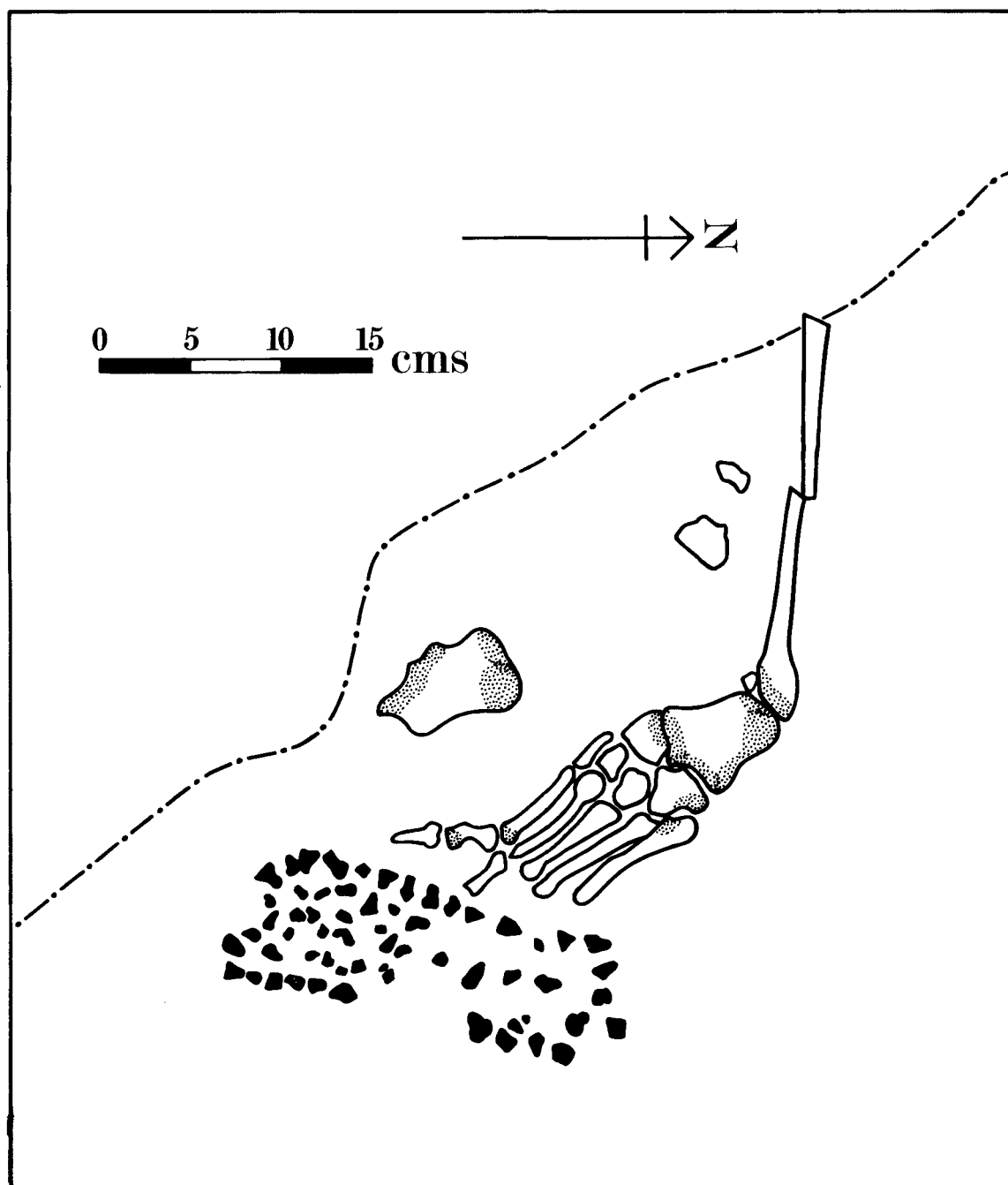


Fig. 6. Goodman's Yard: Plan of foot and boot hobnails in Area A.

7. Hard red, reddish-brown colour-coat. Very frequent quartz, $<0.09\text{mm}$. Frequent red iron, 0.09mm .
8. Hard buff. Slightly lustrous dark brown colour-coat, lighter on interior surface. Frequent red iron, $<0.09\text{mm}$. Probably Nene Valley.
9. Hard red. Dark brown lustrous colour-coat. As for 6. Occasional red iron, 0.27mm . Probably Nene Valley.

Flagon

10. Hard buff. Dark brown matt colour-coat. As for 9. Probably Nene Valley.

Mortarium

11. Hard off-white. Reddish brown patches on exterior. Pink, grey and white trituration grits. Frequent clear and colourless quartz, $0.18\text{--}0.45\text{mm}$, and red iron up to 0.45mm . Oxfordshire. Type M.18 (Young 1977).

Bowls and Dishes

12. Hard black with brownish exterior. Burnished surfaces. Very frequent quartz, $\leq 0.09\text{mm}$. BB2.
13. Hard black with brown margins. Rim and interior burnished. Frequent white quartz $0.27\text{--}0.45\text{mm}$. Although of similar form, the majority of flanged bowls from the site were in a BB1 type fabric.
14. Hard black, burnished. Arcade decoration as for 1. BB1.

Layer 183

Jar

15. Hard black, burnished. As for 1. BB1. This more pronounced form of cavetto rim was present in several layers.

Layer 219

Bowl

16. Hard grey with red-brown margins. Frequent clear and colourless quartz up to 0.45mm . Occasional

black, $<0.09\text{mm}$ and rare red iron 0.27mm . (cf Colchester form 306 (Hull 1963); a number were found at Swan Street, Southwark dated 2nd half of 3rd century (Hammerson and Murray 1978, nos. 1762–68, 1850–54). Although there were no draw-able examples of this type of vessel from Layer 175, bowls similar to this were found throughout the sequence.

Layers 178 and 180

Flagon

17. Hard red, burnished. Very frequent clear and white quartz, $\leq 0.09\text{mm}$. Frequent black and occasional red iron, 0.09mm . Much Hadham. Part of a flagon with a face on the front. Only the hair on one side of the head survives. The 'handle' lies flat against the side of the vessel.

Layers 226 and 229

Beaker

18. As for 5. White slip lettering and decoration. 'Rhenish Ware' (Moselkeramic). Part of a motto beaker. Sherds from several such vessels were recovered from the site.

Vessels not illustrated.

Body sherds, but no rim or bases, from a group of similar vessels were found in Trenches A, B and E.

Fabric: Hard reddish sometimes with a grey core; surfaces vary from brown to buff. Burnished neck and rouletted shoulder and body. Frequent clear and colourless quartz $0.09\text{--}0.18\text{mm}$. Frequent red iron, 0.27mm and occasional-frequent black iron up to 0.18mm .

Several body sherds of eastern Mediterranean/North African amphorae dated late 3rd–early 4th century (information C. Green) came from layers: 176, 217, 228, 243.

Discussion

The types of vessel recovered from the site were of late 3rd- or possibly early 4th-century date. This differs from the samian which appears to belong to the early 3rd century. An attempt was made to see if a difference in date was visible between the lower and upper layers of the sequence by comparing the proportions of various fabrics and pottery types. No definite trends could be discerned. The material suggests that the layers of dumping were deposited over a relatively short period of time. In a number of instances sherds from the same vessel were found in several different layers.

The earliest strata 186, 232, 258 and 264 differed from the other deposits on the site in having very little pottery, none of which was diagnostic for dating. In common with the overlying layers, however, they did contain sherds of 'Rhenish Ware', so although possible, it is unlikely there was much of a break in deposition.

A relatively large quantity of 'Rhenish Ware' (Moselkeramic) was found. The vessels included pieces from several motto beakers as well as indented beakers. Apart from one vessel with an 'E' on it (No. 16), only fragments of letters were visible. 'Rhenish Ware' was found in c. 66% of the Roman contexts. In c. 49% 'Rhenish Ware' constituted $>10\%$ of the fineware while in c. 29% of the contexts it was $>20\%$.

The remainder of the fineware consisted largely of vessels from the Nene Valley (or possibly Colchester). No sherds of Oxfordshire fineware were identified which suggests that the deposits do not go very far into the 4th century, if at all.

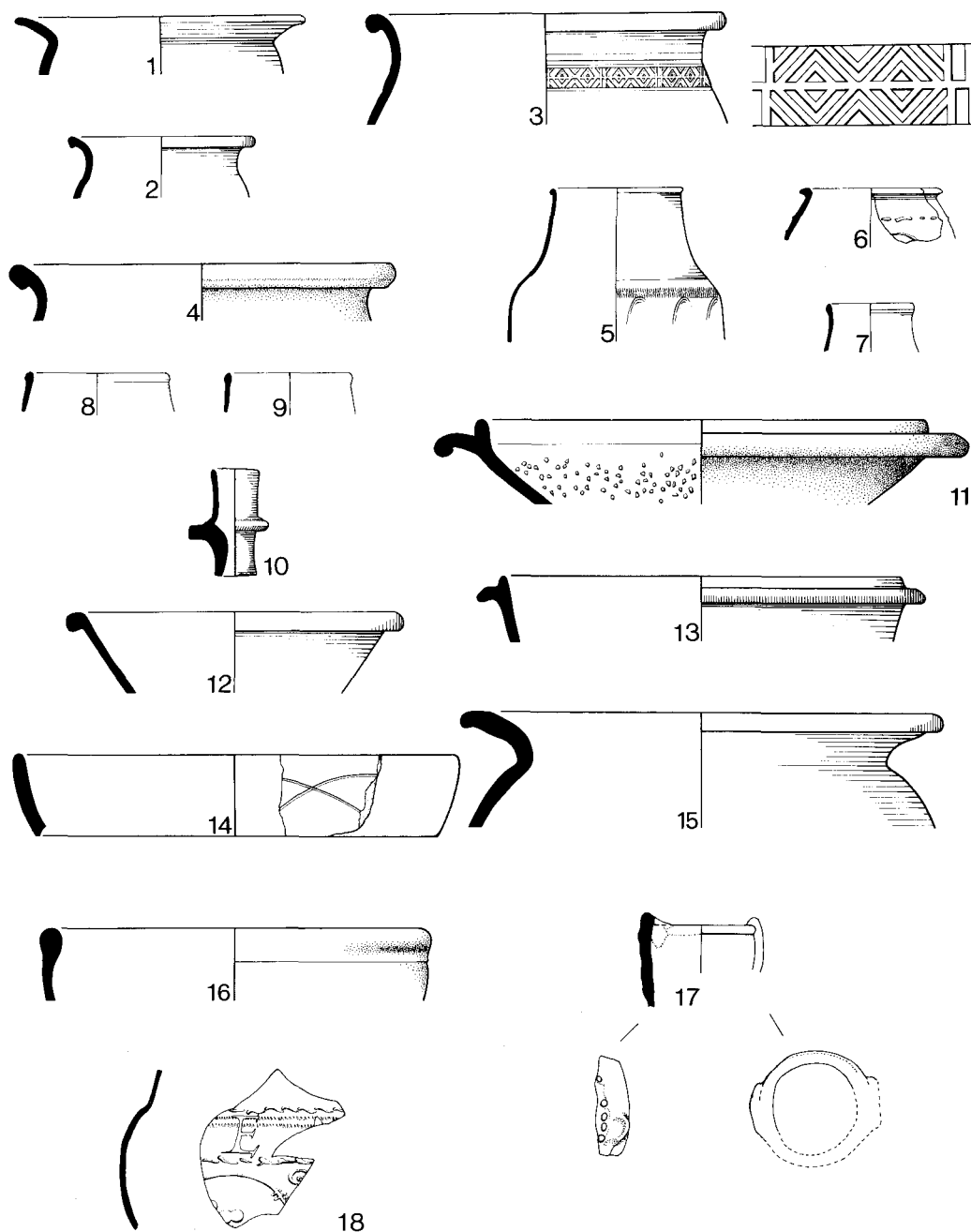


Fig. 7. Goodman's Yard: Roman pottery Nos. 1-18 (1/4); detail of No. 3 (1/1).

THE GLASS

By John D. Shepherd

This site produced forty-five fragments of glass, including the glass tessera No. 45, of which twenty-one fragments can not be assigned to any particular form or date. All forty-five fragments are catalogued according to colour below.

(Fig. 8)

Colourless Glass

1. Fragment from the side of a bowl or beaker. Blown; decorated with a small marvered 'prunt' of the same metal. Colourless glass. Illustrated. (From 175)
 2. As No. 1. Colourless glass. Probably from the same vessel as No. 1 above. (From 175)
- The following 6 fragments (Nos. 3-8) belong to four vessels of similar form (Nos. 3-7 (Isings 1957, 126f form 106/136f form 109); No. 8 (Isings *op. cit.* 136f form 109)). Sadly, insufficient of each example exists to allow close parallels to be made but such fragments are a common feature of glass assemblages of the 3rd and 4th centuries. (From 177)
- 3-5 Three fragments from the side of a beaker. Blown; decorated with a group of three horizontal wheel-cut lines. Colourless glass. (From 175)
 6. Fragment from the side of a beaker. Blown; decorated with a group of wheel-cut lines. Colourless glass with faint greenish tinge. (From 182)
 7. As No. 6. Decorated with a group of narrow wheel-cut lines. Colourless glass with a faint greenish tinge. (From 251)
 8. As No. 6. Decorated with four horizontal wheel-cut lines above a rounded carination. Thick colourless glass. Illustrated. (From 253)
 9. Small fragment from the side of a flask or bowl. Blown; decorated with a thick vertical marvered trail of the same metal. Thick colourless glass. (From 232)
 10. Fragment from the lower part of a hemispherical bowl. (Isings *op. cit.*, 114, form 96b). Blown; decorated with two rows of vertical narrow wheel-cut facets. Colourless glass. (*cf* Calvi 1968, 72, no. 168; Harden 1968, 80, no. 103. 2nd century). Illustrated. (From 183)
 11. Fragment from the side of a beaker or bowl. Blown; decorated with a deep vertical indentation. Four indents on reconstructed vessel. Thick colourless glass. 2nd or 3rd century. (From 251)
 12. Fragment from the base of small beaker or bowl. Blown; hollow tubular base-ring. Colourless glass. Illustrated. (From 246)

13. Lower part of a large handle of an urn or flask. Applied and drawn on a blown vessel. Thick colourless glass. Illustrated. (From 223)
14. Small fragment from the ribbed handle of a flask or bottle. Technique as for No. 13. Thick colourless glass. (From 225)
- 15-23 Nine fragments of thin blown colourless glass of indeterminate forms and dates. (From 175 (x3); 182; 223; 225; 244; 251; 253)

Naturally coloured glass (Bluish-green etc.).

24. Fragment from the rim and neck of a bottle (Isings *op. cit.* 63-69 form 50/51). Blown; rim folded inwards and flattened. Thick greenish-blue glass. Late 1st or 2nd century. Illustrated. (From 175)
25. Small fragment from the rim of a flask or bottle. Blown; rim folded inwards and flattened. Greenish-blue glass. (From 255)
26. Small fragment from the handle of a bottle or flask. Greenish-blue glass. (From 223)
27. Fragment from the side of a bottle (Isings *op. cit.* 63f form 50). Mould-blown; thick greenish-blue glass. Late 1st or 2nd century. (From 179)
28. As No. 27. Thick greenish-blue glass. (From 249)
- 29-30 Two fragments from the side of a bowl or flask. Blown; decorated with a large vertical marvered trail of the same metal. Bluish-green glass. 2nd century. (From 182)
31. Fragment from the side of a bowl. Blown; decorated with a horizontal marvered trail of the same metal. Greenish-blue glass. (From 183)
- 32-42. Eleven fragments of blown greenish-blue glass from vessels of indeterminate form and date. (From 179 (x2); 182, 219; 223 (x2); 244; 249 (x3); 253)

Greenish colourless glass. (See also Nos. 6 & 7)

43. Fragment of blown greenish colourless glass of indeterminate form and date. (From 175)

Window glass

44. Fragment of window glass of the double glossy variety. Greenish-blue glass. (From 175)

Glass other than vessels

45. Small tessera, triangular in section, of opaque blue glass paste. (From 175)

As well as fragments of 2nd- or 3rd-century date vessels of the late 3rd or early 4th century (e.g. Nos. 3-9) are also represented. It is not possible to make any further observation concerning the glassware at this site due to the small size of the assemblage and the inability to date individual vessels closely.

COIN

The one Roman coin found on the site came from a dark earth deposit (182). It has been identified by M. J. Hammerson.

Nero. AE As. AD 66-68.

Obv. [NERO CAE] sar AVG PM [AX TRP PP]; rev.

SC. Victory

With shield inscribed SPQR; Lyons.

Roman Imperial Coinage (1925-) 329.

SMALL FINDS

(Fig. 8)

Bone

1. Pin with spherical head. Polished. Handcut. (From 175).
2. Pin with spherical head. End of shaft broken. Lightly polished. Handcut. (From 175)
3. Pin with spherical head. End of shaft broken. Lightly polished. Handcut. (From 226)

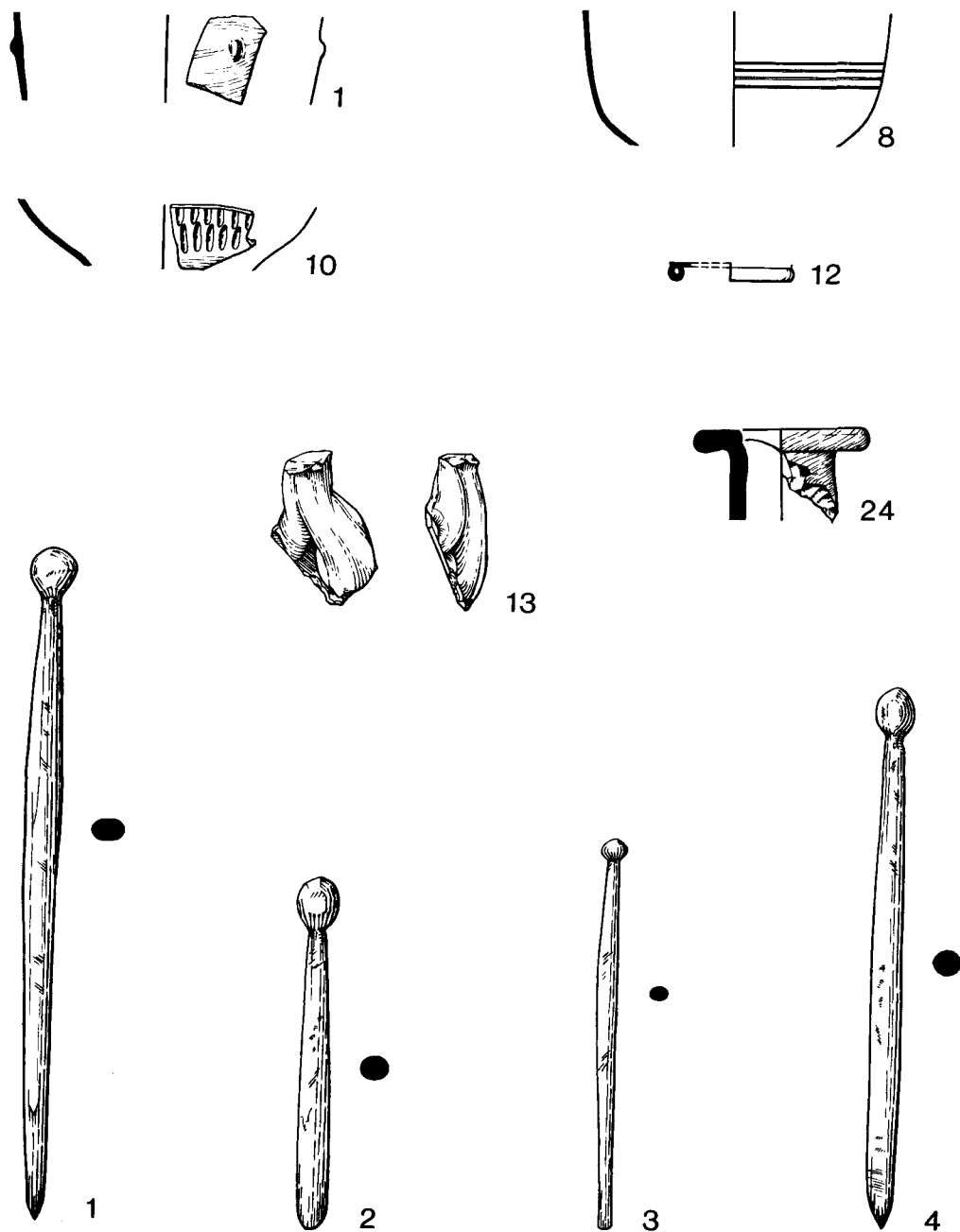


Fig. 8. Goodman's Yard: Roman glass Nos. 1, 8, 10, 12, 13, 24 (1/2); Roman small finds, bone Nos. 1-4 (1/1).

4. Pin with spherical head. Polished. Handcut. (From 227)

Stone

5. Fragment of a quern stone. It has been identified by Martyn Owen (Institute of Geological Sciences) as Niedermendig lava from the Mayen area of Germany. Not illustrated. (From 253)

THE REMAINS OF A ROMAN HOBNAILED SHOE

By Michael Rhodes

Associated with the surviving foot bones in Layer 182 were the remains of a shoe. The leather parts had disappeared leaving *in situ* 56 of the hobnails which once held together the layers of the bottom unit. The heads of the nails were uppermost, showing that the shoe was buried upside down. The shoe may have slipped at least partially off the foot during the process of burial, suggesting that this was probably not done in a particularly careful fashion.

The nails are now very corroded, but the heads appear to be of the usual conical type with a diameter of c. 10–11mm. Their arrangement indicates that the specimen was a left shoe and was c. 215mm long; equivalent to c. size 13 on the English shoe size scale. This shoe is at the top end of the known Roman size-range for its type. The exact pattern of nailing is not entirely clear, but definitely belongs to Type C (Rhodes, *in press*). This is the most heavily nailed variety with two rows around the outside edge of the sole (in this example they do not appear to extend down to the heel), at least one row round the remainder and within its border, 2 to 3 straight rows extending either along the whole length of the sole or just along the tread or heel. Shoes with this nailing pattern are thought to be *caligae* or army boots because, as well as being the most heavily-nailed, they are usually larger than other types of shoe and are associated with uppers of the 'moccasin' or one-piece variety, thought to be the distinctive mark of this type of footwear (Rhodes, 1980).

Although the shoe is of a military type, this does not necessarily mean that its wearer was a soldier. Shoes of similar form appear to have been widely adopted by the civil population at least by the time of Diocletian (*Diocletian's Edict* 9, 1–6 and 10).

THE ANIMAL BONES

By Alison Locker

The bulk of deposits on the site were dumped and of the same or very similar date (late 3rd or possibly early 4th century). These layers from all trenches have been combined for the purpose of faunal analysis.

The Mammal Bones

A total of 1,286 mammal bones was recovered, the following species were identified; ox (*Bos* sp.), sheep (*Ovis* sp.), pig (*Sus* sp.), horse (*Equus* sp.), dog (*Canis* sp.), cat (*Felis* sp.) and hare (*Lepus* sp.), measurements were taken whenever possible according to Jones (1976) and von den Driesch (1976). These are available on request. Below greatest length is abbreviated as GL.

The table below indicates the number of bones for each species. Fragments termed ox or sheep sized have been added to the categories ox and sheep respectively. Loose teeth and rib fragments have been included in the count.

ox	sheep	pig	horse	dog	cat	hare	unidentifiable	=	total
493	51	109	22	21	2	2	586		1286

Ox was the predominant species (forming 38% of the mammal bone) both numerically and even more so in terms of meat contribution. All parts of the skeleton were represented and butchery marks were common.

Butchery was frequently observed on mandible chopped around the area of the gonion,

possibly for the removal of the cheek meat and the tongue, as well as chopping around the diastema and under the alveoli of the molars.

Scapulae were chopped through the joint surface, the proximal surfaces of radii, tibiae, and metapodials were often chopped along their posterior surfaces, possibly as a result of chopping the joint above. The distal condyles on the posterior surface of the femur were also chopped. The os coxae were chopped around the area of the acetabulum.

All the ox bones were mature and fully fused.

Sheep were present in low numbers (4%), and butchery was noted on a number of long bones. Most of the bones were mature except for 2 immature mandible fragments.

Pig formed 8% of the total, many of the bone fragments were still porous, and some were from neonatal individuals. It is common for pig to have a higher proportion of immature bone than ox or sheep since its prime function is as a meat producer. Butchery was observed in the form of chop marks through the frontals of the skull, and through the mandibles at the area of the alveoli of the premolars. Many of the long bones also showed chop marks.

A number of horse bones were recovered. Context 186 yielded the partial skull, and the mandible of a small individual, the skull measurements compared closely with the complete Roman horse skull from Quakers Burial Ground, Staines (Chapman in press). This individual appeared to be horse rather than donkey, indicated by the 1st molar of the mandible (Armitage 1979). The atlas, axis and 3 cervical vertebrae which all articulated were also present. Measurement of a horse radius (GL 337mm) from context 180 suggested an individual with a withers height of 146cms which is approximately 13 hands (Kieswalter 1974).

The only instance of pathology was seen on a dog femur, where exostosis covered the proximal area of the shaft. The shoulder heights of dog gave a range of 33 to 57cms, which is within the Romano-British range given by Harcourt (Harcourt 1974).

	GL	Shoulder height
Dog radius	142mm	47cms
	175mm	58cms
ulna	148mm	42cms
	118mm	33cms
femur	160mm	48cms

The Bird Bones

A total of 77 bird bones was recovered, the following species were identified; domestic fowl (*Gallus* sp.), duck (*Anas* sp.) and goose (*Anser* sp.).

dom.fowl	duck	duck (cf mallard)	duck (cf golden eye)	goose	immature	unidenti- fiable	total
32	1	1	3	18	5	17	= 77

Measurements were taken whenever possible according to Jones 1976, all these bones probably represent domestic food refuse.

The Fish Bones

A total of 9 fish bones was recovered, 8 of which were from context 175. Seven of these belonged to a flatfish, probably sole (*Solea solea*) representing one individual, and the vertebral centrum of a bream (*Abramis brama*) was also recovered.

The Shellfish

A total of 764 fragments of shellfish was recovered, and the following species were identified; oyster (*Ostrea edulis*), whelk (*Buccinum undatum*), mussel (*Mytilus* sp.), cockle (*Cardium edule*), carpet shell (*Venerupis decussata*), limpet (*Patella vulgata*) and one *Cepaea* shell.

oyster	whelk	mussel	cockle	carpet shell	limpet	cepaea	total
228 upper valves	13	14	7	5	1	1	= 764
90 lower valves							
16 indeterminate							

The mussel, oyster, whelk, cockle, carpet shell and limpet may have been collected for food from around the shoreline and in the case of oysters from deeper water.

It is not clear whether Cepaea were eaten, this one individual may have been part of the surrounding land fauna which became incorporated in the deposits.

General Conclusions

The small nature of the sample precludes any estimation of the relative contribution of different species to the diet during the Roman period but broadly speaking the deposits seem to represent well mixed deposits of food refuse, there appears to be little difference between the 3 deposits though this may be a factor of the small size of the sample rather than true homogeneity.

The Human Bones

A total of 55 human bones were recovered from 5 different contexts.

Layer 182	1 pair of tali
1 pair calcanea	15 fragments of phalanges etc.
1 fibula	1 proximal end of an ulna
1 distal phalanx	1 skull fragment
2 proximal phalanges	2 proximal ends and shafts of tibiae
1 1st metatarsal	2 distal ends of tibiae
1 2nd metatarsal	2 radius shaft fragments
1 3rd metatarsal	1 midshaft and distal end of a humerus
1 4th metatarsal	2 ulna shaft fragments
5 talus bones	1 fragment of os coxa
	1 fragment of acetabulum
Layer 186	
1 skull fragment	
2 femur shaft fragments	
1 vertebral centrum	
1 long bone shaft fragment	
Layer 224	
1 pair of calcanea	
	Layer 232
	1 fragment of os coxa
	Layer 241
	1 long bone shaft fragment
	1 skull fragment

All these bones were adult and quite robust. Anatomically they could all belong to a single adult male, but the stratigraphy suggests that it is more likely that at least 2 individuals are present.

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EXCAVATIONS AT TOWER HILL 1978

DAVID WHIPP

SUMMARY

Excavations were carried out on the Roman defences of London in the area of the Wakefield Gardens, immediately north of the Tower of London (Fig. 1). Small areas of rampart were found to survive together with a short stretch of city wall. It was demonstrated that the rampart and wall were contemporary and that a construction date of about AD 200 was indicated for both. The footings of a Roman turret were also investigated. This was erected at the same time as the wall and probably served as a staircase turret to a parapet walk.

INTRODUCTION

Excavations at Tower Hill (Grid Ref. TQ33608070) were carried out by the Inner London Archaeological Unit between March and December 1978 under the direction of the author. The Unit was acting as agent of the Department of the Environment's Ancient Monuments Inspectorate which had made the site the subject of an Interim Preservation Order.

The excavation was along the line of the Roman city defences and took place prior to the construction of a pedestrian subway from the Wakefield Gardens to the Tower Gardens (Fig. 2). It seemed inevitable that the excavation of this subway would involve the destruction of archaeological deposits. Adjacent to the site a stretch of Roman city wall survives to a considerable height though much remodelled in the Middle Ages.¹ To the south there is no standing wall but part of the area available for excavation lay across its projected line, and it was hoped to investigate the footings of the city wall and its relationship to any surviving rampart.

CITY WALL (Plate 1) (Fig. 3)

A 6.5m length of Roman city wall was discovered immediately under the make-up for the modern pavement. It had been cut through the middle by a sewer pipe and at each of its ends by basements. There was further modern disturbance beneath the wall, as a vault had been tunnelled underneath and incorporated the wall footings in its roof.

The wall survived to a maximum height of 0.80m above the Roman ground level and was 2.40m wide. On the external, eastern face of the wall, ground level was marked by a plinth course of large chamfered blocks of brown sandstone (Plate 1). The largest of these measured 0.50m in length, 0.44m in width and was 0.22m deep. Above the plinth the wall survived as four even courses of squared ragstone blocks mortared into position.

At ground level on the rear face of the wall was a triple course of red tiles. This was only one tile deep, and did not continue through the thickness of the

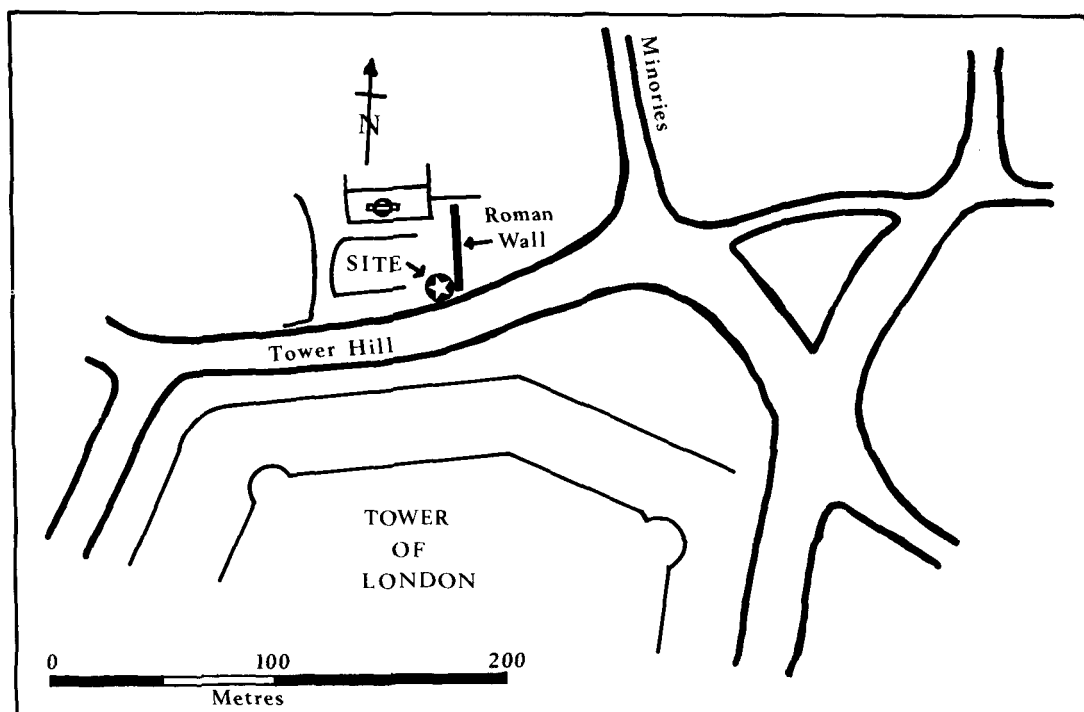


Fig. 1. Tower Hill 1978: Site location plan.

wall. Only two courses of walling survived above the tile course and these too were carefully shaped and mortared in position. The core of the wall between the two faces stood to a maximum height of five building courses. At this level we know from excavations and observations of the wall elsewhere in the City that there was a triple bonding course of tiles running through the thickness of the wall.² Only one tile from the bottom layer of this bonding course was found in the Tower Hill excavations and this stood at a height of 0.80m above Roman ground level.

The core of the wall was made from irregular ragstone lumps placed in roughly level courses separated by thick layers of mortar (Fig. 6). There was no indication that the stones had been placed with a deliberate pitch to north or south—a feature observed at the Dukes Place site near Aldgate in 1978.³

The wall foundations had been badly disturbed by basements and nowhere was it possible to excavate a complete cross section through them. The foundation trench was found to be flat bottomed and 1.10m deep. The west side was vertical and the foundations were built flush against it, but the east side did not survive. At the bottom of the foundation trench was a very thin layer of dark, orange, sandy gravel and over this was 0.70m of stiff grey-brown clay containing many large flint nodules. This was the main foundation for the wall. On top was another thin lens of dark orange sand and gravel varying between 0.04m and 0.08m in depth. Above this were the upper foundations which consisted of two courses of large irregular lumps of ragstone bonded together by a great deal of hard mortar, and the plinth course.

The excavated stretch of wall showed a change of alignment north and south of the modern sewer trench (Fig. 3). This could well have been the result of movement caused by the post-medieval tunnelling beneath the wall and need not imply a deliberate change of alignment on the part of the builders.

ROMAN GROUND SURFACE (Figs. 6 and 7)

The Roman topsoil surface was discovered in several places on the site, at c. 10m+O.D., varying within a range of a few centimetres over the site. It was 0.30m deep and consisted of a dark brown fine sandy clay containing numerous charcoal flecks, flint pebbles and a few potsherds. It overlay a subsoil of natural brickearth and sand.

MORTAR AND STONE SPREADS (Fig. 4)

Above the Roman topsoil was a layer of mortar. It began at the internal face of the city wall into which it bonded and was found up to 11 metres away to the west. Away from the wall the layer was often wafer thin but where it bonded into the city wall it was c. 0.10m thick. So liberal was the use of mortar at the bond, that the tile course on the rear face of the wall was completely obscured in places (Fig. 6). Although later features had destroyed a great deal, it appeared that there was once a continuous spread of mortar behind the wall, on its western side. All archaeological deposits to the east of the wall had been destroyed and so its existence on that side could not be ascertained. It is worth noting, however, that on the Dukes Place site mentioned above a similar spread was discovered on both sides of the city wall. The excavator of this site seems to suggest that the mortar spread resulted from accidental spillage of mortar whilst the wall was being built.⁴ The mortar spread at Tower Hill, however, was so extensive as to make this explanation unlikely. Additional evidence to suggest that the layer was deliberately laid comes from rough stone surfaces which were laid down at points where the mortar spread

was particularly thin or worn away altogether. These stone surfaces (Fig. 4, Plate 3) have every appearance of being repairs to the mortar spread. Such repairs would not be necessary unless the mortar spread had a particular function. What this was is impossible to know unless it was an attempt to consolidate the otherwise soft and sandy ground surface in order to facilitate the work of the masons.

THE RAMPART (Figs. 3, 6, 7)

The excavation revealed that a rampart had been built immediately behind the wall and lay on top of the mortar spread. The surface of the latter was quite clean and there was no discoloration or accumulation of deposits to suggest that any significant period of time had elapsed between the laying of the mortar spread and the construction of the rampart. Modern disturbance prevented the original dimensions of the rampart from being estimated, but it was found surviving to a maximum height of 1.0m and up to 9.5m away from the internal face of the city wall. This is a remarkable width in comparison with the few published records made of sections elsewhere in the city. At Dukes Place the rampart was only 4.0m³ wide and at Central Criminal Court 5.0m wide.⁶ The reason for the greater width at Tower Hill is not understood but it may be related to the presence of a wall turret discovered at the south end of the excavation (see below).

The rampart material consisted of yellow brown sandy clay and this probably came from the wall construction trench and the external defensive ditch. A cross section excavated through the ramparts clearly showed tip lines sloping down from east to west. For the most part the bank was archaeologically sterile but fragments of ragstone, tile and mortar (i.e. building material from the wall), were found together with pieces of charcoal, oyster shell and occasional potsherds.

Where the rampart met the city wall there were slight indications that it had been built in more than one stage (Fig. 6). The evidence consisted of two tips of bank material; these layers (168, 169) were separated by a lens of loose mortar, ragstone chip and pebbles (161). At its base this layer did not join up with the mortar spread, but ran parallel to and separated from it by 0.02m of rampart material. The layer was 0.10m thick on average and seems to represent the accidental spillage of building debris from the wall on top of an incomplete rampart. A possible interpretation is that the rampart was built up in stages as the masons gradually increased the height of the wall—each successive stage of the rampart giving the masons easier access to the next course of wall to be built. During such a process accumulations of building rubbish would inevitably become incorporated as thin layers within the rampart. Insufficient rampart survived to test this theory over a significant area.

GULLIES (Figs. 5, 7, Plate 4)

Cut into the Roman ground surface were the remains of two parallel gullies (129/154 and 137). They ran parallel to the city wall and were 9.00m and 10.60m away from it respectively. Both were badly affected by later disturbance but 4m survived of the western gully and two lengths of 2m and 0.7m remained of that to the east. Their widths varied between 0.30–0.40m and averaged 0.15m in depth with sides sloping gently to a curved base. The fill of both gullies consisted of grey clayey sand with bits of charcoal, brick and gravel. The eastern gully (129), was sealed entirely by rampart material but not by the mortar spread described above. Instead it seemed to have cut through the spread—unless it coincided exactly with the western edge of the mortar which seems unlikely. Post-Roman disturbance meant that it could not be determined if the mortar continued on the other side of the eastern gully. Only one patch of mortar was found between the two gullies and this terminated along the eastern edge of the western gully. No mortar was found beyond this gully.

There is insufficient evidence for a full interpretation of these gullies to be attempted but the suggestion has been made that they were cart wheel ruts worn through the mortar spreads. If this were the case, however, one might expect the ruts to have been more numerous and somewhat narrower. Another equally conjectural interpretation is that the gullies were marking out lines to define the lateral extent of each of the stages of the rampart construction suggested above.

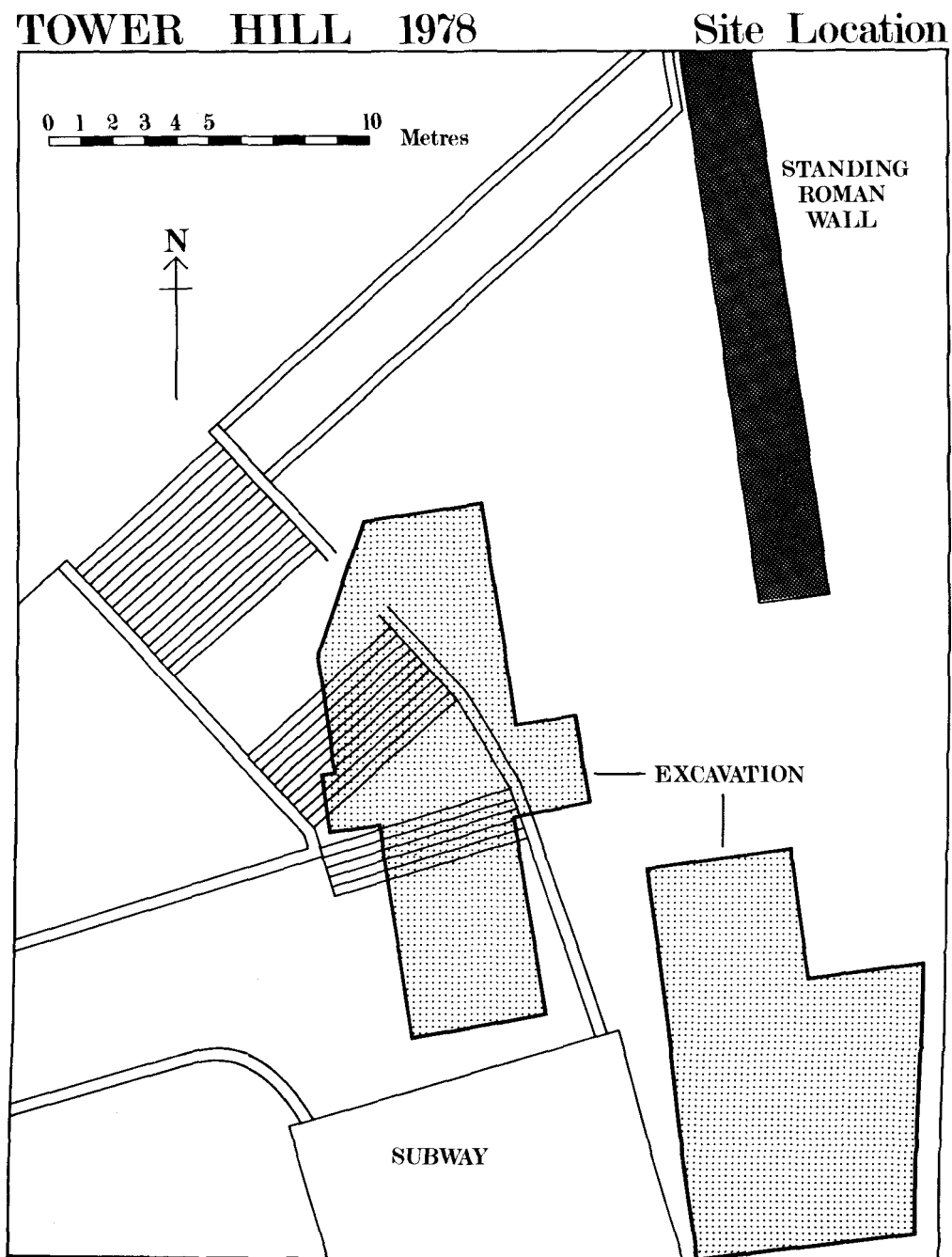


Fig. 2. Tower Hill 1978: Plan of excavation trenches.

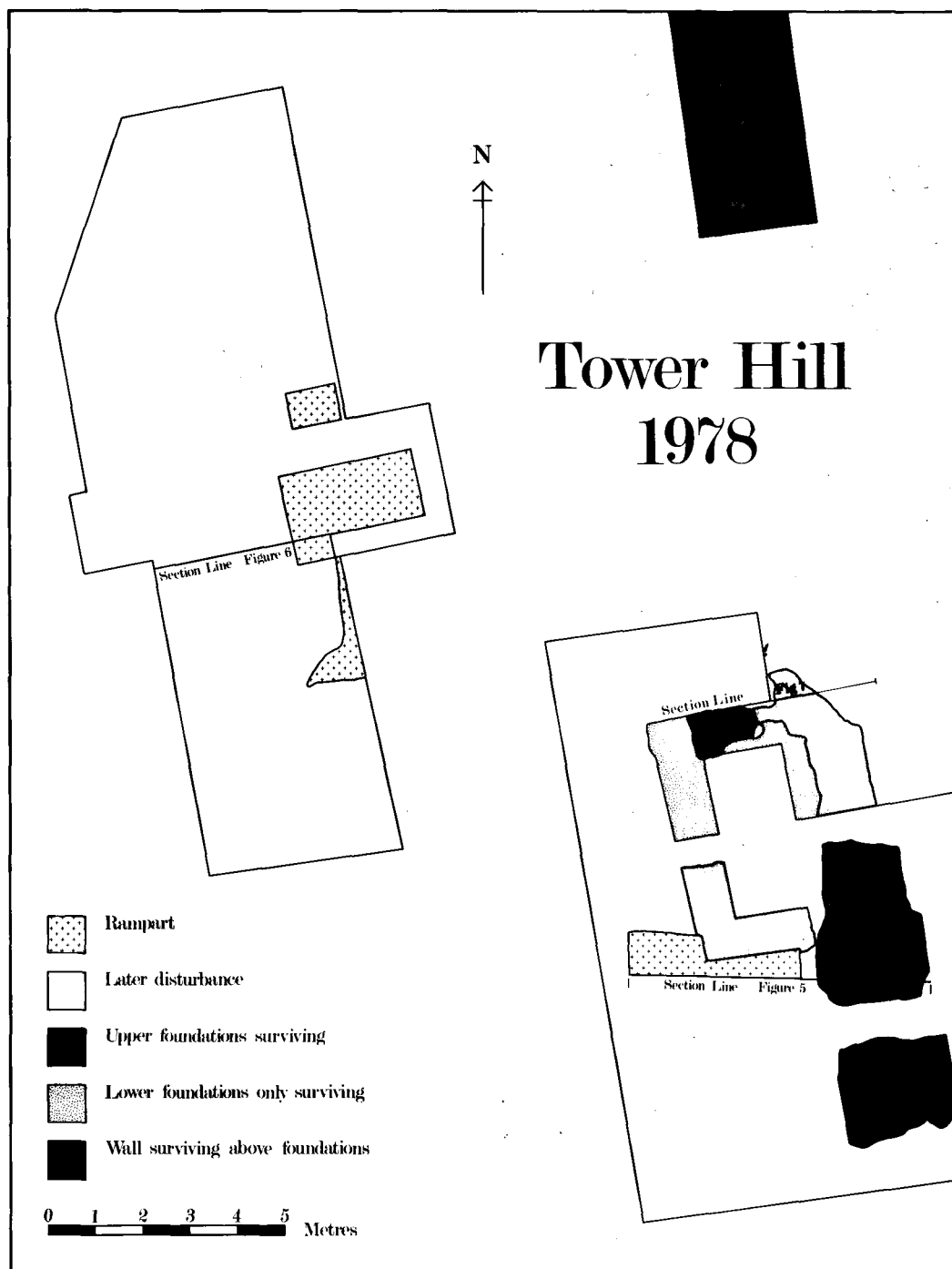


Fig. 3. Tower Hill 1978: Plan of surviving Roman city wall, turret and rampart.

Along the western edge of the site was found part of another Roman feature (152), most of which lay beyond the excavated area (Fig. 5). It ran north-south, cutting through the Roman ground surface. The north end was cut by later disturbance and the south end was beyond the edge of the excavation. The eastern side of the feature sloped gently to a depth of 0.55m before running beyond the edge of the site. The western edge and the base could not be excavated. It appears to have been a pit or a gully but so little could be excavated that its function is not known. The mortar spread did not extend as far as 152 but one or two of the stones from the metalled surface did overlie the backfill of the feature, which contained orange-brown clayey sand.

ROMAN TURRET (Figs. 3, 8, Plate 2)

The redevelopment at Tower Hill involved the destruction of part of a Roman wall turret which had been examined in 1935 by Mr. F. Cottrill, then archaeological Investigator into Roman London for the Society of Antiquaries. The area excavated in 1935 was taken into guardianship by what is now the Department of Environment and is on public display. The unexcavated portion of the turret, however, lay beneath a pavement and was not afforded legal protection. This area was destroyed in the 1978 development although time was made available for excavation. The opportunity was also taken to re-examine the guardianship area as there was concern that some of the reconstruction work carried out for display purposes was not in accord with the findings of the 1935 excavation.

The turret was rectangular, its eastern wall being the Roman city wall. During the 1978 excavation the foundations of the north, south and west walls were exposed and all the modern reconstruction removed. (Fig. 3, Plate 2). The north and south walls were found to be parallel to each other but of unequal length. As a consequence the west wall was not at right angles to them, nor parallel to the city wall. Externally the south wall was 2.40m long, the west wall 5.28m and the north wall 2.64m. Each wall was 0.95m thick. The foundations of the south wall were 0.85m deep, the lowest 0.42m consisting of brown-grey clay packed with flints with a lens of orange gravel running through the middle of the clay. Over this were a few centimetres of soft yellow mortar. These deposits filled the bottom half of the vertical sided flat bottomed construction trench and the top half was filled with two courses of ragstone rubble embedded in a mass of hard white mortar. Overlaying this at ground level was found the bottom layer of what was once a triple tile bonding course. Nothing survived above this level but the impressions left by the second layer of tiles could be clearly seen on the mortar covering the first.

Only the north wall of the turret survived above ground level and here only for a short length where it stood 0.50m high (Fig. 8). Elsewhere even the foundations had been badly disturbed (Fig. 3). From what did survive it could be seen that the foundations of the turret were very similar in construction to those of the city wall. Interestingly, the foundations for the north wall of the turret were 0.40m deeper than those of the south wall and were as deep as the city wall foundations. To compensate for this the west wall foundations were deeper at their northern end than the south.

The interior of the turret had unfortunately been completely destroyed by a post-medieval pit the fill of which contained evidence of metal smelting on the site. As the pit occupied the whole interior there is a strong suggestion that the turret walls stood to a considerable height even after the medieval period and that advantage was taken of the shelter they provided for the purpose of metal smelting. Modern disturbance prevented the precise relationship between the rampart and the turret from being determined. The rampart certainly overlay the foundation trench of the south wall of the turret which was, therefore, stratigraphically earlier but it would have been very interesting to know the relationship between the standing walls of the turret and the bank. If access into the turret was at ground level then an entrance way through the width of the rampart would have been necessary. Alternatively the door could have been on the top of the rampart, in which case no modifications would be required other than a flight of steps up the bank.

Insufficient evidence remained for the function of the turret to be satisfactorily determined. It was not large enough or strong enough to act as an internal bastion and for the same reasons

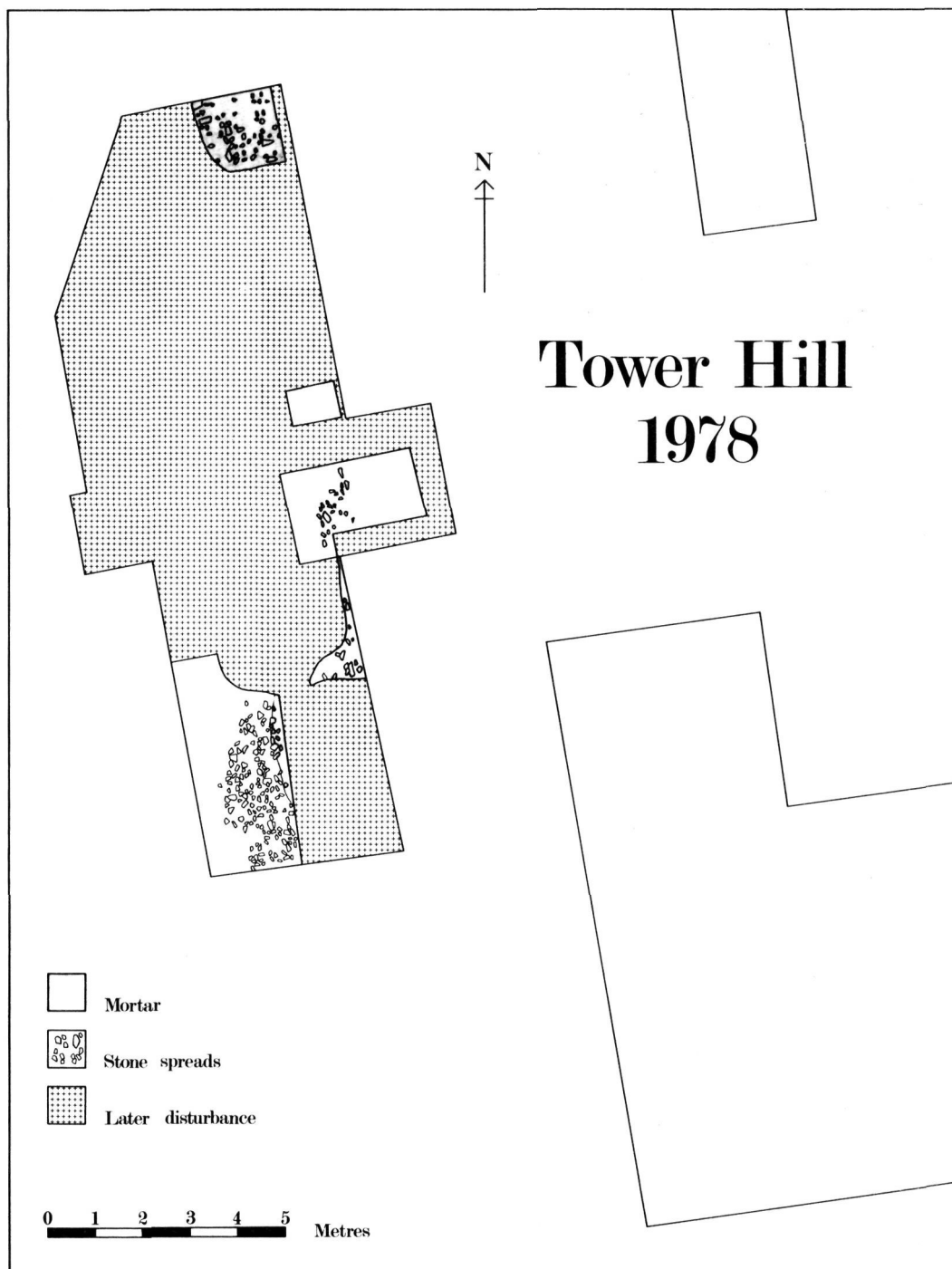


Fig. 4. Tower Hill 1978: Plan of stone and mortar spreads.

