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Volume 45 1994



London and Middlesex Archaeological Society

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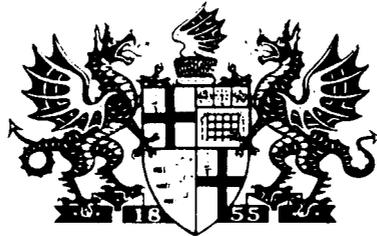
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**LAMAS**

Transactions of the  
**London and Middlesex  
Archaeological Society**

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*Museum of London, London Wall, London EC2Y 5HN*

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**APOLOGY**

The London and Middlesex Archaeological Society apologises to English Heritage for omitting to mention that two reports in Transactions, volume 44: *Excavations and observations of a Bronze Age cemetery and Roman site in Avenue Gardens, Acton* and *Early Roman development at Leadenhall Court, London and related research* were published with the aid of a grant from English Heritage.

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# London & Middlesex Archaeological Society

*Registered as a charity*

ESTABLISHED IN 1855

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# London and Middlesex Archaeological Society

138th ANNUAL REPORT OF COUNCIL  
FOR THE YEAR ENDING 30TH SEPTEMBER 1993

## Meetings and Visits

The Annual General Meeting was held on 24th February 1993. Due to the tragic death of Dr Hugh Chapman there was no LAMAS President; the annual Presidential Address was given instead by the immediate Past President, Dr Derek Renn. His address was entitled 'The other towers of London' and considered the history of private fortifications in London.

The lecture meetings of 1992-93, arranged by Marsden Anderson, were *Excavations in Highgate Wood, 1966-78* by Harvey Sheldon which focused upon the Roman pottery kilns and modern attempts to duplicate their construction and use; a study of *London's Early Docks* by R Aspinall; *The Story of the Mary Rose* by John Fisher; *An Iron Age Warrior Burial* recently found in St Albans, by Rosalind Niblett, and a lecture by Helen Patterson which traced the route taken by medieval pilgrims travelling to Canterbury. The Society was particularly honoured to receive the eminent archaeologist, Professor Martin Biddle, who gave the final lecture of the year, a study of archaeological work undertaken during the restoration of the shrine of St Alban. This was a particularly topical lecture as it was given a week before the rededication of the restored shrine. Marsden Anderson has now retired as Hon Director of Lecture Meetings and the Council wish to express their gratitude for the excellent work he has done over many years in organising the Society's lecture programme.

In recent years several visits had been cancelled, making a loss. Consequently Council decided for the short term to organise no further coach parties. In their place will be visits to which members will make their own way and be taken on a tour by a local person. The first two of these visits were held successfully in 1991/2, but a visit to Highgate, organised this year, regrettably had to be cancelled due to lack of enough interested people.

## Publications

The importance of the publication programme to LAMAS had been reaffirmed by the decision of Council to appoint a paid editor, Gillian Clegg, in order to try to end the *Transactions* backlog. This decision was vindicated by the production in 1992/3 of the two much delayed volumes 39 and 40. The Society's thanks are expressed to Ms Clegg, Mr Grew and Mrs Bowlt — the archaeological and historical consultants, and to Mr Pearcey the Chair of Publications Committee. As a result of their hard work the publications programme is now firmly back on target. Future volumes of *Transactions* will now have the colourful covers and better quality production previously associated only with the Special Papers series.

It had been decided by Council to suspend the Special Papers programme until the *Transactions* backlog had been overcome. There had therefore been no new Special Papers this year though sales of the others had been steady if unremarkable, largely due to insufficient numbers of people willing to undertake the role of selling Special Papers at Conferences and to booksellers.

The *Newsletter* came out three times under the editorship of Mrs Eileen Bowlt. Mrs Bowlt had originally tendered her resignation but had been persuaded to stay since no successor had come forward. Council therefore were extremely grateful for her hard work and dedication.

## Council

Eileen Bowlt and Patricia Wilkinson were elected Chairman and Deputy Chairman respectively.

Change was a theme which very much occupied Council's deliberations during the year. A small sub-committee had been established to examine the Society's instrument of government, The Rules, and to bring forward proposals for reform, to ensure that Council and the Society were in a position to respond quickly and positively to the ever-changing situation in London archaeology. The group's proposals had been agreed by Council and would be taken to the 1994 AGM.

At the request of Council, ex-Newsletter editor, Andy Doidge, had designed a new version of the LAMAS logo which incorporated both the crest and acronym. This new motif design offered a more compact logo which could be used on a wider range of materials giving a more professional appearance to the Society's output. The older

logo of the crest in an oval, as presently used on the Newsletter, would be phased out since the wording on it was difficult to reproduce in a way that made it easily readable.

During the previous year, Council had launched the LAMAS Project, a several-year research project intended to combine all the areas of LAMAS interest and activity. The first phase of this project would be a population survey organized principally by the Local History Committee. A small pilot scheme was held during the year to test the viability of the idea and, following its success, the survey was commenced in earnest. The second phase of the project will be a photographic record of rural London; work on organising this is now underway.

### **Membership and Finance**

Both the general economic climate of the country and the non-production of *Transactions* had contributed to declining membership figures. These did not immediately endanger the Society's financial position which remained healthy, however in the long term they presented a problem which needed to be addressed. A special Council meeting had been held in 1992 to examine ways to generate more interest in the Society and to better publicise its existing activities. Accordingly Council was now making increasing membership one of its key priorities. Work has started on designing a new, more attractive, membership leaflet which should be ready next year. Mr Michael Sellers had taken over the role of Membership Secretary.

### **Archaeological Research Committee**

The Committee met regularly during 1992/3 and considered a wide variety of topics, largely relating to the changes in the organisation of archaeology in London and the creation and first year of operation of the Museum of London Archaeological Service (MoLAS). The committee considered carefully its own position and the proposals which it brought forward to Council for a modified role, were unanimously endorsed. The committee now has a wider remit including responsibility for matters in relation to the recording of standing buildings, and will in future seek to better co-ordinate its activities with other regional and national bodies. It was considered by the Committee that the reduction in the levels of excavation undertaken by professional archaeologists might mean a new role for amateur/volunteer archaeologists and accordingly initiated a review of 'The Role of the Amateur in London Archaeology' which will be reporting to the Committee next year.

The 29th Annual Conference of London Archaeologists was held in March. The morning session was devoted to a round up of current excavations and research. The afternoon session was titled: 'Cess flies and what they ate: Environmental archaeology in London'.

### **Local History Committee**

The Committee organised another very popular and successful conference on 21st November 1992. The theme was 'Feeding London'. The speakers were Dr Margaret Murphy on 'Supplying the Medieval Capital c.1300'; Dr Vanessa Harding on 'Food markets in London from 16th to 18th century'; Maisie Brown on 'Market gardening in South West London'; Alex Werner on 'Importing food into 19th and early 20th century London; and Bridget Williams on 'Retailing in London from the 19th Century onwards'.

### **Historic Buildings**

The Committee met eight times during the year. The number of cases considered declined to 202 during the calendar year 1993 compared to 339 in 1992. The main load in 1993 came from Westminster, Merton, the City and Redbridge. The Committee however has been fully occupied dealing with English Heritage proposals for listed buildings in London and the draft PPG15.

The Committee welcomed the addition of Nicholas Long. They were very sorry to accept the resignation of Mrs Josephine Birthenough after many years, including several as the Secretary of the Committee, due to serious illness. The Committee consists of 12 members and 4 corresponding members.

The Committee's target is to have members who can cover each London Borough (except Croydon, Sutton and Kingston). It could do with help in respect of Bexley, Haringey, Hounslow and Tower Hamlets. We need members who can look at the buildings and inspect plans at the town hall.

### **Young LAMAS**

Valerie Saunders continued her string of extremely interesting outings culminating in a visit to the Houses of Parliament. She was then regrettably forced to resign due to pressure of family commitments. Council wish to express their great gratitude for her energy and commitment to the Youth Section. She is sadly missed. She has however been ably succeeded by Mr Gabriel Pepper. He organised a much-enjoyed tour of the Museum of London then directing the members to the excavations at Church Farm, Hendon. A recruitment drive is now underway to ensure the successful continuation of Young LAMAS into the next decade.

BY DIRECTION OF THE COUNCIL

February 1993



# A ROMANO-BRITISH RURAL SITE AT LONG LANE PLAYING FIELDS, ICKENHAM

David Lakin

## SUMMARY

*Excavations at Long Lane Playing Fields, Ickenham, produced slight evidence for a settlement of late Iron Age date superseded in the late 1st century AD by an extensive multi-phase field system. The latest modification to this system can be dated to the mid 2nd century, although later activity on the site is indicated by a substantial surface scatter of 3rd and 4th-century pottery.*

*The importance of this site lies in the contribution it can make, in conjunction with similar recently excavated sites, to our knowledge of the Romano-British settlement pattern in London's hinterland.*

*Of particular note is the indication that areas of the hinterland previously thought to be unattractive in this period may in fact harbour localised variations in the drift geology where settlement did occur.*

## INTRODUCTION

The Museum of London Archaeology Service undertook excavations on the site of the former playing fields at Long Lane, Ickenham, in the London Borough of Hillingdon, between 31 October and 16 December 1994. The site lies on the eastern side of Long Lane (B466) at OS grid reference TQ 0780 8523 (Fig 1).

The site was to be developed as a residential scheme by Acton Housing Association who generously provided funds for excavation when initial evaluation work showed that archaeological deposits on the site were threatened by the proposed construction. An area totalling 2650sq m was examined during the course of the excavation.

The site lies equidistant between the River Pinn and the Yeading Brook, which here run roughly from north to south 1.5km apart. The mean height of the modern ground surface in the area of excavation was just over 36.00m OD. The ground rises to the north and west to a maximum of c.40.00m OD.

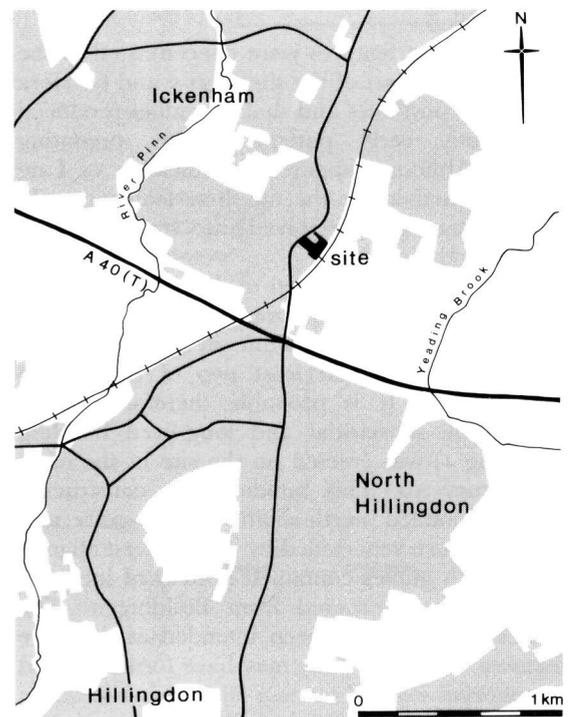


Fig 1. Site location

The central part of the Borough of Hillingdon, where the site is located, lies on a London Clay outcrop and for this reason settlement in the area was believed to be unlikely to predate the medieval period. In fact, evaluation of the site showed that it was situated on an apparently anomalous brickearth subsoil and that activity on the site was confined to the Roman period.

Excavation demonstrated the presence of an extensive multi-phase Romano-British field system and produced tenuous evidence for a pre-Roman conquest late Iron Age phase.

## THE SEQUENCE

A subsoil of stiff mottled tan brickearth was observed across the entire area of excavation. The depth of this deposit was not tested by excavation but had previously been shown by a borehole survey to be c.1.00m thick and to overlie sand.

A small assemblage of burnt and struck flint indicated activity on or near to the site in the Mesolithic and Neolithic periods. However all of the flint was residual within much later features and no obviously contemporary features could be identified.

The earliest features were concentrated in the south-eastern part of the site (Figs 2 and 6). Here a series of postholes and shallow gullies produced consistently early pottery (mostly predating AD 50). Although apparently indicative of Late Iron Age activity on the site these features could only be tentatively resolved into structures and field boundaries.

The postholes appeared to define a rectilinear structure in excess of 2m × 5m. The postholes were, on average, 500mm in diameter and 300mm deep and at least two of them were replacements. It is probable therefore that a moderately substantial and long-lived building (Building 1) was erected on the site in the early 1st-century AD. This building was constructed over an infilled north-south aligned gully and was in its turn superseded by an east-west aligned gully. Both gullies contained pottery of identical date to that recovered from Building 1. The gullies seem to have been intended as drainage features – the later gully may have formed a field boundary.

All subsequent activity on the site can be securely dated to the Roman period and has

been divided into three broad phases. The date range of ceramic material from all three phases is identical and lies within the range AD 70–160 (although small amounts of both residual and intrusive material were present).

The first phase, Roman Phase 1 (Fig 3), consisted of field boundaries defined by narrow, relatively shallow, gullies and associated pits, post- and stake-holes. Five distinct lengths of ditch were noted; all were U-shaped in profile and varied in depth from 70mm to 300mm. No gully junctions could be identified and projected continuation of alignment suggests that the gullies must have met at quite acute angles. The pits, post- and stake-holes assigned to this phase stratigraphically predate the features in the next phase and are largely datable to a period later than AD 50. Consequently they are probably broadly contemporary with the field system defined by the narrow gullies, though they are too scattered to be indicative of particular structures or areas of occupation.

The next phase, Roman Phase 2 (Figs 4 and 6), consisted of field boundaries defined by relatively wide and deep ditches. Eight distinct lengths of ditch were noted, varying in width between 600mm and 1.60m and in depth between 200mm and 700mm. They were on average in excess of 500mm deep and generally had steep sides and flat or shallow U-shaped bases. The ditches formed a rigidly rectilinear field system composed of, by implication, at least five definable fields. These fields, where measurable, were 15m and 30m in width and in excess of 40m in length and appear to have been laid out on a grid aligned on the cardinal compass points. At least one of the ditches had been recut and one other appeared to represent a slightly later modification of the system subdividing one of the fields—both indicative of a moderately long life-span for this phase.

The final phase, Roman Phase 3 (Figs 5 and 6), consists of field boundaries defined by wide, deep, curvilinear ditches and associated burnt spreads and 'tree-throws' indicative of the disuse of the field system of Roman Phase 2. Two distinct lengths of ditch were observed. The principal ditch ran roughly north-south and was up to 2.30m wide and 1m deep, and the secondary ditch joined it at a rough right-angle and was 1m wide and 320mm deep. Associated with this field system were a number of wide, shallow, irregularly shaped features, typically 3m

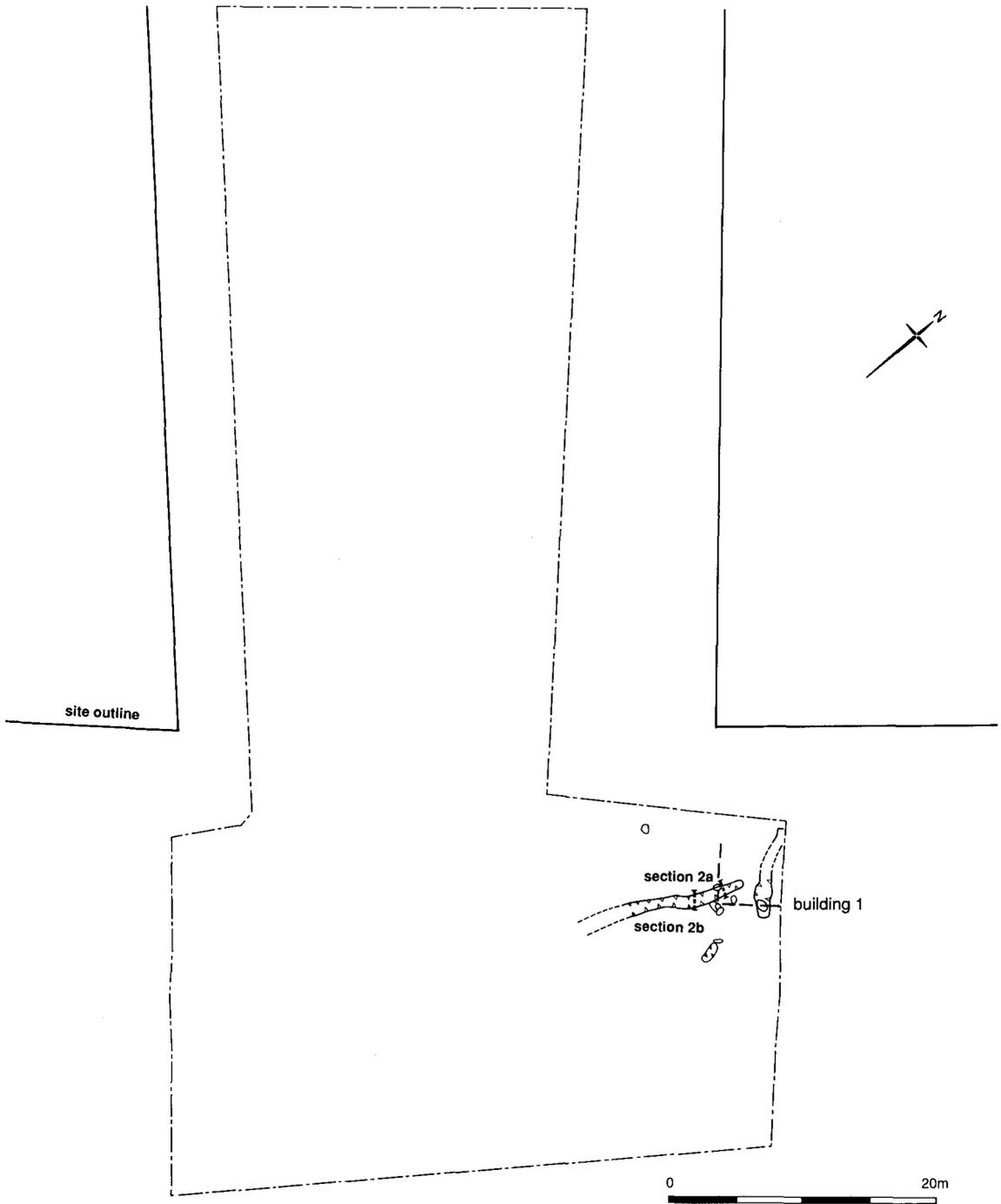
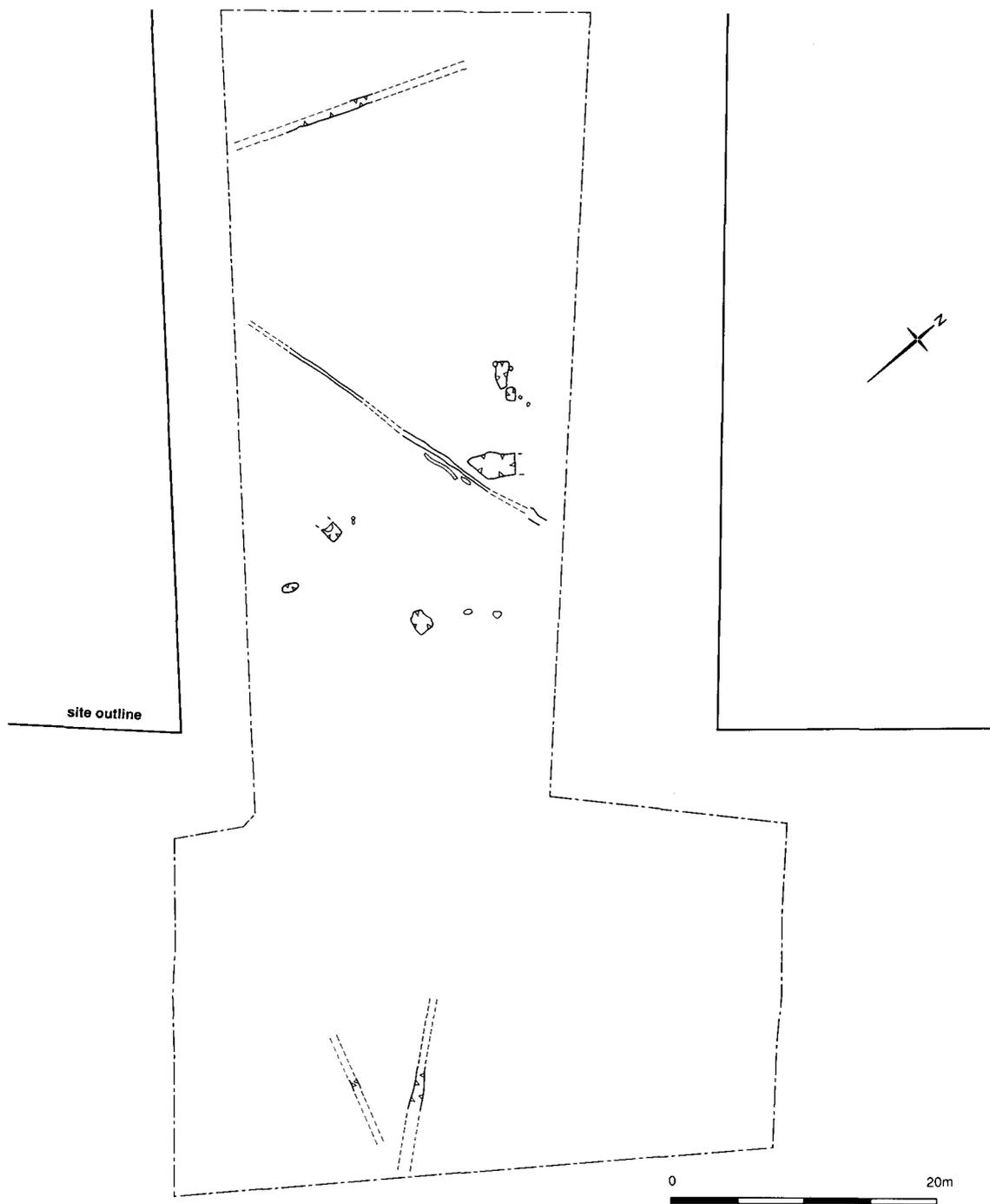


Fig 2. Possible prehistoric features

in diameter and 100mm deep, which have been tentatively identified as the remains of 'tree throws'. These features overlay the ditches and

entrance-ways of the Roman Phase 2 field system and are indicative of the disuse of that system. In addition two extensive spreads of burnt



*Fig 3. Roman Phase 1*

material can, on a similar basis, be assigned to this phase. Carbonised cereal grains recovered from this material showed that grain processing

was undertaken nearby, but also indicated that carbonisation was accidental or at least took place after rather than during processing.

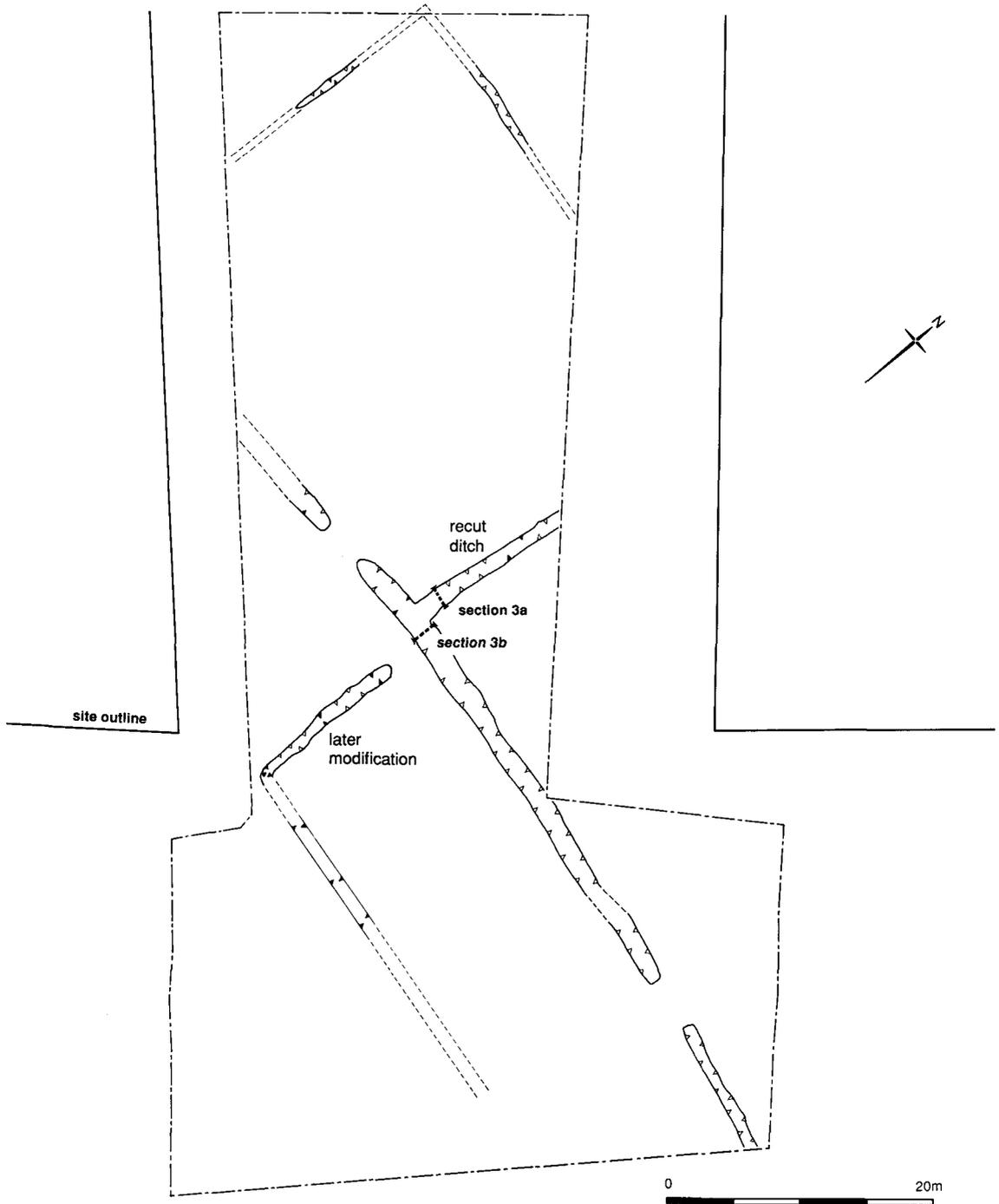
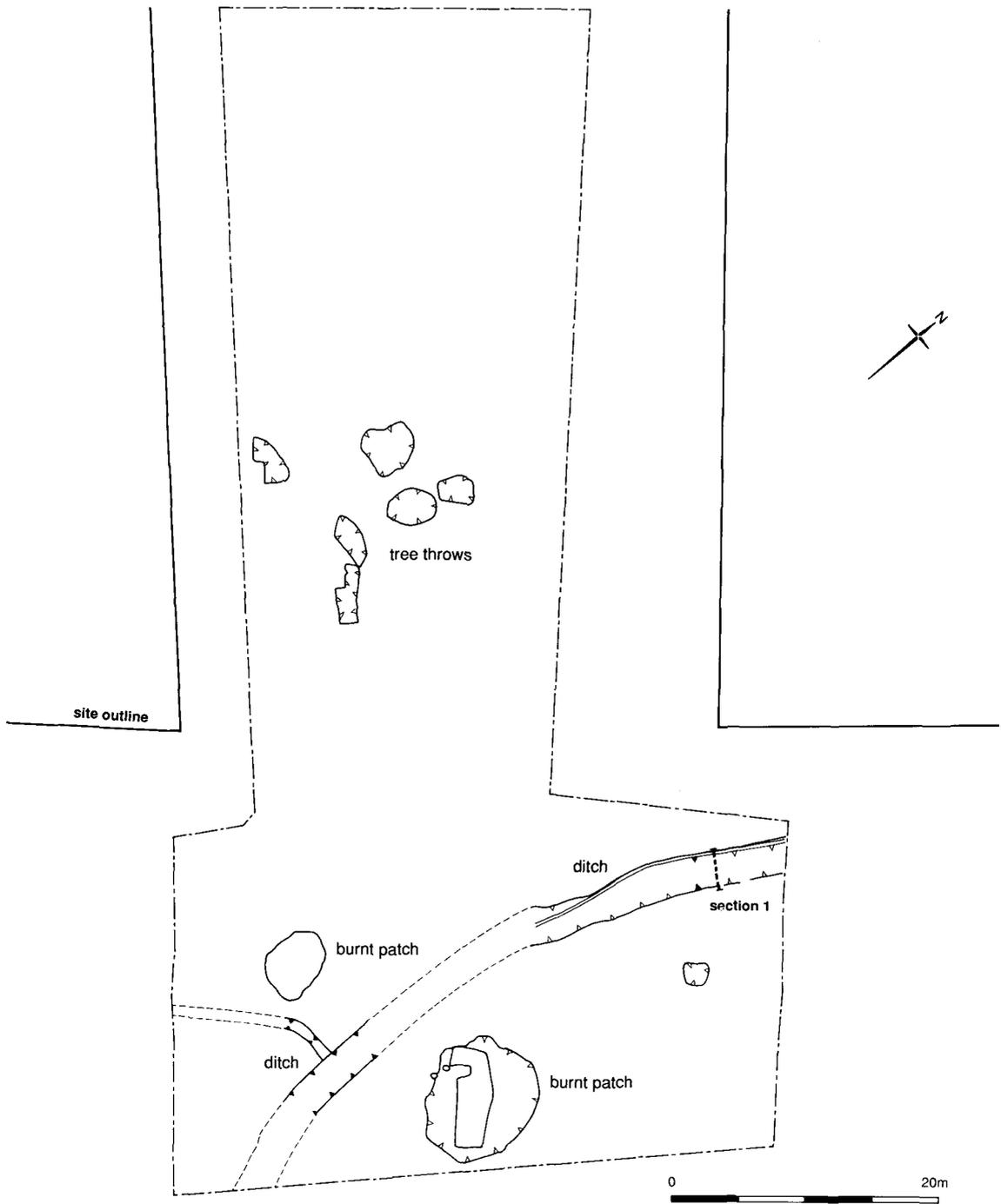


Fig 4. Roman Phase 2

Sealing the cut features over much of the site was a thin layer of mixed brickearth and topsoil, marking the interface between topsoil and subsoil

and probably produced by a mixture of plough action and worm sorting. Excavation of this deposit produced a moderately large quantity of



*Fig 5. Roman Phase 3*

pottery, much of which could be dated to the period AD 200–400. Unfortunately, although this material appears to be indicative of activity on

the site in the Later Roman period, it was not possible to identify any features which could be positively assigned to this period.

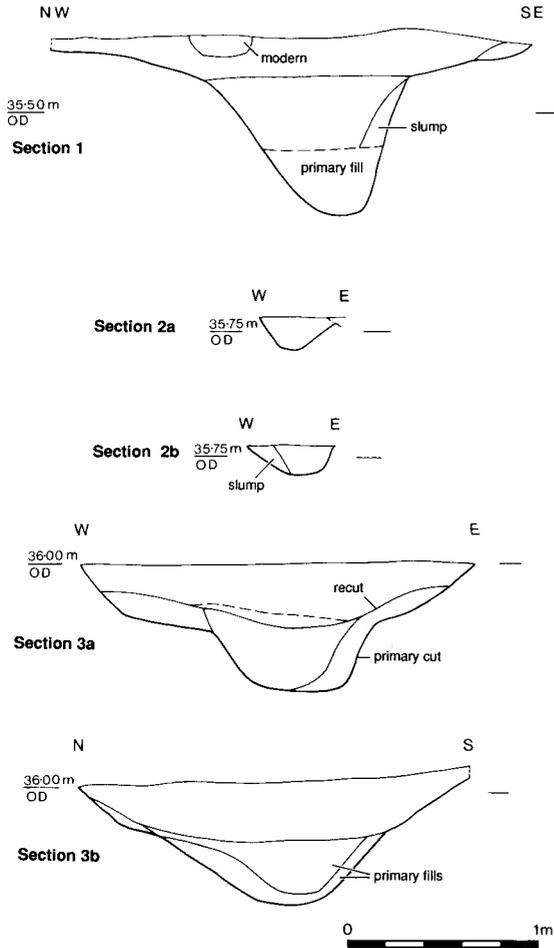


Fig 6. Sections through ditches of Roman Phases 1-3

## CARBONISED CEREAL GRAINS

Twenty-six soil samples were collected from a range of feature types, and were processed using standard MoLAS techniques (MoLAS 1988).

Nine samples produced very small assemblages of carbonised plant remains, consisting virtually entirely of cereal grains. The grains were relatively well distributed amongst these samples, although one layer contained 16 of the 38 grains. Bread/club wheat (*Triticum aestivum* type) could be identified to species level and was the best represented cereal, with twelve grains. A small number of grains may belong to either wheat (*Triticum* sp.), barley (*Hordeum* sp.) or rye (*Secale cereale*). One grain was tentatively identified as oat (*Avena* sp.) although this may represent a

weed. A weed seed of dock (*Rumex* sp.) was also found.

## THE POTTERY

*Robin Symonds*

The site produced a total of six ordinary museum boxes (180mm × 460mm × 125mm) of pottery, consisting mainly of small or medium-sized sherds. Most of these were badly abraded which has inhibited identification. This is a particularly difficult problem because the identifiable pottery clearly contains Iron Age, early Roman, late Roman and a very small quantity of post-medieval material, and the more badly abraded pieces could conceivably belong to any of these periods. Nevertheless, some conclusions are possible, and these must form the basis for future work on sites of a similar nature in the region.

Most of the pottery is Roman, probably including many of the sherds identified as possibly prehistoric, although Roman pottery found on this kind of site can mean either pottery made in the Roman period (*ie* post-AD 43, including pottery which is essentially 'native'), or pottery made in a Romanised style (*ie* may be marginally pre-AD 43, but was either imported from Gaul or is a direct imitation of types imported from Gaul). In this material there is very little belonging to the latter category, although there are some sherds of grog-tempered ware which are in forms associated with terra nigra, which is a (Romanised) Gaulish style of pottery exported as far as Britain from the Augustan period onwards.

In terms of dating, the pottery reflects occupation on the site from sometime in the late Iron Age, perhaps from as early as the late 1st century BC but more likely from the beginning of the 1st century AD. The Roman phases yielded some elements which would not normally date to before AD 70. There appears to be a hiatus in the occupation, or at least a major decline, which may have begun in the middle of the 2nd century, or rather earlier, perhaps as early as AD 100. There was then still later occupation, which probably began sometime in the first half of the 3rd century, and continued through into the 4th. It is not possible to be much more specific than this, owing to the relative scarcity of the pottery, and its poor preservation. Interestingly, this appears to be exactly the same

picture seen with pottery from urban sites in London, albeit on a much larger scale and with much more evidence. Clearly in central London occupation continued throughout the 2nd century and into the 3rd, but there was an obvious decline in the second half of the 2nd century which corresponds with the description above. (However given the shallow and apparently truncated nature of the features on this site it is possible that the later pottery was derived from the ploughed out upper fills of the ditches. In that case the pottery recovered from the features must have been residual, and the dates of the three Roman Phases may be later than appears at first sight.)

Although the nature of the site is rather better illuminated by the environmental evidence than by the pottery, it is perhaps equally reflected in the fact that the pottery consists mainly of coarse ware jars and bowls, some of which were probably made nearby, while others were imported from some distance, particularly in the later Roman period. In the early Roman period there were few imported wares of any sort: the pottery included only three sherds of South Gaulish samian ware, which is found almost by the tonne in urban sites. There were two sherds of otherwise unidentifiable amphorae. The early Roman pottery is dominated by sand- and grog-tempered wares (SAND and GROG) which may not have been transported more than a few miles at most. The only exception to this is the presence of Verulamium Region oxidised ware (VRW): local potters obviously made grey wares, mainly jars, while white and buff-coloured flagons or bowls were bought or brought from Verulamium. The grey wares include a few examples of early wares from Alice Holt (AHSU), but it is the later Alice Holt/Farnham grey wares (AHFA) which dominate in the later Roman period.

In the later Roman period, there are virtually no sherds which can be ascribed to purely local production, with the exception of some sand-tempered wares (SAND), whereas the grey wares include some imported black-burnished wares (BB1 and a wheel-made imitation, BBS) as well as Alice Holt wares. There are also Romano-British fine wares, mainly from the Nene Valley, near Peterborough (NVCC), but also from the Oxford region (OXRC). The mixed ploughsoil includes a sherd of Portchester 'D' ware (PORD), normally dated to the second half of the 4th century.

By way of conclusion, reports on the pottery

from several recent sites in west (and south) London have noted the need to study in more detail the fabrics of coarse grog- and sand-tempered wares of the late Iron Age and early Roman period. While the vast majority of the sherds identified as grog-tempered ?prehistoric, or sand-tempered ?prehistoric *etc* offer nothing other than the fabric to identify, the fabrics could be subjected to petrological analysis, and this may lead to some recognition of areas of distribution of particular sources. No such sherds in this material exhibited any elements of decoration, but it has been possible to note the presence of the ubiquitous bead-rimmed jar (type 2A, dated AD 40–100), which occurs in various sizes. In sum, there is some potential further work on this sort of material, but it would be most usefully undertaken as part of a study of a substantial number of sites containing similar late Iron Age and early Roman pottery.

## OTHER FINDS

A small quantity of other finds—metalwork, coins, worked stone and building material—were also recovered from the site.

Two coins, both in poor condition, were found. One was probably Claudian in date, although it could not be positively identified. The second was a *dupondius* of Antonine or Severan date. Both coins were found in features associated with Roman Phase 1.

The only other metallic finds were three fragments of iron and one scrap of lead, possibly building material.

A fragment of a hone or whetstone was recovered from the fill of one of the ditches of Roman Phase 2. Four fragments of small rotary quernstones were found, two of them were made from a volcanic lava and had been imported from the Rhineland and the remaining two from a fine grained sandstone probably derived from West Sussex. The quernstone fragments were found in features associated with Roman Phases 1 and 3 as well as within the mixed topsoil layer.

A quantity of mostly abraded ceramic building material was recovered. Where identifiable this material was largely of Roman date, attributable to the mid 1st to mid 2nd century. Brick, roof tile (both *tegula* and *imbrex*), and possibly also box flue-tile were identified. A small quantity of medieval or post-medieval peg-tile was recovered from the topsoil interface.

Table 1. Incidences of fabrics and forms found at Long Lane Playing Fields

<b>Fabrics</b>	<b>Forms</b>	
<i>Samian wares:</i>	<i>Flagons:</i>	
La Graufesenque samian ware (SAMLG)	Miscellaneous flagons (1)	1
<i>Fine wares, Romano-British:</i>	Ring-necked flagon with flaring mouth (1B2)	2
Nene Valley colour-coated ware (NVCC)	<i>Jars:</i>	
Oxfordshire red/brown colour-coated ware (OXRC)	Miscellaneous jars (2)	56
<i>Fine reduced wares:</i>	Bead-rimmed jar (2A)	19
Miscellaneous fine wares (FINE)	Necked jar with carinated shoulder (2C)	1
Fine micaceous black/grey ware (FMIC)	Black-burnished-type everted-rimmed jar (2F)	2
<i>Black-burnished-type wares:</i>	Everted 'cavetto'-rim jar (2F13)	1
Black-burnished ware, type 1 (BB1)	Otherwise undistinguishable necked jar (2T)	12
Black-burnished ware, type 2 (BB2)	Storage jar (other than 2M) (2V)	4
Black-burnished ware, type 2, fine fabric (BB2F)	<i>Beakers:</i>	
Black-burnished-style ware (BBS)	Miscellaneous beakers (3)	8
<i>Reduced wares:</i>	<i>Bowls:</i>	
Alice Holt/Farnham ware (AHFA)	Miscellaneous bowls (4)	5
Alice Holt/Surrey ware (AHSU)	Reeded-rimmed bowls (4A)	2
Early Roman sandy ware type B (ERSB)	Bowl with flat/hooded/folded-over rim (4F)	1
Highgate 'C' sand-tempered ware (HWC)	'Surrey bowl' (4K)	1
Highgate 'C' wares with added coarse sand (HWC+)	Flanged bowl (4M)	2
Miscellaneous sand-tempered wares (SAND)	Dragendorff 37 bowl (4DR37)	1
<i>Tempered wares:</i>	Dragendorff 38 flanged bowl (4DR38)	3
Miscellaneous coarse wares (COAR)	<i>Dishes:</i>	
Grog-tempered ware (GROG)	Plate with plain exterior profile (5A)	2
Highgate 'B' grog-tempered ware (HWB)	Dish with simple rim (5J)	3
Highgate Wood 'B' or 'C' ware (HWB/C)	<i>Mortaria:</i>	
Portchester 'D' ware (PORD)	Miscellaneous mortarium (7)	3
<i>Oxidised wares:</i>	<i>Amphorae:</i>	
Hoo ware (HOO)	Miscellaneous amphorae (8)	2
Miscellaneous oxidised wares (OXID)	<i>Miscellaneous forms:</i>	
Miscellaneous red- and white-slipped wares (RWS)	Miscellaneous forms (9)	2
?Verulamium Region coarse white-slipped wares (VCWS)	Lids (9A)	7
Verulamium Region white ware (VRW)	Patera (handle) (9J)	1
Miscellaneous mortaria types (MORT)	Unidentified forms	238
<i>Amphorae:</i>	<b>TOTAL</b>	<b>377</b>
Miscellaneous amphorae fabrics (AMPH)		
<i>Other pottery:</i>		
Prehistoric pottery (PREP)		
Medieval pottery (MPOT)		
Pale brown earthenware (MOCH)		
Miscellaneous red earthenware (PMR)		
Post-medieval pottery (PPOT)		
<b>TOTAL</b>		<b>377</b>

More detailed descriptions of the above fabrics, along with illustrations of the forms, can be found in Davies et al. 1994 (for early Roman fabrics) and in Symonds and Tomber 1994 (for later Roman fabrics).

## DISCUSSION

What sort of settlement do the remains suggest once existed on the site? Any attempt to answer

this question is bedevilled by the exiguous nature of the evidence.

It is possible, tentatively, to suggest that the construction of the modestly-sized building in the

south-eastern part, some time before AD 50, marks the start of the concerted agricultural exploitation of the site. The quantity of pottery datable to the first half of the 1st century AD recovered from the site as a whole reinforces the probability of more than short-term occupation. However in many ways it is easier to note the absence of expected features: there are no hut circles or eaves-drip gullies; no storage pits; no post-built structures; and no droveways or stock enclosures.

Subsequent phases present equal problems. Despite the presence of extensive and well-defined, small-scale enclosures and quite large quantities of domestic refuse, it was not possible to define any element of the settlement which might have produced them. This is a common feature of the Romano-British rural sites of West London. Sites excavated in the 1980s at Holloway Lane, Harmondsworth; Wall Garden Farm, Sipson; and Cranford Lane, Harlington all failed to produce any evidence of buildings despite the presence of extensive field systems and large quantities of pottery (MoLAS forthcoming). It is, of course, possible that in view of the relatively small area excavated at Long Lane (0.265ha) any settlement may have lain beyond the limits of the excavation. But the much larger areas excavated on the other sites make it less likely in those cases that the settlement areas were missed. The possibility exists that where surface-laid buildings have been erected their archaeological remains may be so ephemeral as to elude the excavator. The report of excavations at Brockworth, Glos (Rawes 1981), demonstrates the presence of hut circles within a rectilinear field system, similar in size and layout to that identified at Long Lane. The site was, like Long Lane, covered by a shallow topsoil and considerable truncation had resulted from ploughing. It was only possible to define the hut circles from the presence of shallow penannular eaves-drip gullies. If similar huts had been erected at Long Lane, without eaves-drip gullies, it is probable that their remains would not have been noticed in excavation. Building material noted in the finds assemblage from Long Lane further strengthens the possibility that buildings were once present on or near to the site. Roof tile fragments (*tegula* and *imbrex*) of mid 1st to mid 2nd-century date were found in the topsoil interface deposit, burnt daub and daub with wattle impressions were recovered from some of the ditches of Roman Phase 2, and a fragment of lead pierced by square section holes was also

found in the topsoil interface deposit. All of these items point to the presence nearby of one or more buildings erected using typically Roman techniques.

Whether or not a settlement actually once existed on the site it is clear that the second half of the 1st century AD saw a reordering of the landscape on and around the site. Even the somewhat haphazard system of Roman Phase 1 is evidence of greater concern with landscape organisation than was demonstrated in the preceding phase. The rigidly rectilinear scheme of Roman Phase 2 suggests a comprehensive attempt at reorganisation (obviously not entirely successful since it was in its turn quickly replaced). It is possible that these changes in the landscape hold implications about the nature of the economy of the site and even about the nature of land tenure.

The date at which the site fell out of use is difficult to identify with precision. The latest set of field ditches (Roman Phase 3) contained pottery datable to no later than AD 160. Yet clearance of the site provided a considerable surface scatter of pottery, concentrated in the central part of the site, datable to the period AD 250–400. While it has not been possible to identify any features datable to this period, the quantity of material involved suggests that activity on the site did not cease c.AD 160, the latest date of the last phase of features.

Recent work on Romano-British rural sites suggests that agricultural practice was more widely based than had previously been thought (see for example Briggs *et al* 1986) with less clear-cut divisions between arable and pastoral regimes. The layout of the field systems at Long Lane, particularly those of Roman Phases 1 and 2 where the individual fields were relatively small, seems to imply their use as stock pens and therefore an economy at least partly pastoral. Material remains from the site are able to add a little to the picture. Arable farming is indicated by the presence of carbonised cereal grains and the fragmentary remains of quernstones. The grains, together with charcoal found in virtually all of the samples taken from the site, are indicative of human activities. The grains were accidentally burnt, possibly while being dried before storage or hardened for milling into flour.

Bread/club wheat has been recorded on sites dating from the Neolithic period onwards (Greig 1986). In west London it has been found in samples from a Roman corn drier at Wall

Garden Farm, Sipson and in late Iron Age or early Roman features at St Mary Abbots Hospital, Kensington. However, only at very few Roman sites, is it the best represented grain *eg* Barton Court Farm, Abingdon (Briggs *et al* 1986).

The advantages of bread wheat over other cereals are its greater tolerance of frost conditions, a high yield potential and, because it is a free-threshing grain, its ease of processing. This cereal also produces high quality bread. Conversely bread wheat requires greater soil fertility than other wheats, is a poor competitor with weeds and is more vulnerable to insect and fungal attack.

While the paucity of carbonised material from this site provides little detailed information about crop husbandry, processing or the nature of the settlement, the material does add to our understanding of the cereal types utilised in this part of west London during the late Iron Age/Roman period, an area for which at present there is a dearth of evidence.

Unfortunately soil conditions on the site were not conducive to the survival of bone and no animal or human bone was recovered from the site. However dairy farming may be indicated by the remains of two possible cheese-presses (both in sandy grey ware—SAND) one of which was found associated with the features of the Roman Phase 1.

### CONCLUSIONS

Despite the relatively exiguous nature of the discoveries made at Long Lane Playing Fields the site has some importance for the light it can shed on the nature of Romano-British rural activity in the hinterland of *Londinium*. In particular it allows comparison and contrast to be made with recently excavated sites on the Thames Gravels and in Kensington (MoLAS 1995).

Of most interest is the nature and chronology of the field systems established on the site. As Branigan states ‘...the laying out of thousands of acres of new fields, driveways and enclosures represents a ... profound change in the British landscape...’ (Branigan 1982).

The morphology and alignment of these new field systems may serve as indicators of land use, or even of land tenure with all the implications

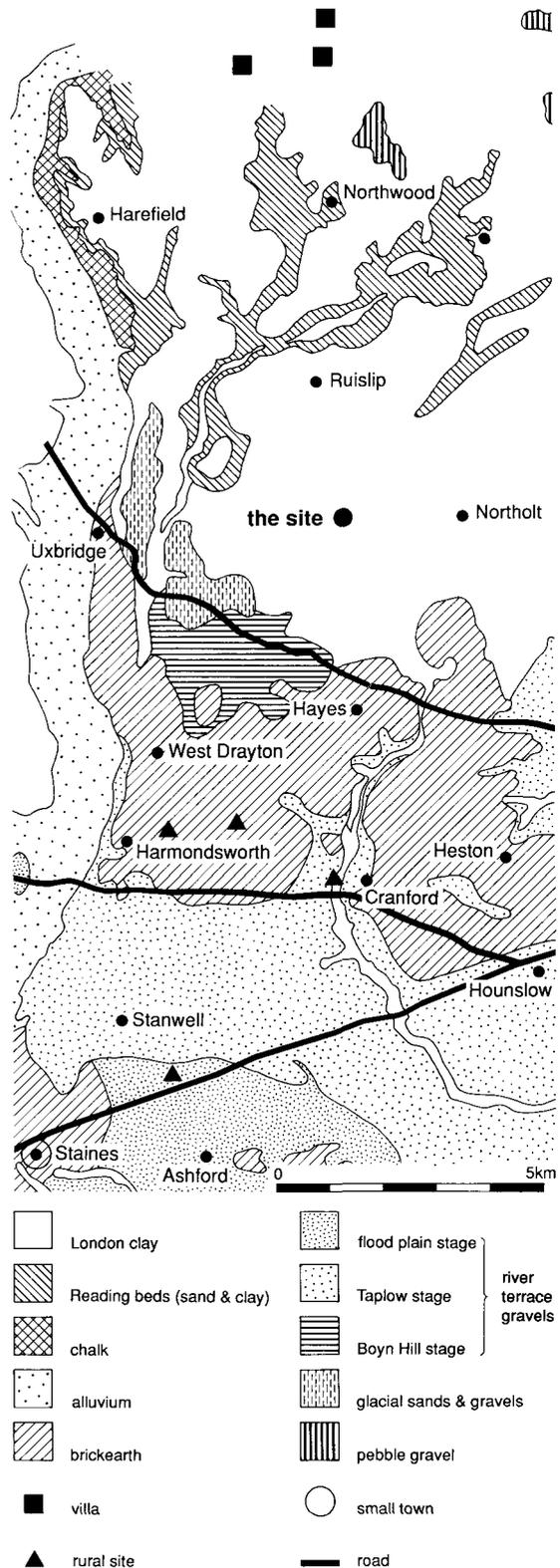


Fig 7. Romano-British sites and geology of west London

this may have for continuity and change between the late Iron Age and the Roman period.

Further study of this and other rural sites in London's hinterland may shed light on the perceived fluctuations in the scale and nature of urban settlement in the capital. For example, at first glance the apparent demise, or at least scaling down, of activity on the site after AD 160 seems to fit the supposed decline in the City's fortunes in the late 2nd century. This apparent link between rural and urban trends remains to be confirmed or modified.

Finally it is worth emphasising the revision of our view of the extent of Romano-British rural settlement which may be necessary following the discovery that localised areas of variation in drift geology may have proved attractive to settlement in areas where occupation has hitherto not been found (see Fig 7). While Romano-British settlement is well known from the Thames Gravels to the south of the site, the London Clay lands to the north of Uxbridge and Hayes have been thought to lack settlements of this period because of their heavier soils. It may be no coincidence that the site at Long Lane provided evidence for a localised variation in the drift geology and occupation of Roman date.

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# EXCAVATIONS AND OBSERVATIONS ON THE SITE OF THE DUTCH CHURCH, AUSTIN FRIARS, IN THE CITY OF LONDON

Bruce Watson

## SUMMARY

During 1950–1 the late Professor Grimes directed the excavation of the interior of the ruined Dutch Church or Jesus Temple of Austin Friars (TQ 3293 8136), which had been destroyed by bombing in 1940. The earliest Romano-British features were gravel pits, which were in-filled during the mid 2nd century. The area was then divided by a series of linear gullies, interpreted as property boundaries. Later the ground level was raised by soil dumping and then a series of mud brick or cob walled buildings were constructed during the late 2nd or early 3rd century. These buildings were later demolished and others erected during the late 3rd or 4th century. The site was then sealed by a build up of dark earth deposits. The earliest post-Roman activity was the digging of rubbish pits, which began during the Saxo-Norman period. From c.1253 the nave of the Augustinian priory church occupied the site. The foundations of the south arcade of the nave consisted of a series of masonry pier bases. Under 'Synthesis' below the results of the 1950–1 excavations are linked to more recent archaeological work in the Austin Friars area.

## INTRODUCTION

The excavation of the Dutch Church of Austin Friars was one of the many archaeological investigations directed by the late Professor Grimes on bomb sites within the City of London in advance of redevelopment between 1946–1968 (Fig 1). From July 1950 to spring 1951 six areas

within the ruined church were excavated. The original intention was to excavate the entire nave in a series of eight trenches each measuring some 28ft (8.5m) by 32ft (9.6m). Each trench was to be separated by a baulk 3ft (0.9m) wide (Fig 2). Due to a lack of time, resources, room to dump the spoil and bad weather work was largely restricted to Areas 1 to 4 within the southern half of the church; only the south-west (Area 4) trench was fully excavated. Very limited work was undertaken in the northern half of the church (Areas 5 and 6).<sup>1</sup>

In the upper portion of the trenches, the extent of individual features or deposits could not be determined, so each area was subdivided into 15 squares and dug in 6in (0.15m) or 1ft (0.30m) thick spits. Many of the intrusive pits were only defined at depth, so the spits contained

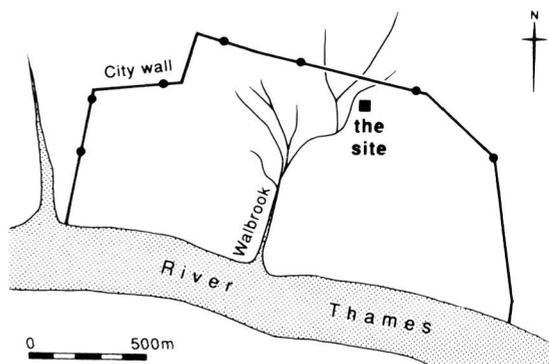


Fig 1. The walled Roman city, showing the location of the site

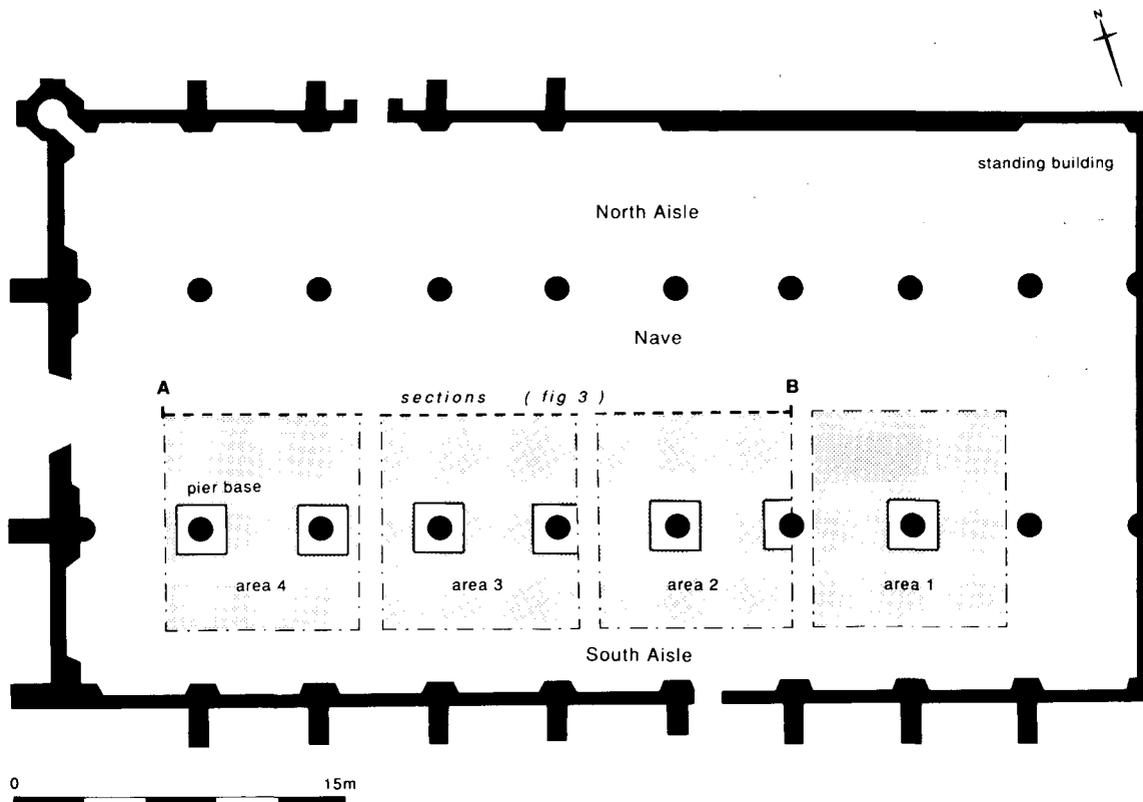


Fig 2. The location of the excavations within the Dutch Church (the extent of Fig 3. is indicated by the letters A and B)

much intrusive material. Before the excavation started in 1950 some 7ft (2.1m) of post-medieval graves, brick burial vaults and modern deposits within the ruined church were cleared down to c.11.3m OD. During the rebuilding of the church it was proposed to reduce the ground level a further 3m clearing the site of all archaeological deposits.

An interim report on the site was included in Grimes's volume on his London work (1968, 124-127). This excavation is referred to as site WFG 50 in the Grimes Archive (held by the Museum of London). Unfortunately some of the finds have been mislaid since the 1950s so the dating evidence for some phases of Romano-British activity is limited. This report is a summary of the full stratigraphic archive report on the excavation (Watson 1996).

### Phase one: site topography and geology

The natural ground surface of this area slopes from east to west, towards a deep tributary of

the Walbrook stream (Fig 1).<sup>2</sup> Untruncated Pleistocene sand and gravel was located in the western part of Area 4 at 10.0m OD, while further east in Areas 2 and 3 it was located at 10.3m OD. Natural brickearth overlying the gravel was located in the southern part of Area 4 at 10.1m OD (Fig 3). In many places the natural deposits had been truncated by quarrying. In several places undated disturbed subsoils or redeposited gravels and brickearth were located directly above natural deposits.

### Phase two: quarry pits

Two quarry pits were dug for the extraction of gravel (Fig 3). The backfills of the larger pit can be divided into two types. First, clayey brickearth and second, gravel or gravelly loam. Grimes (1968, 125) suggested that this feature was a sunken-floored hut and interpreted the brickearth as makeup for successive gravel floors. The thin gravel fills which all sloped down towards the centre of the feature look more like eroded

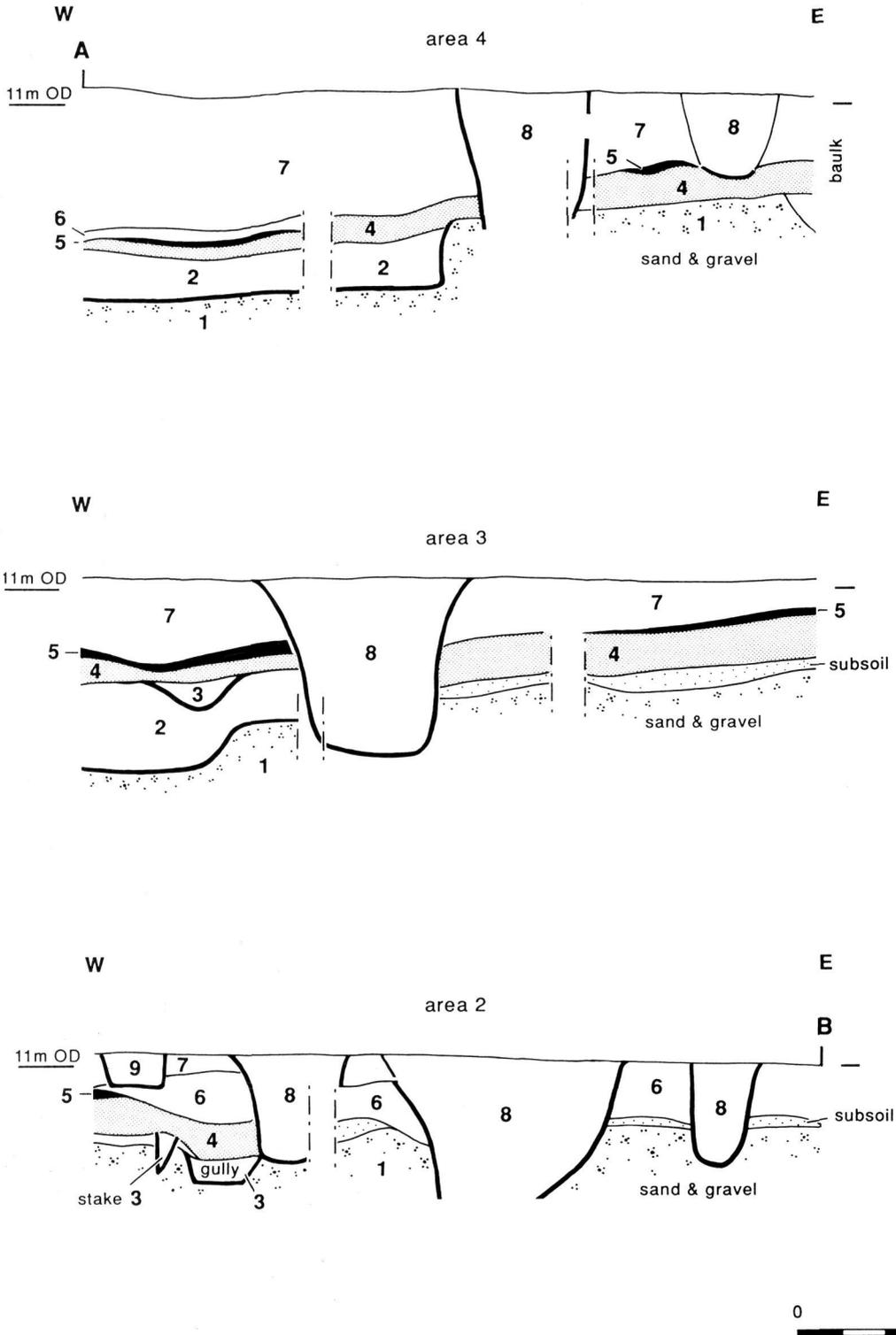


Fig 3. South facing sections of Areas 2, 3 and 4. The numbers 1 to 9 refer to the site phasing

material derived from the sides of the pit than floors. Perhaps the pit was intermittently infilled with brickearth stripped from neighbouring sites before gravel quarrying took place. The infilling of this pit is dated to AD 120–160, suggesting that the quarrying had taken place during the late 1st or early 2nd century AD.<sup>3</sup>

The smaller gravel pit had a basal fill of dark brown organic silt, sealed by dumps of buff loam, gravel, mortar and wall plaster.

### **Phase three: land allotment**

Across the infilled gravel pits a series of five linear gullies aligned north-south were laid out (Fig 3). A sixth feature may be part of a small pit or an east-west gully. Associated with one of these gullies were nine stakeholes, which may represent fence lines flanking the gully. These gullies are interpreted as a period of land allotment, probably marking out building plots before the area was developed during the mid to late 2nd century.

### **Phase four: soil dumping**

The infilled linear gullies were sealed by the dumping of 0.3 to 0.5m of gravelly soil (Fig 3). These undated dumps are interpreted as the raising and levelling of the area before the first phase of building. A wire brooch of 2nd-century date was found within these deposits.

### **Phase five: earlier buildings**

Across the western part of Area 4 were two areas of gravel flooring, at the same level was a concentration of collapsed or dumped wall plaster fragments. Further east were small areas of yellow clay, gravel and mortar flooring (Fig 3). These buildings were only represented by fragmentary areas of flooring, any associated walls were apparently destroyed by later buildings (Phase six) or the density of medieval pits (Phase eight).

Grimes (1968, 126) noted that there were 'quantities of wall plaster, sometimes in concentrated patches, the most definite covering an area about 12ft (3.6m) across' and interpreted as the collapsed plaster facing from a cob (clay lump) or mud brick walled building. Other plaster

concentrations were found within layers of brickearth, interpreted as the remains of cob or mud brick walled buildings. In one place an area of *in situ* 'plaster floor' (2.5cm thick) retained a short length 'of quarter-round moulding, above which in turn projected the broken edge of a vertical surface, obviously the facing of the wall. Of the wall itself, however, there was no trace: it had no foundation trench' (Grimes 1968, 126). This observation suggests that the associated wall was founded on a timber baseplate, which was robbed out when the building was demolished.

There are no finds to date the construction of these buildings, but on stratigraphic grounds they were erected during the late 2nd or early 3rd century.

### **Phase six: later buildings**

The construction of the later phase of buildings was preceded by the dumping of c.0.3m depth of clayey brickearth, interpreted by Grimes (1968, 126) as the demolished walls of the earlier cob or mud brick buildings (Fig 3). Finds from this deposit date to AD 120–250. The brickearth dumps were sealed by a yellow clay floor, which in turn was sealed by a build up of organic rubbish dating to AD 240–400. Above this deposit was an undated stony level, probably another floor surface, which was covered by a dark earth deposit (Phase seven).

One area of earlier building flooring (Phase five) was sealed by dumps of mortar and loamy soil, dated to AD 120–160 (purely residual finds). These dumps were sealed by 0.3m of gravel and mortar, interpreted as makeup for a clay floor.

The remains of these buildings were limited to fragments of flooring, no wall-lines survived, so the plan or even the number of buildings on the site is not known. The presence of one external area is indicated by the dumping of gravel and soil (described earlier), which was later built over.

The various fragments of later buildings are of late 3rd and 4th-century date, no more precise dating is possible from such limited evidence. However, a coin of Constantine (AD 306–337), found in a post-Roman context, suggests that the site was still occupied during the early 4th century.

### **Phase seven: dark earth build up**

The later phase of Romano-British buildings (Phase six) was sealed by a depth of 0.6 to 1.5m

of 'dark fairly stiff loam, gravelly in places, but quite without stratification or other features' (Grimes 1968, 127; Fig 3). This deposit is interpreted as a dark earth deposit (discussed below).

The dark earth was dug in spits 15 or 30cm thick on a grid system within each trench. A number of the contexts assigned to these spits contain medieval finds, presumably due to undetected intrusive features (Blackmore 1992). Romano-British pottery was found in eight spit contexts, of these contexts, five date to AD 270–400 and a sixth to AD 250–400. These dates suggest that either the accumulation of the dark earth deposit began during the 4th century or that some 4th-century deposits have been destroyed by biological reworking (root/worm action).

### Phase eight: medieval rubbish pits

Within Areas 1 to 4, eight rubbish pits were excavated. Most were backfilled with 'black soil' derived from decayed organic rubbish (Fig 3). Several pits contained thin bands of clay, probably laid down to seal the smelly, decaying, organic rubbish. The dating evidence for these pits is limited as the upper portion of most pits was dug out as part of the dark earth spits (Phase seven) and the features were only defined at the top of the surviving Romano-British deposits. It is probable that the 13th and 14th-century pottery from the dark earth spits was derived from these pits or later features. The earliest medieval pottery from Areas 1 to 4 is of 12th-century date. Limited excavation of several pits within Area 6 produced Saxo-Norman pottery (1050–1150), a pricket candlestick and 13th-century pottery (Blackmore 1992).

It appears that before the establishment of the Augustinian priory in 1253 (Phase nine) the site was an external area used for the disposal of rubbish. No trace of associated medieval buildings or other features such as wells were found.

### Phase nine: the Augustinian priory church

It is documented that the Augustinian priory was founded in 1253 (Wheatley 1956, 160). It consisted of a large church (nave and choir) with cloisters and domestic buildings to the north (Fig 4). The excavated area occupied part of the

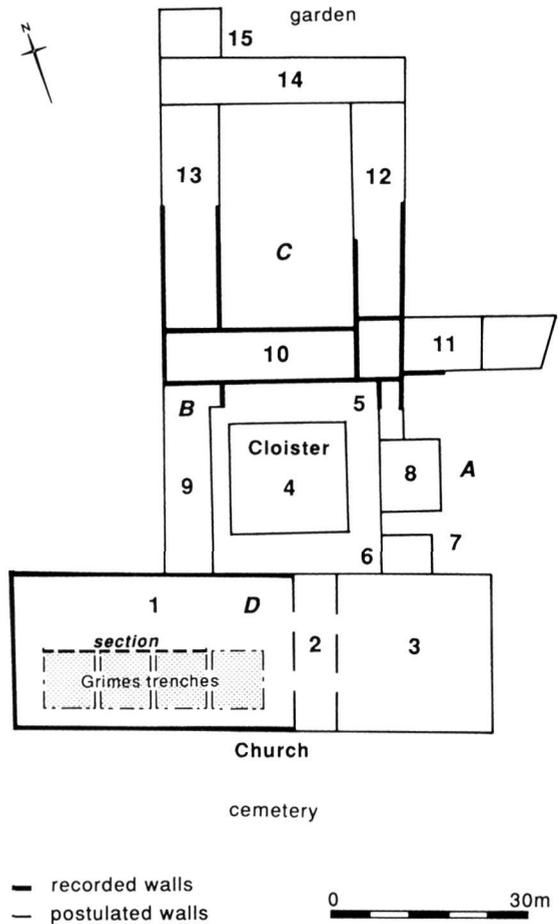


Fig 4. The postulated layout of the London Augustinian priory, showing the location of relevant archaeological investigations (after Cater 1915, 205)

**KEY TO PRIORY BUILDINGS:** 1. Nave, site of later Dutch church; 2. Cross-aisles; 3. Choir; 4. Cloister garth (courtyard); 5. Little Dorter (above cloister walk?); 6. Little Chapterhouse; 7. Little Chapterhouse; 8. Great Chapterhouse; 9. Hall, with dorter above; 10. Library; 11. Kitchens and bakehouse; 12. Refectory; 13. Hall and guesthouse; 14. Probable site of Prior's lodgings; 15. Possible site of infirmary

**KEY TO ARCHAEOLOGICAL INVESTIGATIONS:** A) Eastern side of Austin Friar's Square (address unknown) 1888 and 111–5 Old Broad Street, 1994 and 1995; B) 10 Austin Friars Square, 1895; C) Pinner's Hall, 105–8 Old Broad Street and 8 Austin Friars Square 1912 and 1989–90; D) Interior of the Dutch church 1950–1

nave and south aisle of the church. The south arcade foundations were represented by eight rectangular, trench-built, chalk rubble pier bases (Fig 2). Similar foundations existed for the

unexcavated north arcade (Grimes 1968, 125). These regularly spaced foundations appear to represent only one phase of construction, which related to the mid 14th-century standing building, interpreted as the result of the 1354 rebuilding (RCHM 1929, 32–33). As there was no sign of earlier foundations or robbed out foundations, it must be assumed that the original 13th-century nave was of either the same or a very similar plan to that of the mid 14th-century rebuild, allowing the reuse of all the original pier bases.

Inside the nave were a number of post-medieval burial vaults and many monuments of 15th to 18th-century date (RCHM 1929, 33–34). All the burial vaults and graves within the church were cleared before the excavation began in 1950. During the excavation only the basal portions of three empty graves or modern features were recorded (Fig 4). The level of the post-medieval church floor is estimated to have been c.13.4m OD.

## SYNTHESIS

### The Romano-British period

The earliest Romano-British activity on the site was gravel quarrying, the two pits were infilled by the mid 2nd century (Phase two). Only one of the quarry pit fills consisted of a dump of plaster or mortar and no fills can be interpreted as domestic rubbish—implying that there was little human habitation close by.

Why a flood-free site on the eastern edge of the Upper Walbrook Valley was not developed during the late 1st and early 2nd century when the City was rapidly expanding is worth considering (Perring 1991, 23–37). One possibility is that this area of valley flank was not considered worth settling until a lot of the lower lying valley land was drained and reclaimed during the period c.AD 90–120. This period of reclamation appears to have served partly as preparation for a phase of building construction within the Upper Walbrook Valley during the early 2nd century (Maloney 1990, 119–120). Another possibility is that this marginal area was being quarried until the mid 2nd century, to save bringing gravel from further afield. Construction projects such as the second basilica (built c.AD 100–130), only 200 metres south of the site, would have required vast amounts of sand and gravel. Presumably this demand would have

encouraged the quarrying of any nearby vacant area. Yet this area was clearly both settled and valued during the early 3rd century (discussed below) as it was included within the City walls (built c.AD 200–225).

After the infilling of the quarry pits a series of north-south linear gullies were dug (Phase three). Associated with one gully were two probable fence lines. These gullies are interpreted as a late 2nd-century phase of land allotment, marking out building plots. Similar linear gullies have been found on several sites within the walled city. At Rangoon Street there were a series of early Roman linear ditches, probably defining small fields or animal pens, which were infilled and abandoned during the late 2nd century then sealed by a build up of dark earth. Interestingly this site never appears to have been built over during the Romano-British period (Bowler 1983). At Leadenhall Court, on the site of the second Roman basilica, a series of linear gullies of mid 1st-century date represent enclosures and property boundaries (Milne 1992, 10–11). The infilled gullies were sealed by soil dumps presumably to raise and level the area before building began (Phase 4).

The earlier phase of building is dated to the late 2nd or early 3rd century, the buildings consisted of a small area of clay, gravel and plaster/mortar floor. The actual walls were of cob or mud brick construction, with evidence of collapsed sheets of plaster or external mortar render. One fragment of mortar floor was associated with a quarter round moulding at the junction of the wall and floor.

The earlier phase of building is broadly contemporary with the two, late 2nd or 3rd-century stone-built houses, containing tessellated floors and painted plaster walls, found to the west of the site at 22–25 Austin Friars in 1989 (Dunlop and Shottliff 1989; Milne 1995, 75).

After the demolition of the earlier buildings, the resulting debris was used to level up the site and another phase of buildings of late 3rd to 4th-century date were erected (Phase five). Again the evidence of these buildings was limited to small areas of flooring.

The later buildings were sealed by a thick layer of dark earth. This deposit is now interpreted as soil build up of complex origin, which began during the late Roman period and appears to have continued until the late Anglo-Saxon reoccupation of the walled City. It is probable that the dark earth represents a

combination of biological reworking of the latest Roman deposits and natural soil build up on unoccupied or waste land (Courty *et al* 1989, 261–268; Macphail 1993; Yule 1990). Previously dark earth deposits have been interpreted as the result of gardens or farmland created on the sites of former buildings within the declining and sparsely populated late Roman city (Perring 1991, 78–80).

### The Augustinian priory

The earliest medieval activity was the digging of rubbish pits which started in the Saxo-Norman period (1050–1150) and presumably continued until 1253.

The Order of Friars Hermit of St Augustine—commonly known as Austin Friars—was formally instituted in 1256 by an ordinance of Pope Alexander IV. This new mendicant order had developed from the unification of a number of small Austin hermit communities (Lawrence 1984, 217). The title ‘Austin’ signifies that these friars followed the monastic rule of St Augustine. In the 13th century the mendicant friars represented a radical breakaway from the monastic tradition of seclusion. Instead they saw their mission as preaching and ministering to the ever expanding urban population, whom the friars sought to live amongst (Lawrence 1984, 192–195, 207). The first Augustinian priory in England was founded at Clare in Suffolk in 1248–9 and their second priory was founded in the City of London during 1253 by Humphrey Bohun, Earl of Hereford and Essex. In 1334 and 1345 the London priory was enlarged by new land-grants and was ‘re-edified’ during 1354–55 (Hugo 1864, 11–13; Wheatley 1956, 160).

The medieval monastic orders, like modern financial houses, all sought to have a large London branch to represent their interests in the capital and at court. Therefore the London priory was much larger than most of their houses. Hence the cathedral-like proportions of the church: the nave of which was 153ft (46.7m) long; for comparison the nave of the present St Paul’s cathedral is 188ft (57.3m) long (RCHM 1929, 32, 44). The nave of London Blackfriars was only seven bays and 114ft (34.8m) long and the nave of London Greyfriars was also only seven bays and 132ft (40.2m) long (Clapham 1912, 64).

The church consisted of a large nave of nine bays separated from the choir by a cross-passage, above which was ‘a most fine spired steeple, small high and straight’ which was rebuilt in 1362 (Wheatley 1956, 159–160).<sup>4</sup> The appearance of the rebuilt nave is illustrated in a late 18th-century watercolour (Schofield 1993a, fig 63). Within the church were chapels dedicated to St Thomas and St John (Hugo 1864, 6). The location of these chapels is uncertain. A 16th-century Harleian manuscript catalogue of burials within the priory lists many aristocratic or rich interments. The places of burial are listed as the nave, choir, ‘the walking place by the choir’ (the cross-passage), the chapels of St Thomas and St John, the ‘east’ and ‘west wings’ of the church (presumably chapels of unknown dedication), plus the chapterhouse (Hugo 1864, 5–8). Stow writing in *c.*1600 obviously obtained his list of interments from the same manuscript (Wheatley 1956, 160–161). The main cemetery lay to the south of the church (Fig 4). Redevelopment of this area in 1910 revealed no sign of burials (Norman 1916, 9) and archaeological investigation of this site in 1987 also revealed no sign of the cemetery, probably due to the truncation caused by construction of deep basements in 1910 (Beazley 1988).

The area of the excavation lay within part of the nave and south aisle of the priory church, the foundations of the south arcade were represented by rubble-built pierbases. These bases appear to have been part of the original 13th-century church, but were reused in the mid 14th century rebuild (RCHM 1929, 2–33). The external foundations and buttresses of the south nave wall were revealed during the redevelopment of the adjoining property in 1910. The presence of two partly blocked medieval windows in the south aisle wall suggest the existence of a medieval building, possibly a chapel entered from the south aisle, built up against the south wall of the church (Norman 1916, 7–9).

To the north of the church stood the priory cloisters (Fig 4). The approximate extent of the cloister garth is still preserved as open space by Austin Friars Square (Cater 1915, 214; RCHM 1929, 33). Grouped around or to the north of the cloisters were the various residential and service buildings (Fig 4). The quadrangular layout of the priory buildings suggest the existence of two sets of cloisters.<sup>5</sup> The excavation of Leicester Austin Friars revealed two sets of cloisters on the north side of the church. The first set of cloisters

dated from the 13th century and the second set was added during the 14th century (Mellor and Pearce 1981, 9–41). The most northerly part of the priory precinct fronting onto London Wall was garden. Disputes concerning the walls and ditches around the ‘prior’s garden’ were heard by the London Assize of Nuisance in 1313 and 1328 (Chew and Kellaway 1973, 39,67).

Various fragments of the priory buildings have been recorded during redevelopment or, more recently, during archaeological investigations of the area (Fig 4). In 1888 redevelopment of the eastern side of Austin Friars Square on the site of the Great and Little Chapterhouse revealed a number of burials (Cater 1912, 29). It has been suggested that these burials lay within a cemetery to the north of the choir (Cater 1915, 218). However, this area is not documented as a cemetery, so it seems more probable that these burials either lay within one of the chapterhouses or the north side of the choir. An evaluation of the site of the chapterhouses and choir during 1994 revealed truncated chalk rubble wall foundations, interpreted as part of the Little Chapterhouse and a substantial fragment of L-shaped foundations aligned east-west, with a north-south return in Testpit 4A (Thomas 1994). The foundations in Testpit 4A are provisionally interpreted as part of the north wall of the choir with an attached external buttress (the north-south return). In an attempt to clarify the situation in Testpit 4A a further evaluation (Testpit 4B) was undertaken during 1995. This work confirmed the full width of the east-west foundation (1.24m) (Hardy 1995).

A fragment of the western arm of the cloisters was revealed during 1895, when the house at 10 Austin Friars was demolished. A 14th-century door (c.3.9m high and over 2.3m wide), plus several ceiling bosses and various fragments of groined vault rib were discovered (Cater 1915, 216–217; Norman 1916, 10).

When Pinner’s Hall was built in 1912 large portions of the foundations of the hall or guesthouse, refectory, kitchens, bakehouses and library were recorded (Cater 1912, 27–31). Sadly re-examination of this site in 1989–90 revealed little trace of the priory foundations (Greatorex and Watson 1989; Rosborough 1990).

The priory closed in November 1539. In 1541 Sir William Powlett (later Marquis of Winchester) acquired some of the domestic buildings and in 1550 he acquired the church choir (Hugo 1864, 15). By c.1560 Powlett had built a large residence,

surrounded by formal gardens, known as Winchester House on the site of many of the priory buildings.<sup>6</sup> Powlett’s new residence was one of a number of ‘urban palaces’ erected between c.1532–1570 within the recently closed City of London monastic precincts (Schofield 1993b, 29, 33). Fragments of ‘Tudor’ brick foundations including a number of four-centred relieving arches were recorded at Pinner’s Hall during the 1912 redevelopment (Cater 1912, 30, site plan). These foundations are interpreted as fragments of the southern part of Powlett’s residence or its outbuildings. One brick wall was built directly over the western wall of the hall and guesthouse, suggesting that a number of priory foundations and possibly standing fabric were retained within the new residence. In 1580 part of the priory buildings, probably the kitchens or bakehouse became a ‘glasshouse’, manufacturing Venetian glass (Cater 1915, 215).

After the dissolution the church was left standing. In 1545 it was converted to warehousing and subsequently used as a naval storehouse (Hugo 1864, 15–17; Cater 1915, 228–229). In June 1550 the nave was granted by King Edward VI to the Dutch protestants as their preaching place. In July 1550 the King granted the rest of the church—the choir, the cross-aisles and chapels—to Sir William Powlett. In July 1551, by letters patent, the nave was granted to a congregation of Walloons led by Johnnes a Lasco, as their temple of Jesus (Hugo 1864, 15–17). In July 1553 after the accession of Queen Mary, the Dutch protestants were ordered to leave the country. In February 1560 the church was restored to the Dutch by Queen Elizabeth. In 1571 the cross-aisles of the church were being used for grain storage and the choir was a coal store (Hugo 1864, 16). By 1603 the steeple and choir were derelict and were demolished by the Marquis of Winchester—who refused to repair them despite public protest (Hugo 1864, 18). Stow noted in c.1600 that the church was entered via a south gate, which lead into the cemetery, while the actual church was entered by a west porch. He described it as a large church with a ‘fine spired steeple’ (Wheatley 1956, 159).

The Dutch church escaped destruction in the Great Fire of 1666, only to be gutted by fire in 1862, then restored in 1863–4. During the night of 15–16th October 1940 the church was destroyed by bombing. The present church was built during 1950–54.<sup>7</sup>

## ACKNOWLEDGEMENTS

Thanks to John Shepherd of the Early Department (Curator of the Grimes Archive), Museum of London, for his assistance and advice.

Some preliminary post-excavation work on Grimes's site WFG 50 was funded by English Heritage as part of the Grimes archive publication programme. The finds study for this report was undertaken by Jo Groves (Roman pottery) and Lyn Blackmore (Post-Roman pottery) of MoLAS. The artwork for this report was produced by Kikar Singh of MoLAS.

## NOTES

<sup>1</sup> Areas 5 and 6 are not shown on any plan and therefore not included on Fig 2.

<sup>2</sup> The course of this infilled stream channel was plotted in 1940 under Great Winchester Street, see Gould 1951, and later at Winchester House in 1963, see Marsden 1967, 208–209. More recently this channel has been examined locally at 22–25 Austin Friars, see Dunlop and Shotliff 1989.

<sup>3</sup> All the Romano-British dating evidence cited is taken from the pottery spot-dating by Jo Groves, see WFG50 archive for details.

<sup>4</sup> This area is described in a grant of 1550 as a cross-aisle, see Hugo 1864, 15. This archaic term normally means transepts, but in this case it must refer to internal divisions as the church had no transepts.

<sup>5</sup> The set of cloisters adjoining the church are described in a grant of 1546 as 'the principal cloister', see Cater 1915, 213–214.

<sup>6</sup> Powlett's house can be clearly seen on the London copperplate map of c.1559, see Fisher 1981. During the 1963 redevelopment of Winchester House (GM193) no evidence of either Powlett's house or the priory buildings were recorded, possibly due to the depth of the existing cellars, see Marsden 1967, 208 and Schofield 1994, 93. However, a recent evaluation of the site revealed some archaeological deposits remain *in situ*, see Askew 1995.

<sup>7</sup> The dates cited are taken from the 1986 editions of the church guide. The foundation stone of the new church was laid on 23th July 1950, but rebuilding appears not to have started until 1951.

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# SAXON AND MEDIEVAL PARISH CHURCHES IN THE CITY OF LONDON: A REVIEW

*John Schofield*

*With contributions by Ian Betts, Charlotte Harding, Richard Lea and Peter Marsden*

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## SUMMARY

*This paper reviews the evidence for the physical development, architectural style and internal furnishing and embellishment of the parish churches in the City of London from Saxon times to about 1550, highlighting the contribution of antiquarian observation and archaeological excavations from 1818 to the present, but drawing also on the renditions of churches in the eastern half of the City which are found on the surviving sheets of the copperplate map of c.1559. It is suggested that four developments in church architecture can be identified in London: (i) monuments to prominent citizens from the 1280s, and chapels in the 14th century, the latter especially attached to the chancel and sprouting from it; (ii) many towers, intended primarily as belfries, from about 1370; (iii) though the addition of north and south aisles to the nave began at some churches around 1230, the standard later-medieval form of nave and two aisles only appears around 1400; (iv) the erection of altar tombs around the east end in a particular form, from at least 1477 (and possibly earlier). The parish churches of the medieval City of London are finally reviewed as an archaeological resource, and research priorities for the future suggested. Detailed evidence from 51 medieval parish churches in the City and observations at 12 others is summarised in the Gazetteer which forms the second part of this paper.*

## INTRODUCTION

The medieval City of London contained over 100 parish churches (Fig 1); now, in the 1990s, there are 39. The eight churches with a significant amount of medieval fabric remaining were surveyed by the Royal Commission on Historical Monuments (RCHM) for their *City* volume in 1929 (Figs 2, 3). This paper sets out to place these precious fragments in a true setting, by charting the structural and decorative development of the London parish church from Saxon times to about 1550.

The information assembled in this survey, largely from archaeological investigation and observation since 1818, provides a fragmented but often detailed picture of religious observance and church building in the City of London. From this picture emerge several themes which both summarise recent advances in knowledge and point the way to future research. These concern origins, churches and topographical development of towns, building histories and architecture (including the role of individual and corporate patronage), what the archaeological remains and

associated documentary research can tell us about medieval liturgy and other uses of space within the church, and the interrelationship of the church with its local urban surroundings.

The 108 parish churches considered in this paper are numbered and listed alphabetically in Fig 1. This table serves to identify churches throughout the study. Numbers in bold in the text refer to further information in the Gazetteer below, which is ordered by the same numbering series. Only those churches for which we have a substantial body of evidence (archaeological, documentary or graphic), however, are described in the Gazetteer. This describes 51 churches where a structural outline, from all kinds of evidence, is attempted; and a further 12 instances where an isolated observation has been made in the past, but which was not considered sufficient to merit a full Gazetteer entry.

## THE AVAILABLE SOURCES OF EVIDENCE

### Physical survival

The *Historic Towns Atlas* volume for London (1989) lists 113 separate churches, though not all were functioning as full parish churches throughout the medieval period. The present study lists 108 churches, of which six had disappeared by 1550. Two were removed during the 12th and 13th centuries through the creation of precincts for religious houses (Holy Trinity Aldgate and St Olave Broad Street), and a third disappeared by the 14th century (St Michael Aldgate); a fourth was made redundant in the 15th century (St Augustine Papey). Between 1540 and the Great Fire in 1666 three were abolished at the Reformation (St Audoen, St Mary Axe and St Nicholas Shambles), a fourth (St Alphage) was moved into an adjacent hospital, and six new parishes were created as a result of the dissolution of the religious houses. On the eve of the Great Fire there were once again 108 parishes and parish churches in the City (Keene & Harding 1985, xviii–xix).<sup>1</sup>

Eighty-seven churches were destroyed or badly damaged in the Fire. Only eight of the survivors were still standing in pre-Fire form to be recorded by the Royal Commission on Historical Monuments in the early 20th century (RCHM 1929). Of these, in turn, three were badly bombed in the Second World War; though all three: All Hallows Barking (1), St Giles

Cripplegate (42), St Olave Hart Street (95) stand today in rebuilt form and contain some original medieval fabric and fittings.

Up to 1992, the City possessed five parish churches with a significant amount of pre-Fire fabric extant; and of these, St Bartholomew Smithfield was a priory church converted into a parish church at the Reformation, and St Katherine Cree (50) was rebuilt in 1628–31. Thus there were only three parish churches with predominantly pre-Fire fabric standing: St Helen Bishopsgate (44), which was also part of a Benedictine nunnery, St Ethelburga Bishopsgate (38) and St Andrew Undershaft (16), all in the same small area in the north-east of the City, between Bishopsgate and Leadenhall Street, where the Great Fire did not reach.

In April 1992 a terrorist bomb exploded in St Mary Axe street, outside the east end of St Helen Bishopsgate. It badly damaged the church and, to a lesser extent, the nearby St Andrew Undershaft. The windows of both churches were blown in or damaged, and several cannot be restored. A second bomb in April 1993 exploded outside the west end of St Ethelburga, demolishing much of the church (Fig 65 below). After a clearing exercise by the Museum of London in 1993–4, which has conserved all historic fragments, the future of the church is still under discussion at the time of writing.

Pieces of pre-Fire fabric are also to be found in later churches. As noted by an observer of the demolition of St Bartholomew by the Exchange in 1840 and suggested on a wider scale by Philip Norman in 1902 (Norman 1902), the 52 churches rebuilt by Wren and his associates after the Great Fire often contain substantial portions of pre-Fire fabric. A notable case is the 11th-century crypt below St Mary le Bow (69); but there are indications that Wren often incorporated above-ground fabric, especially towers, into his new designs. In many cases the medieval tower, being largely of stone or brick probably did not burn as fiercely as the rest of the church, and was retained and rebuilt; this ensured the survival of a 16th-century tower arch at St Mary Aldermary (56) and of a fragment of the west door jamb at St Margaret Lothbury (66), as well as substantial parts of the pre-Fire tower at several other churches. Parts of the body of the church which had survived the Fire were also sometimes retained, even if modified: the north wall of St Mary at Hill (71), which revealed its Tudor windows in 1984, is an example. Secondly, in

several cases Wren's preferred design is of three aisles with the chancel projecting slightly further east, reminiscent of the medieval form. It seems probable that, except for distinctive new shapes such as the decagon at St Benet Fink, Wren often modelled his new church on the fullest outline of the pre-Fire church, only occasionally sacrificing parts to the needs of street-widening (as at St Magnus, where a protruding pre-Fire north aisle is shown on Leake's plan and Hollar's derivative map immediately after the Fire).

The plans of the eight surviving medieval churches, drawn for the Royal Commission on Historical Monuments in 1929, are given on Figs 2–3 to show the variety in shapes and sizes: All Hallows Barking (1), St Andrew Undershaft (16), St Ethelburga Bishopsgate (38), St Giles Cripplegate (42) on Figure 2; and St Helen Bishopsgate (44), St Mary le Bow (69), St Olave Hart Street (95) and St Sepulchre (103) on Figure 3.

### Antiquarian recording and archaeological excavation

The sites of the churches where recording work has taken place are shown on Figure 4.

Although D Laing recorded remains of St Dunstan in the East (35) during rebuilding in 1818, and an anonymous correspondent briefly described roadworks in Fenchurch Street which uncovered fragments of St Gabriel Fenchurch (40) in 1834, modern archaeological observation of City churches really begins with the belated reaction to the removal of a number of churches in the 19th century, after the Union of Benefices Act of 1860; 'I deplore from my heart this vandalism', wrote Philip Norman, Treasurer of the Society of Antiquaries, in his report on one of the victims, St Michael Bassishaw (Norman 1902). Under the Act, 22 churches, 16 of which had been rebuilt by Wren, were removed by 1888. Antiquaries observed some of the destruction at St Dionis Backchurch (34, 1878), St Olave Jewry (96, 1888–9), St Michael Bassishaw (81, 1896) and St Michael Wood Street (87, 1897). The recording at St Dionis and St Michael Bassishaw was reviewed by Cohen (1995).