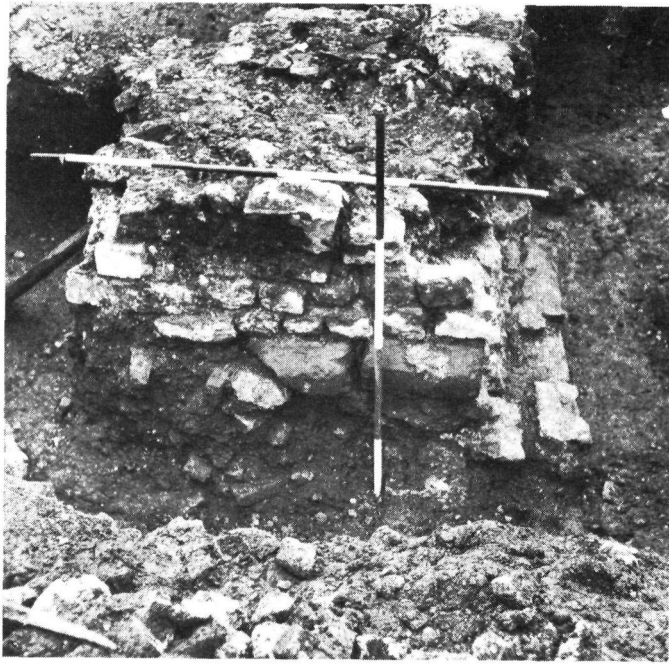


Plate 1. Tower Hill 1978: Eastern face of Roman wall (2m scale).

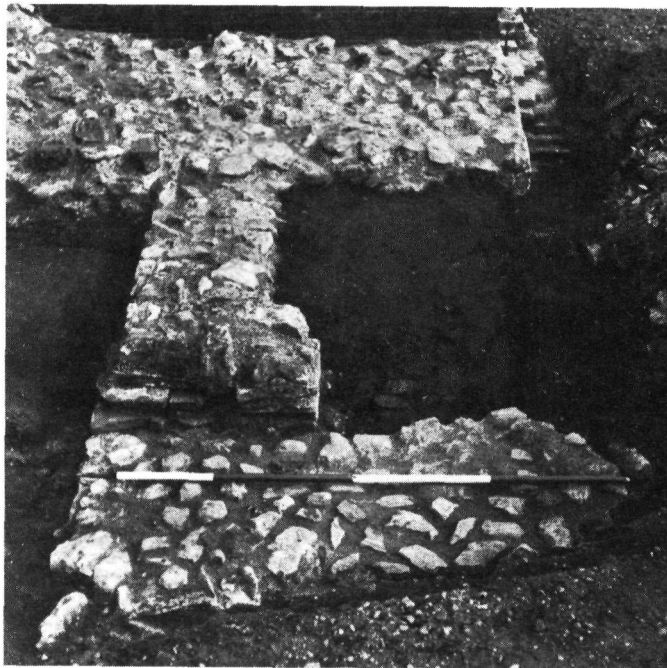


Plate 2. Tower Hill 1978: Roman turret as displayed in 1978. Reconstructed west wall of turret is in foreground and reconstructed city wall in background (2m scale).

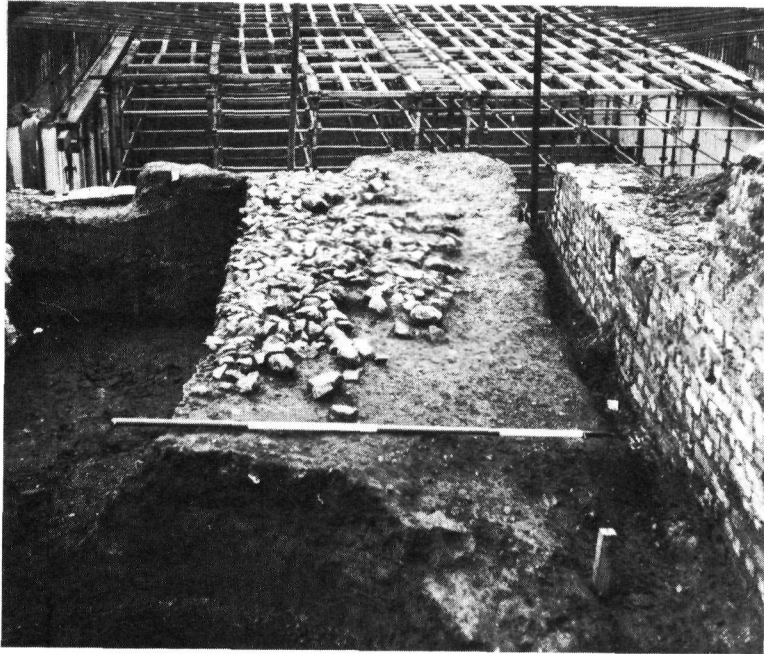


Plate 3. Tower Hill 1978: Metallised surface (2m scale).

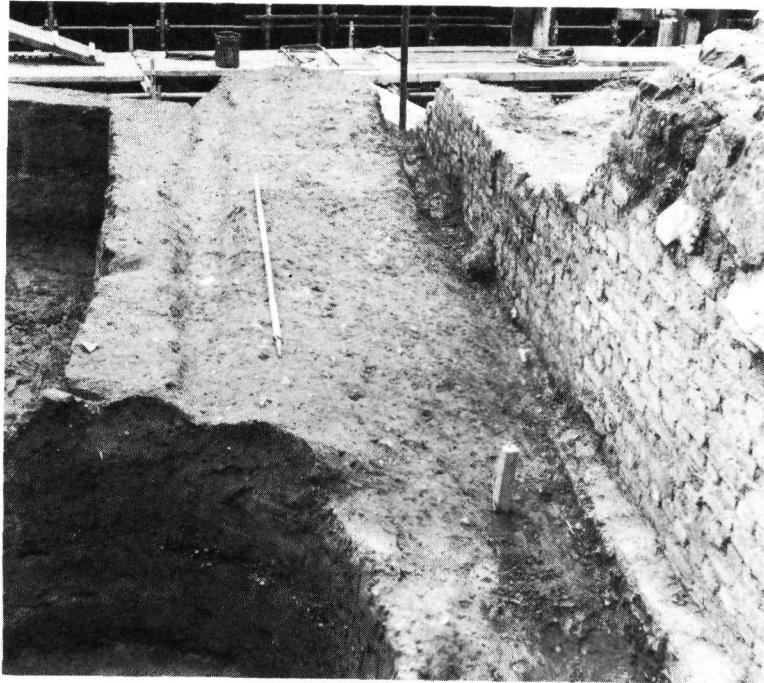


Plate 4. Tower Hill 1978: Roman gully (137) (2m scale).

was unlikely to be a guard-house. In addition no evidence was found in the excavation that there was ever a breach in the Roman wall at this point which would require a guard. The most likely use that it can have been put to is a stairway up to a parapet walk on the city wall. The turret is not unique in London and three other examples have been found on the city wall, one in the west and two in the east. A fourth example at Noble Street is associated with the Cripplegate fort rather than the city wall and is not, therefore, strictly comparable. The city wall turrets were discovered at the Tower of London,⁸ at Coopers Row, to the north of Tower Hill,⁹ and to the west of the city at the Central Criminal Court.¹⁰ Each turret was rectangular although they varied in size. The internal area of the turrets were respectively; Tower of London 5.26 sq. metres, Tower Hill 5.45 sq. metres, Coopers Row 3.97 sq. metres, and Central Criminal Court 9.37 sq. metres. Both at Tower Hill and Central Criminal Court the rampart was recorded as overlying the foundations of the turrets which demonstrates that on these sites at least the turrets were original features of the city defences. Assuming that there was a parapet walk along the city wall and that the turrets gave access to it, then many more such turrets must have once existed and may indeed still survive.

DATING AND CONCLUSIONS

Perhaps the main contribution of the excavation under discussion was that it proved beyond doubt that the foundations of the city wall were stratigraphically earlier than the rampart, and consequently the city wall was an original feature of the defences and not a later addition to an already existing rampart. The turret was also stratigraphically earlier than the rampart. Dating evidence from the excavated features was not particularly plentiful. No dateable artifacts were found in the city wall, the turret or their respective foundation trenches. The majority of finds came from the rampart and the soil sealed beneath it. The presence of East Gaulish samian sherds and black burnished ware of the late Antonine period suggest that the rampart and, therefore, the wall was not built before the mid-2nd century. Similarly, the absence of very late second-century samian forms such as Walters 79 and 80 and Dr. 45 suggest that it was completed very soon after AD 200 if not earlier. No coins were found in the excavation and a few fragments of glass vessels provide the only other dating evidence. These appear to be mid-late 2nd century in date.

In conclusion, then, the excavation at Tower Hill provided valuable stratigraphical evidence concerning the relationship of the rampart to the city wall and turret and provided dating evidence for the defences similar to that discovered on other sites in the city. The best *terminus ante quem* for the city defences is provided by the evidence from the Central Criminal Court site discussed above. These consisted of two double coin-moulds discarded by a forger. These were in extremely good condition and were discovered in a layer of refuse dumped inside the internal wall turret. This event must have taken place after the turret, and therefore the city wall, was constructed. The moulds contained impressions of denarii of Septimus Severus, Geta, and Caracalla dated to AD 201–10, AD 210–212, and AD 215 respectively. If one assumes that a forger would only copy coins in general circulation then it is unlikely the moulds were manufactured much later than AD 215. If one also assumes that the mint state of the moulds indicates that they were still fairly new when discarded then the layer, in which they were deposited and which itself was laid

down after the wall had been in existence for some little time, can hardly be later than AD 225 in date. The construction of the wall itself therefore is not likely to have been after *c.* AD 210¹².

NOTES

1. R. Merrifield *Roman City of London* (London 1965) 300.
2. Merrifield *ibid* 104.
3. J. Maloney (Personal communication).
4. J. Maloney 'Excavations at Dukes Place: The Roman Defences' *London Archaeologist* 3 No. 11 (Summer 1979) 204.
5. Maloney *ibid* 295
6. P. Marsden 'Archaeological finds in the City of London 1966-9' *Trans. London and Middlesex Archaeol. Soc.* 22 Pt. 3 (1970) 2-6.
7. W. G. Bell, F. Cottrill, C. Spon *London Wall through Eighteen Centuries* (London 1937).
8. 'Roman Britain in 1957' *J. Rom. Stud.* 48 (1958) 142
9. 'Roman Britain in 1962' *J. Rom. Stud.* 53 (1963) 139
10. Marsden *op. cit.* in note 6.
11. 'Roman Britain in 1956' *J. Rom. Stud.* 47 (1957) 220
12. Marsden *op. cit.* in note 6; and R. Merrifield *Roman London* (London 1969) 119, and *A Handbook to Roman London* (Museum of London 1978) 19.

ROMAN FEATURES

Roman Topsoil.

Feature:	159
Layers:	6,30, 34, 80, 116, 118, 120, 122, 128, 133, 134, 140

Subsoil.

Feature:	44
Layers:	12, 31, 33, 37, 38, 39, 131, 132, 145.

Mortar Spreads.

Feature:	77	Feature:	150
Layers:	78, 79	Layers:	151
Feature:	114	Feature:	158
Layers:	115	Layers:	5, 29, 90, 111, 112, 117, 198.
Feature:	126	Feature:	193
Layers:	127	Layers:	197, 209

Ramparts.

Feature:	65/69
Layers:	1, 2, 3, 4, 7, 8, 9, 10, 11, 25, 32, 57, 70, 74, 75, 76, 96, 98, 107, 108, 109, 113, 147, 148, 149, 161, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 204, 205, 207.

Metalled Surface.

Feature:	55	Feature:	97
Layer:	56	Layer:	110
Feature:	92	Feature:	135
Layer:	93	Layer:	136

Gullies.

Feature:	121	Feature:	152
Layer:	119	Layer:	153
Feature:	129	Feature:	154
Layer:	130	Layer:	155
Feature:	137		
Layers:	138, 139		

City Wall.

Feature: 156
Layers: 160, 188, 189

City Wall Foundations

Feature: 200
Layers: 201, 202, 203, 206.

Turret.

South Wall: Feature: 191
Layer: 194

West Wall: Feature: 192
Layer: 194

Foundations: Feature: 210
Layers: 195, 196.

Pits.

Feature: 84 Feature: 143

Layers: 82, 89, 91 Layer: 144

Feature: 102

Layers: 83, 100, 103, 104.

THE FINDS

SAMIAN

By Geoff Marsh

(Fig. 9)
Top soil

- Layers 6. 1. Dr. 37 SG Part of festoon design with wreath decoration below c. AD 85–110
2. Dr. 18/31 3 sherds CG Early-mid-2nd century
3. Dr. 27 Martres Early 2nd century
4. At least 2 x Dr. 27 SG 1st century
5. Several SG sherds 1st century
6. Several CG sherds 2nd century. Including rim fragment possibly from enclosed form
30. 7. SG sherd 1st century
8. Dn18 or 18/31 SG/CG Flavian/Hadrianic
116. 9. Dr.33 CG 2nd century
10. Dr.18/31 CG Hadrianic/Early Antonine
11. Dr.37 CG Antonine
12. Very micaceous sherd—possibly 1st century Lezoux ware
118. 13. Dr.29 Martres? Early 2nd century
14. Dr.18/31 Martres? Early 2nd century
122. 15. Dr.29 SG Early Flavian (2 sherds)

Mortar spread

- Layers 111. 16. Dr.30 SC (Montans ware). Badly moulded design with single bordered ovolo with straight tongue above a beaded border. Probably Trajanic–Hadrianic (Illustrated).

Metalled surface

- Layers 93. 17. SG sherd 1st century
136. 18. Dr.18/31 Martres Early 2nd century

Gullies

- Layers 130. 19. Dr.27 SG Flavian
20. Dr.35 SG Flavian
138. 21. CG sherd Early 2nd century

Rampart

- Layers 32. 22. Dr.18 SG Flavian
23. Dr.31? CG/EG Antonine
74. 24. Dr.31? Antonine
76. 25. SG sherd 1st century
96. 26. SG? sherd 1st century
98. 27. Dr.27 SG 1st century
28. SG 2 sherds 1st century
29. Dr.18 or 18/31. Highly overfired, perhaps SG, if so Flavian/Trajanic
- Layers 107. 30. Dr.36 Martres Early 2nd century
31. Dr.18/31 Martres? Early 2nd century. Burnt black, nearly melted.
32. Dr.37x CG Antonine
37. Dr.37 Lezoux Figure of Victory (0.812) in a double medallion c. AD 140–180 (Illustrated)
34. SG 2 sherds 1st century
35. CG 2 sherds 2nd century
36. SG/CG 2 sherds
108. 37. Dr.27 SG 1st century
38. SG 2 sherds

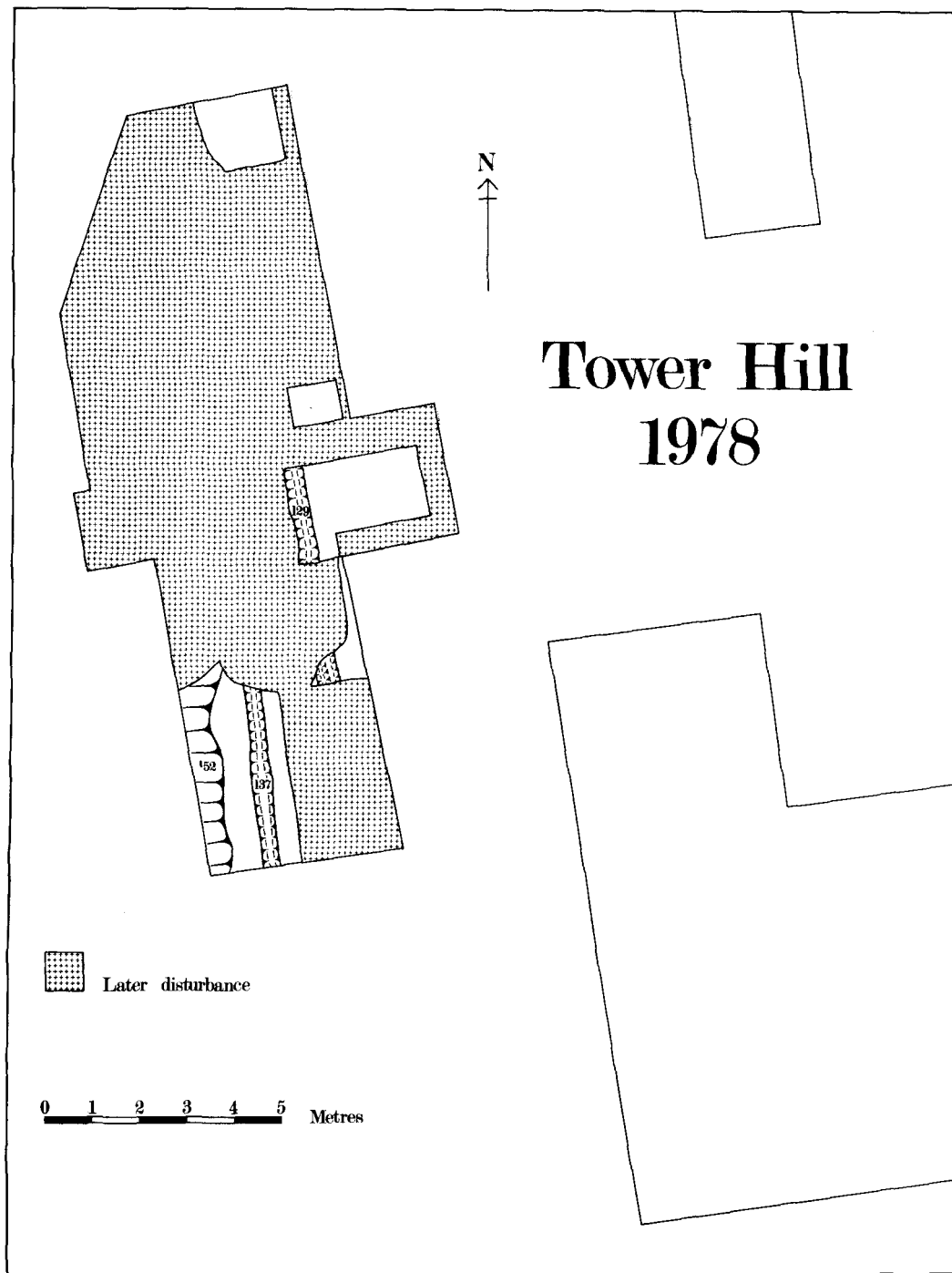


Fig. 5. Tower Hill 1978: Plan of Roman gullies under rampart.

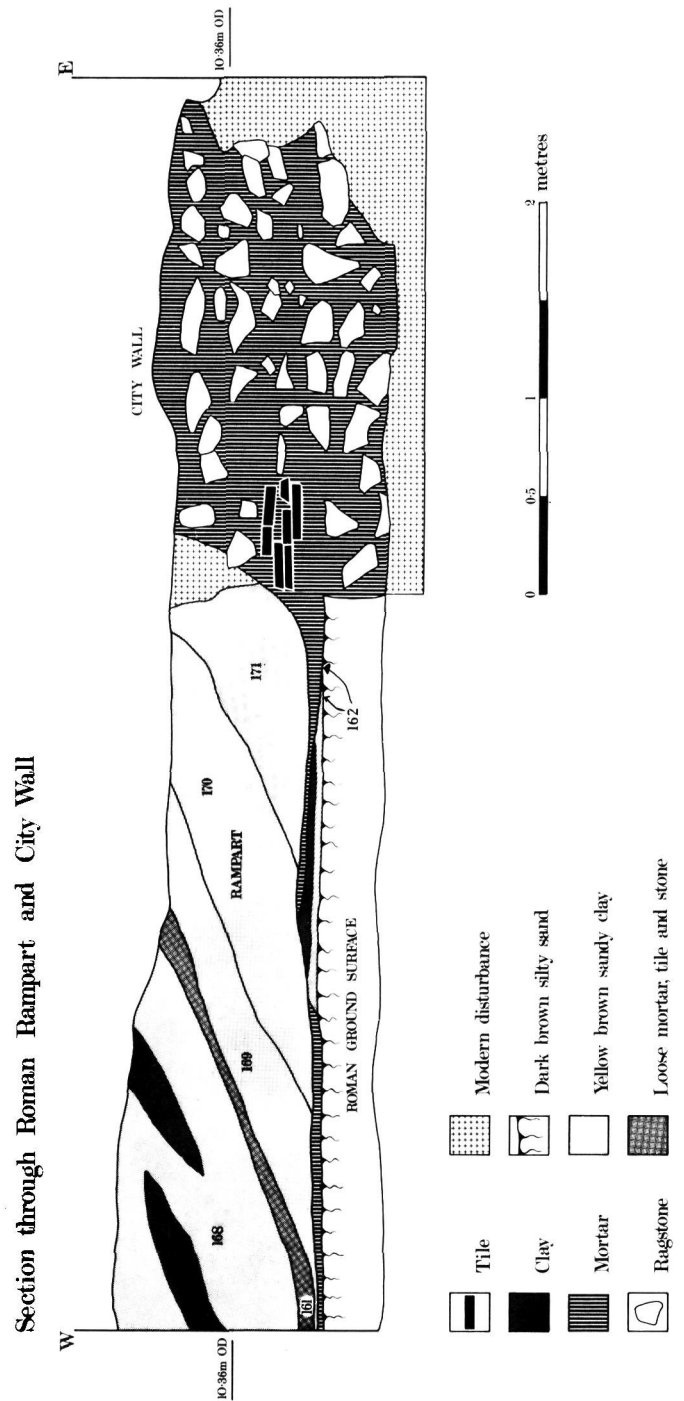


Fig. 6. Tower Hill 1978: Section through Roman rampart and city wall.

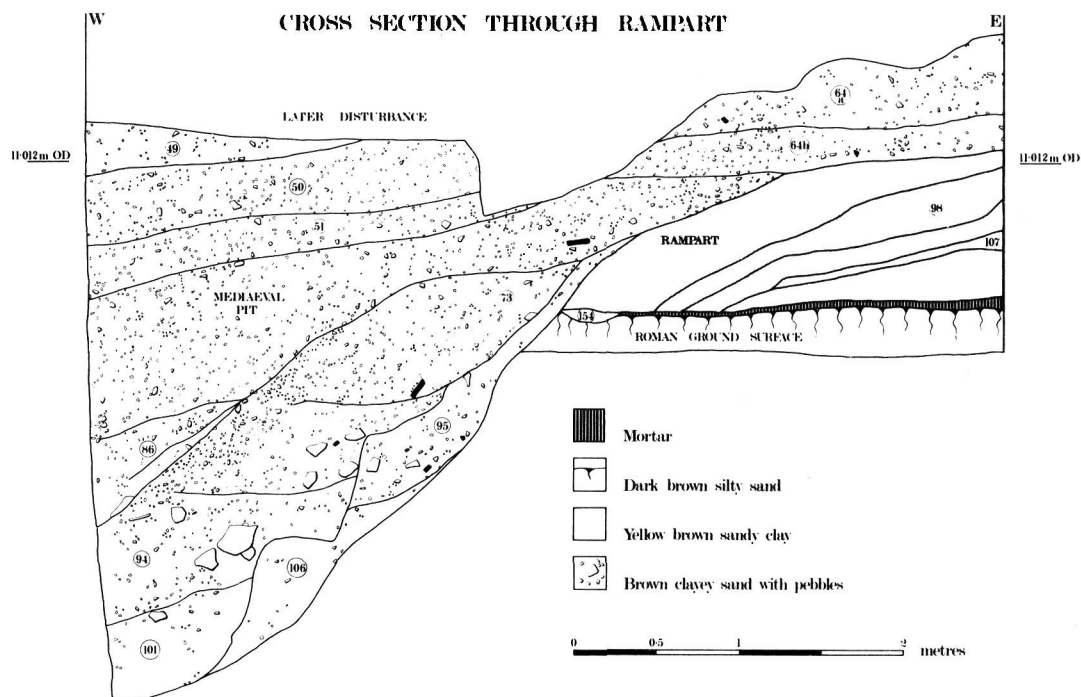


Fig. 7. Tower Hill 1978: Section through Roman rampart and medieval pit.

- | | |
|--|--|
| 147. 39. SG? sherd 1st century | 49. Enclosed form CG/EG Antonine |
| 149. 40. Dr.27 SG Flavian/Trajanic | 50. Dr.30 (rouletted) CG/EG Antonine |
| 164. 41. Dr.27 SG 1st century | 51. Dr.37 EG Fragment of double bordered ovolo. Late 2nd century (Illustrated) |
| 167. 42. Footring. Martres Early 2nd century | 52. CG 3 sherds 2nd century. |
| 170. 43. Dr.36 SG Flavian | 171. 53. Enclosed form SG Flavian |
| 44. Enclosed form SG Flavian | 54. Dr.18/31 probably Martres Early 2nd century |
| 45. At least 2 sherds Dr.18 SG Flavian | 55. CG sherd 2nd century |
| 46. Dr.27 SG 1st century | 207. 56. Dr.38? CG Antonine |
| 47. Dr.31 CG Antonine | |
| 48. Enclosed form CG Antonine | |

The presence of a couple of East Gaulish sherds from the rampart taken with the other samian finds indicates a date of up to *c.* AD180 for their deposition. The absence of very late 2nd-century forms such as Walters 79 and 80 and Dr. 45 suggests that the assemblage is unlikely to have been deposited after this date.

THE OTHER ROMAN POTTERY

By Wendy McIsaac

Introduction

One of the purposes of the excavation was to date the construction of the city wall and its rampart. The dateable material recovered from Roman contexts on the site consisted primarily

Section through the Foundations of North Wall of Turret and of City Wall

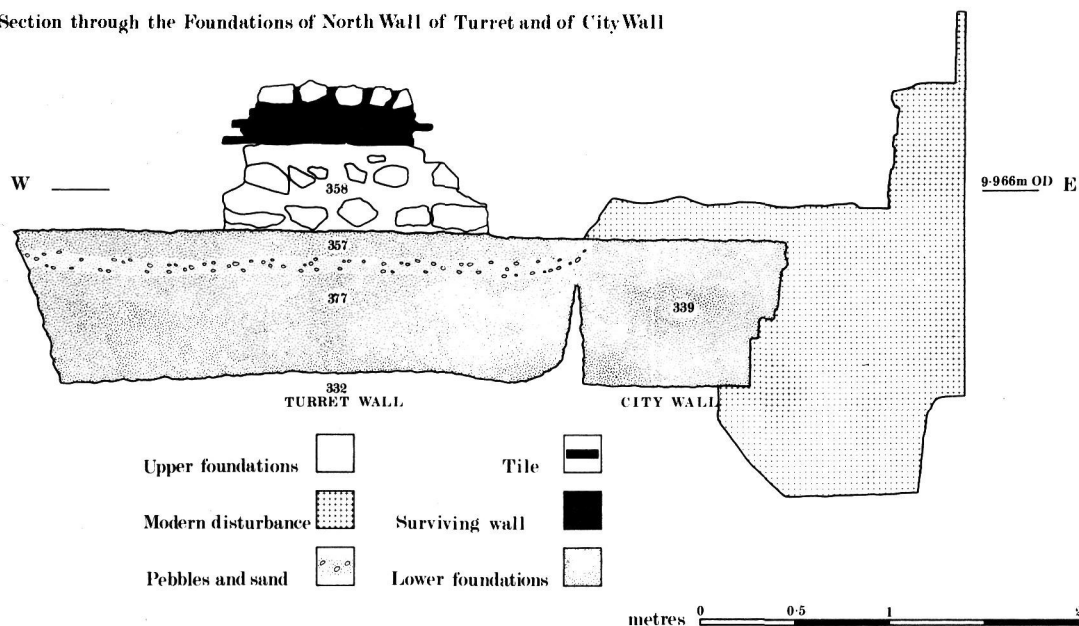


Fig. 8. Tower Hill 1978: Section through north wall of Roman turret and city wall.

of a small quantity of pottery. Rims from two groups of pottery have been illustrated. These were from (1) the topsoil predating the building of the wall, and (2) the rampart. No sherds large enough to be drawn were recovered from the mortar spread, metalling or gullies. The pottery from all contexts was fragmentary and in an abraded condition. Sherds which might be considered 'residual' have been included. The term 'BB2' has been used to refer to Black Burnished Ware, category 2. Descriptions were done using a 20x magnification and frequency of inclusions is indicated as rare, occasional, frequent and very frequent.

I am grateful to G. Marsh for his views on the pottery and to S. Castle for his comments on the Verulamium region products.

(Fig. 10)

Topsoil (Layers 6, 30, 80, 116, 118, 122, 133)

Jars and Beakers

1. Hard dark grey, burnished rim. Frequent clear and white quartz, 0.27–0.45mm. (6)
2. Hard black, burnished surfaces. Handmade. Vegetable and possibly some grog tempering. Occasional quartz grains up to 0.91mm. Rare black iron up to 0.91mm, smaller and less frequent red iron particles. (6)
3. Hard reddish brown with black surfaces. Rim and exterior slipped and burnished. Frequent clear and white quartz, 0.27–0.45mm and red iron 0.27–0.45mm. (6)
4. Hard dark grey or black with brown interior margin and surface. Slipped and burnished rim and exterior. Frequent clear, white and rose quartz, 0.27–0.45mm. Rare black iron 0.27–0.45mm. (133)
5. Hard dark grey with slightly lighter core. Burnished rim and exterior. Frequent clear and white quartz, 0.27–0.45mm. Some black iron 0.27. BB2. (6)
6. Hard grey with slightly darker surfaces. Rim and exterior slipped black. As for 5.
7. Hard dark grey or black. Rim and exterior bur-

nished. As for 4.

8. Fairly hard red with brown surfaces. White slip and burnishing on exterior and upper part of interior. Very frequent clear and white quartz < 0.09mm, very occasional quartz grains up to 0.55mm. Fairly frequent black iron 0.09mm, and some red iron c. 0.45mm. (6)
9. Hard brown with reddish brown core. As for 8, iron is rare. (30)
10. Fairly hard grey. Surfaces slipped lighter grey and burnished. Very frequent clear and white quartz, ≤0.09mm. (122) (cf Highgate (Brown and Sheldon 1974, No. 94) 140–60).
11. Hard dark grey with brown interior. Rim and exterior slipped light grey and burnished. Barbotine dot decoration. As for 10. (116)
12. Fairly hard brown with grey exterior margin and surface. Light grey slip burnished black on rim and exterior. Barbotine dot decoration. As for 10. (6). (cf Southwark (Marsh and Tyers 1978, form III E.1) Flavian–Antonine; Verulamium (Wilson 1972, Nos. 599, 839) 130–50 and 150–60 respectively.)
13. Hard dark grey with lighter core. Light grey slip and burnishing. As for 10. Also occasional quartz 0.27–0.45mm, rare black iron.

Flagon

14. Hard reddish. Frequent clear and white quartz, 0.18–0.45mm. Occasional-frequent red iron 0.18mm. Verulamium region. (6) (*cf.* Southwark (Marsh and Tyers 1978, form 1 H.1) although in Southwark this form is in a buff fabric; Brockley Hill 80+, Southwark 120–60.)

Mortarium

15. Hard buff-pink, slightly burnt. Frequent clear and white quartz 0.18–0.45mm. Some red iron. Red-brown trituration grits. Stamped *Valentinus* (118) Concerning the stamp K. Hartley writes: The potter's stamp is from the single die of Valentinus. His stamps are now known from Caerleon; Canterbury (2); Corbridge; Dover (2); Highstead near Canterbury; London (5); Slayshill, Upchurch; Verulamium, and Wroxeter. Part of Valentinus' activity was undoubtedly in Kent but he probably spent part of his working life in the Verulamium region (i.e. near Watling Street between Verulamium and Brockley Hill). This London example is likely to have been made in the latter area. His rim profiles indicate activity within the period AD 110–160.

Bowls and Dishes

16. Hard reddish brown with grey core. Slipped and burnished, lattice decoration. Slightly burnt. As for 5. Rare red as well as black iron. BB2. (6) (*cf.* Southwark (Marsh and Tyers 1978, form IV.H.4) 140+, more common in late Antonine.)
17. Hard black with narrow brown margins. Surfaces slipped and burnished. As for 4. BB2. (80) (*cf.* Southwark (Marsh and Tyers 1978, form IV.H.2) 130/140+.)
18. Hard brownish red with grey core. Mica dusted. Frequent clear, white and rose quartz, 0.18–0.36mm. Occasional black iron, 0.27mm and lesser amounts of red 0.27mm. London. (6) (*cf.* Marsh 1978, Nos. 24, 26 & 24.33 (1st half of 2nd century).)
19. Hard brownish red with a buff core. Mica dusted. Very frequent quartz < 0.05mm. Occasional red and black iron up to 0.09mm, and frequent mica, 0.27mm. London. (6) (*cf.* Marsh 1978, Nos. 24.23 (1st half of 2nd century).)

Lid

20. Hard grey with red surfaces. As for 5. Occasional black iron and fairly frequent mica. (6)

Rampart (Layers 11, 74, 76, 121, 149, 164, 166, 169, 170)

Jars and Beakers

21. Hard dark grey with red core. Slipped. Occasional clear and white quartz 0.36–0.55mm. Rare red iron. (170)

22. Hard red with grey to buff surfaces. Very frequent clear and white quartz ≤ 0.09 mm, occasional quartz 0.27–0.45mm. Some red and black iron 0.09mm. (76)
23. Hard buff with grey core. Occasional-frequent mainly white quartz 0.18–0.45mm and red iron up to 0.45mm. Verulamium region. (164)
24. Hard orange with buff-brown surfaces. Very frequent clear quartz, ≤ 0.09 mm with occasional grains up to 0.18mm. Red iron. (170) (form as for Southwark (Marsh and Tyers 1978, form IIJ) but Tower Hill example not in Verulamium fabric, 2nd century)
25. Hard red with grey core and buff surfaces. Mica dusted. Very frequent quartz, ≤ 0.05 mm. Frequent mica and black iron < 0.09mm. London. (170) (*cf.* Marsh 1978, No. 22)

Bowls and Dishes

26. Hard brownish grey. Surface slipped dark grey to black and burnished. Lattice decoration. As for 5. (149) (*cf.* Southwark (Marsh and Tyers 1978, form IV.H.2) 130/140+, most examples to mid Antonine.)
27. Hard black, slipped and well burnished surfaces. Lattice decoration. As for 5. BB2. (*cf.* Southwark (Marsh and Tyers 1978, form IV.H.4) 140+, more common late Antonine.)
28. Fairly hard black, burnished rim and narrow band just below rim on exterior. As for 3. BB2. (169) (*cf.* Southwark (Marsh and Tyers 1978, form IV.H5) later 2nd century.)
29. Hard grey to buff; exterior discoloured black. Frequent clear and white quartz, 0.18–0.36mm. rare red iron. Verulamium region. (170) (*cf.* Southwark (Hammerson and Murray 1978, No. 1568) Hadrianic; Verulamium (Wilson 1972, Nos. 683 & 685) 130–150.)
30. Hard grey with off-white surfaces and red margins. As for 29, but more red iron. Verulamium region. (149) (*cf.* Verulamium (Wilson 1972, No. 924) 105–60)
31. Fairly hard grey with darker surfaces. Interior and upper part of exterior slipped. Both surfaces burnished. As for 10.
32. Hard reddish buff with grey core. Mica dusted. As for 25, with occasional clear quartz up to 0.36mm. Probably London. (170) (*cf.* Marsh, 1978, No. 24 (1st half of 2nd century).)

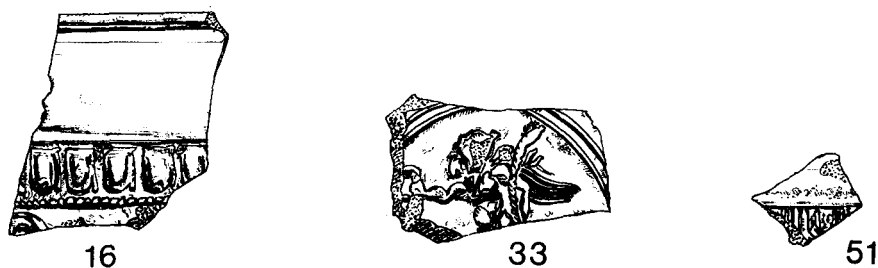
Lids

33. Hard grey with darker surfaces. Very frequent quartz ≤ 0.05 mm, occasional clear quartz up to 0.27mm. (121)
34. Hard reddish brown with grey core. As for 33, with frequent iron. (74)

Discussion

The sherds illustrated range from the late 1st/early 2nd century to the late Antonine period. Taken as a whole however, the material from both the rampart and the Roman topsoil appears to date to the second half of the 2nd century—probably *c.* 160–180. This date is based primarily on the BB2 forms.

The flagons from the soil layer and the rampart included a sizeable proportion from the Verulamium region in smooth red fabric with a cream slip. This was used spordically as Brockley Hill (AD 125/130) But its main circulation began in the early Antonine period (AD

Fig. 9. Tower Hill 1978: Decorated samian ($\frac{1}{2}$).

140/150) (Marsh and Tyers 1978, 550). No rims were found so this type is not represented in the illustrations.

Most of the fine ware was extremely fragmentary. A sherd from a mica dusted beaker in a buff Verulamium region fabric came from the topsoil (6). Several pieces of London Ware (topsoil: 6, rampart: 169) and roughcast beaker (topsoil: 6, 80, 116; rampart: 98, 170, 204) were also found. A fragment from a barbotine decorated beaker was recovered from the topsoil (130) (these, it is suggested, began to appear on British sites in the AD 150s (Greene 1978, 18).)

The small quantity and fragmentary nature of the pottery recovered from the excavation makes it difficult to provide a secure date. There do not appear to be any forms present which suggest these assemblages are 3rd century and a date in the latter half of the 2nd century fits well with other available evidence. The samian from the site also indicates a date in the second half of the 2nd century with a number of sherds belonging to the Antonine period and one to the late 2nd century. Excavation on the city wall at Dukes Place revealed the wall foundations cut through a deposit containing pottery with a proposed date of *c.* 180 (Maloney 1979, 294) and sherds from the bank were of similar date (Maloney 1979, 295).

THE GLASS

By John D. Shepherd

Twenty-eight fragments of glass were recovered from this site of which fourteen can not, with any certainty, be assigned to a particular form or date. However, all the fragments are included in the following catalogue which has been arranged according to vessel colour and not to form or date.

(Fig. 11)

Monochrome glass

1. Fragment from the rim of a pillar-moulded bowl (Isings 1957 18, form 3a). Cast; rim ground and polished. Deep blue glass. Mid 1st century. (Pit/Gully 121)
2. Small fragment of blown amber coloured glass from a vessel of indeterminate form, probably 2nd century. (Rampart 171)

Colourless glass

3. Fragment from the rim and side of a shallow bowl. Cast; ground and polished. Broad outplayed rim with overhang at edge. Colourless glass. 2nd century. (*cf.* Fishbourne (Harden and Price 1971, 332, No. 26) from period 2 occupation, 75–100. Tongeren, Belgium (Vanderhoeven 1962, 70, No. 194) 2nd century.) Illustrated. (Subsoil 145)
4. Fragment from the rim of a small shallow bowl. Cast; ground and polished. Flat rim with two

horizontal wheel-cut grooves immediately below. Colourless glass. (*cf.* Shakenoak (Harden 1973, 102, Nos. 210 & 211) dated to the late 3rd and 4th centuries). Illustrated. (Rampart 171)

5. Fragment from the centre of the base of a bowl of 'Airlie' type (Isings *op. cit.* 102f, form 85b). Brown; thick applied marvered ring on underside. None of base-ring surviving. Colourless glass. Late 2nd or 3rd century. Illustrated. (Rampart 98)
- 6–11 Six fragments of blown colourless glass of indeterminate forms and date. (Topsoil 6 (×3), 134; Rampart 170, 171)

Naturally coloured glass (Bluish-green etc.).

12. Small fragment from the rim of a small bottle, flask or unguentarium. Blown; tubular rim folded inwards, outplayed and flattened with an irregular lip. Greenish-blue glass. Illustrated. (Rampart 166)
13. Fragment from the neck of a bottle or flask. Blown; greenish-blue glass with many air bubbles. Late 1st or 2nd century. (Rampart 166)

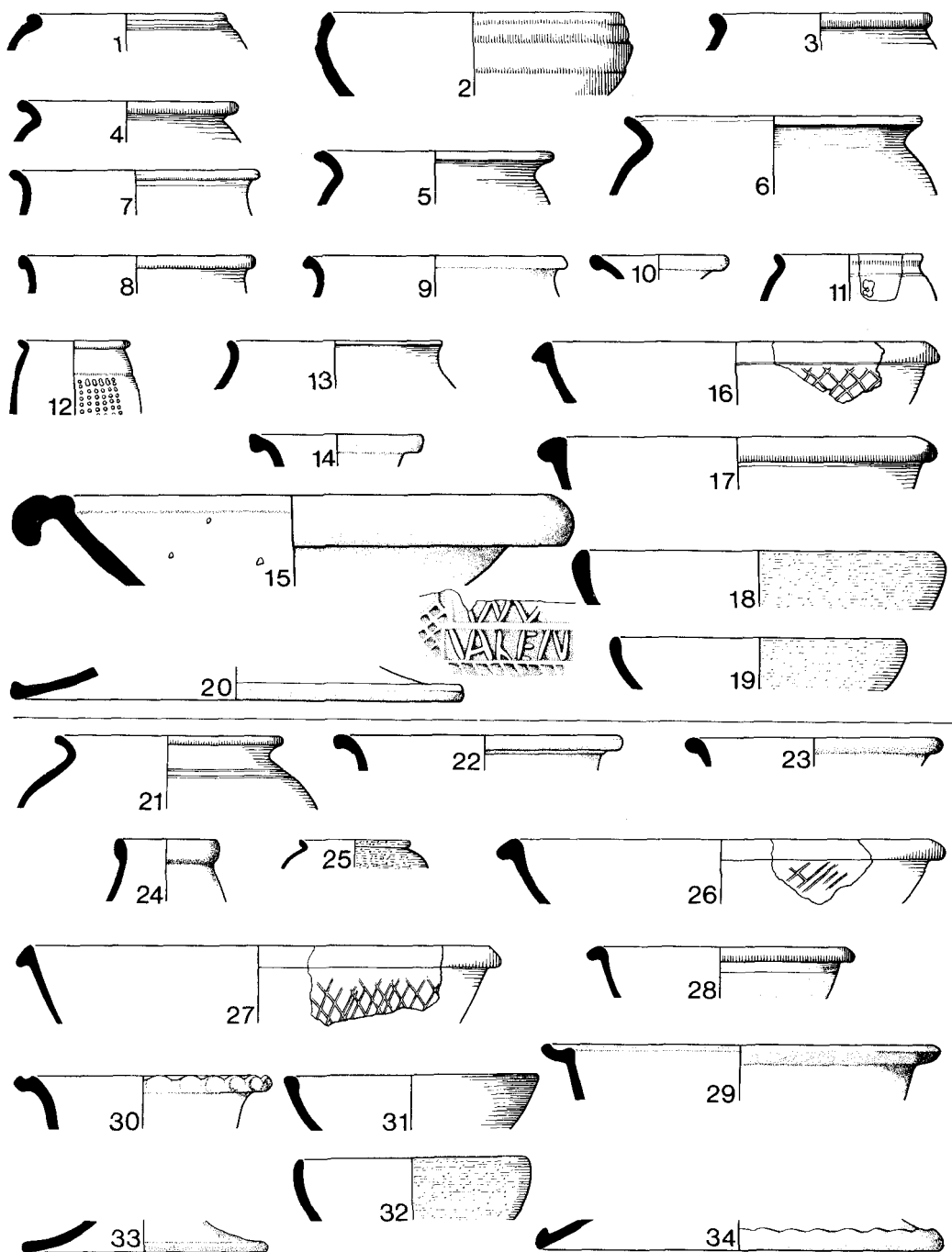


Fig. 10. Tower Hill 1978: Roman pottery Nos. 1–20 Topsoil; Nos. 21–34 Rampart. All ($\frac{1}{4}$) except mortarium stamp ($\frac{1}{2}$).

14. Small fragment from the handle of a bottle or flask. Applied and drawn; plain handle. Thick bluish-green glass. Late 1st or 2nd century. (Topsoil 6)
15. Fragment from the handle of a small flask. Applied and drawn; narrow plain handle. Greenish-blue glass. Date as for No. 14. (Rampart 207)
16. Fragment from the side of a prismatic bottle (Isings *op. cit.*, 63f, form 50). Mould-blown. Greenish-blue glass. Late 1st or 2nd century. (Topsoil 118)
17. As No. 16. Greenish-blue glass. (Rampart 32)
18. Fragment from the side of a cylindrical bottle. (Isings *op. cit.*, 67f, form 51). Blown; bluish-green glass. Date as for No. 16. (Topsoil 122)
- 19-20 Two fragments from the rim and neck of a wide-mouthed jar. Blown; tubular rim folded inwards, outplayed and pushed downwards. Greenish-blue glass. 2nd century. (*cf* Verulamium (Charlesworth 1972, 205, x No. 5).) Illustrated. (Topsoil 6)
- 21-27 Seven fragments of blown greenish-blue glass of indeterminate forms and dates (most probably of the late 1st or 2nd century). (Topsoil 6, 116; Metalled surface 93; Rampart 74, 168 (×2), 171)
28. Small fragment of greenish colourless glass of indeterminate form and date. (City Wall Foundations 202).

Although this group of glass is perhaps too small to make any positive conclusions, it is possible to make a few observations. It is noticeable that distinctive 1st-century vessel types are absent from this group, except for the small rim fragment from a pillar-moulded bowl (No. 1) which in its present association is almost certainly residual, and only one fragment (No. 4) appears to be of late Roman date. This is probably intrusive. The remaining identifiable fragments are all of well attested greenish-blue vessel forms of late 1st- or, more probably, 2nd-century date and the presence of the 'Airlie' type beaker fragment (No. 5), a vessel type more associated with late 2nd- and 3rd-century assemblages, suggests a mid to late 2nd-century date in general for this group.

SMALL FINDS

(Fig. 11)

Bronze

1. Tweezers. Heavily corroded. (Subsoil 33)
2. Finger ring. Broken and heavily corroded. (Rampart 96)

THE ANIMAL BONES

By Alison Locker

A total of 334 bones were recovered from Roman contexts on the site. The following species were identified; horse (*Equus* sp.), ox (*Bos* sp.) sheep (*Ovis* sp.), pig (*Sus* sp.), red deer (*Cervus elaphus*), dog (*Canis* sp.), hare (*Lepus* sp.), domestic fowl (*Gallus* sp.), and frog (*Rana* sp.).

The table below indicates the proportion of species in the pre-rampart and rampart contexts.

HORSE	OX	SHEEP	PIG	RED DEER	DOG	HARE	UNIDENT	DOM. FOWL	FROG	
1	41	19	17	1	2	1	85	4	15	Pre-rampart
1	13	16	15	—	2	1	92	7	1	Rampart

Measurements were taken whenever possible according to von den Driesch (1976) and Jones (1976). None of the bones were complete enough for any estimation of stature to be made. The categories ox and sheep include ox and sheep sized fragments respectively. Loose teeth and rib fragments were also included in the count.

Chop marks were observed on ox, sheep and pig as evidence of butchery. Knifecuts around the proximal area of an immature sheep metatarsal may be evidence of skinning.

The 15 frog bones in the pre-rampart phase probably belonged to a single individual.

The small size of the sample dictates that this report should only outline the species present. No valid interpretations on the presence or absence of particular species or bones could be made.

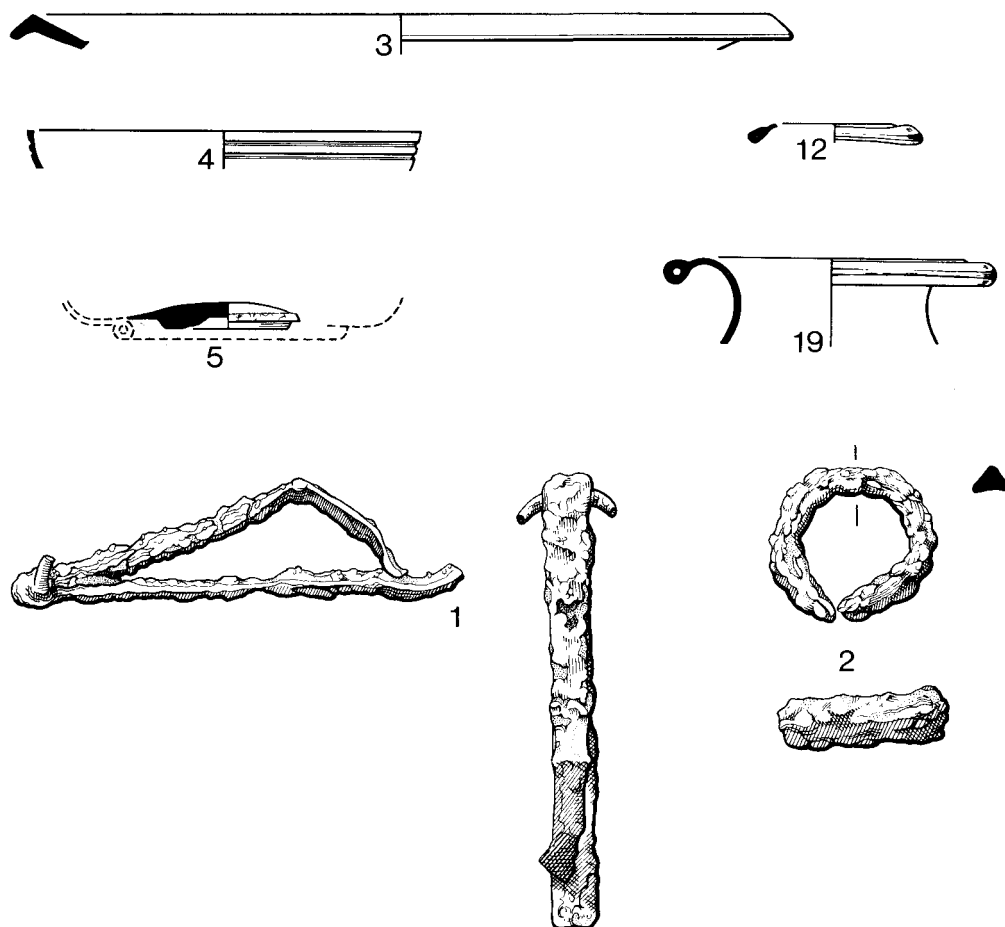


Fig. 11. Tower Hill 1978: Roman glass Nos. 3, 4, 15, 17, 19 (1/2); Roman small finds, bronze Nos. 1 and 2 (1/1).

THE SHELLFISH

A total of 259 fragments of shellfish were recovered. The species identified include: oyster (*Ostrea edulis*), whelk (*Buccinum undatum*), mussel (*Mytilis* sp.), cockle (*Cardium edule*), carpet shell (*Venerupis decussata*) and *Cepaea*.

OYSTER	WHELK	MUSSEL	COCKLE	CARPET SHELL	CEPAEA	
139	1	3	2	1	6	Pre-rampart
102	1	—	—	—	4	Rampart

All these save *Cepaea* are edible marine shellfish, and could have been collected from the shoreline to (in the case of oyster) possibly a depth of 45 fathoms on suitable coasts.

Cepaea may have been eaten or alternatively may have been part of the local land fauna which became incorporated in the deposit.

Several fragments of crustacean shell were present. These probably originally were in one piece; it was not possible to make a more specific identification, but they may be the remains of a crab or lobster.

Bone measurements are available on request.

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THE DISCOVERY OF BASTION 4A IN THE CITY OF LONDON AND ITS IMPLICATIONS

JOHN MALONEY

From September 1979 until March 1980 the Department of Urban Archaeology carried out excavations at 8-10 Crosswall, E.C.3 (TQ3366 8056), a site situated immediately outside the city wall between Aldgate and the Tower. Part of the western boundary of the site was known to have followed the course of the Roman city wall: in 1906, during building operations on an adjacent site, a 12m (40ft) length of its internal face was discovered and in part was subsequently preserved in the new building ('Roman Wall House', 1 Crutched Friars).¹ At Crosswall, the external face of this stretch was found incorporated within the basement wall of a 19-century warehouse, concealed by a whitewashed mortar surface. A 9m (30ft) length of the Roman wall standing 3m (10ft) high above the plinth had been re-used. The associated V-shaped ditch discovered during excavation was 2m (6ft 6in) deep and some 4.8m (15ft 9in) wide, leaving a berm of about 2.7m (8ft 9in).