The east wall of All Hallows Lombard Street (6) partly collapsed in 1934, and the church was demolished in 1939; the site was monitored by representatives of the London and Middlesex Archaeological Society, and by Adrian Oswald

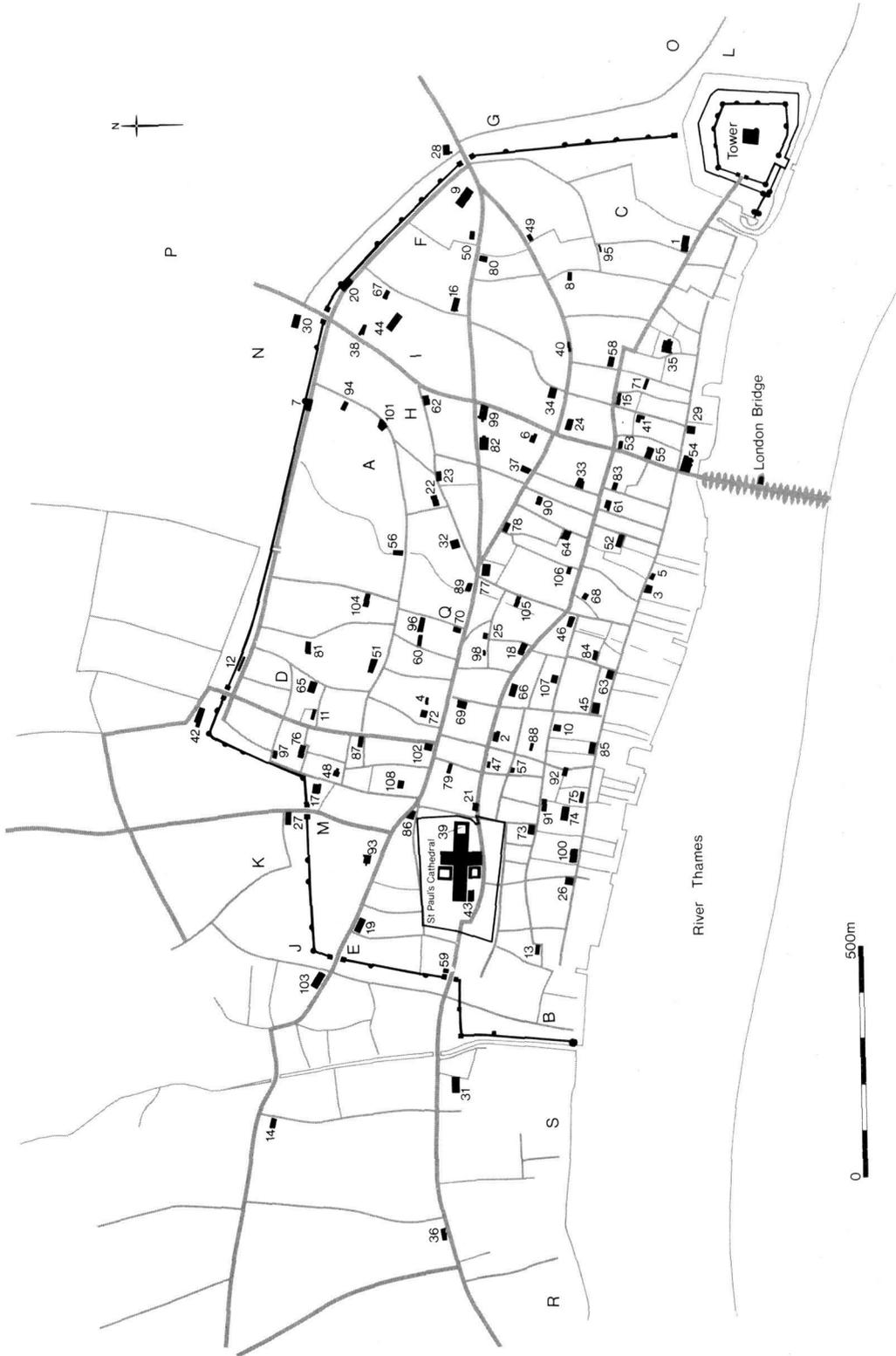
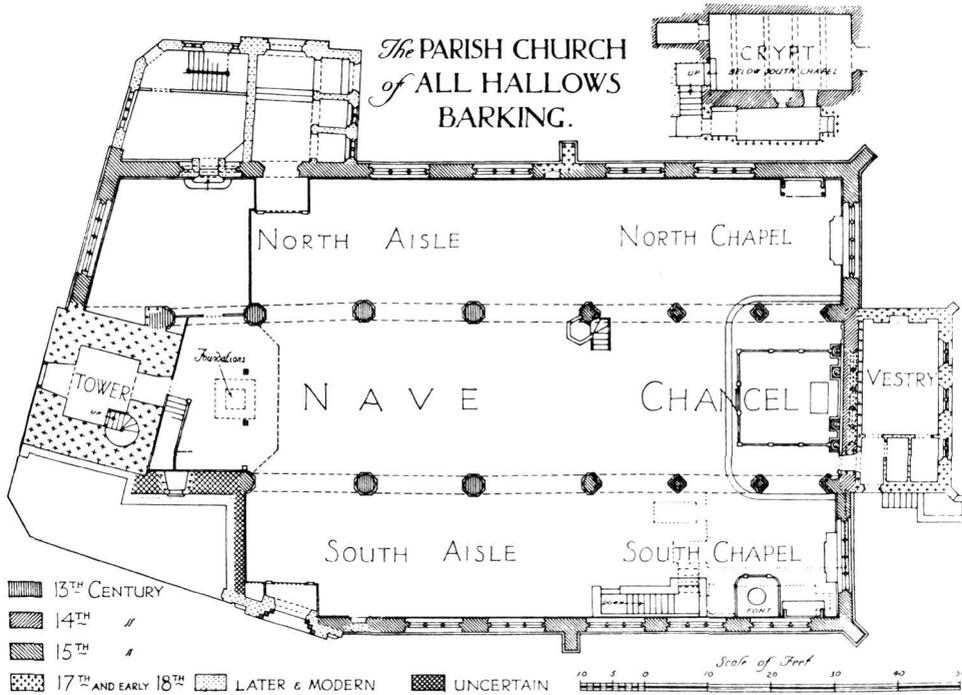
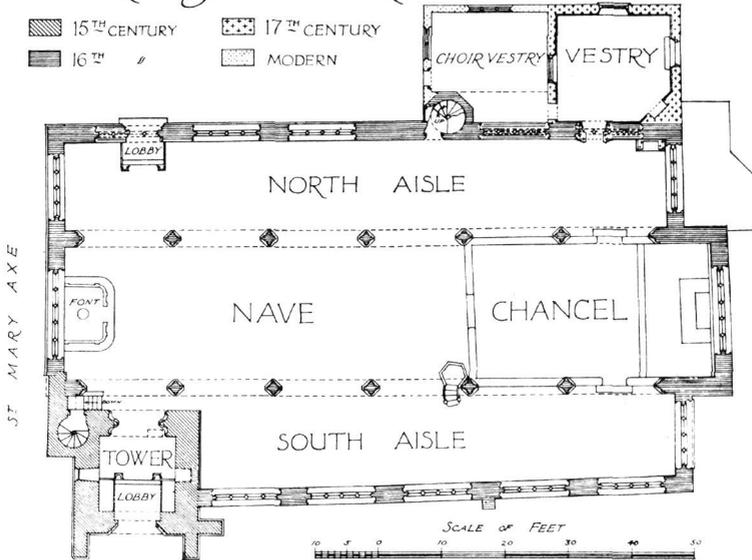


Fig. 1. *The medieval City of London, showing the locations of the 108 churches considered in this paper. The street plan of this map is based on artwork kindly supplied by the Corporation of London*

KEY: **1** All Hallows Barking **2** All Hallows Bread Street (Watling Street) **3** All Hallows Honey Lane **5** All Hallows the Less **6** All Hallows Lombard Street (Gracechurch Street) **7** All Hallows London Wall **8** All Hallows Staining **9** Holy Trinity Aldgate (subsumed into site of priory 1108) **10** Holy Trinity the Less **11** St Alban Wood Street **12** St Alphage **13** St Andrew Castle Baynard **14** St Andrew Holborn **15** St Andrew Hubbard **16** St Andrew Undershaf **17** St Anne and St Agnes **18** St Antholin **19** St Audoen **20** St Augustine Papey **21** St Augustine Watling Street (Old Change) **22** St Bartholomew Exchange **23** St Benet Fink **24** St Benet Gracechurch **25** St Benet Sherehog **26** St Benet Paul's Wharf **27** St Botolph Aldersgate **28** St Botolph Aldgate **29** St Botolph Billingsgate **30** St Botolph Bishopsgate **31** St Bride Fleet Street **32** St Christopher le Stocks **33** St Clement Eastcheap **34** St Dionis Backchurch **35** St Dunstan in the East **36** St Dunstan in the West **37** St Edmund the King **38** St Ethelburga Bishopsgate **39** St Faith **40** St Gabriel Fenchurch Street **41** St George Botolph Lane **42** St Giles Cripplegate **43** St Gregory **44** St Helen Bishopsgate **45** St James Garlickhithe **46** St John the Baptist (Cloak Lane, Walbrook) **47** St John the Evangelist Watling Street (until the mid 14th century, known as St Werbourga) **48** St John Zachary **49** St Katherine Coleman **50** St Katherine Cree **51** St Lawrence Jewry **52** St Lawrence Pountney **53** St Leonard Eastcheap **54** St Magnus **55** St Margaret Fish Street Hill **56** St Margaret Lothbury **57** St Margaret Moses **58** St Margaret Pattens **59** St Martin Ludgate **60** St Martin Pomary **61** St Martin Orgar **62** St Martin Outwich **63** St Martin Vintry **64** St Mary Abchurch **65** St Mary Aldermanbury **66** St Mary Aldermary **67** St Mary Axe **68** St Mary Bothaw **69** St Mary le Bow **70** St Mary Colechurch **71** St Mary at Hill **72** St Mary Magdalen Milk Street **73** St Mary Magdalen Old Fish Street **74** St Mary Mounthaw **75** St Mary Somerset **76** St Mary Staining **77** St Mary le Stocks (Woolchurch) **78** St Mary Woolnoth **79** St Matthew Friday Street **80** St Michael Aldgate **81** St Michael Bassishaw **82** St Michael Cornhill **83** St Michael Crooked Lane **84** St Michael Paternoster Royal **85** St Michael Queenhithe **86** St Michael le Querne **87** St Michael Wood Street (Huggin Lane) **88** St Mildred Bread Street **89** St Mildred Poultry **90** St Nicholas Acon **91** St Nicholas Cole Abbey **92** St Nicholas Olave **93** St Nicholas Shambles **94** St Olave Broad Street (subsumed into site of Austin Friars) **95** St Olave Hart Street **96** St Olave Jewry **97** St Olave Silver Street **98** St Pancras **99** St Peter Cornhill **100** St Peter the Less (Paul's Wharf) **101** St Peter le Poor **102** St Peter Westcheap (Wood Street) **103** St Sepulchre without Newgate **104** St Stephen Coleman Street **105** St Stephen Walbrook **106** St Swithun London Stone **107** St Thomas Apostle **108** St Vedast Foster Lane

*Precincts:* **A** Austin Friars **B** Blackfriars **C** Crutched Friars **D** Elsing Spital **E** Greyfriars **F** Holy Trinity Priory Aldgate **G** Minoreesses **H** St Anthony's Hospital **I** St Helen Bishopgate **J** St Bartholomew's Priory **K** St Bartholomew's Hospital **L** St Katharine's Hospital **M** St Martin le Grand **N** St Mary Bethlem Hospital **O** St Mary Graeces **P** St Mary Spital **Q** St Thomas Acon **R** Temple (Inner and New) **S** Whitefriars

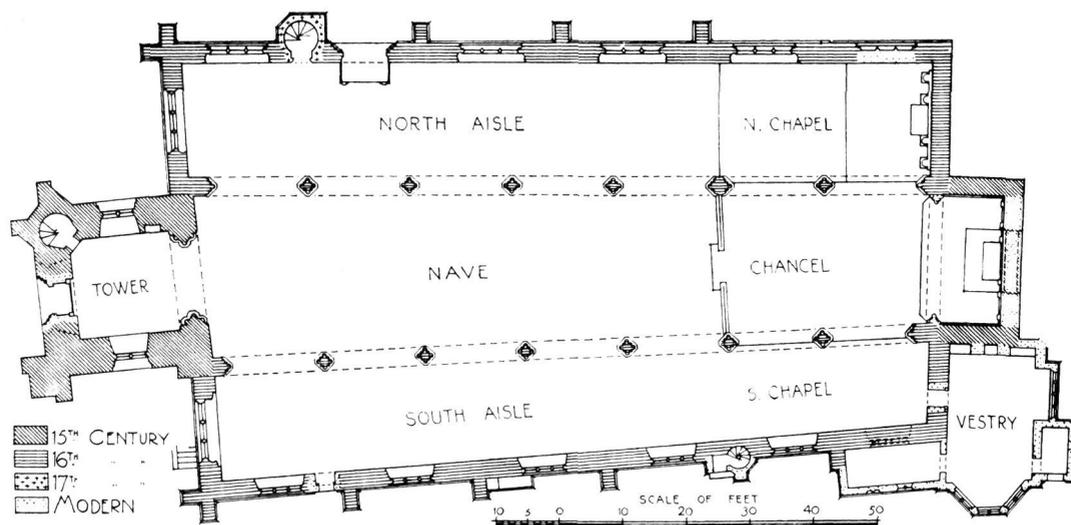
### CHURCH of ST ANDREW, UNDERSHAFT. E.C.



of the Guildhall Museum, the latter with funds from the Society of Antiquaries. After the Second World War, Professor W F Grimes excavated four churches (St Alban Wood St (11), St Bride Fleet Street (31), St Mary Aldermanbury (65) and St Swithun (106)); he also excavated through

the graveyard of All Hallows Honey Lane (4). Ivor Noel Hume, P R V Marsden and other Guildhall staff investigated the sites of eight churches (St Augustine Watling Street (21), St John the Evangelist Watling Street (47), St Martin Vintry (63), St Mary Axe (67), St Michael

## CHURCH OF ST GILES CRIPPLEGATE



## CHURCH of ST ETHELBURGA.

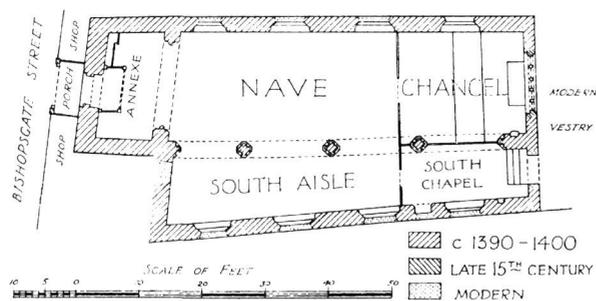


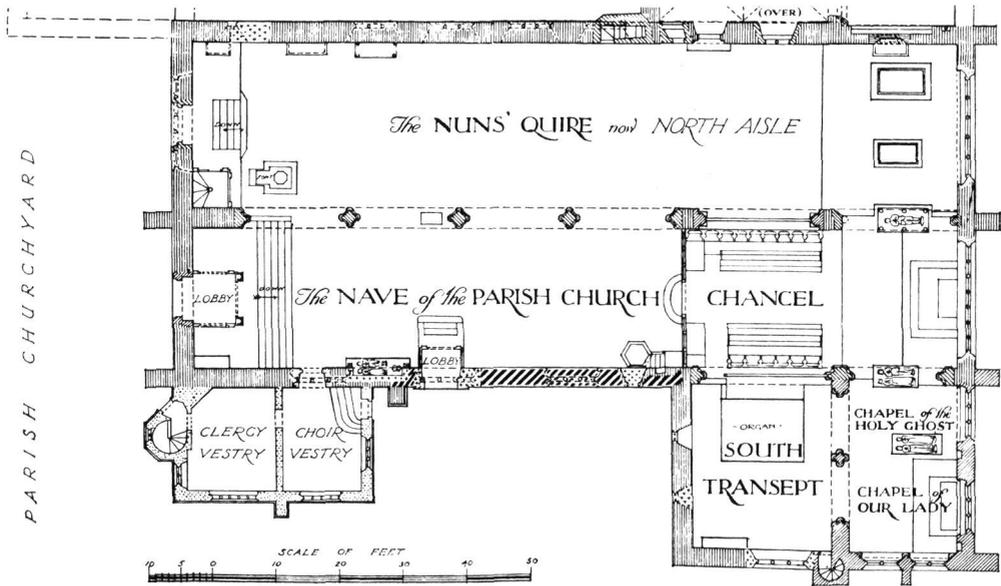
Fig 2. Plans in 1929 of St Andrew Undershaft (16), All Hallows Barking (1), St Giles Cripplegate (42) St Ethelburga within Bishopsgate (38) (1929 RCHM)

Bassishaw (81), St Nicholas Acon (90), St Pancras (98) and St Stephen Coleman Street (104)). In the years 1974-91 the Department of Urban Archaeology of the Museum of London (until 1976, of the Guildhall Museum) investigated or conducted salvage work at a further 11 church sites: St Alphage (12), St Botolph Aldgate (28), St Botolph Billingsgate (29), St Dionis Backchurch (34), St Ethelburga Bishopsgate (38), St Helen Bishopsgate (44), St Leonard Eastcheap (53; but nothing was found to remain), St Martin Orgar (61), St Mary at Hill (71), St Mildred Bread Street (88), St Nicholas Shambles (93), and St Olave Jewry (96). At the time of writing (1995) the Museum of London Archaeology Service has recently finished excavation of the site of St Benet Sherehog (25, Fig 8), as part of the investigation of the site at 1, Poultry; this site will

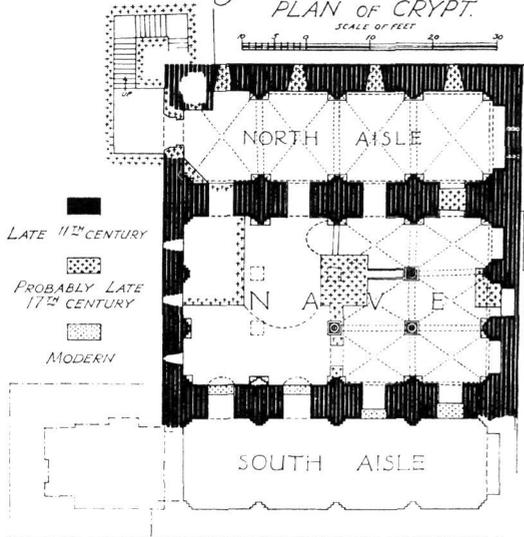
be reported in due course. In addition there are records of small observations at other church sites in Guildhall Museum records, and these have been summarised in the Gazetteer: notably the sites of St Antholin (18), St Benet Gracechurch Street (24), St Lawrence Jewry (51), St Margaret Pattens (58) and St Michael le Querne (86 though the observed walls were possibly of the Little Conduit). The archives of all these excavations are in the Museum of London.

## Plans and other pictorial sources

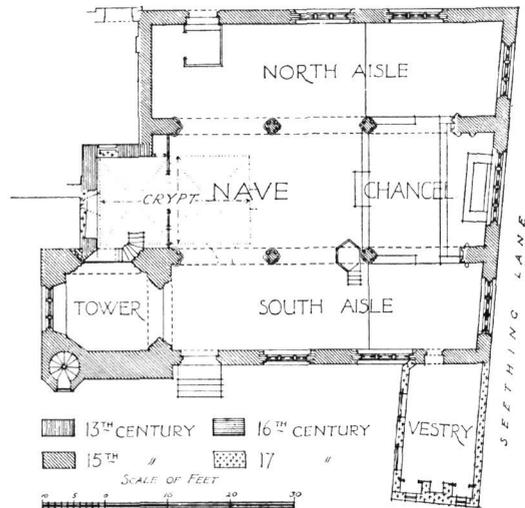
Two pre-Fire drawings of individual City churches are known to the writer: a west view of the tower of St Michael Cornhill apparently before its demolition in 1421 (though the drawing



The CHURCH of ST MARY Le BOW.  
PLAN of CRYPT.



The PARISH CHURCH of ST OLAVE  
HART ST



is probably of the late 16th century) (Fig 5), and the south elevation of St Michael-le-Querne (86) by Ralph Treswell in 1585 (Schofield 1987, 57 and pl 1).

The pre-Fire City appears in map-views and panoramas from the mid 16th century, nearly all drawn from the south. The earliest is Wyngaerde's 'Long View' of c.1540 (Fig 6) in the Sutherland Collection at the Ashmolean Museum, Oxford (reproduced as London Topographical Society

Publication 1 in 1881). A virtually contemporary panorama, now also in the Ashmolean, and sometimes groundlessly attributed to Wyngaerde, has no generally accepted name; it is here called the low-level panorama (Fig 7). It shows the waterfront from the Steelyard to the Bridge, and all the waterfront churches in that district. The drawing is not dated, but it shows what must be the waterside aspect of the Coldharbour mansion in Thames Street before its rebuilding probably

## The CHURCH of *ST* SEPULCHRE IN THE BAILEY.

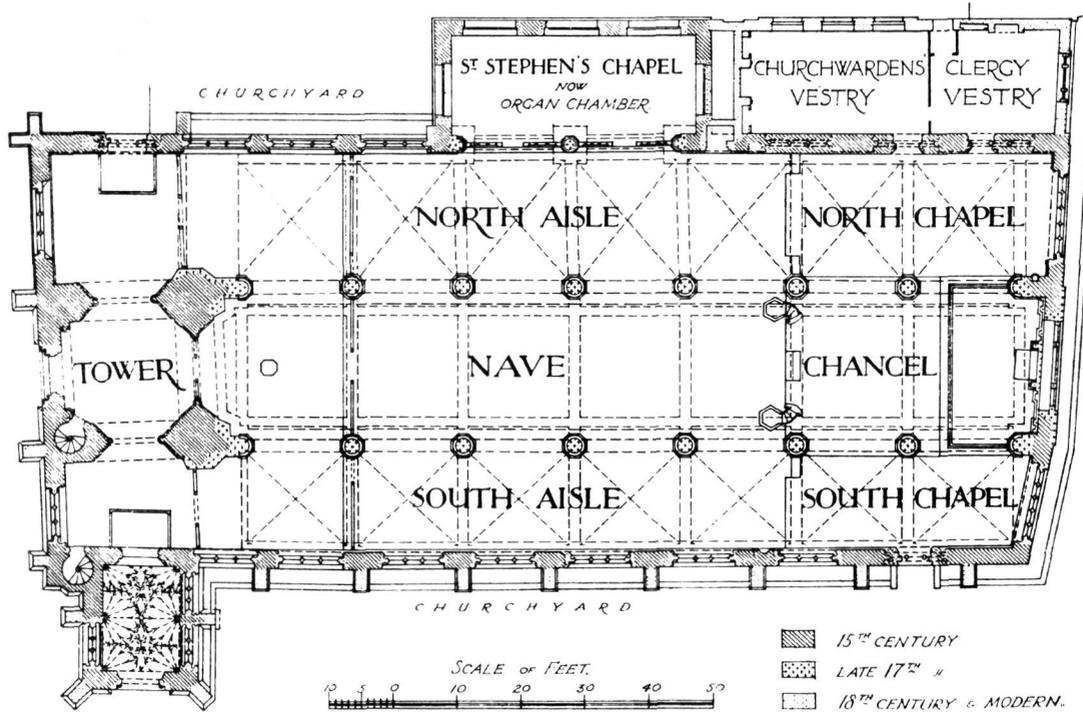


Fig 3. Plans in 1929 of *St Helen Bishopsgate* (44), *St Mary le Bow* (69), *St Olave Hart Street* (95) and *St Sepulchre* (103) (RCHM 1929)

in 1553–60 (Harding 1980, 22); a date of c.1550 will be used here, although it may be earlier.

The copperplate map of c.1559 comprises two plates which cover the eastern half of the City. The 'Agas' woodcut is a crude copy of the copperplate, and covers the whole City (Prockter & Taylor 1979). Deduction about the form of churches from the woodcut alone is however of doubtful validity and will not be employed here.

The circumstances of discovery of the upper copperplate, and its relation to the lower section, are given by Holmes (1966). The London Museum acquired the upper plate which had been reused on its other side for a painting of the Tower of Babel by the 16th-century Flemish painter Martin van Valckenborgh. The plate covered the northern part of the City between Aldermanbury and Holy Trinity Priory Aldgate, together with Moorfields and Spitalfields to the north. It was found to join with a second plate, then in private possession but since acquired by the Museum of London, which showed the area to the south: the City from St Mary le Bow to

Mark Lane and the waterfront. By comparing the map with documentary sources, especially John Stow's *Survey*, Holmes was able to show that the copperplate map was often accurate. Details such as notable private houses, conduits, gardens and other topographical features mentioned by Stow could be seen on the map.

The copperplate gives only information about churches in the eastern half of the City. The 65 churches which should be shown on the map (with the addition, to avoid any misunderstanding, of the hospital of St Anthony in Threadneedle Street, which resembled a church), are given in Figs 8–10. Five churches within the area of the map are not distinctively shown—St Leonard Eastcheap (53), St Mary Colechurch, St Mary at Hill (71), St Nicholas Acon (90), and St Stephen Coleman Street (104).

The next major pictorial source is the panorama of Wenceslaus Hollar, drawn in the early 1640s and published in 1647 (Figs 11–13). This must be counted the most carefully drawn of the pre-Fire panoramas, and some of Hollar's

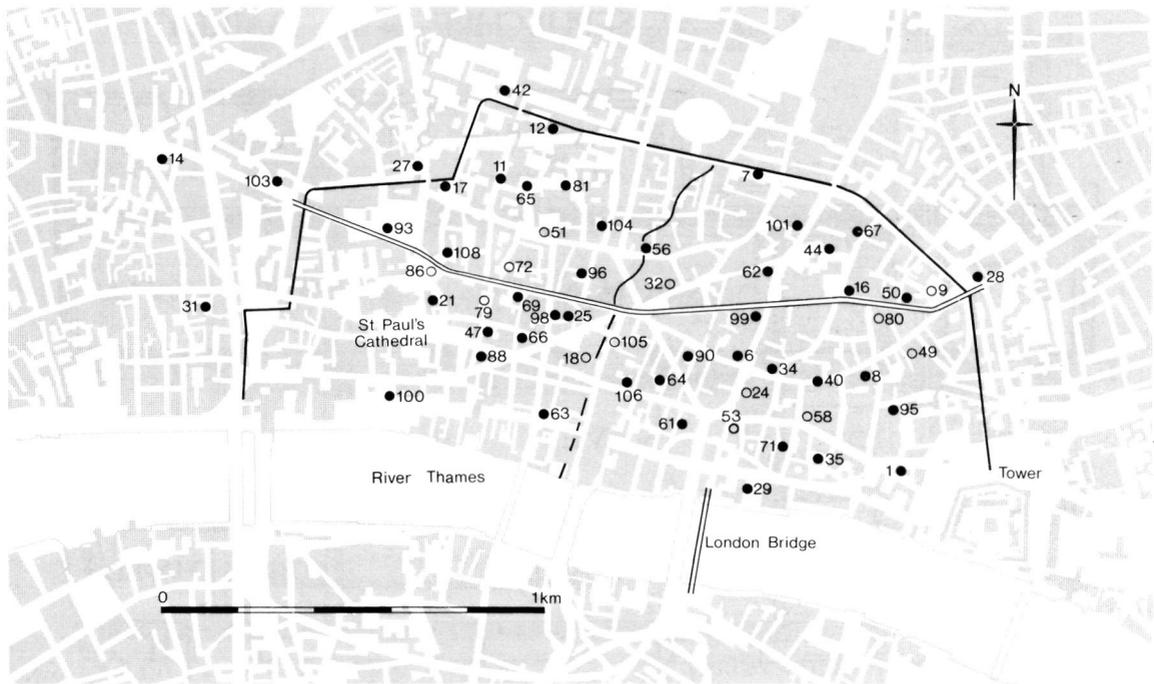


Fig 4. The modern City of London, showing sites of Saxon and medieval parish churches which have been either excavated (black circles) or observed (open circles) since the opening of the 19th century, with the numbers allocated in Fig 1

original sketches survive; though it is also noticeable that some of the details have been changed in the process of engraving, which was carried out in Antwerp some years after the drawings were made on the spot.

Two pictorial sources stem from the immediate post-Fire days and months. First, John Leake drew the outlines of the sites of churches within the fire-damaged area for his map, which has survived in manuscript (BL, Add MS 5415) and as published versions (for instance, as engraved by Hollar in 1667). This map often shows the extent of the church building within the churchyard. Secondly, surveys of destroyed churches made immediately after the Fire in 1666, have been published for five churches (Summerson 1970).<sup>2</sup> Some of these show interior details such as stairs and pillars.

Finally, engravings of individual churches which survived the Great Fire because they lay outside its area of destruction are also useful; in some cases the churches were demolished or substantially rebuilt before the RCHM survey in 1929. A notable series on City churches by West and Toms was published in 1736–9. Engravings of churches and other historic buildings through-

out the City have been catalogued by Adams (1983).

### Other documentary sources

Several lists of City churches, with notes on their characteristics, were drawn up for various purposes in the period 1100–1548, and they provide points for comparisons among groups of churches.

The two earliest lists are of churches in the possession of two powerful religious institutions with influence in London: Christ Church, Canterbury, and St Paul's Cathedral. A list of around 1100 mentions 10 churches belonging to Christ Church: churches **6, 34, 35, 47, 66, 69, 98** and **108** in the Gazetteer below (Kissan 1940). About 1181 the Dean and Chapter of St Paul's made a visitation of their City churches, which numbered 20, and detailed inventories of the books, vestments and ornaments were made (Sparrow Simpson 1897, 283–300).<sup>3</sup> This group included churches **29, 42, 44, 61** and **96** in the Gazetteer. By 1300, nearly all the 108 London churches were in place. Surveys of churches were

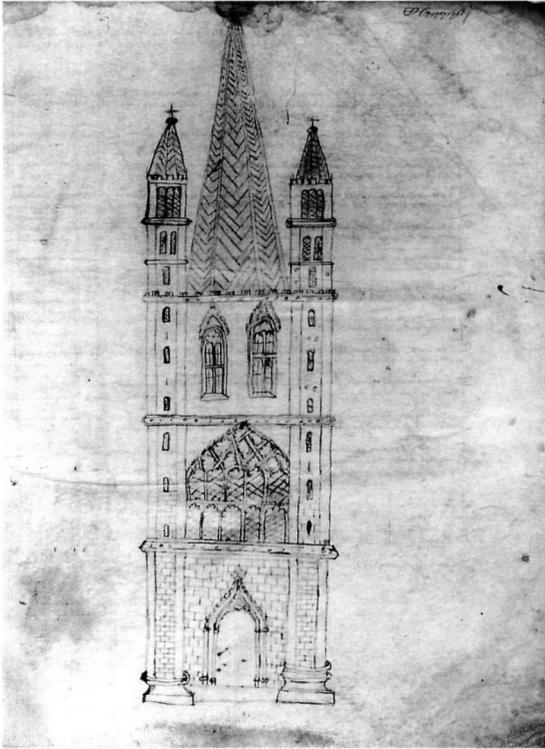


Fig 5. *St Michael Cornhill (82)*: drawing of 1421 (probably copied in this form in the late 16th century) in the churchwardens' accounts (GL, MS 4070/1) showing the tower

undertaken for the purposes of taxation of the clergy and on ecclesiastical property supply lists in 1379 and 1381. Churches can also be glimpsed in the 1548 chantry certificate for London and Middlesex, which gives details of the income for each parish at that date, the ecclesiastical personnel, and an estimate of the number of communicants (McHardy 1977; Kitching 1980). From this latter survey, in particular, a rough idea of rich and poor parishes, and of crowded or sparsely-populated parishes, may be gained. At the end of the 16th century, John Stow provides a detailed guide to the interiors of the churches then existing (*Survey of London* (cited here as 'Stow'), ed Kingsford 1971).

It seems likely that the principal burden for the repair and building of new churches lay generally with parishioners by the 13th century. Twenty-one City churches have churchwardens' accounts surviving for the period prior to 1548 (Keene & Harding 1985, 113–42) and the accounts for nine churches have been sampled for this study.<sup>4</sup> Surviving vestry minutes almost

all start after the Reformation (and mostly in the 17th century), and are therefore of no direct use for the building history of churches prior to 1548.<sup>5</sup>

Printed calendars of the major collections of wills of London citizens have also been a major source of evidence, and it is certain that further information could be gleaned from study of the manuscripts themselves, especially the uncalendared series.

## SAXON CHURCHES

The range of origins of parish churches and the chronology of the earliest foundations is the first thing to review.

St Paul's cathedral was established in 604, presumably in some as yet unknown relationship to the fragmentary surviving Roman street system. It lay near the Roman gate of Ludgate, the through road which led west along what is now Fleet Street and the Strand, where a settlement probably of mercantile character lay in the 7th and 8th centuries (Vince 1984; 1990; 1991). This settlement may have extended north to and beyond a second major Roman road beneath modern Holborn; on the south side of this highway, St Andrew Holborn (14) was recorded as an old timber church in 959. But in general such *wic* settlements did not have many churches; at contemporary York, for instance, only one or possibly two (St Andrew Fishergate and All Saints Fishergate). Presumably the London seen as an asset by Offa in the 8th century was the *wic*, a gateway for the landlocked Mercian kingdom to the Continent; though Offa's palace, according to a 13th-century tradition, lay in what is now known to be the Cripplegate fort, next to St Alban's church (11), within the City walls. It seems probable that Offa wished to transfer the archbishopric of Canterbury to London (*ie* to St Paul's), as Gregory had originally wished, perhaps because the Mercians were at the time not in control of Kent. The pope refused, and in any case the restoration of Mercian authority in Kent made such a move unnecessary (Stenton 1971, 225–6). This does however show that London was considered to be a viable national centre of religious organisation in the 8th century.

Alfred repossessed the City, after its occupation by Viking invaders, in 886. His associates included prominent churchmen, who were evidently instrumental in urban redevelopment

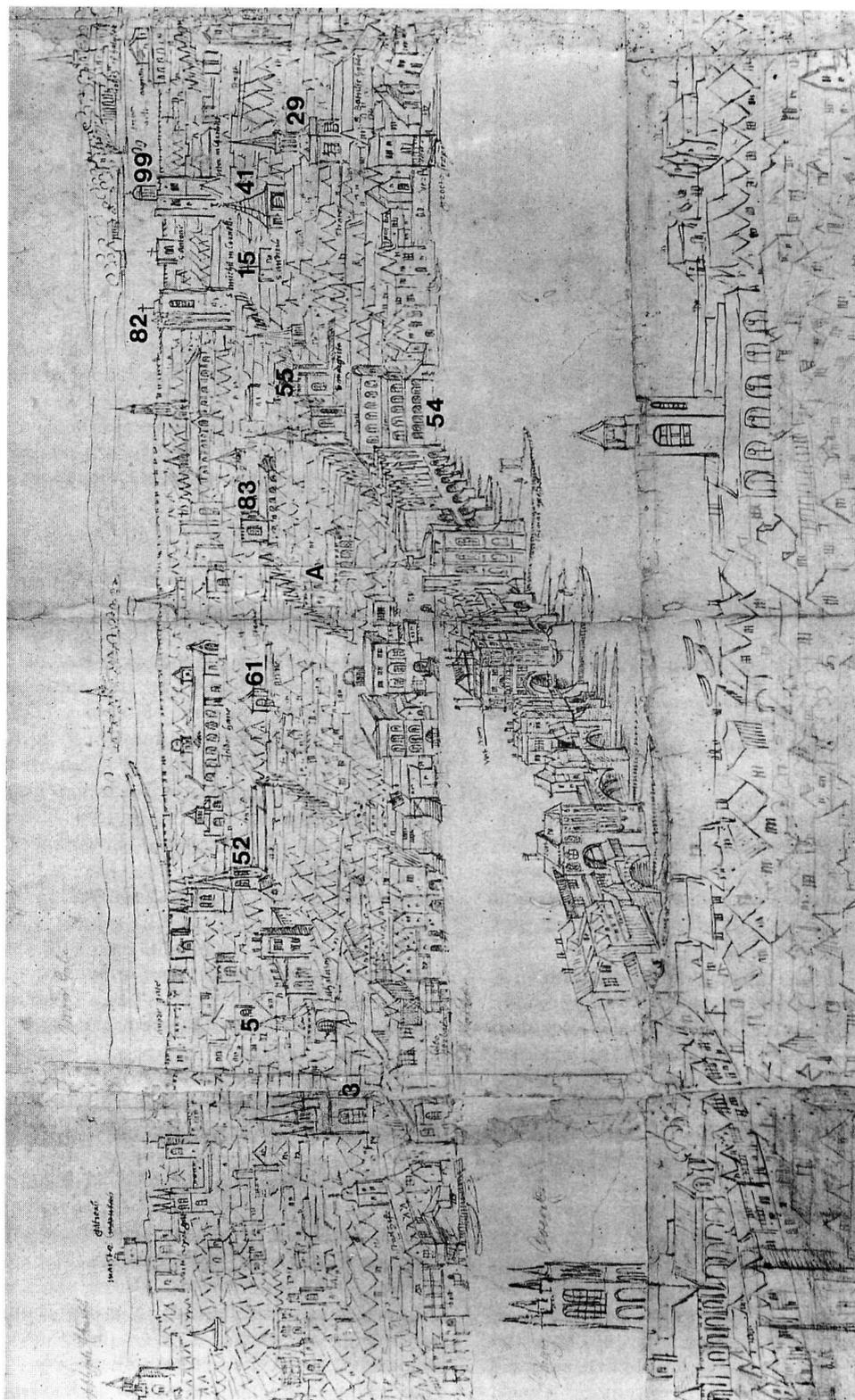


Fig 6. Part of the panorama by Wyngaerde, c.1540, showing the waterfront around the bridge and churches to the north. The superimposed numbers are those churches which can be identified with certainty, using the numbers in Fig 1. The church marked A is an error by Wyngaerde, since no church is known in this place (Astmolean Museum Oxford)

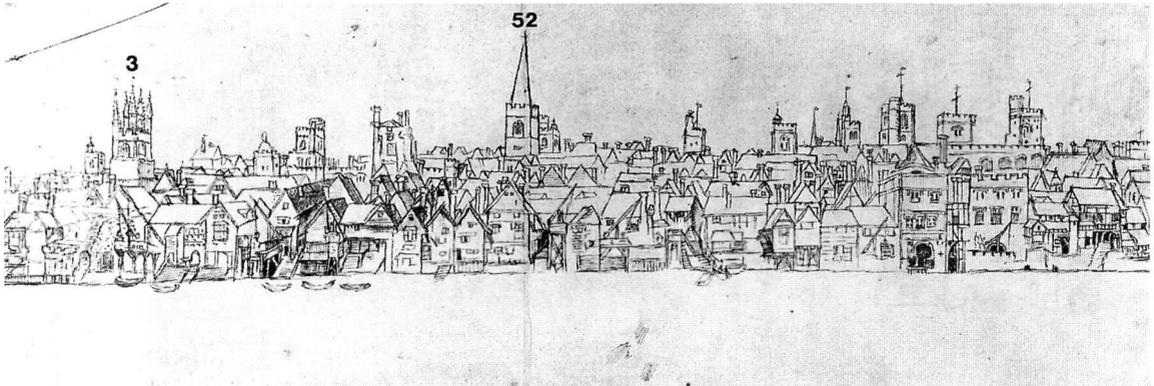


Fig 7. The low-level panorama (? c.1550) with churches 3 and 52 identified. Although many other churches around the bridgehead are shown, it is impossible to be certain which they are (Ashmolean Museum Oxford)

which included the promotion of trade and laying out of streets; but no establishment of churches is mentioned in the scanty records of the time. A possible parallel is provided by Winchester: the land in the new Alfredian borough may have been parcelled out to individual lay and ecclesiastical lords. These would sometimes have had a private church, whose advowson may later be found belonging to a great lord or owner of the rents (Biddle 1976, 452).

The churches which multiplied in London between the 10th century (or perhaps its last third) and the 12th century probably originated in at least three ways: as a private chapel on a prominent tenement, as neighbourhood churches or having been established (or at least maintained) by a group of traders.

The majority of churches were presumably privately-owned (*Eigenkirche*), as were all English churches mentioned in Domesday Book and similar contemporary churches in France and Germany. The most usual mode of origin for parish churches must have been as a private chapel on a prominent tenement, as an adjunct to a notable residence; a pattern found also in other pre-Conquest towns such as Lincoln, Winchester, York, and probably Stamford. In many cases the siting of a medieval church, set back from the street frontage, suggests such an antecedent. In contrast, other churches occupied more prominent positions, for instance at street-corners, or in the middle of streets. In 1244 the City reported that the churches of All Hallows Fenchurch (40 *ie* St Gabriel), St Magnus the Martyr, St Audoen, St Michael le Querne (86), St Peter the Less (100, Paul's Wharf) and St

Alphage (12) were situated on the king's highway, and the churches of All Hallows London Wall (7, Fig 8) and St Augustine (Papey, Fig 8) were on the City wall (*Eyre* 1244, 276). The outline history of St Alphage has recently been elucidated (Fig 14); it was certainly on the City wall, rather than in the king's highway, which was presumably a reference to the (?Alfredian) intramural way at the foot of the Roman defensive bank behind the wall.

Two examples of the third kind of origin, that of a church associated with a particular social (often trading) group, are St Martin Vintry (63), called *baermanne cyrce* (church of the porters) in the 11th century, and All Hallows the Great, called *semanes cyrce* in 1106, both on the waterfront. Here, however, the cognomen may have as much to do with use by a group as with the church's origin. All Hallows was one of four churches south of Thames Street and in the area of reclaimed land. Because a church would attract to it traffic, access ways and secular buildings, these four churches (from west to east, All Hallows the Great; All Hallows the Less; St Magnus; St Botolph Billingsgate (29)) probably signify centres of activity and reclamation into the river during the late 10th, the 11th and 12th centuries (Fig 15). These four churches lay over and on the riverwards side of the ruins of the 3rd and 4th-century Roman riverside wall, which became totally obscured (as seen at New Fresh Wharf, immediately downstream of the bridge) only in the 11th century. West of the mouth of the Walbrook stream, there were four other churches along Thames Street, including St Martin Vintry, but they were on the inland side

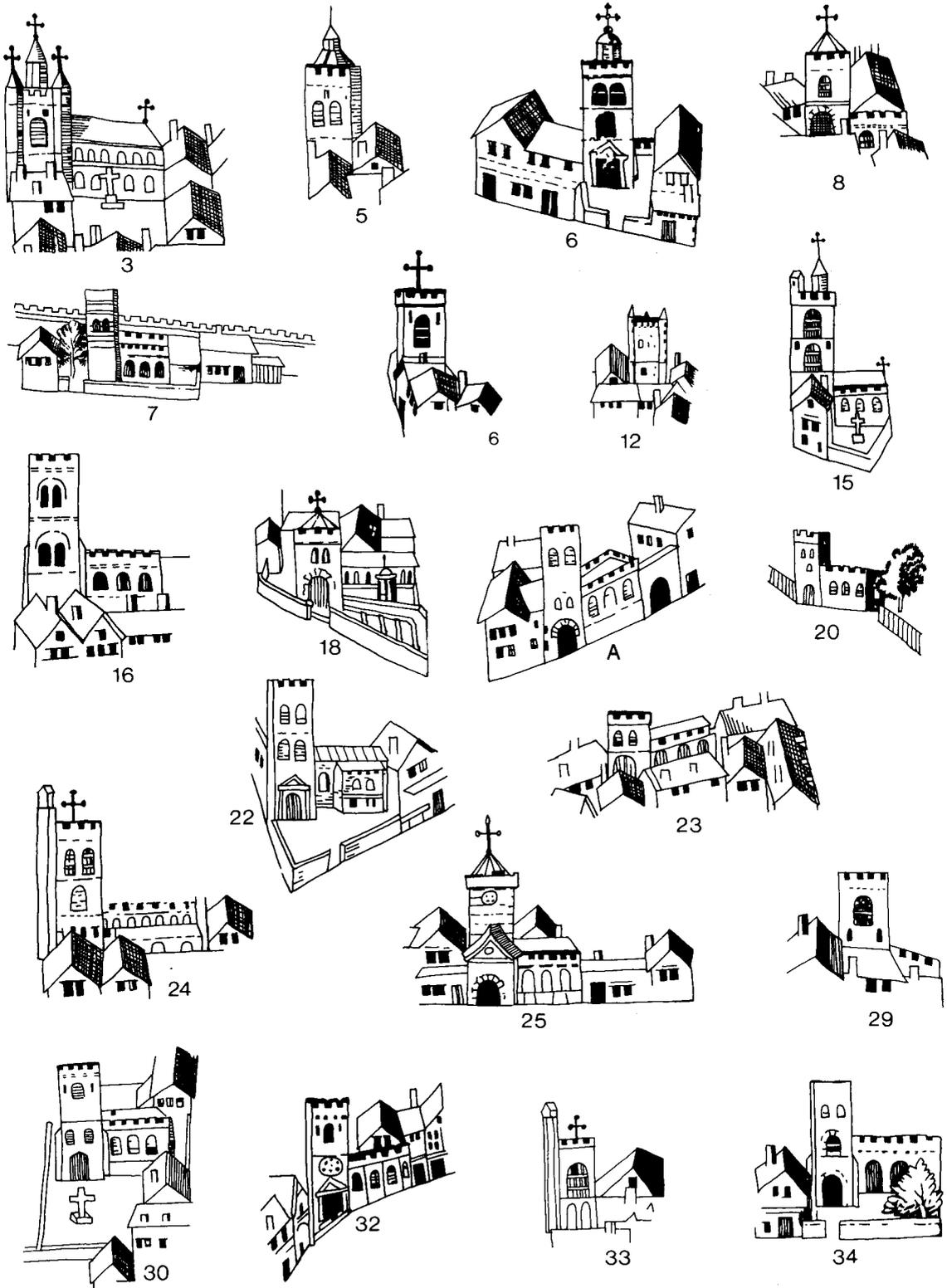


Fig 8. Churches 3-34: those which are shown on the copperplate map (c.1559). A=Hospital of St Anthony Threadneedle Street

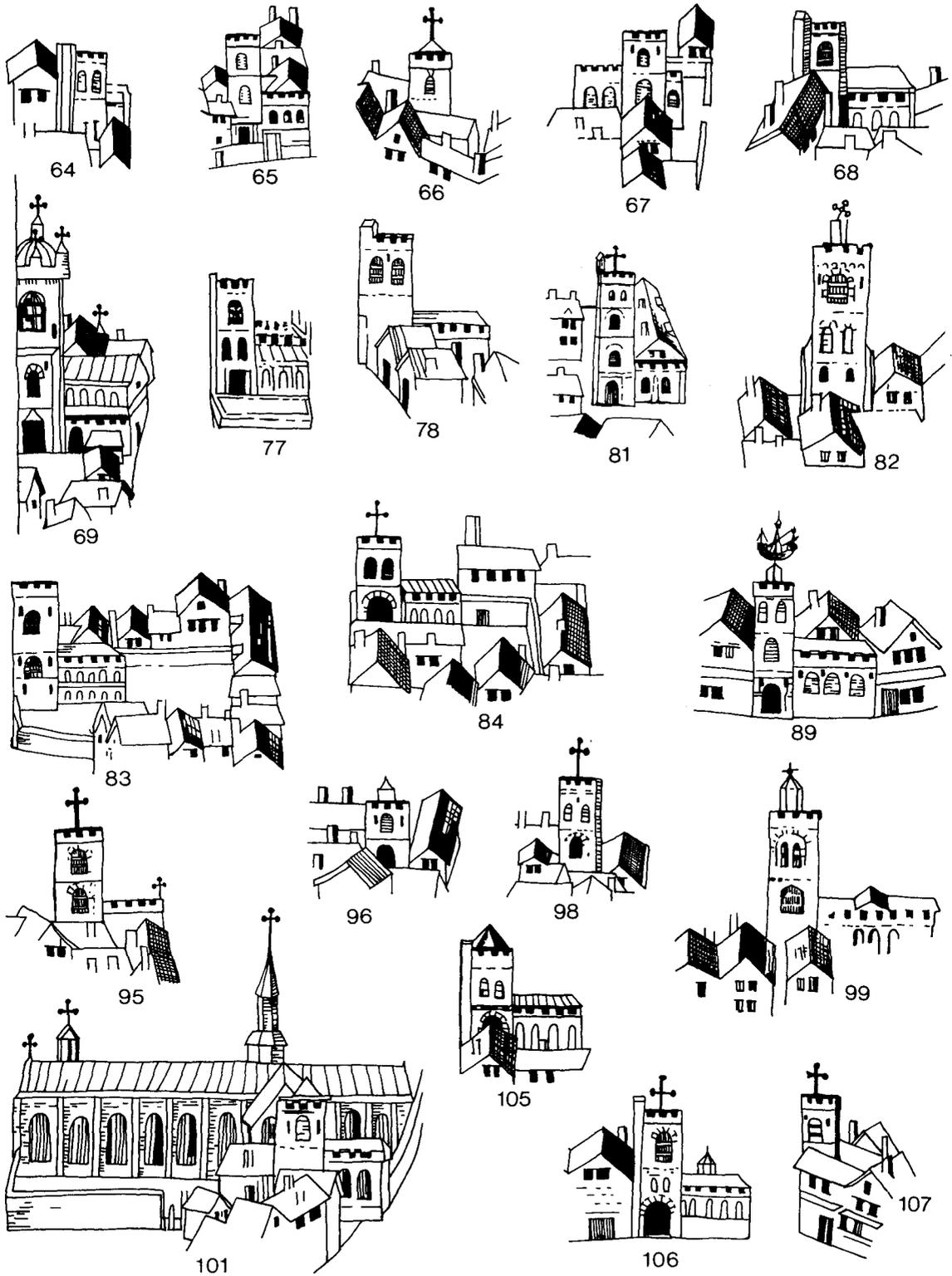


Fig 10. Churches 64–107: those which are shown on the copperplate map (c.1559)

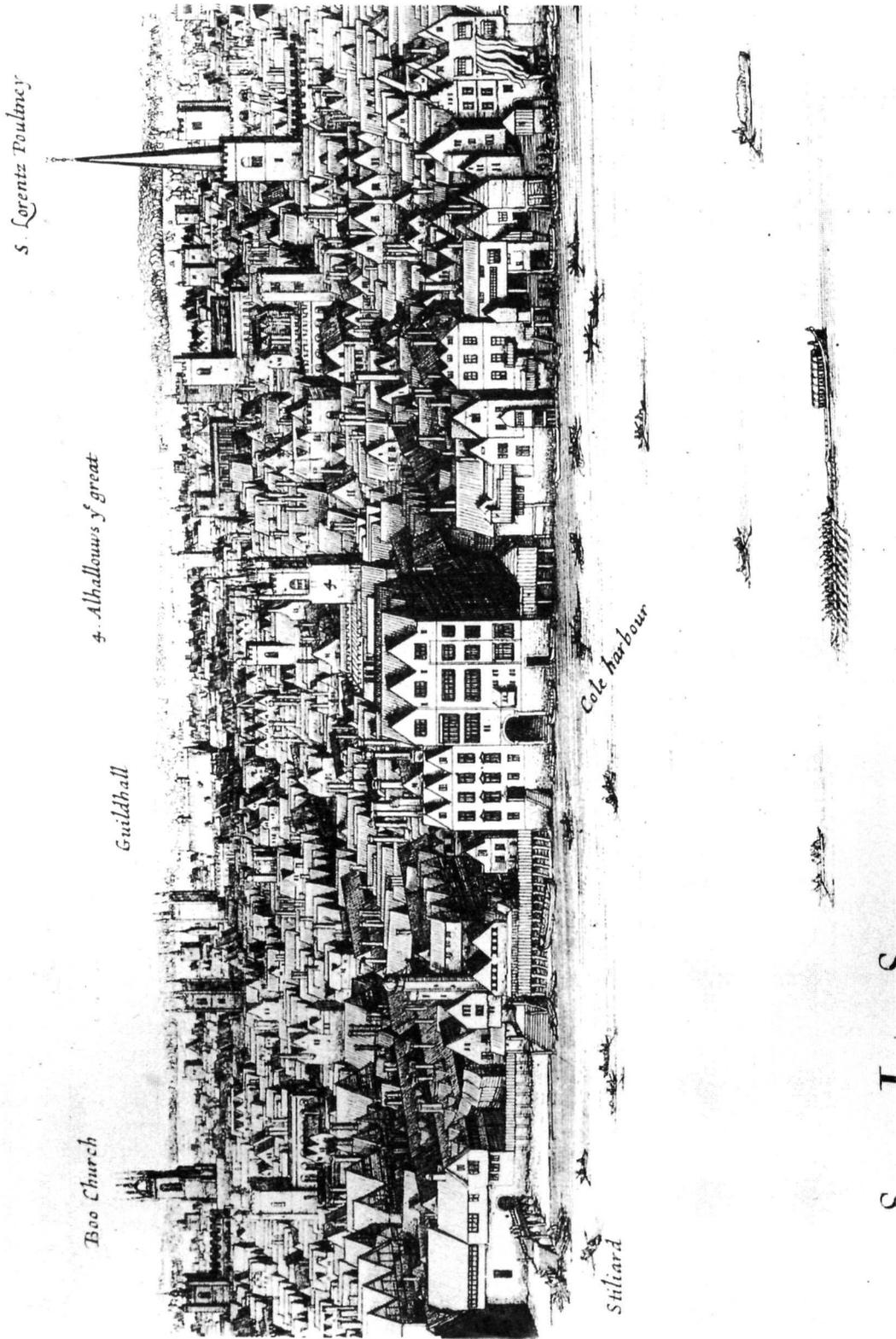


Fig 11. Hollar's panorama, 1647: section from the Steelyard to the Old Swan

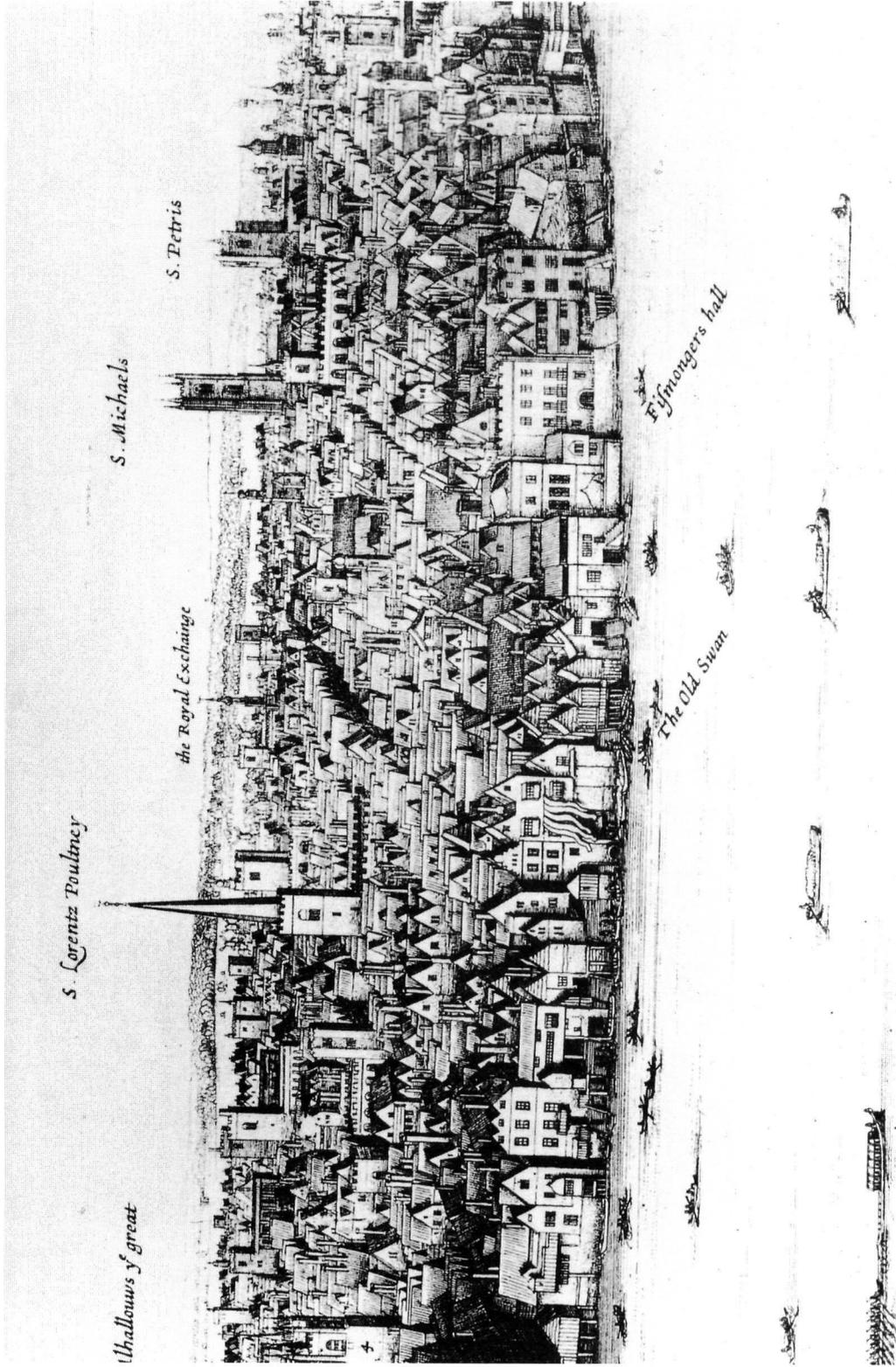


Fig 12. Hollar's panorama, 1647: section from the Old Swan to the Bridge

1. *S. Magnes*2. *Gray Church*

Fig 13. *Hollar's panorama, 1647: section immediately downstream of the Bridge*

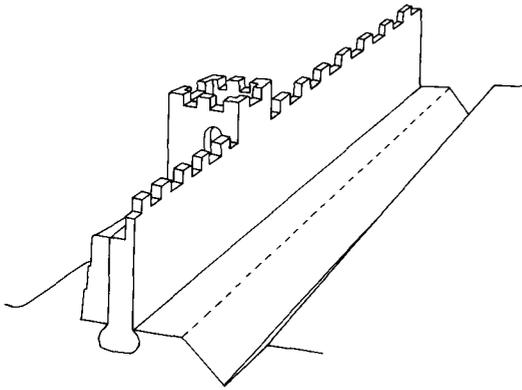
of the street and inland of the line of the Roman wall.

In the 1170s William Fitzstephen counted 126 parish churches in London and its suburbs; Brooke and Keir suggested that he was including a fair part of Middlesex, but 120 churches in London is corroborated by Peter of Blois, archdeacon of London, who reported this number to the pope in a letter on his appointment to office at the end of the 12th century (*VCH*, i, 179). The exceptional number of churches reflects London's rise to wealth in the 10th to 12th centuries, which is indicated in documents and by numismatic and other archaeological finds. It should be noted, however, that there is little evidence as yet for church foundations in the City during the 10th century. A recent consideration of the archaeological evidence for Saxon London suggests that the 10th-century

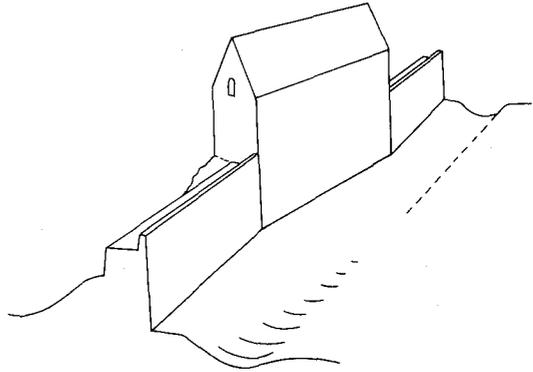
evidence is in fact quite slim, and that all of it could be compressed into the last third of the century (Brooke & Keir 1975, 128; Vince 1990; 1991, 27–8).

Twenty-seven parish churches were at least probably, and in some cases certainly, established by 1100: nos 1, 4, 8, 9, 11, 12, 14, ?21, 25, ?27, 31, 34, ?38, 44, 64, 66, 69, 80, 87, 88, 90, 93, 95, ?106 in the Gazetteer, also those on Fig 1 numbered 3, 54 and possibly 55. The excavations at St Nicholas Shambles (93) show that churches first mentioned in the 12th century, that is the majority of parish churches in the City as a whole, might well reveal origins up to a century older when they are investigated archaeologically. A similar pattern is emerging for Winchester, where there were 57 churches by the late 13th century, of which 10 or 11 can be proved to have been in existence before the Conquest

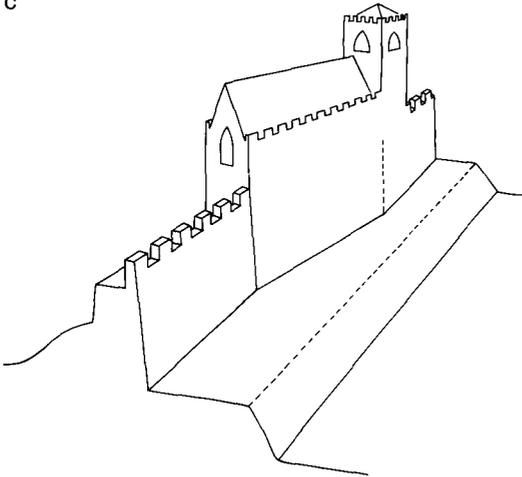
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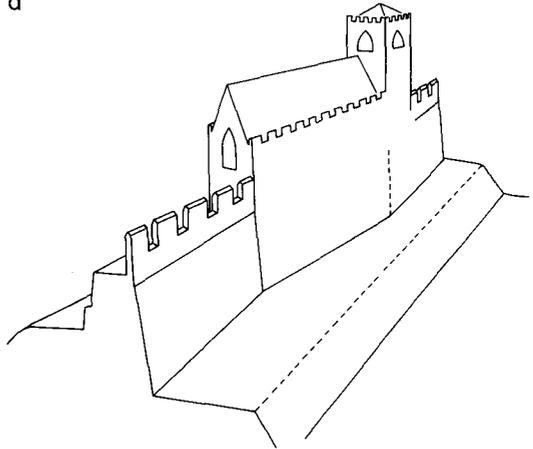
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c



d



*Fig 14. St Alphege (12): sketches by A Westman showing suggested development, after investigations of 1985. (a) the Roman city wall is inserted behind the pre-existing Roman Cripplegate fort wall c.200 AD; (b) a late Saxon church is built on top of the City wall, the latter also rebuilt in the late Saxon period; (c) the church and wall are repaired in the 14th century; (d) the church is incorporated in the rebuilding of the wall parapet in 1477*

(Biddle 1976, 329). At Canterbury, 22 churches are known by about 1200, 'large in number and small in size'; only one can confidently be taken back to the pre-Conquest period, but it seems probable that many had such origins, and several are known by 1086 (Urry 1967, 208–9). At York, by 1200, there were 35 parish churches, and a further 10 are mentioned in the 13th century (inf B Wilson and F Mee). The proliferation of churches in London and other towns at this general period may not however have been moving in chronological parallel, and the increase

in numbers may have happened at different times and for different reasons in the various towns.

London has now produced more church plans dating to before the 12th century than any other English town (Fig 16). The standard London church plan of this period was of two cells, the nave and chancel, though there were unicellular buildings at St Benet Sherehog (25) and apparently at St Bride's (31), and this form is known in several towns in the Low Countries in the 11th and 12th centuries (Stoepker 1990,

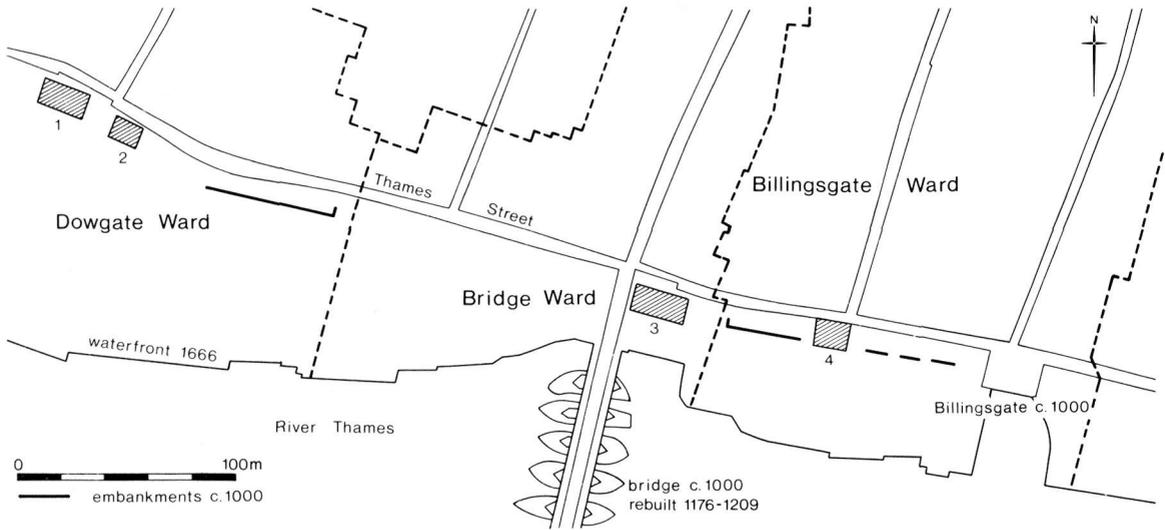


Fig 15. The bridgehead area of late Saxon London, showing positions of the four medieval churches south of Thames Street and the excavated sites of 10th-century embankments. The churches are 1: All Hallows the Great (3); 2, All Hallows the Less; 3, St Magnus (54); 4, St Botolph Billingsgate (29)

208–11). The crypt of St Mary le Bow (69) is exceptional, being probably Canterbury work in a special form at the archbishop's centre of operations in the City.

All the known fragments of Saxon churches in London reused Roman building materials (stone and tile) in their construction, and it is likely that little if any new stone was used. The exception to this might be worked stones with elaborate carved detail, such as capitals, but none has survived from a London Saxon church to be scrutinised.

The dating of reuse of Roman building material, especially whole or pieces of wall-tiles, in Saxon and medieval churches in London as in other towns of Roman origin needs to be revised and rethought in the following way. The widespread reuse of Roman building material in Saxon churches has been noticed in both urban and rural settings as far north as Yorkshire up to the 11th century (Parsons 1991, 13–14). In London, foundations, as at St Nicholas Shambles, were usually of a variety of stones—most probably taken from Roman buildings—in unmortared layers, separated by gravel. Walls were of roughly coursed ragstone, with Roman tiles used for quoins at the corners of buildings at All Hallows Barking (1) and St Olave Jewry (96, Fig 17); and at the former to form an arch, perhaps into a tower (Fig 18). The use of Roman tiles for quoins in the Saxon period is also found

near London at St Paulinus, St Paul's Cray (Kent, now in the Borough of Bromley). In the City, use of Roman tiles for arches is a feature from at least the late 11th century, as in the vaulting arrangements in the crypt of St Mary le Bow (69), and continues to the 13th century when Roman tiles are used in the relieving arches above lancet windows in the south transept of St Helen Bishopsgate (44).

In this context there seems to be little evidence to commend a date earlier than the 11th century for the arch, here interpreted as the entrance into a tower, at All Hallows Barking (1, Fig 18). The association of the church with the nuns of Barking says nothing about the date of construction of church or arch. In contrast to opinions sometimes expressed, there is no clear similarity with the work at Brixworth (Northants), the original parts of which are dated to the 8th and perhaps 9th centuries. Coincidentally the tower and stair at Brixworth were added in the late Saxon or Norman period, the 11th or perhaps early 12th century (Sutherland 1990). An 11th-century (and possibly pre-1086) date for the arch at All Hallows Barking is proposed here, partly on the grounds of analogy with a growing number of other churches with details in reused Roman brick, as at St Mary le Bow (69) in the late 11th century and at other, only broadly dated, churches such as St Olave Jewry (96).

Though the majority of pre-Conquest churches in London were of stone, others were of timber: not only St Andrew Holborn (14) in 959, as mentioned under Saxon churches above, but 'the wooden chapel of St Margaret Eastcheap' (presumably later St Margaret Bridge Street) in a document dated between 1108 and 1116 (*Regesta Rerum*, ii, 1177). No definite traces of timber churches have yet been located on London sites, though a structure of posts was recorded beneath St Michael Bassishaw (81), and another possibility is at St John Watling Street (47). Timber churches in London need not have been small structures; in Dutch towns, where more examples have been found, 11th-century timber churches can have a nave and two aisles, and the similarity of these structures to contemporary barns (in England, as in Holland) is noted (Stoepker 1990, 200–3).

A small amount of ornate Saxon or Saxo-Norman carving has so far been recovered or recorded from City church sites; Roach Smith noted a capital carved with twisted serpents and bead-work at All Hallows Honey Lane (4) in 1836, and on the newels of the stair at St Mary le Bow (69), uncovered in 1955 and 1959, are two small interlace carvings (Figs 19–20), rather like the simple designs being carved on pieces of bone at the same period nearby on the site excavated in Milk Street.<sup>6</sup> Some fragments of cemetery crosses and a number of stone grave markers or covers of Viking and Saxo-Norman date have also been excavated, though none since 1945. A circular cross-head of Saxon type has been recovered from the churchyard of St John Walbrook, and a portion of a recumbent grave-slab with two panels of interlacing, similar to one found at Cambridge Castle and possibly from one of the two Saxon churches within the outer bailey there, has been found in the churchyard of St Benet Fink (*VCH* i, 169–70, Fig 34). Pieces of sculpture revealed by bombing at All Hallows Barking (1) include four fragments of the shaft of a cemetery cross of the second quarter of the 11th century or later (Fig 21).

Two other monuments in Viking style have been found in the cathedral churchyard. The famous headstone, with an animal in Ringerike style carved upon it, was found in the south-east part of St Paul's Churchyard in 1852; it was apparently at the south end of a grave aligned north-south. The other flat grave-slab, which was recorded in two fragments, had similar tendril patterns; its findspot is given both as 'the City of

London' and 'probably from St Paul's Churchyard' (*VCH* i, 167–8, Fig 32).<sup>7</sup>

## STRUCTURAL DEVELOPMENT OF MEDIEVAL CHURCHES

This section deals with evidence in the medieval period for the development of the component parts of the church (chancel, aisles, roof, crypts, tower, porch), internal arrangements, and finally fittings and furnishings (chapels, altars, fixed furniture, glazing, images and monuments).

### The body of the church: chancels, aisles, roofs, crypts and towers

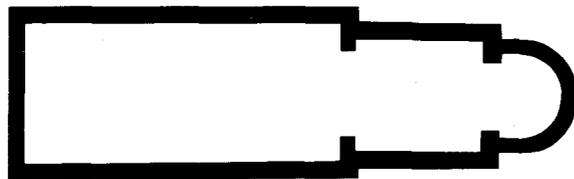
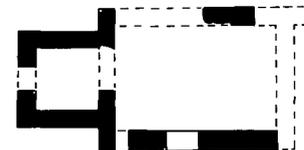
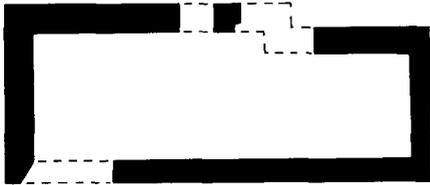
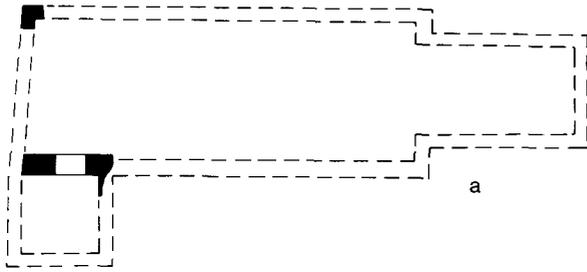
The enlargement of parish churches in the later 11th and 12th centuries, of which there are many examples in English towns, has been taken to represent their adaptation from private chapels to a parochial function, and to a congregation larger than the original private group, as suggested for Winchester (Biddle 1976, 335). For comparison, in late 11th- and 12th-century Rome, a spate of new parish churches (*ie* no longer private chapels) sprang up, with a prevailing type comprising nave and two aisles (Krautheimer 1980, 167). In London, parishes and their boundaries were largely defined and explicit by 1200 (Brooke & Keir 1975, 122–31). There is however little evidence yet for extensions to parish churches in the City before 1200.

### Chancel

Apsidal chancels, a feature of Romanesque churches (Clapham 1934, 101) are found in the City at St Bride Fleet Street (31: the revision of the plan and phasing now in preparation suggests a normal apse, not canted on the outside as published by Grimes; Milne in prep), St Martin Orgar (61), St Michael Bassishaw (81) and St Pancras (98). These are all probably of 12th-

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Fig 16. Plans of Saxon churches in the City of London: (a) All Hallows Barking (1); (b) All Hallows Lombard Street (6); (c) St Alban Wood Street (11); (d) St Bride Fleet Street (31), showing the church in the 13th century; (e) St Nicholas Acon (90); (f) St Nicholas Shambles (93); (g) St Olave Jewry (96); (h) St Pancras (98)



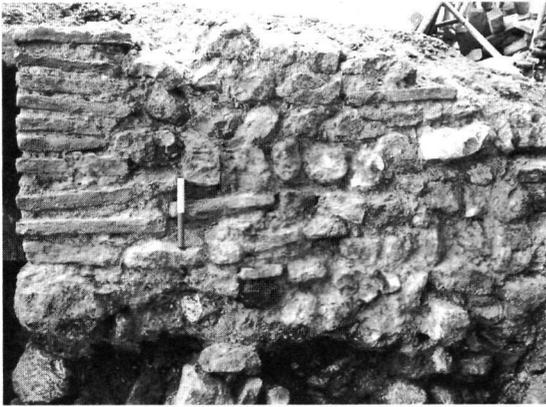


Fig 17. *St Olave Jewry (96)*: details of Roman tiles reused as quoins. Scale is  $2 \times 100\text{mm}$  units



Fig 18. *All Hallows Barking (1)*: Saxon arch (GM; photograph by R Merrifield)

century date, but hard evidence is usually lacking. Other pre-1100 churches in the City known from excavation, however, originally had square chancels, narrower than the nave (Fig 16; 90, 93). This form came to replace the rounded apse

in many cases elsewhere in England after about 1130. Two examples of this development in London are St Martin Orgar and St Michael Bassishaw, where the apse was replaced by a square chancel probably in the 13th century.

A second 13th-century development was the extension of the chancel to the east. Two possible reasons for this were a wish to enhance the dignity of the altar by moving it eastwards, and to provide a space for prestigious burials, rather as the choirs of contemporary monastic and friary churches were becoming favoured places for tombs of secular patrons. Outside London such extensions were often made to parish churches which had a connection with a monastic house. In London there were examples at All Hallows Barking (1; it may have been contemporary with the aisles of 1230–40), and at churches not known to be connected with monastic houses such as St Bride (31; in the 12th century?), and St Nicholas Shambles (93; 1150–1250 or slightly later). The addition to the chancel of ‘aisles’ by the middle of the 13th century is considered under *Chapels*, below.

#### *Aisles to the nave*

The excavated church of St Bride (31) had a north aisle added probably in the 13th century. The earliest documented extension of a parish church in the City with an aisle may be that of St Magnus, ‘enlarged’ in 1234. References in the slightly later Eyre of 1244 confirm that this extension was into a street; whether into Thames Street for a north aisle or westwards onto the bridge approach is not apparent, but the former seems more likely. All Hallows Barking (1) had two aisles in the second quarter of the 13th century, as shown by the style of its north and south arcades. During the 13th century, also, a north aisle was built at All Hallows Lombard Street (6), and a south and probably a north aisle at St Michael Bassishaw (81).

Outside London, addition of aisles to the nave begins to appear in Norman churches after 1100; in Kent, the churches in the prosperous Cinque Ports of Hythe and Sandwich had aisles in the early 13th century. In Middlesex, a few churches retain evidence of single aisles (Harmondsworth, Littleton) or even both aisles (Laleham) in the 12th century, and others in the 13th century (Harrow, Ruislip, Stanwell, Willesden); presumably this reflects the pattern in London to some



Fig 19. *St Mary le Bow (69): the 11th-century stair uncovered in 1955. Scale is in feet (GM; photograph probably by R Merrifield)*

extent. Apart from Harrow, these places were always small settlements. Early aisles were often narrow, and thus could be covered by a continuation of the slope of the nave roof. In York, first additions are usually aisles in the 12th century; often only one, the other being built up to a century later. It might therefore be proposed that in the 12th and 13th centuries more London churches had aisles than the current evidence suggests.

Aisles are increasingly mentioned in London documents in the 14th century. St Giles Cripplegate (42) had a south aisle by 1339, and St Dunstan in the East (35) was extended with a south aisle, designed by Henry Yevele, in 1381. St Ethelburga (38) was rebuilt with a south aisle at about this time, and St Botolph Aldersgate (27) had a new south aisle in about 1400 (Fig 22). The building of north aisles is not well documented, but some are later, *eg* that of St Olave Jewry (96) in 1436. It is not clear, in some cases, whether the first known building was the first extension or a rebuilding of an aisle, as in the case of the north aisle of St Mary at Hill (71)

in 1487–1503. The central church of All Hallows Lombard Street (6) showed in excavation that its pre-Fire north aisle had been rebuilt twice after the original extension.

As in York, the north and south aisles added to a church could be of differing dates; or a comprehensive rebuilding of the site could result in a nave and two aisles of a single period. The former is suggested at St Botolph Aldersgate (27) where the ‘new aisle’ of 1431 is demonstrably the south aisle, and yet the church had a nave and two aisles by the time of the Great Fire in 1666. By 1400, a nave and two aisles was becoming the norm, as illustrated by the cumulative plans of churches and those which were rebuilt afresh, as in 15th-century rebuildings (some taking decades) at All Hallows Barking (1), St Bride Fleet Street (31), St Michael Bassishaw (81), St Olave Hart Street (95, Figs 3 and 23), St Sepulchre (103) and St Swithin (106, one of the earliest examples in its rebuilding of 1400–20); and around 1500, All Hallows Lombard Street (6) in 1494–1516, St Botolph Aldgate (28, Fig 24) in the early 16th century, and St Andrew



*Fig 20. St Mary le Bow (69): the carving on the newel of the stair, photographed 1955 (GM; photograph probably by R Merrifield)*

Undershaft (16, Fig 2) in 1520–32. A nave and two aisles is suggested by the overall dimensions of St Stephen Walbrook (105) on its second site in 1428, and at St James Garlickhithe by 1451, when the rector and parish were allowed by the City to build four buttresses of stone against the east end of their church, providing that the common way was not narrowed (Harben 1918, 552; CCPR, St James Garlickhithe). In wider Middlesex, this pattern is broadly corroborated, with examples of churches completely rebuilt with both aisles and a western tower as early as 1321 at St John Pinner and St Andrew Enfield, or rebuilt with aisles in the 15th century as at St Martin West Drayton.

Several London churches, however, only had one aisle. In the churches of two smaller and possibly less wealthy parishes, St Ethelburga (38, Fig 2) and All Hallows London Wall (7, Fig 25), only a south aisle was ever constructed, in the latter case as late as 1528. St Stephen Coleman

Street (104) is probably another example. In the first two cases, constrictions of the site did not allow a north aisle (at All Hallows, the north wall of the nave was formed by the City wall). Similar considerations presumably applied at the corner site of St Martin Outwich (62, Figs 26 and 40), where a north aisle would have encroached into Threadneedle Street. It is clear that there were many factors involved in which aisle, north or south, was built first, and the London churches do not display any clear patterns of choice in this matter.<sup>8</sup>

The copperplate map is not very forthcoming for details of the naves of churches, since the artist does not seem to have been concerned with the nave as he was with the tower. The naves are generally shown foreshortened and with no detail. In several cases the body of the church is not shown at all.

Nearly all the naves shown on the copperplate are battlemented. No doubt this was partly a convention used by the artist to specify the body of the church without further elaboration, but battlements on many churches are also shown by Hollar in 1647. Crenellated walls were occasionally to be found on noble houses in the City, and were a feature of civic buildings of the middle of the 15th century such as Guildhall and Leadenhall (both 1440; Samuel 1989) and the arcaded building at Billingsgate (probably c.1450). Battlements were to be found on churches and chapels in other towns by the 1430s (for example, St Mary-on-the-Hill, Chester, in 1433; Salzman 1967, 490–1) but in London the earliest documented reference appears to be a bequest for the workmanship of battlements (no longer present) at St Sepulchre (103) in 1473, perhaps to finish off the recent rebuilding there. The rebuilding of St Dionis (34) just before 1466 may have included the battlements which are shown as a convention on the copperplate map. Battlements on the north side of St Michael Cornhill were mended in 1474, suggesting that they had been there for some years by that date, and further references now become common. In 1479 and 1485 St Mildred Poultry (Fig 10,) had money left to it for the making of battlements (Kingsford's notes to Stow, ii, 397); St Mary at Hill (71) had battlements added to its new aisles in 1513–14; about 1520 John Bridges, draper and mayor, repaired and embattled St Nicholas Acon (90); and in 1523 the Mercers gave ten stones called Caters for the making of battlements

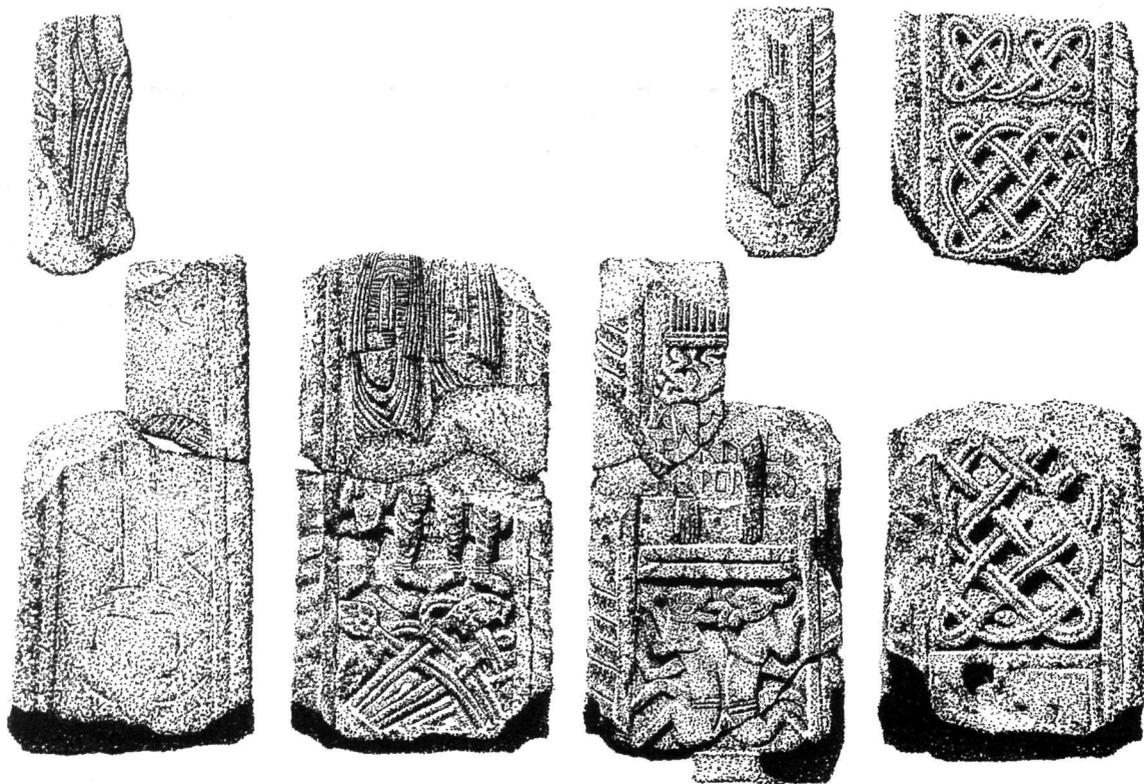


Fig 21. All Hallows Barking (1): faces of a Saxon cross shaft reused in medieval walling

at St Andrew Hubbard (Lyell & Watney 1936, 570).

### Roofs

Evidence of roofs is scanty before the 15th century, when several churches had their roofs rebuilt, endowed by individual parishioners or churchwardens who often had their arms placed in the roof timbers; All Hallows Staining (8), St Mildred Poultry, St Peter Cornhill (99) and St Olave Hart Street (95, Fig 27) are examples. The ceiling of the north aisle at St Andrew Undershaft (16), of 1532, has the arms of its builder Stephen Jennings in each of the squares of its panels. Several churches on the copperplate have the topsides of their roofs divided by lines into compartments, suggesting lead sheets. Where a lead roof is known from documentary sources (as at St Martin Vintry (63, Fig 9) or St Stephen Walbrook (105, Fig 10; Stow i, 227–8) the lines are employed in the church's representation on

the copperplate. It is therefore probable that lead roofs were always indicated on the map by such lines, which figure in 10 cases (and on the larger roof of Austin Friars, shown behind St Peter le Poor in Fig 10, 101).

### Crypts

The occurrence of crypts in churches is a rarity and governed by individual or special circumstances. The first was that several churches stood above a vault or vaults let out to secular occupation as at All Hallows Honey Lane (4), All Hallows the Less, Thames Street and St Mary Colechurch. In the light of this practice, the two-bay crypt of c.1270 which survives under the west end of the nave of St Olave Hart Street (95, Fig 28) is of interest. There are no parallels for an ecclesiastical crypt or undercroft in this position. The entrance, formerly directly to the open air, was later incorporated within the tower (Fig 3). The crypt may therefore have been part

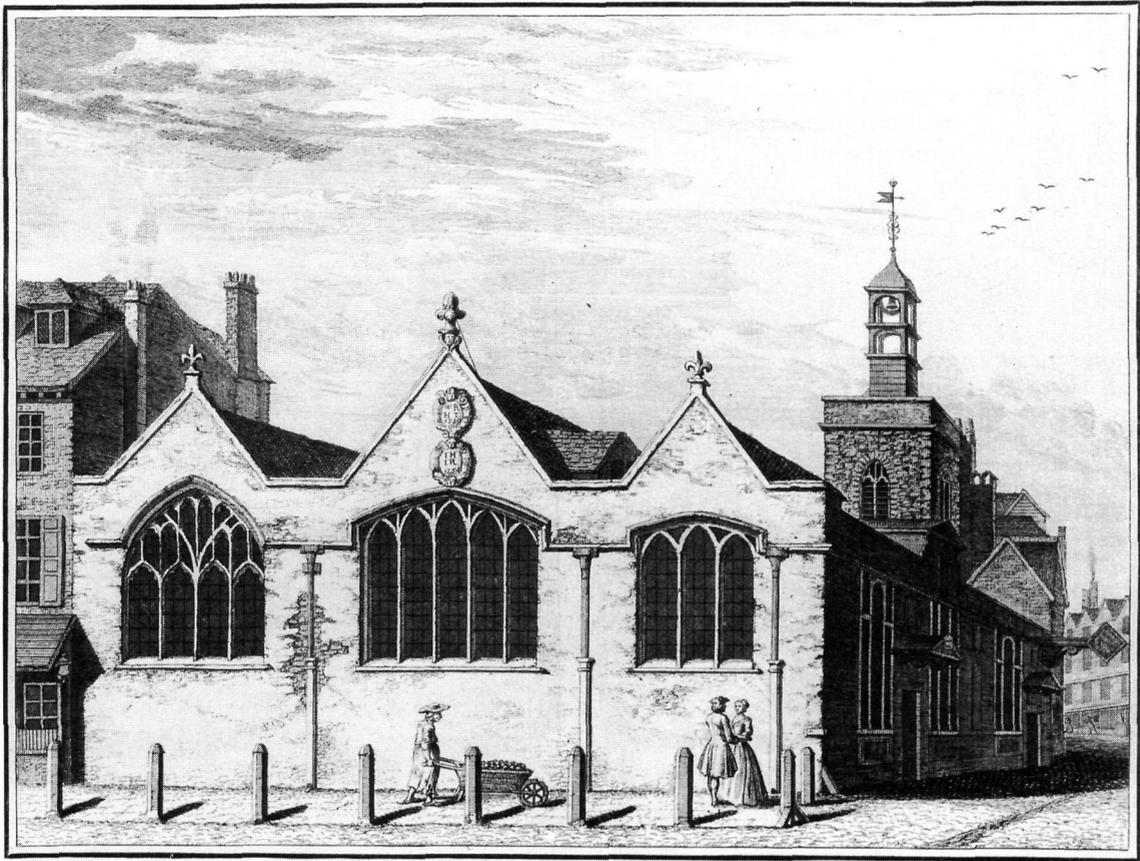


Fig 22. *St Botolph Aldersgate (27): view from east by West and Toms, 1737 (GL)*

of a previous house on the site, later subsumed into the body of the church; or it may have been a further case of a church over a separate vault intended for secular use. The date of construction of this undercroft, *c.*1270, was near the beginning of the period when a good number of secular vaulted undercrofts were built in the City, including several nearby in Fenchurch and Aldgate Streets. An even more complicated history of expansion of a church into an adjacent secular building is shown by *St Botolph Billingsgate (29)*; Fig 29; the sequence is described in the section below on chapels, and in the *Gazetteer* entry).

A second group of crypts inside or attached to churches were smaller structures, and probably relate to the fashion for chapels at the east end of the church. Two churches had small crypts under an aisle or chapel at their east ends in the 14th century: at the south-east corner of *All Hallows Barking (1)* and beneath the north-east

corner of *St Bride (31)*. The latter, running north-south, was entered from outside the church, and had a window in its east side. It probably supported a 14th-century Lady Chapel, either wholly or in part. The crypt at *All Hallows Barking* also appears to have had an exterior entrance, this time to the east (Fig 2). A third probable example of this is the vaulted medieval undercroft which survives beneath the churchyard of *St Mary Abchurch (64)*, Fig 30; it presumably supported an extension to the medieval church, near (though not actually at) its south-east corner. The function of these crypts is considered below, where the function of the ground-level parts above them, probably as chapels, is discussed.

A 15th-century crypt of one rectangular quadripartite bay, approached by a stair descending from the south aisle, was recorded beneath the chancel at *St Dionis Backchurch (34)*. This may have been another example of a chapel actually south of the chancel, but it is

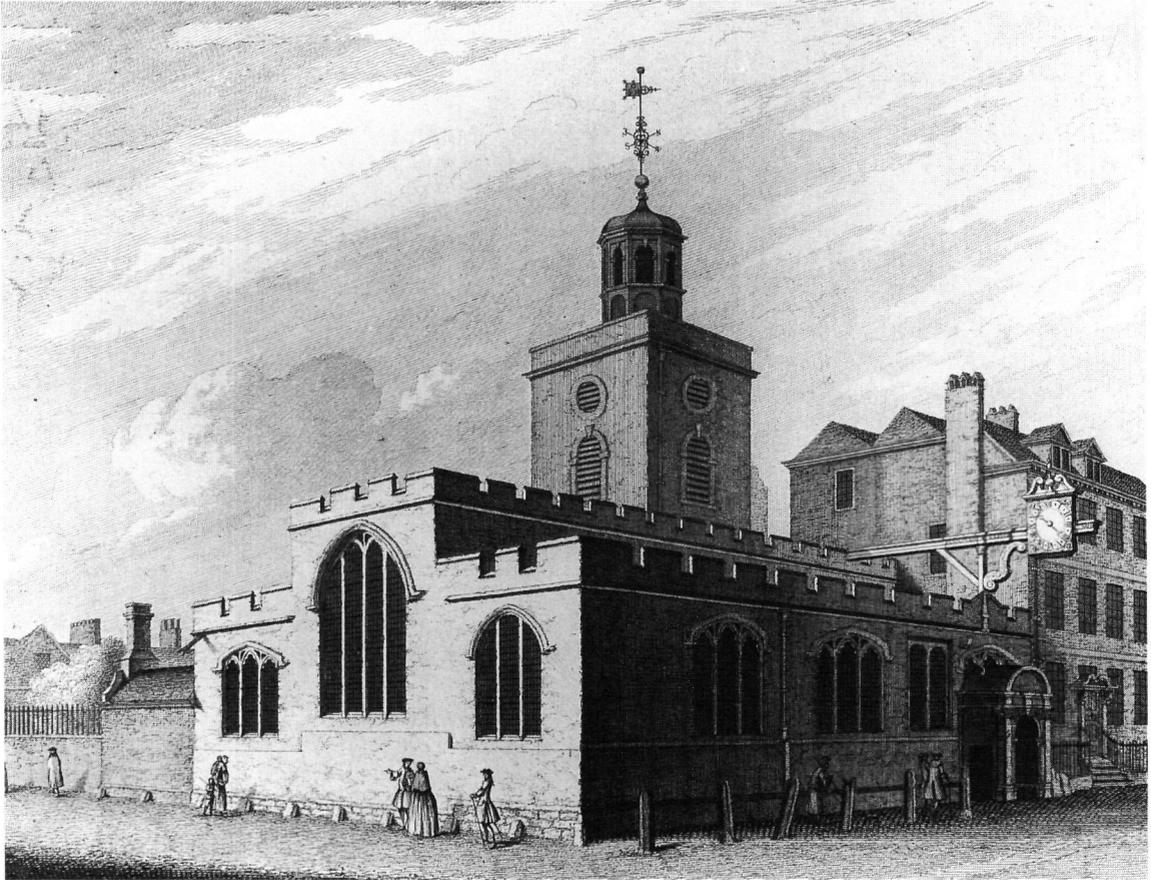


Fig 23. *St Olave Hart Street (95): view from east by West and Toms, 1736 (GL)*

more likely that it had a different purpose, and perhaps pertains to the contemporary and fairly new wish of prominent parishioners or patrons to be buried in vaults, which was shortly to be found throughout the City (for example at St Martin Outwich **62**). From the early 16th century, some leaders of the community chose burial in vaults. Henry Keble (d.1518), grocer and mayor, included a vault for himself on the north side of the choir in his rebuilding of St Mary Aldermary (**66**); the vault was later used for two other grocer-mayors in 1556 and 1565, reinforcing its significance. At the same time, burial both outside and inside parish churches must have been becoming a tiresome and packed affair; a chapel called a charnel was added to St Mary Woolnoth by Sir Hugh Brice, goldsmith, before his death in 1496. As many as seven parish churches had charnels, the earliest dating from 1457 (Harding 1992, 128 and n.53).

### *Towers*

Pre-Reformation towers survive largely intact at All Hallows Staining (**8**), St Andrew Undershaft (**16**), St Giles Cripplegate (**42**—all but the top stage), St Olave Hart Street (**95**) and St Sepulchre (**103**); parts of towers survive within later rebuildings at St Andrew Holborn (**14**), St Anne and Agnes (**17**; including part of a 14th-century doorway at the second stage), and at St Katherine Cree (**50**; 1504). Earlier towers no doubt survive within other towers of Wren churches. The base and first steps of the early medieval (?12th century) tower, on a different site from that of 1512 and that of Wren, survive at St Mary le Bow (**69**).

Towers are especially featured on the copperplate map (Figs 8–10). There are drawbacks in their rendition to be taken into account: in comparison to the panoramas, angle-buttresses



Fig 24. *St Botolph Aldgate (28): view from west by West and Toms, 1737 (GL)*

are largely omitted; and towers are generally shown to be of two or three stages, when they were probably of three or four (a diminution of height shared also by the secular buildings on the copperplate). Nevertheless, the copperplate map will be taken at face value unless proved otherwise.

In the 16th century, some churches probably still retained their Romanesque towers. There are no traces on the copperplate of round church towers, though the foundations of one were reportedly seen in 1914 predating the late medieval tower at St Michael Paternoster Royal (84; anon, *Antiquary* 50 (1914), 27) and round towers have been noted in the surrounding countryside (eg formerly at Tooting, and surviving at South Ockenden, Essex). The other Romanesque style of square tower with paired windows or paired blind windows may be present at St Margaret Bridge Street (see Fig 7) and St Martin Orgar (61), but these might equally be

later in date. Grimes dated the tower of the medieval St Bride (31) to the 12th century from its architectural detail; it seems to have been demolished during the 15th-century rebuilding, to be replaced by a more conventional tower at the west end of the nave, the position re-used by Wren. The earlier tower or belfry of St Bride was separate from the body of the church, but was not unique in this; clearly the use of heavy bells sometimes dictated that the tower should be only vestigially attached to the church, as at St Botolph Aldgate (28) in its rebuilding of the early 16th century. Towers expressly to hang bells were apparently attached to some churches for the first time from the beginning of the 15th century (1418–20 at St Swithin (106); 1429 at St Michael Wood Street (87)).