At the north end of this stretch of the Roman wall the foundation of a previously unrecorded bastion—designated 4A²—was discovered (Pl.1). It was rectangular in shape, 6.7m (22ft) wide and projected 5.4m (17ft 9in) from the wall. The whole depth of the foundation was recorded and it had apparently been carefully constructed (Fig.1). A trench had been dug from the contemporaneous ground surface, presumably at the level of the plinth, but the foundation was only constructed within the natural gravel which commenced some 0.4m (1ft 3in) below the plinth. In addition, since the foundation trench cut through the backfill of the V-shaped ditch, the foundation was stepped down in two stages into the bottom of the ditch to ensure maximum stability. The foundation consisted of ragstone rubble, flints and lumps of chalk and *opus signinum*, set in a layer of gravel or crushed chalk which was capped with rammed chalk. Within the V-shaped ditch this layered method of construction was repeated six times giving a total depth of foundation of 1.45m (4ft 9in). A fragment of worked stone from the foundation bears part of a Roman inscription (Pl.2), and another two survived *in situ* on top of the foundation. Imprints of other large stones at this level suggest that immediately above the foundation the superstructure was solid rather than hollow. The face of the Roman wall alongside the foundation showed no signs that the bastion had been bonded into it. The layers sealing the remains of the bastion contained 13th century pottery and the outer edge of the foundation had apparently been cut away during the digging of a medieval ditch.³

Excavations at the south end of the site, in the only other area of single basement, revealed the location of Bastion 4, known to have been nearby from

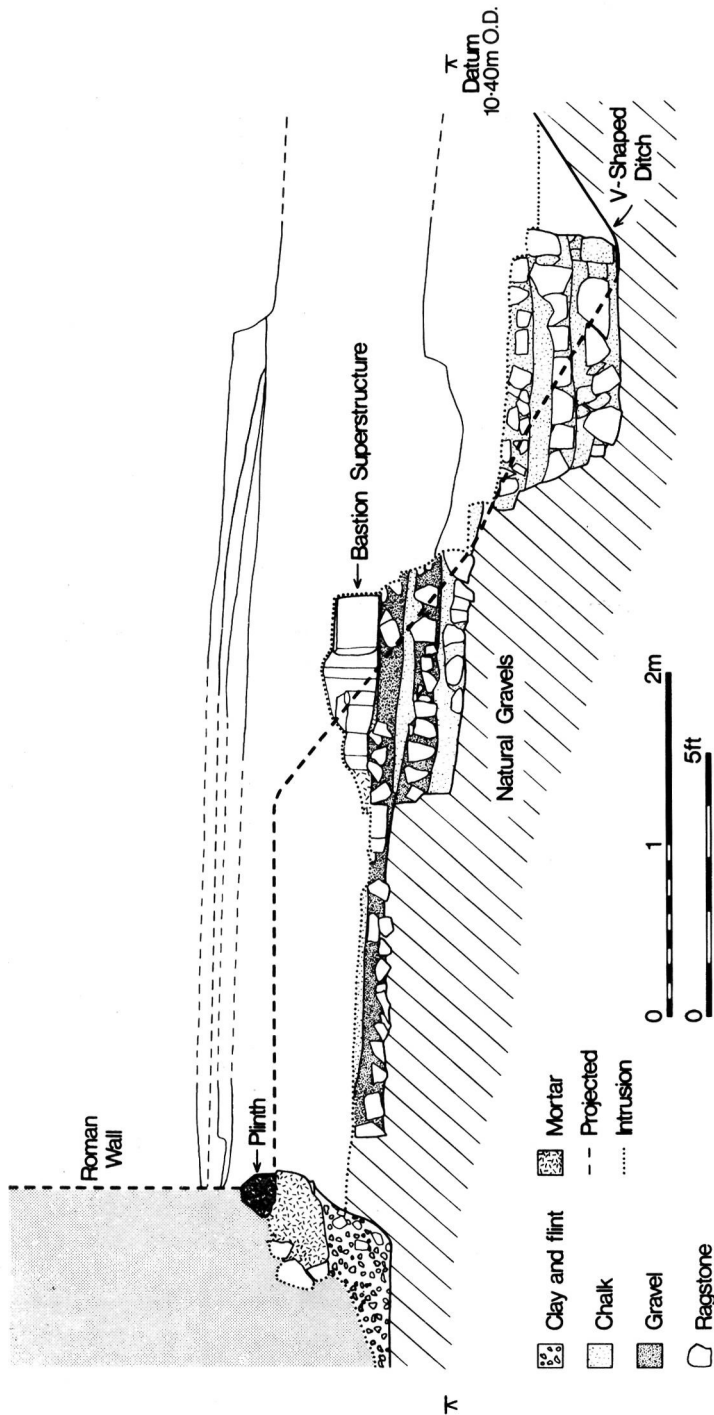


Fig. 1 Bastion 4A: Composite section showing the Roman wall and remains of bastion.

Ogilby and Morgan's survey of 1676.⁴ A small part of the foundation survived (Fig.2), which indicated its dimensions—at least 5.6m (18ft 4in) wide and projecting 4.6m (15ft) from the assumed line of the Roman city wall—and its relationship to the V-shaped ditch appeared to be very similar to that of Bastion 4A⁵.

DISCUSSION

The bastions in London are all evidently later additions to the Roman city wall, but can be regarded as two groups both geographically and in their method of construction. The eastern group are solid above their foundations (with the exception of B1 and B11) and contain Roman monumental stones re-used as building material. The western group are hollow (except B17) and, as far as is known, did not incorporate stones from Roman monuments. The dating evidence for both groups is limited: the eastern group are considered to be Roman⁶ and coin evidence has indicated that one of these (B6) was late Roman and may have been erected *c.* AD 341–375;⁷ it is certain that at least B11A of the western group is of medieval date.⁸ Between the two groups is a 230m (750ft) stretch of wall along which no bastions are known.

Bastion 4A is not closely dated but, in common with the rest of the eastern group, circumstantial evidence suggests that it is Roman. Its stepped foundation was evidently developed to compensate for the unstable backfill of the V-shaped ditch, implying that the builders were acquainted with that feature.⁹ The re-use of Roman monumental stones in the fabric of B4A and the indications that it was solid above its foundation are details particularly associated with the bastions of the eastern group. The possibility that the bastion was medieval is reduced by the evidence of its demolition not later than the 13th century, since the early 13th century is the likeliest date for the construction of the medieval bastions.¹⁰

In 1965, Ralph Merrifield suggested that in both groups there may have been additional bastions of which no trace or record survives, and that they may originally have been more evenly spaced, though perhaps not completely regularly.¹¹ The discovery of Bastion 11A in the same year and more recently the identification of a new addition to the eastern group—Bastion 10A—from cartographic and documentary evidence,¹² confirmed the first part of this suggestion. The identification of B10A led to further speculation about the regular spacing of the eastern series and suggested the possibility of an unknown bastion mid-way between B4 and B5.¹³ The discovery of B4A in precisely this position calls for a re-examination of the original proposal, which pointed out that the bastions between B9 and Aldgate are quite regularly spaced and that a 'rough module' of about 200ft, if applied to the intervals between the known eastern bastions, might indicate the sites of other, unrecorded, bastions (Fig.3). The excavations at Crosswall, for the first time, made it possible for a measurement to be taken directly between two bastions of the eastern group: the distance separating the foundations of B4 and B4A is 177ft, or from centre to centre 198ft.¹⁴ The measurements from B4 and B4A to the bastions on either side—B3 and B5—are 188ft and 179ft respectively,¹⁵ and the other eastern

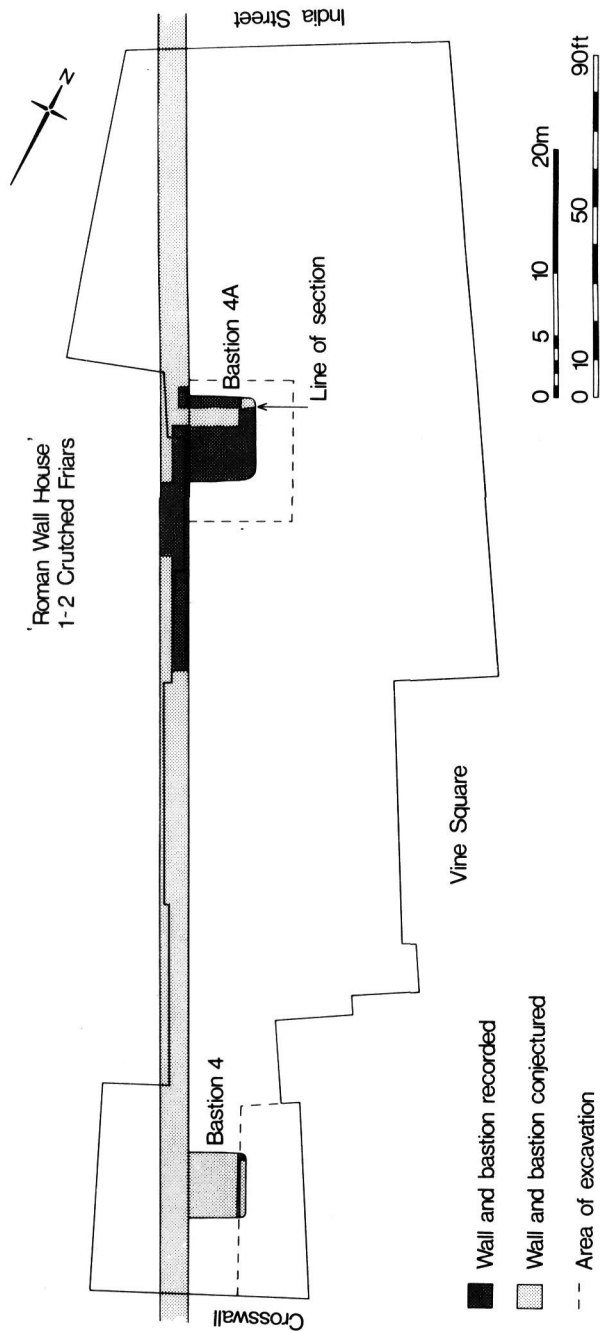


Fig. 2 Bastion 4A: Plan showing location of the Roman wall, Bastion 4 and Bastion 4A.

bastions are consistently separated by intervals or multiples of approximately 180ft (55m) when measuring the shortest distance between them and reckoning an average width of 20ft for a conjectured bastion. Thus from the south-east corner of the Roman city,¹⁶ the distance to B1 is 181ft. Between B1 and B2 there is a gap of 776ft which could have accommodated three bastions of usual width¹⁷ at intervals of 178ft. However, a gateway or postern may have existed along this stretch of wall,¹⁸ and two rather than three bastions might therefore be more likely. Bastions 2 and 3 are 383ft apart which might represent two intervals of 181ft separated by an unknown bastion. The spacings between B3 and B5 follow the pattern, however, it is at least 215ft from B5 to Aldgate which is markedly greater than the usual interval. The position of B6 has been established at about 180ft north of Aldgate and the same distance divides B6 from B7.¹⁹ According to the original record of its location, B8 is apparently separated from B7 and B9 by intervals of 179ft.²⁰ Since B9 is 371ft from B10, a bastion occurring mid-way between the two would give spacings of 175ft.²¹ From B10 to Bishopsgate there is an interval of about 215ft, an irregularity comparable with that between B5 and Aldgate. However, the suggested location of B10A—the next bastion west of the gate—would produce a more normal interval of about 177ft. Between Bishopsgate and B11 there is a gap of some 580ft which suggests that as well as B10A, there may have been another bastion also located at 177ft from its neighbours.

While the regularity with which the known eastern bastions are separated by intervals or multiples of 180ft is remarkable, the contrasting intervals of about 215ft from B5 to Aldgate and B10 to Bishopsgate also require comment. The wall was effectively divided into lengths relative to the fixed positions of the gates, and this factor must have influenced the planning of the bastions. Since bastions were not positioned equidistantly along each length of wall—ie. from the riverside to Aldgate, and Aldgate to Bishopsgate—their spacing was perhaps based on a unit of measurement determined by the range of the weapons employed.²² The interval governing the proposed regular spacing on average is equivalent to approximately 186 Roman feet, or from centre to centre 206 Roman feet, neither of which definitely equate with standard units of Roman measurement.²³ This is also true of the distances between regularly spaced bastions elsewhere in Britain, although generally the intervals are significantly shorter.²⁴ Nevertheless, if the planning of the eastern series in London was based on a unit of measurement, it follows that the siting of the bastions along each length of wall was calculated from east to west thus causing the distance from the westernmost bastion to the adjacent gate to be irregular in both instances. Assuming that the bastions were constructed to provide covering fire along the face of the wall, then 175–215ft would be within the effective range of firepower.

William Fitzstephen, writing before 1183 about the City of London, observed: 'there runs continuously a great wall and high, with seven double gates, and with towers along the North at intervals. On the South, London was once walled and towered in like fashion, but the Thames, that mighty river, teeming with fish, which runs on that side with the sea's ebb and flow, has in



Plate 1. Bastion 4A: The Roman wall and foundation of the bastion at Crosswall, EC3.

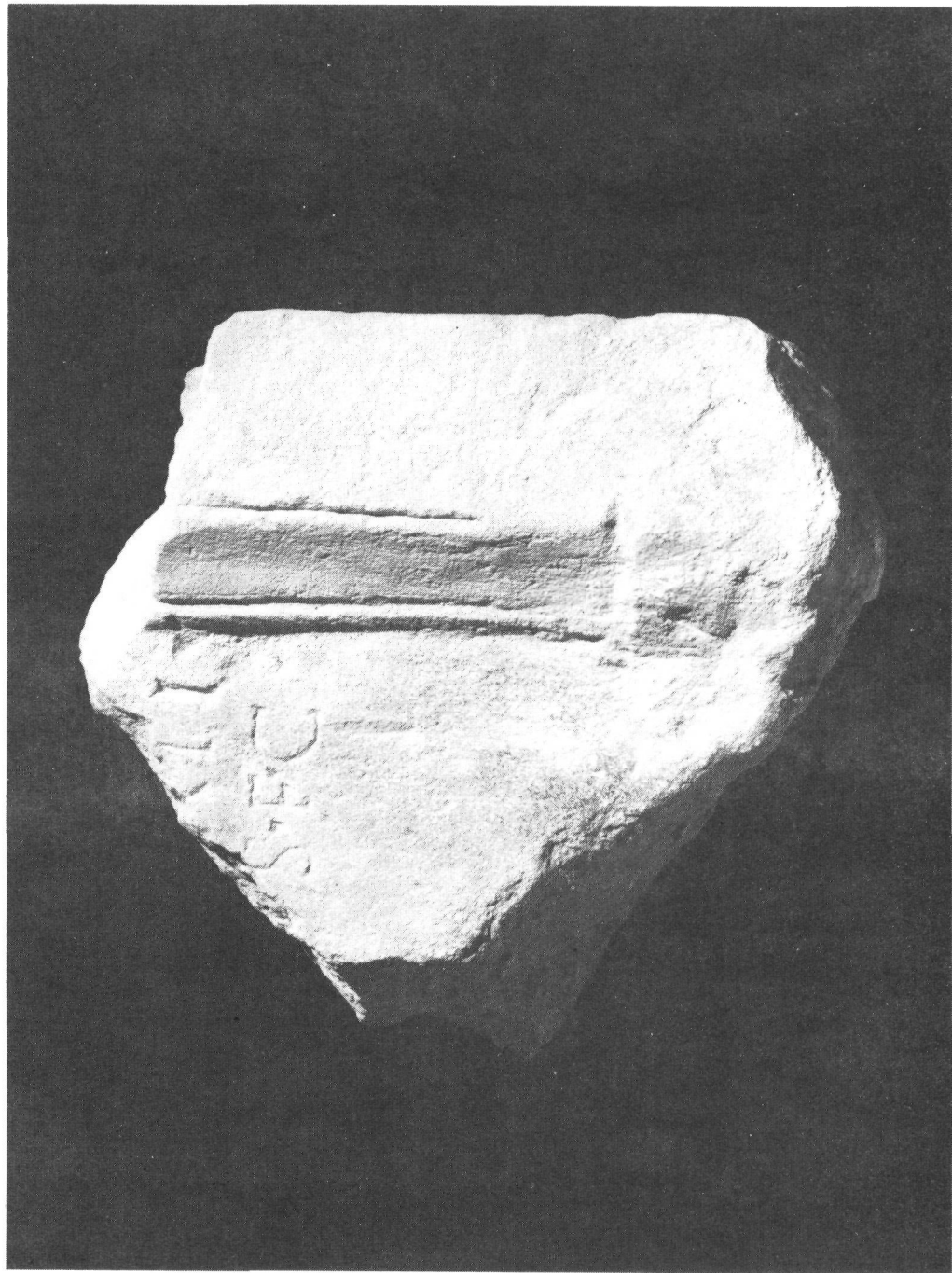


Plate 2. Bastion 4A: Fragment of inscribed Roman tombstone recovered from the foundation of bastion.

the course of time washed away those bulwarks, undermined and cast them down'.²⁵ His observation that there were 'towers at intervals' is of some importance, especially in consideration of the accuracy of his statement concerning the riverside wall,²⁶ but there is no indication in the text as to whether the intervals were regular or not. Although Fitzstephen claimed that there were bastions along 'the North'—before the building of the medieval bastions—none have yet been found along the long stretch between B11 and B11A (Fig.3), and it is quite possible that the marshy headwaters of the Walbrook outside the wall at this point rendered the provision of bastions unnecessary.²⁷ No evidence for specifically Roman bastions has been found on the west side of the City, and although some of the western group appear to be regularly spaced, the intervals are different from those here demonstrated on the east.²⁸ However, the Roman wall on the west for much of its length followed the top of a ridge which descended steeply down to the River Fleet, providing the western flank with the advantage of a natural barrier.²⁹ It may be therefore that the Romans had to be content with confining their activities to the east side of the landward wall, erecting bastions where the topography did not afford natural advantages, in an area which was particularly vulnerable to attack by Germanic invaders.³⁰

Fitzstephen is unequivocal in his assertion that the riverside wall had also been provided with bastions, 'in like manner' to the landward wall. At the Tower of London, the distance between the Wardrobe Tower (built on the base of B1) and the Lanthorn Tower (which stands over the south-east corner of the

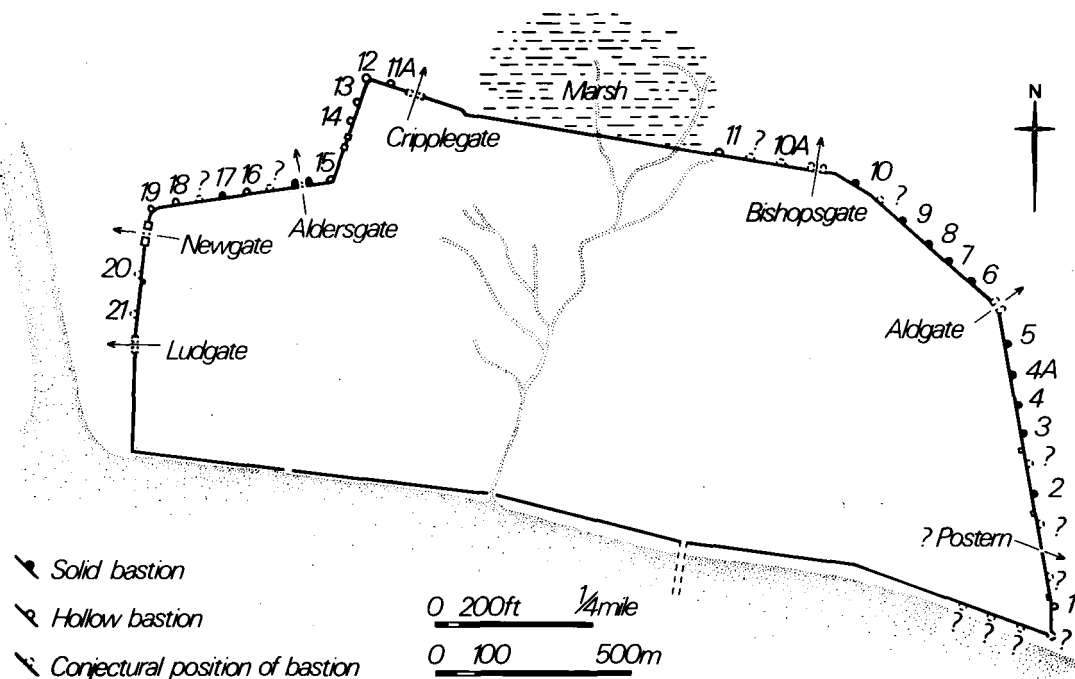


Fig. 3 Bastion 4A: Plan showing the known and predicted locations of bastions in London.

Roman city), is similar to the intervals separating the Lanthorn, Bell, Wakefield and Middle Towers³¹ which face the riverside: they are all between 170–185ft apart. On the basis of this observation, it was suggested more than 50 years ago that the early medieval Tower curtain wall had followed the course of a Roman riverside wall, and that the four towers on this alignment were constructed on the foundations of Roman bastions.³² Recent excavations at the Tower in confirming the former suggestion, allow the possibility that the medieval Lanthorn, Bell, Wakefield and Middle Towers were indeed located on the sites of Roman bastions set at regular intervals—similar to the spacing of the eastern group—along the riverside wall.³³

CONCLUSION

The discovery of a previously unrecorded bastion, B4A, at Crosswall supports the argument that the bastions on the east side of the city wall were regularly spaced, at intervals of approximately 180ft. An implication of this conclusion is that the eastern bastions are contemporary and belong to a single system of defence. The dating of the eastern group is not secure, but details of construction point to Roman origin and coin evidence has indicated that B6 may have been erected *c.* AD 341–375. The extent to which the western group of bastions may have been part of the same defensive system is uncertain, but historical and topographical evidence suggests there was a related series of bastions along the riverside wall. The case for a major reorganization of London's defences in the late Roman period is argued in detail elsewhere.³⁴

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NOTES

1. P. Norman and F. W. Reader 'Recent Discoveries in connexion with Roman London' *Archaeologia* 60 (1906) 191–6.
2. The bastions were numbered by R. E. M. Wheeler R. C. H. M. *Roman London* (London 1928) 99–106, and this scheme was followed by R. Merrifield *The Roman City of London* (London 1965) 320–5: since the sequence starts at the south-east corner of the city, newly discovered bastions have been assigned the number of the neighbouring bastion nearest the point of origin but differentiated by the addition of 'A'.
3. The fills contained pottery of 13th century date and it is presumably the ditch dug in 1213, H. R. Ward ed. *Annals Monastici* (1866) III 34. However, elsewhere this ditch did not appear to have survived in the vicinity of the city wall due to the digging of another ditch later in the medieval period, J. Maloney and C. Harding 'Dukes Place and Houndsditch: The Medieval Defences' *London Archaeol* 3 No 13 (1979) 353–4.
4. John Ogilby and William Morgan *A Large and Accurate Map of the City of London* (1676) Sheet 15.
5. A full description and discussion is contained in the Crosswall Archive Report (XWL79) available from the Department of Urban Archaeology, Museum of London.
6. Merrifield *op. cit.* in note 2, 68–72 and 111–3.
7. J. Maloney 'Excavations at Dukes Place: The Roman Defences' *London Archaeol.* 3 No 11 (1979) 297.
8. W. F. Grimes *The Excavation of Roman and Medieval London* (London 1968) 71–8.
9. Bastion 11 was considered to have been built while the V-shaped ditch was still open, P. Norman and F. W. Reader 'Further Discoveries relating to Roman London, 1906–12' *Archaeologia* 63 (1912) 271–4. But some doubt has been cast on this conclusion, R. Merrifield *Roman London* (London 1969) 126–7.
10. Grimes, *loc. cit.* See also H. L. Turner, *Town Defences* (London 1970) 58.
11. Merrifield *op. cit.* in note 2, 112.

12. J. Schofield with A. J. Clark 'Bastion 10A: A newly identified bastion in the City of London' *Trans. London Middlesex Archaeol. Soc.* 29 (1978) 91–8.
13. Schofield *ibid.* 97.
14. Schofield's proposed module of about 200ft applies to the distance between bastions from centre to centre (pers. comm.); but in this article the measurements refer to the distances actually separating known or postulated bastions—unless otherwise stated—since it is possible that these intervals may be as significant eg 'The distance between the towers are so to be made that one is not further from another than a bowshot. . . .' Vitruvius *De Architectura* (Loeb edition by F. Granger, London 1931) I Ch.5.49.
15. Using the map accompanying Merrifield (*op. cit.* in note 2) it is possible to measure to an accuracy of within 2ft.
16. G. Parnell 'An Earlier Roman Riverside Wall at the Tower of London' *London Archaeol.* 3 No 7 (1978) 171–6.
17. On average 20ft; see B3, B9, B10 and B11 in Merrifield *op. cit.* in note 2, 320–3.
18. Merrifield *ibid.* 101; and consider the eastward projection of the Roman road underneath the east end of Lombard Street, 118–9.
19. Bastion 6 is some 5ft further south-east than plotted on Merrifield's map (see note 15)—its position was checked in 1977, J. Maloney *op. cit.* in note 7, Fig. 1. For the position of the gate at Aldgate see P. Norman and F. W. Reader *op. cit.* in note 9, 266, and P. Marsden 'Archaeological Finds in the City of London, 1966–8' *Trans. London Middlesex Archaeol. Soc.* 22 (1969) Pt. 2 20–26.
20. Merrifield (*ibid.*) appears to place B8 some 20ft too far south-east, as is demonstrated by comparison with the original drawing showing its location (H. Hodge in 1881) and the O.S. map of 1875. I am indebted to Hugh Chapman for bringing the Hodge drawing to my attention.
21. If a bastion did exist between B9 and B10, according to the proposed intervals it would have been on the site of 71 St. Mary Axe, E.C.3—approximately 13m north of the Camomile Street frontage and 7m west of the St. Mary Axe frontage. The building here has only a single basement and this area offers the best possibility of discovering the remains of another unknown bastion, as far as can be determined.
22. It has been assumed that Roman bastions served as platforms for artillery and perhaps the solid construction of the eastern series is indicative of this function, Merrifield *op. cit.* in note 2, 68. However, bastions could also be used to bring more men forward, with archers or slingers providing covering fire along the face of the wall, D. Baatz 'Town Walls and Defensive Weapons' in B. Hobley and J. Maloney eds. *Town Defences of the Roman Empire* (forthcoming).
23. The basic unit of Roman measurement was the foot (*pes monetalis*), normally equivalent to 11.6in/29.57cm (which was used for converting the imperial measurements in the text), O. A. W. Dilke *The Roman Land Surveyors* (Newton Abbot 1971) 82. However, it has recently been pointed out that extant measures of the *pes monetalis* vary at least within the range 29.1–29.7cm, R. P. Duncan-Jones 'Length-units in Roman Town Planning: The *Pes Monetalis* and the *Pes Drusianus*' *Britannia* 11 (1980) 127–133, especially note 3. In towns, the foot was commonly used for measuring buildings and distances but land surveyors used the *actus*, a unit of 120 Roman feet. Military surveyors reckoned to a large extent in paces (*passus*, 5 Roman feet) unless acting as land surveyors. It is not known who built the eastern bastions but if supervised by military surveyors the proposed regular spacing is likely to have been based on a unit of 100 feet. In this case the usual interval between bastions (approximately 186 feet) can be discounted but the average distance, from centre to centre, 207 feet, has to be considered. But even if the known distance from B4 to B4A (204 feet) is converted according to equation $29.7\text{cm} = 1 \text{ Roman foot}$, the result— $203\frac{3}{4}$ feet—has a rather high margin of error of 1.6% given a target of 200 feet (R. P. Duncan-Jones *loc. cit.*). Although usually associated with land measurement, it has been suggested that the *actus* was the basis on which the 1st–early 2nd century street grid of London was laid out, P. Marsden *Roman London* (London 1980) 47. Moreover, since the bastions were effectively outside the official urban boundary it could be argued that the unit of measurement which determined their spacing may well have been that used by the land surveyors (pers. comm. O. A. W. Dilke). In respect of the *actus*, the distance between bastions from centre to centre has no apparent significance, but if the 29.7cm equation is used to convert the interval between B4 and B4A (177ft), the result is 181.7ft which has a more acceptable error of 0.9% if the target was $1\frac{1}{2} \text{ actus}$ (180 feet).
- I am grateful to Professor O. A. W. Dilke for much of the above information about Roman surveying—any errors will undoubtedly be my own.
24. Since in other towns groups of bastions are seemingly incomplete or irregular, it is difficult to assess the range of intervals used. However, most are within 110–165 ft (imperial) e.g. Caerwent; and this is consistently the case with the bastions of the Saxon Shore Forts, S. Johnson *The Roman Forts of the Saxon Shore* (London 1976) 34–62. The closest parallel for the eastern series in London is found at Cirencester: from the east gate to Bastion 1 is 210ft; Bastion 1 to Bastion 2 is 192ft; Bastion 2 to Bastion 3 is approximately 170ft; but Bastion 3 to Bastion 4 is approximately 75ft—J. S. Wachter 'Cirencester, 1960, First Interim Report' *Antiq. J.* 41 (1961) 68, and see J. S. Wachter *The Towns of Roman Britain* (London 1974) 290–1, Fig. 66.
25. H. E. Butler (trans.) 'William Fitz Stephen's Description' in F. M. Stenton *Norman London* (London 1932) 27.
26. C. Hill, M. Millet and T. Blagg *The Roman Riverside Wall and Monumental Arch in London* *London Middlesex Archaeol. Soc. Special Paper No. 3* (1980) 2.
27. The construction of the Roman wall would have impeded the natural drainage of this area, despite the provision of culverts for the Walbrook and its tributaries, Grimes *op. cit.* in note 8, 89. See also P. Marsden 'Mapping the birth of Londinium' *Geographical Magazine* (Sept. 1972) 844.
28. The choice of locations for the western bastions—regardless of date(s)—will have been complicated by the awkward positions of the gates on this side of London. Although, generally, the spacing of the

- western bastions is evidently less consistent than that indicated for the eastern group, between Aldersgate and Newgate B16 to B19 appear to be set at regular intervals of 148ft (if an unknown bastion between B17 and B18 is assumed). See Fig. 3, and note 24.
29. P. Marsden *op. cit.* in note 27, 842–3 and 844.
 30. J. Maloney 'The Roman Defences of London' *Current Archaeol.* 73 (1980) 55–60. The probable number of Roman bastions would therefore be 18.
 31. i.e. the northern gate-tower of the Middle Tower.
 32. A. W. Clapham and W. H. Godfrey *Some Famous Buildings and their story* (London 1913) 32–35.
 33. G. Parnell *op. cit.* in note 16, 175 and Fig. 2.
 34. J. Maloney 'Recent Work on London's Defences' in B. Hobley and J. Maloney (eds.) *op. cit.* in note 22.

A ROMAN WELL ON WELBECK ST, W.1.

PETER S. MILLS

In March–April 1979 a feature which seems to have been a well was exposed by workmen during the construction of a rear extension at 14 Welbeck St, W.1. (TQ28538144) about 300m north of Oxford St. It was reported that the well, cut by the rear basement wall, was semi-circular in plan, 1.8m–2.5m (6ft.–8ft.) in diameter and approximately 1.8m (6ft.) deep. The fill was black organic clay from which a complete 2nd-century flagon¹ was recovered at c. 19.5m O.D. Fragments of blue and green glass were also found but unfortunately only the flagon was kept.

The presence of a well or pit in this area implies the existence of a hitherto unknown settlement near the ford or bridge² where Oxford Street (a Roman road) crosses the Tyburn roughly at Bond Street Station, some two miles from the City of London.

NOTES

1. This was a ring necked flagon, red fabric with a cream slip (Fig. 1, drawn by Dorrie Orchard). Probably produced in the Verulamium region, and very similar to Southwark typology form 1B9, which is dated c. 130–180/200+AD, see Marsh and Tyers in *Southwark Excavations 1972–74* Joint Publication No. 1, London & Middlesex Archaeological Society and Surrey Archaeological Society (1978) Fig. 232 (*W. McIsaac*).
2. During work at Stratford Place W.1. in 1979 the Inner London Archaeological Unit was told that a series of wooden piles or stakes had been found in 1975 in the centre of Oxford Street while a new subway for Bond Street Station was being built.

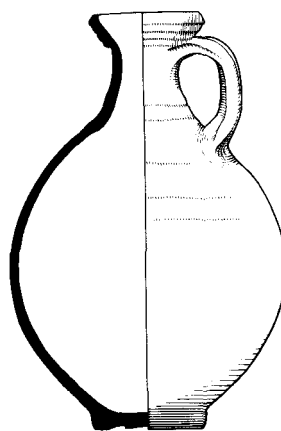


Fig. 1. (¼)

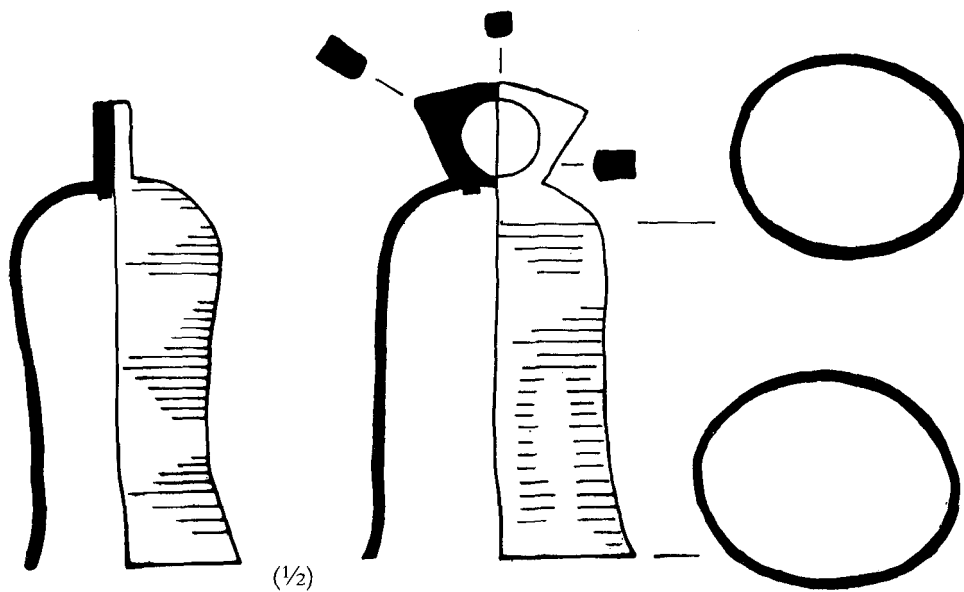
A ROMAN BELL FROM THE THAMES

ANGELA WARDLE

A bronze bell of the Roman period found on the northern foreshore of the Thames has recently been acquired by the Museum of London.¹

The instrument, which is in fine condition, consists of a body and a polygonal handle, with a circular central hole, and is cast in one piece. Its total height is 124mm. The body is tulip shaped, narrowing at the middle and flaring towards an elliptical mouth which has maximum and minimum diameters of 72 and 56mm respectively. The thickness of the bronze is 2–2.5mm. The clapper, which would have been of iron, has not survived but inside the bell at the top are two small holes, probably for the attachment of a loop from which it was suspended. When struck the bell has a fine ringing tone.

There is no stratigraphical indication of the date of the instrument but parallels have been found in Roman contexts. The angular form of the handle is characteristic of many Roman bells and there are several examples from British sites which include Camerton, Fishbourne and Verulamium.² Leaving aside the design of the handle, bells were made in a variety of forms. The examples cited above are all round or four sided, shapes that are more common than the tulip form, but some exact parallels to the Thames bell are known. One comes from Binnington Carr in Yorkshire, while the British Museum possesses several undated bells of similar shape.³ The form is widespread on the continent with examples known from Ampurias in Spain and from sites in Germany.⁴ One



from Mainz is almost exactly the same height as the Thames bell, while two from Köln are little larger. Another bell in Köln museum which is of tulip shape but with a differently designed handle is displayed on a bronze collar, as a cow bell.⁵

In the absence of further evidence it is difficult to ascribe a definite function to the Thames bell. Bells (*tintinnabula*) are frequently found on Roman sites but had only limited importance as musical instruments. They sometimes had atropaic significance and were rung in various religious ceremonies.⁶ Small bells were attached to the costumes of some dancers, illustrated on figurines and sarcophagi, and sets of bells were hung in doorways.⁷ The size of the Thames example however precludes such use. Bells were also rung to give signals and alarms and, as today, were hung around the necks of animals⁸—certainly suggesting a possible use for the London bell.

NOTES

1. Accession No. 80.94. I am grateful to Dr. Hugh Chapman for bringing the bell to my attention and to Jenny Hall for the drawing.
2. W. J. Wedlake *Excavations at Camerton* (1958) 258 No. 29 Fig. 59; B. Cunliffe *Excavations at Fishbourne 1961–69* (London 1971) 112 Fig. 46, Nos. 107, 108; S. S. Frere *Verulamium Excavations I* (London 1972) 126, No. 93. See also J. P. Bushe-Fox *Richborough I* (London 1926) 45 No. 15; 4 (1949) Pl. LVI No. 271. Many bells in the British Museum have angular handles, for example, Inv. Nos. 1976 1–6–13; 1976 1–6–17, and the form can be seen in collections of many continental museums.
3. Binnington Carr *Proc. Soc. Ant. Lond.* 13 (1889–1891) 29–31. The bell was found in ploughing, but in association with silver coins of the first century AD. (BM Inv. No. 49 5–19–12; WT 938).
4. Bells from Ampurias are on display in the Museo Arqueologico, Barcelona; Mainz, G. Behrens 'Neue Funde aus dem Kastell Mainz' *Mainzer Zeitschrift* 7 (1912) 88 Abb 4, 9; Kastell Hüfingen, *Obergermanisches-Raetisches Limes B.Bd.V* No. 62A. I am grateful to Dr. Chapman for the two German references.
5. Römisches Germanisches Museum Köln Nos. 8984, 8985, 4129.
6. Plautus *Pseud.* 332. On bells in general see E. Esperandieu in Daremberg and Saglio *Dictionnaire . . .* (Paris 1912) art *tintinnabulum*.
7. G. Pesce *Sarcophagi Romani di Sardegna* (Rome 1957) 27ff. with bibliography.
8. Apuleius *Met.* X.18; Lucian *Luc.* 48.

TWO SAMIAN BOWLS WITH MOULD-MAKERS' NAME-STAMPS IN THE ROYAL ONTARIO MUSEUM, TORONTO

ALISON HARLE EASSON

More than 350 fragments of relief-moulded samian ware are among the Royal Ontario Museum's collection of Romano-British artifacts. Most are from building sites in the City of London and were acquired from G. F. Lawrence during the 1920s. Some were donated by the Guildhall Museum and the City of London in 1939 and a number are from excavations elsewhere in Britain or from unknown British sources.

A few pieces retain either the name-stamp or cursive signature of their respective mould-makers. These include two fragmentary bowls from moulds by Belsus I and Julius I of Rheinzabern. Both bowls have an orange-red paste with a moderately glossy orange-red surface.

1. Bowl from a mould with the name-stamp of Belsus I of Rheinzabern, from the Old General Post Office site, St. Martin le-Grand, and possibly from excavations during 1913-14¹ (Royal Ontario Museum, 927.15.17) (Fig. 1).

Acquired from G. F. Lawrence in 1927.

Height 115mm., original diameter 203mm., diameter of footring 77mm.

Below the ovolo-band, formed by a punch with one tongue and two ovolos (LRF.E1),² are two panels alternating around the circumference and separated by a vertical cabled line (LRF.O242). One panel contains Hercules with his club and lion's skin (LRF.M84) on the left and a veiled woman (LRF.M31) on the right with a rosette (LRF.O52) in each corner. The other panel has a large cabled festoon suspended from astragali (LRF.O201) and within, a krater with volute-handles (LRF.O21) on the left, a peacock (LRF.T227) on the right and a goose (LRF.T255) below. The festoon appears to be a double cable and is not recorded in LRF. Only traces of the inner band are present but the upper left end is visible in the panel with Belsus I's retrograde name-stamp (LR taf.255/a)³ placed horizontally above the peacock. Below the decoration is a wreath of double leaves (LRF.R36).

The decorative scheme is not among the mould- and bowl-fragments from Rheinzabern published in LR, nor at Lauriacum,⁴ Iuvavum⁵ or Ovilava.⁶ The general arrangement of the stamps is similar to two moulds by Belsus I at Rheinzabern, *cf.* LR taf.109, nos. 3a-bF, 4F, but rosettes are placed below the festoon rather than in the panel with the figures. In both moulds, the festoon is from a different punch. On a sherd from Köngen,⁷ Belsus created a similar festoon-panel, using a different krater and festoon but placing the same peacock and name-stamp in positions similar to those on the Toronto bowl. Cerialis V, who used 56 of the 80 decorative punches recorded in LRF for Belsus I, created an arrangement similar to ours on a bowl at Rheinzabern (*cf.* LR taf.65, no.1a-b), but placed two pygmies below the festoon.

Belsus I has been dated to the reign of Commodus and into the first quarter of the 3rd century AD⁸ and it has been suggested that he may have begun work before AD 175.⁹

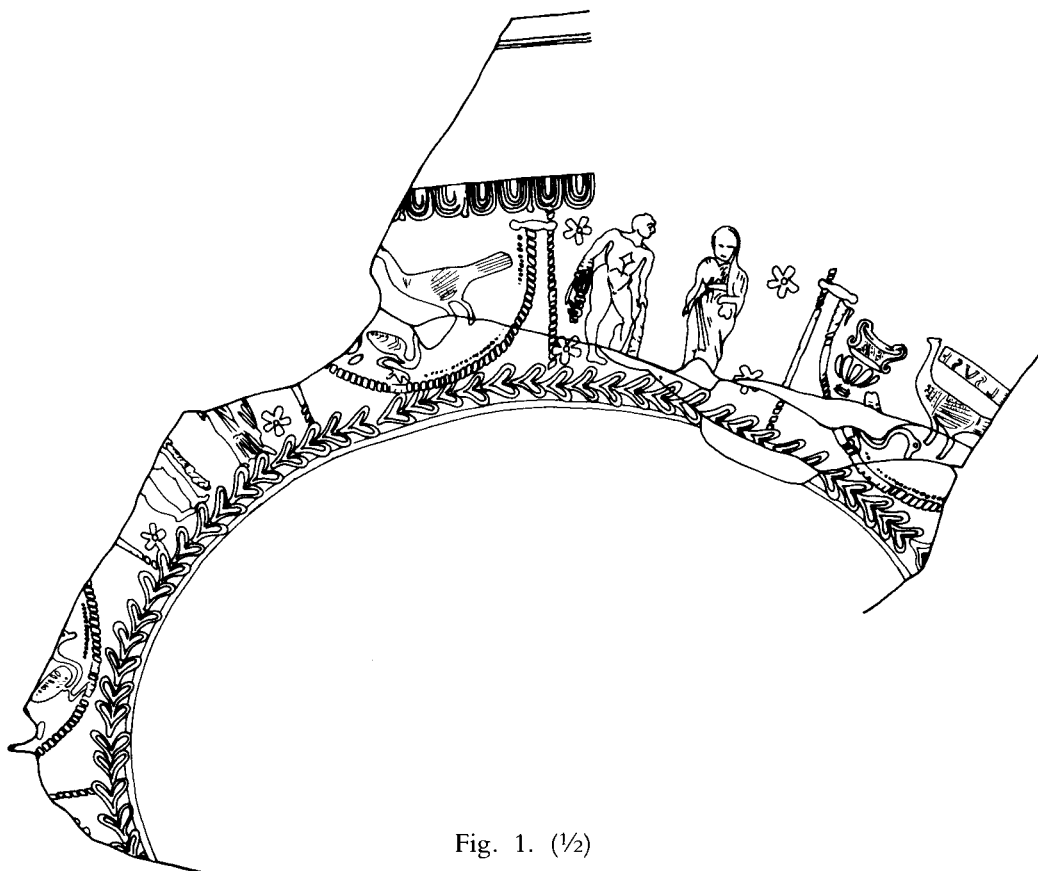


Fig. 1. (1/2)

2. Bowl from a mould with the name-stamp of Julius I of Rheinzabern, from Leadenhall St., City of London (Royal Ontario Museum, 929.49.46) (Fig. 2).
Acquired from G. F. Lawrence in 1929.

Height 146mm., original diameter *c.* 253mm., diameter of footring 91mm.

Below the ovolo-band (LRF.E42) are vertical beadrows (LRF.O261) with double wings (LRF.P145) at top, centre and bottom. These separate double-bordered medallions (LRF.K20) enclosing a sequence of four stamps: pecking pigeon (LRF.T254), tree (LRF.P3), eagle (LRF.T205a) and gladiator (LRF.M220b). This is repeated once around the circumference of the bowl. Julius I placed his retrograde name-stamp (LR taf.257/c) diagonally downwards in the lower left corner of a panel with a pecking pigeon in the medallion.

This design by Julius I does not appear in LRF or at Lauriacum, Iuvavum or Ovilava.¹⁰ He is recorded as using a closely related scheme with three rosettes¹¹ or small double arcades¹² punctuating the beadrows between medallions enclosing figures or other motifs.

The mould-maker Lupus, whose repertoire included 36 of the 70 stamps used by Julius I, created very similar decorative schemes in which medallions are separated by herring-bone lines punctuated with 3 rosettes¹³ or by short beadrows with a rosette or double wing at the bottom and two wings at the top.¹⁴

A sherd decorated with seahorses within medallions separated by beadrows with double wings at the top, centre and bottom, was found at Lauriacum and attributed to Art des Comitialis VI.¹⁵ The placing of the various elements in the design is similar to the Toronto bowl and likely should be attributed to Julius I. The sherd, however, lacks the ovolo-band

which would have aided a more positive attribution since the two mould-makers used different ovolo-stamps.

At Ovilava, Julius I was dated to the first half of the 3rd century AD¹⁶ and at Kastell Künzing, a bowl-fragment attributed to him was assigned to perhaps the beginning of the 3rd century.¹⁷

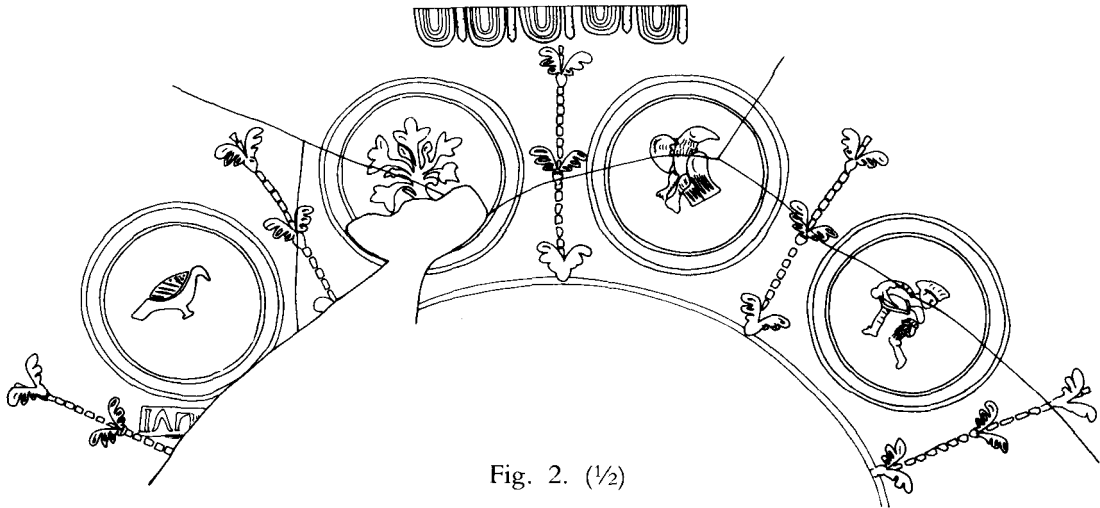


Fig. 2. (1/2)

Because they lack archaeological contexts, the Royal Ontario Museum's bowls cannot aid in dating Belsus I, Julius I or the industry at Rheinzabern.¹⁸ They do, however, add two schemes of decoration signed by their mould-makers and what appears to be a previously unpublished stamp, the double cabled festoon, to the repertoire of Belsus I.

NOTES

1. Information kindly supplied by Dr. H. Chapman, Museum of London.
2. LRF: W. Ludowici, H. Ricken and C. Fischer *Die Bilderschüsseln der Römischen Töpfer von Rheinzabern, Typenkatalog* (Bonn 1963).
3. LR: W. Ludowici and H. Ricken *Die Bilderschüsseln der Römischen Töpfer von Rheinzabern, Tafelband* (Speyer 1948).
4. Karnitsch (1955): P. Karnitsch *Die verzierte Sigillata von Lauriacum (Lorch-Enns)*, *Forschungen in Lauriacum* 3 (Linz 1955).
5. P. Karnitsch *Sigillata von Iuvavum (Salzburg)*, *Jahresschrift Salzburger Museum Carolino Augusteum* 16 (1971).
6. Karnitsch (1959): P. Karnitsch *Die Reliefsigillata von Ovilava (Wels, Oberösterreich)* (Linz 1959).
7. H-G. Simon 'Terra Sigillata aus Köngen' *Saalburg Jahrbuch* 20 (1962) 30 No. 212 and Abb.13.
8. Karnitsch (1959) 356.
9. H-G. Simon 'Das Kleinkastell Degerfeld in Butzbach' *Saalburg Jahrbuch* 25 (1968) 23.
10. See Notes 4-6 above.
11. LR taf.154, nos. 4F, 8, 16; J. N. Dore and J. P. Gillam *The Roman Fort at South Shields* (Newcastle 1979) 124 No. 118 and Fig. 32.
12. LR taf.153, nos. 14, 19.
13. LR taf.157, no. 1F and taf.158, no. 1.
14. LR taf.157, no. 7F; Karnitsch (1959) taf.162, no. 1.
15. Karnitsch (1955) taf.36, no. 4.
16. Karnitsch (1959) 398.
17. H. Schönberger *Kastell Künzing-Quintana*, *Limesforschungen* 13 (Berlin 1975) 23.
18. For comprehensive bibliographies on the dating of the Rheinzabern industry, see H. U. Nuber 'Zum Ende der reliefverzierten Terra-Sigillata-Herstellung in Rheinzabern' *Mitteilungen des Historischen Vereins der Pfalz* 67 (1969) 136-147 and B. Pferdehirt *Die Keramik des Kastells Holzhausen*, *Limesforschungen* 16 (Berlin 1976) 19-29. I am grateful to Dr. B. Oldenstein-Pferdehirt, Römisch-germanische Kommission des Deutschen Archäologischen Instituts, for bringing these two publications to my attention.

LONDON AND SOUTHWARK IN THE SEVENTH CENTURY AND LATER

A NEGLECTED REFERENCE

TONY DYSON

1

The charter which Frithuwald 'of the province of the men of Surrey, and sub-king of Wulfhere, king of the Mercians' issued in favour of Chertsey abbey in 672–4¹ is of interest for several reasons. It is very early; the oldest authentic English charter dates only from 669. It contains the sole reference to West Saxon *provinciae* (Surrey and Sonning);² districts better recorded elsewhere in England and also known as *regiones*, into which the original Anglo-Saxon kingdoms were sub-divided before the creation of the shires by the mid-8th century in Wessex and by the mid-10th in other areas. It testifies to a Mercian dominion over Surrey which is not otherwise recorded and which, though of only short duration, clearly demonstrates the vitality of the rising Middle Kingdom and, even at this comparatively early date, its pre-eminence in southern England. But of still more particular interest, the charter also features the first post-Roman reference to the 'port' of London—some sixty years earlier than Bede's—as well as what looks very like the first mention, though not by name, of Southwark.

This, clearly, is a matter of some interest, not least because the standard texts on early London and Southwark are found to have nothing at all to say on the subject. It is a strange omission, not to be explained on the grounds of selectivity: 7th century London is hardly that well documented. Nor is the text of the charter particularly inaccessible, and since 1955 a translation has been widely available in the authoritative *English Historical Documents*.³ The reason can only lie—and the point is worth making—in that fundamental deficiency of Anglo-Saxon scholarship, the continuing absence of a single, systematic edition of the early English charters and even more of a comprehensive index to their contents.⁴ For the obscurity arises in part from the simple accident that London receives a comparatively brief allusion in a document primarily concerned with Chertsey abbey's more extensive local holdings. The reference clearly calls for advertisement as a neglected piece of evidence which contributes to the understanding of an obscure but important phase of London's development, and which offers a significant clue to the character of Southwark at the same period.

The purpose of Frithuwald's charter was to convey to Eorcenwold, abbot of

Chertsey since its foundation in 666, 205 hides of land (*manentes*) on his own account, and also to confirm the possession of a total of 300 hides. All but ten of these lay more or less locally along the Thames between Sonning (Berks) and Molesey, and included Chertsey itself, Thorpe, Egham, Cobham, Chobham, Woodham and Weybridge.⁵ The remaining land was not so local, and lay some twenty miles downstream. It is defined by the following passage, translated by Dr. Whitelock:

‘Of the same land, however, a separate part, of ten hides is by the port of London, where ships come to land, on the same river on the southern side by the public way.’