As might be expected in a mid 16th-century city, a large proportion of the towers seem to be Perpendicular in style. The largest group are of the type called Kentish, although they are

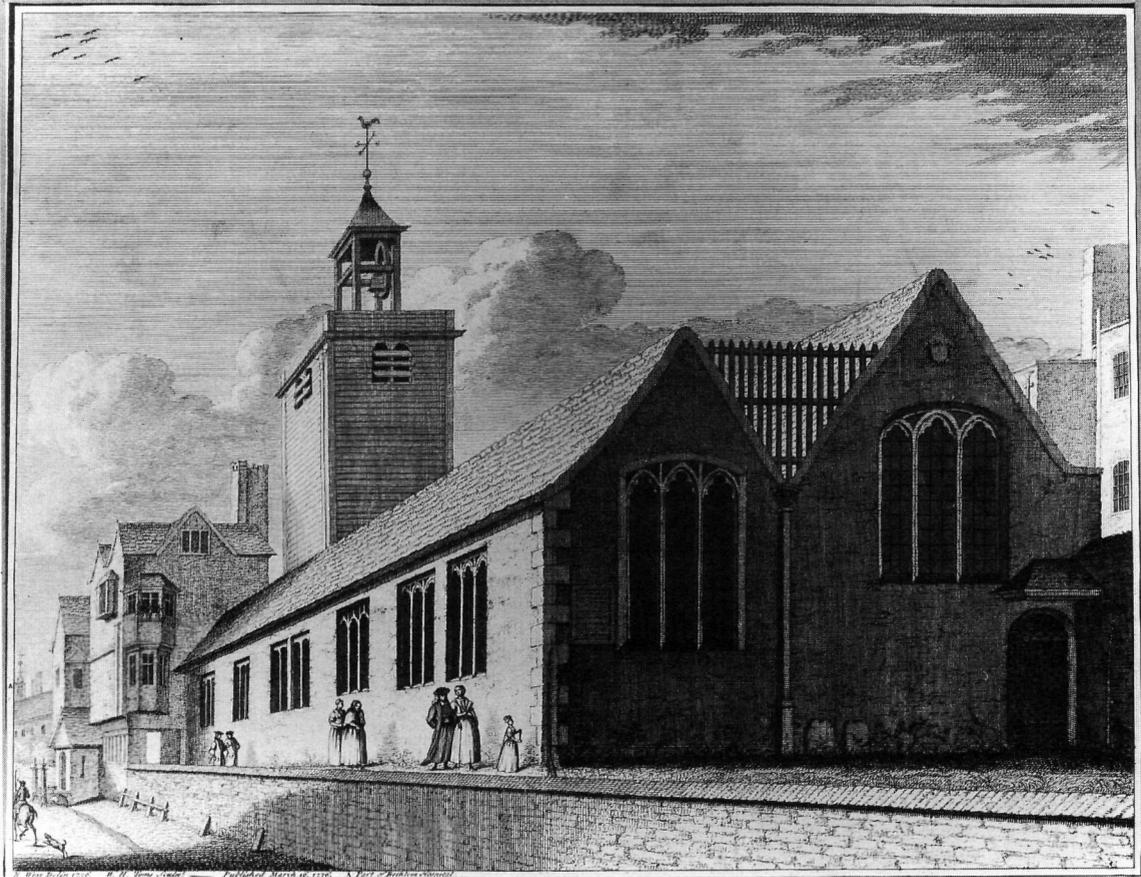


Fig 25. All Hallows London Wall (7): view from south-east by West and Toms, 1736 (GL)

distributed throughout north Kent, Middlesex, north Surrey and south Essex. The type was built from the late 14th century to the Reformation; two of the earliest seem to be that at St Mary, Lambeth, built in 1370, and the tower of Maidstone (Kent) collegiate church in 1395–8, attributed to Henry Yevele (Harvey 1987, 130). An example dated to 1440–1 survives at All Saints, Fulham; this was built by Richard Garald, who lived in the parish of St Sepulchre (Harvey 1987, 114; Schofield 1993, fig 92). The latest dated example in the immediate London area is at St Mary, Hornsey, of c.1500 (Pevsner & Cherry 1983, 29). The characteristics of these towers are a level embattled parapet, without angle-pinnacles; an external stair-turret, round or polygonal, at one corner, rising a little above the parapet; and buttresses stopping below the top stage at a well-marked string-course. South views of variants of the type, mostly undated,

can be seen on the copperplate at St Benet Gracechurch (24), St Clement Eastcheap, St Magnus, St Martin Pomary, St Mary Abchurch, St Mary Bothaw, possibly St Mary Woolnoth, St Stephen Walbrook (105, perhaps dating from the initial building of the new church in 1428) and St Swithin Cannon Street (106, c.1420) (Figs 8–10). The large tower of St Giles Cripplegate (42, 1396; Fig 31), cleaned in 1994 is an exception in overall size and quality of stonework.

A more elaborate tower appears on a small number of churches, not necessarily those of larger size. In it the corner buttresses are carried up into a small spirelet at each corner. This is seen at All Hallows the Great (Figs 7 and 8), St Lawrence Jewry (51) and St Martin Vintry (63; tower possibly dating to shortly after 1397).

There were also a small number of spires or broaches. The timber broach of St Ethelburga (38, Fig 8) is shown in West and Toms' engraving



Fig 26. *St Martin Outwich (62): interior view looking east by C R Ryley, 1795 (GL)*

of the church in 1736 (Schofield 1993, fig 91). St Edmund had a small spire, while St Dunstan in the East (35) and St Lawrence Pountney were prominent in all the panoramas for their tall, possibly 13th-century spires. All Hallows Watling Street (2) had a stone spire removed after damage by lightning in 1559 (Stow i, 346–7), and the church is shown without its spire on the copperplate, though displaced one block to the east.

In the churchwardens' accounts of St Michael Cornhill is a pen and ink drawing of the 'old steeple' demolished in 1421 (Fig 5); though the drawing is undated, it lies at the back of a volume of accounts which finish in 1580, and the accompanying text is in a hand of the mid-late 16th century. The drawing is therefore taken here to be a copy of a now lost original which must have dated to around 1420. It shows a tower with hexagonal corner turrets rising to

pinnacles of three stages at the corners; evidently the west face is being shown, in which is a fine window and a crocketed, ogee-headed door. Above is a short spire. Unfortunately the churchwardens' accounts, though long and extensive, do not start until 1455.

When a church stood next to a gate of the City, protracted negotiations might be necessary for expansion. In 1425 the City licensed the rector and parishioners of St Martin Ludgate to build a belfry in the shape of a tower on common soil at the west end of their church, 28ft by 24ft; the tower was to contain two gates for the mayor and commonalty to pass through. This must refer to the placing of the new tower either on the intramural street, known to run from Aldersgate to Ludgate in the early medieval period (but increasingly being built over by house owners), and/or the medieval bank behind the adjacent City wall immediately north of Ludgate.



Fig 27. *St Olave Hart Street (95): interior looking east in 1837, showing the mid 15th-century nave roof*

This reference shows that the church was physically separate from the wall and gate until 1425. In 1467, the Fraternity of the Blessed Virgin Mary in the church successfully petitioned the City that they might build a new chapel to the Virgin over Ludgate; since, they argued, the executors of Stephen Forster who had enlarged Ludgate prison (south of the gate) according to his will, having taken down the former chapel, had not carried out their promise to rebuild it (CCPR St Martin Ludgate, 1425 and 1467). By the early 15th century, then, a chapel of the church lay over the gate, and presumably it was separate from the body of the church.

Whenever the ground floor stage of the church tower can be seen on the copperplate, the main entrance to the church is very often in the tower's south side (eg St Antholin (18; cf the hospital of St Anthony, Threadneedle Street,

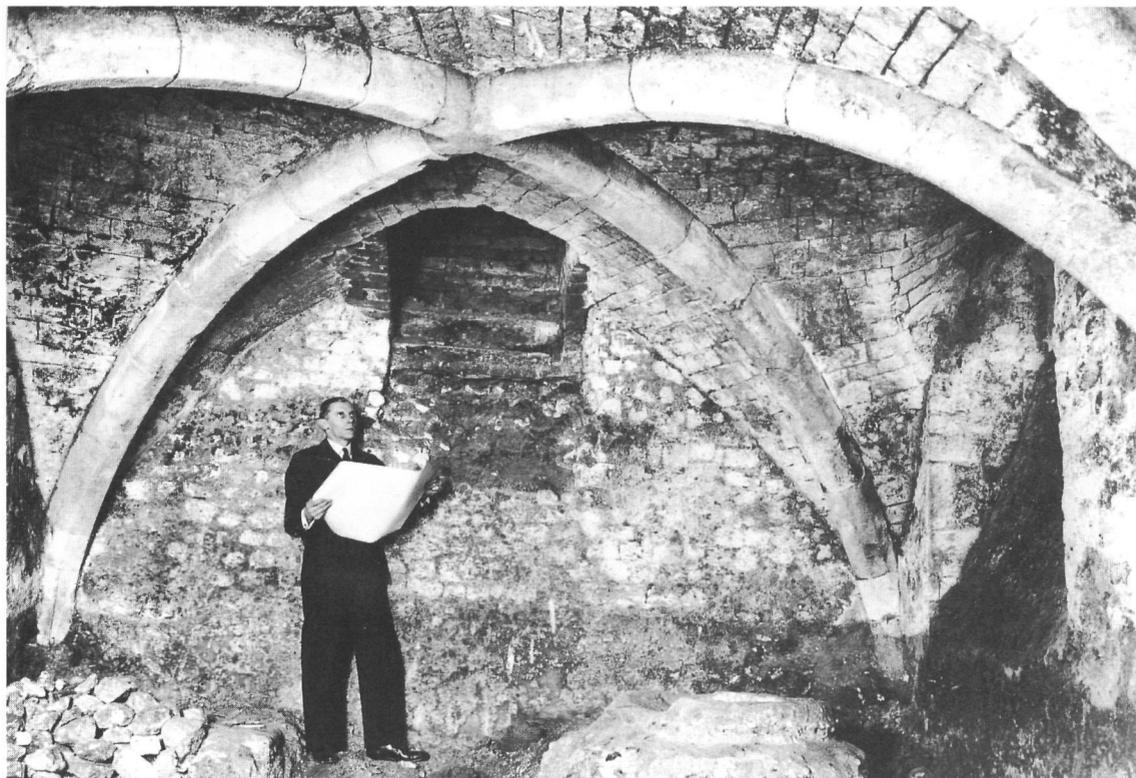
Fig 8A), St Augustine Papey, St Bartholomew Exchange, St Benet Sherehog (25), and St Dionis Backchurch (34, where foundations have been recorded). This even occurs in the suburban churches of St Botolph Aldgate (28) and St Botolph Bishopsgate, where constrictions of space would apply less. It therefore seems that the entrance through the south side of the tower is a London tradition or fashion. This is in contrast to the normal entrance in churches in Norwich or York, which is into the nave. The entrance to the nave or the south aisle was not unknown in London (for instance, at All Hallows Barking (1) and St Nicholas Shambles (93)), but it is rare. The factors influencing this repeated siting of the entrance may have stemmed from a common position for the original churches within their surrounding properties and access ways; or, in addition, the significance of using the ground storey of a tower as a porch.

By the time of the Great Fire in 1666, the entrance through the tower had been fossilised by custom. The tower was usually the most substantial part of the ruin confronting Sir Christopher Wren in the years after the Fire, and he retained the pre-Fire tower in the majority of his rebuildings. In many cases, the entrance through the tower was also retained.

In London, west doors into the church went through centrally-aligned western towers, when they were present, for example at St Giles Cripplegate (42), St Michael Cornhill (in the tower of 1421, Fig 5) and St Sepulchre (103). St Margaret Lothbury (56) seems to have had doors in both west and south sides of its tower, at the south-west corner of the church. It would have been more usual in such situations to have the west door in the west wall of the church north of the tower, in the middle aisle (as at St Botolph Aldgate, 28 and Fig 24).

### *Porches*

Porches are known by 1339 and were built until at least 1505. A two-bay and three-storey stone porch of the 15th century survives, rebuilt, at St Sepulchre (103); it originally incorporated a statue of the sponsor, Sir John Popham (d. 1463), but this had decayed or been defaced by the time of Stow (Fig 32 shows the church in 1739). Other porches known from records are: St Andrew Undershaft (16) in 1339, St Nicholas Shambles (93) in 1354, St Peter Cornhill (99) in



*Fig 28. St Olave Hart Street (95): crypt of c.1270 at west end of church*

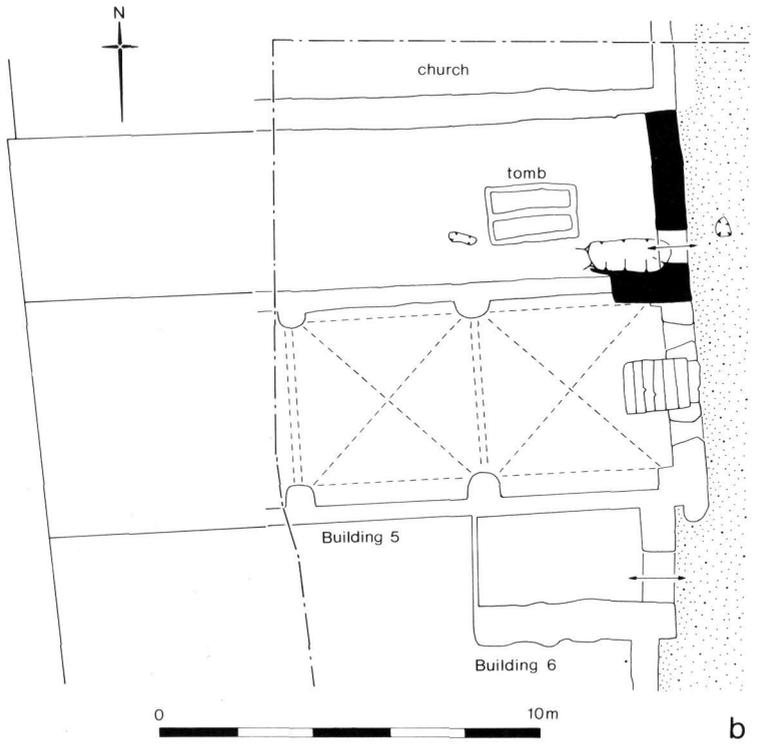
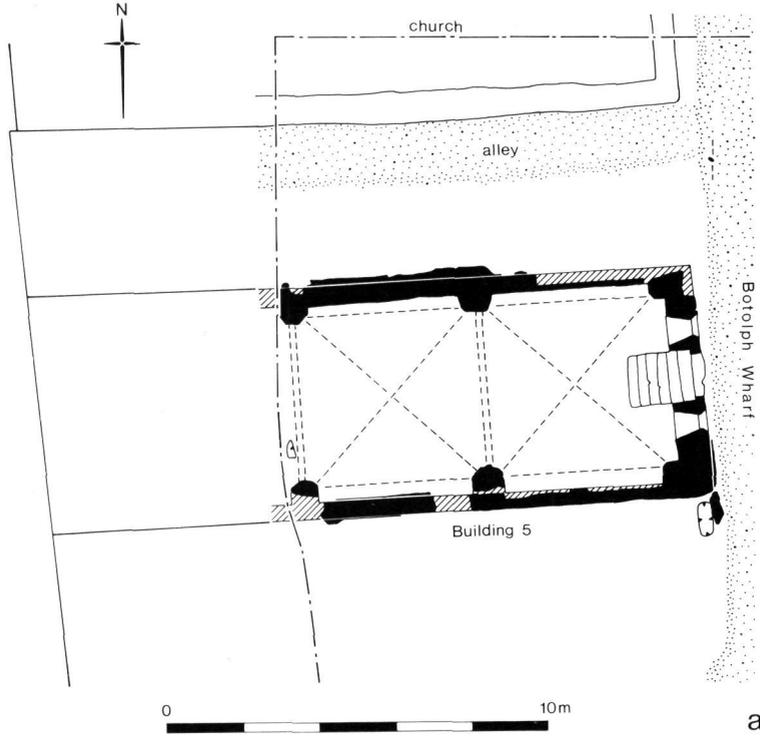
1360, St Bride (31) in 1390, St Botolph Aldersgate (27) in 1396, St Mary at Hill (71) in 1420–1, St Mary Woolnoth in the 1440s (Keene 1987, 34), and St Mary le Stocks (Stow i, 226–7), probably for a west door in the tower, after a donation in 1505. In 1540 Wyngaerde shows a porch with two gablets, apparently of the Decorated style, at the south door of All Hallows Barking (1) (Fig 49). This is curious as it would have been built out from the south aisle of the 15th century; perhaps some other feature than gablets is intended by the simple lines.

By 1559, according to the copperplate map, some external entrances into towers also had a porch (St Benet Sherehog (25), St Margaret Pattens (58)), and in one case it is known that a stone porch, erected at All Hallows Lombard Street (6) in 1544, came from a dissolved priory (Fig 8). The 15th-century doorway and panelled partition which stood on the inner side of the entrance, perhaps a timber porch, from St Ethelburga Bishopsgate (38) is now preserved in the Museum of London (Fig 33). A more modest alternative was a simple pentice over the main

entrance, as at St Michael le Querne by 1585, shown by Treswell (Schofield 1987, pl 1). But with the main entrance into the church so often being in the tower, there cannot have been many porches of any architectural note in London.

All the towers must have been built to serve as belfries. In 1929, two medieval bells survived at St Bartholomew the Less (not considered in this survey, as it became a parish church at the Reformation) and five at St Bartholomew the Great, both in Smithfield (RCHM 1929, xxviii).<sup>9</sup> A Flemish bell from All Hallows Staining (8), inscribed and with a date of 1458, now stands in the vestibule of Grocers' Hall.

At this point various features relating to the exterior of the church may be noted. The drawing of St Michael le Querne in 1585 by Treswell shows that the church had two sundials, one at the east end and the other on the south side of the tower; and on the copperplate map St Magnus is shown with a clock on brackets, hanging over the approach to the Bridge (Fig 9— for evidence of clocks inside churches, see below). There is no clear evidence for the exteriors of



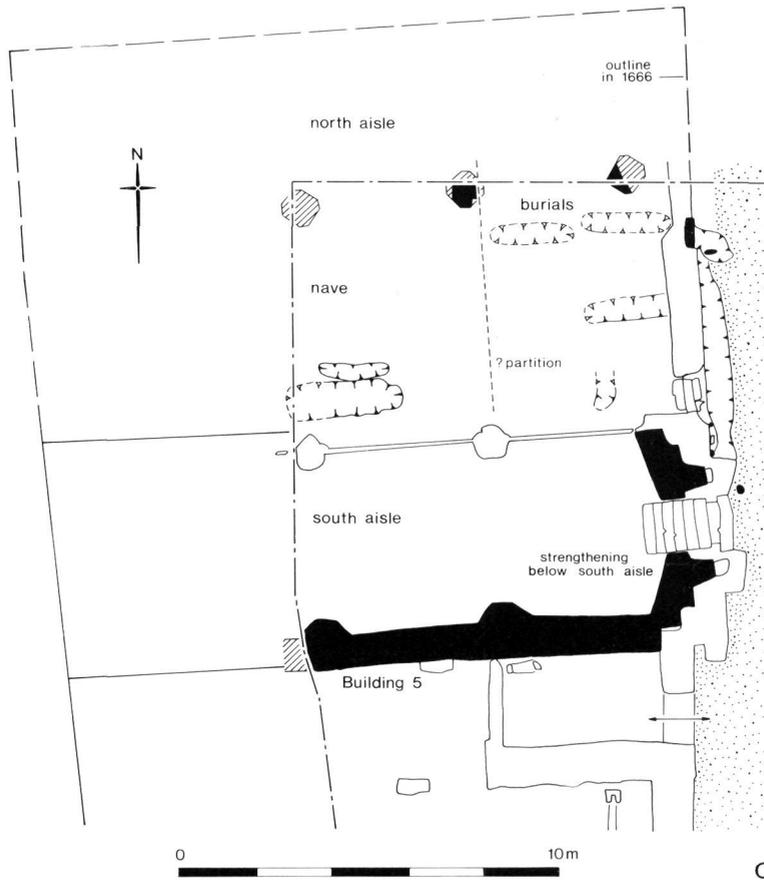


Fig 29. *St Botolph Billingsgate* (29): phase plans from archaeological excavation of south aisle, 1982. (a) the site in the late 14th century, with the original church at the top and the secular building south of it; (b) c.1400, with the space between the church and the secular building filled in to form an aisle or chapel; (c) c.1600, when the building to the south had been bequeathed to the church as a vestry. This third plan shows the strengthening applied to the vault of the former house; the floor of the church must have lain over it, but the precise details are not clear

church walls being built of finely-squared ashlar blocks up to 1500, though detailed scrutiny of excavation records might produce some hints. The accounts of St John Zachary mention rough casting on the exterior, which was renewed in 1629 (Pendril 1937, 3). At the opening of the 16th century, however, new walls of ashlar were built at St Mary at Hill (71) in 1497–1503 and at St Mary Aldermary (66) in the rebuilding of around 1510; presumably these were prosperous parishes. At least one church tower was built of ashlar for most, if not all, of its original height; the blocks of Reigate stone used at St Giles Cripplegate (42) in 1396 are of various sizes, carefully laid, and many of the blocks are larger than can be obtained from quarries today.<sup>10</sup>

## Chapels and other internal features and fittings

### Chapels

Chapels are mentioned infrequently in wills of the late 13th and early 14th century in London, as at St Michael Bassishaw (81) in 1278, and at St Botolph Bishopsgate (30) in 1303 (*Cal Wills* i, 158). In the 658 wills surviving on the Husting Rolls from the earliest example in 1259 to 1300, 59 perpetual chantries are recorded as being founded in London parish churches. From 1300 to 1402, in the same series of wills, an average of 28 permanent chantries were founded every 10 years. Often the endowment proved in-

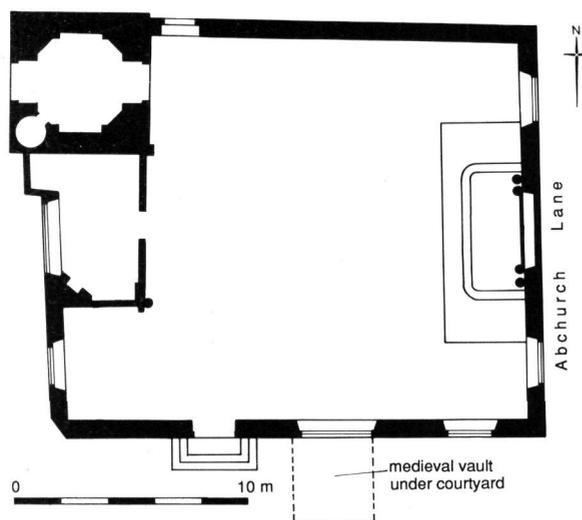


Fig 30. *St Mary Abchurch* (64): the vault under the southern churchyard; (a) plan; (b) interior view looking south (1992)

sufficient within 50 years, and the plethora of both under-funded chantries and chantry priests led to the foundation of colleges for the priests. Several London parish churches had groups of priests called colleges, but only a small number had special buildings or accommodation near the church (*VCH* i, 192, 205–6).

The establishment of a chantry only rarely resulted in embellishment or building work at a church. The singing of masses was associated with the donor commemorated, so the mass might be said at a portable altar laid on the tomb, or even at a spot on the tomb itself marked by a consecration cross (Evans 1949, 178); no examples have yet been noted in London. It is rarely stated that the testator had improved the church, either in its architecture or by donating fittings or ornaments, and we therefore cannot say if the period of the greatest number of chantry foundations, the 14th century, was also a period of architectural embellishment on that account. A development of this kind has been suggested for Florence, where the desire for private chapels brought about a surge in church

construction after the mid 14th century (Goldthwaite 1980, 12);<sup>11</sup> but in London, specially-built chapels were a rarity and were built in both the 14th and 15th centuries.

Chapels took a range of forms, from special buildings attached to the body of the church (most often, the chancel), to simple modifications of space by the use of timber partitions. Records of many London parish chapels are however too vague to specify what kind of construction was involved. Some chapels were described by Stow as 'built' within the church, implying substantial structures, as for instance the chapel of William Hariot, draper and mayor, in 1481 at St Dunstan in the East (35), or that of Sir James Yarford, mercer and mayor, 'in a special chapel by him builded on the north side of the Quire' of St Michael Bassishaw (81). Similarly William Cantelow built a chapel at St Mary Magdalen Milk Street and was buried there in 1495 (Stow i, 295); and Henry Coote, goldsmith, built St Dunstan's chapel in St Vedast Foster Lane (108) before his death in 1509; but the form of these chapels is unknown. Presumably they employed

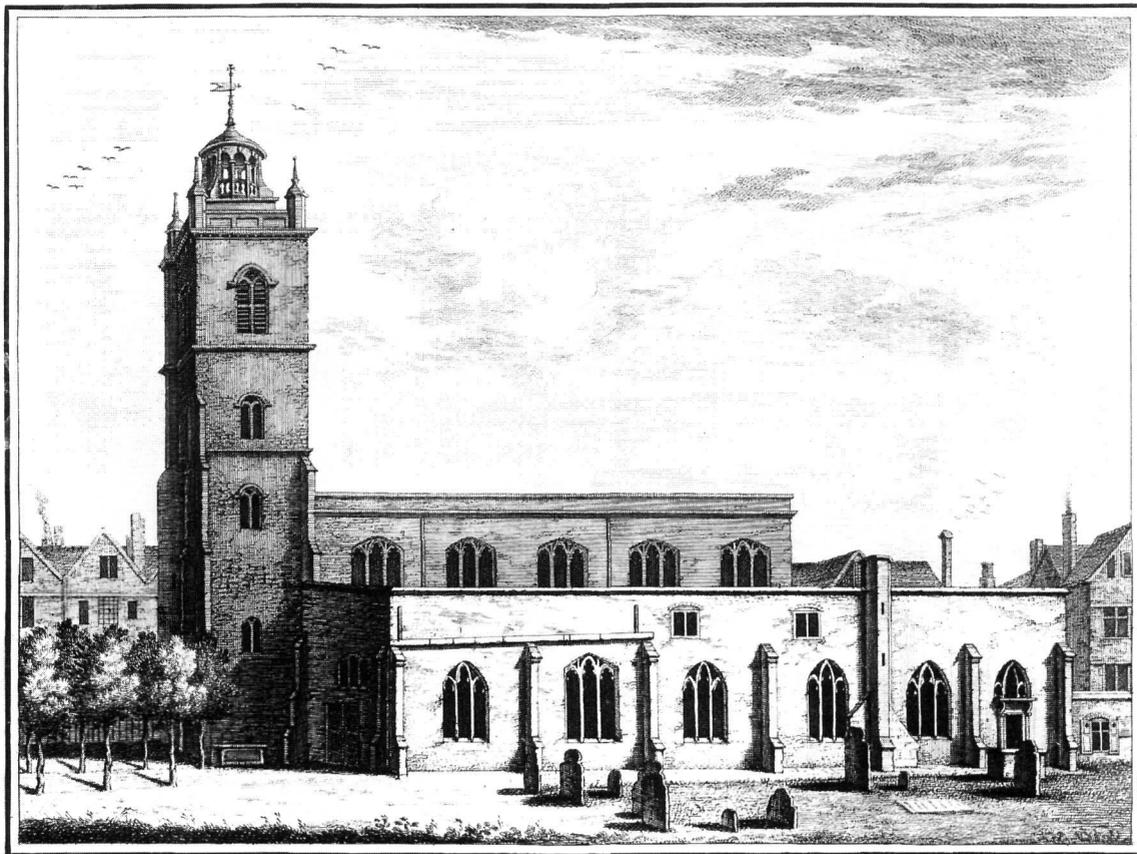


Fig 31. *St Giles Cripplegate (42): view from the south by West and Toms, 1737 (GL)*

screens of timber and occasionally of stone, but were otherwise not integral to the structure of the church itself, and as such were removed at the Reformation. There are hints that this was the arrangement at St Mary at Hill (71).

A small number of churches had chapels built against the church so that they protruded from the fabric, and these were no doubt more substantial structures. Examples are All Hallows Bread Street in 1350 (Harben 1918, 14), St Sepulchre (103) in the 15th century, and St Bartholomew Exchange, where the substantial chapel on its own basement erected by Sir William Cappell, mayor, in 1509 can be seen in the copperplate drawing (Fig 8). John Darby added a south chapel or aisle to St Dionis (34) before his burial there in 1466; in this case the distinction between aisle and chapel was unclear to Stow, and the copperplate shows no special addition; but a 15th-century crypt was built inside the body of the church.

There have been two recent archaeological investigations which included the sites of what are probably chapels, rather than aisles. At St Botolph Billingsgate (29), excavations in 1982 found that a narrow space between the existing south wall of the church and an adjacent building, then secular, was filled in to form a south chapel (Fig 29). This had an east wall decorated in black and white chequerwork (Fig 34). At a later date, possibly as late as c.1600, the church was rebuilt much wider and the south chapel became the site of the main altar (Fig 29c). Excavation on the south side of St Martin Orgar (61) in 1987 uncovered a chapel at the south-east corner of the church, which may be that added in 1433 by William Crowmer, mayor (Fig 73 below).

While it may be commonplace for chapels to have been erected towards the east end of the parish church, some London churches show that the chancel area may have been embellished

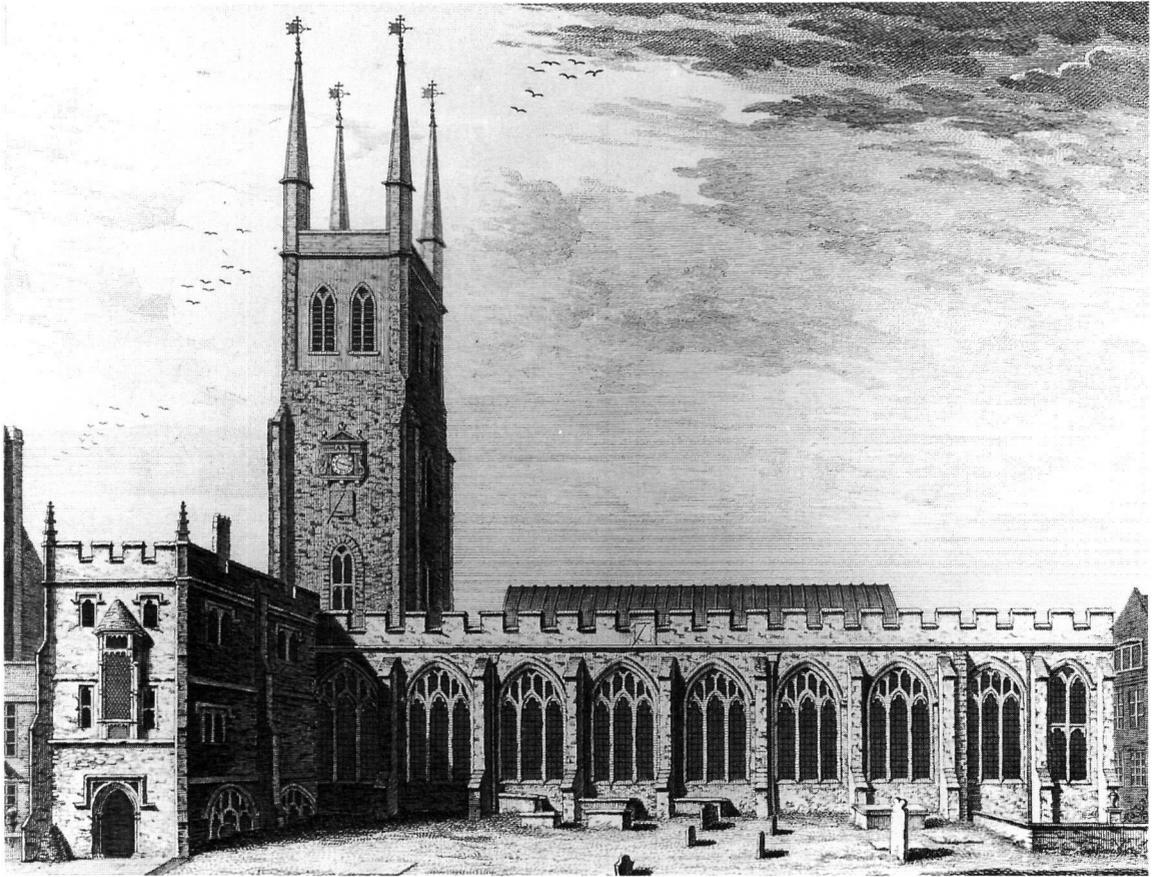


Fig 32. *St Sepulchre without Newgate (103): view from the south by West and Toms, 1737 (GL)*

with chapels added to the north and south before the body of the nave was given aisles, to produce a winged effect in plan (Fig 35). The clearest case is St Alban Wood Street (11), where the undated but medieval development of the Saxon church resulted in chapels to north and south of the chancel. At St Bride Fleet Street (31), where the church had a narrow north aisle, new aisles were added to the chancel, probably in the 14th century; the north aisle included a chapel on a north-south vaulted undercroft. This undercroft was entered from outside the church; and a parallel is supplied by the existing 14th-century undercroft below the present south aisle at All Hallows Barking (1, Fig 2), in this case oriented east-west and with original entrances both at the west end (? into the church) and at the east end (external). The Gazetteer entry for All Hallows suggests that Barking Chapel, sometimes thought to be a separate building in the northern churchyard at this church, may originally have

been the equivalent chapel protruding from the north side of the 14th-century chancel. A possible fourth example is at St John Zachary, where in 1390 a benefactor was buried between the two columns on the south side of the altar, amongst his new work (Stow ii, 397(xviii)). A similar crypt of probably 15th-century date lies under the churchyard at St Mary Abchurch (64), and was added to the south side of the church half way along its side; this was possibly also the vault below a chapel (Fig 30). These cases suggest that probably during the 14th century specially-built chapels were added to chancels, and in three cases they were on undercrofts which had external entrances. The interior furnishings of chapels, and the monuments within them, are dealt with separately below.

A further question concerns the intended uses of the vaulted substructures. At present there is no hard evidence, though some functions can be suggested: as a charnel house, or even as a place



Fig 33. *St Ethelburga Bishopsgate (38): 15th-century partition forming the doorway within the western entrance, now in the Museum of London*

lived in by the chantry priest, though this seems unlikely. That three of the undercrofts had external entrances to the churchyard seems significant, and would militate against the room being a sacristy for the chapel above.

#### *The interior of the church*

The interior of a London parish church, as in its counterparts elsewhere, contained fixtures such as the rood, font, pulpit and pews; glazing and images (either paintings or statues); floor tiles and monuments. Very few of these items have survived or have been recorded (apart from the finding of floor tiles on several church sites), but documentary evidence provides a brief overview. There are also two pieces of medieval art which have tenuous connections with London parish churches.

The rood screen, a wooden partition dividing the nave from the chancel and often embellished with figures above it of the crucifixion flanked by SS Mary and John, was a feature of the church by the 1340s, and presumably there were examples as old as the early 14th-century screens still to be seen in churches in Essex. The rood is mentioned at St Nicholas Acon (90) in 1341 and

at St Benet Gracechurch Street (24; *Cal Wills* i, 471); St Dionis (34) in 1342; St Martin Vintry (63) in 1350; St Christopher le Stocks (32) in 1352 (*Cal Wills* i, 667). At All Hallows London Wall (7) in 1455, the rood loft had a representation of Judas on it. A rood was constructed for St Andrew Hubbard in 1522–3 by James Nedeham, the future royal carpenter, though he did not finish it since he had left to serve the deputy of Calais (GL, MS 1279/1, f. 114b–115, 117b; Harvey 1987, 210). In 1538, during rebuilding of St Margaret Pattens (58), the rood was taken out into the churchyard and worshipped there (Stow i, 209). The normal external turret for the rood stair is known from either present plans or engravings at All Hallows Barking (1), St Andrew Undershaft (16), St Bartholomew Exchange (*Gentleman's Magazine* 1840 (i), 162; 1841 (i), 153), St Dionis (34), and St Magnus (shown also in Fig 13).

Eleventh and 12th-century parish churches had fonts, in several forms (Clapham 1934, 153–8). No medieval fonts survive intact from a City parish church, though they are mentioned occasionally in records (at St Nicholas Acon (90) in 1341; All Hallows Staining (8), 1378; the font at St Margaret Pattens (58) was 'new ledid and new gilt' in 1479 (St John Hope 1885, 322)), and a fragment of a 12th-century font has been recognised in the recent revision of work at St Bride's Fleet Street (31). A 15th-century font survives at St Bartholomew Smithfield and a further example of a London font can be found at St Mary Northolt (Middx), where the prominent grocer and alderman Nicholas Brembre was lord of the manor 1374–88; the font is octagonal and decorated with traceried panels, carved roses and what is probably Brembre's escutcheon. Other London fonts no doubt survive in the region.

There is very little pre-Reformation woodwork surviving from London parish churches. St Andrew Undershaft (16) still has a south door of late 15th or early 16th-century date; and part of the inner porch of St Ethelburga (38), of about the same date, was acquired by the London Museum in 1934 and is now in the Museum of London (Fig 33). Its spandrels feature roundels of a man's face and a lion, the symbols of St Matthew and St Mark, and there may have been a comparable piece in the porch which featured the emblems of the other two Evangelists. Otherwise, the pulpit of St Margaret Bridge Street is mentioned

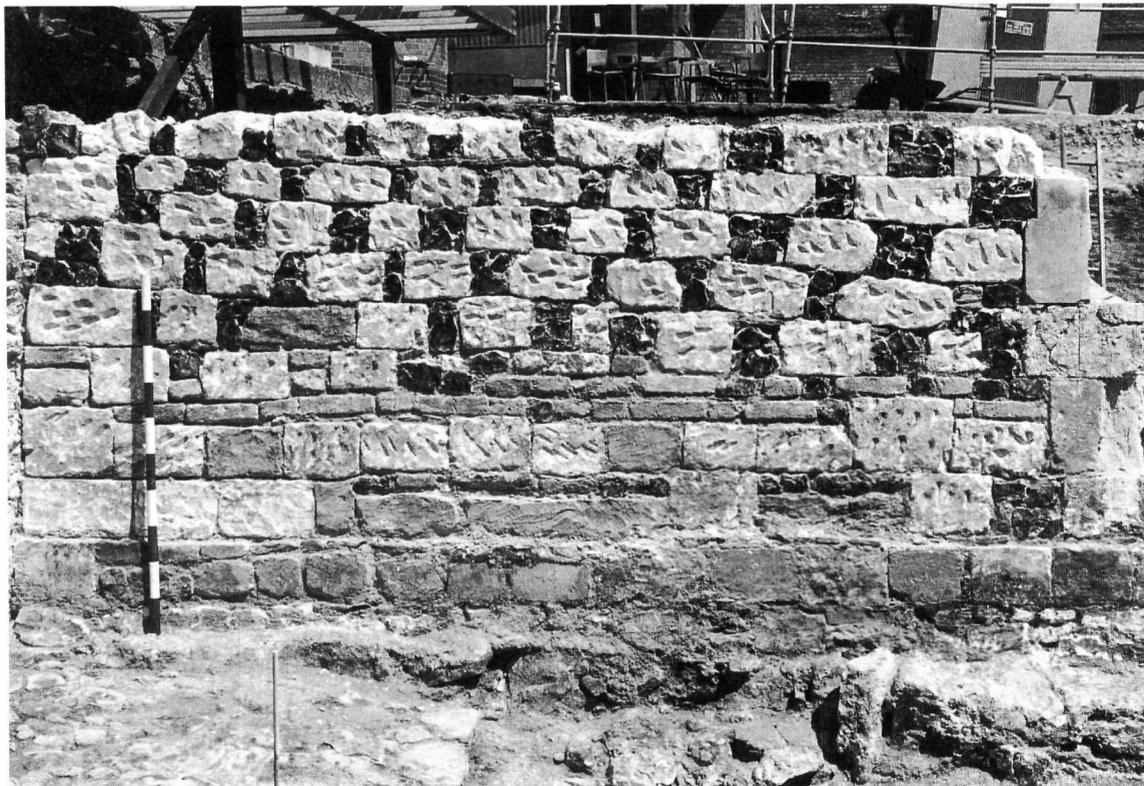


Fig 34. *St Botolph Billingsgate (29)*: chequerwork on the interior of the east wall of the south aisle or chapel, recorded on the Billingsgate Lorry Park site in 1982

in 1400 (*Cal Wills* ii, 346), and that of St Botolph Aldersgate (27) in the rules of the Fraternity of Holy Trinity, written probably around 1398.

A clock was to be made for St Paul's cathedral by Walter the Orgoner of Southwark in 1344, and another early clock, at Windsor Castle in 1351, had many of its parts made in London around Aldgate (Veale (1969) repr 1990, 136).<sup>12</sup> A further and no doubt less ambitious clock is mentioned shortly after at St Pancras (98) in 1368; further examples are documented at St Andrew Hubbard in 1459–60 (GL, MS 1279/1, f.1) and All Hallows Staining (8) in 1493. It is not clear whether these examples were outside or inside the church building. Clocks, also from the second half of the 14th century, are found in parish churches in other large cities of Europe, such as at Nuremberg in 1388 (Boockmann 1987, 197).

Thirteenth-century pews survive at St Mary and All Saints, Dunsfold, Surrey (Nairn & Pevsner 1971, 201) but the earliest London references to seats (presumably pews) are of the

second half of the 14th century. In 1364 a testator wished to be buried in St Martin Ludgate, in the place where he used to sit during service, and in 1386 Stephen Dawbeny, skinner, wished to be buried 'in front of his accustomed seat' in the chapel of St Katherine in St Michael Cornhill (*Cal Wills* ii, 84, 261). Thereafter there are references to seating in an aisle (27, 1431), a chapel adjoining the choir (66, 1436) and even in the chancel at St John Walbrook in 1461 (*Cal Wills* ii, 546). Such seating in the chancel for prominent persons was accepted by 13th-century church statutes (Aston 1990, 245–6).

In a large, central church such as St Michael Cornhill, pews with doors were assigned to named individuals from at least 1457; and in the same church, there were separate areas of pews for men and women, if not before (Overall 1869, 11, 16); one of the chapels provided seating for men only at St Mary at Hill (71) in 1495.<sup>13</sup> 'Writing of the pews' in 1469–70 at All Hallows London Wall (7) is taken to refer to a plan of the allotment of prominent pews to parishioners, no

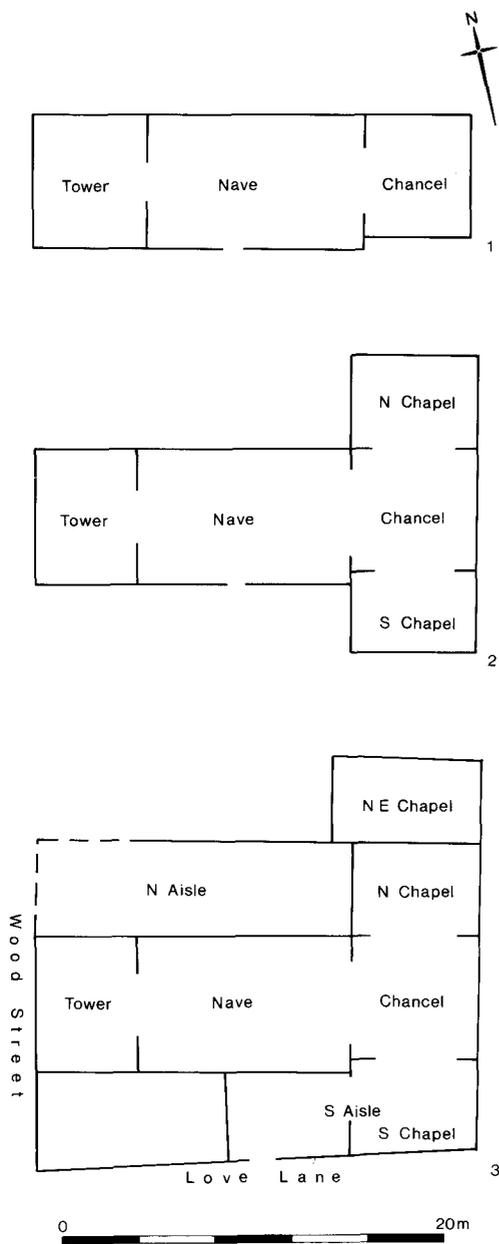


Fig 35. Suggested outline development of St Alban Wood Street (11), showing eastern chapels in the 14th century (after Grimes 1968).

doubt for an annual fee (Welch 1912, xix). This renting of pews, often by individual families, was to become a source of friction in the second half of the 16th century, but clearly was an established practice in certain London churches a hundred years before.

Donors were commemorated in windows from at least 1299, when the executors of Mathew Columbars, a Bordeaux wine merchant, celebrated his major contribution to rebuilding St Martin Vintry (63) by placing his arms in the new east window; other examples are recorded in 1376–7 at St Nicholas Cole Abbey (Stow ii, 3) and especially throughout the 15th century (for example, at St Christopher le Stocks (32), St Margaret Bridge Street, St Peter Cornhill (99), St Swithun (106) and St Thomas Apostle (107, Stow i, 186, 248, 194, 223–4, 245)).

There is virtually no medieval window-glass surviving in churches in the City of London; the fragments at St Helen Bishopsgate (44) have survived the recent bomb but in even more pieces and have been replaced at the top of a new window at the east end of the north aisle. Thirty-six shields of contributors to the rebuilding at St Andrew Undershaft (16) of about 1532 are therefore a precious remnant (two are shown in Fig 36).

From at least the 12th century, parish churches generally had painted decoration of some kind; traces of paint have been found on moulded stones from St Nicholas Shambles (93) and most recently on medieval features uncovered during the rebuilding of St Helen Bishopsgate (44). Surviving examples of wall paintings in the region (for example, of the late 13th century at St Mary, Bedfont (Middx)) have been attributed to London painters (Pevsner 1951, 44). There are no securely-provenanced examples of pre-Reformation wall-paintings surviving or being recorded from London parish churches, but there is the fragment of fresco painting said to be from the site of St Nicholas Acon (90, Fig 37). In 1909 this piece, alleged to have been found during one of several reconstructions of bank buildings on the site of St Nicholas in the 19th or early 20th century, was given by the London and County Bank to the parish of St Edmund (which had incorporated that of St Nicholas after the Fire). The fragment, now in the parish room of St Edmund, shows a life-sized head of a saint in a black habit placing his finger on his lips. It appears to be a figure of St Dominic, and is in an Italian style of the 15th century; but current expert opinion is that it is probably a 19th-century copy or fake.<sup>14</sup>

There are several medieval records of images, but it is often not clear whether they were statues or paintings. An image of St Botolph, for instance, stood on the south side of the high altar

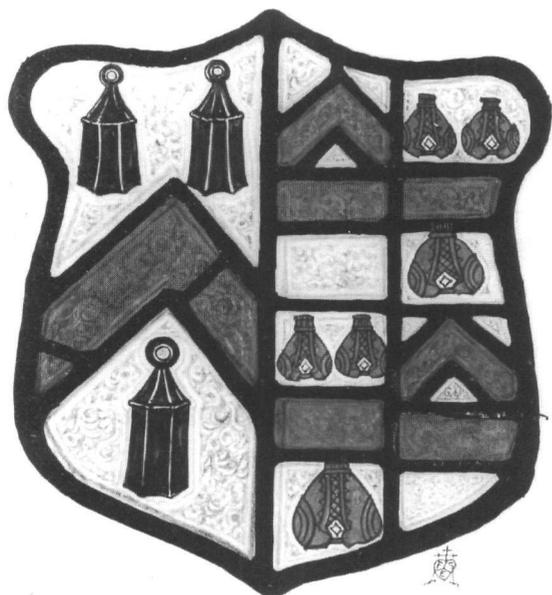


Fig 36. Stained glass: arms of benefactors from *St Andrew Undershaft* (16); contributors towards the rebuilding of 1520–32. (a) Goldwell, (b) Merchant Taylors' Company (GL, Eden paintings)

at *St Botolph Billingsgate* (29) in 1361; one of *St Christopher* at *St Andrew Baynard Castle* in 1410 (*Cal Wills* ii, 392). At *St Christopher le Stocks* (32) in 1483 were 12 'tables', including portraits of SS Anne, Christopher (three images), Crasynus, Gregory, James, and Sebastian (*VCH*



Fig 37. *St Nicholas Acon* (90): painted fresco of *St Dominic*, apparently 15th-century Tuscan work, allegedly from the site of the church (first mentioned, 1909)

i, 241, where images in other churches are also noted). Evidence for statues is rare, but a 14th or 15th-century stone statue of *St Christopher* holding the infant Christ, probably from a church, was recovered from a wall on the site of *Newgate Prison* in 1903 and is now in the *Museum of London* (Fig 38; Norman 1904). In 1348 a bequest was made to place a crown on the head of an image of the *Blessed Virgin* at *St Mary le Bow* (69), which was presumably a three-dimensional work. In 1414 *St Margaret Bridge Street* had an image of *St Christopher* in its churchyard (Dyson 1974).

There are no securely-documented surviving examples of paintings which hung or stood in medieval London parish churches; but there is the remarkable case of the *Tate Panel* at *All Hallows Barking* (1). The Panel (cover illustration and Fig 39) comprises four panels from a winged triptych, possibly by a Flemish artist, and dating to around 1500. The present arrangement of the panels was made by *Horace Walpole* of



*Fig 38. Statue of St Christopher, found 'in a wall at Newgate'; of 15th-century date (now in MoL)*

Strawberry Hill who had them in his collection; they were presented to the parish after the Second World War. The central scene would have been the Adoration of the Magi, and incorporated what are now arranged as the outer panels; the present inner panels would have been originally on the outer sides of the folding leaves. The painting bears arms of Tate/Wood, although these have been added to the original painting at a later date. Robert Tate, mayor in 1488, was buried in Barking Chapel which stood on the north side of the church or in the north

churchyard (Stow i, 130-1), and it is this possible association which has brought the painting to the church.

The two central saints, who would have figured on the outside of the leaves, are identifiably SS Ambrose of Milan and Jerome, and the figure on the right is St Joseph. But there is less certainty about the identification of both the figures on the left. The saint has been suggested as St John the Baptist or a St Robert (Grossinger 1992, 131). He holds the hat and cup for the kneeling figure, who, in the convention of paintings of this type, is in the attitude of one of the kings. This is possibly a portrait of the donor, who might have been Robert Tate; but the portrait uses the same model as that of St Ambrose. The artist may have been Jan Prevost, who worked in Bruges in the 1490s. The parish suggests that the triptych also hung in Barking Chapel; it now stands at the north-east corner of the present church, as close as possible to the supposed location of the medieval chapel, about which virtually nothing is known.

#### *Floor tiles*

Glazed floor tiles have been excavated or recovered from several parish church sites, and in three cases some relaid examples are still in situ (at 1, 31 and 44). A survey of floor tiles from parish church sites by I Betts is given in the Appendix below. The tiles are mainly of the three types known to have been used also on royal, monastic and even domestic sites in the City: 'Westminster' tiles in the 13th century, Penn tiles from Buckinghamshire in the period 1330-1390, and imported Flemish tiles from at least the opening of the 14th century for most of the remaining Middle Ages. The first two kinds were almost exclusively decorated, and the Flemish tiles always plain. Given their weight and bulk, the import of tiles from the Continent must reflect an extraordinary need for use in building works in the 14th century, or perhaps there is another explanation to do with London-Flanders trade in general at this time. Pottery from the Continent, particularly from the Rhineland and the Low Countries, began to be used in London in great quantities from the middle of the 14th century (Vince 1985, 58). This suggests that Flanders parallels should be sought for other forms of decoration and embellishment in 14th-century London churches.



Fig 39. *All Hallows Barking (1)*: the Tate panel c.1500 (RCHM)

### Monuments

Stow recounts how the City's churches contained many monuments. Up to the 12th century it was usual only for priests to be buried inside parish churches; noble and civic dignitaries were joining royalty by being buried in London's monastic churches from the later part of the century (for instance in the church at Holy Trinity Priory, Aldgate). By the middle of the 13th century effigies of knights are known in parish churches outside London, for instance in Essex and Surrey, and monumental brasses survive from the 1270s (for example, at Westminster Abbey); latten images let into stone are recorded from 1208 (Bertram 1987; Binski 1987; Blair 1987; Coales 1987).

Thus it might be expected that burials inside parish churches date from sometime in the early 13th century; by the time of the earliest surviving Husting Roll wills in 1259, burial in church could be requested. The earliest surviving will expressing a wish to be buried inside the church of St Nicholas Shambles (93) dates from 1276. One of the earliest fragments of a monument

from a London church (106) is that of Joanna, wife of sheriff Fulke de Edmond around 1290; a few years later, the prominent Bordeaux merchant Mathew Columbars donated to the rebuilding of St Martin Vintry (63) and had his arms placed in the new east window. Brasses of figures other than nobility (*ie* tradesmen, merchants) survive elsewhere from the middle of the 14th century. Firms of makers of brasses were working in London by the opening of the 14th century; in 1352 a London hosier asked that a brass be set in his tomb (Evans 1949, 142; *Cal Wills* i, 656–8). In 1892 a total of 41 medieval monumental brasses could be counted from City churches (Oliver 1892, 79–81). The largest collection today is at All Hallows Barking (1), where there are 17 brasses or fragments, the earliest being a roundel of the arms of William Tonge (d. 1389); a second group of 11 brasses, including four from St Martin Outwich (62), are at St Helen Bishopsgate (44). The plan of St Martin Outwich in 1797 (Fig 40) shows what are probably the original medieval positions of two brasses, in this case of priests, within the small chancel area.

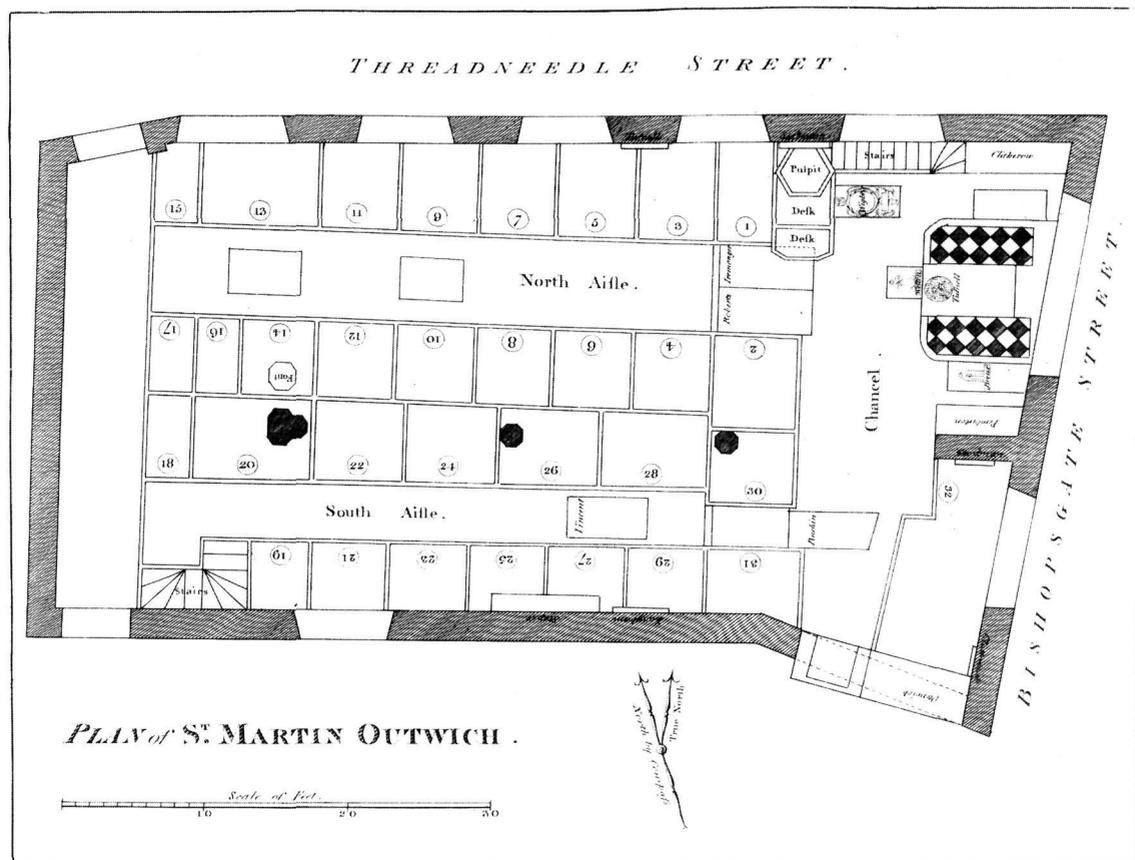


Fig 40. *St Martin Outwich (62): plan in 1797 (GL)*

The same recording of St Martin Outwich enables the decoration and fittings of a late 14th-century chapel to be partly reconstructed. A manuscript plan (Fig 75 below) shows that the Oteswich tomb lay in a specially-constructed recess at the south-east corner of the church; the church wall seems to have been widened expressly to accommodate it. Presumably this was a wall-recess over the alabaster effigy; what may be the east side of the screen (now lost) is shown in the upper drawing in Fig 76, which shows a cinquefoil piscina adjacent to the tomb (point H in the plan on Fig 75).

What was probably a niche for a wall-tomb of uncertain date has also been recorded at St Sepulchre (103, Fig 41). Piscinae have been recorded here and at St Helen Bishopsgate (44); in the latter case, in both chapels of c.1370 and the adjacent south aisle. One recorded in the recent restoration work bore traces of paint.

Alabaster seems to have come into use during

the second quarter of the 14th century, and its frequency increased in the decades after 1350; it was carved into lifesize effigies and small reliefs, sometimes grouped in wooden frames to form reredoses or retabes (Gardner 1935, 328–84; Ramsay 1991). Images specifically of alabaster are recorded in several London churches. John Lovekyn, stockfishmonger, rebuilt St Michael Crooked Lane in four stages between 1348 and 1366, and was buried in the choir in 1368 under a tomb with images of himself and his wife in alabaster (Stow i, 219; *Cal Wills* ii, 117). The late 14th-century alabaster effigies of John de Oteswich and his wife, formerly in St Martin Outwich, are now in St Helen Bishopsgate (Fig 42), and survived the 1992–3 bomb blasts. There are also records of ornate stone monuments in which use of alabaster seems likely, as in the case of the monument of Richard Lyons, buried in 1381 at the entry to the choir of St Martin Vintry (63):

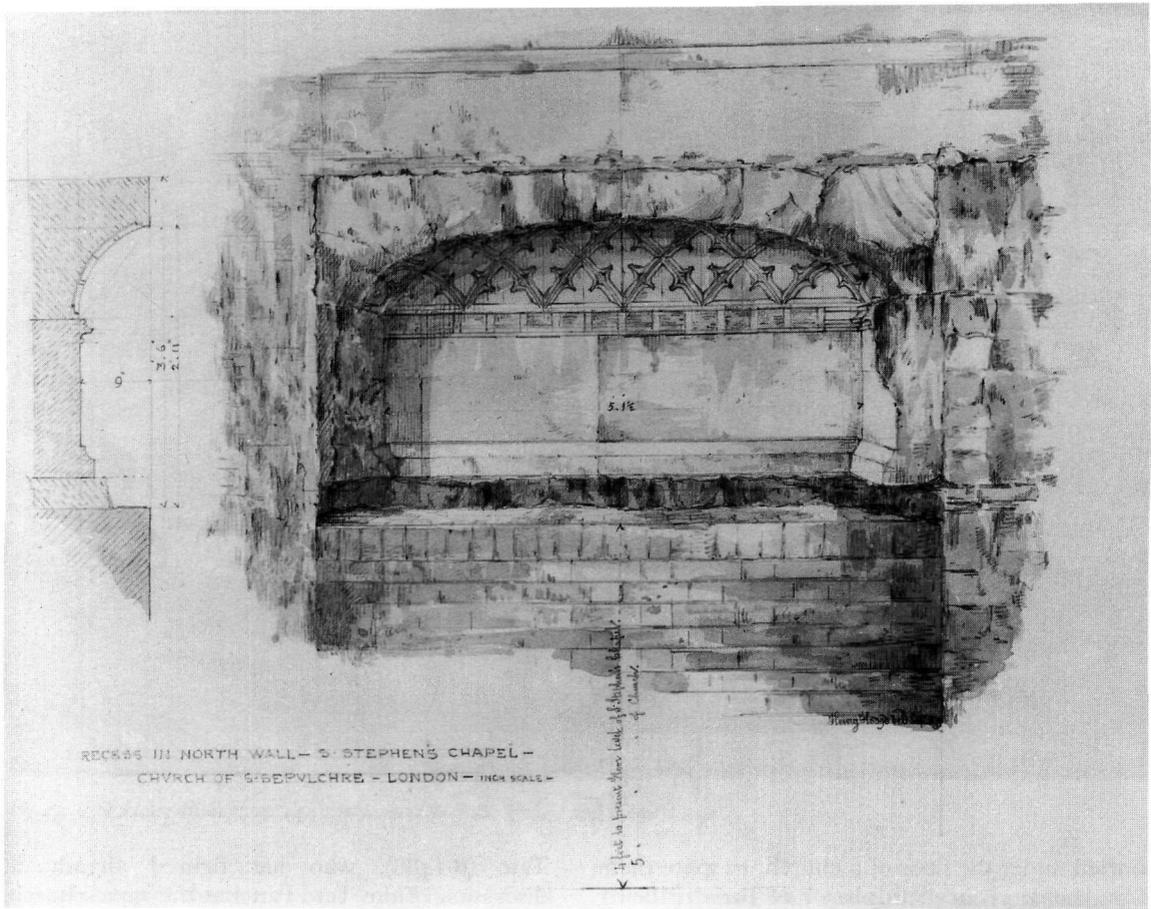


Fig 41. *St Sepulchre without Newgate (103)*: detail of *St Stephen's Chapel*, drawn by Henry Hodge in 1887 (GL)

'his picture on his gravestone very fair and large, is with his hair rounded by his ears, and curled, a little beard forked, a gown girt to him down to his feet, of branched Damask wrought with the likeness of flowers, a large purse on his right side, a plain hood about his neck, covering his shoulders, and hanging back behind him.' (Stow i, 249)

and the 'marble' monument to Thomas Weston, fishmonger, his wife and 17 children at St Nicholas Cole Abbey (will proved 1459). The monument of Sir John Crosby and his first wife Agnes, in St Helen Bishopsgate (44, Fig 43) is of 'Sussex marble', with the effigies in alabaster (*Cal Wills* ii, 538; RCHM 1929, 23).

A mixed collection of fragments of alabaster retables has also been found, but not directly associated with a church. In 1882, during excavations at 20 Mark Lane, within the parish of St Olave Hart Street, 20 fragments of English alabaster sculpture were found 'embedded in a brick culvert 12–14ft below ground level' (Povah 1894, 11–12).<sup>15</sup> They originally formed portions

of a variety of scenes from several different panels, which would have been grouped together to form a narrative series. Those illustrated here (Figs 44–5) show the beheading of a female saint, probably St Katharine of Alexandria; the betrayal of Christ, or Christ before Pilate; the Assumption of the Blessed Virgin Mary; and the Nativity. Each panel seems to be of a different type of alabaster and also to be of a different date within the 15th century. Such panels and figures were carved in large numbers in the Midlands from the later 14th century to the early 16th century; they are often referred to as 'Nottingham alabasters', though Nottingham was a marketing centre rather than a place where they were actually produced. Panels such as these were almost all acquired for parish churches and chapels; for those laymen who had a private chapel, a single non-narrative panel would have sufficed. If damaged or broken, they might be



*Fig 42. St Helen Bishopsgate (44): monument to John de Oteswich and his wife*

buried under the floor of a church, to spare them from being reduced to plaster of Paris or being otherwise recycled. The Hart Street fragments may have come from any parish church, or more than one church, or even from the nearby Crutched Friars.

From the latter part of the 15th century two marble tombs with traceried canopies survive: the tomb of John Croke (d.1477) at All Hallows Barking (1), and that of Hugh Pemberton (d.1500) from St Martin Outwich, now at St Helen Bishopsgate (44). Both comprise a tomb-chest with quatrefoils containing shields; the top of the tomb-chest is in Purbeck. In each case small brasses of the dedicatee and his family were originally set into the rear panel of the canopy. On these tombs, perhaps because of the difficulty of carving Purbeck, there were no weepers or other statuary. A third example is illustrated here (Fig 46): the tomb destroyed in the War but formerly standing at the east end of the south aisle of All Hallows Barking, matching the position of the Croke monument in the north aisle. The occupant of the tomb is not known, though it has been associated with Sir Robert

Tate (d.1488), who has figured already in discussion of the Tate Panel at the same church, and who is also said to have been buried in the Barking Chapel to the north of the church. The brass inlaid in the rear panel of the tomb, depicting the Resurrection, has survived. This particular monument provides a close parallel for the fragment of moulded pediment from a tomb found during the excavation of St Nicholas Shambles (Schofield in prep) and fragments found re-used at St Mary at Hill (71).

Bridget Cherry has drawn attention to a group of late 15th and early 16th-century tomb-chests in and around London, which include those mentioned also the tomb of Johane Alfrey (d.1525) at St Helen's (Fig 68 below); she suggests that 'the small canopied altar tomb can be seen as an abbreviated version of the canopied tomb-chest with life-size effigies, crossed with the older tradition of the founder's tomb set in a low wall niche' (Cherry 1984, 89). The tomb of Johane Alfrey was intended to be used also as an Easter Sepulchre, where the crucifix and sacrament were deposited between Good Friday and Easter Sunday; no special architectural feature except

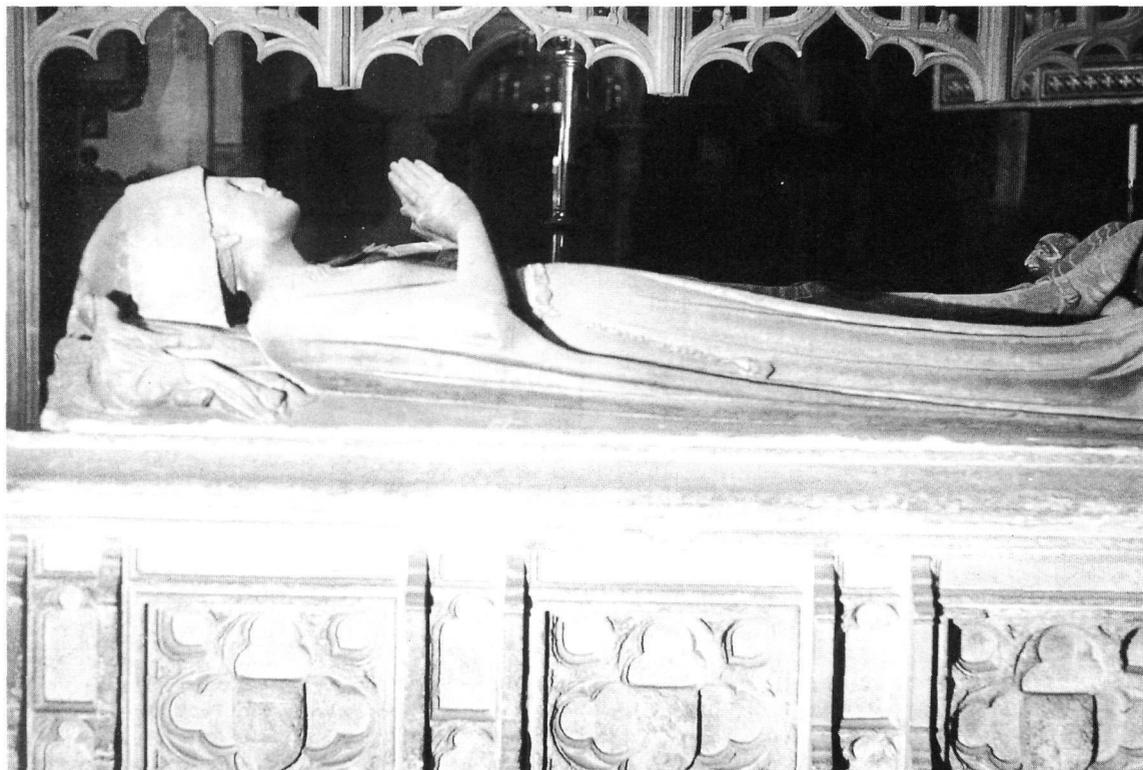


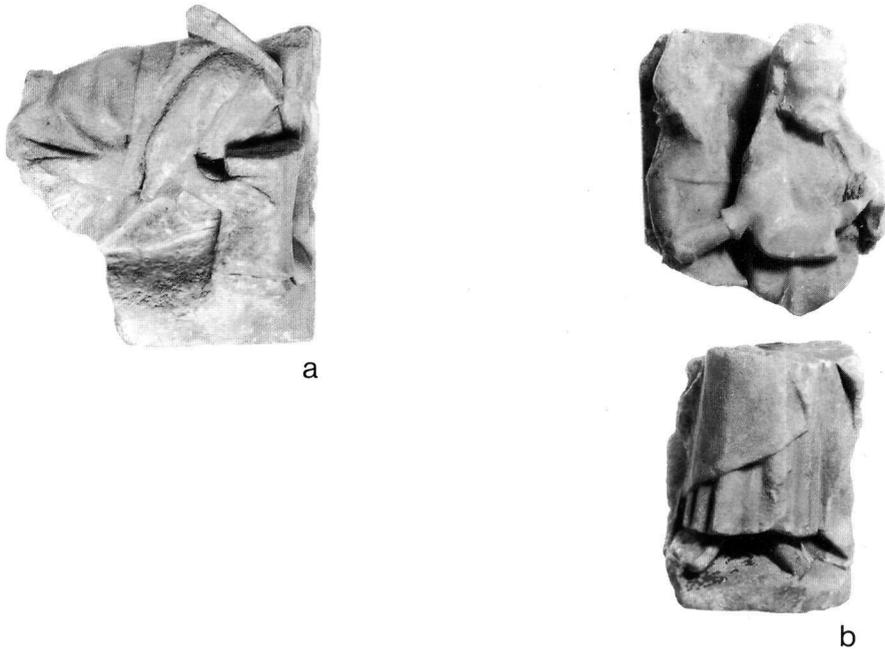
Fig 43. *St Helen Bishopsgate (44): monument to John Crosby and his first wife*

the table-top of the tomb chest would be required for this. Cherry suggests that this dual function may have been common for table-tombs on the north side of the chancel—the place also of Croke’s tomb at All Hallows. She further suggests that the popularity of this form may reflect a change in religious attitudes, a rejection of the private chantry chapel in favour of a commemorative monument in a prominent position, which would at the same time form part of the ritual at the most important ceremonies of the year.

These large tombs, although undoubtedly important, were not allowed to obscure worshippers’ views of the altar. The stone apertures in the Alfrey tomb are a multiple squint for nuns to see the altar in their chancel; Pemberton’s tomb, in its original place on the south side of the main altar at St Martin Outwich (62), but aligned at right angles to the east wall, had a squint cut through it for parishioners looking on from the south aisle.

The concentration of tombs of priests and of prominent parishioners at the east end of the church was part of a socially-defined zoning of

burials throughout the church and probably the cemetery. Buying a preferred spot was not unknown: in 1460, for instance, John Burton, mercer, bequeathed funds to pay for panelling and painting the roof of the nave of St Michael Bassishaw (81) in return for the burial of his body in the chancel. From the middle of the 15th century, also, there were different fees for burial in different parts of the church and cemetery, and this was widespread by the second half of the 16th century: in 1565, for instance, the vestry of St Helen (44) ordered that burial ‘above the steps’ (presumably into the chancel) would cost 15*s.*, between the steps and the choir door in all the aisles, 15*s.*, in the rest of the body of the church, 6*s.* 8*d.*, and in the porch 3*s.* 4*d.* (Cox 1876, i, 105). Such zoning can be taken back into the medieval period on the archaeological evidence alone, at least in the friaries. Would it correlate with skeletal features such as levels of nutrition or disease? This would depend on very careful excavation and phasing of human burials, to isolate earlier from later in the same area of church or graveyard. Such a fine phasing has



*Fig 44. Fragments of 15th-century alabaster retables from near St Olave Hart Street (95): (a) the beheading of a saint, probably St Katharine of Alexandria, but possibly John the Baptist; the headless neck is seen above the executioner's block, and (s)he holds the latter with her right hand. From a set of panels showing the saint's life; (b) two fragments of the Betrayal (though there is no sign of Judas), or possibly Christ before Pilate; Christ is on the right, a soldier on the left. Christ's hands are usually raised higher in the Betrayal. From a set of panels of the Passion (comments by Nigel Ramsay)*

not yet been possible in medieval graveyard excavations, for instance at St Nicholas Shambles (93).

Burial plots and monuments, once established on a spot, were also family affairs, as there is evidence that testators, in the 14th and 15th centuries, wished to be buried not only near a spouse or close relative who had predeceased them, but sometimes in the same grave or tomb: husbands with wives, and sons with fathers (*Cal Wills* ii, 81, 132, 285–6 (all 14th-century examples); the topic is discussed briefly by Harding 1992, 126–7).

The liturgical space may also have had, as another religious focus, a collection of relics. Some parish churches assembled collections of relics, perhaps in part as souvenirs of parishioners' pilgrimages; and these may have influenced the internal arrangements in London churches. Where were they kept, and was a special space arranged around them, or access created to them? A relatively poor church such as All Hallows London Wall (7) reported in 1500–1 that it only possessed one relic, a bone of St

David, but a remarkable list of relics survives for St Margaret Bridge Street in 1472 (Welch 1912, 68; GL, MS 4711). At least 30 items reveal devotions ranging widely over holy figures and events of the Old and New Testament, as well as more recent saints. From earliest times came part of the bush of Moses, and part of his rod. From the times of Christ were preserved part of the manger and crib, part of the Sepulchre, and two fragments of the clothing of the Virgin; there was also part of the vestment and clothing of St Mary Magdalene, as well as a piece of the stone where she did penance. The first item on the list, and possibly the most precious, was a silver cross containing a piece of the holy cross. Also in the collection were part of the cross of St Peter, part of the cross of St Andrew, along with some of his bones, part of the cope of St Peter, and some clothing of St Matthew; a relic of St James Apostle the Less and some oil of St Katherine. Recent saints were represented by bones of St Hugh (of Lincoln), some flesh (*sic*) of St Wolston (Wulfstan), clothing of Edward the Confessor, the stole and comb of St Dunstan, bones of St

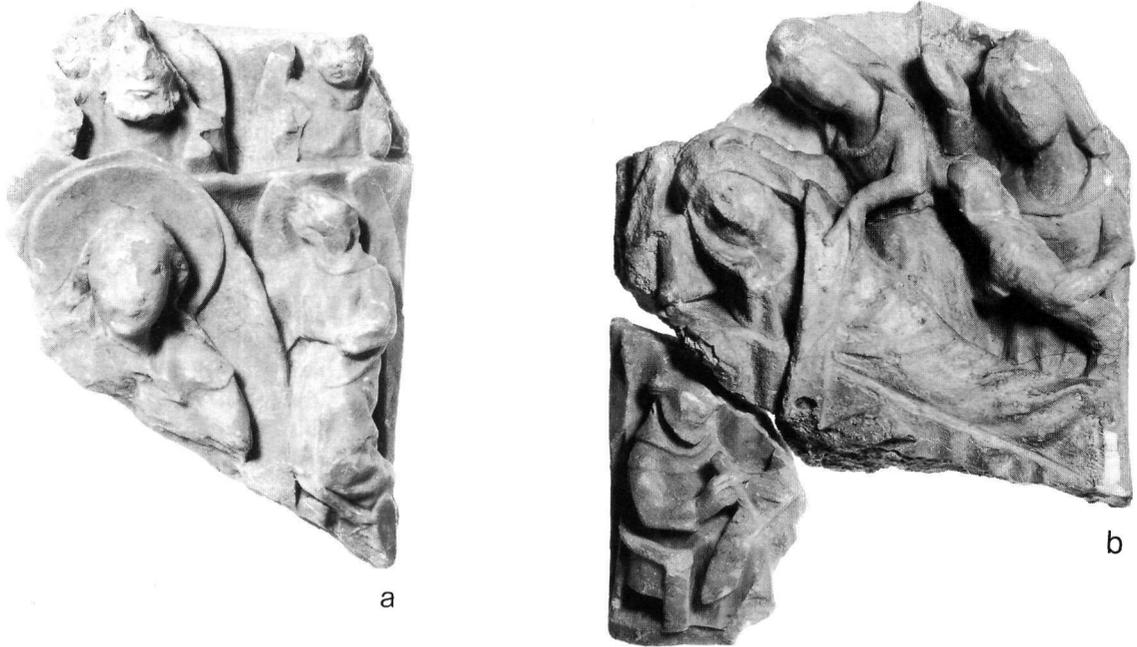


Fig 45. Fragments of 15th-century alabaster retables from near St Olave Hart Street (95): (a) two fragments of the Assumption of the Blessed Virgin Mary. The head of God the Father is above Mary's; each is flanked by angels. From a set of panels showing (probably) the Joys of the Virgin Mary; (b) two pieces from the Nativity. The Virgin lies in bed, while Christ is held up at the right; Joseph is at the lower left. From a set of panels showing (probably) the Joys of the Virgin (comments by Nigel Ramsay)

Blaise, a tooth of St Brigid, and hair of St Thomas Becket. Sadly there is no mention of where these relics were displayed in the church.<sup>16</sup>

### Burials and cemeteries; buildings in the churchyard or near the church

The proliferation of funerals, and the need for ground in which to bury the dead, must have been a concomitant of urban growth in the 10th and 11th centuries. It might even have been one reason for the founding of neighbourhood churches.

The cemetery at St Nicholas Shambles (93) appears to have lain north and east of the first church in the 11th century; across the City near Aldgate, a church founded shortly before and subsumed into the site of Holy Trinity Priory in 1108 (9) had an extensive cemetery. These examples suggest that at least some churches had cemeteries in the 11th century, though clearly others did not a century later; in the St Paul's visitation of 1181, six of the 20 churches in the cathedral's possession did not have cemeteries.

Nearly all parish churches in London had burial grounds, some separate from the church, by the early 14th century. A proportion of the will-making class, up to 30% in a sample researched by Harding (1992), chose burial outside their parish; the churchyard of St Paul's was the most popular alternative for people from adjacent or nearby parishes (Sparrow Simpson 1897, 285).<sup>17</sup>

Buildings in or bordering on medieval churchyards have not so far been identified in archaeological excavations, and the following account relies on documentary evidence. Several churches had cloisters around the cemetery, though it is not known precisely what these comprised (the word *claustrum* can mean simply an enclosure). The earliest clear reference is to cloisters at St Lawrence Pountney in 1392, though this is perhaps a reference to the buildings of the college of priests north of the church; other references are to cloisters at St Magnus in 1518 (Figs 9 and 13) and All Hallows the Great (3) by 1546, perhaps part of the new cemetery added in the late 14th century. Stow additionally mentions cloisters at St Mary Aldermanbury (65), St Mary Bothaw and St Michael Cornhill (Fig 10,



Fig 46. *All Hallows Barking* (1): anonymous monument formerly on the south side of the church, destroyed in the Second World War (NMR); the resurrection brass which was fixed to it has survived and is now displayed in the church

Stow i, 229, 197); a walk or cloister is shown around the north churchyard of St Christopher le Stocks (32) by Leake in 1666.

The cloistered churchyard of St Michael Cornhill had a preaching-cross, erected by Sir John Rudstone, mayor in 1528; he died in 1531 and was buried in a vault beneath it (Overall 1869, xi). Crosses are also shown on the copperplate map in the churchyards of All Hallows the Great (1), St Andrew Hubbard, St Botolph Bishopsgate, St Dunstan in the East (35), St Helen Bishopsgate (44), St Katherine Cree (50), St Lawrence Pountney and St Magnus (Figs 8–9). Churchyard crosses were used as one of the focal points of the Palm Sunday procession. Several churchyards had a well (St Antholin (18), built or endowed by William de Hanhampstede, 1348; Fig 8, *Cal Wills* i, 598), St Giles Cripplegate (42; 1550) and St Helen Bishopsgate (44, Fig 9). As already noted, the churchyard of St Margaret Bridge Street contained an image of St Christopher in the 15th century.

Some churchyards had trees, which occasion-

ally were specified in wills as requested burial places, for example two elms at All Hallows Lombard Street (6) in 1422, and a box tree at St Botolph Aldgate in 1468 (28); a tree is shown in the churchyard of St Dionis in 1559 (34, Fig 8). The box tree was generally encouraged in medieval churchyards for its foliage, which was used for decorating the church at festivals. At St Andrew Hubbard about 1485, the tree in the churchyard had to be trimmed against caterpillars (GL, MS 1279/1, f.51).

In 1413 the churchyard at St Botolph Bishopsgate (30) had an anchorite in it, or perhaps more accurately at its edge (*Historic Towns Atlas*, 86). This holy person is likely to have inhabited the adjacent bastion of the City wall, which overlooked the churchyard; though to obtain audience with the anchorite, the visitor from the churchyard side was required to cross the City ditch.

Buildings in or encroaching upon the churchyard could include the rector's house, as at St Bartholomew by the Exchange in 1372, or a house for chaplains of the chantry endowed by a testator, as at St Antholin (18) in 1349 (*Cal Plea & Mem R* 1364–81, 144; *Cal Wills* ii, 2). Records of the Assize of Nuisance in the first half of the 16th century provide the outline dimensions of two parsonages (67, 69). After the Reformation, several churchyards had tenements built upon them by the parish; these plots still exist in modern building lines, as for instance the strips on the north side of both St Michael and St Peter Cornhill (99).

By the end of the medieval period a number of churches had schools attached to them; but structural or documentary evidence for any special buildings or arrangements for education is so far lacking. Presumably much of the business of the school took place within the church itself. Schools were set up in 1447–8 in All Hallows the Great (3), St Andrew Holborn (14), St Peter Cornhill (99 which also later acquired a library built by the executors of Sir John Crosby) and St Mary Colechurch; and in 1456–7 in St Paul's Churchyard, at St Mary le Bow (69), St Dunstan in the East (35) and at the hospital of St Anthony, Threadneedle Street (Fig 8A). A girls' school was attached to the nunnery and parish church of St Helen Bishopsgate (44) by 1459, and in 1523–4 St Mary at Hill (71) used a chamber in the adjacent Inn of the Abbot of Waltham as a parish school (Strype 1720, i, 162–3; for the

school at St Helen's, *Historic Towns Atlas*, 87; for that at St Mary, Littlehales 1904–5, i, 321).

Churches were also part of the social environment of the medieval City in other ways. They were used as meeting places both formally and informally. The wardmote for Faringdon Within was held in 1339 in the church of St Sepulchre (103), that of Cripplegate Ward in St Alban (11) in 1355 and special meetings for legal and military purposes were also held in churches (*Assize of Nuisance*, 454; *Cal LB D*, 278; *Memorials*, 143, 500). An ancient well possibly formed the original nucleus of St Bride's (31), and there was a well in the west (parish) churchyard of St Helen Bishopsgate (44) as shown on the copperplate map; in the latter case, there is still a manhole in roughly the right position. Other public wells were to be found at the street-ends of several churches, such as St Olave Jewry (96) and St Martin Outwich (62, Fig 47). These wells were turned into pumps in the later 16th century, and continued to be places of public congregation

until they were replaced by another water system in the 19th century. The public wells, in these cases, were presumably dug adjacent to churches because the latter were natural points of congregation.

## SOME THEMES FOR CHURCH STUDIES IN LONDON

### Churches and topographical development

The suburbs were, like the waterfront, areas of growth in the medieval period. If we could establish the dates of foundation of the churches immediately outside the gates of London—three dedicated to St Botolph, and one to St Giles—then we would have an indication of the spread of settlement outside those gates. So far the indications are that the suburban churches, apart from the prior case of St Andrew Holborn, date from broadly around 1100; St Giles Cripplegate

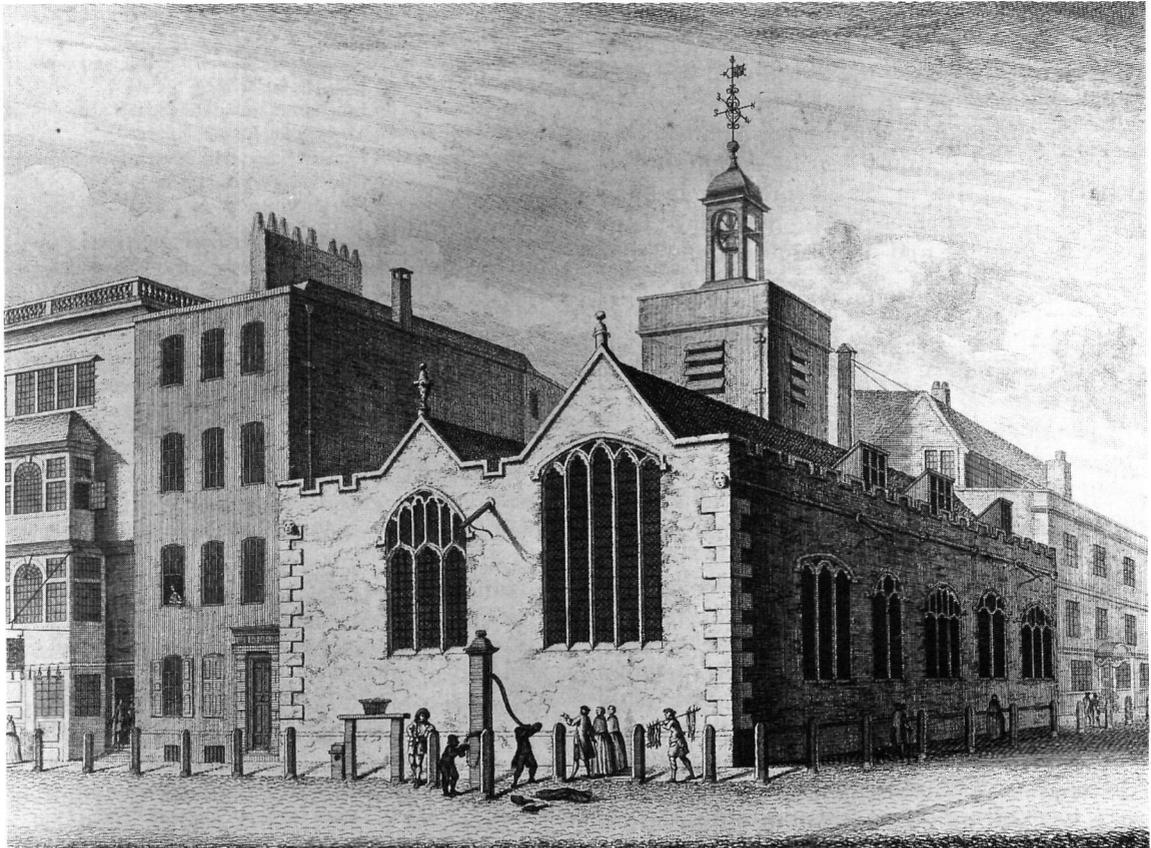


Fig 47. St Martin Outwich (62): view from east by West and Toms, 1739, showing the pump (in medieval times, a public well)

(42) was reportedly built in c.1102–15, and St Botolph Aldgate (28) is mentioned in 1125 as the church of the *Cnihtengild*, probably being in place before the founding of Holy Trinity Priory in 1108.

With so many small, complex churches, it is difficult now to investigate the question of whether the size of any one parish church reflected the size of its intended or actual congregation. But a suggestion may be made about the probable relation between the sizes of several suburban, and intramural but peripheral churches, and the local population movements in the 15th and 16th centuries. To the west, the churches of St Bride (31), St Andrew Holborn (14) and St Sepulchre (103) were completely rebuilt during the 15th century; as far as these developments can be dated, they are largely in the decades after 1440. To the east, around Aldgate, the churches of St Andrew Undershaft (16) and St Botolph Aldgate (28) were rebuilt in the early 16th century. These were all fairly large churches; St Giles Cripplegate (42), serving a new northern suburb, was also of substantial size when rebuilt after a fire in 1545. These rebuildings—especially the exceptional size of St Sepulchre, which in its final form was over six times the size of the contemporary St Ethelburga Bishopsgate (38)—would suggest the pressure of population growth in the suburban and intramural but peripheral areas, requiring large churches from the mid 15th century. Only in the cases of St Andrew Undershaft and St Bride do we know that this meant a larger church than before, but it seems likely that this was also the case for the others. Within the central part of the City, in the 15th century, there was much embellishment of churches but few cases of enlargement.

During the 15th and 16th centuries, the numbers of churches in other large towns declined, but there was comparatively little cutback in London. Though the parish of St Augustine Papey was submerged in the 15th century and three parish churches were made redundant at the Reformation (St Nicholas Shambles (93); St Audoen; St Mary Axe (67)), there was no large-scale reduction in the number of churches, as there was for instance at Lincoln, where 46 parishes with churches (43 of which were in existence by 1150) were reduced to a mere nine in 1549, or at York where the number of parishes was rationalised from 40 to 25 (Hill

*Table 1. Summary of major rebuildings in London parish churches, 1100–1550*

1100s	St Bride Fleet Street, tower, square E end
1150–1250	St Nicholas Shambles, extension of chancel
1200s	All Hallows Graccchurch Street, aisle
1200s	St Bride Fleet Street, N aisle, chapels to chancel
1200s	St Helen Bishopsgate, S transept
1200s	St Martin Orgar, square E end
1200s	St Michael Bassishaw, square E end
1234	St Magnus enlarged (?N aisle)
1230–40	All Hallows Barking, aisles
1285	St Giles Cripplegate, Lady Chapel
1299	St Martin Vintry, rebuilding
1300s	St Alban Wood Street, chapels
1300s	St Alphage, rebuilding on city wall
1300s	All Hallows Barking, vault at SE corner; chapel?
1326	St James Garlickhithe, rebuilding
1330	All Hallows the Less, rebuilding
–1339	St Giles Cripplegate, S aisle
1340–1400	St Nicholas Shambles, chapels on sides of chancel
1350s +	St Helen Bishopsgate, chapels
1360s +	St Michael Crooked Lane, choir and side chapels
1371	St Thomas Apostle, rebuilding and glazing
1377	St Nicholas Cole Abbey, tower and S aisle and glazing
1380s + 1397	All Hallows the Great, ? S aisle and cloister
1381	St Dunstan in the East, S aisle
1390	St Ethelburga, rebuilding and S aisle
1390s	St Michael le Querne, enlarged
1390s	St John Zachary, rebuilding with a S aisle
1396	St Giles Cripplegate, tower
1397	St Martin Vintry, tower?
c.1400	St Antholin, 're-edified'
c.1400	St Botolph Aldersgate, S aisle
1400–20	St Swithun, rebuilding and tower
1400–69	St Martin Outwich, S aisle
1400–80	St Bride Fleet St, nave and aisles
1400–1540	St Nicholas Shambles, aisles and vestry
1409 +	St Michael Paternoster Royal enlarged
1412	St John Walbrook, enlarged
1421	St Michael Cornhill, new tower
1422	St Michael Wood Street, enlarged
1425–67	St Martin Ludgate, tower
1428	St Mildred Bread Street, tower
1429	St Stephen Walbrook, construction on a new site
1429–30	St Michael Wood Street, tower
1430	St Michael le Querne, enlarged
1433	St Martin Orgar, chapel
1436 +	St Olave Jewry, N aisle
1437	St Martin Ludgate, tower
1438	St Bartholomew the Less (Exchange), rebuilding
1438	St Mary Aldermanbury, tower
1439 +	St Andrew Holborn, rebuilding
1440	St Margaret Lothbury, extension
1440s	St Dionis Backchurch, rebuilding
1442	All Hallows Staining, roof
1442 +	St Mary Woolchurch, rebuilding
1450s +	St Antholin, rebuilding

Table 1. *Continued*

1450s +	St Sepulchre, rebuilding
1457	St Mildred Poultry, extension to E and roof
1460	St Michael Bassishaw, rebuilding
1460s	St Olave Hart Street, rebuilding
1460s–70s	St Peter Cornhill, 3 new arcades, roof and glazing
1462–72	St Christopher le Stocks, rebuilding and glazing
1466	St Dionis Backchurch, S aisle
1475	St Helen Bishopsgate, rebuilding of nave
1491	St Peter Wood Street, roof and tower repaired
1494	All Hallows Gracechurch Street, S aisle
1494	St Martin Vintry, roof, glazing
1495	St Mary Magdalen Milk Street, chapel
1496	St Mary Woolnoth, chapel and other parts
1497	St Mary at Hill, N aisle
1500s (early)	St Botolph Aldgate, rebuilding (?tower)
1504	St Katherine Creec, tower
1506	St Christopher le Stocks, tower
1509	St Bartholomew the Less (Exchange), chapel
1509+	St Vedast, chapel and rebuilding
1512	St Mary le Bow, tower
1513	St Mary Magdalen Milk Street, substantially repaired
1517	St Dunstan in the East, chapel
1518	St Mary Aldermary, rebuilding
1520	St Nicholas Acon, repair and battlements
1520–32	St Andrew Undershaft, nave and aisles
1527	St Michael Bassishaw, chapel
1528	All Hallows on the Wall, S aisle
1538	St Margaret Pattens, rebuilding
1545	St Giles Cripplegate, rebuilding after fire <sup>18</sup>

1948, 147–8; Palliser 1979, 240). At rising major towns such as Bristol, where the 18 parochial churches of the Middle Ages survived the Reformation, and London, a contrasting resilience and continued provision of churches can be traced. In London, three redundant churches were replaced in numbers by others: Christ Church Greyfriars absorbed the nearby St Nicholas, and new parishes were established at St Anne Blackfriars (by 1544), St Bartholomew the Less (1547) and St Bartholomew the Great in Smithfield (1548), St James Duke's Place (1622), the last on the site of the chapter house of Holy Trinity Priory Aldgate. Presumably ecclesiastical re-arrangement, rather than pruning, reflected London's spiritual needs; by 1550 the City's population was beginning to equal the early 14th-century figure and would soon eclipse it. Future pressure from population numbers would be felt in the suburbs, resulting eventually in the Commission for Fifty Churches in the early 18th century, which built or subsidised 19 churches in such places as Shadwell, Southwark, Spitalfields, Gravesend and Deptford (Port 1986).