One notable feature here is that the location of the ten hides is only indirectly indicated in relation to other, more or less adjacent, places or landmarks: London itself, the Thames and a public road. No distinctive place-name is supplied. This signal defect presents an immediate problem, and has doubtless had its part to play in the obscurity and neglect of the whole issue. But even the Latin text itself is less than precise, so that meaning is more than usually dependent on punctuation. It reads:

‘Est tamen de eadem terra pars semota manencium decem iuxta portum Londonie ubi naves applicant super idem flumen in meridiana parte iuxta viam publicam.’

Depending on the placing of commas, the passage could (just) be made to mean that the land was by the port of London, where ships tie up on the same river, on the south side (*i.e.* of London) by the public road. In this case the public way could be taken to denote Thames Street, a matter of some interest since the real antiquity of that thoroughfare stands in need of demonstration.⁶ But ‘by the port of London’ might be thought an unduly quaint way of describing land adjacent to Thames Street, even in the 7th century, and Dr. Whitelock’s less contrived translation seems preferable. Besides, the facts are that all the other property mentioned in the charter is in Surrey to which, by his own definition, Frithuwald’s authority was confined.

The allusion, then, is to the south side of the river and here, given the highly inhospitable character of the early Surrey shore of the Thames in the vicinity of London, the choice of location for these ten hides is quite restricted. For several miles in either direction the low lying coastal strip at the foot of the gravel river terrace was composed of mudflats intersected by tidal channels. Only at Southwark could the river be approached on the relatively firmer footing provided by a series of sandbanks, themselves only slightly above river level, which projected northward from the gravels.⁷ These topographical constraints largely determined the site of the Roman bridge, and hence of London itself, and they still applied in the post-Roman period. Indeed, because of a general rise in tidal levels at that date, they were almost certainly accentuated; with the exception of Southwark, and perhaps of the still more isolated site of Bermondsey, land to the east and west seems to have been largely under water until the later medieval period.⁸

There must therefore be a strong presumption that any worthwhile grant of land on the south side of the Thames near London in the 7th century was at the exceptional site of Southwark, not least when a public road is also specified. In fact, two Roman roads are now known to have converged just south of the bridgehead at Southwark. One of these led south to Watling Street, the main route from north Kent.⁹ The other led south-west, apparently in the direction of Lambeth, and since there is reason for supposing that the two lines of Watling Street north and south of the Thames may originally have continued beyond their surviving alignments to a ford between Westminster and Lambeth¹⁰, a possible alternative location for the Chertsey property arises. But the case for Lambeth, which lay at the western extremity of the marshy coastal strip,¹¹ is difficult to sustain. There is clear evidence that the road from Southwark went out of use in the late Roman period and—like any extension of Watling Street to Lambeth—was not even approximately followed by any known medieval successor.¹² It might also be doubted whether land at Lambeth would be close enough to London to be usefully described as ‘by’ (*iuxta*) the port, in the same sense that it was also described as ‘by’ the public road (*iuxta viam publicam*). Besides, the description of the ten hides as lying on the south side of the river, though not impossible in a general sense, would clearly be less appropriate at a point where, as at Lambeth, the Thames flows from south to north. Vague as the terms of this description may seem to us, it must be assumed that they were adequate for their purpose in 672–4, and by far the likeliest identification for a property distinguishable by these means remains the former Roman site of Southwark, directly opposite London.

2

The earliest documentary reference to Southwark by name dates from the early 10th century,¹³ so that the proposed identification would in some sense bring forward the history of London’s southern suburb by some two and a half centuries. It will clearly be necessary to assess how well this information fits in with the more familiar sources, and what it might add to our knowledge of London and Southwark generally. First, however, it is important to test the validity of the ‘London passage’ in the context of the charter itself. About the document as a whole there seems little doubt. Though the original no longer exists, and its text survives as a copy in the earliest of the Chertsey cartularies, compiled in the third quarter of the 13th century and probably within a few years of 1260,¹⁴ for all general purposes the charter has invariably been regarded as authentic.¹⁵ On that basis Dr. Whitelock printed it as the oldest of the representative series of land grants selected for her volume of *English Historical Documents*.¹⁶ Sir Frank Stenton, who discussed the document often, believed the ancient formulas at its core to show that it descends from a text of the 7th century.¹⁷ The English Place-name Society’s volume for Surrey, of which Stenton was a co-author, pronounced that there is no reason why the text should not be used for ‘historical purposes’.¹⁸ This, at least, is the case so far as

concerns the four principal abbey estates of Chertsey, Thorpe, Egham and Cobham, for which there is ample corroborative evidence elsewhere. But no-one has ventured any specific comment upon the ten hides near London; do these general imprimaturs necessarily cover them too?

Initially, at least, there is reason for some caution. Despite his confidence in the charter's basic authenticity, Stenton also remarked that the text is 'distended with spurious matter'.¹⁹ Unfortunately he did not particularise, but one all too obvious instance of this is the detailed English description of the bounds of the four principal estates, which is appended to the Latin text of Frithuwald's grant. There is no doubt that this is of much later date than the 7th century—it is probably of at least the 9th century²⁰—and it is clear too that the text of the bounds has been interpolated with material which could only have been supplied in the mid-13th: roughly the date, that is, of the extant cartulary copy.²¹ That being so, we need to be reasonably certain before placing any reliance upon it that the 'London passage' was not another, subtler, interpolation made at any time up to c. 1260. The mention of a property near London might very well be worth slipping into a copy, or recopy, of the original text, whether for the purposes of completeness, antiquarian interest, deliberate fraud or through simple misunderstanding. Indeed, this possibility is strengthened by the fact that several of the other charters in the same cartulary, which purportedly date from the time of Frithuwald onwards, are undoubtedly forgeries,²² three of them to the extent that they contain long lists of properties.²³ These, it has been suggested, include all the place-names which the forger knew had at any time been associated with the abbey,²⁴ and for which there is no independent corroboration. Neither, for that matter, is there any corroboration, in Chertsey sources or elsewhere, for the abbey's possession of property on the Surrey shore of the Thames. No mention is to be found in the Domesday survey of Surrey in 1086: in the whole of *Brixistan* (Brixton) hundred, which extended along the river from the Kent border to Kew, the abbot of Chertsey was accredited only with land in Lower Tooting.²⁵

Despite these hazards there is nevertheless a fair chance that the 'London passage' is authentic. The absence of any later reference to nearby property in Surrey might equally well mean that Chertsey's possession of the ten hides was indeed as early as it purports to be, but that it was also of brief duration. It is particularly interesting, for example, that not one of the several recognized fabrications, even of those with compendious lists of place-names, has anything to say of the ten hides. Least of all does a charter of Alfred which recites some of the identificatory material relating to the four principal estates which features in the charter of 672–4.²⁶ This material itself might well be an interpolation, like the English bounds for the four estates also appended to Frithuwald's charter: even so, it would seem to show that when the fabricated charters were fabricated—evidently no earlier than the 10th century—Chertsey no longer had any interest in the property near London such as might prompt its inclusion in them. But the most positive grounds for accepting the authenticity of the 'London passage' are to be found in the text of the charter itself. In the first place there is no obvious infelicity in the placing of the passage in the

context of the provisions of the grant. It is well integrated with the text, if only because all the properties mentioned adjoin the Thames, so that there is an apparent coherence to the whole document.

More decisive, however, is the very absence of a distinctive place-name, and the presence instead of periphrastic references to readily recognizable landmarks. For this procedure is entirely characteristic of the early English charters in that even very large estates were often conveyed by no other name than that of a river by which they lay, or of some other prominent feature.²⁷ The use of place-names obviously regarded as permanent only became common in the course of the 8th century, and routine by the 10th, as a reflection of an increasing density of settlement which called for a more precise and particular mode of definition.²⁸ The implications of this conclusion for the early character of Southwark will be assessed shortly: the immediate point is that the tenor of the 'London passage' is as consistent as other features of the charter's text with an authentic grant of late 7th century date. Had the passage been a later interpolation, a greater degree of exactitude might have been expected; certainly a place-name—such as Southwark possessed, at least from the early 10th century—would have been supplied, just as the spurious Chertsey charters supplied them in such abundance elsewhere. As it is, the absence of this modest requisite is undoubtedly the best warranty of the antiquity of the ten hides, and also no doubt for the early date and irrevocability of their loss.

For the question arises how the abbey came to be parted from such a property near London, whose value must have been increasingly more apparent with the passing of time. If that question could be answered, our confidence in the ten hides could be enhanced still further. Fortunately, more than one explanation is available. The most obvious is that in the late 9th century Chertsey was totally destroyed by the Danes and its lands devastated, so that it came to be virtually refounded towards the mid-10th century.²⁹ Under these conditions it is more than probable that many of the original endowments, especially those more remote from the abbey, were lost for good. Moreover, London in particular was occupied by the Danes between 871 and 886; and, even if the ten hides were subsequently restored, renewed Danish activity in the area of the southern bridgehead in the early 11th century shows that the Surrey bank was completely at the invaders' mercy.³⁰ From at least 1051, the manor of Southwark was in the possession of the Anglo-Danish earl Godwin, a man not inhibited by exaggerated respect for monastic integrity.³¹ An alternative explanation, not inconsistent with this, will be offered presently. But it is one thing to explain the loss of monastic property, and quite another to account for Chertsey's subsequent silence on the numerous occasions when the opportunity arose, as in the case of the abbey's later charters—genuine or fabricated—to rehearse their legitimate claims. In this connexion it is interesting to note that by the beginning of the 11th century Chertsey appears to have acquired another local base on the Thames, this time in London itself. A charter of Ethelred II, dated *c.* 1006–12, confirmed to the abbey a bequest by his priest, Wulfstan, of an enclosure on the river in the western part of the city close to the harbour called Fish Hithe (*Fischuthe*), together with mooring and market rights.³² Fish

Wharf, recorded in 1291, lay near the foot of Trig Lane,³³ and although the form of Ethelred's charter is suspect, its substance is to some extent confirmed by the fact that in 1258–9 the abbots of Chertsey were said to have neglected and abandoned the rights which they had held up to forty years previously at Broken Wharf,³⁴ immediately downstream of Fish Wharf. This was presumably the property—as no other is recorded in the city at this time—for which Edward the Confessor confirmed the abbey in *sac* and *soc* over land and men within London in a genuine writ of 1058–66.³⁵ It would be rash to conclude that Ethelred's charter was in any formal sense compensating Chertsey for the loss of an estate across the river which it had held since the 7th century, though this is clearly not impossible. Such privileges were rare and closely restricted prerogatives;³⁶ Wulfstan could only have received them from the king, and could hardly have disposed of them without his active consent. In any event, the transaction offers an explanation of how the memory of an earlier property might be allowed to sink into oblivion on the acquisition of a new site, manifestly better place and privileged.

3

The conclusion that the London passage in Frithuwald's charter is authentic, and that the ten hides which it conveyed to Chertsey in 672–4 were subsequently lost in the unsettled conditions of the late Saxon period, now calls for some consideration of the 7th century context to which it belongs. What can it tell of early London and Southwark? So far as London is concerned, it cannot but help to clarify what little is already known. The most striking contribution is in the reference to London as a port, for it predates by some sixty years Bede's celebrated description of the city as a market (*emporium*) of many peoples coming to it by land and sea.³⁷ In fact, with the exception of Pope Gregory's unembroidered allusion to the *civitas* in his correspondence with Augustine at the turn of the 6th and 7th centuries,³⁸ Frithuwald's charter would seem to embody the earliest documentary reference to London since the *Anglo-Saxon Chronicle's* annal for 457.³⁹

This designation of London as a port complements two other historical sources of roughly similar date. It provides valuable corroboration for Bede's mention of the sale of a slave to a Frisian merchant in 679, itself a purely incidental reference made two generations later which only tenuously implies seaborne trade at second hand.⁴⁰ It also makes an interesting comparison with the laws of the Kentish kings Hlothere and Eadric which refer to the existence in the London of the 680s of a royal hall where, in the presence of the royal reeve, Kentish merchants could receive warranty of the goods they purchased in the city.⁴¹ These laws say nothing directly of London as a port, beyond what may be implied by the name *Lundenwic* (cf. Ipswich and *Hamwih*) but—unless it is supposed that the Roman bridge still stood intact almost three centuries after its builders had departed—it could be inferred that this particular trade was essentially conducted by sea rather than by land. In any case, it is quite clear that

the level of that trade was considerable, and the presence of the reeve—an official active at Lincoln as early as *c.* 630⁴²—indicates that the Kentish kings were alive to the need for its regulation, and doubtless for its taxation also. The charter of 672–4 thus reinforces Bede's earlier notice and the Kentish laws; together, the three references demonstrate that by the 670s and 680s London already anticipated the thriving port described by Bede in his own day, and implied within a decade after the 730s by a series of charters in which Aethelbald of Mercia conferred monies derived from tolls collected by permanent *exactores* from specified shiploads.⁴³

A similar conclusion is also suggested by the import of the London passage for Chertsey itself. An area of land sufficient to support ten peasant families,⁴⁴ or to render an equivalent value, might at first seem a negligible endowment compared with the 290 hides which the charter also confirms in the more immediate neighbourhood of the abbey. Yet its very remoteness from those central estates seems also to reflect the contemporary importance of London; to a far-sighted monastic sponsor it might well be obvious that as the city's prosperity developed it would increase the value of such a holding with it, either as a source of rents or as a base for commercial activity by the abbey itself, twenty miles upstream. Such a sponsor was certainly present. Eorcenwold, the first abbot of Chertsey before his election to the see of London in 675, and the addressee of Frithuwald's charter, was equally clearly influential in the foundation of Barking abbey in Essex, which also held land in and close to London, and whose first abbess was his sister.⁴⁵ Though apparently not the formal, or at least the exclusive, founder of either house, he emerges with much of the credit, and his memory was especially cherished by Londoners until the Reformation. Little else is known of him, except for his outstanding piety, but one suspects that there was more to him than that. The location of these two monastic foundations on either side of London might alone suggest, however, that the city was a significant factor in the choice of sites, and that Eorcenwold was in some sense operating from there. Both houses, moreover, lay on different sides of the Thames, and in the early years of their foundation Mercia was both temporarily in control of Surrey, as Frithuwald's charter shows, and also sufficiently effective in London to have the bishopric at its disposal *c.* 670.⁴⁶ No doubt these conditions assisted Eorcenwold: Wulfhere of Mercia who sanctioned Frithuwald's charter to Chertsey is also recorded as having given a hide near London to Barking.⁴⁷ Perhaps, too, Eorcenwold was helped in part by that ancient authority which London appears to have exercised over an area greater than Middlesex, for it was presumably the early inclusion of Surrey within the diocese of London that enabled Ine of Wessex to describe him in *c.* 690 as his own bishop.⁴⁸ At all events, Eorcenwold's influence, however derived, evidently extended over a wide region of which London can be seen as an effective political centre, while the endowment of Chertsey with ten hides near the port, and of Barking with ten hides in the city, and with a hide nearby in addition to lands at Battersea⁴⁹ would emphasize the economic importance of London within that region.

How long London had enjoyed this status as an international port, together

with its regional pre-eminence, is a question which the charter raises rather than answers. The very casualness of its reference to the port 'where ships tie up' clearly implies that these facilities were no new thing and were already well established in 672–4. It perceptibly increases the possibility that the London which, as late as four years after Augustine's arrival in England, Pope Gregory still regarded as an appropriate seat for an archbishopric, and in which Ethelberht of Kent established St. Paul's cathedral in 604, was something more than a sequestered pulpit.

4

From the discussion of the London context of Frithuwald's charter it is now time to turn to the ten hides themselves. The case for attributing them to Southwark has already been stated: elsewhere on the Surrey shore near London the terrain lay at least part of the time below water and, for the same reason, the only public thoroughfare known to have approached the river was the Roman road which led from Watling Street to the site of the southern bridgehead. It has also been noticed that the charter of 672–4 lacks an identificatory place-name, a general characteristic of charters of this date and symptomatic of a relative sparsity of settlement for which any greater particularity was unnecessary. Now that principle, if applied to Southwark, would itself seem to suggest that little development of any significance had yet occurred, and several other features of Frithuwald's charter would tend to a similar conclusion. Where Southwark lacks a name, a pointed contrast is provided by the availability of the names of Chertsey and Thorpe, manifestly remoter and more obscure places, at least by the standard of settlement evident in the Roman period and from the 11th century. Conversely the charter gives no hint that the grant of the ten hides was affected by any existing habitation: no account is taken of the presence of neighbours, of other hides or indeed of any human activity. It begins to look very much as if Chertsey was virtually first on the spot.⁵⁰ Altogether, the tendency of Frithuwald's charter is to cast doubt on the existence in 672–4 of any settlement of Southwark comparable with that of the Roman and Saxo-Norman periods. This, in itself, is hardly inconsistent with the absence of archaeological evidence for early Saxon activity.⁵¹ One hesitates to overstress this last point in view of the comparable scarcity of such evidence from London, whose status at this period is so far only redeemed by documentary sources, or from later Saxon Southwark itself. But the fact remains that there is minimal positive evidence of any intensity of settlement in early Southwark, and that any supposition to the contrary rests partly on the knowledge of its considerable importance in the Roman and medieval periods, and partly on an assumed relationship with London.

The nature of that relationship is, however, crucially dependent on a factor of which, again, nothing is known at this period but which merits consideration in this context; the bridge which in the late Saxon period, as also in the Roman period, linked Southwark directly with London. Even if it was not deliberately

demolished, it is unlikely that the Roman bridge survived the 5th and 6th centuries. Certainly no bridge is mentioned in 672–4, although if one existed it would have offered a far more conspicuous and definitive landmark than any of those actually mentioned by Frithuwald's charter. But given the evidence, already reviewed, of the geographical limitations of the Southwark site, it is hard to avoid the conclusion that the existence, or non-existence, of a bridge was of vital importance. Without a bridge, it is difficult to see how the site could have amounted to much more than a *cul de sac* in a swamp, close to London but decisively separated from it, except perhaps for the limited convenience of a ferry. For such a place there could have been little local competition on the part of those traders anxious to participate in the growing activity of late 7th century London, although the potential value of the site and its limited accessibility might well be regarded in a more favourable light by the provident founders of a monastery which lay some 20 miles further upstream. But with a bridge, such as certainly existed by c. 1000,⁵² the potential of the site would be immediately confirmed both as an integral southern outpost of London and—as was to be apparent by 1086—as an urban centre in its own right, serving its own district.⁵³ Both these roles are reflected in the various forms of the name Southwark, when it eventually appears in the early 10th century. The earliest, *Suthringa geweorch*, denotes 'defensive works of the men of Surrey'⁵⁴ in much the same sense that Frithuwald claimed to be sub-king of the men of Surrey. Later forms, the Domesday *Sudwerca*,⁵⁵ and the *Suthgewearke* of the *Anglo Saxon Chronicle*,⁵⁶ representing the direct ancestors of the modern name, reflect the relation of the defences to London.

Does the occurrence of *Suthringa geweorch* imply that these conditions had now been met by the provision of a bridge? There is good reason to suppose that this was the case. The first appearance of *Suthringa geweorch* is made in the 'Burghal Hidage', a document of the 910s which sets out the totals of personnel required for the defence of a number of fortified places, almost all south of the Thames, in accordance with a formula which stipulates a given number of men for a given length of defensive circuit.⁵⁷ This list appears to enumerate those places which had recently been fortified, or re-fortified, during the first, West Saxon, phase of Alfred's campaigns against the Danes, and in several instances has been confirmed by archaeological evidence. The first occurrence of the name Southwark in this document itself strongly suggests that the site of the southern bridgehead was included in this programme, as does the fact that the stipulated defensive circuit of some 2225m compares very closely with what is known of the extent of Roman settlement there.⁵⁸ So too does the element *geweorc*,⁵⁹ and the name is of a kind to have arisen from some very specific and fundamental innovation, such as might supplant an earlier settlement or name, if any had existed.

The likeliest context for such a development is one which preceded the Burghal Hidage by at most a couple of decades; the restoration of London described in very general terms by contemporary writers,⁶⁰ and specifically discussed by Alfred at a council held at Chelsea in 898 or 899, some thirteen years after his recapture of the city from the Danes. The evidence for this

council and its consequences for London have been discussed recently,⁶¹ but the main conclusions can be summarised. Two of the participants of the conference, the archbishop of Canterbury and the bishop of Worcester, both prominent associates of the king, received adjacent plots of land with mooring rights at Queenhithe. In the case of Bishop Waerferth, this grant supplemented an earlier award in 889 of market rights on the 'trading shore' at a plot whose dimensions suggest identification with an *insula* immediately north of Queenhithe. Between them, the two grants were clearly concerned with the promotion of riverborne trade. The early name of the Queenhithe (*Aetheredes hyd*) was shared by Ethelred, ealdorman of Mercia, who was entrusted by Alfred with the custody of London and who also attended the Chelsea conference. But the activities of neither Ethelred nor Waerferth were confined to London, for at a similar date both men were also concerned with the fortification of Worcester and with the establishment there of a market on terms which resemble those at Queenhithe. These developments underline the characteristic interdependence of the military and economic elements of Alfred's programme of urban renewal, in which London can thus be shown to have shared. Of the purely military aspects of Alfred's restoration of London nothing specific is known, though contemporaries speak vaguely of the strengthening and garrisoning of the city. Such measures are unlikely to have omitted the securing of communications across the Thames, both because co-ordination between Mercia and Wessex was a vital feature of contemporary policy and because there was a particular need to contain the Danish settlement of East Anglia and to counter any recurrence of concerted action with raiders operating to the south of the river.

If these preoccupations provided the occasion for the defensive works at Southwark, it is still far from clear what precise purpose would have been served if they were not in fact accompanied by a bridge. They were too distant from London, across a river too wide to be controlled by shore defences alone, to benefit the city in particular or communications in general, and it remains to be shown that there was anything at Southwark itself to call for special protection. The probability is that the bridge and *burh* which presented such an effective barrier to Danish shipping in 1016 that the invaders had to dig a channel around the southern side of Southwark,⁶² were both built as part of a single operation in *c.* 900. That probability approaches virtual certainty in the light of the special attention paid at the turn of the 9th and 10th centuries to the securing of river crossings and the control of riverborn traffic. In 895 Alfred himself selected an unspecified place at which the river Lea could be blocked to prevent the Danes bringing out their ships, a stratagem achieved by the erection of two fortifications (*tu geweorc*) on the two sides of the river.⁶³ A similar, and much more widespread, concern can be seen in a series of fortifications, recorded in the *Anglo-Saxon Chronicle*, which were undertaken between 907 and 920. Unlike the great majority of sites listed in the Burghal Hidage, these were all in Mercia and were established by the now familiar Ethelred of Mercia and his wife Aethelflaed, in concert with Edward the Elder and as an extension of Alfred's policy, to further contain and then to reduce the Danish occupation of

eastern Mercia.⁶⁴ In five cases, Hertford (912), Buckingham (914), Bedford (915), Stamford (918) and Nottingham (920), river crossings were secured on either side by protective *burhs*⁶⁵. Except for Hertford and Buckingham, where fortification or settlement on either side was apparently novel, an existing *burh* was complemented by new defences opposite, where none had stood before. In the certain case of Nottingham a bridge was constructed between the two strongholds, and it is likely that the same was the case with the other four, though the names Bedford, Hertford and Stamford might suggest that their rivers were negotiable without further provision. But in each case it is clear that the basic requirement was a defensible crossing, with the further capacity for controlling the passage of ships.

There thus seems to be little difficulty in attributing the works at Southwark to the construction of a bridge across the Thames *c.* 900 as part of a military and economic renewal which applied to lowland England generally as well as to London in particular. No earlier occasion is recorded which compares in scope, scale and urgency with these developments, and before the reign of Alfred the Thames was, with brief exceptions, a political frontier, a condition which would have inhibited the establishment of permanent and over-accessible communications across it,⁶⁶ as it would also render its maintenance and operation uncertain. It is hard also to overlook an interesting comparison with Kingston, 15 miles upstream, which served as a frequent meeting place for the West Saxon royal council from the early 9th century, and as a crown-wearing place in the 10th.⁶⁷ As the Thames lay on the periphery of the West Saxon kingdom, such a site presumably offered some particular political advantage, possibly proximity to London. One further reason for the choice of Kingston was perhaps that, as its name shows, it was a prominent *villa regalis*, important enough to remain in royal hands throughout the Saxon period, and to give its name to the local hundred. In both these respects it signally contrasts with Southwark, but it was also favoured by the existence of a ford, by which the Thames could readily be crossed.⁶⁸ It may be then that the comparative importance of Kingston at a period when nothing is known of Southwark provides a further indication of the obscurity and remoteness of the latter site before *c.* 900. It is certainly notable too that after the 10th century much less is heard of Kingston generally and that, unlike Southwark, the town did not feature as a *burh* either in the Burghal Hidage or in the Domesday survey. These apparent changes in relative status may be merely coincidental but, like the evidence of Frithuwald's charter, they are at least consistent with a long period of minimal activity in early Southwark. They are also consistent with the evidence of major innovations in London at the turn of the 9th and 10th centuries, in which the provision of a bridge would have restored to the Southwark site something of its former Roman function and status and, not least, given it a name so conspicuously lacking in 672–4.

NOTES

1. The full Latin text is printed in W. de G. Birch, *Cartularium Saxonicum* 1 (London 1885) No. 34. A modern translation appears in D. Whitelock *English*

Historical Documents, 500–1042 (London 1955) No. 54, 440–1; (2nd ed., 1979) 479–80.

2. F. M. Stenton *Anglo-Saxon England* (3rd ed., Oxford 1971) 294.
3. Whitelock (*loc. cit.* in Note 1). The document also

- escaped the present writer, who is indebted to Gustav Milne for the reference.
4. Two modern projects are attempting to supply this deficiency on a regional basis: the *Early Charters* series, published by Leicester University Press, which consists of summaries with some comment and references, and which so far includes (by H. P. R. Finberg) *The Early Charters of the West Midlands*, and of *Devon and Cornwall* (both 1961), of *Wessex* (1964); (by C. R. Hart) of *Eastern England* (1966); of *the Midlands and of Northern England* (both 1975); and (by M. Gelling) of *the Thames Valley* (1979). A more elaborate (and protracted) treatment is the *Anglo-Saxon Charters* series, sponsored by the British Academy and the Royal Historical Society, of which *Rochester* ed. A. Campbell (London 1973) and *Burton Abbey* ed. P. M. Sawyer (London 1979) have so far appeared. Until these series are concluded, P. H. Sawyer *Anglo-Saxon Charters: an annotated list and bibliography* (London 1968) provides the most complete single coverage, with abstracts and comment: The present charter is no. 1165. Unfortunately, however, the reference to London is not included in the abstract (or in the index), a defect only very recently redressed by Margaret Gelling's *Early Charters of the Thames Valley* (see above) No. 309.
 5. This information derives from a parenthesis in the Latin text (see Whitelock *loc. cit.* in Note 1) and may be a later interpolation. It is however consistent with other evidence.
 6. See T. Dyson in C. Hill, M. Millett and T. Blagg, *The Roman Riverside Wall and Monumental Arch in London*, London Middlesex Archaeol. Soc. Special Paper No. 3 (1980) 9–10.
 7. *Southwark Excavations 1972–4* ed. J. Bird, A. H. Graham, H. Sheldon and P. Townend, London Middlesex Archaeol. Soc. & Surrey Archaeol. Soc., Joint Publication No. 1 (1978) 1. 13–15, 19–20, and Figs. 2–4.
 8. *Ibid.* 47–8.
 9. *Ibid.* 22; Fig. 1 (Road 1).
 10. *Ibid.* 22, 25, 252–5 (Road 2).
 11. *Ibid.* Fig. 2.
 12. *Ibid.* 254–5.
 13. See below, p. 91.
 14. British Library, MS Cotton Vitellius A xiii (in which Frithuwald's charter appears on ff. 20v.–23). See *The Chertsey Abbey Cartularies* 2 (pt. 1) introd. C. A. F. Meekings, *Surrey Record Society* 12 (1958) xiv–xv.
 15. Sawyer (*op. cit.* in Note 4) No. 1165.
 16. *Loc. cit.* in Note 1.
 17. F. M. Stenton *Latin Charters of the Anglo-Saxon Period* (Oxford 1955) 29.
 18. J. E. B. Gover, A. Mawer and F. M. Stenton, *The Place-names of Surrey* English Place-name Society 11 (Cambridge 1934) xvi.
 19. Stenton (*loc. cit.* in Note 17).
 20. See below. Appended English bounds became common from the 9th and 10th centuries, partly as response to damage and confusion caused by Danish raids and invasion. For the particular plight of Chertsey, see below, p. 87.
 21. Meekings (*op. cit.* in Note 14), xv.
 22. These include Sawyer (*op. cit.* in Note 4) Nos. 69, 127, 285, 353, 1093, 1094–5, 1181 and 1477.
 23. *Ibid.* Nos. 420, 752, 1035.
 24. Gover, Mawer and Stenton (*op. cit.* in Note 18) 88.
 - The fact that the surviving texts are spurious does not of course preclude the possibility that there was some original substance to the abbey's 'association' with these places.
 25. *Victoria History of the Counties of England (VCH): Surrey* 1 (London 1902) 310, and map between pp. 294 and 295.
 26. Sawyer (*op. cit.* in Note 4) No. 353, dated 871–99. See now also Gelling (*op. cit.* in Note 4) No. 322.
 27. Stenton (*op. cit.* in Note 2) 285–6.
 28. F. M. Stenton 'The English Element in Place-Names' in *Preparatory to Anglo-Saxon England* ed. D. M. Stenton (Oxford 1970) 77–80.
 29. *VCH (Surrey)* 2 (London 1905) 55–6.
 30. See below, p. 92 and Note 62.
 31. D. J. Johnson *Southwark and the City* (Oxford 1969) 22 and n.7, 23. For Earl Godwin's character, see F. Barlow *Edward the Confessor* (London 1970) 89.
 32. Sawyer (*op. cit.* in Note 4) No. 940; J. Kemble *Codex Diplomaticus Aevi Saxonici* 7 (London 1845) No. 718 (pp. 353–5).
 33. City of London Records Office, Husting Roll 20(44): '... venellam per quam itur versus la Fywayrve . . .'; cf. H. R. 34(99): '... venella . . . versus le Fihswarf . . .' (1306) and H. R. 42(19) '... venella . . . per quam itur ad kayum . . . vocatum le Fishwarf' (1313). The lane, later Trig Lane, was the eastern boundary of the parish of St. Peter the less; the wharf would have lain to the east of it.
 34. *Cal. Charter Rolls 1257–1300*, p. 16; *Cal. Misc. Inquisitions*, 1 No. 246.
 35. F. E. Harmer *Anglo-Saxon Writs* (Manchester 1952) No. 43, 201ff.
 36. T. Dyson 'The terms 'quay' and 'wharf' and the early medieval London Waterfront' in *Waterfront Archaeology in Britain and Northern Europe* ed. G. Milne and B. Hopley, Council for British Archaeology (forthcoming).
 37. Bede *Historia Ecclesiastica*, ii.3.
 38. *Ibid.* i. 29.
 39. Anglo-Saxon Chronicle, MS. E. The nature and date of the ultimate source of this annal, as used by the synthetic Alfredian chronicle, is uncertain and may itself post-date the 7th century.
 40. Bede (*op. cit.* in Note 37) iv. 22. The date is established in the following chapter of the *History*.
 41. *The Ancient Laws and Institutes of England*, ed. B. Thorpe, Record Commission 66 (1840) 14–15. Hlothere and Eadric ruled Kent jointly—or separately—between late 684 and early 685.
 42. Bede (*op. cit.* in Note 37) ii.16.
 43. Sawyer (*op. cit.* in Note 4) Nos. 86, 88, 98. They are in favour of Minster in Thanet (? 733), Rochester (734) and Worcester (743–5) respectively.
 44. Stenton (*op. cit.* in Note 2) 279.
 45. *VCH (Essex)* 2 (London 1907) 115.
 46. Bede (*op. cit.* in Note 37) iii. 7.
 47. Wulfhere's grant to Barking is recorded in a spurious, but not necessarily unfounded, charter of 677 (Sawyer, *op. cit.* in Note 4, No. 1246). Frithuwald's charter seems to show that King Egbert (of Kent, 664–673) founded Chertsey (*monasterium quod primo sub rege Egberto constructum est*). Presumably Wulfhere in some sense assumed Egbert's role when he took over control of Surrey in the interval after 660.
 48. Gover, Mawer and Stenton (*op. cit.* in Note 18), xiv and n.; Whitelock (*op. cit.* in Note 1) no. 32 (p. 399).

- For the origins of Surrey as part of a district which also included Middlesex see Gover, Mawer and Stenton, xiv–xv. In the 12th century Londoners claimed hunting rights in Surrey (C. N. L. Brooke, G. Keir and S. Reynolds 'Henry I's Charter for the City of London', *J. Soc. Archivists* 4 (1973) 576). The origin of this claim is likely to be of great antiquity.
49. See Note 47.
50. It might be noted here that the 'value of 1800 hides' accredited to Southwark in the Burghal Hidage (*Southwark Excavations* (op. cit. in Note 7, 48)) is not that of the area of the *burh* itself, but of a region (presumably Surrey, assessed at 1830 hides in 1042–66, and at 1750½ hides in 1130 (*VCH (Surrey)* i. 276–7) intended to provide one man from each of its 1800 hides towards the manning of the Southwark defences on the basis of four men to each pole (16½ ft) of wall. Thus the length of the Southwark defences can be calculated as
- $$\frac{1800}{4} \times 16.5 \text{ ft, i.e. } 7425 \text{ ft.,}$$
- which apparently conforms with the archaeological evidence for the extent of the Roman settlement.
51. *Southwark Excavations* (op. cit. in Note 7) 48.
52. *De Institutis Lundonie* (also known as Ethelred II, Code IV), Thorpe (op. cit. in Note 41) 127–9. A supposed reference to 'London Bridge' in 963–975 has recently been shown to relate to Northamptonshire (D. Hill, 'London Bridge: a reasonable doubt?' *Trans. London Middlesex Archaeol. Soc.* 27 (1976) 303–4).
53. Johnson (op. cit. in Note 31) 12–13; *VCH (Surrey)* i. 256. A significant number of Surrey properties also held land in London in 1086, and it is clear that city and suburb were regarded as indistinguishable for some purposes (Johnson *Ibid.* 13).
54. A. H. Smith *English Place-name Elements* 2, English Place-name Society, 26 (Cambridge 1956) 254.
55. *Ibid.*
56. *Anglo-Saxon Chronicle*, 1016, 1052. The existing texts which records these events date from c. 1100 (see loc. cit. in Note 54).
57. D. Hill, 'The Burghal Hidage: the establishment of a text', *Medieval Archaeol.* 13 (1969) 84–92.
58. *Southwark Excavations* (op. cit. in Note 7), 48.
59. Cf. A. H. Smith (loc. cit. in Note 54). Note in particular 'Butterwork' in Lincoln: *butangeveorc* ('outside work').
60. *Asser's life of King Alfred*, ed. W. H. Stevenson (Oxford 1904), 69; *The Chronicle of Aethelweard*, ed. A. Campbell (London 1962), 46.
61. T. Dyson, 'Two Saxon Land Grants for Greenhithe' in *Collectanea Londiniensia: studies . . . presented to Ralph Merrifield*, ed. J. Bird, H. Chapman and J. Clark, London Middlesex Archaeol. Soc., Special Paper No. 2 (1978), 200–215.
62. *Anglo-Saxon Chronicle*, for 1016.
63. *Ibid.*, MS A.
64. See F. T. Wainwright 'Aethelflaed, Lady of the Mercians' in *The Anglo-Saxons, Studies . . . presented to Bruce Dickins* ed. P. Clemoes (London 1959) 53–70. Wainwright's case that the record of the Mercian contribution to these campaigns and expeditions was subsequently suppressed by Edward the Elder might help to explain the lack of more specific detail about developments in London, particularly in the *Anglo-Saxon Chronicle*.
65. These details are based on M. Biddle 'Towns', in *The Archaeology of Anglo-Saxon England* ed. D. M. Wilson (London 1976) 135–6.
66. Cf. D. Johnson (op. cit. in Note 31) 5.
67. *VCH (Surrey)* 3 (London 1911) 487.
68. *Ibid.*

THE BRONZE HORSEMAN

A POSTSCRIPT

JOHN CLARK

In my contribution to the Society's second Special Paper *Collectanea Londiniensia*¹ I made the suggestion, which could be no more than speculation, that the 12th-century writer Geoffrey of Monmouth's fantasy, in his *History of the Kings of Britain*, of a life-size bronze horseman erected on the west gate of London as a tomb and memorial for Cadwallo, King of the Britons, might have been inspired by the discovery in that area of fragments of a Roman bronze equestrian statue. A further reference in Geoffrey's text, not noted by me there, would seem to add further weight to that argument.

The bronze figure erected on London's west gate is referred to by Geoffrey three times. The most important of these is his account of its erection at the time of Cadwallo's death,² but it is also 'foretold' in the *Prophecies of Merlin*, which are incorporated at an earlier point in the *History*, that a 'bronze man' would 'for many ages guard the gates of London on a bronze horse'.³ The relationship to the rest of the *History* of the composition of these 'prophecies', which have their own preface and dedication by Geoffrey and were apparently first published independently before the completion of the whole work, is unclear, as is the extent to which they are the sole invention of Geoffrey himself.⁴ Yet there are sufficient references back and forth between the *Prophecies* and the *History* to indicate that they can be used in conjunction when discussing Geoffrey's intentions and his vision of the past.

Thus the third reference I had not previously noticed is relevant. This also is one of Merlin's 'prophecies', and follows shortly after that of the bronze man guarding the gates of London. It refers to the time when 'the German serpent will be crowned'—when the Saxons win control of Britain—and states simply that 'the bronze prince will be buried'.⁵ There is no doubt about the last word '*humabitur*' which appears in the earliest manuscripts, though later copyists, puzzled by this odd reference, wrote '*humiliabitur*'—'will be humbled'.⁶

Geoffrey, then, seems to envisage a bronze statue, which had been erected on a London gate in the last days of British rule, being taken down and buried when the Saxons came to power. Its 'burial' emphasises that the obvious inspiration for such a suggestion would be the discovery, in Geoffrey's own time, of such a statue, or recognisable fragments of one, in the ground—perhaps during the building, as I previously suggested, of Baynard's Castle or the new cathedral of St. Paul. Such a discovery, combined with a knowledge of cases in Rome where similar bronze statues still survived in the 12th century, some of them on arches,⁷ and possibly even of Roman coins like that of

Claudius showing an equestrian statue on a triumphal arch inscribed 'DE BRITANN',⁸ would be quite sufficient foundation for a writer with Geoffrey's obvious talents for historical speculation to build his reconstruction of a gate surmounted by a bronze horseman, to relate, as modern archaeologists so often do, the results of excavation to better-surviving parallels elsewhere and to iconographical evidence. Thus there are good grounds for regarding the 'bronze horseman' as an early example of a historical hypothesis based on the evidence of archaeology, and Geoffrey of Monmouth as one of London's earliest archaeologists.

NOTES

1. J. Clark 'Cadwallo, King of the Britons, the bronze horseman of London' in J. Bird, H. Chapman and J. Clark eds. *Collectanea Londiniensia* London Middlesex Archaeological Society Special Paper No. 2 (1978) 194–199.
2. *Historia Regum Britanniae* XII. 13.
3. *Ibid.* VII. 3.
4. J. S. P. Tatlock *The Legendary History of Britain* (Berkeley 1950) 403–421.
5. *Loc. cit.* in note 3.
6. As in the 13th-century Harlech manuscript collated with earlier texts by A. Griscom ed. *The Historia*

Regum Britanniae of Geoffrey of Monmouth (London 1929) 386.

7. Tatlock *op. cit.* in note 4, 375.
8. Clark *op. cit.* in note 1, 198 and Fig. 1. I deliberately did not there make this suggestion, of the coin as a source of inspiration, explicit; however, having discovered that W. R. Lethaby had speculated on these lines as long ago as 1902 (*London Before the Conquest* (London 1902) 17–19), and encouraged by a similar comment (in correspondence) from Dr. Martin Henig, I am emboldened to put it in print here.

THE BRASSES OF MIDDLESEX

PART 20

Isleworth

H. K. CAMERON

The church of All Saints at Isleworth has changed in shape and appearance many times. The only remaining medieval feature is the 15th-century west tower. The nave was rebuilt in 1706–7 and Sir Christopher Wren was in part responsible for the design.¹ A major restoration took place in 1866–8 when the chancel, vestry and organ chamber were added.² The church was burnt down in 1943, not by enemy action but by miscreant boys. It took some twenty-five years before rebuilding began, supported in the main by local subscription, and six years later the reconstruction was brought to a happy conclusion with a most imaginative lay-out and modern building which is architecturally highly satisfying, enhanced as it is by the superb riverside site which this church has always enjoyed.

These many changes have had their effect on the brasses, not least the loss without trace of the most unusual and interesting small figure of a nun from the neighbouring monastery of Syon. Weever writing in 1631³ quotes eight inscriptions, not specifically on brass but from the style very likely so, and not one of these exists today. On the other hand he does not mention any of those that have survived. Lysons⁴ in 1795 records some and their positions in the church as it was. A first description of the brasses with illustrations of two of them was given by Aungier⁵ in 1840. He notes that at least three of them were loose and kept in the vestry. Following the restoration in 1866 they were all refixed, but one at least was loose again early in this century. The later history will be described under each individual brass.

- I. An unknown figure in armour,
c. 1450, now mounted on wood
and on a pillar at the west end of the new church.

This excellently preserved and elegant figure is just 36 inches high. He is shown in full plate armour with bare head and short cropped hair. The sword, hung from a belt slanting from the right hip, has been broken and the lower part is missing, as is the end of the dog's tail below. His feet in long pointed sabbatons rest upon this long-nosed dog or hound. The dating of this brass to



Isleworth. No. I. Unknown Knight, c. 1450.

about 1450 is established by the close likeness in style to other brass figures whose identity is known. One of these is to Walter Grene at Hayes who died in 1456 and whose brass was described in an earlier paper in this series.⁶ The differences are that Walter Grene's head, though also bare, is lying on a helmet: he wears a dagger at his right hip in addition to his sword; and his feet rest on a griffin. It is 35 inches high. His son-in-law's father, John Gainsford, who died in 1450, is commemorated at Crowhurst in Surrey by another brass so closely alike that it must be contemporary and from the same workshop.⁷ The only variation is that his feet rest on a lion. The height is 37½ inches. At Ulcombe in Kent the figure of John St. Leger who died in 1442 has a dog at his feet, with head turned backwards and up towards his master, exactly like the figure at Isleworth.⁸ Two more similar figures are to be found in Essex; one, also about 1442, represents Thomas Torrell at Willingale Doe and has the dog with upturned face;⁹ the other is at Little Waltham and commemorates John Maltoun, the lord of the manor, who died in 1447.¹⁰ Another very close parallel, this time accompanied by his wife, is the brass to Thomas Reynes, also lord of the manor at Marston Mortaine in Bedfordshire, who died in 1451.¹¹ The distinctive features of the armour on these effigies are, first the overlapping plates above the shoulders secured by rivets to the breast plate and by a strap around the neck. These were intended to provide flexibility in arm and shoulder movement. The second characteristic is the division of the taces into smaller pieces than is usual, again to assist freer movement, this time of the legs. Several of the figures have at their feet a hound, each almost identical with the others and unlike any other dogs to be found in this position. The close similarity of this group of brasses has of course been noted before, and is indeed regarded by the cognoscenti in this field of stylistic studies as part of a continuously developing pattern of engraving called Series B.¹²

The likelihood is that these brasses were all engraved in a workshop of renown situated probably in London and used by persons of some substance. Several of the names mentioned above were lords of the manor where they lived. Thomas Torrell had been sheriff of Essex and Hertfordshire. Walter Grene had been a member of Parliament for Middlesex no fewer than eight times and John Gaynesford had also been a member. It is unfortunate that there is no positive identification of the figure at Isleworth. For many years past the only inscription associated with it has been that commemorating William Chase (brass No. II) which postdates the style of armour by a hundred years. Mill Stephenson¹³ in his List suggests that this brass may be for Geoffrey Goodluck, though possibly on no more evidence than is provided by Aungier in his book on the parish. On p. 459 he quotes from the will of this man:

'Testamentum Galfridi Goodlocke, 12 October, 1452. 'corpusque meum sepeliend. in ecclesia paroch. Omnium Sanctorum de Istelworth London dioc. Item lego eidem ecclesiae pro sepultura corporis mei vi^s viii^d.'

That Goodluck was a substantial landowner in and around Isleworth is evident from another quotation by Aungier (p. 214); in 1444 Joan, widow of Richard Maydestone, remised and quitclaimed for ever for herself and her heirs

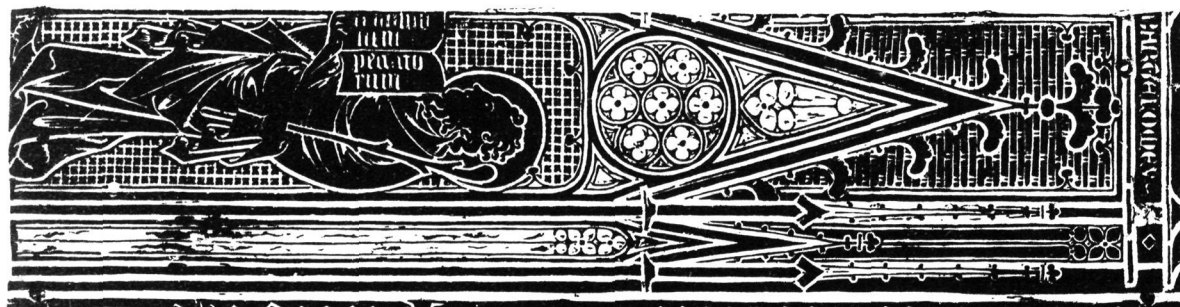
to Geoffrey Godlok and Elizabeth his wife their heirs and assigns all her right, title etc. to and in all the lands etc. in Isleworth called Thistleworth, Hounslow, Brentford and other places in the Counties of Middlesex and Hertford.

The original stone in which this brass had been laid on the floor of the north aisle and with which brass No. II had been associated as far back as the 18th century at least, had been thrown outside the church on the south side by 1840, and the brass itself was then loose in the vestry. It was relaid at the 1866 restoration in a white stone, 47 inches by 24 inches, as was noted by F. A. Greenhill who visited the church in December, 1923.¹⁴ Brass No. II, an inscription, was again laid beneath, but this had already worked loose by 1902. The stone was laid on the floor at the east end of the south aisle. Since the recent rebuilding of the church it has been mounted on wood and fixed to a brick pillar at the west end of the church.

II. William Chase Esquier, *ob.* 1544.

A rectangular plate 19½ inches wide and 5 inches high records in five lines of blackletter the following inscription:

Of yo' charyte pray for the Soule of Wyllm Chase Esquier
sūtyme sergeaunt to Kyng Henry the viii & of hys most honorable
howsehould of hys hall & woodyerd which decessed the viii day
of Maye yn the yer' of oure Lord god m' ccccc and xliiii
of whos soule & all crystyn Soules ihū have mercy amen



Isleworth. No. II. William Chase Esq., *ob.* 1544.

This inscription was below the figure of No. I for many years. Lysons, in 1795, wrote that 'On the floor of this (north) aisle are the tombs of William Chase Esq. (a brass plate with a figure of the deceased in armour), 1544'. This is unusual; the period when monuments were restored, often mistakenly, was the nineteenth century. It is possible that the error of placing these two pieces together occurred at the rebuilding of the nave in 1706–7, though it is also just possible that the earlier figure was appropriated, or misappropriated, to the use of William Chase when his inscription was originally laid. Such behaviour was not unknown, particularly at the time when many brasses were available from the recently despoiled monastic churches. The Chase inscription is itself cut on the back of such a piece of 'scrap' metal.

Of the obverse of this brass and of William Chase there is no more to relate than what the interesting inscription tells. The engraving on the reverse shows it to have been part of one of those large 14th-century brasses imported from the Low Countries and engraved at Tournai. Complete examples occur in this country, for example at St. Albans and at King's Lynn. This fragment comes from the side shaft of a canopy and was engraved about the middle of the century. The side shafts of these canopies enclosed a series of niches in which were small figures of saints, usually the apostles. This example is unique in two respects. It has the names of the apostles engraved in Lombardic letters immediately below the relevant figure. The name BARTELOMEVS can be seen at the top of this piece and must refer to the missing figure above. It is unfortunate that the name is missing below the figure on this fragment. The second unique feature is that the saint holds an open book on which is engraved in small blackletter the words 'remissionem peccatorum', that phrase from the Apostles' creed associated with St. Simon. His presence on these brasses is uncommon and his usual symbol is a saw. There was however more variety and less rigidity about the symbols used at this period for all but the most popular and best known saints, and Simon is also shown at times with a fish, or an oar, or as in this example with a club. Were it not for the extract from the creed, this figure would have been accepted as St. James-the-Less whose usual attribute was a fuller's bat or club.

This interesting palimpsest fragment has had a troubled history. The inscription, associated with brass No. I in Lysons' day, was loose in the vestry in 1840. Relaid under No. I in 1866 it was again reported as loose in 1902¹⁵ and by F. A. Greenhill in 1923.¹⁴ It survived thus until 1943 when the church was burnt down. The present illustration is from a rubbing made by R. H. Pearson on 20th May, 1945, when the brasses were loose at the vicarage. This piece and the other palimpsest piece, brass No. IV, came into the temporary keeping first of Mr. R. H. Pearson, Hon. Secretary and later President of the Monumental Brass Society, and then of myself as one deeply interested in Flemish brasses and in palimpsests. These pieces were returned to Isleworth when the new church was being built, only for this piece to be broken in two by, it is said, a careless and irresponsible brass-rubber. It has been mended and is now mounted, along with a resin replica of the reverse side, on a board in the community room of the new building.

III. Margaret Dely, a sister of Syon, ob. 1561.

This must be one of the smallest figures of an adult ever engraved, being only 6½ inches high. It represents a nun of Syon monastery, adjacent to the church. She is dressed in a gown with cuffs turned back and held in at the waist by a plain girdle tied in a bow at the front. A veil over her head leaves the face fully



Isleworth. No. III. Margaret Dely, a sister of Syon, ob. 1561.

exposed, but falls over her shoulders. Below this figure is a small rectangular plate, 11 inches by 4 inches, on which is the inscription in blackletter:

Here lyeth the body of Margaret
Dely A Syster professed yn Syon
who decessed y^e viith of October, A°
1561 on whose soule Jhu have m'cy

In Lysons' time this brass was on the floor of the south aisle. By 1840 Aungier writes that it 'was let into the door of the Duke of Northumberland's pew, by his Grace's express command'. At the restoration of the church in 1866 it was mounted on a small black marble tablet at the east end of the nave on the south side of the chancel arch, where it remained until 1943. At the time of the fire this brass disappeared¹ and no trace of it has come to light since. It was a small brass but of the very greatest interest and it is a most unhappy loss. A resin replica is now mounted on the board in the new community room. The present illustration is from a rubbing made in 1901 by a former President of the Monumental Brass Society, Mr. A. B. Connor, the rubbing now being in the Cambridge collection.

IV. Fraunces Holland, *ob.* 1575

On a rectangular plate 15½ inches wide and 6 inches high is this inscription in six lines of blackletter:—

Here lieth buried under this apynion of Armes
Mistris Fraunc^e Holland one of the Daughters of
Edwarde Holland of Denton in the Countie of Lan-
kastre Esquier: and Servant unto the right Hono-
rable the Ladie Margaret Countesse of Derby who
Disseased the xxviith daye of Marche A^o dñi 15(75)

The corner of the brass has been broken off for many years past and the last two digits of the year of death are missing. The parish register records her burial on March 29th, 1575, as 'Frances Holland, gentlewoman to the Comtiss Darby.' (Fire has obliterated the word Darby, but see Ref. 15.)