### Building histories, architectural style and patronage

From the 12th century, alterations and rebuildings are more frequently known from documentary and archaeological evidence. The table opposite, showing dated rebuildings at City churches, is no doubt far from complete, but attempts to show overall patterns of building from what is known so far.

Several suggestions about architectural trends may be made from this table and the preceding summaries of individual topics. Monuments of prominent civic persons and their wives, either in stone or glass, could be seen in London parish churches from the 1280s. When, slightly later, chapels can be identified in the archaeological record, they are north and south of the chancel, in nearly all cases earlier than known aisles to the nave of the church. There is a clear concentration of religious feeling, and architectural consequences, at the east end of the church. Probable or possible examples, all dating to the 14th century, are All Hallows Barking (1), St Alban (11), St Botolph Billingsgate (29), St Bride (31), St Helen (44) and St Nicholas Shambles (93).

Secondly, perhaps from about 1370, towers were constructed in numbers. This paper has suggested that many church towers in London were of Kentish type, which outside London dates from 1370 (if Lambeth can be called outside London) to 1500. The London towers are nearly all undated, but there were several, if not many, standing by 1420. Perhaps the 'Kentish' tower should be renamed the 'London' type. The copperplate map shows that where the church lay on the north side of a street (and the base of the tower is therefore shown), the entrance often lay through the tower which stood at the south-west corner of the church. In several cases a tower must have protruded on three of its four sides from the south-west corner of a church, as demonstrated in the plan of St Andrew Undershaft before its rebuilding in 1532 (16, Fig 2). In this regard the towers of St Botolph Aldgate (28, Fig 24) and especially St Bride (31), which were similarly only attached by their north walls to the south side of the church, and specifically stood somewhat to the east of the south-west corner of the nave, may not have been remarkable exceptions in the medieval City. Church towers were primarily belfries, and if this line of thought is correct, they would in many cases have stood almost separate from the body

of the church for structural reasons, only later being incorporated into the main building when aisles were added to the nave. Eleventh and 12th-century towers were to be found at All Hallows Barking (1), St Bride (31) and St Mary le Bow (69), but towers became more widespread in the second half of the 14th century. This greater provision or need for stout belfry towers presumably coincided with a fashion for larger church bells from the London founders.

Thirdly, there is little evidence for the late medieval church of nave and two aisles in London, again with a small number of exceptions, until the first half of the 15th century. The nave and aisles plan was then normal, but perhaps not before, when the addition of a single aisle, often the south aisle, was apparently sufficient as a first step in expansion (see late 14th-century examples in table).

A fourth distinctive development came with the fashion for prominent tombs within the aisled church, on north and south sides at the east end. To some extent, though not exclusively, this overtook the practice of building whole new chapels.

Finally, it is evident from the table that church building was a fairly continuous activity from 1300 to 1530; there may have been just as much building in the decades before 1300, but the evidence is scanty. Churches, therefore, do not appear to have peaks and troughs of building cycles; interest in, and cash for, building projects was constant over this long period. Though the 14th century might be seen as a period of expansion in endowment of chantries, it does not, from present evidence, coincide with a period of extraordinary architectural embellishment. Table 1 shows that there are over twice as many documented rebuildings in the 15th century as in the 14th century.

Further, it might be argued that the construction dates of these churches and their modifications do not parallel the City's economic fortunes: there is little if any evidence of stagnation in the 15th century as far as building or embellishing parish churches is concerned. But the table, which tells of work at only a small proportion of 108 parish churches, could mask wealth and poverty in different parts of the City. Other archaeological indicators (houses, pottery, number of building phases on any one site) may in the future suggest how some localities improved and others decayed.

Architectural style in churches would have

been a matter for the masons and carpenters who had much more work in the capital's royal and noble residences, monasteries, friaries and public buildings. References to named medieval masons and carpenters on pre-Fire parish churches in London are few: the design of the south aisle of St Dunstan in the East (35) in 1381 by Henry Yevele, works perhaps for a new north aisle and cutting-back of the east end of St John Walbrook in 1412 by Walter Walton, the roodloft of St Mary at Hill (71) in 1427 by carpenter William Serle, the building of St Stephen Walbrook (105) on its second site in 1429 by Thomas Mapilton, work by Thomas Coventry at St Olave Hart Street (95) in 1464, which perhaps included the panelled ceiling, and the making of the battlements on the nave and south aisle at St Mary at Hill (71) by John Warner in 1513-14. We can suggest that new ideas were given their first trial on larger buildings in the capital, such as the innovations which became the hallmarks of Perpendicular architecture in the period 1290-1335 (Harvey 1978, 16, 195, 314); the style may have been prompted and encouraged by the growing wish of the merchants and civic dignitaries to build monuments to themselves and their wives in their local churches.

Architectural embellishment of the church was therefore a product of patronage, whether private or corporate. Many trade guilds or fraternities were associated with a parish church, often the local church for their hall. The guild stored banners and other equipment in the church, and went there on their saint's day. In other towns, guilds and fraternities characteristically maintained lights before images in the parish church, and occasionally organised or contributed towards rebuilding or extension (Duffy 1992, 146-7). In London, however, there is little evidence for building or embellishment of churches by the crafts as corporate bodies, or by parish fraternities, as opposed to some of their individual distinguished and rich members (for association of specific crafts with individual churches, see 56, 93). Thirty-four London fraternities made returns in 1389, and some of these were in the larger churches such as St Paul's, the Blackfriars or the Whitefriars. Only three are known to have been directly concerned with the repair of parish churches: at All Hallows London Wall (7) in 1343; the fraternity of Our Lady and St Giles at St Giles Cripplegate (42), which may have originated in the building of a Lady Chapel in the south aisle and which

recorded parish expenditure on the aisle and church roof; and St Magnus may have been rebuilt partly out of the joint funds of two fraternities (Westlake 1919, 180–8). The rebuilding of St Andrew Undershaft (16) in 1520–32, with its commemorative glass, is a rare case where corporate sponsorship, no doubt inspired by an individual, can be seen at work.

A further question concerns whether London churches themselves displayed any particular characteristics that set them apart from rural churches, and so might be called specially urban. In medieval Dutch towns, for instance, it is suggested that town churches were very similar to their rural counterparts between 1000 and 1400, but that after 1400 the large hall-church developed as a peculiarly urban form (Sarfati 1990, 193). In London we can suggest that the extraordinary development of chapels protruding north and south of the chancel, often on special undercrofts, in the 14th century was a feature hardly ever present in rural English churches. Thus we can say that during the second half of the 14th century, churches in London were displaying specifically urban characteristics.

### **The archaeology of literacy**

Another potential research topic is the archaeological study of literacy; when words appeared on brasses, in glass, and on tombs, and which language was used. The late medieval parish church, through its iconography of painting, carving and glass, was a highly effective educator at a time when lay literacy was rising. An inscription on the earliest surviving brass at St Helen Bishopsgate (44) of 1393, is in French. Others are in Latin, and the earliest surviving English inscription is on a brass of 1514 at All Hallows Barking, but indents in other places have earlier English inscriptions, such as one at All Saints, Stamford, in 1489 (Duffy 1992, 7; RCHM 1977, 9). It seems likely that the late 15th-century London parish church interior would contain at least some English words which any literate parishioner could understand.

### **Liturgy and other ways of dividing space within the church**

Churches can be studied to demonstrate how liturgy was practised, how church interiors were

used, and therefore how churches were perceived by the people who frequented them. In the case of larger churches such as cathedrals, however, the modular design of the building militates against this: their architectural form shows little interaction with function (Wilson 1992, 9, 223). Normally, in addition, the arrangement of spaces, access and processional routes within churches is only perceptible in detail when medieval floor levels survive, and this has rarely been the case in London excavations reported so far.

Throughout the medieval period the church was organised as a space around the altar. From at least 1300, the more prestigious monuments were close to the altar, which by then had migrated from a position nearer the chancel arch to an emphasised eastern location. The religious spaces or features now included chapels off the chancel, brasses of priests which conventionally lay in the chancel before the altar, and later the table-tombs of the late 15th century. In all these embellishments parish churches shared English cathedral practice of constructing private funerary chapels and monuments within the main space of the church, rather than the Continental usage of building extensions out from side aisles;<sup>19</sup> though, as shown above, there were rare exceptions.

Less clear from this study is any liturgical reason or background for the London preference for the main entrance to the church to be through a south-western tower. Though porches were to be found occasionally but rarely on the tower itself or leading directly from the street or churchyard into the south aisle, they were unusual. The tower most often functioned as the church porch, which was the setting for part of the baptism and marriage ceremonies.

### **The church and its local urban environment**

Churches in London were often physically constrained, and at a local level, the distinction between ecclesiastical and secular boundaries was sometimes either intricate or, as a result, blurred. Several churches stood on vaults which were let out to secular interests (All Hallows Honey Lane (4), All Hallows the Less,<sup>19</sup> St Mary Colechurch); the surviving undercroft at St Olave Hart Street (95) may be an example of this. A church expanded, if necessary, over an adjacent property, for example at St Nicholas Cole Abbey in 1377 and at St Mary at Hill (71) in 1500–1. The

detailed study of St Botolph Billingsgate (29) will show how the church expanded over reclaimed land, filling a space up to an adjacent private stone house which was later bequeathed to it as a vestry. At nearby St Leonard Eastcheap (53), Thomas Doget gave a portion of his house for the enlargement of the chapel of the Blessed Virgin on condition that he could have a window into the chapel from his house in 1337, and in 1544 the vestry lay under another neighbour's house (*Assize of Nuisance*, 574 (1337, cited in 1370; Loengard 1989, 266). As already noted, after the Reformation the parish church was further exposed and increasingly amenable to commercial pressures or opportunities. Portions of the churchyard adjacent to lanes and streets were often sold for development as shops. Church land, particularly in the City centre, was snapped up for other purposes: the sites of St Audoen and St Nicholas Shambles (93), both off Newgate Street, became the sites of housing and the parsonage of St Nicholas, enlarged by encroachment into the only recently closed churchyard, became Butchers' Hall.

### Church archaeology

To promote the study of the topics outlined here, and other topics, certain issues in church archaeology must be addressed and methodology developed, in London as in other towns. First, there is an argument for the total excavation of church sites; it is said that fragmented sections and small holes will not suffice (Morris 1987, 184). The excavation of St Nicholas Shambles (93) in 1975–9 (Schofield in prep) recorded most of the medieval church and the great majority of its northern cemetery. Only thorough archaeological investigation can produce a comprehensive history of a parish church, as illustrated by the four churches in the City which have been substantially excavated and reported in more than outline before 1991: St Alban (11), St Bride (31), St Swithun (106) and now (apart from its west and south borders) St Nicholas Shambles (93). But all the churches excavated by W F Grimes (the first three mentioned above) were excavated hurriedly and with inadequate resources; the church of St Nicholas Shambles survived only as truncated foundations, without the crucial floor levels. The implication of this argument, that we need to excavate at least one more parish church site (and a good one) in its

entirety, clashes however with current thinking on the conservation of archaeological strata in towns.

Secondly the church and its stratigraphy must be more accurately dated. Current work on pottery, which has identified 13 separate ceramic phases in the City between about 1000 and 1550 has yet to be extended in detail to church excavations. Since dating material from St Nicholas Shambles (93) was on the whole sparse, post-excavation work on St Botolph Billingsgate (29) will be the first real study of the applicability of ceramic dating to a parish church site in the City with intact floor levels (and then only to the south aisle, which comprised the area of excavation). Further work on City churches may usefully investigate church extensions, or parts of churches, which are reliably dated: this will be fruitful for the 15th and 16th centuries, when documentary evidence is relatively profuse. As outlined at the beginning of this paper, churches can contribute much to the detailed history of building construction and decoration, as well as providing long development sequences of strata in datable blocks of stratigraphy which complement the waterfront series of revetments and their tightly-dated sequences.

The role of archaeological recording on medieval church sites where fabric survives above ground should be carefully considered. Stone-by-stone recording of medieval (and possibly late Saxon) fabric has taken place at several churches, notably at St Bride (31), St Ethelburga (38), St Helen Bishopsgate (44), St Mary at Hill (71) and St Vedast (108); exercises elsewhere of recording larger portions such as complete towers, for instance at St Mary Bishophill Junior, York, show the great potential of such studies (Wenham *et al* 1987). The lower stages of the tower of St Giles Cripplegate (42), now revealed by cleaning, are a welcome example of a significant amount of medieval stonework surviving intact. Further pieces of medieval work continue to appear at Wren churches, and this is no doubt an area to concentrate on in the future. Each medieval church needs an accurate map of its surviving medieval fabric, as a management tool for the future.

Several medieval churches still lie in the ground more or less in their pre-Fire state: those which were destroyed in the Great Fire and not rebuilt (their sites and churchyards being used for burial from 1666 until 1851). The excavation at St Martin Orgar (61) showed that, despite

some damage from post-Fire burials, parts of the medieval church are to be found in those burial grounds which have survived, and a good number have, even to the present day. Thus they represent a reservoir of data, not only about burials, but about the underlying pre-Fire church.

In their discussion of the contribution of archaeology to the study of Saxon and medieval London parish churches, historians Christopher Brooke and Gillian Keir concluded, from work up to about 1970, that 'the spade has a great deal more to tell us still, but we cannot expect miracles' (Brooke & Keir 1975, 91). The overall conclusion of this survey is that the parish churches of London, though damaged by time, fire and bombing, still have considerable potential for adding to our understanding of many aspects of medieval religious and urban life.

## GAZETTEER OF CHURCH SITES

*John Schofield*

*With contributions by Ian Betts, Natalie Cohen, Tony Dyson, Charlotte Harding, Richard Lea, Peter Marsden and Gustav Milne*

This Gazetteer describes sites of Saxon and medieval parish churches in the City of London (not including Southwark) which have been examined or observed by antiquaries and archaeologists, or for which there is an amount of topographical information (usually plans or drawings) allowing reconstruction of significant aspects of the church buildings. In the majority of cases, information from both archaeological and documentary sources is presented. In a minority of cases, where only a small observation of the church has been made, the documentary history has not been summarised.

Overall dimensions of surviving churches are shown on the plans in Figs 2–3; descriptions of their state around 1970, with details of post-War restorations, are in Pevsner & Cherry 1973, 142–81. References to the *Wren Society* are to the relevant pages of plans and details in the 21 volumes on Wren's work published by the Wren Society. References in the individual Gazetteer entries to recovered or surviving (*in situ*) medieval floor tiles are detailed and discussed further in the Appendix by I Betts below. Imperial measurements are usually cited: one foot equals 0.305m.

Church personnel in medieval London have not been considered here, but the number of chaplains at each church, as reported in 1379–81, is included as a guide to the general wealth of the parish church, and

perhaps as a very rough guide to the number of subsidiary altars within the church.

### All Hallows Barking (1)

First mentioned 1086 (*DB*, ii. 17–18); churchyard by 1271 (*Holy Trinity Cartulary*, 192). Described in RCHM 1929, 176–80. The plan in Fig 2, drawn in the 1920s, is of the church before severe damage in the Second World War, and before discovery of the Saxon arch. A plan to support the interpretation given here is shown on Fig 48.

This church has several early features. An arch of reused Roman bricks, discovered during clearance after bombing, stands at the south west corner of the

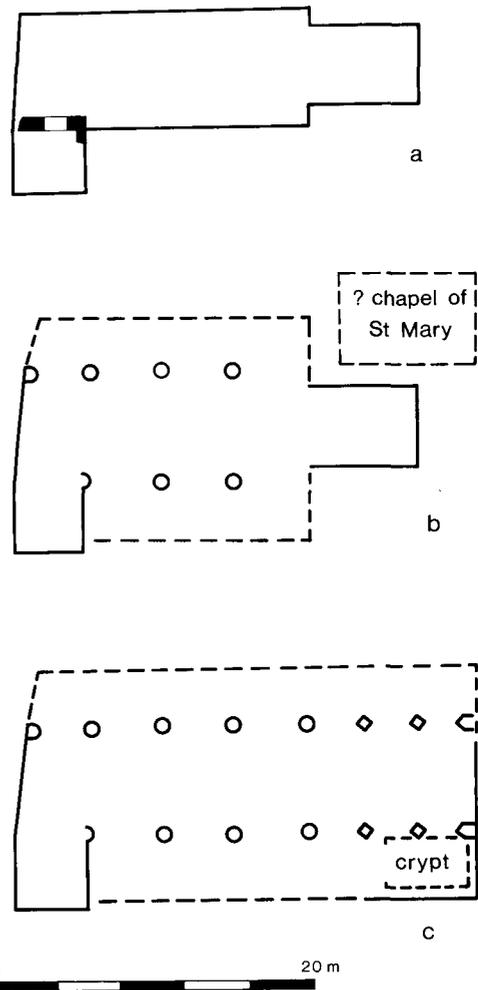


Fig 48. All Hallows Barking (1): suggested development plan from known fragments. (a) 11th century; (b) 13th century; (c) 15th century

church, in line with the south arcade. The jambs are formed of Roman brick, rubble and some dressed limestone. The arch is of Roman brick, in which the individual bricks are not set truly radially so that infilling of a wedge-shaped space at the crown is carried out in fragments of brick. In a similar position in line with the north arcade, a quoin of Roman brick can be seen at first-floor level; it presumably comprised the north-west corner of the Saxon church.

On the basis of similarities to arches in Brixworth church (Northants)—notably the use of Roman tiles 'with considerable disregard for radial setting', the All Hallows arch has been assigned a 7th-century date (Kendrick & Radford 1943, 14–18; Kendrick 1949, 83–5); this is restated without comment by Taylor and Taylor (1965, 399–400). Their plan also shows that they assigned the beginning of a north-south wall at the east end of the arch, to the Saxon period; this length was of unknown date to RCHM (the plan reproduced here in Fig 2), before discovery of the arch. The present study suggests that the arch and the north-west quoin could be of 11th-century date.

Foundations either of the Saxon church or of a 13th-century extension have been located beneath the present chancel. As early as 1708 it was reported that the foundations of a wall ran across at a considerable depth near the pulpit. During excavations for underpinning the nave (*Survey of London* 15, 114–5) three walls were exposed in this area, constructed of ragstone rubble in hard yellow mortar. The foundations of the south and east walls contained flints and fragments of Roman brick; the east wall was built on gravel foundations in a trench. The cores of the north and south walls included many reused worked blocks, probably Roman in date, and including some of architectural character. The east wall lay about 10ft 6in to the west of the present east end, and was 11ft long and 3ft 6in wide. Thirty feet to the west was the face of another north-south wall, its foundations now exposed in the side of the modern undercroft below the church, and probably that reported in 1708. This second wall marks the chancel arch probably in the 12th or 13th century, a likely date for the walls described; it remained the division between nave and chancel.

The bombing of 1940 also revealed several pieces of Saxon sculpture, reused in later masonry. Four fragments make up over 3ft of a cross shaft, with cabled edges, figure-sculpture, an inscription, a vine-roll, animal patterns and interlace decoration ascribed to the second quarter of the 11th century (Fig 21; Kendrick 1949, 83–5). There was also the head of a second cross, comprising a cross in a circle, c.1000; and a third in Ringerike style, with a stylised lion on the back (Kendrick & Radford 1943).

The church developed with arcades of four bays in c.1230–40, indicating aisles to north and south. The present east window dates originally from the mid 14th century, indicating an extension of the previous

chancel; the masonry of the east wall is dated to the 15th century by RCHM, and so presumably the window was rebuilt, either *in situ* or after having been moved from another location, at the later period. It is possible that the 14th-century church was coterminous with the 15th-century rebuilding at the east end. A vaulted 14th-century undercroft south of the choir probably indicates a chapel at the south-east corner of the church. In the 15th century the body of the church was rebuilt, including new piers for the three bays of the chancel. The representation of the church on Ogilby and Morgan's map (1677) shows that both north and south nave walls had projecting octagonal turrets for the rood stairs; in 1929 a doorway for the roodstair was still visible in the north wall and is still evident in part. Fifteenth-century windows, restored, survive in the north and south aisles, and there is a small patch of medieval, possibly Flemish floor tiles under glass against the north wall, and a number of Flemish tiles, probably of late 15th to mid 16th-century date, are reused in the present floor of the post-War crypt. Some Penn tiles from the church are also on show in the crypt.

The medieval tower is shown at the west end of the south aisle by Wyngaerde (c.1540; Fig 49). In the mid 17th century the medieval tower was taken down and replaced by the present tower of brick at the west end of the nave. A suggestion which would explain the survival of the Saxon arch is that it formed the north wall of a Saxon and medieval tower, and that therefore only the west and south sides of this tower were taken down in the 17th century; the north and east sides remained, the arch blocked up, to form new external walls to the church. This would also explain the survival of the fragment of 'Saxon' masonry at the east end of the arch; it was the original east wall of the tower, and this in turn is why this arch survived the various rebuildings of the church in the 13th to 15th centuries.

An altar of St Katherine is mentioned in 1390 (*Cal Wills* ii, 285). The church had four chaplains in 1379 (McHardy 1977, 91). The brasses in the church in the 19th century are described in detail by Maskell (1864, 41–58). Fifteen brasses and five indents were surviving in 1929 (RCHM 1929, 178–9); the present number is said to be 17. The Tate Panel (cover illustration and Fig 39) and the monuments from this church are discussed in the main text of this paper.

A chapel to St Mary called 'Berkyngchapel' was erected on the north side by Richard I (Harben 1918, 13; *Cal Wills* i, 645); the parish of St Mary Berkingchurch was frequently used as a synonym for the parish of All Hallows Barking. Edward I placed a statue of the Virgin in the chapel, and at least one miracle was attributed to it. Edward IV made it a royal chantry in 1465, appointing the scholar John Tiptoft, earl of Worcester as master (*Cal Pat R* 1461–67, 428). The chapel itself is described as 'on the north side of the church' or 'in the cemetery', both of which



Fig 49. *All Hallows Barking* (1): the church and its surroundings on the *Wyngaerde panorama*, c.1540 (Ashmolean Museum)

could refer to an appendage to the church, probably with a separate entrance to the churchyard, as well as to a physically separate building. The parish historian Maskell (1864, 13) thought that Barking Chapel was subsumed into the site of the east end of the north aisle in the 15th-century rebuilding. John Croke, one of the wardens of the chantry, died in 1477 and his monument still stands against the 15th-century north wall. There is no definite reference to the chapel of St Mary standing alone in the churchyard, and it seems equally possible that the chapel may have originally protruded north from the chancel and was later subsumed into an altar at the north-east corner of the 15th-century church. For the Croke and Tate families, see Lacey 1994.

One further piece of evidence apparently clashes with this second suggestion. The will of Robert Tate (d.1501), the possible sponsor of the Tate Panel, records his wish to be buried 'in the chapel called Berking Chapel, beside Berking Church', at the east end of the said chapel before the altar of Our Lady, directing his executors to make an arch in the wall (to breach it, or make a recess for a wall-tomb?) and to erect a chapel on the north side, to be called St Thomas's Chapel, with an altar on the east side; to provide a table with the Martyrdom of St Thomas; and a chantry priest (Maskell 1864, 57). Since the east end of the church itself had been rebuilt in the 15th

century, and the Croke tomb of 1477 placed against the north wall, the Tate reference presumably indicates that either (i) St Mary's or Berking Chapel was by then a separate building, entered solely from the churchyard, or (b) the name was associated with the north-east corner of the rebuilt church, as now, and the parish never carried out the request.

### All Hallows the Great (3)

Earliest mention: 1100–7 as *Semannescyrce* in a charter of Henry I (Harben 1918, 17). Burnt in the Great Fire and rebuilt by Wren 1683; plan in *Wren Society* ix, 2. Demolished 1893.

The church lay at the corner of Thames Street and Haywharf Lane. Judging a dispute of 1542 between the parishes of St Michael Crooked Lane and All Hallows the Great over a plot of land originally along the south side of the church at its east end, the City Viewers could find only that the plot and a cellar beneath it appeared to be built over by the south aisle of the church (and part of the chancel and a charnel house), some time previously (Loengard 1989, 165). This suggests that a cellar entered from Haywharf Lane lay under the south-east part of the church. The parish claimed this was the bequest of Thomas Atteleg, who died in 1373 (Harding 1980, 17).

In 1398 Sir Philip Seintclere and his wife alienated two messuages, part of the adjacent mansion of Coldharbour, to the church to make a cemetery and a chapel for the church (*Cal Pat R 1396-9*, 353). The cloister is mentioned in 1546 (*Cal Wills ii*, 655) and was ruined by the time of Stow (i, 235). In 1452 John Arcoll left a parcel of land for the enlargement of the church (*Cal Wills ii*, 552), but it is not clear where this was.

A plan of the fire-damaged church possibly by Wren (Summerson 1970, fig 12; redrawn here, Fig 50) shows that the pre-Fire tower was in the middle of the north side of a square church. The Perpendicular tower with crockets is shown by Wyngaerde (Fig 6), on the low-level panorama (Fig 7) and by Hollar (Fig 11). The church is also shown on the copperplate map (Fig 8), with a cross in its churchyard, presumably the cloistered area, on the south side. The Wren church had almost the same plan as the pre-Fire church, with the tower in the same position. Presumably the position of the tower on the copperplate map, apparently at the south-east corner of the church, is an error.

An altar of St Katherine under the belfry is mentioned in 1349 (*Cal Wills i*, 615). John Preston, corder, wished to be buried in the chapel of the Annunciation erected by his father (John de Preston) in the church, in 1353; his father's will had been

proved in 1339 (*Cal Wills i*, 435-6). The church had six chaplains in 1379 (McHardy 1977, 93).

### All Hallows Honey Lane (4)

Existing by 1197-1212 (*Historic Towns Atlas*, 64); churchyard by 1361 (*Cal Wills ii*, 40). Burnt in the Great Fire and not rebuilt.

During building works in 1836 Charles Roach-Smith observed tiles, pavements and vaults of an 'Anglo-Norman' church, along with the capital of a 'Saxon' column carved with twisted serpents and beadwork (Roach-Smith 1838). A pencil sketch in the Noble Collection of Guildhall Library, entitled 'part of old church discovered in Honey Lane Cheapside on digging the foundations of the new school, the site of Honey Lane Market, 1836' appears to be arches below either All Hallows Honey Lane or the adjacent St Mary Magdalen Milk Street (GL, Noble Collection, A306/3). It is not possible to say which is more likely. I am grateful to John Fisher for pointing out this drawing.

Excavations at the rear of 110-116 Cheapside by Professor Grimes for the Roman and Medieval Excavation Committee in 1954 located part of the

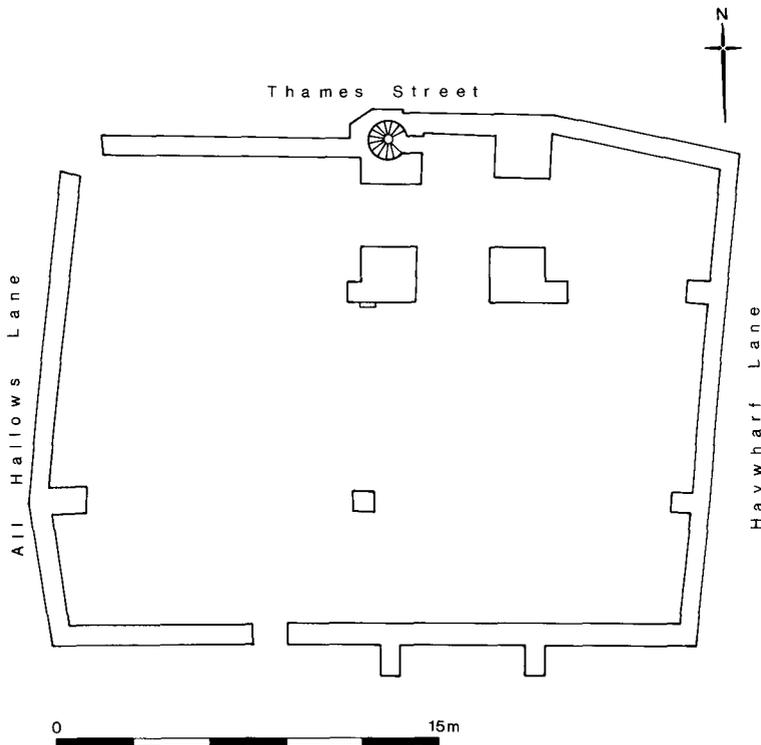


Fig 50. *All Hallows the Great (3): plan of fire-damaged church c.1667 (after Summerson 1970)*

churchyard. Burials were disturbed, but orientated with heads to the west in chalk-lined graves, at a depth of 13ft to 15ft 6in below street level. Traces of a wooden coffin survived in one case (Grimes 1968, 137–40).

The church was built over a cellar which is mentioned in 1306 (*Cal Wills* i, 699; *Cal Letter Bk A*, 245). The church had four chaplains in 1379 (McHardy 1977, 91). The plan of the church remains unknown.

### All Hallows Lombard Street (Gracechurch Street) (6)

Established by 1052–70 (Sawyer 1968, 1234); churchyard 1222–9 (*Holy Trinity Cartulary*, 331). Rebuilt by Wren 1686–94 (RCHM 1929, 166–8; *Wren Society* ix, 3). Demolished in 1939–40 (Oswald 1940; Bloe 1948).

During the demolition of the Wren church, an early stone church with overall dimensions of 66ft × 22ft was recorded by J W Bloe (Fig 51). A stagger in the north wall may indicate the division between nave and chancel; there was no cross wall between them. The walls were of ragstone with reused Roman tiles and bricks between layers of clean gravel, between 3ft 6in and 5ft wide. At the west end were two fragmentary walls of pitched ragstone in soft mortar, 2ft–2ft 6in wide. These might have been a west porch, or part of an earlier structure.

In the 13th century a narrow north aisle about 10ft wide was added, of chalk walls on ragstone piers, with pointed foundation arches of chalk at the west end. This aisle was widened in the late 14th or early 15th century and further rebuilt c.1500 with ragstone walls on chalk and sandstone arches (Fig 52). The east wall of the chancel was also built on chalk foundation arches. The tower at the west end of the nave was probably constructed at the time of the later rebuilding of the north aisle (c.1500; see documentary evidence below). In his rebuilding Wren positioned a new tower in the south-west corner (Fig 53).

The church was rebuilt from 1494 onwards. John Warner, armourer, later grocer, and sheriff, began the rebuilding of the south aisle in 1494; his son Robert finished it in 1516. The Pewterers contributed towards the north aisle and other parts. These references, with the archaeological detail and Wren's three-aisled plan (RCHM 1929, 166), indicate that the rebuilding of 1494 produced a church with three aisles. The tower was finished in 1544 and incorporated a stone porch taken from the dissolved priory of St John Clerkenwell, as was the frame for the bells (Stow i, 203).

The copperplate map (Fig 8) shows the tower of 1544 and the porch from St John's Priory. The three-stage tower is divided by string courses and there is a hint of an overhanging parapet. Above is an octagonal cupola.

The phase-plans shown here as Fig 51, redrawn in sequence from Bloe's original drawing which had all

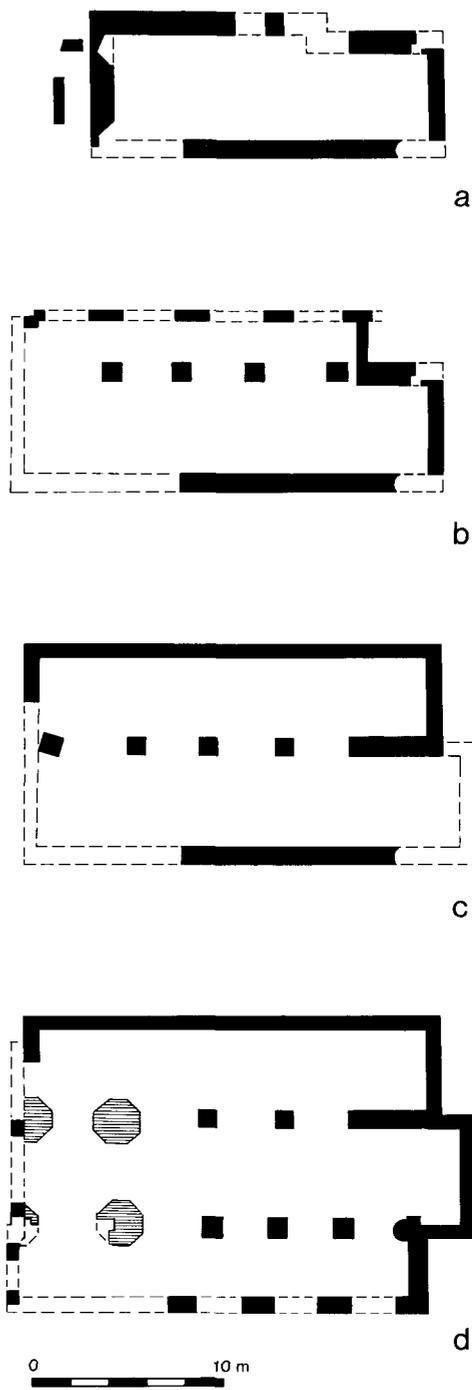


Fig 51. All Hallows Lombard Street (6): plan of stages of development of church (after Bloe 1948): (a) 11th or 12th century; (b) north aisle extended, ?13th century; (c) north aisle rebuilt and extended, new arcade, 14th or 15th century; (d) south aisle built, 15th century; west tower added, 16th century



Fig 52. *All Hallows Lombard Street (6)*: arches of the north arcade uncovered during demolition in 1939 (GM)

the phases superimposed, point to a problem produced by Bloe's phasing. He found 'foundations of the 16th-century tower', of ragstone and brick, at the west end of the nave (as shown on Fig 51), but the tower of 1544 is shown on the copperplate map as having its porch in the south side. Although the copperplate map is not clear, this would make most sense in a south-west tower, at the west end of the south aisle and in the position later occupied by the Wren tower. A second problem with Bloe's plan is that the 16th-century foundations apparently lay below the 13th and 14th-century piers at the west end of the north arcade.

A number of moulded stones were recorded by Bloe (1948), though in his published article he used only two photographs (reproduced here as Figs 54–5). Two pages of 'rough sketches of medieval stones' survive in the GM (now MoL) archive (sitecode GM101), and these have been re-interpreted by R. Lea. They comprise a mixed assemblage of pieces from the 13th to the 16th centuries. Fragments of attached shafts (Fig 54 no.5) presumably came from the 13th-century rebuilding, possibly in the early part of the century. Eighteen fragments probably derived from a large glazed window of the first half of the 14th century

(Fig 54 no.4). Other pieces of tracery and cornice can only be dated roughly to the 14th–16th centuries (Fig 54 no.1). Fragments from the 15th or 16th centuries included two heraldic shields (Fig 54 nos 3 and 7), tracery (Fig 54 no.6), mullion fragments, and a hood mould stop carved with an angel bearing a shield, from a door, window or monumental tomb (Fig 54 no.2); and more definitely from the 16th century, two parts of one or more monumental tombs of c.1500 (Fig 55) and the base for a concave-sided hexagonal shaft. A number of floor tiles from the church, of both 'Westminster' and Penn types, are now in the Museum of London.

A new chapel is mentioned in 1348, and one of St Mary in 1349 (*Cal Wills* i, 525, 647). A north chapel is mentioned in 1544 (*ibid* ii, 674). Two elm trees in the churchyard are mentioned in 1422, but in the past tense so perhaps they had been removed (*ibid* ii, 445).

### **All Hallows London Wall (7)**

Established by 1128–34 (*Holy Trinity Cartulary*, 779–81); churchyard by 1348 (*Cal Wills* i, 537). Rebuilt in

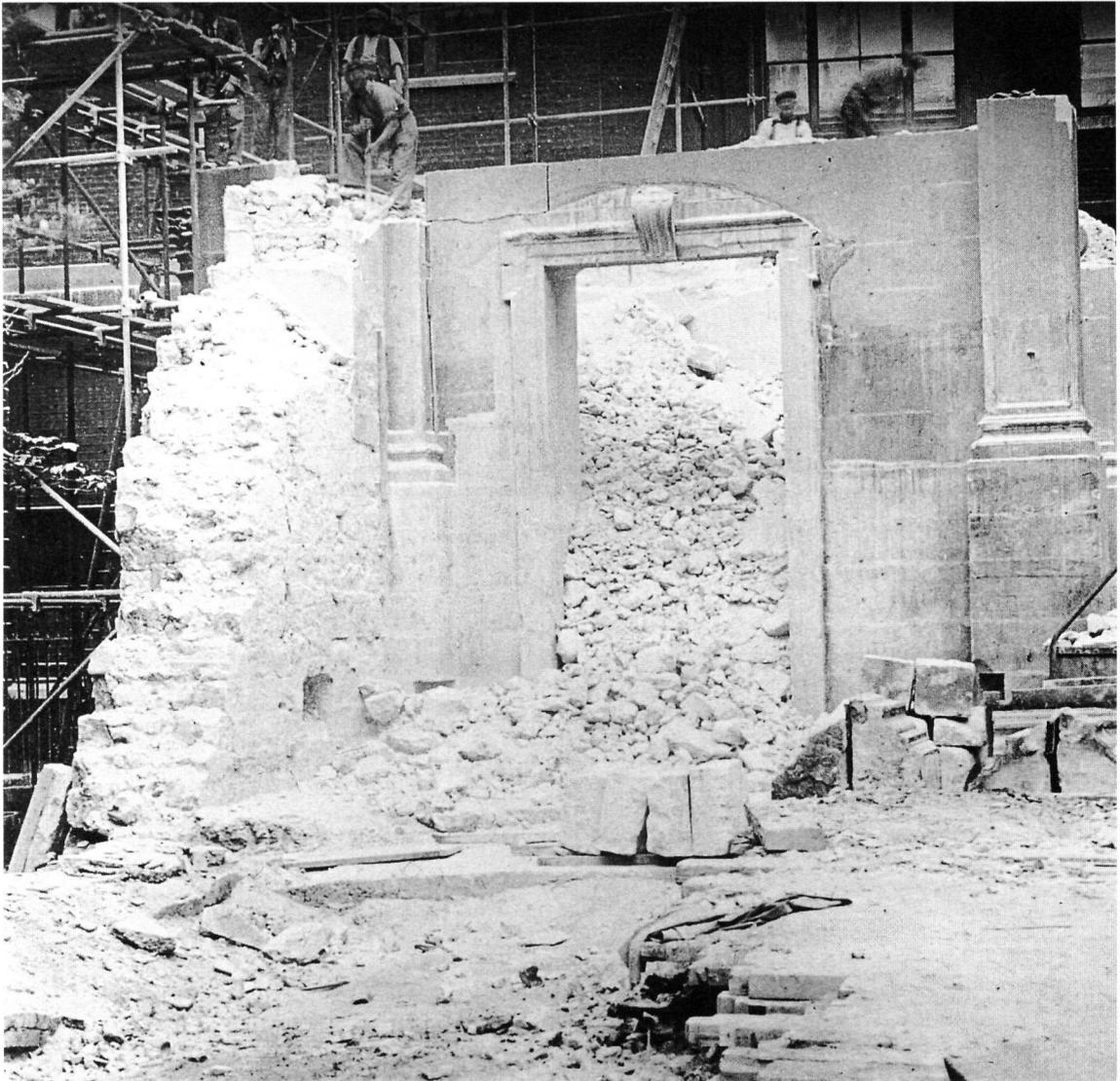


Fig 53. *All Hallows Lombard Street (6): demolition of the west end of the Wren church in progress, 1939 (GM)*

present form by George Dance the younger in 1765 (Pevsner & Cherry 1973, 144–5).

The church was built on the City wall, with Bastion 11 (probably late Roman in date) about half way along the north side of the nave; it is not clear if there was a clear walkway along the wall between the bastion and the church.

According to Westlake (1919, 27), in 1343 John Enefeld and other citizens of London founded a fraternity in the church, for the prime purpose of its restoration. They rebuilt the steeple, which was in danger of falling, and the chapel in the turret on the wall and reroofed it.

A new aisle was built in 1528–9 (Welch 1912); this

is probably the south aisle seen in a view of the church from the east by West and Toms in 1736, though the three windows towards the west end of the aisle look later (Fig 25). The church is shown with a nave and south aisle, the latter of five bays. The tower, shown with weatherboarded sides on the copperplate map (Fig 8) stood at the west end of the nave.

In 1455 the rood loft, including a representation of Judas, was painted. The main altar was dedicated to All Saints, and other altars were to Our Lady and St Lawrence (Malcolm 1803–7, ii, 66). The church had one chaplain in 1379 (McHardy 1977, 99). St Lawrence was the patron saint of the Carpenters' Company, whose hall lay nearby across the street from



Fig 54. All Hallows Lombard Street (6): moulded stones from the church, uncovered during demolition in 1939. In the text the stones are identified by being numbered from left to right (GM)

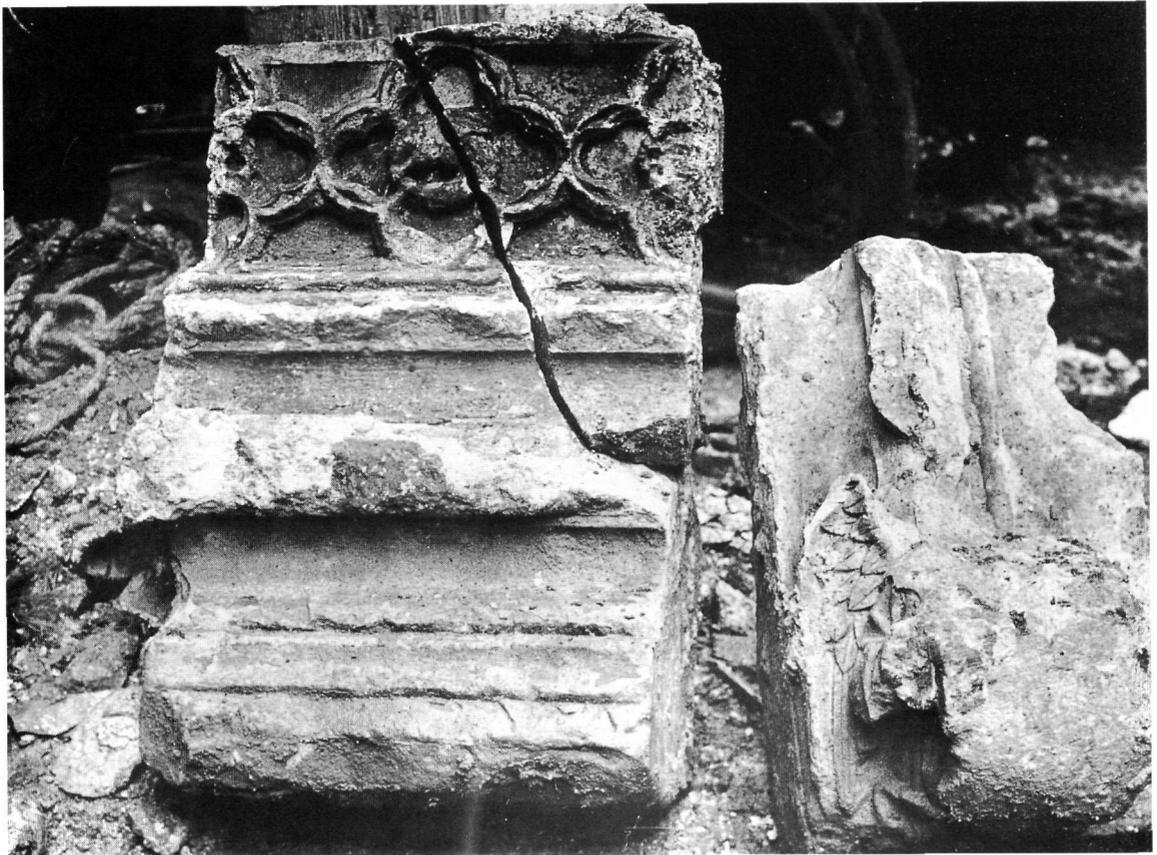


Fig 55. All Hallows Lombard Street (6): moulded stones from the church, uncovered during demolition in 1939, second group (GM)

1429. In 1469–70, payment by the churchwardens for ‘wrytyng of the pews’ perhaps refers to a plan for allotment of pews to parishioners (Welch 1912, xix).

During excavations in 1905 for a post office trench along London Wall many human bones were discovered, presumably from the churchyard of All Hallows. At the east end of the church, 30ft to the south of the city wall, was a solid ragstone wall which extended east for 30ft and then turned north towards the City wall (Norman & Reader 1906). This was probably the churchyard wall, destroyed during the rebuilding of the church in 1765. The new church used the site and shape of the former bastion as its vestry.

### All Hallows Staining (8) now Dunster Court, Mark Lane

Established by 1170–97 (*CAD* A.2406); churchyard by 1218–19 (*Holy Trinity Cartulary*, 993). Parish combined with that of St Olave Hart Street, 1870 (*VCH* i, 402); all but the tower demolished (RCHM 1929, 170).

An outline history of the church has been compiled after recent recording work on the surviving tower, which was being restored by the Clothworkers’ Company (Lea 1993).

In the lower stages of the tower two phases of masonry in the west and north walls can be distinguished. The lower is characterised by knapped flint and small unsquared ragstone rubble, whereas the upper (above the arch in the south wall) uses larger blocks, better squared and with only very occasional knapped flint. The stair turret appears to date from a third phase of building. The lower work implies a tower, but not accurately datable; it could be 13th century, but also of the same date as better dated work of the first half of the 14th century (Fig 56a). This work comprises the window in the west wall of the tower of two cinquefoiled lights with a quatrefoil within a pointed head. The arches in the east and south walls of the tower are also of the first half of the 14th century, and imply that the tower then stood at the end of the nave and that there was a south aisle running past its south side. A view by West and Toms of *c.*1736 (Fig 57) shows a window in the south aisle of similar character to that in the tower.

In the late 14th or 15th century (dated from mouldings on its doorways) the stair turret was added; but the doorways in it originally seem to have served four storeys, not three as in the present form of the tower (Fig 56b). The 16th-century tower (as shown in the copperplate map, Fig 8) must have been taller than at present (Fig 56c). The West and Toms engraving shows the 16th-century middle stage before it was reduced in a rebuilding probably of 1776.