This inscription is palimpsest too, also being a fragment of a Flemish brass which has been turned over and reused. It has on the reverse the corner of an armorial memorial of late 15th or early 16th century showing part of a shield with a field fretty of eagles displayed and the mantling above it. A pomegranate is in the corner and an ornamental border surrounds the original plate. Another piece of this same Flemish brass with more of the shield, mantling and border has been found on the back of an inscription to Anne Harman of date 1574 at Erith in Kent, while a third piece with the helm and mantling has more recently been found at Isleham in Cambridgeshire on the reverse of part of an inscription to Richard Peyton who also died in 1574. It is evident that these three scattered English brasses must have been engraved in a workshop, probably in London, where they were reusing metal taken from Flemish churches in the iconoclasm of the preceding years, notably 1566. An illustration connecting these three reverse pieces has recently appeared.¹⁶

This inscription at Isleworth was loose in the vestry in 1840. In 1866 it was relaid at the east end of the south aisle in the same stone as No. V. While temporarily in my possession it was possible to examine the red colouring matter with which some parts of the Flemish engraving were still filled. Analysis confirmed the use of cinnabar, or mercuric sulphide, commonly used



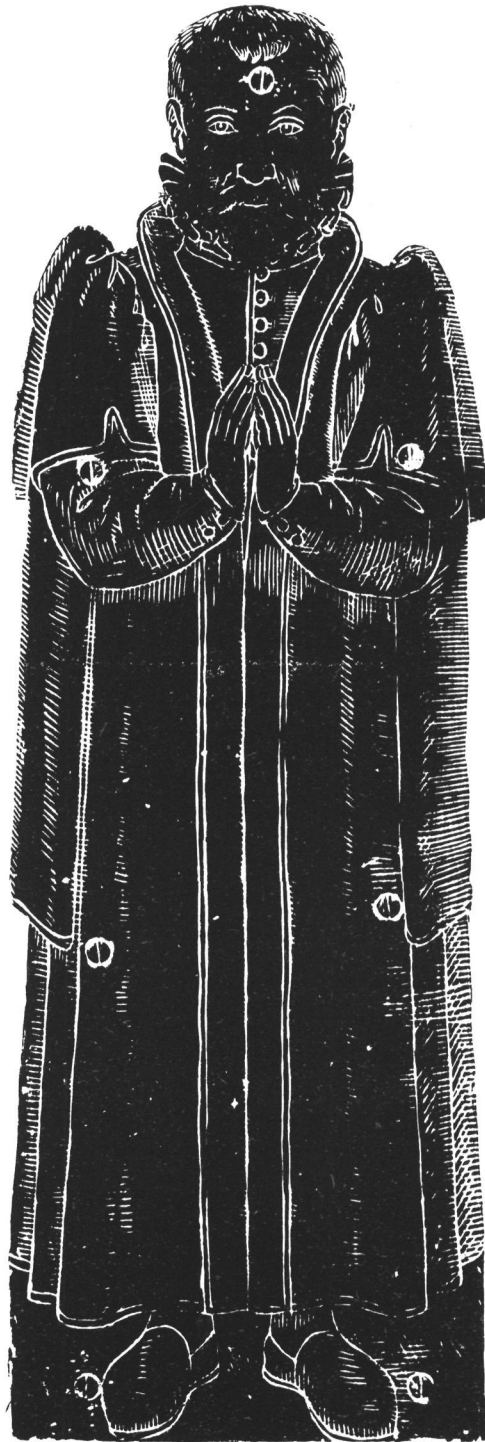
Here lieth buried under this effigie of Armes
 Miltris Fraunce Holland one of the Daughters of
 Edward Holland of Denton in the Countie of Lan-
 kastre Esquier: and Servant unto the right hono-
 rable the Ladie Margaret Countesse of Archie who
 disleased the xxijth daie of Marche A^o dñi. 15

Isleworth. No. IV. Fraunces Holland, ob. 1575.

in medieval times as a bright red pigment. The brass has now been mounted with other brasses on a board on the wall of the community room, with a resin copy of the reverse.

V. A civilian, c. 1590

This is a figure of a civilian in full face view, 23½ inches high. His dress is buttoned up to his neck, around which is a ruff. There are also two buttons at each cuff. An outer gown reaches to the ankles, turned back at the front edges and half standing around the neck as a collar. The sleeves of this gown end above the elbows, are puffed at the shoulders and have false ends reaching half way down the figure. The shoes are plain and simple. He has a beard and a moustache.



Isleworth. No. V. Unknown Civilian, c. 1590.

This brass was also loose in the vestry in 1840. It was relaid in 1866 along with the inscription to Fraunces Holland, on a stone at the east end of the south aisle. It has now been mounted on a board on a brick pillar at the west end of the new church. There seems no evidence of the name of this civilian, although Mill Stephenson¹³ suggests that it may possibly commemorate Laurence Manley, yeoman usher of the chamber and serjeant of the bears, who died in 1589.

VI. Katherine Cox, *ob.* 1598; inscription and two sons remaining

An inscription in seven lines of Roman Capitals records the death of Katherine Cox. The plate is 20 inches wide and six inches high. Associated with this is a small plate six inches high and three inches wide on which are two small male figures in long gowns with ruffs around the neck.

The inscription reads:—

KATHERINE COX THE WYFE OF RICHARD COX MARCHANT
TAYLER WHO DECEASED THE LAST OF JVNE 1598 AND
ABOVTE THE AGE OF FORTYE VIII YERES AND LEFT BEHIND
HER EDWARD COX AND LAURENCE COX MARGRET AND JANE
COX SONNES AND DAUGHTERS VNTO THE SAID RICHARD COX
AND THE SAYD CATHERINE COX WIFF OF THE SAID RICHARD
COX LATE DECEASED THE SERVANT OF GOD.

The burial register shows, in the year 1598: 'July 1. Catherine Coxe the wife of Richard Coxe.'

These brasses are now on the board in the community room.

VII. Mrs Ann Master, *ob.* March 5th, 1767.

This is a brass coffin plate, 16 inches high and 12 inches wide with a lozenge of arms, supported by the winged head of an angel and surrounded by floral scroll work. On it is inscribed:

Mrs.
Ann Master
Died March 5th
1767
aged 70

This plate is on the board in the community room.

VIII. Mary Nevill, Countess of Abergavenny, *ob.* 1796.

This too is a brass coffin plate, now kept in the church office, measuring 31½ inches high and 19 inches wide. At the head is engraved a fine Countess' coronet and below:

MARY NEVILL
Countess of Abergavenny
Died the 26th October
1796
AGED 36 YEARS

KATHERINE COX THE WYFE OF RICHARD COX MERCHANT
TAYLER WHO DECEASED THE LAST OF IUNE 1598. AND
ABOVTE THE AGE OF FORTYE VIII. YERES AND LEFT BEHIND
HER EDWARD COX AND LAVRENCE COX MARGRET AND IANE
COX SONNES AND DAUGHTERS VNTO THE SAID RICHARD COX
AND THE SAYD CATHERINE COX WIFF OF THE SAID RICHARD
COX LATE DECEASED THE SERVANT OF GOD.



Isleworth. No. VI. Katherine Cox, ob. 1598, with two sons.

The following extract from the parish register is quoted by Lysons¹⁷:— The Hon. Henry Nevill of St. George, Hanover-square, and Mary Robinson (daughter of John Robinson, Esq. M.P.) of this parish, were married by special licence, Oct. 3, 1781. Mary Catherine daughter of the Hon. Henry Nevill, son and heir of George Baron of Abergavenny and Mary his wife, baptized Mar. 24, 1783; Henry George, son of the Rt. Hon. Henry Visc^t Nevill and Mary, June 20, 1785; Ralph, son of the Rt. Hon. Henry Earl of Abergavenny, & Jan. 22, 1787; Henrietta, Aug. 14, 1788; John, Feb. 27, 1790; William, Aug. 5, 1792.'

Inscriptions to the following persons in Isleworth church were recorded by Weever³ in 1631; 'Tombs (says Lysons), mentioned by Weever, now decayed or removed.'

John Payne, vicar	1470
Henry Archer	2 Sept. 480 (for 1480)
Clemens Colyns, vicar, iuris Doctor	1498
Audry, w. of Gedeon Aundesham	1502
John Robinson & ws. Katherin & Jone	1503
John Holt & ws. Margerie & Elizabeth	1520
John Sampol, yeoman, Usher of the King's Chamber	1535
Maister Antony Sutton, B.D.	2 Aug. 1543

None of these monuments, most probably inscriptions on brass, now remains. Weever notes that the name Sampol is an alternative spelling for St. Paul, a family from Melwood in Lincolnshire. It is interesting to observe the name John Robinson who must have had as a descendant the John Robinson of Wyke House whose only child Mary became the Countess of Abergavenny (No. VIII).

NOTES AND REFERENCES

1. V.C.H., *Middlesex* III (1962) 125.
2. R.C.H.M., *Middlesex* (1937) 84.
3. Weever *Funerall Monuments* (1631) 528–29.
4. D. Lysons *Environs of London* III, (1795), 102–104.
5. G. J. Aungier *History of Syon Monastery etc., the Parish of Isleworth & the Chapelry of Hounslow* (1840).
6. *Trans. London Middlesex Archaeol. Soc.*, 25, (1974), 303 *et seq.*
7. *Surrey Archaeological Collections*, XXVII 28.
8. R. Griffin & Mill Stephenson *Monumental Brasses in Kent* (1922), Pl. 32.
9. *Trans. Essex Archaeological Soc.*, N.S. VIII, 284.
10. *Essex Review*, II, 47.
11. T. Fisher *Collections Genealogical & Topographical for Bedfordshire* (1812–36), Pl. 66.
12. J. P. C. Kent in *J. Brit. Archaeol. Assoc.*, 12 (1949), 70 *et seq.*; R. Emmerson in *ibid.* 131 (1978), 50 *et seq.*
13. Mill Stephenson *A List of Monumental Brasses in the British Isles*, (1926), 305.
14. F. A. Greenhill: *pers. comm.*
15. *Trans. Monumental Brass Soc.*, IV, 202.
16. *Ibid.* XI, 296.
17. Lysons, *op. cit.*, in note 4, 118.

EXCAVATIONS IN ENFIELD 1977-1979

JAMES DINN AND SUSAN REYNOLDS

SUMMARY

Excavations in Enfield Town from 1977 to 1979 produced traces of medieval activity in the area to the south of Church Street, while a small site in Lincoln Road revealed Roman features.

INTRODUCTION

Excavations took place in Enfield Town from 1977 to 1979 in advance of the construction of a shopping precinct to the south of Church Street. They were carried out at first by the Enfield Archaeological Society and later, over the winter of 1978-79, by a small professional team, directed by G. Williams, with the assistance of the authors. Three sites were excavated in the town centre (Fig. 1); all produced evidence of medieval activity, although no definite traces of the Palace which stood in the area from 1552 to 1927 were found. A full report on the sites excavated has been prepared and is lodged with the finds, site records and plans in Forty Hall Museum, Enfield¹. Copies of the report are available at the British Museum and at the Guildhall Library, London.

PALACE GARDENS

A preliminary report on this site has already appeared². Further work on the site has, however, led to some modification of the published conclusions. The 1978-79 programme concentrated on a reassessment and renumbering of the work carried out in 1977-78 (although the original feature numbers are retained here for convenience of reference to the published report), and on detailed recording of the stokehole, Feature 1 (Fig. 2), which was shown to have been a more complex structure than was formerly supposed. The northern and central sections of the east wall were the earliest parts of the structure and could possibly have been connected with the Tudor Palace; while the other walls and floors were added during the course of the 17th and 18th-centuries, although no precise dating was possible. None of the features on the site could definitely be attributed to the period of the Palace. Features 2, 3 and 4 were dated to the 17th or 18th-centuries. Feature 5 (originally interpreted as a 16th-century raised pathway), Feature 6 (small pit with Tudor pottery) and Feature 7 (16th-century construction trench) all contained post-medieval or modern finds. There was no evidence to suggest that Feature 8 was a gravel floor, although it did appear to be medieval. Feature 9 may have been medieval; one layer within it, which contained post-medieval pottery, may represent an unrecorded later feature.

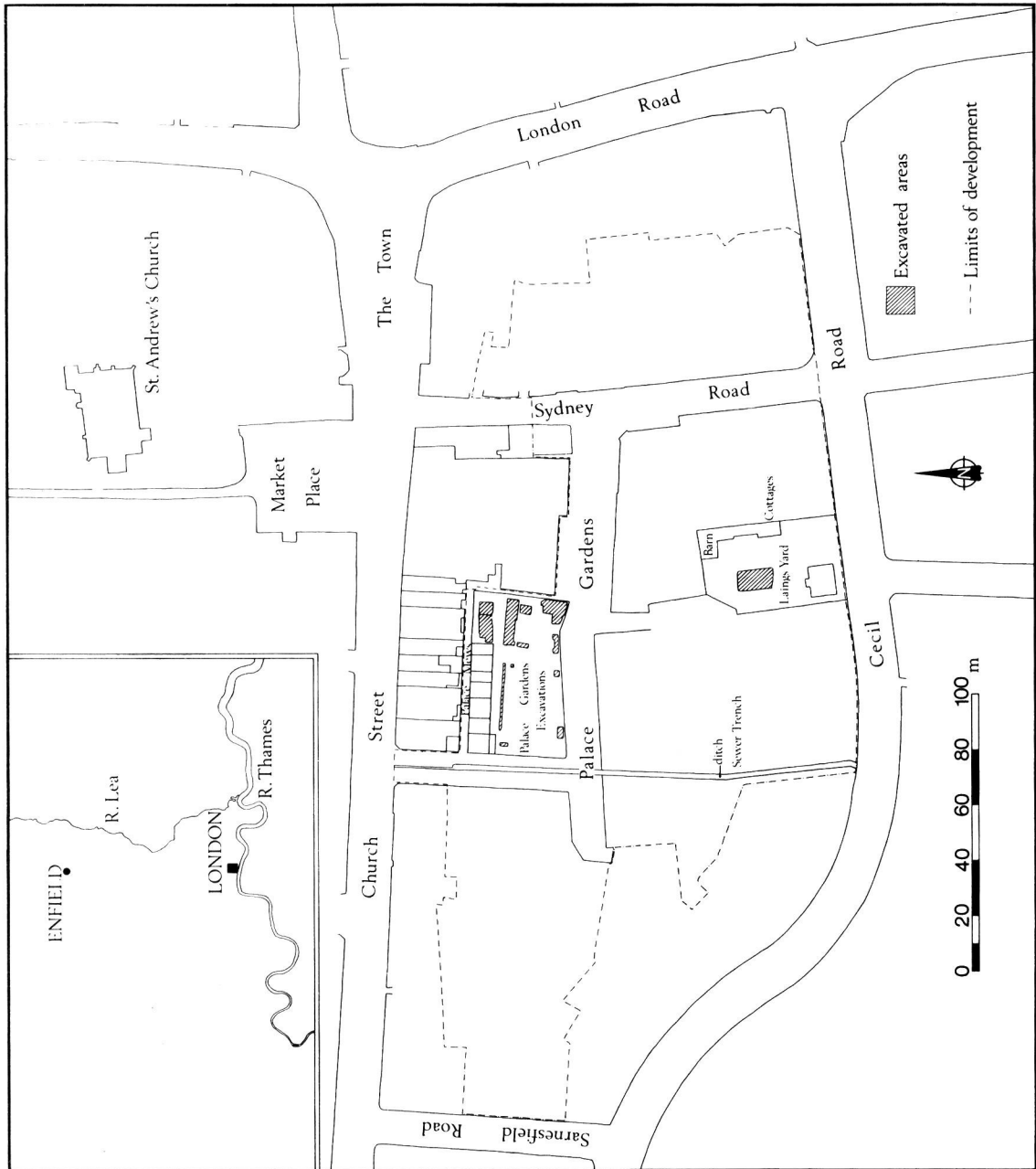


Fig. 1. Enfield: Location of town sites.

PALACE MEWS EXCAVATION

A small area of six by four metres immediately north of the Palace Gardens 1977 site was excavated. The floor and foundations of the Mews Buildings (erected in 1897) were removed by machine, as unfortunately were most of the features, only the deepest surviving. The site was disturbed by several modern features which were connected with the Mews buildings.

At the west end of the site a shallow Ditch 4, cut by a large Pit 39 containing medieval pottery of the hard, grey, quartz gritted south Hertfordshire type, was excavated. An extension of one square metre in the south-west corner of the site was dug, to find the limits of the Pit 39. This proved useful as Pit 39 was cutting a small shallow Pit 38, which contained one sherd of medieval pottery. Pit 38 cut a small squarish pit/posthole (37). Pits 37, 38 and 39 all cut 28 which was only in the extension and was the main fill of a large U-shaped ditch (40), 1.20m deep.

The purpose of Ditches 4 and 40 is not known but they could have been associated with the medieval Manor House which is said to have been in this area. Feature 37 was probably connected with a structure built after Ditch 40 had been filled in. After 37 fell into disuse, Pit 38 was dug through it as a rubbish pit and Pit 39 cut 38 for the same use. These are likely to date from the late 12th to early 13th century.

LAING'S YARD (Fig. 3)

An area of 12×7m was excavated in Laing's Yard, off the north side of Cecil Road, about 100m to the south of the Palace Gardens sites. The site was adjacent to an 18th-century barn and 19th-century cottages. Measured plans of these were made by the Enfield Preservation Society prior to their demolition.

Modern features included a number of small postholes which may be interpreted as footings for a barn which is known to have stood on the site. Features 49 and 56 which ran diagonally across the site appear to have been an 18th-century boundary ditch.

The remaining features were probably all medieval and roughly contemporary. Most of them produced medieval pottery, which was largely of the south Hertfordshire type and is usually dated to the 12th or 13th centuries. Some, however, produced pottery which is probably 14th century. In the south-eastern corner of the site were a number of long narrow pits, mostly comparatively shallow and running on a south-west to north-east alignment. These were Features 12, 14, 16, 20, 22, 24, 47 and 71 and perhaps also 74, 77, 108 and 110; only small parts of the latter came within the limits of the site.

The short parallel ditches—Features 60, 81, 86, 90, 95, 112 and 121, which occupied the rest of the site, were on the same alignment as these pits and were very probably contemporary with them. Nos 81, 86 and 121 did contain single sherds of later pottery but it is suggested that this may be attributed to root disturbance which affected parts of the site. A small Pit 83 was cut by 56; while two larger and deeper pits, 72 and 130, were cut by most of the ditches,

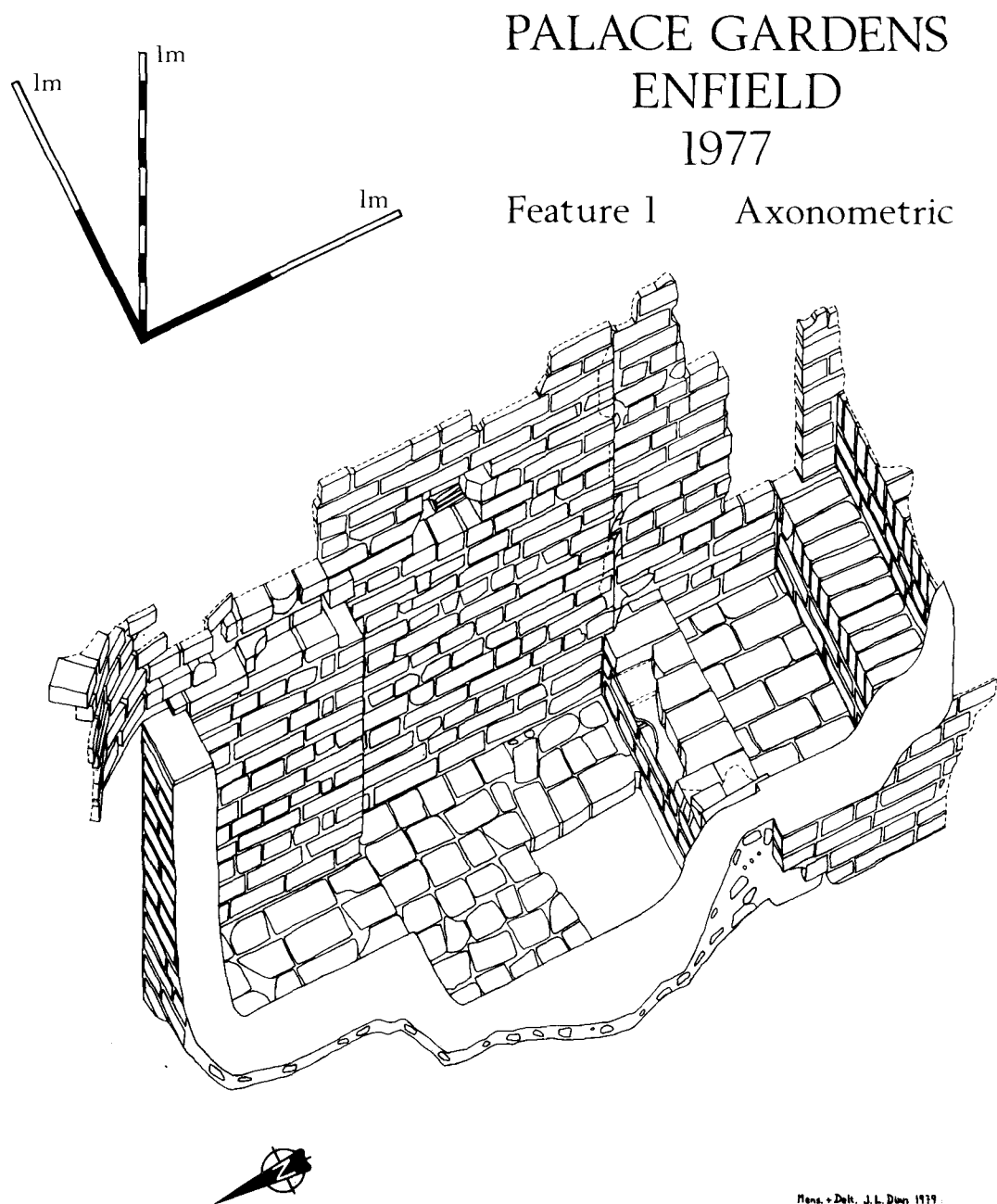


Fig. 2. Enfield: Palace Gardens, 'The Stokehole'.

although 130 did cut 90. It became clear during the excavation that not all of the ditches were dug at exactly the same time; 86 cut 112, while 81 cut both 112 and 121. In addition, several of the features, including all of the ditches, contained tips of clean orange sandy gravel, indicating that they had been left open long enough to allow some weathering of the sides. The use of the circular pits is uncertain but the purpose of the ditches and the long pits was probably agricultural. They may have been dug as a means of increasing the depth of the topsoil. If so it can be assumed that some sort of intensive farming, such as market gardening, was carried on in this area.

LAING'S YARD, ENFIELD. 1979

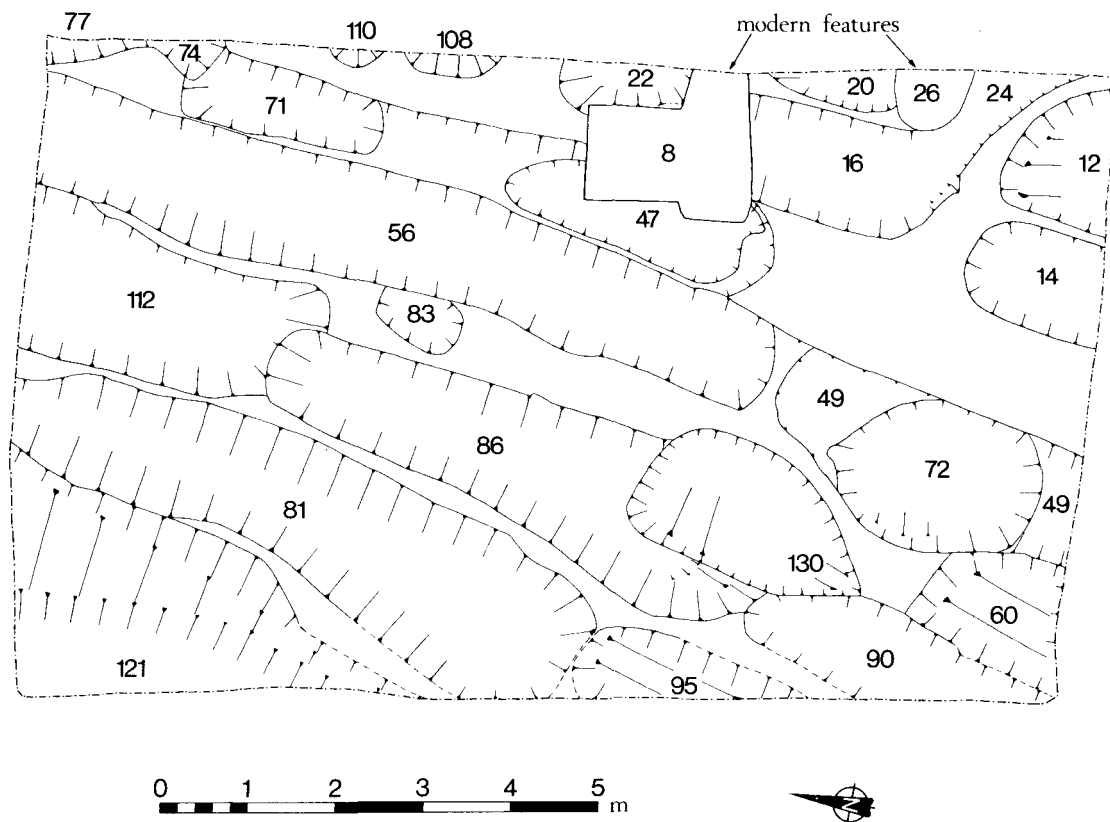


Fig. 3. Enfield: Laing's Yard, site plan.

MEDIEVAL POTTERY FROM LAING'S YARD

The medieval unglazed pottery from the Laing's Yard excavation is of the south Hertfordshire type³. It is comparable to material from Arkley, Elstree⁴, Otterspool⁵ and Rickmansworth⁶. It is of a hard, grey fabric with inclusions of mainly white quartz grits. The forms are largely those of wide based cooking

pots, although a few jugs and open bowls are represented. No decorated sherds or handles were found. The nearest known kiln sites are those near Brimsdown Station, Enfield and at Arkley, Barnet. The date of the pottery is probably late 12th to mid 13th century.

The amount of glazed and slipped pottery is very small—only 50 sherds. The fabric colours vary from grey to orange to buff. Some have inclusions of fine, white quartz grits and some have sandy fabrics. The glazes vary from light greenish-yellow with darker green mottling to mid-green. Fourteen sherds have slip decoration consisting of either stripes of white slip or overall white slip. Glaze has been applied over the slip. Three glazed strap handle sherds decorated with small holes were found. The forms are those of bulbous jugs of several different sizes. The centre of production is not yet known but these sherds can probably be dated to the 13th century.

LINCOLN ROAD

A small excavation was carried out over four days in Lincoln Road, Enfield, in November, 1978, just to the north-west of the 1974-76 excavations,⁷ where road straightening works were taking place. A ditch, possibly a field boundary and a number of small pits were found, as well as a cobbled area—perhaps a yard. Finds from the ditch and the cobbled spread indicated a date in the 3rd or 4th centuries AD. Finds and records are at Forty Hall Museum, Enfield and a full report on the site is to be found together with that from the Enfield Town sites.

ACKNOWLEDGEMENTS

Thanks are due to Enfield Borough Council and Norwich Union Insurance Societies, who generously financed the 1978-79 programme of excavations, to A. H. Nicholls, the Contractors at Lincoln Road, to Clive Orton, Trevor Hurst and John Schofield, of the Department of Urban Archaeology, Museum of London, and to the members of the Enfield Archaeological Society—notably John Ivens, who was largely responsible for organising the excavations, Richard Burton, who worked full-time through the early months of 1979, and Roger Dormer.

NOTES

1. J. Dinn and S. Reynolds *Excavations in Enfield 1977-1979* (1979).
2. P. Armitage and J. Ivens 'Excavations at Palace Gardens, Enfield 1977' *London Archaeol.* No. 6 (1979) 143-148.
3. D. F. Renn *Potters and Kilns in Medieval Hertfordshire* (Hertfordshire Local History Council 1964).
4. M. Biddle 'Medieval Pottery from Elstree' *Trans. St.*

5. *Albans Arch. Archaeol. Soc.* (1961) 65-69.
6. M. Biddle 'Medieval Pottery from a site at Otterspool, Nr. Watford, Herts' *ibid.* 70-76.
7. M. Biddle, L. Barfield and A. Millard 'The Excavation of the Manor of the More, Rickmansworth, Herts' *Archaeol. J.* 117 (1959) 161.
7. A. Gentry, J. Ivens and H. McClean 'Excavations at Lincoln Road, Enfield, 1974-76' *Trans. London Middlesex Archaeol. Soc.* 28 (1977) 101-189.

A GROUP OF SEALS FOUND AT BANKSIDE FROM ST. GALLEN LINENS OR FUSTIANS

G. EGAN

A few of the late medieval and early post-medieval artefacts salvaged during the redevelopment of a site at Bankside in 1977 have already been brought to the attention of readers of the Society's publications.¹ The five leaden cloth seals discussed here were among two groups of objects found on the site which were submitted recently to the Museum of London for recording.²

All five seals are of the two disc form. Nos. 1, 2 and 3 (Pl. 1; Fig. 1 A and B) have been stamped on one side with a bear advancing to the right between the letters S and G in a rounded medieval style of script, and on the other side with an eagle displayed. Seals 4 and 5 (Pl. 2, *c.f.* C and D in Fig. 1) also have an S and a G in the same script, one letter being the complete device on each disc. The 'S' is reversed on these latter two seals.

Just visible above the eagle's head on No. 1 (on the reverse surface of the disc stamped with the bear, where this back disc extends beyond its partner), is an imprint of the textile to which the seal was attached (the area is indicated by a line in Pl. 1, top right). Such impressions, normally unseen on the opposing inner surfaces of the discs, are a fortuitous result of the pressure exerted in striking the dies as seals were fixed in place.³ The fabric indicated here (which has not survived) was plainwoven with fine tightly spun threads, six of which can be counted in 3mm. in one system, while in the other, which is not so well defined, they seem to have been slightly closer together.⁴

Similarities between the devices on the seals and some of the medieval coins of the city of St. Gallen, which are stamped with a bear advancing to the *left* and with an eagle (see below), as well as the letters on the seals indicating their provenance, identify these Bankside finds as having come from imported textiles woven in the St. Gallen area⁵ of the upper Rhine (in present day Switzerland).

The official marking of textiles with leaden seals to indicate the good quality and provenance of each piece (*c.f.* hallmarks on precious metals) was a widespread practice in Europe from the 14th to the 18th centuries.⁶ The three larger seals (Nos. 1–3) probably each came from a different cloth. Whether the letters on Nos. 4 and 5 were adequate to identify the provenance to merchants and consumers, so that they could have been attached on their own to other textiles, or whether they were used in some subsidiary capacity along with the more elaborate ones, perhaps fixed at a different point on the length of cloth, is not known.

St. Gallen was the main producer of linens in late medieval Europe, and its

fabrics were widely traded.⁷ The industry continues to the present day.⁸ The coinage of the city further provides some indications of the date when the Bankside seals would have been used.⁹ The eagle, which appears on many issues, is single-headed from 1424 (the earliest dated coins from here) onwards to an undated series perhaps minted until 1529; from 1563 until well into the next century it is double-headed. In 1475 the bear on the city arms was given a collar by the Emperor Frederick III in recognition of services rendered by the St. Gallen contingent in the war against Burgundy.¹⁰ Assuming that the dies for the city's cloth seals were, like those for the coins, changed to keep up with the differences in the heraldry, the single-headed eagle together with the collarless bear on Nos. 1–3 implies a date for the group prior to the last quarter of the 15th century. Comparison with the dating ascribed to most of the assignable items recovered from the same site suggests these seals were used sometime between 1425 and 1475.¹¹

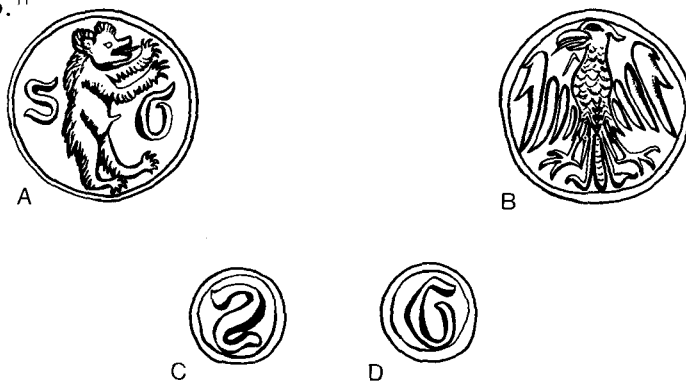


Fig. 1 St. Gallen seals: Simplified drawings of the stamps. A, bear between S and G; B, eagle; C, reversed S; D, G. (1:1).

ACKNOWLEDGEMENTS

I would like to thank Brian Spencer, Chris Unwin, Katharine Hayes, Trevor Hurst and John Bailey for their help in the preparation of this note.

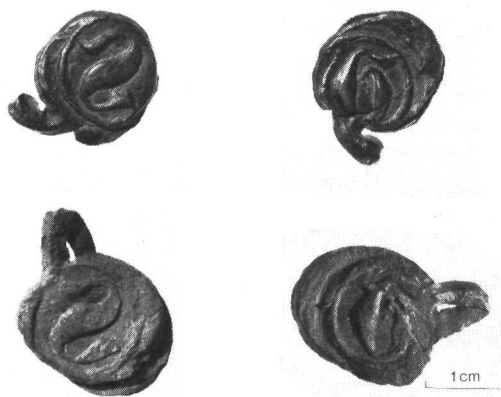
NOTES

1. B. Spencer 'Henry of Windsor and the London Pilgrim' in J. Bird, H. Chapman and J. Clark eds. *Collectanea Londiniensia (Studies Presented to Ralph Merrifield)* London & Middx. Archaeol. Soc. Special Paper No. 2 (1978) 260–1.
2. Nos. 2, 3 & 5 are in the collection of Mr. J. Auld; Nos. 1 & 4 were generously donated to the Museum of London (Acc. Nos. 80.82/5 and /52) by the finder, Mr. J. Haywood. I am grateful to Mr. Auld for making those he recovered available for publication, and to Mr. Haywood for his gift to the Museum.
3. For details of the method of attachment of this two disc type of seal to the textile, see G. Egan 'Cloth Seals' *London Archaeologist* 3 No. 7 (Summer 1978) 177–9.
4. I am grateful to my colleague Frances Pritchard for examining the imprint and providing this information.
5. There are some seals for St. Gallen textiles, thought to date from the 18th century, in the St. Gallen Historisches Museum. I am grateful to Dr. R. Labhart of the Historisches Museum for this information.
6. See G. Egan and W. Endrei 'The Sealing of Cloth in Europe with Special Reference to the English Evidence' *Textile History* (forthcoming).
7. Careful quality regulation of textiles was in operation here from at least the 14th century. F. Lerner 'Quality Controls in Pre-industrial Times' *CIBA Review* No. 4 (1968) 10, refers to 'strictly enforced specifications', but does not mention sealing.
8. J. Horner *The Linen Trade of Europe During the*

- Spinning Wheel Period* (Belfast 1920) 575 refers to the manufacture here of linens called 'Sangelletans' in the 18th or 19th century.
9. R. S. Poole *Descriptive Catalogue of the Swiss Coins in the South Kensington Museum* (London 1878) 149–179. These coins are now in the Department of Coins and Medals at the British Museum. I am grateful to the staff of this department for making them available for comparison with the seals.
 10. Poole *ibid.* 149. The bear on coins issued after this date has a collar.
 11. Mid 15th-century London Customs Accounts refer to the import of fustians (linens manufactured in the environs of Lake Constance were brought to this country by the Hanse via the fairs of Brabant); the imports mentioned may include St. Gallen linens. M. Thielmans *Bourgogne et Angleterre 1435–1467* (Brussels 1966) 231–2, citing PRO Customs Accounts E122/73/23 and 25 (1448–50) and E122/73/10 (1438–9). I am grateful to Mr. H. S. Cobb, Deputy Clerk of the Records at the House of Lords Records Office for these references. Compare the import to England during this period of stoneware vessels as another branch of Rhine trade much more frequently represented in the archaeological record, v. J. G. Hurst 'Langerwehe Stoneware of the 14th and 15th centuries' in M. R. Afted *et al.* eds. *Ancient Monuments and Their Interpretation* (London 1977) 219–222.



Pl. 1 St. Gallen seals: left column, bear between S and G; right column, eagle. No. 1 top (left and right), area of textile imprint indicated by line. No. 2 middle (left and right). No. 3 bottom (left and right).



Pl. 2 St. Gallen seals: left column, reversed S; right column, G. No. 4 top (left and right). No. 5 bottom (left and right).

THE EDWARDIAN INVENTORIES OF MIDDLESEX

LAWRENCE S. SNELL

Continued from Volume 29 (1978) p. 127.

The Certificate and presentment of the jury of all the plate, goodes, ornamentes, Juell'es and Belles belongynge and app'teyning to the churche of Tottenham w^t in the countie of Midd'x as well conteyned wⁱⁿ the Inventory taken by the kynges Ma^{tes} Commyssioners as also other goodes belonging to the same churche at this present thirde day of August in the vjth yere^t of the reigne of our Sovereigne Lord Kyng Edward the vjth by the grace of God kyng of England, ffraunce and Ireland, Defender of the faith and in earth of the churches of England and also of Ireland the supreme head.

TOTTENHAM

John Casen and Edward Picher churchwardens of the p'sshe churche of Tottenham in the countie of Midd'x doo certifie unto y^r worshippes that sithens the last certifcate of their churche goodes unto the kynges ma^{tes} commyssyoners certified the sayd churche hath been robbed twyse and the Inventory of the goodes was stowlen awaye and their vestrie dore wth fyer was burnte in so muche that the saide theves lefte behynde them lytle or nothing that they might come by saving by a lytle old yren and brasse wth certeyn Bann' clothes² and older vestymentes w^{ch} was by the sayd John Casen sold for the some of xij^{li} vj^s viij^d w^{ch} sayde some of money he receyved before the fyrst faull of the money. Also there remayneth of the churche goodes w^{ch} was in the custodie of dyvers honeste men of the same towne. One challise weying vij ounces and one cope worth iiij markes or more and iiij belles and the sanctus bell³ and also there remayneth in Mr. Phesementes handes certayne money w^{ch} he toke for the pixe⁴ whiche was of sylver and dyd weye vij ounces. ffurther more yo^r worshipes shall undertand that John Casen churchwarden of the xij^{li} vj^s viij^d w^{ch} he receyved hagh layed forth by the assent of the parishioners iiij^{li} xv^s ix^d upon the reparacons⁵ of the sayd churche and the reste remayneth in thandes w^{ch} he desyereth y^r worshippes helpfull favour bycause he receyved y^t before the fyrst faull as to your worshippes he hath declared

A compte made in the second yere of king Edward the sixt sould by Will'm Cordall by the consent of the p'isshe.

Itm wexe sould to Mr. Coole iiij^x ^{li} and xvj————xxxij^s

Itm layde out by Mr. Coole for the scripture of the roudde loft⁶ xvj^s

Itm the sayd Mr. Coole bought the paraphrases⁷ w^{ch} coste x^s

and the resydue of the money remayneth in his handes.

Itm sould by Mr. Phesementes a pyxe of sylver weying xvj ounces.
 Itm sould by William Cordall vij ounces of sylver.
 Itm layed out by Will'm Cordall for the reparacon of our p'ishe house xj^s
 Itm payed for a bible x^s.
 Itm payed for the comunyon boke ij^s.
 Itm payed for ij sauters^s iiij^s.
 Itm payed for iiij bokes of the comon prayer ij^s.
 Itm payed for the white lynying of thechurche ij^s.
 Itm payed for ij horselodes of lyme ij^s.
 Itm payed to the pavyers for iiij dayes iiij^s.
 Itm payed to byrde when he gave us warning to come before the
 kynges justice xij^d.
 Itm payed at the gyving upp of our accompte at westend to one
 of your officers xx^d.
 Itm Stowlen from the highe alter one clothe of sayre with all
 implemantes belonging to the alter.

To be continued

NOTES

1. 1552
2. Cloth banners.
3. A bell rung at the Sanctus before the Canon of the Mass.
4. Pyx—a vessel in which the consecrated Host is kept.
5. Repair.
6. Roodloft—gallery on top of the rood screen.
7. Paraphrases of Erasmus—the Commentary on the Gospels written by Erasmus which Edward VI in his Injunctions of 1547 ordered to be set up in all parish churches 'in some convenient place' where the 'parishioners may most commodiously resort unto the same and read the same'.
8. Psalters.

A BUSINESSMAN IN ELIZABETHAN SOUTHWARK: OLYFF BURR

J. E. G. BENNELL

Generally speaking, the writing of biographies becomes more difficult the further back one goes over the centuries, merely because of the smaller range of source-materials available. For the Tudor period, for example, there are no newspapers; very few diaries; little in the way of continuous correspondence; and a great dearth of personal reminiscences. There are some substantial archive collections (such as those of the departments of central government, and the livery companies), but when all is said and done the information provided by these records is very patchy, and seldom capable of providing a coherent picture of a career or private life. In any case, the great majority of the population (in particular, those who did not possess considerable wealth, especially in landed property; engage in litigation, or overseas trade; or commit some serious offence) are unlikely to come to the historian's notice. (Indeed, given the poor survival-rate for complete runs of parish registers, even the mere facts of their births, marriages and deaths may be lost to us.)

Within this context, the members of the middle classes are of great importance. Many of them made wills and paid taxes, and their various other types of activities have often produced documents which throw further light upon them, both as individuals and as members of society, although—since these people played essential roles in maintaining and developing the economic, social, administrative, financial and religious life of London—that is as it should be. Even so, if we can find some Elizabethan for whom there is evidence, albeit sometimes very slight, of his childhood; the offices he held within his own community; his business activities; the residential and other property he owned and leased; the ships he possessed; and of opinions of some who knew him, we are fortunate indeed. Such a man was Olyff Burr, of Southwark.

Olyff Burr's Christian name has posed a problem both for his contemporaries and for modern editors (some of whom call him Oliver, or even Olive), but its origin is quite plain. If his antecedents are unknown (the suggestion that he might have been of alien extraction¹ is based merely upon his seemingly un-English name), there can be little doubt that he was born in the place where he lived all his life, namely, in the parish of St. Olave in Southwark, from which circumstance he derived his cognomen. There were three parish churches with this dedication in the city proper—in Hart Street, Silver Street, and Old Jewry—but the fact that no fewer than three other persons mentioned in Burr's will² bore the same distinctive forename suggests an unusual degree of parochialism. Two depositions he made are signed quite uncompromisingly

'Olyff Bur'.³ Nevertheless, he was sometimes known as 'Tooley', and more frequently termed 'Oliff Burr alias Tooley' (the first word of which represents a form of Olaf, while the last was a contemporary corruption of St. Olave, as preserved in the name Tooley Street). The dual form, with its alias, was plainly very convenient, and it continued to identify him, even in his own parish, till the day he died.⁴

Burr was probably born about 1514, since in 1576 he testified that he was then aged 62 years, although in those days memories were notoriously fickle about such matters. Of his youth, we know only that he often played at quoits on the nearby recreation-ground, the acre of land known as Abbot's Close, which had belonged to Battle Abbey: this appears to have been south of Tooley Street, near the local mill-stream. At any rate, the earliest reference to him found so far relates to the year 1551, at which time his servant, known to us only as Harry, was assessed for subsidy in St. Olave's parish.⁵ Although Burr is most often called a coppersmith, one never encounters him actually engaged in such work, but debts outstanding to the city's Bridgemasters in 1558/9 included one of 4s 8d owed by 'Tooley Coppersmythe'.⁶ There seems to be no reason to doubt that this was the occupation he had followed in his earlier days.

It was almost unthinkable for a man to hope to succeed in business without being free of one of the London livery companies: that Burr did not, so far as is known, obtain this freedom is probably due at least in part to his place of residence. During the Tudor period, as at other times, many members of the 'superior artisan' sector of the working classes (from which Burr himself must have originated) preferred to live in the suburbs of London rather than in the city itself, away from the irksome restrictions on trade and manufacture imposed by the livery companies. Southwark was especially popular in this respect because, although technically part of the city of London from 1550, it suffered little interference from the civic authorities, while giving ready access to the metropolis by way of London Bridge and the numerous wherries which plied for hire. Again, there was no livery company directly applicable to his craft, so that he was able to retain his independence.

In 1557, the master and purser of the *Mary Fortune* of London, which belonged to Burr, entered into a bond in Danzig for repayment of the £50 the latter had borrowed from John Levytt. Burr's trading ventures included the export of a load of timber to Morocco, and a consignment of 44 cloths to the same and other destinations. In 1565, he was importing eight bolts of medernix canvas from St. Martin's, 'for sails for his ship', possibly the *Trinity* of London, which brought them here, as well as four hundred lings (i.e. codfish) from Haarlem, all as duty-free goods; and in the same year he (described this time not as a coppersmith but as a brewer) was listed in a port book '*pro ij doll' pipe servic per lic' Thom' Astley*', showing that Burr was exporting two tons of 'pipe' (presumably, the Latin *piper*, 'pepper') remaining on the licence granted to Thomas Astley. Two years later, Burr—a coppersmith again—imported 1,400lb of hops from Amsterdam. He was one of the investors in Martin Frobisher's second voyage towards the North-West Passage (1577), subscribing £100 for the purpose.⁷

Thus, in the course of time, Burr became preoccupied with other, more lucrative activities than coppersmithing. As indicated above, another of his interests was brewing, and his name appeared in a list of brewers, both native and foreign-born, who were allowed to retain more alien servants than the four permitted by law. Nevertheless, his real livelihood seems to have become the fitting-up and hiring-out of ships, and it was in this connection that he presented one of several petitions to the Privy Council, in 1579. He had, he claimed, obtained a living for forty years 'chiefly by the maintaining of shipping and the navigation', but by now had 'sustained divers and sundry losses as well by the Portingals, the French king and Prince of Condé, as otherwise, to the value of four thousand pounds at the least'. Moreover, he was 'now charged with a number of ships which for want of traffic lie still, to his great hindrance and charges, forasmuch as they are not set on work as they have been heretofore'. Accordingly, Burr's present object was to persuade the council to authorise 'the merchants of Spain' (elsewhere termed 'the President and Assistants of Merchants trading [to] Spain'), who were about to require transportation of 1,200 tons of freight through the Malaga straits, to employ his ships—either there or for Spain (*recte*, southern Spain), Biscay or Portugal—in preference to those of other men. No other details of his ship-hirings have been found, and the outcome of his supplication is not known. He had better luck when, over two years, he obtained the bounty given (at the rate of five shillings per ton) to encourage the building of vessels of 100 tons and over, on 790 tons of shipping.*

It has been said that Burr was a tenant of the Copleys, a family well known in Southwark; on the other hand, he is known to have secured his title to two messuages in St. Olave's parish which he had obtained from Thomas Copley by means of the usual (fictitious) fine, registered in February 1558, and his will refers to properties purchased from Sir Roger Copley, and Thomas, presumably the son who died in Flanders in 1584. His residence was in Mill Lane, which connected Tooley Street with Battle Bridge, where he possessed a 'wharf upon the backside of the Chequer against the Thames', as well as the Chequer itself, in addition to other lands abutting on the Spital Mead at Deptford and 'against the Hawthorn Bush' in Rotherhithe, although he was behind in the payment of some small quitrents on properties ('three tenements at 3d by year, and for twelve years') he held of Thomas Copley and Humphrey White.⁹ In 1561, he took over a property on the south-western part of London Bridge, on the death of its previous tenant, Thomas Burfield, grocer, by lease for 21 years, at a fine of £33 6s 8d and an annual rent of £4 6s 8d; he held these premises until c. 1567. As well as the dwelling-house he was occupying at the time he died, Burr held 'the High House alias the Garner', which lay to the east of the moated mansion that had belonged to Sir John Fastolf (?1378–1459), the distinguished soldier and government official.^{10,11}

Burr was of high standing in his locality, where he was assessed for subsidy on goods worth £67, in 1576. He was one of the two Members of Parliament for Southwark in 1562–63 and 1572, a commissioner for sewers, a governor of St. Olave's Grammar School, and a collector for subsidy and of poor-relief.

Moreover, by virtue of holding other offices in St. Olave parish (notably, churchwarden, during the period 1552–58), he was responsible for effecting the ritualistic changes brought about by the various stages of the Reformation. These included making arrangements for replacing the altar in the chancel by a Communion table in the nave (1552); maintaining the lights on the beam (above the rood-screen) and sepulchre (1554); and approving an inventory of the church's furnishings on the very eve of Elizabeth's Church Settlement. On one occasion, he was required to provide the equipment for a 'lance' and a 'light horse' (i.e. two mounted soldiers) as his contribution towards the county muster, but the two horses he supplied were 'disallowed',¹² presumably for being below the standard expected.

As will be seen, Burr was concerned in several lawsuits, in the Courts of Requests, Star Chamber, Admiralty and Marshalsea. We can never be certain of the rights and wrongs of the various cases, because the surviving evidence only ever represents the claims of one side. In one instance, which is unusually well documented, Ancell Beckett, haberdasher, Hugh Lea, grocer, and merchants John Swynnerton and John Collett, all of London, were in contention with Burr over some bales of cloth shipped from London—or, at least, 'in the River of the Thames'—in August 1582 to the port of Bayona, in north-west Spain, which arrived damaged; surprisingly, the action was not brought till two years later. It would seem that Burr was sued in his capacity as carrier; certainly the vessel concerned, the *Golden Noble* of London, was owned by him. By mischance, 'sixteen London sorting cloths' in the consignment (identified by Beckett's merchant's mark and 'No. 2', on both goods and documentation) 'were in truth marvellously misused and badly conditioned at the time of their unlading from the said ship', so that four Englishmen resident in Bayona—two of them (Thomas Owen and Robert Short) nominated by the master and purser of the *Golden Noble*, and two (Gaspar Morman and Peter Holmes) by Thomas Kyng, who, as consignee of the cloth, was most likely Beckett's agent there—had to be brought in to appraise the damaged merchandise. In due course, Kyng, the master and purser appeared before a local notary, who wrote down their statement in Spanish; one of the documents in the case is an English translation of this, signed and attested by Paul Typoots, a well-known Dutch notary working in London. One of the other deponents, a London grocer named John Dorrington, testified to having known Burr for 'eight or ten years'. It was stated in evidence that the sixteen cloths 'were rotten by lying upon the ballast', and 'damaged by reason of certain oils that the same ship carried in the voyage before And the master and mariners of the said ship confessed that the said ship wanted caulking and that she was leaky in the stem'. This had meant that cloths 'worth 36 ducats were sold for 13 and 14 ducats by means of the said damage'. The actual loss, inclusive of costs of washing and scouring damaged cloth (and for 3 ducats 'paid for making the Testimonial', presumably the Spanish notary's fee), was reckoned at 171 ducats 2 reals, which was converted to £43 16s 1d sterling, although in reality it should have worked out at a little more. As well, there were the legal fees incurred in the Admiralty and Marshalsea Courts, so that the '*Summa totalis* lost in the *Golden Noble* [and]

lost with my charges in suit of law' was £81 19s 1d.¹³ As usual, the verdicts of the courts are not known.

Another case related to the High House mentioned earlier, late in the tenure of William Burnell, which Burr retained till he died. Elizabeth Thomas, widow of Thomas Thomas, a leatherseller of Bermondsey Street, accused Burr of having leased the property to Clement Finch of Milton, Kent, and so jeopardising her interests. The facts of the matter are rather obscure, but questions were asked about a sum of £40 which 'was tendered in the Easter week in the night time' in 1576, and even the rental was uncertain, amounts of £2 and £5 per annum being mentioned.¹⁴

On another occasion, Burr was accused of bringing an action out of malice, simply to cause annoyance to William Curle, an Enfield yeoman, who was one of the defendants. Burr's own version of the story was quite different. William Ledger (or Legiert) of St. Giles Cripplegate, who had married one of Burr's daughters, owed Burr something in the way of 'ready money, cask, corn, hops, beer and other goods' worth no less than £2,000. Being his father-in-law, Burr 'was not hasty in calling him to accompt', so that Ledger found him 'rather a father in deed than by law'; unfortunately, Ledger had died, and his son—another William—had, said Burr, obtained 'by indirect means . . . the books of accompt and other tales of reckoning', and had enlisted the aid of Curle and two Southwark men to help him fight his case. William Ledger, senior, had fallen on hard times following his marriage, but it was alleged that in response Burr had merely told another of his sons-in-law, John Hodge, another Enfield yeoman, 'to take his gelding and travel into the country and get some honest man to give his son-in-law Legiert credit for so more malts as shall amount to 200 marks [£133 6s 8d] or £200.' The general implication was that Burr had 'milked' the Ledger estate of funds, in the way of 'ready money, beer, goods or chattels' obtained from the elder Ledger, and had persuaded the heir to sign an acquittance of any future claims on the estate in return for the sum of £300.¹⁵

Thomas Goffe, fishmonger, alleged that over the twenty years he had had dealings with Burr, who owed him 'for divers sundry parcels of money, ware and other commodities amounting far above the sum of thirty pounds', the latter 'hath always delayed your said subject from time to time and since, sometimes making one excuse and sometimes another . . . yet the said Olif (meaning nothing but fraud and delays) hath gone back from his word, broken his promise and discharged . . . arbitrators contrary to all honest dealing'. Other lawsuits included one concerning a sum of £100 which the late Henry Wallis, fishmonger, had lent to Burr, at 10% interest; and the purchase by Burr of 20 quarters of wheat and 45 quarters of malt from William Bigge of Wallingford, Berks.¹⁶

Of course, it is always possible that Burr's detractors were telling the truth when they accused him of double-dealing; at the same time, he may well have suffered from the envy of less-successful contemporaries, while there can be little doubt that some of his sons-in-law had been 'trying it on'. Some of the charges the latter made had been quite preposterous, and the money which John

Hodge the elder (who married Burr's daughter Barbara) took up on a bond of £320 under statute staple from his father-in-law remained unpaid at the time of the latter's death. It is noticeable that those of his daughters' husbands who had not engaged in attempts at extortion were suitably rewarded in his will,¹⁷ while the others seem merely to have killed the goose which had laid the golden eggs.

At the time of making his will (21st August 1585), Burr was advanced in years (if our earlier surmise is correct, he was turned seventy), and 'weak in body', and the register of St. Olave Southwark records the burial of 'Olyfe Burr al[ias] Toley, Copersmithe' on 23rd August 1585. By his will, he left an annuity of £320 and other bequests, including a cow, a bay nag and a weekly barrel of small beer, to his wife Anne. Although the 'messuage or tenement wherein I lately dwelt' had been leased to Richard Horsley, hatbandmaker, his widow was to enjoy the use of the garden and certain rooms which had been reserved to himself. To his daughter Elizabeth and her husband John Bird, draper, he left his property called the High House with all buildings and wharves belonging, 'which I lately purchased of Clement Finch, gentleman', and to Gillian and her husband John Newton, mercer, 'all such lands, tenements and hereditaments which I lately purchased of Sir Roger Copley, knight, Thomas Copley and others, lying near Bermondsey Street in the parish of St. Olave Southwark'. Apart from several other bequests, wherein he remembered the children of his sons-in-law John Bird, John Newton, John Hodge and William Ledger, deceased, he left the residue of his estate to his executors, Bird and Newton, and this must have included his ships, at least two of which (the *Bark Burr*, 130; and the *Golden Noble*, 200 tons) occur subsequently in their joint possession.¹⁸

Even after Burr's death, the squabbles over his money continued. In 1593/4, Thomas Drew, merchant taylor, was suing Newton and Bird over some financial matters arising over Burr's will, which included considerations of the release of Roger Walters, haberdasher, who was in prison for debt, and a tenement in Bermondsey Street called the Blue Anchor which Burr had demised to Walters; and if Burr did in fact 'leave them [i.e. Bird and Newton] great store of wealth', or whether this had been whittled-down through funeral and other expenses, as was alleged.¹⁹ However, by now, Burr was removed from the scene of these sordid wrangles. Still, although his death prevented him from participating in the privateering ventures which the Spanish War (1585–1604) engendered, two of his ships—the *Golden Noble* and *Bark Burr*—were set forth on such voyages soon afterwards; indeed, the former vessel served against the Armada of 1588, while the latter was blown-up during an engagement off Cuba three years later.²⁰

NOTES

1. As in *Victoria County History* (hereafter, *V.C.H.*), *Surrey* II, 414. In fact, port book E.190.1.4, in the Public Record Office (PRO), which is mainly a record of alien exporters, shows Burr (f.8r) as one of the native Englishmen.
2. PRO, 1585 PCC 41 Brudenell.
3. PRO, Req[uests] 2/41/99 (re 1576); PRO, Star Chamber (STAC) 5/C32/33 (1583).
4. It was used in the St. Olave Southwark parish register, in the Greater London Record Office (GLRO), when recording his burial.
5. PRO, Req 2/41/99; W. Randle and P. Norman, *The Inns of Old Southwark* (London, 1888) 38/9; J. E. B.

- Gover *et al.*, *The Place-Names of Surrey* (Cambridge, 1934) 31; R. E. G. and E. F. Kirk, *Returns of Aliens I* (Huguenot Society X; 1900) 229.
6. Corporation of London Records Office (CLRO), Bridge House Rentals 1554–68, f.64Av. (He is not named with other Surrey coppersmiths of the period: *V.C.H. Surrey* II, 413/4.)
 7. R. G. Marsden, *Select Pleas in the Court of Admiralty II* (Selden Society XI; London, 1897) 72; T. S. Willan, *Studies in Elizabethan Foreign Trade* Manchester, 1959) 110; PRO, E.190.5.1, 190.3.2 and 190.1.4; B. Dietz, *Port and Trade of Early Elizabethan London* (London Record Society, 1972) 34; R. Collinson, *Three Voyages of Martin Frobisher* (Hakluyt Society, 1867) 109.
 8. *Calendar of Patent Rolls 1566–1569* 19; R. H. Tawney and E. Power, *Tudor Economic Documents II* (London, 1924) 123/4; M. Oppenheim, *Administration of the Royal Navy I* (London, 1896) 167.
 9. *Collectanea Topographica et Genealogica VIII* (London, 1843) 259; C. A. F. Meekings, *Abstracts of Surrey Feet of Fines* (Surrey Record Society XIX; 1946) 121; PRO, 'Transcript of second payment of lay subsidy granted 18 Elizabeth', typescript c. 1945, f.129; G. L. Gomme, *Court Minutes of the Surrey and Kent Sewer Commission* (London County Council, 1909) 55, 139.
 10. CLRO, Bridge House Rentals 1554–68, ff.82v, 128v, 150v; *loc. cit.*, Repertories of the Court of Aldermen 1558–60, f.459; PRO, 1585 PCC 41 Brudenell. (No doubt the Enfield maltmen who were unloading malt at Battle Bridge in 1584 were some of Burr's suppliers: J. C. Jeaffreson, *Middlesex County Records I* (1886) 145/6.)
 11. Some authorities (e.g. Randle and Norman, *The Inns of Old Southwark* 41, 33) have confused Burr's 'High House alias the Garner' with the High Beerhouse (also known as the High House), although these were on opposite sides of Fastolf's Place. I am grateful to Miss Martha Carlin, a doctoral candidate at the Centre for Medieval Studies, University of Toronto, for correcting me on this point.
 12. PRO, 'Transcript', f.129; *Return of Members of Parliament* (1878) I, 406, 411; *Calendar of Patent Rolls 1569–1572* 219, 298; *Surrey Taxation Returns* (Surrey Record Society XI; 1932) 111; Southwark Archives Collection, St. Olave vestry book 1551–1604, ff. lv, lr, 3r, 3v, 13r; *loc. cit.*, St. Olave churchwardens' accounts 1546–1610, page 83; *Surrey Musters* (Surrey Record Society III; 1919) 186.
 13. British Library, Lansdowne MS.143, ff. 344–358.
 14. PRO, Req 2/41/99.
 15. PRO, Req 2/125/58 and 2/189/64; PRO, STAC 5/C.25/12 and 5/C.11/30.
 16. PRO, Req 2/93/36, 2/126/53 and 2/173/83.
 17. PRO, 1585 PCC 41 Brudenell.
 18. GLRO, St. Olave Southwark parish registers; PRO, 1585 PCC 41 Brudenell; K. R. Andrews, *Elizabethan Privateering* (Cambridge, 1964) 103.
 19. PRO, Req 2/28/104.
 20. Andrews, *op. cit.*, 103, and his *English Privateering Voyages to the West Indies* (Hakluyt Society; Cambridge, 1959) 101.

JOHN STOW

COMMEMORATION ADDRESS BY PHILIPPA GLANVILLE

delivered at St. Andrew Undershaft, 23rd April 1980

We are gathered here to honour a man who served this City of London well. He recorded in his many books its historical evolution and described those changes which most affected it during his long life, a life which spanned the reigns of Henry VIII and all his children, and only ended after James I came to the throne. His *Survey*, published in the last decade of the 16th century, reflects the Tudor explosion of London's population and its impact on the City. Historians still argue about the size of that increase but agree that it was phenomenal; Stow depicts for us the effect on ordinary people of the process of change, the process by which a city of 50,000 people became in less than a century home to nearly quarter of a million. The in-filling was so intensive that squatters even threw up shacks on the public rubbish dumps or lay-stalls of the City. The May Games were abandoned for bowls and tennis, the fields and gardens of Stow's childhood disappeared, great houses were split up into tenements, warehouses and factories. But there were more positive aspects to this blooming City; these too, its vitality, wealth and pride, Stow describes and not always in that tone of regret and nostalgia which is so often associated with him today.

My distinguished predecessors in this place have paid tribute to many aspects of Stow's life and worthiness of remembrance—his unique contribution to London topography, his records of church monuments long vanished, his lists of charities and benefactions, his civic pride. I should like to consider one aspect of that pride in London which was so widely felt by its citizens. Stow preserved for us the memory of the great men of his time, merchants and aldermen, members of the City aristocracy such as Sir Andrew Judd, the Greshams, father and son, Richard Hills, whose names survived through their schools, alms-houses and public buildings; the generosity has been fully studied by Professor Jordan.¹ One of these men and not the least generous was Sir John Allen, mercer and twice Lord Mayor. Sir John had the special distinction of serving as one of Henry VIII's counsellors. From his time at Court he came to appreciate the status conferred by the massive gold livery collars worn by the great Tudor officers of State; one such can be seen on Sir Thomas More in the marvellous Holbein of the More family at home in Chelsea. Sir John may well himself have received such a collar from the King's hands. Of this we cannot be sure but the magnificent gold collar of SS, Tudor roses and knots which is one of the greatest treasures of the City and still worn by the Lord Mayor is that same 'rich collar of gold' which, Stow records, Sir John left to the City on his death in 1545.²

Allen's unique gift to the Mayor and his successors is a splendid example of

the Tudor goldsmith's craft and exemplifies that swelling pride in the City and the mayoralty, its chief embodiment, which was a constant theme of Stow's work. The very prefix 'Lord' only became permanently attached to the title of the Mayor of London, to differentiate him from all others, some 20 years before Stow's birth. Turning to some rather more everyday objects surviving from the Tudor city, Stow has something helpful to say here also. He refers (by implication) several times to the great technological leap forward which took place in England during the 16th century; of this London was inevitably the chief beneficiary. Stow's comments on contemporary industries shed light on the great range of metalwork, pottery and glass recovered from the soil and the river in the past century and a half.

The unsophisticated 'coarse and uncomely' wares made in the early Tudor city were constantly being supplemented by luxuries expensively imported from Germany, Italy and the Low Countries, to the horror of contemporary economists. A negative balance of trade is no new phenomenon; Londoners have always hungered after foreign novelties—'glasses as well looking as drinking as to glass windows, dials, puppets, pen-horns, toothpicks, knives, earthen-pots, hawks-bells and a thousand like things that might be cleaned spared or else made within this realm'—a familiar story indeed.

However by the time of Stow's death all this had changed; the foreigners, scenting a rich and growing home-market, had come to teach us their new techniques. Glasses, watches, fine knives, delftware were all made in London by 1600, either by immigrant Flemings or by such enterprising Englishmen as Richard Dyer. He, Stow recalls, had learnt from his travels in Spain the knack of making small pottery hand-stoves. Londoners had been familiar for over a century with pottery braziers and chafing-dishes, but Dyer's pots, fired at a kiln outside Moorgate, were of a neat new shape, handsomely green-glazed and very handy for slipping under the table, or even under one's robes to warm the feet in particularly cold weather. This project quite met with Stow's approval.³

Stow has also preserved for us what little is known of London's first delftware potters, Flemings from Antwerp who settled in Aldgate, already an industrial quarter, in 1570. These makers of decorative painted earthenwares, jars for apothecaries, tiles and display plates, have left art historians with a continuing puzzle; we cannot distinguish exactly what they made from the later Southwark and Lambeth delftware. However, thanks to Stow, the probable site of their kiln is known to within a hundred yards or so and the current programme of the Museum of London Department of Urban Archaeology has been excavating important pottery evidence from the area. Stow must have known Jacob Johnson or Janson, the leader of these Flemish potters, who moved into the Sign of the Rose by Aldgate pump, only a stone's throw away from the house which had been the historian's home of twenty years. Stow notes the claim that Johnson or Janson's father, also a delft potter, had been invited to London by Henry VIII; this was no doubt part of the great exercise by that would-be renaissance prince to drag English craftsmanship up to the standards of his European princely rivals, especially Francis I.⁴ Johnson senior refused to come to this barbaric off-shore island and the Italian glass-makers

wooded by Henry returned home after their contract expired but the making of fine Venetian crystal glass was, like delft pottery, to become another of London's new skills by the time of Stow's death. In the 1570s a glass house was set up by Jacob Verzelini in the premises of the dissolved Crutched Friars off Hart Street. Here Verzelini, an Italian by origin but with experience of glass-making in the Low Countries, blew and engraved glasses for wedding gifts and ordinary wine glasses with lion-mask stems. Some found on the site are now in the Museum of London. Even after Stow's move westwards to the house near the Three Tuns in Devonhall Street he still only lived around the corner from Crutched Friars. He records a massive fire at the kiln in September 1575 (always a bad month for fires in a timber-framed city). Fortunately the thick stone walls of the friary hall contained the fire and little external damage was done. The glass house re-opened soon afterwards and flourished until the death of its founder. Without Stow's description of it and of the glassmaker, the earliest known fine English-made glass would have remained anonymous.⁵

Another example of Stow's interest in the new skills of his fellow townsmen is his account of Richard Matthews, a cutler living near Fleet Bridge. Matthews, Stow claims, was the first Englishman 'that attained to the skill of making fine knives and knife hafts . . . with a new kind of hafts'. Matthews' knives, for we think we can identify some amongst the many in the Museum of London that come from London sites, are indeed stronger with a blade and haft cast all in one piece; they made the early Tudor knives imported from Flanders look positively flimsy.⁶ Again Stow's passing mention gives the modern curator a peg or date around which to hang a typology of knives, a dating sequence of use for other towns. I have referred to some occasions when Stow's notes from his personal knowledge of the times can help museum curators in their attempts to date and understand everyday items from the Tudor city. What, if anything, does Stow have to tell the archaeologists now studiously working on pre-fire London?⁷

John Stow was well aware of the need to walk about and observe as well as to read interminably the dusty parchments and papers stored at Guildhall, the Tower, in church vestries and company halls. Repeatedly he describes archaeological discoveries, often made as an incidental result of that site-clearance and rebuilding characteristic of the Elizabethan city. The sites he observed were usually, though not exclusively Roman, such as the cemetery east of the church-wall at Spitalfields. This was exposed in 1576 when a new brickfield was being worked there, supplying clay to nearby brick kilns. Stow went on site, examined the contents of several glass phials from the burials, collected one of the urns with its ashes and bones and kept also a little pot in the form of a hare. So vivid is his description of the finds that we can identify samian ware, the dishes and cups 'which showed such a shining smoothness as if they had been of coral'. He even noted the makers' stamps on their bases. An early post-Roman burial he examined also at Spitalfields, an area then under considerable pressure from would-be developers, survived only in part. The existence of the wooden coffin (which had utterly decayed) had to be inferred from the remains of the nails which had held it together; along with the

jawbone of the occupant Stow carried away one of these massive coffin nails and recorded that there were still to be seen under the head 'slight traces of the old wood, scant turned into earth but still the grain and proper colour'. A perfect illustration of the archaeological method! He even gives the orientation of the burial.⁷

His awareness of London's Roman origins was of course part and parcel of the antiquarian knowledge of the time. In their detailed interpretations antiquarians of course differed. The record of the deposit of more than a hundred ox-skulls discovered in the early 14th century under the new work at St. Paul's Cathedral was interpreted by Stow as demonstrating the existence of a temple to Jupiter there. His friend William Camden, the better scholar but heavily dependant on Stow for his London material and transcripts of manuscripts, nevertheless insisted on calling it a temple to Diana, a story which is still current today. Camden is the better-known national but Stow the better London historian.

Stow's textual criticism was exemplary; he insisted on rejecting the later versions of early British history as recounted by Geoffrey of Monmouth, the commonly-received medieval source. He went back to Caesar's Commentaries on his campaign in Gaul and Britain and argued effectively that Caesar used the word 'civitas' to mean not a city but a tribe or nation under one head, thus squashing the myths of the pre-Roman origins of London. In this area Stow must have benefited from the special knowledge of his friends in the Elizabethan Society of Antiquaries. For a self-taught man, his confidence in reading and translating Latin and Norman French was admirable. Stow's personal experience of the capital extending back over 70 years at the time of the first edition of his *Survey* shines out in every page of the book and indeed also in his *Annales of England*. This latter work was part of a projected history of England which he regarded as a more serious work than his topographical studies. In this year by year chronology of English history from its mythical beginnings to 'this present year 1592', the great set-piece events of national life, royal deaths, campaigns abroad, trial of heretics are interspersed with such idiosyncratic incidents as that of the two Dutch freaks, one a giant and the other a dwarf, whom Stow, along with many other Londoners, marvelled at in 1581. He describes how the dwarf could walk through the giant's legs. He saw them at a tavern which no doubt made a great deal of money from this unusual attraction.⁸

Stow's omnivorous curiosity assumed an equal interest for his gentle reader in a description of Philip Sydney's campaign in the Low Countries and in an accident at a gunpowder store in Fetter Lane at eight o'clock one morning in 1583 which killed three people. Stow constantly reiterated in his prefaces his determination to bring 'Hidden Histories from Dusky Darkness to the sight of the World', a wish expressed almost in the same words by his distinguished predecessor John Leland whose collected manuscripts survived in Stow's careful transcripts now in the Bodleian Library. Stow's own assiduous collecting and transcribing of medieval manuscripts over forty years or more is well known and an additional reason for us to honour him. Many were

preserved after his death through the energetic interest of Simon D'Ewes and Robert Cotton and are now in the British Library. Others have vanished, some no doubt cleared away as so much waste paper; Mr. Edwards the broker and fripperer had a quantity in hand in 1613.⁹ But enough survived in print and in manuscript to give us reason to rejoice in the life of this man whose aim, as expressed in one of his dedications to a worthy predecessor of the Lord Mayor, was 'to preserve for posterity the fleeting manners of the people and the accidents of the time'.

NOTES

1. W. K. Jordan *The Charities of London 1480-1660* (London) 1960.
2. While these collars had been used for 200 years or more they appeared to have been widely recognised as an attribute to which the City's chief officer could aspire only in the 16th century. There is a massive literature on the significance of the SS, see for example A. P. Cust *The Collar of SS* (London) 1910. On the London collar see Jewitt and Hope *Corporation plate . . . of the British Isles* Vol. 2, 111-116; and *Princely Magnificence: Court Jewels of the Renaissance* (Victoria and Albert Museum 1980) 52-53.
3. See for example a handstove in the Museum of London, Acc. No. A4545 illustrated in the Museum's publication *Tudor London* (1980).
4. I. Noël Hume *Early delftware from London and Virginia* (Williamsburg 1977).
5. Verzelini is most conveniently discussed in E. S. Godfrey *The development of English glassmaking 1560-1640* (Oxford 1975) 28-33.
6. Matthews is remembered in the City for other reasons. He presented to the Lord Mayor a very fine sword and to his own company, The Cutlers, made various other generous gifts. By using a combination of Stow's references and those in the Company's own records it is possible to reconstruct something of Matthews's career.
7. John Stow *Survey of London* Vol. I (ed. Kingston 1908) 168-170.
8. John Stow *Annales of England faithfully collected . . . from the first until this present year 1592 (1593)* 1181.
9. *Survey* Introduction p. lxxxvii.

SOME MENAGERIE ACCOUNTS OF JAMES I

ROSEMARY WEINSTEIN

'It is a world also to see how many strange herbs, plants and unusual fruits are daily brought unto us from the Indies, Americas, Taprobane [Ceylon], Canary Isles and all parts of the world.'
William Harrison *Description of England* (1587)

Even more eye-catching than the strange plants being introduced to this country as a result of exploration overseas, were the new species of animals arriving in the capital. Londoners had enjoyed a royal zoo at the Tower since at least the time of Henry III, when an elephant was housed there in its own special quarters. James I shared his royal predecessor's interest and established a menagerie in Spring Gardens and St. James's Park; accounts for feeding fowl and animals here in 1611 are in the Museum of London collections.¹

St. James's Park (Plate 1), originally a marshy field, was enclosed, drained and laid out with walks and a pleasure ground for his new palace at St. James's by Henry VIII between 1536 and 1547.² Spring Gardens lay between St. James's Park, Whitehall and Charing Cross—a garden dating from at least 1547,³ with bowling alleys, cockpit, tennis and pheasant courts. It was called Spring Garden by Paul Hentzner, a travelling tutor to a young German nobleman, because of 'a jet d'eau, with a sun-dial, at which, while strangers are looking, a quantity of water forced by a wheel, which the gardener turns at a distance through a number of little pipes, plentifully sprinkles those that are standing round'.⁴

Hentzner noted the 'great plenty of deer' in St. James's Park and by the reign of James I, wild fowl had also been introduced there. In 1605 the King ordered Sir Thomas Knyvet, then Warden of the Mint, 'to pay from monies in his hands, the expenses of certain houses, and defences for orange trees and for keeping of the ducks in St. James's Park which he was appointed to make.'⁵

Certain officials were now connected with the park and in charge of it.⁶ A bill dated March 1611⁷ records payments to William Walker, Keeper of the Fowl, for the upkeep of such exotica as an opossum from Virginia (colonized in 1607) costing 5/- a month, and a cassowary presented to the King by Lord Salisbury, which cost 12d per day. More routine expenditure covered cages for the white parrots, optimistically 'to last forever', and coal for two stoves in an attempt to hatch ostrich eggs.

The same month (March 1611), Robert Carr⁸ was created Viscount Rochester and appointed Keeper of the Palace of Westminster, part of whose duty was to 'keep and preserve wild beasts and fowl in St. James's Park and Garden and Spring Garden'. His expenditure for maintaining the fowl and beasts during the next three months (April-June 1611) totalled £23 4/7d.⁹

A watercolour from an album compiled by Michael Van Meer, a Dutch visitor to London in 1614, shows some of the animals and birds mentioned in the above accounts.¹⁰ The illustration (Plate 2) titled 'The Young Man from Virginia', shows an Indian (apparently drawn from life) wearing a fringed garment and holding a cane bow and long arrow. Pocahontas and her entourage reached England in 1616; a contemporary engraving of her portrait is in the British Museum. Clearly the new colony of Virginia and its Red Indians had caught the public's imagination: lottery tickets for the Great Standing Lottery for Virginia of 22nd February 1616 illustrate alongside the principal prizes, the Virginian chief Elakintomine and his wife Matahan (Plate 3), in similar stance to that in the Van Meer album; the playwright Philip Massinger also refers to the presence of Virginian Indians in London.¹¹

The caption to the watercolour (Plate 2) describes the animals as 'Indian', a term used to refer to any alien species.¹² This is evidently the case here, since none of the creatures in the picture is of American provenance: the shaggy-haired lop-eared goat is certainly not English, the long pendulous ears being typical of 'oriental' examples, i.e. from India, the Near East and Africa. The polled (hornless) sheep with long tails are commonly found in medieval and Tudor illustrations—showing that, as in today's mountain sheep, the tail was not docked at birth. The artist has chosen to draw the sheep from the back as though wishing to emphasize this (?) enlarged tail possibly because the animal was special—an example of a fat-tailed sheep from India or Africa; if so it is inaccurate since its haunches should be proportionately fatter.

The crane, with the distinctive crest on its head, is probably what Topsell calls the 'Balearian crane',¹³ this bird breeds in Africa and must definitely have been brought in, since it is not a migrant here. The goose could possibly be a Canada goose, but more likely the artist is representing the so-called Barnacle goose, an arctic breeding goose and a winter visitor to Britain, chiefly in the west of Scotland and north-west of England. There was a strange belief that these birds originated from the so-called barnacle goose tree.¹⁴ The third bird is difficult to identify, but resembles the Bittour or Astrean Hearn.¹⁵

Other exotica in James I's menagerie included camels and an elephant received from the King of Spain, hawks and live sables from the Czar of Muscovy, two antelopes from the Great Mogal, an ounce-leopard from the King of Savoy, two young crocodiles and a wild boar from Hispaniola, and some flying squirrels presented by the gift of the Virginia Company. The menagerie, run at considerable expense—the elephant alone costing £273 p.a. exclusive of the gallon of wine a day it was said to drink from September till April—was reckoned amongst the curiosities of England.¹⁶

In 1629 William Walker (Keeper of the Fowl) made 'a great bowling green' with turf from Blackheath, in Spring Garden and a 'new garden house for his Majesty to repose in'.¹⁷ Unfortunately, the quarrels and scandals of the place, particularly the fight there on 3rd June 1634 between Lord Digby and William Crofts, led to the suppression of this popular resort.¹⁸ After the Restoration the Spring Garden at Charing Cross became the Old Spring Garden, the entertainments removing to the New Spring Garden at Lambeth, later known

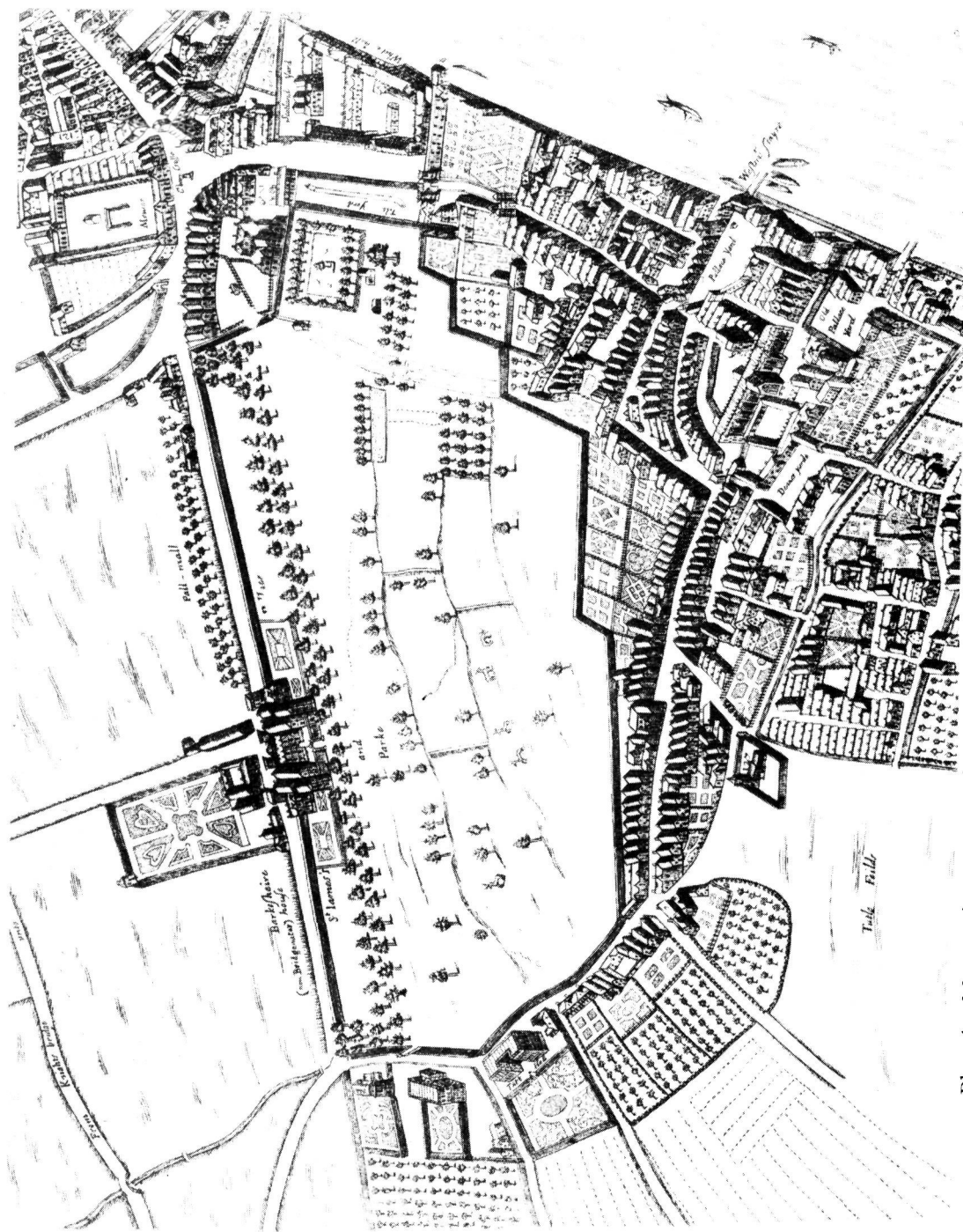


Plate 1 Menagerie accounts of James I: St. James's Park, from Faithorne and Newcourt's map, surveyed in 1643-7 and published in 1658. (British Museum)



Plate 2 Menagerie accounts of James I: A Virginian Indian and exotic birds and animals in St. James's Park. (Van Meer Album, Edinburgh University Library)

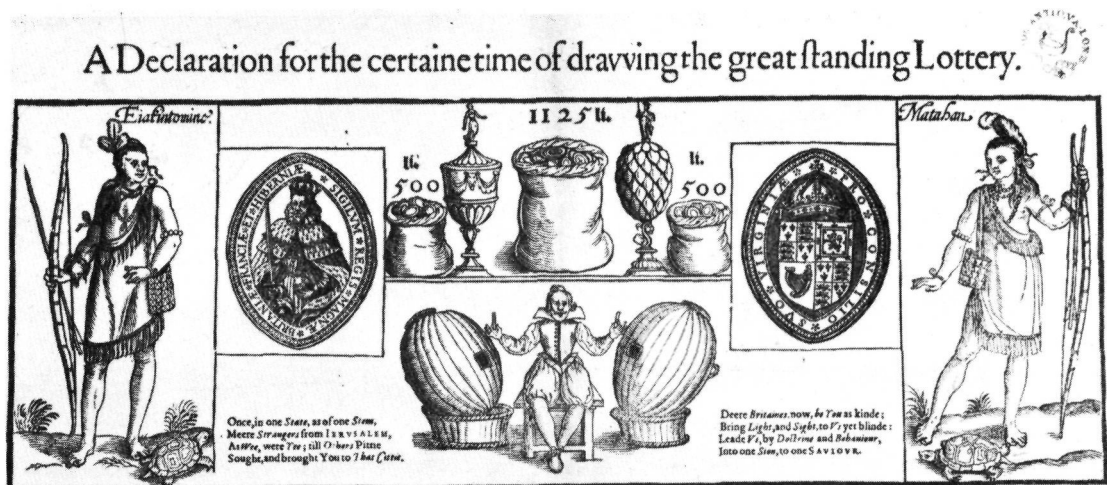


Plate 3 Menagerie accounts of James I: Advertisement for the Great Standing Lottery of 22nd February 1616, showing two Virginian Indians on either side of the prizes. (Society of Antiquaries of London)

as Vauxhall.

St. James's Park was replanned and beautified by Charles II to include a canal, a decoy for ducks, ring fence for deer, avenues of trees and broad gravel walks. Evelyn visiting St. James's Park in February 1664–5,¹⁹ records a variety of strange birds and beasts there: 'The Parke was at this time stored with infinite flocks of severall sorts of ordinary and extraordinary wild fowle, breeding about the Decoy. . . . Deere of severall countries, W[h]ite spotted like Leopards, Antelope: An Elke,²⁰ Red deeres, Robucks, Staggs, Guinny Goates; Arabian sheepe. . . .'²¹ It is probable that many of the creatures seen by Evelyn were gifts from the East India Company.

A white raven was recorded in 1663²² and in the same year two pelicans from Astrakhan were presented to Charles II by the Russian ambassador.²³ The Canadian goose is first recorded in Charles II's collection, and is significantly one of only four alien waterfowl to have been successfully naturalized, being now the largest British goose and widespread and common in many parts of the country.²⁴

Hentzner, writing in 1598,²⁵ had remarked on the great number of red deer in St. James's Park. Zacharias Conrad von Uffenbach, a visitor to London in 1700, made a similar observation but noted the dearth of wild fowl at this date:

'Since not only some of the finest English cows but also a considerable number of red deer graze there, it is called a park, although there is no real woodland but merely avenues. There are no birds to be seen, such as were to be found there formerly.'²⁶

The enthusiasm of James I and Charles II for their collections of unusual beasts and fowl was evidently not shared by their successors. Today, however, St. James's Park can still boast the Canada goose, the Barnacle goose and the Grey heron amongst its waterfowl, three of the same species as those observed during the 17th century.

The Accounts

18^o Julii i6ii
Lord Viscont Rochesters Bill
of Charges for keeping the
fowle and Beastes att St
James Parke and Gardens

Aprill
for May xi^h viii^s ix^d
June i6ii

Aprill i6ii

Laborers ymployed in digginge in the
Springe garden, and makinge cleane the
Allies there.

At xii^d Richard Ireland — xiii dayes di. — xiii^s vi^d
per diem Roger Porter — iii dayes di. — iii^s vi^d

Weeders ymployed in weedinge in the
Springe garden.

at vi^d
per diem
Barbara Davies — xxii dayes — xi^s
Francis Williams — xxii dayes — xi^s
Elizabeth Jepsey — vii dayes — iii^s vi^d
Mary Charnter — xii dayes — vi^s

A keeper of the Springe garden
at vi^d
per diem
George Johnson²⁷ — xxx dayes — xv^s

A keeper of the Duckes, and other Fowle,
at iii^d
per diem
John Barnes — xxx dayes — x^s

Aprill i6ii

Provisions

To George Johnson for money by him layed out for meate for his Majestys Fowle in the Springe garden, viz For a bushell of wheat for the guiney hens ²⁸ — iii ^s , for a bushell of barley for the Duckes — ii ^s viii ^d , for fleshe & bread for the Bustardes ²⁹ — v ^s vi ^d , and for two broode hens to sitt upon the Fesents egges — iii ^s . All is	}	xvi ^s ii ^d
To Thomas Bowles for money layed out by him for meate for the Beaver ³⁰ viz for bread — vii ^s , for Rootes — iii ^s	}	x ^s
To William Nicholls for money by him layed out for meate for the Indian beastes, ³¹ viz for bread and Apples — x ^s , for powder and shott, to kill the vermyn in the parke, — xii ^d	}	xi ^s
To John Barnes for money laied out by him for meate for the Duckes Hearnes, ³² Crane, ³³ Goates etc viz for xiiii bushells of Oates at xviii ^d the b ^l — xxi ^s , for iii buz ³⁴ of otemeale at iiii ^s vi ^d the b ^l , — xiii ^s vi ^d , for Ecles Livers and frogges for the Hearons — vii ^s for ii b ^h of pease for the Pigeons — vi ^s , for bread for the Crane — ii ^s	}	xlix ^s vi ^d

Aprill i6ii

To Richard Wakelin for digginge and caryinge of xiiii loades of sand out of St James Parke unto the Springe garden at viii ^d a load	}	ix ^s iii ^d
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Summa totalis of the
month of Aprill i6ii

viii^h ix^s vi^d

William Palmer

May i6ii

Laborers ymployed in gatheringe of Antes for the
yonge Fesantes in the Springe garden and doinge
other worke there.

Richard Ireland — xiii dayes — xiii^s
Roger Porter — iii dayes di. — iii^s vi^d

A keeper of the Springe garden
George Johnson — xxxi dayes — xv^s vi^d

A keeper of the Duckes and other Fowle
John Barnes — xxxi dayes — x^s iii^d

Provisions

To Thomas Bowles by him layed out for meat for the Beaver in St James Parke viz for bread — vii ^s for fruite and rootes	}	x ^s
---	---	----------------

To Thomas Bowles, more by him laied out unto Thomas Ladbroke and other laborers for often wateringe the yonge Elmes latelie sett in the walke before St James Howse	}	xv ^s
---	---	-----------------

To William Nicholls by him layed out for meate for the Indian beastes viz for breade — viii ^s , for fruite ii ^s	}	x ^s
---	---	----------------

May i6ii

To John Barnes by him layed out for meate for the Duckes, Hearnese, Storke ³⁵ Goates, Pigeons Turtle Doves ³⁶ and Crane, viz for xii buz of Oates at xx ^d the buz — xx ^s , for vi buz of Oates at xxii ^d the buz — xii ^s , for ii buz of Oatemeale — ix ^s , for ii buz of pease — vi ^s viii ^d , for Eeles and livers for the Hearnese and Storke — v ^s , for bread for the Crane — ii ^s	}	liii ^s viii ^d
---	---	-------------------------------------

To George Johnson by him layed out for meate for the fowle in the Springe garden viz for one buz of wheat for the guiney hens — iii ^s for bread and meat for the bustardes — iii ^s , for a buz of Oates for the great Duckes — xx ^d , for a Hen to sett the Fesantes eggs upon — ii ^s	}	xi ^s viii ^d
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Summa totalis of the
month of May i6ii vii^b ii^s viii^d

William Palmer

June i6ii

Laborers ymployed in gatheringe Antes for the
yonge Fesantes in the Springe garden, caryinge
in of sand into the Allies, makinge cleane the
walkes there etc.

Richard Ireland — xvi dayes — xvi^s
Roger Porter — iii dayes di. — iii^s vi^d

Weeders imployed in weedinge in the
Springe garden.

Barbara Davies — xvi dayes — viii^s
Elizabeth Williams — xvi dayes — viii^s
Elizabeth Jepsey — xvi dayes — viii^s

A keeper of the Springe garden
George Johnson — xxx^{vi} daies — xv^s

A keeper of the Duckes & other Fowle
John Barnes — xxx^{vi} dayes — x^s

June 1611

Provisions	
To Thomas Bowles by him layed out for meat for the Beaver in St James Parke viz for bread — vii ^s and for carrett rootes — iii ^s	x ^s
To William Nicholls by him laied out for meat for the Indian beastes viz for bread viii ^s for fruite ii ^s	x ^s
To George Johnson by him layed our for meat for his Majestys Fowle in the Springe garden viz for one bushell of wheat for the guyney hens — iiiii ^s , for one bushell of barley for the great Duckes—iii ^s	vii ^s
To John Barnes by him layed out for meat for his Majesteys Fowle in the Parke viz, for xii b ^{les} of Oates for the Duckes and Goates at ii ^s ii ^d the b ^l — xxvi ^s , for viii b ^{ls} of Oates nowe at ii ^s the bushell — xvi ^s — for ii b ^{ls} of Pease for the Pigeons at ii ^s iiiii ^d ye b ^l — vi ^s viii ^d , for Eeles and Livers for the Hearons and Storke — v ^s , for bread for the Crane — ii ^s for a pecke of wheat for the Turtle Doves — xv ^d	lvi ^s xi ^d

Summa totalis of the viiⁱⁱ xii^s v^d
month of June i6ii
William Palmer

The whole charges of these three moneths together amounteth to a		xxiii ^h	iiii ^s	vii ^d
		viz		
by Debentur ³⁷ 45 ^s 6 ^d	For feeding the Beasts and Fowle	xii ^h	xv ^s	xi ^d
	For Laborers and weeders & for carrieng sand into the Spring Garden	v ^h	xvii ^s	x ^d
	For watering the yong Elmes lately set neere St James		xv ^s	
	To Georg Johnson keeper of the Orange trees vi ^d per diem		xl ^v	vi ^d
	To John Barnes keeper of the Fowle at iiiii ^d per diem		xxx ^s	iiii ^d
Summa totalis		xxiii ^h	iiii ^s	vii ^d
		19 — 8 — 9 allowed		

R. Salisbury³⁸

NOTES

1. Museum of London, Accession No. Z6312, Viscount Rochester's accounts for the maintenance of animals in St. James's Park and Gardens, April–June 1611.
2. For the development of St. James's Field and environs see F. H. W. Sheppard (ed.) *St. James Westminster Pt. 1 Survey of London* (London, 1960) XXIX 23.
3. PRO. Ministers Accounts, Edward VI, 298 and 37 Elizabeth Middlesex 1450. For another garden of this name see C. L. Kingsford *The Early History of Piccadilly, Leicester Square, Soho* (Cambridge, 1925) 81.
4. Paul Hentzner *A Journey into England in 1598* (1757) 263.
5. (a) 16th, April 1605; *Cal. of State Papers Domestic 1603–10* (London, 1857) 211. The orange tree, a native of North India, was introduced into this country from Italy in the 16th century (although a ship load of the fruit was recorded in Southampton in 1290); first cultivated by the Carew family of Beddington, Surrey, in 1595. (As one of his projects, Henry, Prince of Wales, established an orangery at St. James's Palace in 1610.) (b) Knyvet was also ordered to provide for fountains, walks, and waterworks to be made by him in St. James's Park, houses for the reindeer, red deer, ducks, and foreign fowl; also for lodgings built for the gentlewomen of Lady Mary the King's daughter, and wages for two attendants to keep the foreign fruit trees, deer, and fowl. *Cal. of State Papers Domestic 1580–1625* (London, 1872) 469.
6. 26th Dec. 1603; *Cal. of State Papers Domestic 1580–1625* (London 1872) 435. Warrant to Sir John Stanhope, Vice Chamberlain to the Treasurer of the Chamber, to pay to Richard Hampton, who had been appointed mole taker in St. James's Park, the

fee of fourpence a day and twenty shillings yearly for livery.

7. PRO. SP 14/62 f49
opossum: general name of the small marsupial mammals of the American family Didelphyidae; first recorded in England in 1610.
cassowary: a genus of large cursorial birds related to the ostrich, inhabiting New Guinea and standing about 5 foot high, the cassowary must have bemused spectators in St. James's Park! First recorded in England in 1611. *Shorter Oxford Dictionary* (1973).
'A legge and claw of the Cassowary or Emeu that dyed at St. James's Westminster' were recorded in the Musaeum Tradescantianum at Lambeth in 1656. See also *Country Life* (April 15 and May 13, 1971) for cassowary illustrations by Francis Barlow (1626–1704).
8. Robert Carr, Earl of Somerset (d. 1645) favourite of James I; accompanied the King from Scotland and served as his page, knighted 23rd December 1607; the first Scot promoted by the King to a seat in the English House of Lords, he openly adopted the principles of the Spanish party. Replaced as Keeper of St. James's Park by Henry Lord Danvers in 1613. *Dictionary of National Biography* 3 (London, 1908) 1081–5.
9. *Op. cit.* in Note 1.
10. Edinburgh University Library. For a discussion of the album see J. L. Nevinson in 'Sketches of 17th century London' *Country Life* 142 (16th November 1967) 1256–1257.
11. (a) The earliest lotteries in England sanctioned by the Government were for such purposes as the repair of harbours in 1569 and the Virginian Company in 1612. In the lottery of 1569, 40,000 chances were sold at 10/- each, the prizes being 'plate, and certain sorts of merchandises'. In 1698 lotteries, with the exception of the Royal Oak

- lottery for the benefit of the Royal Fishing Company, were prohibited as common nuisances.
- (b) Massinger *City Madam* (1632) III, iii, 'Receive these Indians lately sent him from Virginia into your house'. See Bruce G. Trigger (ed.) *The Handbook of North American Indians* (Smithsonian Institution, 1978) for further discussion.
12. Indian beasts. According to Edward Topsell this term was used to describe any foreign animal: 'They call all strange beasts by the names of Indians, if they find them not in their own country', *The History of Four-Footed Beasts and Serpents and Insects* 1 (London, 1658) 186. Edward Topsell (1572–1625) perpetual curate of St. Botolph Bishopsgate and author of two elaborate manuals of zoology. Topsell's exhaustive account of the prevailing zoological traditions and beliefs give his work historical value. (See *Dictionary of National Biography* for further details.)
 13. Balearian crane: mentioned in Topsell's treatise on birds, T. P. Harrison and F. D. Hoeniger (eds) *The Fowles of Heaven or History of Birdes* (Austin, University of Texas, 1972).
 14. Certain trees, resembling willows, in Pomona, Orkney, produced swollen balls at the ends of their branches which contained the embryo of a goose suspended by the bill; when ripe these fell off into the sea and took wing. The story is promulgated by (amongst others) Giraldus Cambrensis in his *Topographia Hiberniae*, see J. E. Harting *The Ornithologie of Shakespeare* (London, 1871) 247–256.
 15. Bittern, *Botaurus stellatus*, Topsell *op. cit.* in note 13, 88.
 16. Jacob Larwood *The Story of London Parks* 4 (London, 1877) 71–2.
 17. Wheatley and Cunningham (eds.) *London Past and Present* 3 (London, 1891) 293–7.
 18. Sheffield City Libraries, Wentworth Woodhouse Muniments Strafford Papers, 14(90): Garrard to Lord Strafford, 3rd June 1634.
 19. E. S. De Beer (ed.) *The Diary of John Evelyn* 3 (Oxford, 1955) 398–400.
 20. Archaeological evidence has revealed that the elk became extinct in Britain during the Boreal period, c. 7000 BC. Sawn palm segments of elk antler have been found in a late 15th century refuse dump at Baynard's Castle, possibly imports from Scandinavia.
 21. Arabian sheep. Perhaps the animal described is the fat-tailed sheep, as illustrated in Van Meer's album; first recorded during the time of Herodotus, c. 450 BC. See H. Epstein *The Origin of the Domestic Animals of Africa* 2 (London, 1971) 160.
 22. Peter Mundy *The Travels of Peter Mundy in Europe and Asia, 1606–1667* The Hakluyt Society, Vol. V, Second Series, No. LXXVIII (London 1936) 155–8.
 23. *Mercurius Publicus*, 8th Jan., 1663, 3.
 24. Christopher Lever *The Naturalized Animals of the British Isles* (London, 1977) 2.
 25. *Op. cit.* in Note 4.
 26. W. H. Quarrell and M. More (eds.) *London in 1710, from the Travels of Zacharias Conrad von Uffenbach* (London 1934) 12.
 27. On 29th Nov. 1601, a payment of £6 was made to Johnson, Keeper of the Spring Garden for a scaffold which he had erected against the park wall in the Tilt Yard for the use of Count Egmond to see the tilts. Privy Council Registers (PC2)26.475.
 28. Guinea hen: a native of Africa and also known as the turkey hen at this time, the latter having been introduced into England from the New World via Spain in 1524. Harting *op. cit.* in Note 14, 176–179.
 29. The Bustard or Great Bustard (*Otis tarda*) the largest European bird is thus described by Edward Topsell in his treatise on birds, (*op. cit.* in Note 13): 'These fowles love the open and plane Fields . . . They are common to many Countreys, to Spayne, Greece, England, Scotland . . . In Belgia, especially in Holland, they alsoe are very plentifull . . .'. The Great Bustard is mentioned as early as 1544 (see W. Yarrell *A History of British Birds* 2 (London 1856) 1428) and features in the list of game provided for a banquet given in the Inner Temple Hall on 16th October 1555: 'Bustards, 10s each; Swans 10s; Cranes 10s; Pheasants 4s; Turkeys 4s'. The list first appeared in Dugdale's *Origines Juridiciales* reprinted in Yarrell *ibid.* (433). A specimen of bone from a Great Bustard was found in the 1520 refuse at Baynard's Castle, London and it is believed that this bird must have been obtained outside London possibly from the Sussex Downs or the Chilterns. See D. Bramwell 'Bird remains from medieval London' *The London Naturalist* 54 (1975) 15–20. The Bustard became extinct in Britain by about 1838 as a result of changes in land usage, collection of skins and eggs, and its use as a food.
 30. Beaver (*Castor fiber* Linnaeus 1758). It is possible that the MS is referring either to the European beaver or the North American beaver. Literary references suggest the presence of beaver in Wales in the 10th and 12th centuries whilst the latest archaeological 'find' comes from Wirral Park Farm, Somerset and is dated to 11th–12th century (skeletal remains identified by Jennie Coy of DoE Faunal Remains Project, Southampton University). The beaver became extinct in Britain soon after the 12th century due to deforestation and hunting (G. B. Corbet 'The distribution of mammals, in historic times' in *The Changing Flora and Fauna of Britain* (London, 1974) 179–202).
 31. Indian beasts, see Note 12.
 32. Heron; the common heron is indigenous to Britain and resident in most parts of the British Isles. Baynard's Castle, London, deposit 100 (1499–1500) yielded two bones of Grey heron *Ardea cinerea* (Bramwell *op. cit.* in note 29). The heron was hunted with hawks and regarded as a delicacy (Yarrell *op. cit.* in note 29, 228).
 33. Crane, *Grus grus*. Remains found at Baynard's Castle, in deposit 100, 1499–1500 and deposits 1 and 23, 1520 (Bramwell 1975). Harrison and Cowles have identified bones of the Sarus Crane, *Grus antigone* from Bronze and Iron Age sites in Britain (Bronze Age/early Iron Age site, King's Cave, Loch Tarbet, Isle of Jura, Scotland. Iron Age site, Glastonbury Lake Village, Somerset). See also Notes 13 and 29.
 34. 'buz' i.e. bushell:—a measure of capacity containing 4 pecks or 8 gallons.
 35. Stork. The white stork is a very rare visitor to this country—its winter quarters are in northern Africa and during the summer months the stork migrates to Spain, France, Holland, Germany, Poland and Russia (Yarrell *op. cit.* in note 29, 586).
 36. Turtle dove; a summer visitor, coming from its breeding grounds in Africa, arrives in England

- about the end of April (Yarrell *op. cit.* in note 29, 310).
37. By debentur, i.e. a voucher given in the Royal household, the Exchequer or the Government office, certifying to the recipient the sum due to him for services rendered, salary, expenses, etc.
38. Robert Salisbury (i.e. Robert Cecil, Earl of Salisbury), Lord High Treasurer of England—d. 1612; the office was then put in commission.

ACKNOWLEDGEMENT

I would like to thank Dr. Philip Armitage, who is on attachment to the Department of Urban Archaeology, Museum of London, for providing much information on the animals.

SAINT PANCRAS, MIDDLESEX: A SEVENTEENTH-CENTURY SURVEY

RICHARD CONQUEST

In 1765, the parish of Saint Pancras was said to have been 'a remote and isolated spot, consisting of a few scattered dwellings, and containing only 60 inhabitants; and its ancient Church, of diminutive size, suited to the smallness of the population, formed a romantic feature in the landscape. . . .' ¹ A century later, the population had risen to over 198,000, and the parish contained over 15,000 houses. Whilst the development of Saint Pancras may be traced during this period of transformation, its earlier history remains obscure, despite its close proximity to the Metropolis. Little is known of its demographic, economic or topographical history.

This note is concerned with a survey of the parish which was carried out in May 1649. The document sets out the names of all landowners and tenants, together with details of houses and the size and rental value of all landholdings. ² The survey was undertaken for fiscal purposes. On 7th April 1649 an Act of Parliament was passed 'for raising Ninety Thousand pounds per Mensem. For the Maintenance of the Forces raised by Authority of Parliament. . . .' ³ War against the Scots and in Ireland created an immediate and pressing need for money. Parliament recognised that 'the way of assessing and levying the same (for want of an equal pound Rate upon land and goods) in many counties hath hitherto been very unequal. . . .' Whilst promising to change the system, it was nevertheless dictated by the pressures of war finance that the old system be used. ⁴

Commissioners were appointed for the supervision of the assessment in each county, and the Saint Pancras Survey was given to the Treasurers at War by Sir William Roberts, James Hawley and Josias Barners. The Commissioners were empowered to appoint 'such persons as they shall think fit, within their respective divisions, to be assessors of the said rates. . . .' ⁵ Two copies of the survey were drawn up, one for the approval of the Commissioners and the other for the Treasurers. ⁶

The moneys due were to be gathered by Collectors, who were empowered 'to break open any House, Chest, Trunck, Box, or other thing' in order to secure the revenues. For this service the collectors were paid 1d in the pound, as were the clerks 'for their pains in fair writing the said assessments and Duplicates'. ⁷

In the 19th century the parish consisted of 2,716 statute acres, whilst the survey records 2,086 acres, which was made up of 74 parcels of land. The survey lists a total of 96 houses, including those belonging to 'cottagers on the waste' which suggests that the count was fairly comprehensive. Of these

houses, 35 had no sizeable amount of land attached.

The average size of landholdings was 28.1 acres, and the table below shows the distribution of these plots according to acreage. Some individuals held more than one plot.

Size distribution of landholdings

<i>Acres</i>	<i>Number of holdings</i>	<i>Total acres</i>	<i>% of total acreage</i>
0- 10	28	174	8.34
11- 20	18	269	12.89
21- 30	10	257	12.32
31- 40	3	107	5.12
41- 50	3	138	6.61
51- 60	3	174	8.34
61- 70	3	206	9.87
71- 80	1	80	3.83
81- 90	1	84	4.02
91-100	0	0	0
101-110	1	105	5.03
111-120	0	0	0
121-130	0	0	0
131-140	1	132	6.32
141-150	0	0	0
151-160	1	158	7.57
161-170	0	0	0
171-180	0	0	0
181-190	0	0	0
191-200	0	0	0
201-210	1	202	9.68
	<hr/> 74	<hr/> 2086	<hr/> 99.94

The valuations of the properties seem to have been based upon estimates or some formula, the rounded figures of between £2 and £3 per acre were overly consistent, and it seems very unlikely that, given the complexities of leasehold arrangements, such a uniformity of rentals could have existed.

However, accepting the obvious limitations of such sources, the Survey of 1649 provides a great deal of information of a very basic kind, upon which further investigations may safely be grounded.

NOTES

1. Samuel Lewis *Topographical Dictionary of England* (1840). Lewis was most probably referring to the area around the Old Church, certainly the mid 18th-century population of the parish was far greater than he suggested. Nevertheless, his comment had a certain validity.
2. Bodleian Library, Oxford. Rawlinson Mss d.715.
3. C. H. Firth and R. S. Rait *Acts and Ordinances of the*

Interregnum Vol. 2, 25-57. A survey of the Manor of Tottenhall of September 1649 and a list of St. Pancras taxpayers of 1693 have been reprinted in *Survey of London* 19 (London County Council, 1938) Appendices IX and VIII.

4. *Ibid*, 26
5. *Ibid*, 48
6. *Ibid*, 49
7. *Ibid*.

Midd (Middlesex) Pancras and Kentish Towne.

An exact Survey conteineing the number of acres And yearely values of all the Mannors & Messuages, Lands & Tenements and Tythes within the said pish (parish) dated the sixth day of this instant May in persuance of an Acte in Parliament made the 7th day of April last signed under the hands of Sir William Roberts Knight and James Hawley and Josias Bernd Vizt. 23 May 1649.

<i>Owners</i>	<i>Tenants</i>	<i>Houses</i>	<i>Acres</i>	<i>£</i>	<i>s</i>	<i>d</i>
Earle of Southampton	Heyward	0	70	140	0	0
Earle of Clare	Gerrard	0	12	36	0	0
	Gerrard	0	9	27	0	0
Coheirs of Lowe	Gerrard	0	20	60	0	0
Committe of the Revenue for the Manor of Tottenham the late Kings Land.	Graunt	0	132	200	0	0
	Kenricke	1	0	4	0	0
	Mrs Rose	1	0	5	0	0
	Blith	0	26	52	0	0
Mr Redman	Drake	1	0	12	0	0
	Beale	1	0	4	0	0
	Freeman	1	0	10	0	0
	Sands	0	6	18	0	0
	Ingram	0	4	12	0	0
	Gwalter	0	4	8	0	0
Garroway	Gibbs	1	0	16	0	0
Blunt & others	Blith	0	15	40	0	0
Sir William Brownlowe	Pitte	2	6	20	0	0
Earle of Northampton	Neylor	0	2½	6	0	0
	Samond	1	42	92	0	0
Mr Simon Bennett	Streete	0	46	138	0	0
Hobson	Sherwood	0	12	36	0	0
Coxe	Collins	0	54	177	0	0
Robinson	Blunt	0	22	66	0	0
	Durdge	0	10	30	0	0
Brewers Company	Ecclestone	0	25	50	0	0
Jones	Ecclestone	0	30	90	0	0
	Smith	1	0	22	0	0
Doctor Stanton	Trubshaw	0	16	53	0	0
	Channdler	1	0	6	0	0
	Thorpe	1	6	28	0	0
Abraham	Peirce	1	7	50	0	0
	Warr	1	0			
Hale	Man	1	105	240	0	0
	Kidde	1				
Bartholomews Hospital	Smarte	0	60	144	6	8
Mrs Goodcole & others	Barrett	0	3	7	0	0
Prebend of Saint Pauls Mannor of Cantlins	Mr. Richard					
	Gualter	1	202	400	0	0
Mr. Elborowe incorporated in the prebend	Barrett and	0	4	8	0	0
	himselfe	Tythes	0	26	13	4
Viccareedge	Mr Birkett					
	5 c pent low					
	from the tythes of the prebend			40	0	0
Hewett	Giwalter	5	60	126	0	0

Parish land for Church and poore	Bensom & others	0	22	22	0	0
Gray	Giwalter	3	18	60	0	0
Hewett	Padmore	1	0	6	0	0
Prebend of Paules	Carpenter	1	68	136	0	0
James Smyth	Reeve	4	31	82	0	0
	Becke					
	Dixon					
	Chaundler					
Cleeve	Goswell	0	15	30	0	0
	Clayton	1	10	25	0	0
Dixon	Mess and	7	0	17	0	0
	cottages					
Doctor Palmer	Garforde	0	10	20	0	0
Pearse		0	8	16	0	0
Boxe		0	12	24	0	0
Kinge	Beckett	0	6	15	0	0
Sir Thomas Hewett	Neale	1	30	60	0	0
	Hartopp	1	2	10	0	0
Tucker	Stenson	1	36	72	0	0
	Pytte	1	24	48	0	0
	Clayton	0	9	18	0	0
Easte	Benson	1	0	5	0	0
Chapple	Shetleworth	0	15	30	0	0
	Yale	0	2½	6	0	0
Needham	Russell	1	½	2	0	0
Brian	Pytts	1	0	8	0	0
	Graves	1	0	2	10	0
Padmore	Axtree	2	0	3	13	4
	& another	2	0	5	0	0
Harford	Himself and others					
Offley	Chapple	1	9½	30	0	0
	Pytte	0	12	20	0	0
	Russell	1	7	20	0	0
Doctor ? Harvey	Marshe	0	9	20	0	0
	Bullocke	0	26	52	0	0
	Bockett	0	9	20	0	0
Sharpe	Nutt	1	0	5	0	0
Austen	Ffabin	1	0	10	0	0
Mr Nicholls	Graves	0	28	60	0	0
Hoggfflesh	&	1	18	32	0	0
The Lyrd Cholmley	himselfe	0	19	36	0	0
Washborne	Palmer	3	5	32	0	0
	& others	2	84	168	0	0
Mrs Margaret	Mrs Isbell					
Nicholls	Nicholls					
	James Squier	1	40	80	0	0
Westward	Haslopp					
	Eccleston	0	24	50	0	0
Eccleston	Bucknell	0	80	80	0	0
Bill	Bowles	1	158	86	13	4
	Nicholls	1				
	Bilby	1				
Stunt	Syden	1	50	50	0	0
Wright	Himselfe	0	11	20	0	0
Lee	himselfe	0	9	18	0	0

Mr Pryor	himselfe	2	14	67	0	0
	& others					
Mr Glover	himselfe					
	Walle					
	Ffloyd }	2	0	14	0	0
Mr Cholmely	Gardner	0	8			
	Geaves	0	12			
	Ffloyd	0	2			
and Sir James Harington		1	6	30	0	0
? Coyshe	Wainewright					
	and others	3	0	16	0	0
Mr Geares	Knowles	0	20	45	0	0
Lady Dudley	Halte	1	14	80	0	0
Himble	Sharpe					
	& others }	7	14	60	0	0
Sir Robert Payne	Lee					
	Geares					
	Ashman	7	68	280	0	0
	& others }					
Ffloyd		1	0	2	6	8
Smyth	Cottagers	1	0	1	3	4
Turner	on the waste	1	0	1	3	4
Mann	a cottage	1	0	2	0	0

Summa £4735-6-8d

Whereof out of Mr Ecclestons 25 acres to the Brewers company to maynteyne schollers att free schole xx 40£

And out of Mr Smartes ffarme to St Bartholomews Hospitall the sume of £6 13s 4d.

And out of all Doctor Palmers ffarme in the same of Garford to maintaine Boyes x at Schoole xxx £ which amounteth to one hundred markes.

Which being deducted the cleere yeerely is £4668-13-4d

By us Tho Ffabian

Tho Hogsflishe

THE TOWER OF LONDON

The Reconstruction of the Inmost Ward during the reign of Charles II

GEOFFREY PARNELL

When, in 1532–3, Henry VIII ordered extensive repairs and alterations to the lodgings and apartments of the Inmost Ward,¹ he became the last English monarch to attempt to renovate and improve the old medieval palace at the Tower of London. In fact, throughout the late fifteenth and sixteenth century the Tower became less and less a royal residence and more, as Holinshed put it, ‘an armorie and house of munition . . . a place for the safekeeping of offenders’. By the end of the sixteenth century the buildings within the inner sanctum had been allowed to fall into such a state of disrepair that a survey of 1597 presented the great hall as roofless and ‘decay’d’ (Plate 1). No doubt the condition of the palace continued to deteriorate during the first half of the seventeenth century and much of it was gradually acquired and utilised by the various official departments operating within the Tower. As early as 1562 the Mint had established a refinery inside the Inmost or ‘Coldharbour’ Ward, while the Board of Ordnance had stores in the ‘Quenes chamber within her graces lodging’.² By 1599 the Ordnance had established an official ‘storehouse in Coldharbour’.³ This piecemeal acquisition of the dilapidated Coldharbour buildings probably continued until just after the Restoration in 1660.

For the Board of Ordnance, the Restoration in fact marked the beginning of a period of rapid expansion; its functions were increased and it now assumed responsibility for fortifications throughout the realm. Inside the Tower the Ordnance began to assert control over additional areas and in 1663–4, in response to expanding needs, constructed the first of its new storehouses—the present New Armouries.⁴ This was built against the inner curtain just south of the Broad Arrow Tower, opposite the Wardrobe Tower and the main palace complex (Fig. 1), the area where much of the Board’s later expansion was to be directed.

In March 1666, a report containing measures for safeguarding the Powder Magazine in the White Tower, along with proposals for improving access to it, was presented to Charles II.⁵ Consequently, in a royal warrant dated 21st March, the king appointed the prominent Ordnance officials who had prepared the report Commissioners to order and supervise the necessary work.⁶ The Commissioners’ warrant reciting that ‘Wee thinke fitt . . . That you forthwith sett on worke employe such and soe many Workemen, and Labourers as shalbe found necesfary’ with the ‘diligence and expidicon that is requisite in a thinge of soe great concernment’ was duly issued on 15th November 1666.⁷ In summary, instructions were given to demolish any building ‘neare or about’ the White

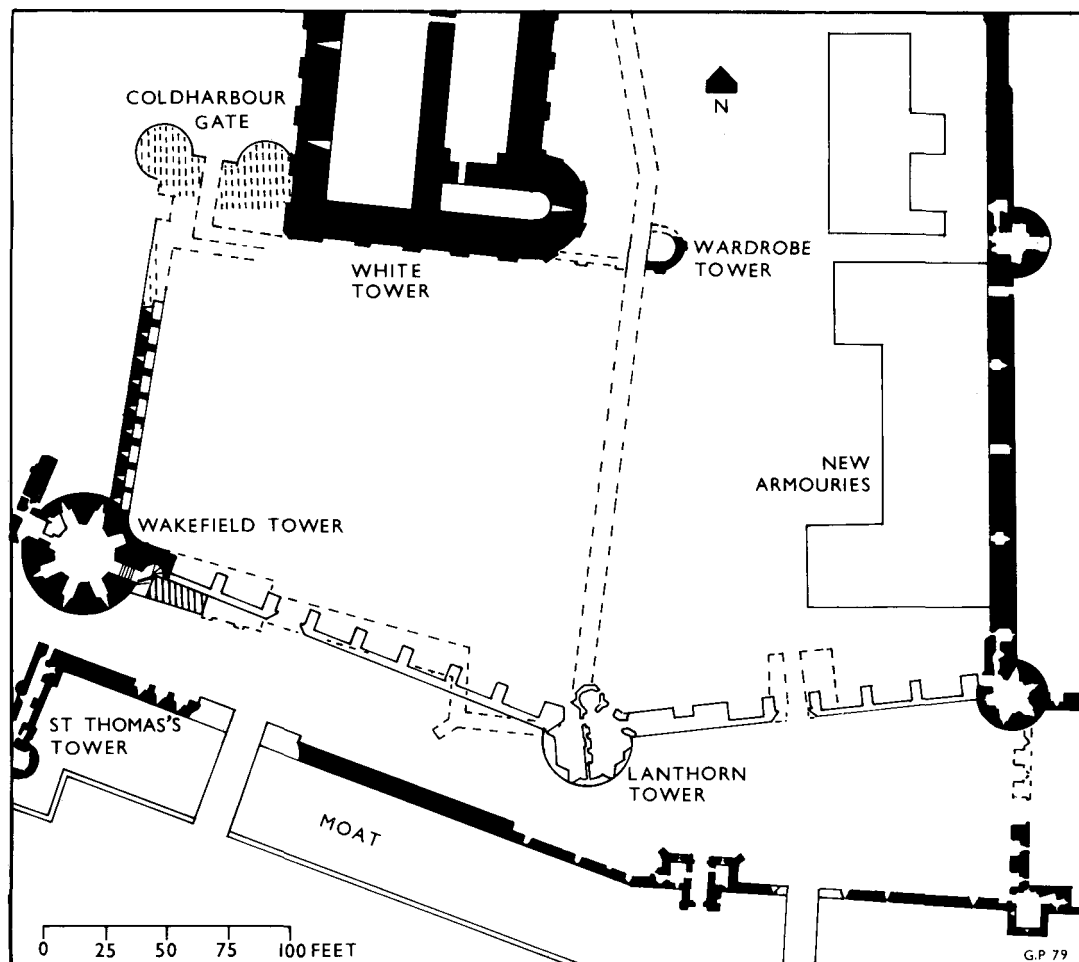


Fig. 1. Tower of London: Plan of Inmost Ward and environs.

Tower, considered to represent a fire risk to the Magazine, while certain other structures in the vicinity were ordered to be removed to enable the construction of three supply passages. In addition, it was stated that the Commissioners 'may convert and appropriate all the Lodgeings Cellars and Vaults within Coleharbour, and thereabouts for the more convenient Lodgeings of his Majesties Stores of warr'.

The most extensive undertaking designed 'for the more convenient bringing in of powdere at a great deale lesse charge then formerly' involved the construction of a passage from the 'Wharfe att the Plattforme neare the pay howse into Coleharbour' and up to the Magazine. Both the 'Outward Wall and Inward Wall' were ordered to be 'opened' and for the crossing over the wharf

moat a 'Bridge made to that end, according to such forme and Moddell as Sir Bernard de Gomme his Majesties Principall Engineer shall design'. Four houses belonging to William Tilly, Christopher Comport, William Norton and William Harmen which impeded the route were ordered to be pulled down.

The position of the new bridge and the line of the passage are not easy to determine. That the work was actually carried out is supported by a warrant issued 16th April 1667, authorising an allowance of £40.0.0 by way of imprest to James Lyod, mason, to enable him to 'performe his said Contract' for the 'makeing and Working of a New Gate' on the south side of the Tower.⁸ This reference is corroborated by a later entry in the Bill Books dated 14th July 1669, which records payment of £372.10.7½ to Thomas Casse, master carpenter to the Board, for 'makeinge a new draw Bridge where the new passage into the Tower was designed by order of the Right Honorable the Commissioners'.⁹ The account stipulates that work was carried out between 22nd December 1666 and 15th June 1667. The most likely position of this ill-documented feature was perhaps some 70 feet east of St. Thomas's Tower on the site of the present Middle Draw Bridge (Fig. 1). The extant structure is a purely nineteenth-century affair and certainly no gate stood here in the eighteenth century. However, a proposed or constructed bridge over the moat is shown here on two seventeenth-century plans. The plans themselves, one dated February 1666, the other marginally earlier, in fact pre-date the construction of the crossing, but the bridge illustrations are clearly later additions (Plate 4). Moreover, in the Board of Works accounts for March 1669, appears an entry for conveying earth over a certain 'Traytors bridge'.¹⁰ Whilst the exact position of this bridge is not given, its name clearly indicates a nearness to the famous gate beneath St. Thomas's Tower. The 1667 draw-bridge does not appear on the 1681/2 Tower plan (Plate 2); its life, therefore, must have been a short one i.e. *circa* 1667–1681/2. In this respect it is interesting to note that in March 1671 the same carpenter who erected the bridge received a further payment for 'pullinge down the drawe bridge at Tower wharfe'.¹¹ There was, however, at least one other wharf draw-bridge operating at the Byward barbican; thus a clear association with the 1667 bridge cannot be established. Nevertheless, demolition must have occurred close to this date, and almost certainly by the mid-1670's when the rebuilding of Coldharbour was complete. It may be supposed that the passage, which the bridge served, was abandoned during the period of reconstruction work and the ground used for building purposes. In this event, the draw-bridge may well have become obsolete and dispensable.

The point where the passage leading from the bridge passed through the inner curtain wall, was perhaps immediately opposite the suggested bridge site. On the 1681/2 plan, the appearance of two small buildings occupying a narrow strip between the 'Graineery' and main offices of the 'Treasury House' might suggest that they had been 'fitted in' to a pre-existing gap (Plate 2). The only alternative route might have been via a communication known eventually as the 'Majors Passage' which ran down the opposing east side of the 'Graineery' (Fig. 2). However, the restrictions offered by this tenuous alley make it an unlikely choice.

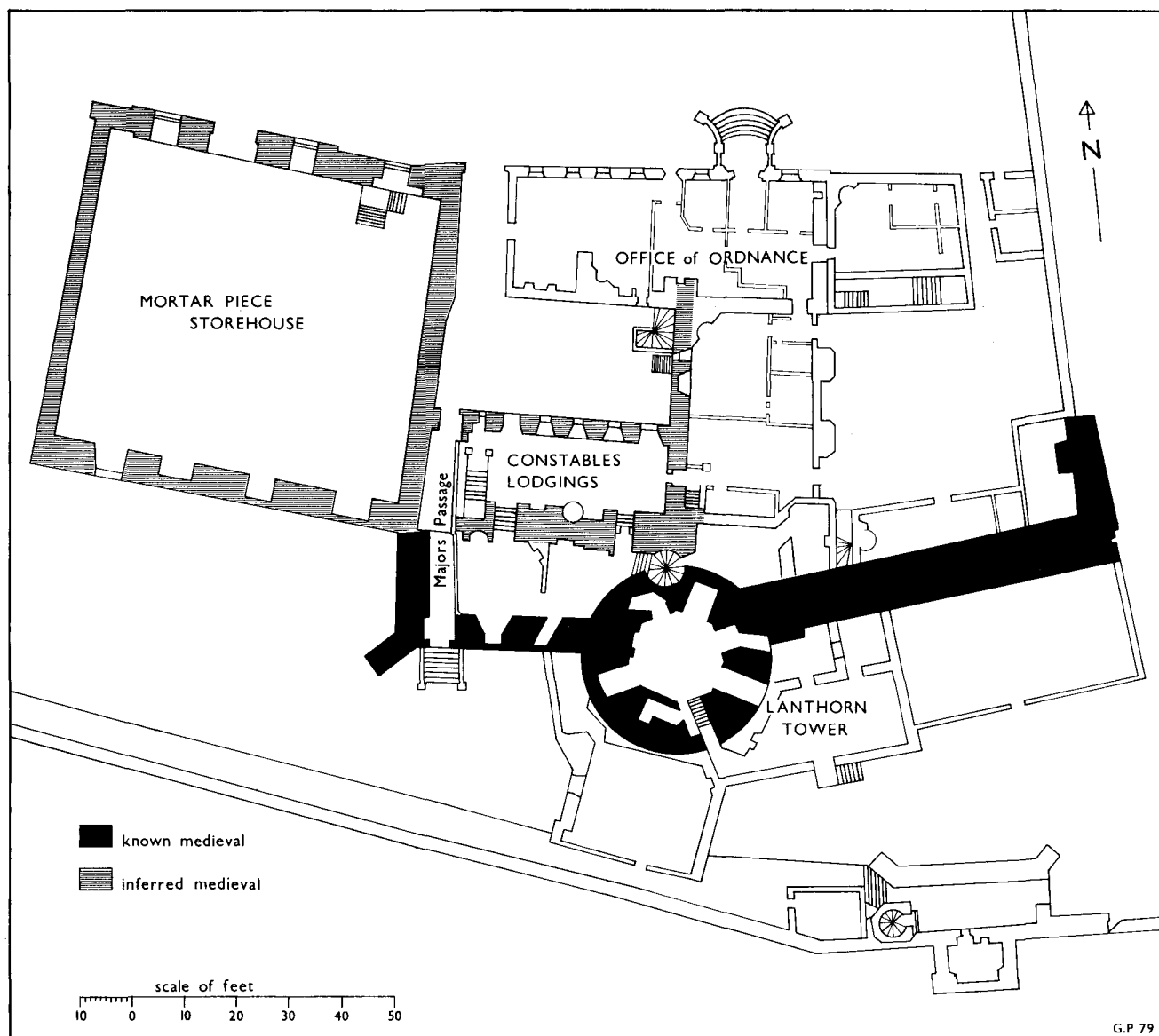


Fig. 2. Tower of London: South-east corner of Inmost Ward showing building lay-out after reconstruction; redrawn from a plan of 1731.

The second passage ordered by the Commissioners was to run from the Magazine to the 'Ordinary Proofs howse' on the east side of the White Tower. Accordingly, 'soe much of the Jewell howse as standeth in the way adjoyneing to or neare the White Tower' was ordered to be demolished. The route of the third passage was to be 'out of Coleharbour through the old hall and garden behinde it into the New Storehowse'. Unfortunately this tantalising reference to the hall is misleading. It can be presumed that the passage, like the other two,

terminated at the Magazine; thus the east-west route to the 'New Storehowse' [New Armouries] would not have passed through the hall, which stood against the south curtain, but a range of buildings called the 'Queens Lodgings' running south from the Wardrobe Tower (Plate 1). Clearly description of the old palace complex had by now become rather confused or all-embracing.

In order to secure the Powder Magazine it was directed that 'all the Chimneys of the howse belonging to the Surveyour of the Workes and those of the Lodging in Cole Harbour Gate, and those in the White Tower adjoyning to the Staires Case goeing upp to the old Chappell as likewise those of that part of the Jewell howse which shall bee left standing and the howse of William Masters Wardour . . . bee demollished, and noe from hereafter made therein'. This direction was given subsequent precedence on 27th February 1667, when the king (in Council at Whitehall) ordered that 'they [Commissioners] are hereby required to meet with all Convenient speed and to give immediate order for pulling downe and demolishing all houses and buildings within such distance of the White Tower . . . as they . . . may any waies Conceive to endanger His Majesties Magazine of powder there'.¹²

By early 1667, the Board of Ordnance appears to have assumed control of most of the Coldharbour enclosure. A warrant dated 22nd April read:

'Whereas wee have found fitt some time since . . . to authorise and direct severall demollishments and alteracons to bee made in and about our Tower of London, which hath allready in some measure been put in execution . . . Wee have thought fitt suitable to those our first Intentions and directions, to signify Our further new pleasure . . . that forthwith you give order for the demollishing altering and new building all that grownde and ould building in the Tower called Cold Harboure.'¹³

Concerning its general reconstruction it was ordered that there 'bee erected such [a] new store-house and buildings . . . as you shall judge most convenient and usefull for Our service and according to such designe and modell as wee have or shall approve and direct'. These were to be built with 'Leade, timber, bricke and stone' taken from the old buildings cleared in advance of construction. Additional material was to be obtained from the 'houses and buildings . . . called the ould store house and Office' located on the 'hill' behind the White Tower. A delineation of the reconstruction area was also given which, although brief, affords useful information about some of the remaining medieval structures:

'Included by the walls passing from the White Tower, to the Bowers Tower, and soe to the Mote on the west side, and by the way leading from the Hill by the new store house [New Armouries] downe to the Lower Garden [Privy Garden] on the east side (excepting one pile or Tower neare to Cold Harboure Gate, with the staire Case reserved for the Jewell house)'.

The previously undocumented 'Bowers Tower', close to the White Tower, evidently relates to 'Nunn's Bower', listed in a curious inventory of about 1641 as the 'prisons over Coleharbour Gate'.¹⁴ In March 1669, the Board of Works, who retained responsibility for the maintenance of the lodgings within the gate, were engaged in 'making cleane the Leads over the Nunns Bower'¹⁵ and during

the following November were obliged to dismantle the top of the 'Tower goeing into Coleharbour' after the 'ffall of the Stones from Nunns Bower'.¹⁶ It can be assumed, therefore, that 'Bowers Tower' was one of the twin flanking towers protecting the gate.¹⁷ The reference to the 'Mote' on the west side of the aforesaid tower is perhaps surprising, since it indicates that the dilapidated gate was still surrounded by its medieval ditch. That this remained a considerable feature is evidenced by an order in the same warrant for 'making a bridge and passage over the Mote'. Finally there is reference to a tower connected with the Jewel House. Presumably this equates with the slender tower attached to the west end of the Jewel House on the 1597 survey, an enigmatic structure which H. M. Colvin has indicated was the 'Ludwyktoure' mentioned in an account of 1339.¹⁸ In 1663 it was referred to as the 'brick Tower'¹⁹ and like the remains of the Jewel House its maintenance remained the responsibility of the Board of Works for a number of years following the start of the Ordnance rebuilding.

Almost a year after the Coldharbour reconstruction began, the Ordnance jurisdiction over a small part of the enclosure was challenged by William Prynne, celebrated pamphleteer and Keeper of the Records in the Tower. On 20th December 1667, Prynne petitioned the King for the return of a building called the 'Record Office' which stood against the east side of the Wakefield Tower and which, by this time, was occupied by Captain George Wharton, Treasurer and Paymaster to the Board in the Tower.²⁰ The result of Prynne's claim is seen in a number of the Board's building accounts which record the cost of providing Captain Wharton with 'new Roomes at the pay Howse'²¹ in 'lieu of those taken from him by William Pryn'.²² The collection of buildings known as the 'pay House' or 'Treasury House' occupied ground to the north and east of the Record Office (Plate 2). Captain Wharton's new abode was apparently on the north side—one end of the building resting against the Office,²³ the other backing onto a contemporary storehouse which, as it will be shortly argued, stood against the curtain wall south of the Coldharbour Gate. Work on Captain Wharton's new quarters began shortly after the Board approved an order for the bricklayer in September 1668.²⁴ The carpenter and his team were active for most of the time between October 1668 and December 1669,²⁵ and by the end of this period the majority of the work seems to have been complete.

Accompanying the building of Captain Wharton's apartments was the construction of the 'new-storehouse' detailed in the April warrant of 1667. The storehouse stood against a stretch of old curtain wall²⁶ with, as we have already seen, one end of it backing onto Captain Wharton's new residence. This indicates adjacency to either the north or east of the Treasury House and thus provides two candidates—the 'Little Storehouse' lying to the north or the much larger 'Mortar Piece Storehouse' to the east (see Plate 5). Surviving building accounts indicate that the new building was relatively modest. For instance the brick work employed in the main body of the structure 'amounting to by measure the Doorways and windowes deducted' came to only '34 Rodds 232 ffoott' with an additional '88 ffoott' for 'Arching over the Doores and windowes'.²⁷ The size of this bill and others²⁸ appears insufficient with the needs and cost of constructing a large structure like the Mortar Piece and it is

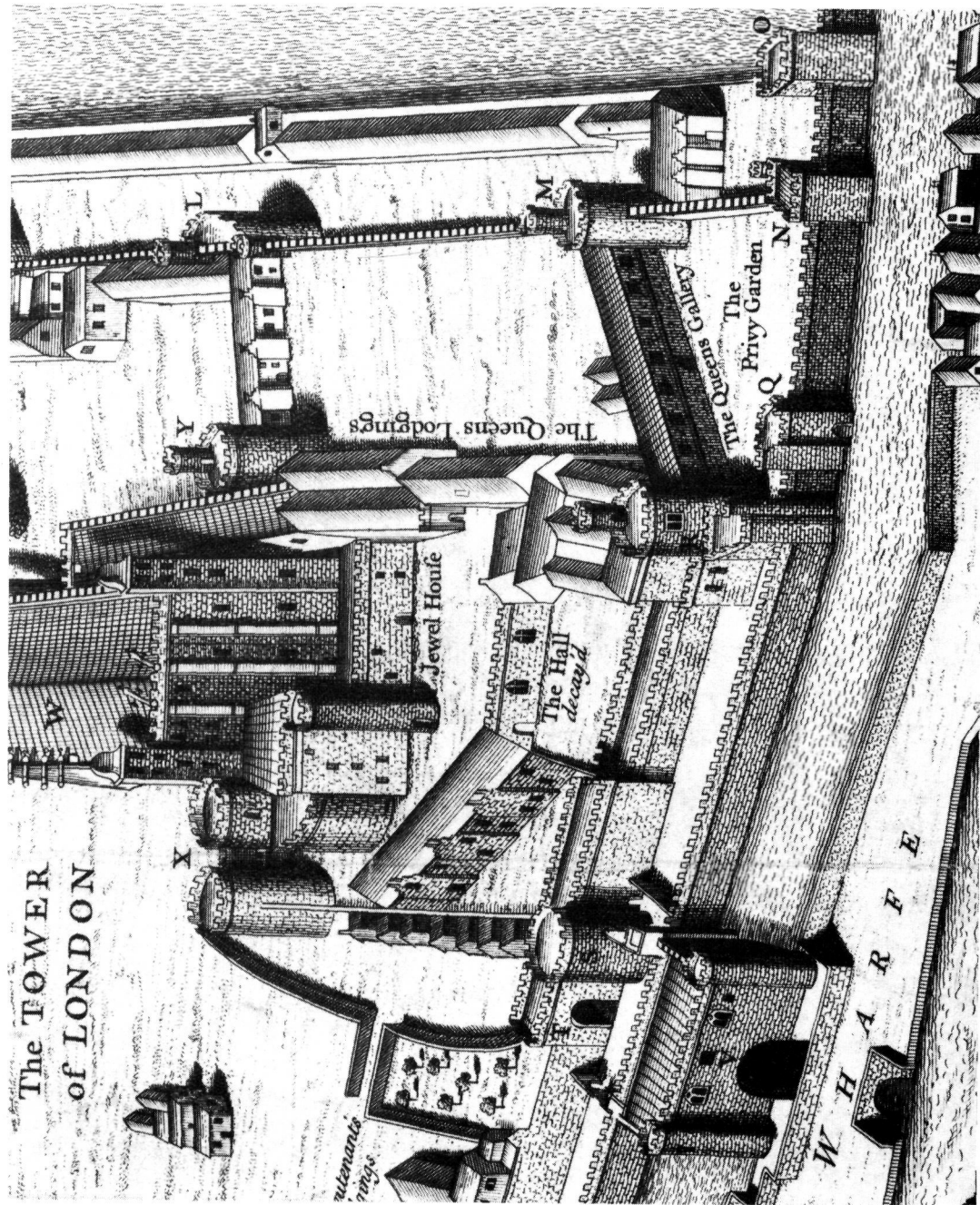


Plate 1. Tower of London: Part of the Haiward and Gascoyne survey of 1597 showing south-east corner of the Tower and palace complex.

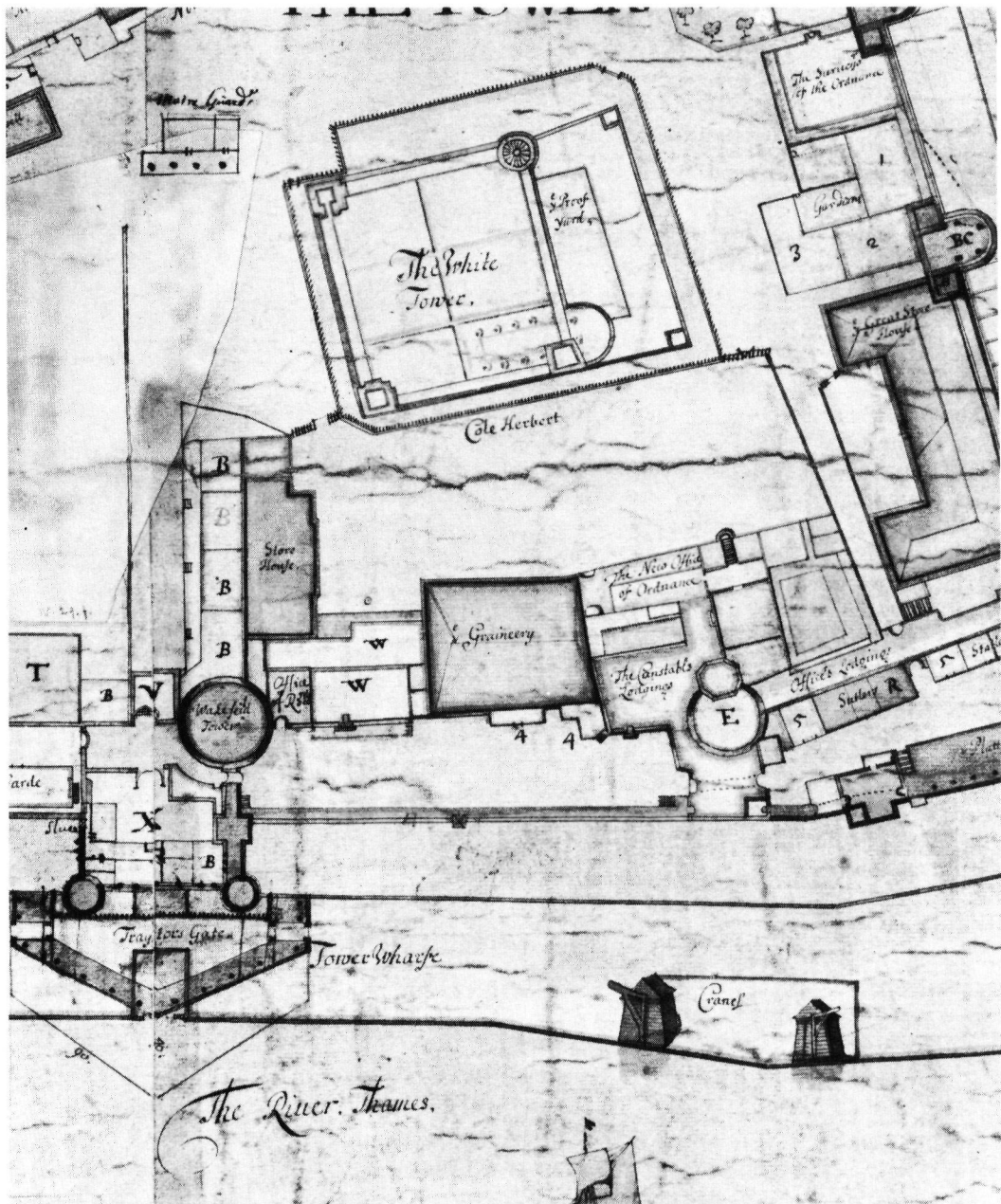


Plate 2. Tower of London: Part of an Ordnance plan dated 1681/2 showing the lay-out of Inmost Ward after reconstruction.

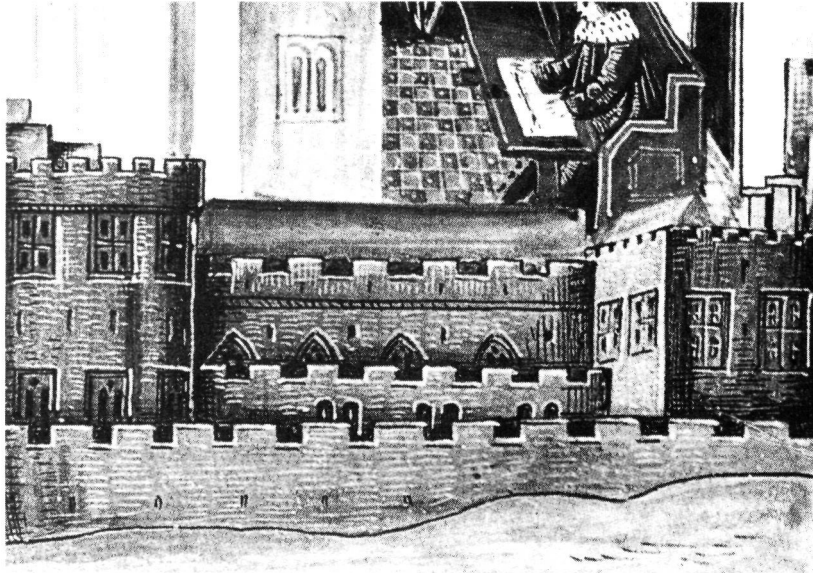


Plate 3. Tower of London: Part of late 15th-century miniature showing the hall and its south fenestration rising above the battlements of the inner curtain.

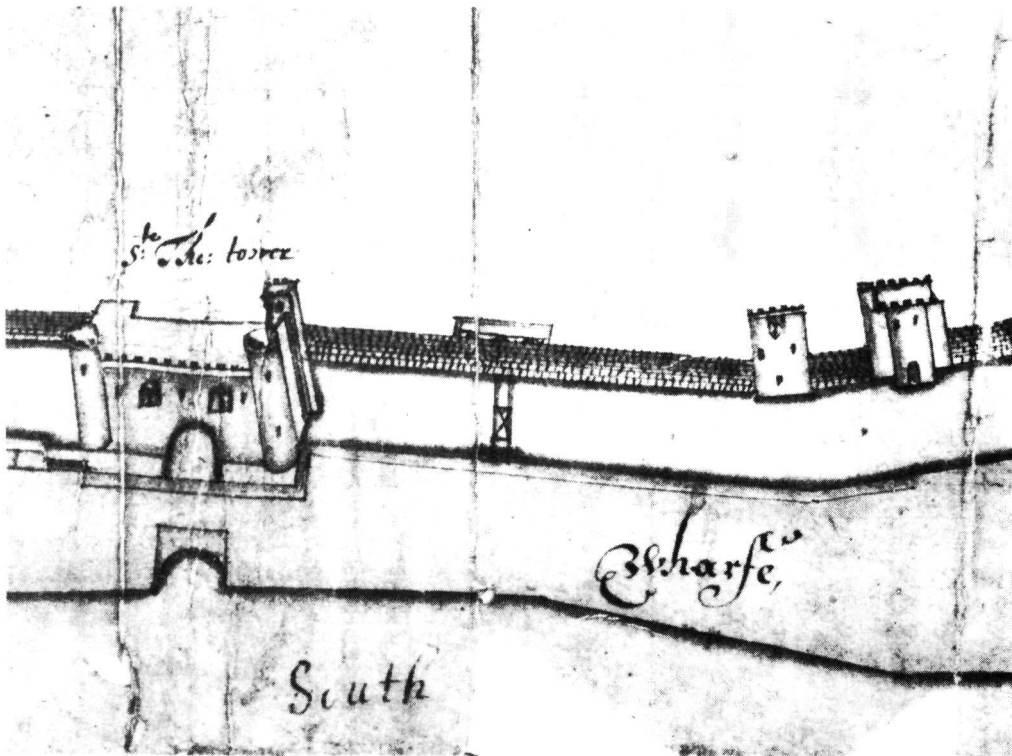


Plate 4. Tower of London: part of an outline plan of the Tower, dated 1666 or a little earlier, showing later bridge site east of St. Thomas's Tower.

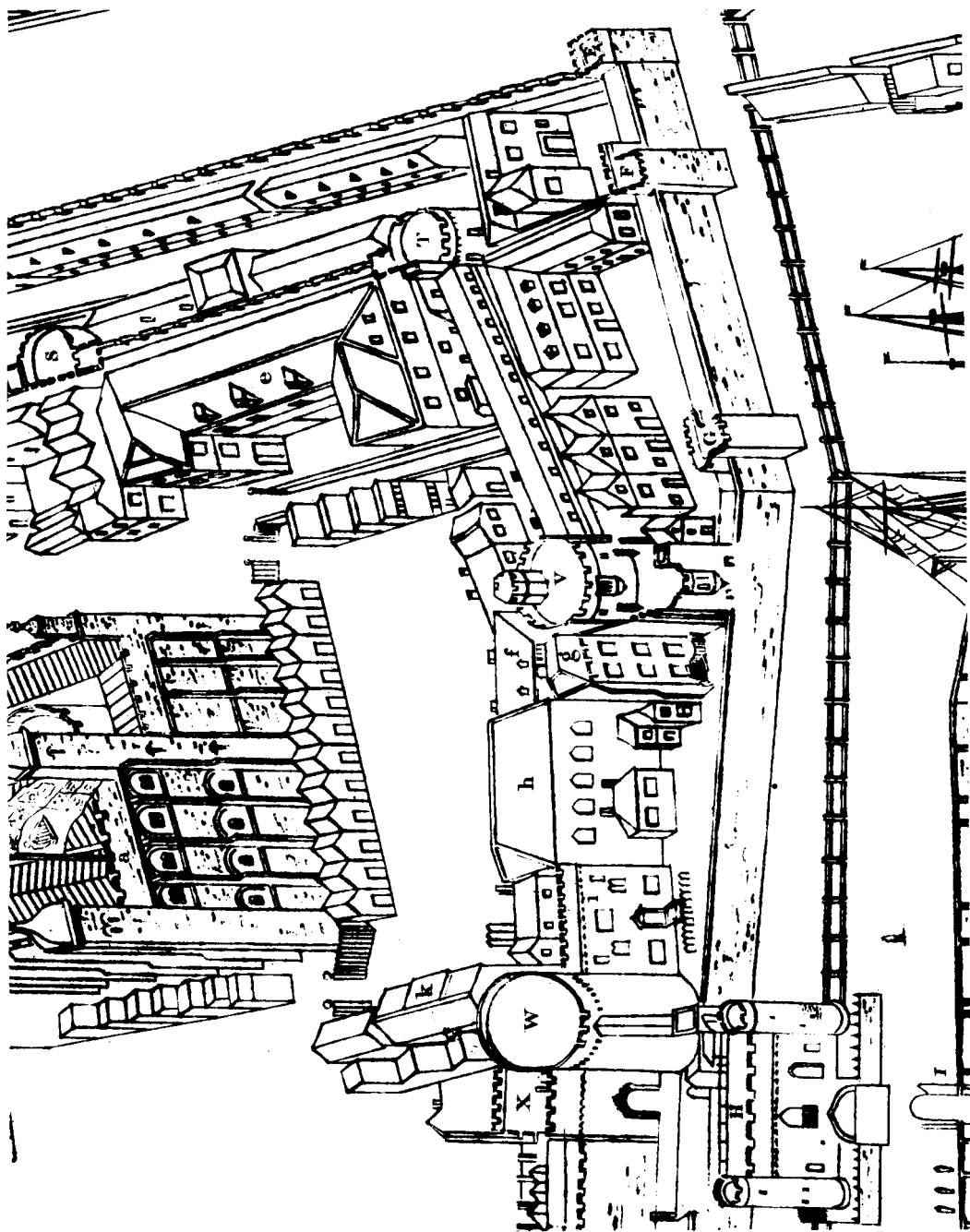


Plate 5. Tower of London: Part of the Lord Dartmouth's bird's-eye view of the Tower which accompanied a report of 1681. f=Office of Ordnance, g=Constable's Lodging, h=Mortar Piece Storehouse, i=Treasury House and k=Little Storehouse in Cold Harbour.

probable, therefore, that the identity of the new building was in fact the 'Little Storehouse'. Moreover, there are separate reasons (presented below) for regarding the Mortar Piece as a building of considerably greater antiquity.

The basic structure of the new two-storey building seems to have been erected by the summer of 1669 and in June an account with the carpenter was settled for the 'hanging up of Holsteres'.²⁹ Some work, however, remained and by the end of the following year the carpenter was still engaged in making window shutters.³⁰ The use of the new building as a storehouse was a short one, for in 1688 it was fitted out with a display of historic armour and immediately opened to the public. Listed amongst the exhibits was the famous 'Line of Kings' and a celebrated collection of trophies known as the 'Spanish Armour'. It was this second collection, claimed to have been taken from the disastrous Armada, which gave the building its new name of 'Spanish Armoury', a title the building retained until its eventual demolition in 1827.

The 'Mortar Piece Storehouse', the second store in Coldharbour was, immediately prior to the building of the 'new storehouse', referred to as the 'Cole Harboure Storehouse'. With the construction of its counterpart it became known as the 'Old Storehouse' or 'Great Storehouse' in Coldharbour. By 1681/2 this had progressed to the 'Graineery' (Plate 2) and the 'Mortar Piece' (Plate 5). There seems little doubt that the main body of this structure comprised the remains of the medieval great hall. As previously stated, the hall was ruinous by 1597, and it is tempting to relate its repair and employment to the reference we have for an official Ordnance storehouse in Coldharbour by 1599. On the 1681/2 plan it can be seen that the 'Graineery' occupied the same site as the hall in the 1597 view. The hall is known to have contained a row of windows along the south face which was altered or repaired in 1443–4;³¹ the top of this fenestration can be seen protruding above the inner defences on the fifteenth-century miniature in the British Museum (Plate 3) and also, as it seems, in a Hollar engraving of about 1647.³² Forty years later, on the 1681 bird's-eye view of the Tower, a line of round-headed windows lighting the south face of the Mortar Piece is once again occupying a similar position (Plate 5).³³ It will also be observed that the curtain wall immediately before the hall/Mortar Piece has gone, a representation which has some archaeological support.³⁴

Quite detailed plans of the Mortar Piece survive from the early eighteenth century. The main body of the structure was approximately 70 feet square with walls up to 7 feet thick occurring at both ground and upper floor levels. The appearance of further walling embedded in the heart of the adjacent 'Constables Lodgeings' and 'Office of Ordnance' suggests affinity with its design and might, therefore, indicate that the hall, or some kind of appendage, had once extended east as far as the Lanthorn Tower (Fig 2). Such an extension might be regarded as having represented the service end of the hall or, alternatively, part of the nearby 'Queens Lodgings' which ran south from the Wardrobe Tower at the south-east corner of the White Tower. Whatever the full extent of the hall and adjoining buildings, it is apparent that in the south-east corner of Coldharbour substantial vestiges of the palace were incorporated in the

replacement Ordnance complex. Thus, having survived for such a remarkable length of time, it is to be regretted that these important remains were finally demolished in the late eighteenth century,³⁵ perhaps only 50 years before their value might have been appreciated by the prominent Tower historians of the early nineteenth century.

During 1669, the Ordnance had a curious wall and 'Pallizadoe' erected around the White Tower (Plate 2).³⁶ The purpose of this fence—set at a short distance from the Tower's base—is not given, though it might be supposed that the constant threat of explosion, from the Magazine in the Tower and the Proof Yard within a building annexed to its east side, resulted in the laying-out of some form of safety corridor. Construction of the pallisade across Coldharbour was delayed for a number of years, and only undertaken in late 1674,³⁷ following demolition of the Jewel House and Kings Lodgings which, until then, had remained contiguous to the White Tower.

In 1672, the Ordnance embarked upon its next major building operation—the construction of a new office to replace their old one behind the Chapel of St. Peter ad Vincula. The new site was located in the south-east corner of Coldharbour, east of the old hall and north of the Lanthorn Tower and surrounding Constables Lodgings (Plate 2). Throughout 1672–3 the Board's workforce was engaged in pulling down and altering the 'old buildings' in this area.³⁸ Further alterations were carried out in the adjacent 'old storehouse' [hall] and, it must be presumed, the 'Constables Lodgings' which were 'intermixed' with the new office (Fig. 2). The construction and equipping of the office seems to have been completed by September 1673, when the officers and clerks were ordered to 'remove all their Bookes papers and writetinges to the new Office . . . without ffayle'.³⁹ An account settled with John Wilkin, the Board's joiner, on 7 October lists rooms assigned to three prominent Ordnance officials and four named clerks. In addition, there was a general 'Clerkes Roome' and a 'Great Roome' with an 'Anteroome' attached; the former three and a 'passage to Capt Sherburns Roome' were all wainscotted. The 'Great Roome' and 'Anteroome' were noted for having three sash windows each; all the other rooms were fitted out with varying combinations of presses, desks, cupboards, tables and screens.⁴⁰

With their office expeditiously erected, the Board began the task of removing all the remaining old buildings contiguous to the south face of the White Tower. In July 1673 they had already directed that all the stores in these buildings were to be transferred elsewhere.⁴¹ And on 10th March 1674, in a reference almost certainly to the Brick Tower, Sir Jonas Moore, the Board's Surveyor, was instructed to draw up a contract for 'pullinge downe the Tower against the White Tower'.⁴² On 24th March a 'Great Screw for Clearinge downe the Ruinous Walls next the White Tower' was ordered onto the site,⁴³ followed thereafter by timber for staging, tackle and other provisions.⁴⁴ The ensuing operation caused something of a stir on 17th July, when the remains of two small children belived to be those of the 'Little Princes in the Tower' were discovered under a stairway leading from the forebuilding or 'Kings Lodgings' to the Chapel in the White Tower.⁴⁵ Despite publicity, the accounts of those

who saw, or heard about, the incident add little or nothing to the scant description we have of this important part of the palace complex.

By August the operation seems to have been completed and several heaps of stone were ordered off the site⁴⁶ to enable the completion of the pallisade around the White Tower. There now remained only one major undertaking, the removal of the original entrance into the palace ward—the Coldharbour Gate. On 16th September 1675 the lead over the gate house was ordered to be taken off,⁴⁷ and on 18th November a contract drawn up with a team of ten workmen for demolishing the gate.⁴⁸ At the same time 'pickaxes extraordinary, Great Sledges, Wedges extraordinary, Crowes of Iron' and other equipment was ordered from the Ordnance stores to facilitate the undertaking.⁴⁹ During the demolition, soft stone and faced rag was specifically retained by the Board, while a large quantity of undressed ragstone was offered for sale, the proceeds going towards the cost of employing the workmen and the building of a 'barge house upon the Tower wharfe for the lodgeing the Office Barge'.⁵⁰ By July 1676 the last remnants of the gate had been dismantled and the stone carted from the site. With the south side of the White Tower free of impediments for the first time in nearly four hundred years, the Board was able to conclude its programme. On 11th July they commanded an estimate for 'puttinge up and finishing the pallizadoes Round the White Tower' and a 'pallizadoe Gate' on the site of the Coldharbour Gate, like the one 'att the East syde' of the White Tower (see Plate 2).⁵¹ Paving was laid along the base of the Tower⁵² and in August a contract signed with the mason for replacing some of the damaged Portland quoins in the buttresses and repairing and repointing the rest of the stonework generally.⁵³ In addition, a new stone stairway was ordered to be made up to the Chapel in the Tower, which by now was being used as a depository for state papers, an appalling risk bearing in mind that the Powder Magazine was accommodated within the same building.

NOTES

1. H. M. Colvin ed. 'The Royal Castles' *The History of the Kings Works* III (1975) 264–68.
2. S. Barter 'The Board of Ordnance' in *The Tower of London: its Buildings and Institutions* (1978) 108.
3. *Ibid.*
4. *Ibid.* 110.
5. WO 55/332, 119–120.
6. *Ibid.*
7. *Ibid.*
8. *Ibid.* 130.
9. WO 51/10, folio 99–100.
10. WORK 5/13.
11. WO 51/12, folio 164–168.
12. WO 55/388, 189–190.
13. WO 55/332, 140–141.
14. Britton & Brayley *Memoirs of the Tower of London* (1830) 228.
15. WORK 5/13.
16. *Ibid.*
17. *Ibid.* November, 1663, note the gate still accommodated its portcullis by this date.
18. H. M. Colvin *op cit.* in note 1, II (1963) 728.
19. WORK 5/13, October, 1663, 'Masons Employed in

workinge of a window of Oxfordshere and Cane [Caen] 7 foot high and 4 foot ½ wide and setting itt up in the brick Tower in Coleharbor'. The position of the structure is confirmed in a later entry of the same year (*ibid.* December) 'in making a brick wall by the brick tower goeing to the Chappell'.

20. WO 55/425, folio 215.
21. WO 51/10, folio 75–76.
22. *Ibid.* folio 80.
23. WO 51/12, folio 26–27.
24. WO 51/10, folio 75–76.
25. *Ibid.* folio 76–77, 79. WO 51/11, folio 59.
26. WO 51/12, folio 136.
27. *Ibid.* folio 52.
28. Carpenter, WO 51/13, folio 18. Glazier, WO 51/10, folio 125.
29. WO 51/10, folio 77.
30. WO 51/13, folio 158.
31. H. M. Colvin *op. cit.* in note 1, II (1963) 729.
32. *Castrum Royale Londinense* (British Museum).
33. I am grateful to Peter Curnow for drawing my attention to this detail.
34. Excavations in 1976/7 revealed the truncated remains of two probable late seventeenth-century

- cellars cut into the core of the wall at this point.
35. Between 1775–77, the Office of Ordnance, Constables Lodgings and Lanthorn Tower were demolished to make way for a new office building. In 1780, the Mortar Piece Storehouse, now functioning as the 'Cordage Warehouse', was virtually rebuilt. Any surviving medieval work would in turn have been removed nine years later when the entire area was made ready for yet another Office of Ordnance following the fire which destroyed the new one in July 1788.
 36. WO 51/10, folio 124, 127. WO 51/11, folio 57. WO 51/12, folio 18.
 37. WO 47/19B, 11th & 27th August.
 38. WO 51/15, folio 137. WO 51/17, folio 59, 113–114, 117, 149–150, 168.
 39. WO 47/19B, 10th September.
 40. WO 51/17, folio 43.
 41. WO 47/19B, 31st July.
 42. *Ibid.*
 43. *Ibid.*
 44. *Ibid.* 26th March & 7th April.
 45. E. Turner and W. Wright 'Recent Investigations regarding the Fate of the Princes in the Tower' *Archaeologia* (1933) 1–26.
 46. WO 47/19B, 11th August.
 47. *Ibid.*
 48. *Ibid.*
 49. *Ibid.* 18th November. WO 51/18, folio 99.
 50. WO 47/19B, 14th December 1675, 27th January & 29th February 1676.
 51. *Ibid.* For the painter's account concerning this work see WO 51/20, folio 126.
 52. WO 51/18, folio 228.
 53. WO 47/19B, 17th August, WO 51/19, folio 64.

ACKNOWLEDGEMENTS

I would like to thank Peter Curnow and Philip Walker of the Inspectorate of Ancient Monuments for their encouragement and advice in the preparation of this paper. I am also grateful to the staff of the Public Record Office at Kew.

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A WITCH-BOTTLE FROM DUKES PLACE, ALDGATE

CATHARINE MALONEY

A stoneware jug of a type commonly known as a 'Bellarmine',¹ found on a site excavated by the Department of Urban Archaeology, Museum of London, may be further evidence of the use of such vessels in charms against witchcraft in the second half of the 17th century.² During the cutting of a trench for a subway at Dukes Place, E.C.3, a whole stoneware jug was noticed in a section, seconds before being smashed by an earthmoving machine.³ The lower part of the jug survived intact and in the bottom there were nearly three dozen badly corroded copper alloy pins (Pl. 1). The jug was found in an upright position and may have been deliberately buried since it apparently lay at the bottom of a narrow pit, which was cut through deposits thought to be the fills of the early medieval city ditch.⁴ Unfortunately, the section collapsed before the pit could be recorded in detail or examined for other finds. The jug dates to the third quarter of the 17th century and was found in an area which at this period was haphazardly occupied by houses facing Houndsditch with gardens or yards between them and the city wall.⁵ Since the 17th-century levels did not survive it was not possible to determine the exact relationship of the pit containing the jug to these properties.

Merrifield has described five Bellarmine jugs from London which are considered to be witch-bottles;⁶ four contained pins and, variously, nails, nail parings, human hair and cloth hearts. All date to the second half of the 17th century and come from areas on the outskirts of the City of London, and in each case the jugs were apparently deliberately concealed (for example, in the Thames or its foreshore, a stream or its bank and in open country). The activities of so-called witches attracted a great deal of attention during the latter part of the 17th century⁷ and this may account for the number of 'white magic' charms against witchcraft dating to this period. Such charms were thought to transfer a spell from the victim back to the witch, accomplished by 'injuring' a representation of the witch. As Merrifield points out, the anthropomorphic Bellarmine jugs (Pl. 2) may have been used to represent the witch, while the pins or nails symbolised pain.⁸ It was also quite common for the victim's urine to accompany the pins or nails in the bottle, which was then carefully concealed. It was believed that by means of sympathetic magic—the link already established between the witch and victim—this particular charm would prevent the witch passing water, causing acute pain until the spell was lifted. It has been suggested that since urinary complaints were common in the 17th and 18th centuries some sufferers may have believed themselves to be the victims of witchcraft⁹—hence the use of urine in the charm.

The Bellarmine jug found at Dukes Place in many respects resembles the witch-bottles from London; its use as a container for pins, its apparently careful burial and its date suggest that it may have been used by a person believing themselves to be bewitched in order to counter the spell.¹⁰

ACKNOWLEDGEMENTS

Thanks are due to John Bailey for the photographs and to Alan Vince for his advice on dating.

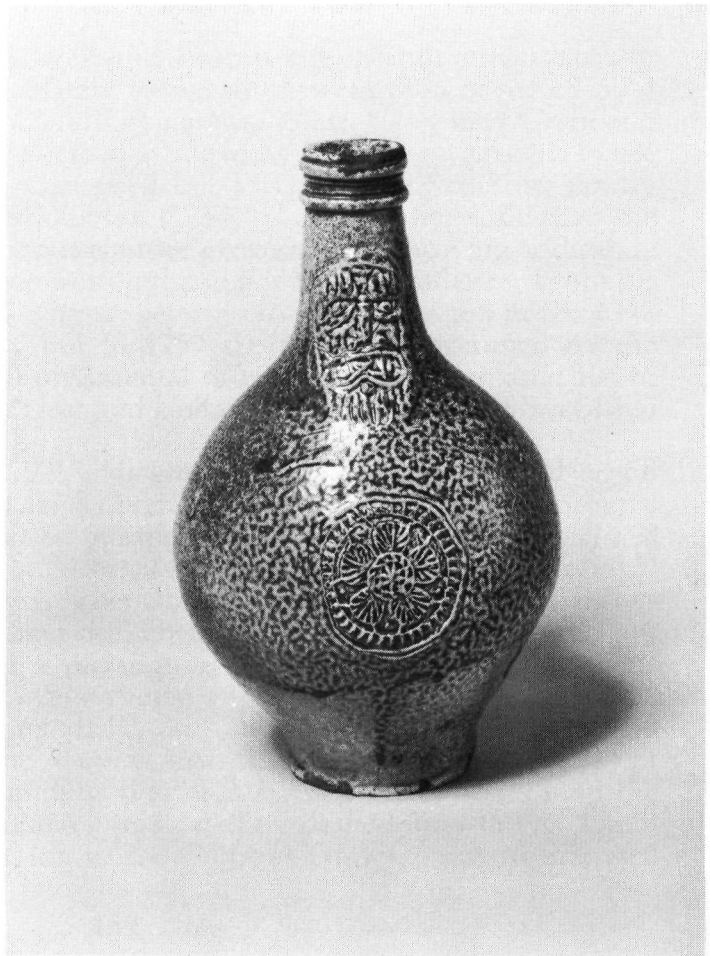
NOTES

1. M. R. Holmes 'The So-called "Bellarmine" Mask on Imported Rhenish Stoneware' *Antiq. J.* 31 (1951) 173–179.
2. Ralph Merrifield 'The Use of Bellarmine as Witch-Bottles' *Guildhall Miscellany* 3 (1953) 3–15.
3. Seen and rescued by P. Marsden and J. Maloney whilst visiting the site.
4. John Maloney and Charlotte Harding 'Dukes Place and Houndsditch: The Medieval Defences' *London Archaeol.* 3 No. 13 (1979) 347–354.
5. As shown on Faithorne and Newcourt's map of 1658 and Ogilvy and Morgan's map of 1676.
6. Merrifield *op. cit.* in note 2.
7. G. N. Clark *The Later Stuarts 1660–1714* (Oxford 1940) 401–2.
8. Merrifield *op. cit.* in note 2.
9. M. J. Becker 'An American Witch Bottle' *Archaeology* 33 No. 2 (1980) 20.
10. A small stoneware jug recently discovered on the site of Plaisterer's Hall, Noble Street, was also found in the vicinity of the city ditch. Its exact find spot is not recorded but this site is located over an area known to have been occupied by the medieval ditch. The jug though not a 'Bellarmine' is an import from Fretchen and is only some 11cm in height. However, it contained nine pins all of which had been carefully bent twice. It dates to the early–mid 17th century—somewhat earlier than the other witch-bottles—but may of course have been in circulation some time before its eventual deposition (Museum of London Accession No. 25437). I am grateful to Mr. Ralph Merrifield for drawing this to my attention.



Plate 1. The base of a 'Bellarmine' jug containing corroded copper alloy pins, from Dukes Place.

Plate 2. A 'Bellarmine' jug from the Museum of London's collection, similar to that from Dukes Place.



SUPPOSED MOATED ENCLOSURE, OAKS ROAD, STANWELL (TQ 057 746)

MARTIN O'CONNELL¹

About 400 metres to the north of the parish church of Stanwell (formerly in Middlesex, but now in Surrey), and close to the southern boundary of Heathrow Airport is an earthwork scheduled as an ancient monument (A.M. in Fig. 1). There is now a plantation of trees within the earthwork, the moat is partially infilled and the south-eastern corner has been destroyed by a large warehouse, built before the site was scheduled in 1975. It is described as a moated enclosure in the inventory of ancient monuments of Middlesex where it was thought to predate 1714.² However a review of the documentary evidence available indicates that the monument could not have been constructed before 1819.

According to a survey of Stanwell and Hammonds Manor undertaken in 1748, the site and the area immediately to the south were then occupied by 4 enclosed plots of land—*4 Acres Close, Drying Yard Close, Close next Green and Gardens* including a house—all described as meadow, pasture or gardens in the ownership of Alexander Hume Campbell but leased to the Stanhope family (Fig. 1.2.1).³ Rocque's map of Middlesex (1754)⁴ is at a smaller scale than the one included in the earlier survey but is more pictographic, showing additional details such as trees and vegetation within the major field boundaries. From his map it is clear that the plan of the house referred to and illustrated in the 1748 survey had altered only slightly but in 1754 the area now occupied by the enclosure then formed part of an ornamental or landscaped garden attached to the building, divided by rows of trees and containing what appear to have been two small ponds.

The Enclosure Award of 1792⁵ indicates that the same area had again undergone changes not only in land divisions but also in terms of property ownership. At that time the area in question was referred to as *the Canal and Pleasure Grounds* together with the *Mansion House* belonging to E. F. Stanhope. The plan included in the survey is schematised to a certain extent and shows only the major plot boundaries and buildings. The canal is not illustrated but the *Mansion House* is shown as a rectangular structure occupying the same position as the house in the 1748 survey.

Greenwood's map of Middlesex (1819) does, however, show the *Canal* and demonstrates that by that date the *Mansion House* had been rebuilt on a different site to the east, as a winged building (Fig. 1.2.2). In Greenwood's map the *Canal* and western property boundary (indicated by dashed lines in Fig. 1.2.2) extended into arable land belonging to the Gibbons family, lords of Stanwell

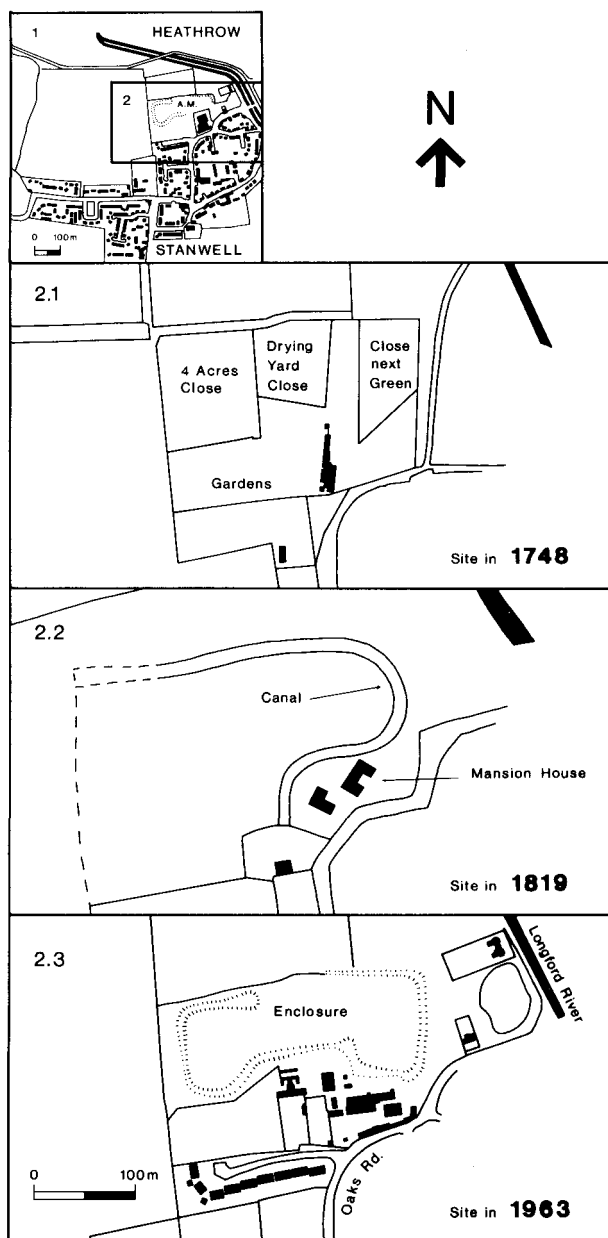


Fig. 1 Supposed Moated Enclosure, Oaks Road, Stanwell; site location and Site at different stages of development. (Crown copyright reserved)

Manor, but in the Tithe Map of Stanwell (1840)⁶ the boundary had returned to the line shown on the 1748 map. This probably reflects an error in Greenwood's surveying and it should be noted that not only was his map drawn at a relatively small scale (approx. 1:34000) but it is also stylised and not as accurate as either the 1748 map or the Tithe map. The *Mansion House* itself can be equated with a building referred to as a 'house of some consequence' that up until 1820 stood at the bend in Oaks Road.⁷

By 1819/20 the land owned by the Stanhopes had been acquired by the Gibbons family⁸ and had been enclosed within the park attached to Stanwell Place, their residence as the lords of the manor. The present enclosure had replaced the *Canal* by 1840, as it appears on the Tithe Map where it is depicted as a water-filled feature, described as a *Fish Pond*. The *Mansion House* had been demolished and the land had become a sort of pleasure garden. The water supply for the *Fish Pond* appears to have been provided by a culvert which was probably connected with the Longford River to the north of the site. Part of that culvert is still visible at the northern end of the western arm of the enclosure and is composed of at least two brick arches. The enclosure still retained its original outline in 1963 (Fig 1; 2.3) but was no longer filled with water.

It is evident from the foregoing discussion that the enclosure is of no great antiquity and simply formed a landscape feature within Stanwell Park, replacing an earlier water-filled feature originally belonging to the Stanhope family.

NOTES

1. This paper has arisen as a result of an excavation carried out in a field to the west of the site under the direction of Martin O'Connell on behalf of the Archaeological Unit, Planning Department, Surrey County Council.
2. Royal Commission on Historical Monuments (RCHM) (1937) *Middlesex*.
3. Survey of Stanwell and Hammonds Manor (1748) Greater London Record Office Acc 809/MST 9B and 10A.
4. J. Rocque (1971) *A Topographical Map of the County of Middlesex* (1754) Reprinted by London and Middlesex Archaeological Society.
5. Enclosure Award (1792) Greater London Record Office Acc 621/14a and 15.
6. Tithe Map of Stanwell (1840) Greater London Record Office TA/S'WELL.
7. Victoria County History (VCH) *Middlesex* 3 (1962)
8. Land Tax Assessment Greater London Record Office MR/PLT 6718.

S. S. TEULON AND HIS RE-CASTING OF TWO WEST LONDON CHURCHES

TREVE ROSOMAN

The early 19th-century religious revival led directly to a great expansion in church building. This was at a time of a rapid growth in the population and a subsequent expansion of towns and cities in Victorian England. In addition to new churches there were many that were enlarged, altered or restored in order to cope with the growing population.

One architect who specialised in such alterations was Samuel Sanders Teulon (1812–1873). Two churches in the west London area, St. Mary's Ealing and St. Mary's Sunbury show well his working method and are examined here.¹ Other examples in London include St. George the Martyr Holborn, and outside the metropolis Holy Trinity Leicester is perhaps the most notable.

BIOGRAPHICAL SKETCH

Samuel Sanders Teulon was born the eldest son on 2nd March 1812, in Greenwich into a family of Huguenot descent. As yet little is known about his early life and family. His sister who wrote two books of religious poetry, *Blossoms in the Shade* and *Fruits of the Valley*, died young.² A brother William Milford Teulon (1827–1902) followed his example and also became an architect.³ One of S. S. Teulon's sons later became a prelate of Chichester Cathedral and vice-principal of Chichester Theological College. These family details and his later architectural career suggest that Teulon's up-bringing and family was a religious one and probably of a 'low church' persuasion.

Teulon attended the Royal Academy school at the age of sixteen and to judge from the drawings of his surviving sketch-book in the R.I.B.A. Drawing Collection⁴ he was a very competent draughtsman. He was articled first to George Legg (1799–1882) and then to George Porter (1797–1856) both architect/builders of south London. Teulon set-up his own practice in 1838 and gained his first major commission—the Dyers Company Almshouses, Balls Pond Road—as a result of a competition in the same year. In 1846 Teulon was made a Fellow of the R.I.B.A. having been an Associate for some years.⁵

Teulon's practice was unusual in that his clientele for secular works was almost exclusively aristocratic. In 1849 for example he built Tortworth Court in Gloucestershire for Lord Ducie, and between 1857–60 he altered Shadwell Park⁶ in Norfolk for Sir Robert Buxton. He was also responsible for extensive improvements, farm-buildings, and model cottages on the Bedfordshire estate at Thorney for the Duke of Bedford in the late 1840s. However unlike most of his contemporaries Teulon never built houses for the 'nouveau riche'.

The major part of his work, though, was the building, re-casting and extending of churches, and with these commissions too his clients were often

aristocratic.⁷ Significantly both sets of clients were what may be termed 'low church', at a time when the Anglo-Catholic Cambridge-Camden Society reigned supreme in matters of church ritual and architecture. Teulon's clients appear for the most part to have been well-born, wealthy, though not active in public or political life and 'low church' in their religious convictions.

In 1841–2 S. S. Teulon went on a Continental tour with his friend and fellow evangelical, Ewan Christian (1814–1895). Together they travelled through France, Belgium, Italy, Switzerland, and Germany and to judge from his sketches in the R.I.B.A. Library Teulon was very struck by the church towers of Normandy and the Gothic churches of Italy, though it must be assumed that these surviving drawings represent only a small percentage of those executed. The 1841 tour had a great effect on Teulon's career and as early as 1846 the influence of Italian polychrome brick decoration could be seen at St. Stephen's Manciple St.⁸

Teulon lived in Hampstead⁹ during his later years with his wife, four sons and four daughters at 'Tensley's' a house he designed on Rosslyn Hill. When he died on 2nd May 1873 at the age of 61 the funeral service was held at his St. Stephen's Rosslyn Hill, opposite his home, and he was buried in Highgate Cemetery. The executor for his will was his old friend Ewan Christian, who also supervised the completion of Teulon's outstanding commissions, most notably St. Nicholas' Guildford.

ST. MARY'S EALING

There had been a church on the site since at least the early 12th century. As a consequence of pillaging after the Battle of Brentford (1642) and subsequent general neglect, the church collapsed in 1729,¹⁰ and was not replaced for ten years. The architect of the new building was James Horne,¹¹ who also designed the similar church of Holy Trinity, Guildford. The style that Horne used was severely rectilinear: a red brick 'preaching-box' 95×50ft. in plan, 40ft. high and with an 80ft. tower, the exterior corners of which were decorated with quoins. The interior of the church was plain. The flat plaster ceiling had a central rosette, from which a brass chandelier was suspended. A narrow gallery ran around three sides of the church, which was lit by a double row of camber-headed windows on the north and south walls. A large Venetian window lit the east end. (Plates 1 and 2)

In 1863 Ealing was declared a borough and it was felt that a new church was needed to accord with this new status. In addition the arrival of the Great Western Railway had caused the population to grow considerably after 1838 and the Georgian parish church was by now old, decayed, uncomfortable and had inadequate seating arrangements. By 1863 the church was in need of considerable repair. It had been noted for some time that 'unpleasant smells'¹² were seeping through cracks in the floor from the crypt beneath. A new floor was required and when Teulon was appointed to re-cast the church, the roof also was found to be in a precarious state. The weight of the plaster ceiling was dragging down the roof timbers, causing the walls to bulge out. A new roof therefore became essential.

The incumbent at this time was the Rev. E. W. Relton, and a report in the *Ealing Post*¹³ indicates that he had originally approached William Butterfield (1814–1900) but after four months had received no reply. Relton had heard of Teulon from the incumbent of St. Mary's Sunbury, a church very similar in design and one that Teulon had recast between 1860–63. Relton had been advised that Teulon was an architect who would not exceed his estimates.¹⁴ No other architects were apparently approached,¹⁵ an unusual course of action at a time when similar projects were often tendered for through competitions, and sufficiently unusual for a Captain Tyrrell to ask in the *Ealing Post*¹⁶ why no other architects had been consulted. The question met with some prevarication on the part of the Restoration Committee and the confrontation ended with Thomas Boddington of Gunnersbury Lodge and an important committee member, denying that he or anyone else, had known Teulon before the church rebuilding programme had been put into effect. The precise reasons for Teulon's appointment in 1863 remain uncertain.

Teulon set about drawing-up his plan. He added a chancel 30ft long to the east end, north and south aisles and planned a magnificent and striking west end. In addition the whole of the interior was to be altered. By 19 December 1863 nine tenders for the cost of building had been received. They ranged from £10,656 from Pateman and Fotheringham of 25 Theobalds Road, to the accepted tender of £8,680 put in by Thomas Nye of Ealing.¹⁷

To accommodate the larger scale of the proposed work, the re-casting was to be done in five stages; (1) the chancel and internal fittings, the side aisles, organ chamber, the vestry and re-seating of the ground floor and the re-laying of the whole floor; (2) the alterations and re-seating of the galleries; (3) re-construction of the main roof; (4) the alteration of the windows in the upper storey, and (5) the re-casting of the tower and west end. The first four stages, apart from some stained glass in the chancel (Plate 8), were completed by 30 May 1866 when the church was consecrated. The west end, stage 5, however was not finished until 1874, a year after Teulon's death.

Major departures from the original design are discernible in the west end (Plates 3 and 4) and certain exterior decorations are missing, notably the 'crows-feet' on the eastern end of the nave roof. There are two possible reasons for these substantial changes. The first was one of cost. It has been stated that the church cost a total of £20,000,¹⁸ and the substantial discrepancy between this figure and the tender of £8,680 from the builder Nye is perhaps explained by the fact that it includes the value of all the gifts of glass, books, etc. and that Nye's tender represented the cost of the actual building. Even so the sum of £10,000 for the decoration is a large one. It is also very possible that the cost of rebuilding the west end and spire proved to be much higher than anticipated. The second reason was probably structural. The tower of the old church was retained, as may be seen from the brick quoins, and in light of the poor condition of the rest of the building in 1863, it may well have proved incapable of bearing the added weight of a spire approximately 50ft. high. For whatever reason the reduced plan was adopted and only the positioning of the clock followed the dictates of the first plan.



Plate 1. S. S. Teulon: South side of St. Mary's Ealing, drawing *c.* 1729 (Ealing Library).



Plate 2. S. S. Teulon: View from the north west of St. Mary's Ealing, oil painting *c.* 1755.

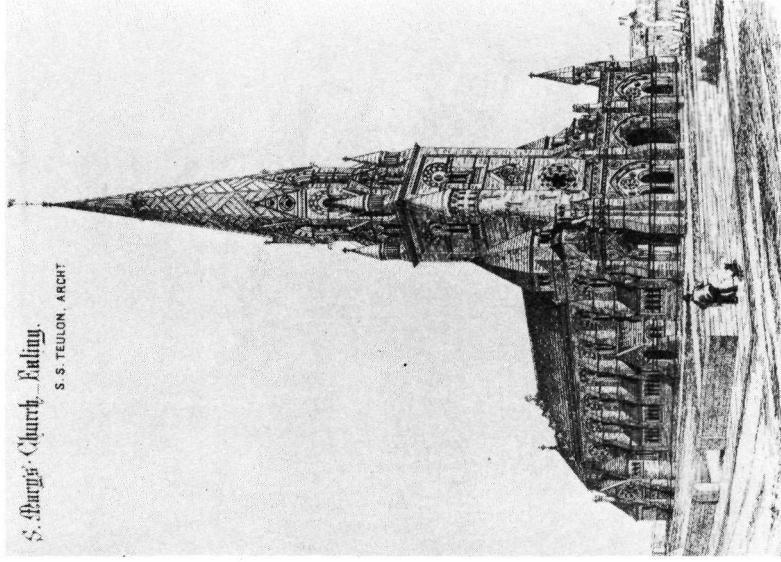


Plate 3. S. S. Teulon: St. Mary's Ealing from the north. A proposed elevation of 1869. Published in *Building News* 25 June 1869 (*Victoria and Albert Museum*).

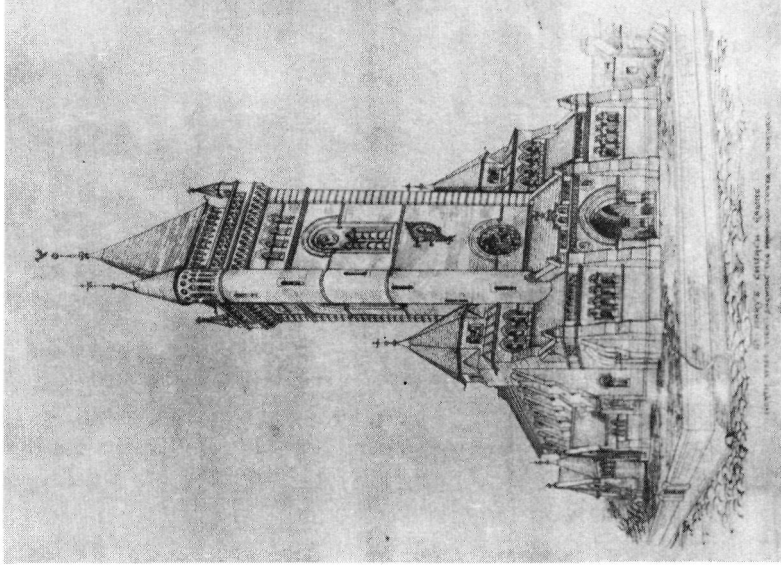


Plate 4. S. S. Teulon: St. Mary's Ealing; an original drawing on tracing paper by Teulon. This is believed to have been on view to the public in April 1871.

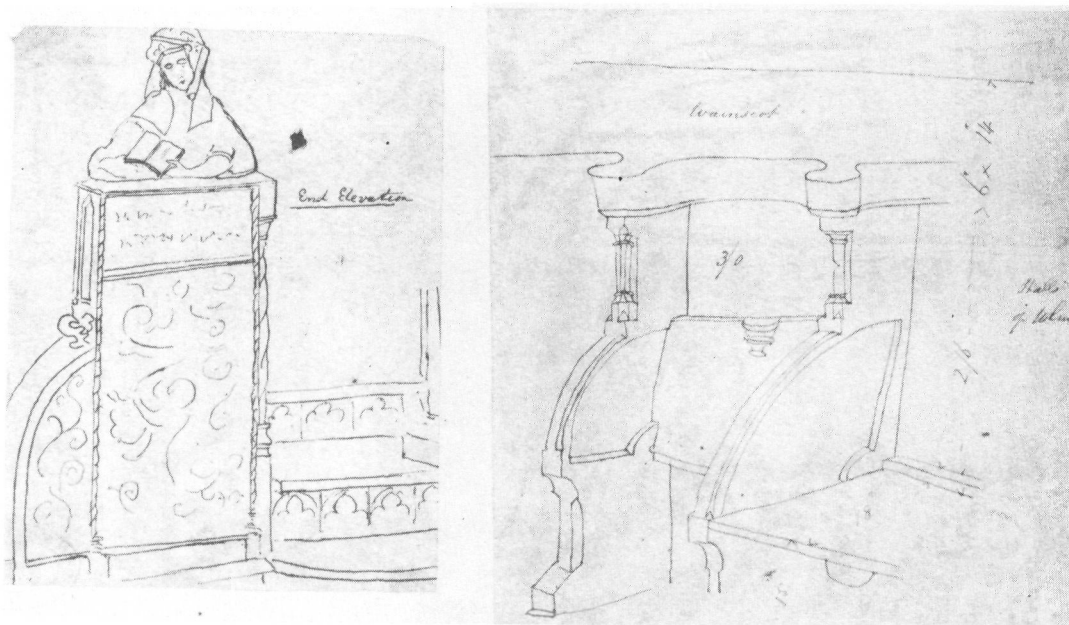


Plate 5. S. S. Teulon: The choir-stalls of Ulm Cathedral as drawn by Teulon on his 1841-2 Continental tour (*R.I.B.A.*).



Plate 6. S. S. Teulon: The choir-stalls designed by Teulon, as installed in the east end of St. Mary's Ealing.

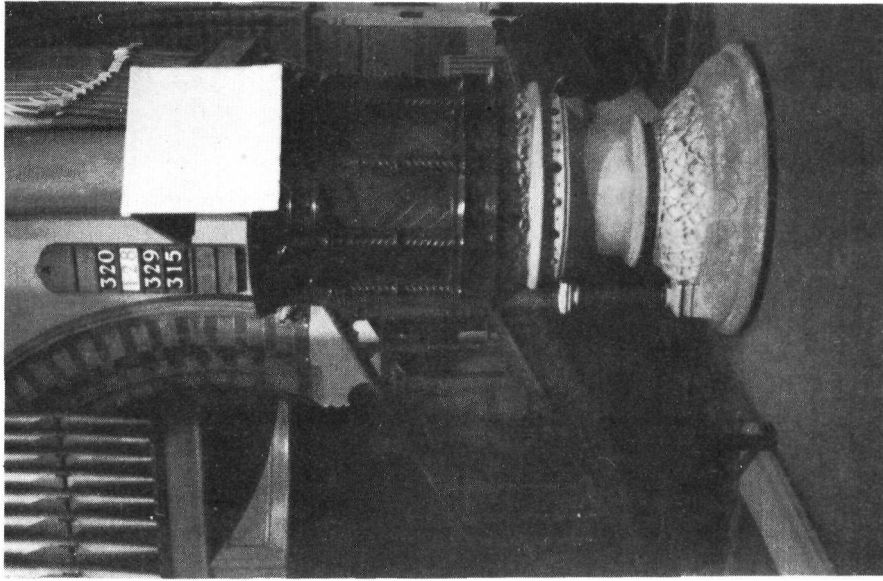


Plate 7. S. S. Teulon: The pulpit designed by Teulon as installed in St. Mary's Ealing.

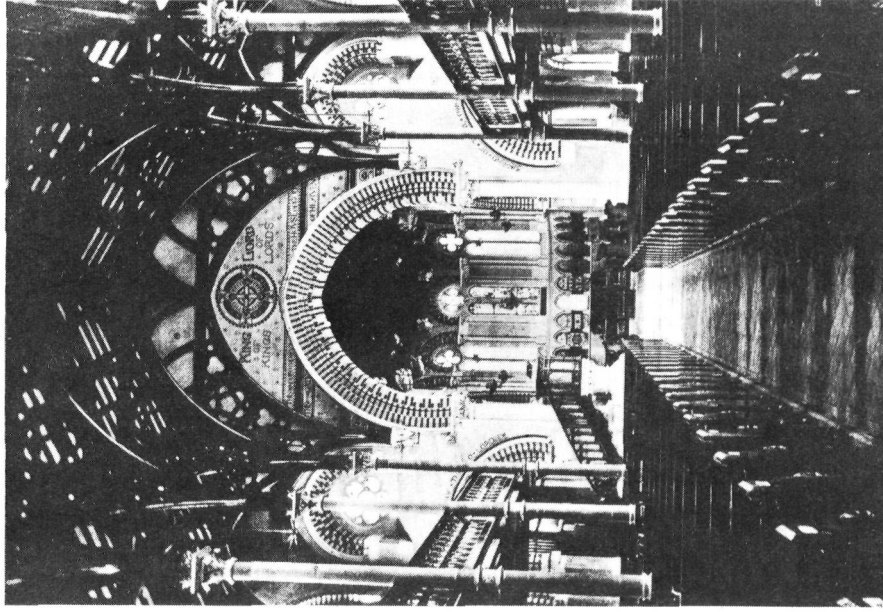


Plate 8. S. S. Teulon: Interior of St. Mary's Ealing June 1866 (*Ealing Library*).

An interesting sidelight on the designs, and incidentally on Teulon's working method, is that the Parish Restoration Committee worked not from actual drawings but from photographs of the plans and elevations supplied by Teulon.¹⁹ None of these appear to have survived although it is known that the committee did try to raise funds by selling postcards of the proposed new church for one shilling each.²⁰

DESCRIPTION OF THE CHURCH.

The nave of the church was widened by north and south aisles, extending the width some forty feet. To achieve this the ground floor windows were converted into arches and the outside walls of the new aisles acted as concealed flying-buttresses to support the weight of the clerestorey, which had previously bowed under weight of the old roof. The rather narrow aisles also served another practical purpose by providing easier access to the pews. The clerestorey windows had a stone framework insert and these divided the window by a vertical shaft pierced in the spandril with a trefoil.

The walls having thus been strengthened the old roof was then removed. The new roof was made up of six bays, each of three aisles. Five pairs of iron pillars were installed to take the weight of the new gallery and timber roof, giving the church a greater sense of height and space, and vastly improving the ventilation of the building. The ceiling joists were supported on the walls by a series of carved stone corbels, executed by Earp,²¹ representing the Prophets and Apostles. The iron pillars ended in a stylised corinthian form made of wrought iron.

The east end wall of the old church was pierced by three horseshoe arches in polychrome brick, supported on 'flattened' corinthian capitals for the central arch. At the clerestorey level there were placed two round windows containing stained glass by Morris and Co.²² The old Georgian 'three-decker' pulpit, originally in the centre of the east end, was replaced by a fine carved oak pulpit designed by Teulon. Set on a stone pedestal to the left of the central aisle, it has a spiral staircase leading up into it. The east end was extended 30ft. by a chancel split into three aisles, the central aisle ending in a high altar set two steps above the floor and backed by a semi-circular apse. Although St. Mary's was 'low church' the east end was nevertheless its focal point, illustrating the move away from the 18th-century bias towards the pulpit and the sermon.

The east end of the north aisle contained the organ loft and vestry. The organ was greatly modified and enlarged and a bigger loft than was originally designed had to be built with an external 'tourelle' for access. The exterior of this side was modified again in 1935 thus obscuring the original plan, though these later changes were effected in a very similar style to Teulon's work. To balance the enlarged north side Teulon suggested a semi-circular baptistry for the south side. This addition was readily accepted and paid for by the Rt. Hon. S. Walpole who, with Thomas Boddington was a leading committee member. This unusual baptistry has a wooden skeleton roof making a contrast with the horse-shoe arch leading into it. The font was designed by Teulon, and donated by a parishioner,²³ and the eight stained-glass windows made and signed by

Lavers and Barraud show a distinct pre-Raphaelite influence.

The main chancel aisle is separated from the north and south aisles by two arches either side, divided by a short stubby column. These again have capitals of the familiar flattened corinthian form which were carved by Bloomfield at a cost of £2. 10s. 0d.²⁴

Behind the altar there is a fine reredos of carved Caen stone and polished serpentine columns forming fifteen arches, originally painted with various decorations. A mosaic of a white marble cross on a gold background, executed by Salviati²⁵ filled the central arch and was matched by two panels of Alpha and Omega above the central arches of the chancel north and south walls. The Salviati reredos mosaic caused a great deal of adverse comment in contemporary accounts due to its Anglo-Catholic associations and overtones of Popery.²⁶ The walls were also painted with the Lord's Prayer, the Ten Commandments and the Credo at a cost of £12. It is unfortunate that except for the Alpha and Omega mosaics, all these painted decorations and mosaic disappeared in the re-painting of 1955.

The chancel is lit by five stained-glass windows designed by Thomas Boddington²⁷ and made by Heaton and Co. and in addition there were five brass pendant lamps, copies of examples in St. Mark's, Venice though these too have since disappeared. At the clerestorey level on the north and south walls is a series of sixteen stained-glass windows depicting angels. These were also designed by Boddington and made by Heaton's. The fine timber hammer-beam roof is supported by eight stone angels beautifully carved by Earp at a cost of £15.²⁸

The west end of the nave had a north and south porch added in accordance with the Camden Society's rules for church lay-out.²⁹

The final form of the west end was the subject of much discussion. Teulon was present at a parish committee meeting on 2nd May 1868³⁰ when he presented the plans and elevations (Plate 3). The spire appeared to be out of scale with the rest of the building, and Teulon, when questioned about this during the meeting, insisted that the distortion was only apparent because of the angle of the sketch and would not appear in reality.³¹ He also supplied two sets of drawings, one with a spire and one without. For the design without a spire Teulon simply cut off the tower just above the level of the arched window.³² This design seems to be at odds with his apparent love of towers as shown by his surviving sketches in the R.I.B.A. and the actual buildings themselves, for example St. Stephen's, Rosslyn Hill. The spire design was eventually adopted in May 1869³³ and estimates from Thomas Nye were received in December of that year. He submitted three estimates, one for a spire covered in lead, one in stone, and one in slate. The highest estimate was for £3,483 for the tower and lead covered spire,³⁴ and the work on the tower itself was quoted at £2,468.

The whole west end complex was to contain a narthex which would act as a shelter for entering and leaving the church, and it also housed two staircases which gave access to the gallery. These were covered by two 'tourelles' flanking the north and south sides of the main tower. The tower was to have a spire added, the clock was to be replaced and the Georgian quoins clad in brick.

However progress was delayed when the cost of the spire was questioned,³⁵ and on 14th April 1871 Teulon proposed a revised plan for the west end which was proclaimed '... of a character more in harmony with the work already effected and of a less expressive nature'.³⁶ Nye's revised estimate of between £2,400 and £2,500³⁷ was accepted and an elevation of the new design (Plate 4) was put on show to the public.³⁸ The work was carried out, and finally completed in 1874, a year after Teulon's death.

The west end remains unchanged today, excepting the glazed inner porch doors which replaced the original Teulon solid timber ones in 1960. To the south porch a new addition, called the Polygon was built in 1978 to provide a church hall.

DECORATIVE DETAILS

Polychrome brickwork: Teulon saw the external polychrome decoration of the Italian churches on his 1841 tour, and in particular he sketched Santa Croce, Florence and Verona Cathedral.³⁹ The use of brick in the early Victorian period was not popular. The 1841 edition of *A Few Words to Church Builders* said 'brick ought on no account to be used', and to use brick decoration as the Italians had done was most unusual. To judge from the R.I.B.A. sketch book, English Tudor architecture, which prominently featured brick decoration, was a further influence on Teulon.

Despite this rather uncompromising attitude of the establishment Teulon designed St. Stephen's Manciple Street Southwark in 1846. This was a brick-built church with strong horizontal bars in stone, the plan of which was based on a Greek cross. The site dictated the plan and in the angles of the building Teulon placed a tower, a vestry and the chancel aisles.

It was left to A. W. N. Pugin (1818–1852) and later William Butterfield (1814–1900) to popularise brick polychrome, most notably in Butterfield's All Saints' Margaret Street built between 1849–59, though Teulon continued to employ such decoration eschewing, for the most part, the use of Kentish-rag masonry which had characterised his earlier works, at for example St. Paul's Bermondsey, 1846. In his secular works Teulon's most notable use of polychrome was Elvetham House, Hampshire built in 1859, a riot of stripes, zigzags, and patterns. Earlier in 1856 he had built probably his most strident church in Italian-style polychrome, St. Andrew's Lambeth, now demolished. The decoration was Italianate but the structure was English Perpendicular.

At St. Mary's, Teulon's use of brick owes much to his interest in Tudor building. The 'tumbling-in' of the narthex buttresses was a favourite Tudor technique. His use of brick is skilful and the colouring subtle, and it is interesting to note that the old and new parts of the church are homogeneous in colour despite an age difference of some 130 years. It is possible that the brick used in Teulon's additions came from the same clay as those used in the original church. There were brick kilns at nearby Acton.

Tiles: Tile work in Victorian churches was a common feature, the patterns imitating medieval encaustic tile antecedents. St. Mary's is no exception to this

practice although the tiles were not specifically designed for the church. None of the tiles are exceptional, though the central panel of the Baptistry floor is a pleasing abstraction of subtle shades of browns, whites and ochres.

Interior decoration: It is the interior decoration of St. Mary's that has altered most. Fortunately a photograph of 1866⁴⁰ of the interior has survived in addition to an oil painting by A. E. Clabburn⁴¹ dated 1890 and showing the original colour scheme. The photograph (Plate 8) was almost certainly taken within a week of the re-consecration in May 1866, when it is known that only one of the set of five chancel apse windows contained stained-glass⁴².

The cast-iron roof support pillars of which Teulon was an early exponent of their use in churches, were originally painted in a polychrome spiral of reddish brown, yellow and blue to the gallery level and above in a diaper pattern to the wrought-iron foliate capitals, which were painted naturalistically.

The clerestorey windows of the nave were originally plain glass,⁴³ and this would have admitted sufficient light to counteract the effect of the dark stained wood-work of the church. The roof was lightened by painting the space between the rafters white. The appearance of the wood-work was also changed when the church was re-painted in 1955. The pews in the main body of the church were made of stained pine, and with the exception of the slides for top-hats under some seats, are unremarkable. The wooden furnishings however of the chancel are very fine. The 1841-2 drawings by Teulon of the choir stalls at Ulm Cathedral⁴⁴ show quite clearly where he derived inspiration for the choir stalls and the stone seats by the high altar at St. Mary's (Plate 5). Of all the wood-work in St. Mary's probably the finest, and certainly the most striking is the pulpit (Plate 7). Consisting of an oak drum, split into eight sections by twisted columns, and with a carved top and bottom rail, the structure is raised on a stone base, which in turn is decorated on the top by twelve cabochon-cut agate stones below a foliate frieze, and on the bottom by a carved net full of fish. A graceful curved staircase leads into the pulpit from the north chancel aisle.

Stained glass: None of the glass dating from before Teulon's work survives. Of the new pieces the finest are the two round windows by Morris and Co. These were reported in the Ealing Post's consecration edition of June 1866 as having been designed by 'Jones' and this is almost certainly Edward Burne-Jones (1833-98). The designs for these windows still exist, though they are unfortunately unsigned.⁴⁵ The two windows were given to the church by a member of the congregation.

Mention has already been made of the contribution by Thomas Boddington to the stained-glass of St. Mary's, and in addition he was responsible for the design of the group of 'muses' placed in the small tower to the organ loft and the large rose window in the west end. The subject of this window is *The Last Judgement* and is made predominantly of dark red glass contrasting vividly with the white heads looking to Christ in Majesty.

Apart from those pieces already mentioned made by Heatons, the remainder of the glass was supplied by the firm of Lavers and Barraud.⁴⁶

A further window was fitted *c.* 1875 in commemoration of Teulon⁴⁷ himself and this can be seen by the north porch entrance. There appears to be no record of Teulon's death in the parish books, although he died before the completion of the final stage of the re-casting, the west end complex.

EARLIER WORKS

Teulon's work was executed very much in traditional Gothic spirit (English Decorated) and a good example of this earlier work is St. Paul's Southwark. However individuality was very much the hallmark of Teulon's commissions rather than a repetitive re-working of one particular style, and he was often commissioned to design churches on unusual and difficult sites. St. Stephen's Manciple Street for example occupied a very cramped site and Holy Trinity, Hastings, 1857, is built on an 'island' between two roads in the centre of the town.

St. Mary's Ealing however, brought special difficulties since it involved the enlargement of a Georgian church, though as a result of his work on St. Margaret, Angmering (1852-3) and especially St. Mary's Sunbury (1859) Teulon had become well acquainted with such problems.

St. Mary's Ealing is certainly the most radical of Teulon's re-casting, although St. Mary's Sunbury had many similarities, and the resemblance to Ealing is instructive about Teulon's method of working. Both churches were orthodox 'preaching-boxes' of the 1730-50 period, Sunbury being built in 1751 by Stephen Wright (d. 1790). Both churches comprised a west end tower and entrance, with no chancel or side aisles; the interiors consisted of a flat roof at Ealing but a more elaborate one at Sunbury, and both had prominent pulpits and large upper galleries.

At Sunbury in 1857 Teulon drew up designs of a Byzantine influence. He added side 'tourelles' to the tower to provide a means of access to the gallery and he inserted a stone sub-frame to the round-headed windows, an idea repeated at Ealing. The same techniques were applied to the windows of St. George the Martyr, Holborn (1867), although a rather different effect was achieved there.

The interior of Sunbury also bears striking similarities to Ealing. Iron pillars were inserted to support the gallery, and a wrought iron balustrade added. The east wall was punctured with three Romanesque arches, the central one of which has two columns with foliate capitals. the polychrome brick arches are more notched than at Ealing, but the subtlety of the colouring is very similar. All the window arches were filled with notched polychrome brick.

The chancel remains the high point of Teulon's work at Sunbury, for it was split into three aisles by two five arched screens supported on pink mottled marble columns. The screens themselves fitted into two large arches either side of the main chancel aisle. The stone spaces between the tops of the screen arches are filled with tiny glistening mosaics, probably by Salviati. Two columns to match those at the entrance of the chancel mark the start of the small apse. As at

St. Andrew's Lambeth (1856),⁴⁸ a reredos was put in and consisted of nine arches on marble columns matching those either side of the main chancel aisle. Here again Teulon probably employed Salviati to insert more mosaic work, further intensifying the Byzantine effect⁴⁹.

Between £1,500 to £2,000 was spent on the re-casting at Sunbury,⁵⁰ and the similarities indicate that the work formed the base for Teulon's re-casting of St. Mary's Ealing some four to five years later, though at Ealing he had a considerably larger and wealthier congregation who were prepared, albeit with some reluctance, to pay for a handsome church for this developing London suburb, and parish.

Other buildings by Teulon demonstrate how he developed themes and designs in successive commissions. The buttresses he uses to decorate the porch of Bestwood Lodge Nottinghamshire (1862-4)⁵¹ are identical in form to those on the tower of St. Paul's, Bermondsey, except that those at Bestwood are made of polychrome brick, and at St. Paul's they are constructed of Kentish rag. The handling of the brick structure of Bestwood's porch also closely resembles the north and south ends of the narthex at St. Mary's Ealing.

CONCLUSION

Teulon's task at St. Mary's Ealing was to produce a design that satisfied three criteria. First, allowing for the constrictions of a Georgian 'preaching-box' carcass he had to draw up a design that was commensurate with the ideas of the Ecclesiological Society⁵². Secondly there was the possibility that the Parish Restoration Committee would hamper his plans if they disapproved of them on the grounds of cost or aesthetics. Lastly he had to contend with the structural problems inherent in the process of up-grading an old building.

Teulon met these criteria successfully. The first was relatively easy since there was plenty of ground surrounding the church in which to extend. Teulon was more likely to face real obstacles in his attempts to meet the second and third criteria, and he was fortunate in having already re-cast Sunbury in 1859, and had available a basic formula from which to work.

By the time Teulon was contracted to draw up plans for Ealing he was 51 and had been in practice for twenty-five years. During this time he had built, re-cast, restored or made alterations to at least forty churches, and had most certainly acquired considerable knowledge in the handling of parish building committees. At Ealing this is borne out by the very few criticisms that emanated from the parish, and the major one that did get voiced, the cost, was not his sole responsibility. The only other real criticism concerned the final design of the tower, and here he skilfully supplied two alternative plans and elevations, leaving the final decision to the committee. Teulon was able to win the committee's almost wholehearted confidence and therefore the power to do almost as he wished, although he was at all times in touch with them and took care to inform them of progress.

It is clear from his surviving buildings that Teulon had a substantial practice, and must therefore have been held in some regard. His output, however, pales almost into insignificance when compared with G. G. Scott (1811-78) who by

the end of his life had over 730 buildings to his credit, including thirty-nine cathedrals and minsters and forty-three mansions. Quantity, however, does not necessarily equal quality, and it could be argued that St. Mary's Ealing was a more individual statement than Scott's Christ Church Ealing less than a mile away. Scott was a great publicist, whose self-aggrandishment certainly threatened his reputation. Nevertheless he was a tireless and indefatigable worker who makes an illuminating comparison with his contemporary Teulon. In contrast to Teulon, Scott came under the direct and strong influence of the Ecclesiologists and especially, Pugin. However, Scott was the son of a 'low church' parson, in consequence the Ecclesiologists kept a wary eye on his development. Such influences and patronage enabled Scott to make himself acceptable to all shades of religious opinion—as exemplified by his Lutheran Cathedral of Hamburg. Teulon, though, seems to have remained true to his evangelical 'low church' beliefs. This may well account for the fact that all his church work was on a parish level—his ecumenical stance disallowing any involvement in the 'high church' attitudes prevalent in contemporary cathedral building.

It is known that Teulon attended Ecclesiologists meetings and he knew Scott quite well,⁵³ and this would seem to indicate that Teulon was well acquainted with current trends. The other 'giants' of his age were William Butterfield and G. E. Street (1824–81) both younger men, by two years and twelve years respectively. Both were intimately connected with the Ecclesiologists and were 'high churchmen'. The society was still powerful enough in the 1850s to publicize their favourites, if not profoundly to alter styles as they had done in the previous decade. It was in this 'weakness' that Teulon was able to flourish. He was able to use his great talent for the handling of spatial qualities, as shown admirably by the west end of St. Mary's Ealing, and to remain free to use his individual style as he wished without the constraints that could have been applied by the Ecclesiologists. It was possibly his relish of artistic freedom that kept him working at the parish level and therefore on a small scale.

NOTES

1. This article has been adapted from work done as part of the author's BA. I am very grateful for the help given to me by my tutors, Dr. Anne Powell and Andrew Hemingway of Ealing College of Higher Education. I must also thank the vicars of Ealing and Sunbury for allowing me to photograph their churches. Thanks are also due to Clive Wainwright of the Victoria and Albert Museum, Matthew Saunders of The Ancient Monuments Society, and the staff of Ealing Central Library Reference Department, the R.I.B.A. Library and Drawing Collection, and the Middlesex County Record Office.
2. M. Girouard 'Acrobatic Gothic' *Country Life* 148 p. 1282.
3. M. Girouard *The Victorian Country House* (London 1979) 415.
4. R.I.B.A. Drawing Collection.
5. R.I.B.A. *Drawing Collection Catalogue* Vol. T-Z (London 1981) 114, Biographical note.
6. Girouard *op. cit.* in note 3, 422 pl. 38 Tortworth Court, 194–204 Shadwell Park.
7. E.g. St. Augustin's Edgebaston built for Lord Calthorpe, c. 1850.
8. B. F. L. Clarke *Parish Churches of London* (London 1966) 263. St. Stephen's was demolished in 1966. There is a photograph of the church in Southwark Central Reference Library, Local History Department.
9. Teulon also had a country home at Limpsfield also called 'Tensleys'.
10. Edith Jackson *Annals of Old Ealing* (London 1896) 56.
11. Howard Colvin *A Biographical Dictionary of English Architects, 1660–1840* (London 1954) 301.
12. *Middlesex County Times* (2nd June 1866).
13. *Ealing Post* (16 May 1863).
14. *Idem*.
15. *Ibid.* (19th December 1863).
16. *Idem*.
17. *Idem*.

18. Jackson *op. cit.* in note 10, 239.
19. S. Muthesius *The High Victorian Movement in Architecture, 1850-1870* (1972) 29.
20. *Ealing Post* (8 August 1863).
21. Minute books of the Parish Restoration Committee, October 1863. These are kept at the Middlesex County Record Office.
22. *Middlesex County Times* (2nd June 1866).
23. Jackson *op. cit.* in note 10, 241.
24. Minute books of the Parish Restoration Committee, October 1865.
25. So far my researches have revealed little on Salviati. However he did work for G. G. Scott, amongst others, and it seems that he also decorated Teulon's headstone in Highgate Cemetery.
26. *Middlesex County Times* (25th June 1866); a letter.
27. *Ibid.* (2nd June 1866).
28. Minute books of the Parish Restoration Committee, 7th October 1865.
29. Muthesius *op. cit.* in note 19, 7.
30. Minute books of the Parish Restoration Committee, 2nd May 1868.
31. *Idem.*
32. Photographs of these two elevations are in the Middlesex County Record Office.
33. Minute books of the Parish Restoration Committee, December 1869.
34. *Idem.*
35. *Ibid.* (14th April 1871).
36. *Idem.*
37. *Ibid.* (20th May 1871).
38. *Ibid.* (14th April 1871).
39. See the Teulon sketch-book in the R.I.B.A. Drawing Collection.
40. Kept at Ealing Central Library Reference Department.
41. Arthur Clabburn exhibited portraits at the R.A. in 1875, 1876 and 1879. The painting of St. Mary's is kept at Ealing Central Library Reference Department.
42. *Middlesex County Times* (2nd June 1866).
43. The present stained-glass bears dedication dates of c. 1890-95.
44. R.I.B.A. Drawing Teulon sketch-book, p. 43.
45. A. C. Sewter *The Stained Glass of William Morris and His Circle* (Yale 1974), see the catalogue.
46. When the clerestorey of the nave was glazed by 1895 the company had become Lavers and Westlake.
47. The date of the inscription for Teulon's death is incorrect. He died on 2 May 1873 not as stated 2nd May 1872.
48. See *The Builder* (7th June 1856).
49. There are no surviving records of the re-casting of Sunbury by Teulon as survives for St. Mary's Ealing. However due to the similarity of work it seems reasonable to assume that Salviati had worked at Sunbury.
50. Michael J. S. Collins ed. *St. Mary's A History of the Church and Parish of Sunbury* (Gloucester n.d.). I am grateful for the help given to me by Mr. Freeman of The Sunbury and Shepperton Local History Society.
51. Girouard *op. cit.* in note 3, frontispiece.
52. The Cambridge Camden Society changed their name to the Ecclesiological Society in 1846.
53. There is a letter from Teulon to G. G. Scott in the R.I.B.A. Library. Cat. No. Sc GGS/4/1/15.

OBITUARY

S. E. WARREN

Stan Warren died on Christmas Eve 1980 after several years of seriously declining health. By his death the Wandsworth Historical Society has lost one of its most respected members.

Stan Warren's introduction to archaeological excavations was in 1963. With his special interest in prehistory it was not surprising to find him by 1969 directing the excavation of the Neolithic site at Sefton Street, Putney. The dig finished in June 1970 and he quickly produced an interim report for *The London Archaeologist* (Autumn 1971) and in due course a final report which appeared in *Transactions* for 1977. When the parish church of St. Mary at Putney was gutted by fire in 1973, it was Stan Warren who volunteered to direct an excavation prior to the rebuilding; this task continued to 1976. During this period his disability slowed down his work but nevertheless he persevered with commendable fortitude.

Declining health prompted Stan Warren's resignation in March 1975 from the Council of the London and Middlesex Archaeological Society on which he had served as a member for two years, and after finishing the excavation at St. Mary's, he was forced, reluctantly, to retire from fieldwork. Despite his illness, Stan Warren continued to support the archaeological group of the Wandsworth Historical Society as its vice-chairman for some five years, and he managed from time to time to visit excavation sites in order to maintain his interests in local archaeological activities.

N. F. & J. S.

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