In 1671 a large part of the church fell down. From the West and Toms engraving, it appears that the tower and the west end of the south aisle survived,

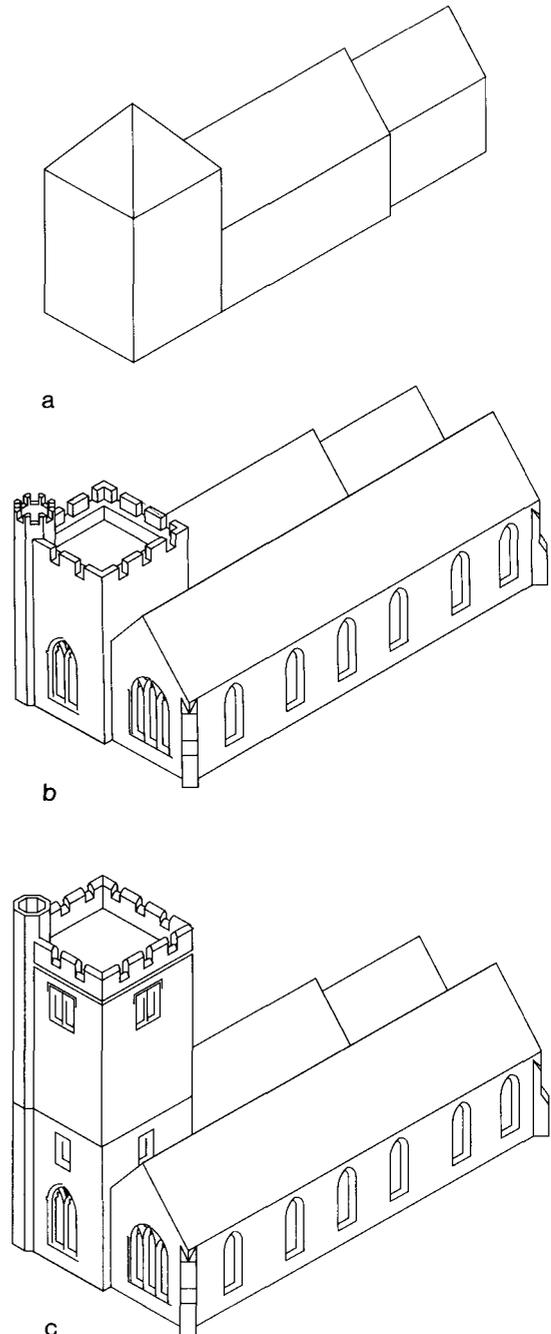


Fig 56. All Hallows Staining (8); suggested form of the church in (a) the first half of the 14th century, (b) the second half of the 14th century, (c) the 16th century (R Lea)

and new work was attached to them. The small plan of the church on Ogilby and Morgan’s map of 1677 shows it as having only a nave and south aisle, with the tower at the north-west corner.



Fig 57. *All Hallows Staining (8): view from the south-west by West and Toms, 1736*

A font is mentioned in 1378 (*Cal Wills* ii, 209). A rope was purchased for a clock in 1493 (Povah 1894, 364). In the first half of the 16th century there were altars to All Hallows, Our Lady, the Holy Name of Jesus, St Clement and St Luke (Povah 1894, 358, from churchwardens' accounts). In about 1511 the last two were furnished with carved tabernacles by Goodman Gymbold, carver of Aldermanbury (Malcolm 1803-7, ii, 20); the high altar was similarly embellished with carved tabernacle by Anthony Sakkar at the same time (*ibid*, 19). The church had five chaplains in 1379 (McHardy 1977, 95).

During sewer excavations in 1860 many skeletons were encountered in a trench cut east-west along Star Alley. They were c.9-12ft below the contemporary ground level and were probably from the cemetery of the church (CLRO, City Sewers Record Book, 51; City Sewer Plan, 353).

A bell of Flemish manufacture from the church is now in the vestibule of Grocers' Hall, Cheapside; it has an inscription beginning 'Martine . . es . . minen . . name' and a date in Roman numerals of 1458.

### **Holy Trinity, Aldgate (9)**

According to the opening narrative of the cartulary of Holy Trinity Priory, Aldgate, the priory was founded on a site where a certain Syredus had established a church from which the dean and chapter of Waltham Holy Cross (itself founded 1060) had received a rent of 30s p.a., but only for a few years before 1108 (*Holy Trinity Cartulary*, 1; the full text is printed in *ibid*, appendix 1, p.223-4). Stow (i, 139) adds that the church of Syredus was dedicated not only to the Holy Cross but also to Mary Magdalen and the first parish heading in the cartulary groups together the parishes of Holy Trinity, St Michael, Mary Magdalen and St Katherine (*cf* the cartulary, p.5). It is probable that the medieval parish of St Katherine Cree comprised this amalgamation.

The parish of Holy Trinity is mentioned three times in the grants recorded in the cartulary: property there lay in Fenchurch Street (*Holy Trinity Cartulary*, 80), and the parish was 'by Aldgate' (*ibid*, 993, 1020). The only

part of St Katherine's parish which included Fenchurch Street was close to the latter's junction with Aldgate Street. This would suggest that the parish of Holy Trinity was in the south-east part of the later parish of St Katherine. By 1360 the garden called *Colemanhawe* south of Fenchurch Street, which was previously reckoned to be in Holy Trinity parish, was counted in the parish of St Katherine Coleman (*ibid*, 80). So the parish lived on as an entity until the mid 14th century though the church itself had been demolished to make way for the priory in 1108.

Excavations on the site of the priory church at Leadenhall St/Mitre Street in 1984 (MoL sitecode LEA84) found an extensive late Saxon, presumably 11th-century, graveyard overlain by the priory church and by further burials which aligned with the priory church (the construction of which, in this part, probably dates from 1108–32). To the south, burials excavated in 1990 at 78–79 Leadenhall Street (MoL sitecode LHN89), apparently extending southwards to Leadenhall Street itself, similarly comprised a majority of burials out of alignment with the priory church and a few in alignment with it, suggesting that this graveyard functioned before and after the priory's foundation.

Arguments from the alignment of the various phases of the burials and of the priory church (Schofield & Lea, in prep) would suggest that Syredus's church was aligned conventionally east-west, and that the subsequent priory church assumed its known alignment about 35 degrees south-east of an east-west alignment; but another possibility is that the previous church was coincident with the priory church in its alignment, as at Romsey, Hants, where the Saxon church is beneath the Norman nave and crossing.

The architectural character of Syredus's church, presumably dating from the middle of the 11th century, remains unknown, though links with Waltham Abbey are likely. If fragments survive beneath the ground, they will be below Mitre Street, which now bisects the site of the priory church which replaced it in the 12th century.

### St Alban Wood Street (11)

Established by 1077–93 (*Gesta Abbatum S Albani* i, 55). Rebuilt by Wren, 1682–7 (RCHM 1929, 89–90); destroyed in the War and not rebuilt, but tower survives.

This site (now covered by the east carriageway of Wood Street) was excavated in 1961–2 (Grimes 1968, 203–9). The earliest church on the site consisted of a nave 51ft 6in × 19ft and a chancel 16ft × 14ft (Fig 16c). The south wall of the chancel butted against the nave, but it is not known whether this indicates any interval of time between their construction, which was similar: Kentish rag with chalk in the foundations, and reused Roman masonry. Sixteen feet from the west end was a cross wall which ran between the nave walls; its junctions with them at either end could not be

examined. Near this, in the south wall, was a recess with a sill of Reigate stone, and a doorway in the same wall. No dating evidence was recovered but Grimes suggested it might be the chapel of Offa of Mercia (reigned 757–96). This was in light of a tradition reported by Matthew Paris in the 13th century that the church originated as a chapel built by Offa adjacent to his palace and originally given to the abbey of St Albans (*Gesta Abbatum S Albani*, i, 55). Brooke and Keir (1975, 111 n.) criticise this reference as 'unsupported' and 'poor evidence for traditions of a much earlier period'. The earliest archaeological phase has generally been accepted as Saxon, though in fact there is no clear evidence for such a date except for the plan of the church.

Anthony Munday, who continued Stow's *Survey*, inserted into his edition a description of the church just before it was rebuilt in 1633. He noted that a Saxon origin was supported by the antique 'manner of turning of the arches in the windows and heads of the pillars' as well as the occasional reuse of Roman bricks in the fabric (quoted in Strype 1720 i.iii.76). The 'turning of the arches' presumably refers to arcades turned in Roman brick, as in the crypt of St Mary le Bow or the surviving arch at All Hallows Barking. It therefore seems likely that part of the church at least was of late Saxon date, and that these details were still visible in 1633.

In Grimes's excavation, a number of subsequent phases was noted; three concerned with the body of the church can be arranged in a sequence. Chapels were added to the north and south sides of the chancel; foundations of the south chapel were on arches. In a second phase, the chapels were extended to the west to form north and south aisles. The exterior facing of the north aisle was of knapped flints, and near the tower were indications of a blocked window. In a third phase a further chapel was added in the north-east corner. A corresponding rebuild on the south side was mostly in brick and Grimes attributed this to Inigo Jones in 1633–4, suggesting that the last modification on the north side was of this date also. The reference in Strype (1720, iii, 76–7), however, says only that Jones was one of a party which surveyed the decayed church and concluded it was too far decayed to repair. According to Strype, wholesale rebuilding followed, but its connection with Jones requires further proof.

The medieval west tower of the church had been built inside the west end of the Saxon nave, presumably partly because the street ran down the west end of the church. The construction date of the tower could not be ascertained. In this case Wren built a new tower at the north-west corner of the new church.

The church had three chaplains in 1379 (McHardy 1977, 24). In 1467 Dame Alice Illingworth directed that in the chapel of St Thomas the martyr a plate of laton with the days and years of the decease of herself and her husband should be set on a marble stone, the

chapel ceiled (wainscotted) with estrich board (oak or deal), 'batounnes and knottes', the arms of herself and of her husband to be set in the knots (Stow ii, 397, xvii).

Presumably parts of the Saxon and medieval church still lie beneath modern Wood Street, south and east of the remaining Wren tower. The Grimes excavation on this site will be re-analysed in future work by MoL.

### St Alphege (12)

Established by 1108–27 (WAM 13167, no.138); churchyard by 1414 (*Cal Wills* ii, 409). The church was closed in 1540 and re-established in the chapel of the adjacent hospital of Elsing Spital, part of which survives at London Wall.

A length of the Roman and medieval City wall stands in St Alphege Garden. Work took place here in 1986 as part of the Corporation of London's programme to record the present state of the City wall and associated monuments in its care (Fig 14; Westman 1987; MoL sitecode APG86). The north wall of the medieval church is detectable in the north elevation of the City wall as a stretch of chequerwork masonry in ragstone and flint and as a slight change in alignment of the superstructure of the wall itself. The brick crenellations of 1477 about the chequerwork masonry on the west and are mixed with it. The chequerwork probably represents the north face of the church; the technique is broadly dated to the 14th century in London and elsewhere.

Below the chequerwork section and sharing its slightly different alignment, is masonry of roughly dressed ragstone and tiles, bedded horizontally and forming rough courses on rough ragstone footings. This is evidently the base of the pre-14th century north wall of the church and could be of Saxon as well as 12th or 13th-century date. RCHM (1929, 94) thought that the masonry described possibly represented the north wall of the chancel, and noted a 'N.E. angle'. The development of St Alphege, as proposed after the work of 1986, is shown in Fig 14. Recording on the site by Professor Grimes will be re-analysed in the future by MoL.

The church is mentioned twice in the Eyre of 1244. In the context of churches generally, the City answered that St Alphege stood on the wall, and belonged to the dean of St Martin's (*Eyre*, 199), but later, concerning churches which should be in the king's gift, St Alphege was situated on the highway [the intramural street?], and therefore by implication should belong to the king (*Eyre*, 276). The church had two chaplains in 1379 (McHardy 1977, 22).

### St Andrew Holborn (14)

'The old timber church of St Andrew' in c.959 (Sawyer 1968, no.670); churchyard by 1348. Rebuilt by Wren 1686–7 (RCHM 1929, 120–3; *Wren Society* ix, 6–7).

A study of the medieval church has been made by Barron and Roscoe (1980). In 1280 money was left for the building of a belfry. A chapel of St John the Baptist was built in the 1360s; in 1361 bequests mention a window dedicated to St John, and 'St John's door'. In 1379 there were nine chaplains; one was parochial, two others 'of Roger Legat' (McHardy 1977, 18). The church was rebuilt in the mid 15th century, probably during the rectorship of Gilbert Worthington (1439–47). This included north and south aisles, a west tower, and possibly a vestry; the nave clerestories were emblazoned with subscribers' arms in 1511. A north porch was built in wood in 1573.

Money was bequeathed for a belfry at the north west end of the church in 1447 (proved 1459–60: *Cal Wills* ii, 540). This tower is shown by Hollar in 1647 (Fig 58). The three lower stages of the 15th-century tower survive, though heightened and faced with Portland stone in 1704. In all four walls are 15th-century arches and above, windows, some now blocked; and at the western angles of the lower stage are diagonal buttresses (RCHM 1929, 120). The pulpit is mentioned in 1506 (*VCH* i, 240).

### St Andrew Undershaft (16)

Established by 1108–47 (*Holy Trinity Cartulary*, 807); churchyard by 1363 (*Cal Wills* ii, 77). Survived the Great Fire (RCHM 1929, 4–5). Damaged by a bomb April 1992, but now (1995) restored except for the major windows.

A porch and 'work of the said church' are mentioned in 1339 (*Cal Wills* i, 467). The lower three stages of a 15th-century tower survive at the south-west corner of the church (rebuilt in 1830, according to RCHM (1929, 4; notes also in *Gentleman's Magazine*, 1831, part II, 217–8) and the nave and aisles date from a rebuilding of 1520–32 by several prominent merchants. Sir William Fitz-William, master of the Merchant Tailors in 1499 and sheriff 1506, rebuilt all the church except the north side of the nave and the north aisle, which were funded by Stephen Gennings, who had been mayor in 1508–9 (Fig 2; Boulter 1935, 13; Stow i, 143).

The nave and chancel are undivided and of six bays (nave and chancel) and five bays (aisles). The piers of the arcades have four attached shafts with moulded capitals and bases; the arches are four-centred. The stonework of the windows (four-light in the aisles, three-light in the clerestory) have been restored. Occupying most of the west bay and part of the next in the south aisle is the tower. A blocked window in its east side shows that before the 16th-century rebuilding, the tower projected south from the body of the church. The roofs of the nave and north aisle are largely of the 16th century; that of the north aisle has the arms of Gennings in each of the squares of its panels (Boulter 1935, 20), and is dated 1532 on two of

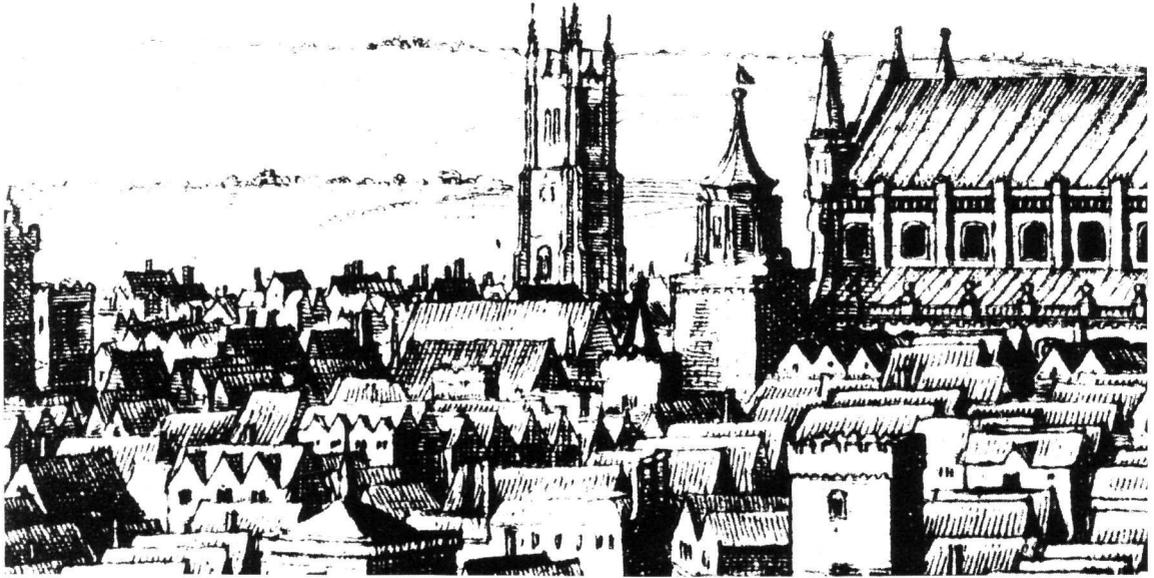
5. *y*<sup>e</sup> Waterhouse*S. Andre in Holborne*

Fig 58. *St Andrew Holborn* (14): tower detail on Hollar's panorama, 1647

the corbels (*ibid*, 18). The door to the church may be of late 15th-century or 16th-century date. The church is shown simply on the copperplate map (Fig 8).

St Mary's chapel is mentioned in 1394, St Mary's chancel in 1413 (*Cal Wills* ii, 321, 403). The church had three chaplains in 1379 (McHardy 1977, 27).

In 1929 two brasses were noted (RCHM 1929, 6); of these, the one inside the church, to Nycolas Leveson, sheriff, of 1539 is still extant (drawn in Johnston 1931, pl opp p505). In the aisle windows, in 1929, were shields of contributors to the rebuilding of 1520–32 (RCHM 1929, 6–7); they included the Merchant Taylors, Mercers, Bakers, the Staple of Calais, and Gennings himself (arranged four per window, in four windows of the N aisle and all five windows of the S aisle; total, in 1929, 36 shields). Two are illustrated in Fig 36.

### St Anne and St Agnes (17)

Established by the early 12th century as the church of St Agnes (*HMC 9th Report*, 61); churchyard by 1269

(McMurray 1925, 144–5). Rebuilt by Wren 1676–87 (RCHM 1929, 1–2; *Wren Society* ix, 4) but damaged in the Second World War.

The 14th-century tower survives to the floor level of the third stage within the Wren church. It has a spiral stair in the north-west corner, also of medieval date; a 14th-century door into the tower from the stair survives at the second stage where there are remains of windows in the north and south walls (RCHM 1929, 1–2).

A plan of the burnt-out church after the Great Fire in 1666 was made before rebuilding by Wren (Summerson 1970, figs 6a-b). This shows that the church was about 65ft 6in × 51ft internally, of nave and two aisles with the tower flanked by the aisles; the north arcade passed to the north of the tower stair. A semi-circular projection in the north wall would have been for a rood stair, which would divide the church into three bays for the nave and two for the chancel. The south aisle was slightly shorter than the nave, leaving space for a small door in the south wall of the chancel. The church had one chaplain in 1379 (McHardy 1977, 26).

**St Antholin (18)**

A watching brief on the large site of Temple House, Queen Victoria Street in 1958–9 produced slight evidence for the east and south walls of the church of St Antholin (demolished 1875). They were constructed of chalk and brick but details were impossible to obtain (MoL archive, sitecode GM31). The church is shown on the copperplate map (Fig 8).

**St Augustine Watling Street (or Old Change; 21)**

First mentioned 1148 (*HMC 9th Report*, 63); enlarged after 1252–3 when Alexander le Cordwaner made a grant of land on the north side (Harben 1918, 37); destroyed 1666, rebuilt by Wren 1682–95 (RCHM 1929, 107–9; *Wren Society* ix, 10); destroyed in Second World War.

The northern half of the church was recorded during redevelopment of St Paul's Choir School, New Change, in 1965 (Fig 59). The foundations of the medieval church, of chalk and yellow mortar about 3ft 3in wide, suggest a building 61ft long. The church was extended to the north on foundations of chalk and white mortar; the extension measuring 59ft long and 16ft wide. This is presumably a north aisle, and the enlargement of the 1250s (Marsden 1968, 3, 11). The Wren tower has been restored and survives on the site, with three bays of the S wall, as part of the Cathedral Choir School.

A chapel of St Mary is mentioned in 1361 (*Cal Wills* ii, 60). In 1420–1 Henry Rede, armourer, made a bequest to the church to provide bells for the belfry, ornamenting the ceiling of the nave in a handsome manner to the glory of God on condition that the rector did the same for the chancel (*ibid* ii, 424). The church had two chaplains in 1379 (McHardy 1977, 21).

**St Benet Gracechurch (24)**

During a watching brief on building works at 55–60 Gracechurch Street in 1959, several fragments of chalk walls and foundations were noted, some, including a vault, evidently from the medieval church of St Benet Gracechurch Street (demolished 1876; MoL archive, sitecode GM69). The west end of the church was recorded in 1977 in a Post Office tunnel dug along Gracechurch Street, 4.5m below the surface (MoL sitecode GST77). One Penn floor tile is in the British Museum. The church is shown on the copperplate map (Fig 8).

**St Benet Sherehog (25)**

First mentioned 1111–31 (Harben 1918, 68); destroyed in the Great Fire and not rebuilt.

Excavation in 1994–5 (MoL sitecode ONE94) revealed the well-preserved first phase of the church. Provisional dating of pottery suggests a rectangular stone church, of only one chamber, was built about 1080. The church measured 9m × 5m (30ft × 15ft) internally, and had doors on the north and south sides; the latter led via an alley to Sise Lane on the south. The fabric was reused Roman ragstone and tile, but had quoins in limestone long-and-short work. A primary mortar floor was found, around the setting for an altar against the east end. Successive mortar surfaces raised the internal floor by over 1m by the 13th century. Within this build-up of floors was evidence of rebuildings of the altar and a possible timber screen or rail which may have delineated the chancel. No burials were found in association with this first church, and the graveyard may have lain outside to the west. Ragstone foundations and chalk footings around the church signified phases of enlargement, as yet not analysed in detail. Glazed and decorated late 15th century floor tiles, some *in situ*, were recovered, along with a small number of burials which lay beneath later floors. The church was not rebuilt after the Great Fire, but the site continued in use as a graveyard, and over 250 post-Fire burials were excavated.

Chapels are recorded to St Mary in 1348 (*Cal Wills* i, 534) and to St Sithe in 1397 (*ibid*, ii, 238).

**St Botolph Aldersgate (27)**

Established by 1108–22, perhaps by 1115 (*Regesta* ii, 1106–7); churchyard by 1348 (*Cal Wills* i, 502). Damaged by the Fire but not rebuilt until 1754–7.

Although no archaeological work has taken place here, evidence for the medieval form of this church is provided by a plan and a West and Toms engraving. All burials beneath the floor of the 18th-century church were removed in the 1890s, and the excavated area filled with sterile soil. It is therefore probable that very little survives of previous churches beneath the present building.

A plan of the Fire-damaged church (Summerson 1970, fig 16a) shows the church to be of three aisles with a west tower flanked by the aisles; as at St Anne and St Agnes, the tower is narrower than the nave. The north and south arcades are formed by single piers of diamond-shaped section, placed roughly half way between the tower and the east end. In the north arcade the intervening spaces are occupied by two smaller diamond-sectioned piers, but not in the southern arcade.

The south porch of the church is mentioned in 1396

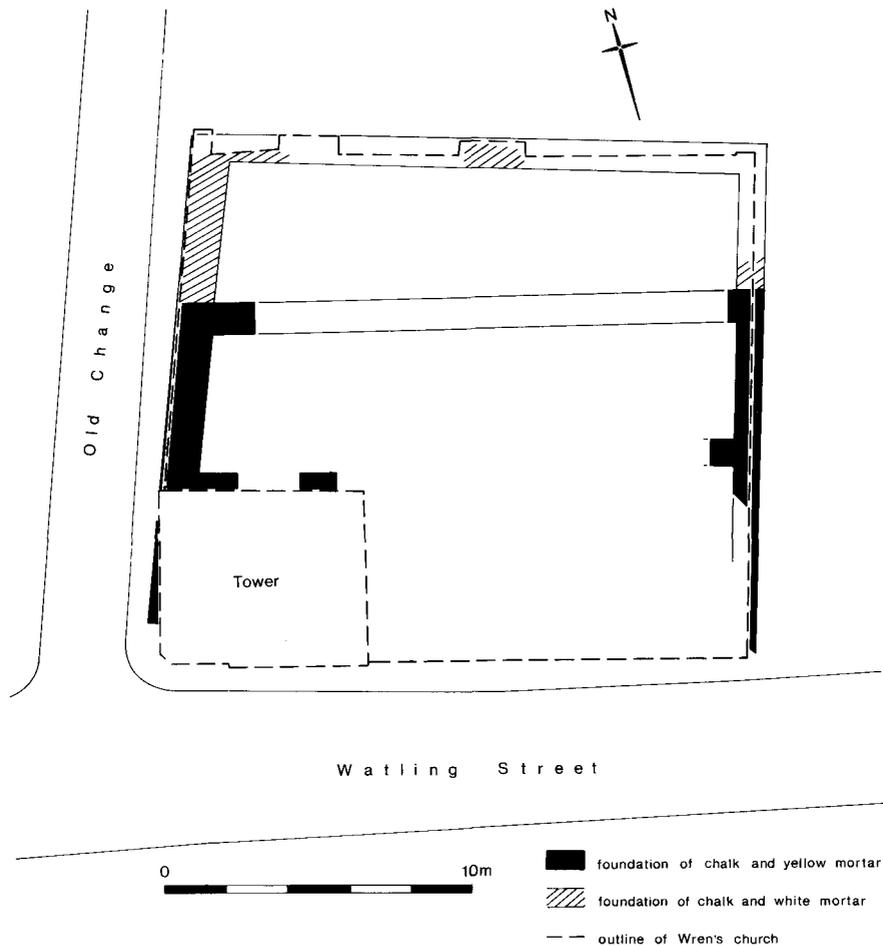


Fig 59. *St Augustine Watling Street (21): plan (Marsden)*

(*Cal Wills* ii, 327), the north door and belfry in 1399 (*VCH* i, 205) and the vestry in 1453 (Basing 1982, 60).

A view of the church by West and Toms in 1739 (Fig 22) shows the east end, with the tower in the background. The facade of the north wall was evidently altered after 1666 when two doorways were inserted and windows were reworked. At the east end of the south aisle a window of c.1400–20 is shown; there are parallels with windows at New College and Merton College, Oxford and at Hull (Harvey 1978, 114, 119, fig 126). Windows at the east end of the nave and in the north aisle are of 15th-century or early 16th-century character.

In 1431, John Mason, brewer, wished to be buried before the place where he was accustomed to sit in the new aisle (Basing 1982, 67); this presumably refers to the south aisle, which may therefore have been built at the same time as its window of c.1400.

The church had seven chaplains and a mattins-priest in 1379 (McHardy 1977, 33). In 1377 a

Fraternity of SS Fabian and Sebastian was established in the church; its register and some accounts survive (Basing 1982). The altar of SS Fabian and Sebastian is mentioned in 1395 and 1428 (*ibid*, nos 89, 113). A pulpit is mentioned in the rules of a second Fraternity of Holy Trinity, written probably around 1398 (*ibid* xxviii, 17). The letters patent confirming the merging of the two fraternities in 1446 mention that the new group would celebrate at an altar on the south side of the church (*ibid*, 102).

### St Botolph Aldgate (28)

Established by 1125 (*Holy Trinity Cartulary*, 871); churchyard by c.1230 (*ibid*, 1009). Rebuilt by the elder George Dance in 1741–4.

In 1987 and 1990, renovation for new uses of the vault beneath the steps of the Dance church uncovered

foundations of the previous church and associated burials (Fig 60; MoL sitecode SAB87). The earliest phase comprised the south side of a small nave and narrower chancel, surviving as foundations of chalk and gravel. At an unknown but probably medieval date a south aisle was added; in the south-east corner was a burial vault, floored with orange-red tiles. A number of burials, at least 17, was also excavated; some in rough mortared cists normally assigned to the 11th–12th century.

The stairs of the south entrance are mentioned in 1380 (*Cal Wills* ii, 227). By his will of 1418 Robert Burford, bellfounder, gave money for the addition of an aisle of St Katharine, a new chapel to St Mary, ‘made equal and like to the said St Katharine’s aisle’, and a new steeple (Strype 1720, ii, 16). Two chaplains are mentioned in 1379, one of them parochial (McHardy 1977, 32).

The church was rebuilt in the early 16th century by the patrons, Holy Trinity Priory Aldgate; the arms of the house were evident in the stonework to Stow (i, 127). What this rebuilding comprised is not apparent from the archaeological or engraved evidence. The representation of the church on Ogilby and Morgan’s map of 1677 shows it had three aisles, the tower protruding from the south aisle. A view by West and Toms in 1739 from the north west (Fig 24) shows a nave and two aisles, a north porch, and the tower at the south west. This was evidently attached to the church only on its north side, with a stair up the north west corner; it was presumably built from the bequest by Burford in 1418, though it could have been finished or embellished in the prior’s rebuilding of a century

later. The pinnacles and arches on the tower are probably a post-medieval addition, since they are not shown on the tower as drawn by Wyngaerde in *c.*1540. The church lies a short distance to the east of the area covered by the copperplate map, and is therefore not shown on it.

A plan of 23 December 1706 (Fig 61; GL MS 3606/2) shows the church before its rebuilding by Dance; this can be compared with the West and Toms engraving. The south porch was through the tower, and a separate west door on the plan can be seen, low down, on the west front in the engraving. The excavation of 1990 beneath the steps of the Dance church found that the brick vaults there incorporated fragments of medieval window tracery, perhaps of 14th-century date.

Excavations in the former north churchyard in 1965, ahead of road widening of St Botolph Street, recorded an undated pit in which were layers of burnt clay moulded to shape and evidently used in bell-casting (MoL archive, sitecode GM10; Excavation Day Notebook X, 25).

### St Botolph Billingsgate (29)

First mentioned 1181 (Harben 1918, 93), though indirectly in the 1140s (Dyson in Steedman *et al* 1992, 76); separate cemetery by 1392, in Botolph Lane (*Cal Pat R* 1391–6, 141). Destroyed in the Great Fire and not rebuilt.

The original church lies largely beneath the southern

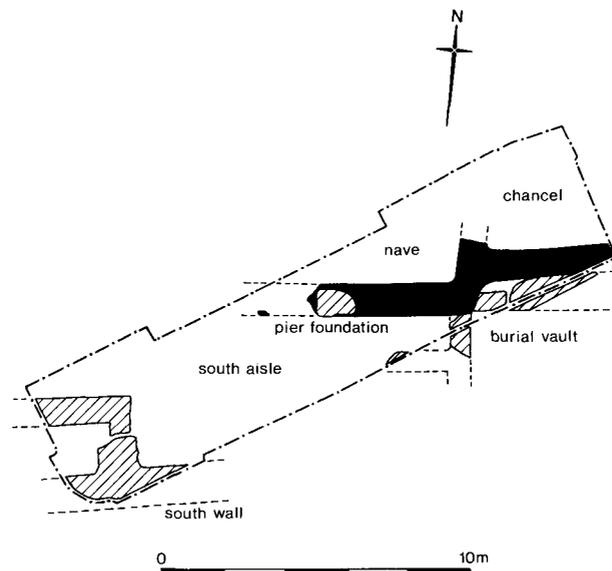


Fig 60. *St Botolph Aldgate* (28) plan of the south side of the medieval church, excavated beneath the steps of the 18th-century church in 1987–90



pavement of Lower Thames Street, but excavation on the Billingsgate lorry park site (MoL sitecode BIG82) in 1982 revealed that its 12th-century south wall lay on a piled terrace constructed along the crest of an earlier river embankment. The terrace terminated at its east end near an earlier inlet, although it is unlikely that the first church extended so far east. By the 13th century, the waterfront had advanced southward. The inlet was infilled to allow the extension of Botolph Lane south of Thames Street, and the church expanded to the east along the new lane.

The earliest remains of the church on the Billingsgate excavation site were a south wall, largely of uncoursed cobbles and some Roman brick, rendered inside and out. This wall was not accurately dated, but made a corner with the west end of the church, of 12th or 13th-century date, excavated on the adjacent site of New Fresh Wharf (NFW74) in 1974. The south wall of the church was rebuilt with roughly-coursed mixed masonry with squared quoins at the south-east corner, probably in the middle of the 14th century (Fig 29a). The area to the south, previously sporadically occupied, was cleared at about the same time to create an open metalled area, separated from the church by a cobbled alleyway, and bounded to the south by a stone building, which was given a three-bayed vaulted undercroft in the early-mid 14th century. An isolated burial in the yard suggests that it already belonged to the church, but it is likely that the building to the south was in secular ownership.

The church was later extended to the south; a north-south wall on the east side was faced internally in chequerwork (Fig 34) and there was a doorway to the lane of St Botolph's Wharf. The north wall of the undercroft formed the south wall of this extension, which was separated from the rest of the church by an internal wall (Fig 29b). In this extension, presumably a chapel, a double-cist brick vault was constructed. The body from the northern cist was later taken out and placed with the body in the southern cist, and the vault sealed. Two further bodies were interred inside the entrance to the lane, with a child's grave west of the vault. The meagre dating evidence places this extension only in the period 1330–1500. In 1361 the chapel of St Mary in the church is mentioned, apparently on the south side of the altar; here was also an image of St Botolph (*Cal Wills* ii, 22). It may well be that the south extension observed in the excavation corresponds with the chapel of St Mary. The church had seven chaplains in 1379 (McHardy 1977, 31).

The adjacent building to the south was probably the stone house granted to a group of trustees in 1443 by former mayor John Reynewell and intended to be a vestry; one of them willed it to the church in memory of Reynewell in 1458 (Stow i, 186).

A tile floor was laid on a raising of the floor by 0.4m; this floor was found in two damaged areas (one shown in Fig 62). These tiles were of 14th to 15th-

century types, but had been finally relaid sometime in the 16th century (see Appendix below). The cast wall of chequerwork was also rendered (the keying marks on the underlying chalk are shown in Fig 34). From the space left by the tiles and lines on the rendering on the east wall, it is suggested that an altar was constructed against the east wall, and screened from the entrance to the lane. This phase seems to be of mid 16th-century date, and perhaps represents Reformation changes in the church.

The church is shown and named by Wyngaerde in c.1540 (Fig 6); it has a tower with a ?spirelet. The drawing appears to show two parallel roofs comprising the church; perhaps the tower was at the west end of the original nave, and the nearer roof is the south aisle. The church is also shown on the copperplate map (Fig 8).

Subsequently, the wall dividing the older part of the church from the south chapel was demolished, and replaced by piers constructed immediately to the north at 4.8m intervals (centres): the chapel now became the nave, and could still be entered separately from the lane by three new steps (going down to the lane) (Fig 29c). What happened at the junction of the church and the vestry, and inside the vestry, is far from certain. The new piers lay opposite the springers of the undercroft bays, suggesting a vaulted roof structure for the new church space; to compensate for the added load, the south wall of the undercroft to the south was strengthened and massive masonry reinforcement constructed across the four corners. This blocked the small windows facing the street, leaving only the west window and doors in the north and east walls. This phase is dated by pottery to the late 16th or early 17th century and there is documentary evidence in the churchwardens' accounts for some rebuilding in 1607–9 (although only the steeple is mentioned in these accounts).

Several bodies were interred, and the floor raised, followed by a large number of internments in two concentrations of 32 and 22 individuals, centred in two adjoining bays and associated with a series of tile floors. Evidence for a partition between two of the piers presumably marks a choir screen or even rood setting (Fig 29c). It is probable that some of the latest burials were a result of the plague of 1665, since the final floor was covered with debris from the Great Fire of the following year.

### **St Bride Fleet Street (31)**

Dedication possibly 10th/11th century; earliest reference 1163 × 1181 (G Keir pers comm); churchyard by 1188 (*Historic Towns Atlas*, 86). Rebuilt by Wren in 1670–84 (RCHM 1929, 129–32; *Wren Society* ix, 14–17); destroyed in the War and restored, with some Roman and medieval features preserved in the

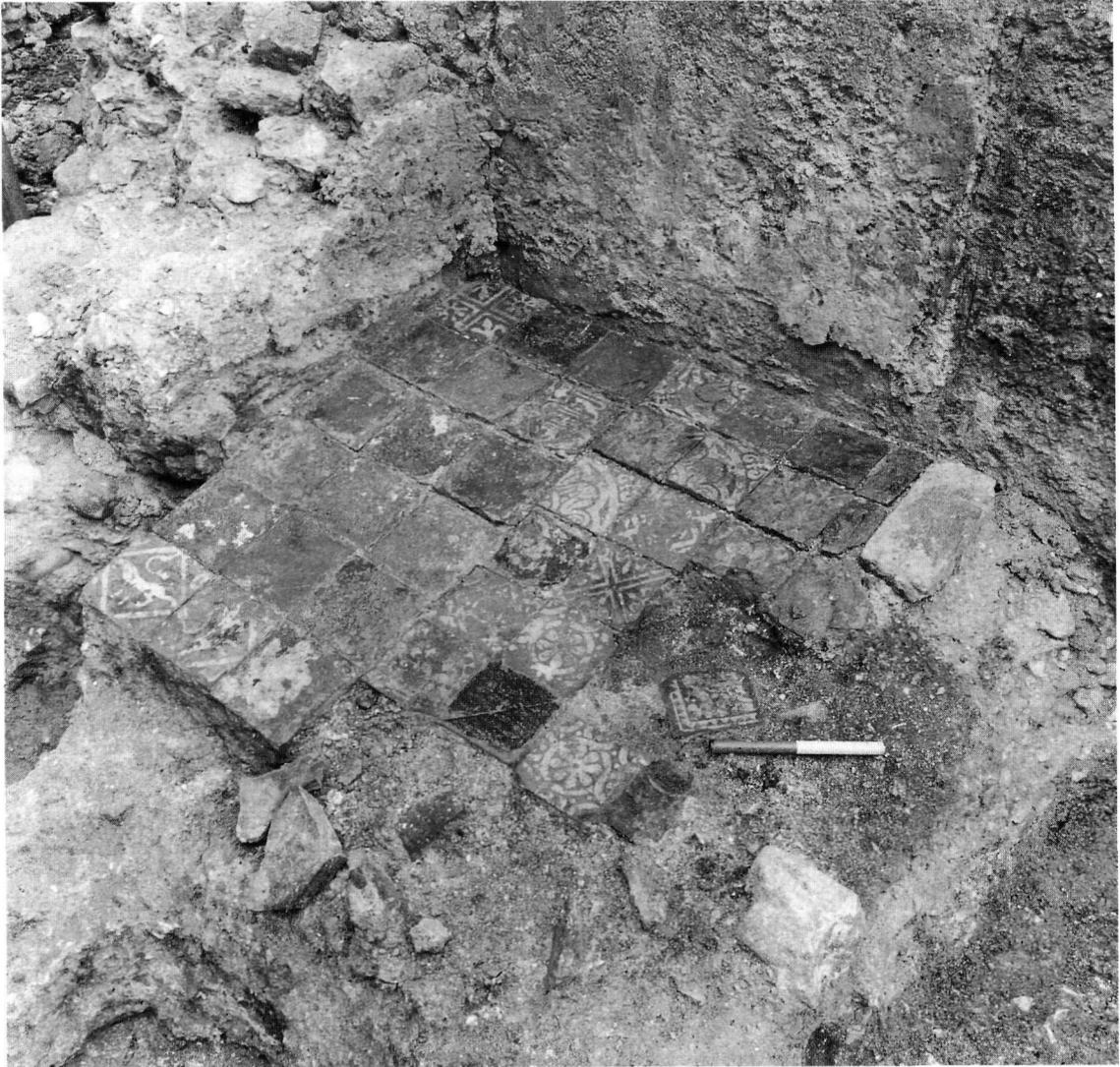


Fig 62. *St Botolph Billingsgate (29)*: detail of floor tiles against east wall of church. Scale is  $2 \times 100\text{mm}$  units

basement. The following summary is largely from information provided by G Milne.

The bombed Wren church site was excavated in 1952 (Grimes 1968, 182–97). The finds were re-examined by staff from the Museum of London in 1992–5, and the medieval walls in the crypt recorded by students from the Institute of Archaeology, University College London, in 1992–3 (Milne & Reynolds 1994). The results of this re-appraisal are to be published in detail (Milne in preparation) and only a summary is presented here.

The original excavation report discussed the possibility that an initial focus for the church may have been the Roman cemetery in the vicinity, and part of a Roman masonry building was found under

the east end of the church (Grimes 1968, 182–3). The more recent study suggests that a holy well of St Bride, later contained in a cistern at the south-east of the church, may have been the primary focus. A cut for the earliest recognisable well was excavated just to the east of an initial single-cell masonry building, which was probably of early to mid 11th-century date. The well was filled in with material including 11th-century pottery before an apse was added to the church. A small group of cist burials beyond the apse included one containing a still-born child.

The building was extended in the 12th century with a square east end within which a stone-lined grave was set centrally below the high altar, while a free-standing bell tower was constructed outside the south

wall of the nave. In the 13th century a north aisle was added and a pair of chapels one on either side of the chancel. According to Milne (in preparation) a crypt was added to the northern chapel in the early 14th century.

The crypt, which runs north-south, was entered from outside on the north. It was perhaps the substructure of a Lady Chapel known to have been on the north side of the chancel, first mentioned as St Mary's chapel in 1390 (*Cal Wills* ii, 284; details recorded by Milne & Reynolds 1994). In 1390 an armourer wished to be buried in the churchyard, under the north wall of the church between *la porche* and *la looge* (?) (*Cal Wills* ii, 281).

Later the nave was lengthened to the west and rebuilt with north and south arcades on square piers; this was probably the first time the nave had a south aisle. Documentary references indicate donations for rebuilding throughout the 15th century, culminating in that of William Venor, warden of the Fleet Prison, about 1480 (Stow ii, 45); mention is made of new bells and a tower (1409–19: a prominent western tower is shown by Hollar in 1647), the glazing of the clerestory (1449) and the paving and glazing of the north aisle (1456–63) (*Survey of London: St Bride Fleet Street*, 121–3). The superstructure of the 12th-century belfry on the south side was demolished, but the vaulted lowest storey was retained as a crypt. A chapel dedicated to St Anne was subsequently added to the south-east corner of the church.

'Westminster', Penn and Flemish tiles from this church are detailed in the Appendix below. Notable finds from the excavations by Grimes include sherds of 5th-century pottery, part of a 12th-century font, part of a piscina, a large range of worked stones and medieval window glass. In 1379 the church had 14 chaplains (McHardy 1977, 39).

### **St Christopher le Stocks (32)**

This church, rebuilt by Wren, was demolished in 1781. There are no records of excavation on the site, but some floor tiles were recovered and are now in MoL; they are of Penn type. The church is shown on the copperplate map (Fig 8).

In 1934, during reconstruction at the Bank of England, a fragment of an incised slab of Purbeck marble was discovered. On it is an effigy of a male civilian in dress of the second quarter of the 14th century. This slab, now in the Victoria and Albert Museum, is presumed to have come originally from St Christopher's church (Stephenson 1934).

### **St Dionis Backchurch (34)**

Established by 1089–1108 (Kissan 1940, 57, 62–3); churchyard by 1349 (*Cal Wills* i, 592). Destroyed in

the Great Fire and rebuilt by Wren in 1670–86 (*Wren Society* ix, 24). Parish united with All Hallows Lombard Street 1876 (*VCH* i, 401); church demolished 1876–8.

During the demolition of the church in 1878, H Hodge recorded the interior elevation of the foundations of the west wall and the tower, which was in the south-west corner. The walls were of chalk and ragstone and outlines of arched openings were recorded, possibly from a burial vault. A lower level foundation arch is indicated by the tower and a buttress or pier base at the south end (drawing in GL: illustrated in Cohen 1995, fig 3). In 1976 chalk foundations of two buttresses to the the south wall and of the tower were recorded (MoL sitecode FSE76).

In 1342 a testator requested burial before the rood, between the two doors of the church (*Cal Wills* i, 461). The porch under the belfry was a burial place in 1394 (*ibid* ii, 311).

A crypt of 15th-century date was recorded 'beneath the chancel' of the Wren church by G Street in 1858 (*The Builder*, 1858 (16) 508). It measured 13ft east-west × 9ft 6in; in plan a parallelogram, vaulted with a quadripartite vault of four-centred arches with ribs springing from corbels at the four corners (a drawing of one by Hodge in 1878 is given in Cohen 1995, fig 5). At the centre was a boss carved as a rose. The total height of the vault was 8ft, that from the floor to the corbel being 4ft. A blocked opening on the south wall probably represented the original entrance as it connected to a staircase roofed with segmental pointed arches, ascending to the west.

The church was rebuilt in the reign of Henry VI; the arms of John Bugge were carved in the stonework of the choir, and John Darby or Derby, alderman, added a south aisle or chapel, being buried there about 1466 (Stow i, 201). St John's chapel, lately built by John Derby, is mentioned in 1478 (*Cal Wills* ii, 579). If, as seems likely, the crypt recorded by Hodge was part of the chapel built by Derby, it must have been an ornate vaulted crypt to a chapel above—or was the crypt itself the chapel? Detailed work on the drawings and other records is required to clarify this.

The church is shown on the copperplate map (Fig 8) with a tower at the south-west corner projecting into a south churchyard entered from Fenchurch Street. The battlements on the nave, if they are not a simple (and inaccurate) drawing convention, may be from the rebuilding of 1466.

The Wren church was of nave and two aisles, with the tower at the south-west corner. Since the copperplate map, supported by excavation, suggests that the pre-Fire tower protruded from the church and bordered Fenchurch Street, and the towers are almost certainly on identical sites, it seems likely that Wren's south aisle was an addition to the pre-Fire outline. This means that the medieval chapel found beneath the Wren chancel may have been on the south side of the medieval chancel, and could even have protruded from it in the manner of other chapels.

Thus it may have been a crypt beneath the chapel built by John Darby in 1466. One medieval floor tile has been noted from this church; it is of unusual hand-painted type.

### St Dunstan in the East (35)

Established by 1098–1108 (Kissan 1940, 58, 64); churchyard by 1193–4 (*Historic Towns Atlas*, 87). Rebuilt by Wren in 1670–1 and again, except for the tower, in 1818–19 (RCHM 1929, 183–4; *Wren Society* ix, 25). Damaged in the Second World War and now a garden.

Stone mouldings probably from the medieval church were incorporated in post-Fire buildings at a site in Harp Lane, south of the church, where they were recovered in 1974 (MoL, sitecode HL74). They include 12th-century arch mouldings, probably from a door, and a fragment of a late 12th or early 13th-century trefoil arch probably forming a door or recess (Schofield 1993, fig 58).

Parts of the medieval church, which had been incorporated into the Wren structure, were recorded when the church was rebuilt by D Laing (1818–19, 38–41). The Wren tower, on a new site, reused the outer walls of the medieval church and incorporated many moulded stones as rubble, including mullions, tracery, ribs, roses and gravestones. The lower part of a blocked 15th-century east window was found *in situ*. A Purbeck piscina was found in the south wall of the chancel and a stone aumbry with iron hinges in the north chancel wall; the entrance to the rood stair in the middle of the south wall.

Parts of the medieval floor comprising glazed decorated tiles were found 2ft below the Wren floor, as well as a thick ‘marble’ (? Purbeck) slab and stone benches. The western porch on the north wall which had been used as a burial vault had a thick Purbeck floor 5ft below contemporary ground level, side benches of stone and a ‘curious side window having four columns of good workmanship’. Massive chalk and ‘marble’ walls and foundations were also noted to the north of the church.

An engraving by J T Smith of c.1800 (Fig 63) shows the south aisle lit by large windows with three lights. Each window was composed of two pointed lights flanking a third round-headed surmounted by a circle all within a two-centred arch. Although no cusping is visible in the engravings (it was probably obscured by the glazing) these windows may be the work of Henry Yevele who advised on the building of a new south aisle and a porch by mason Nicholas Typerton in 1381 (Salzman 1967, 462–3). The window in the engraving however looks more like an early 14th-century example.

The church is shown on the copperplate map (Fig 9). Two features of the church exterior show in the panoramas; the spire and, on Hollar’s drawing, an

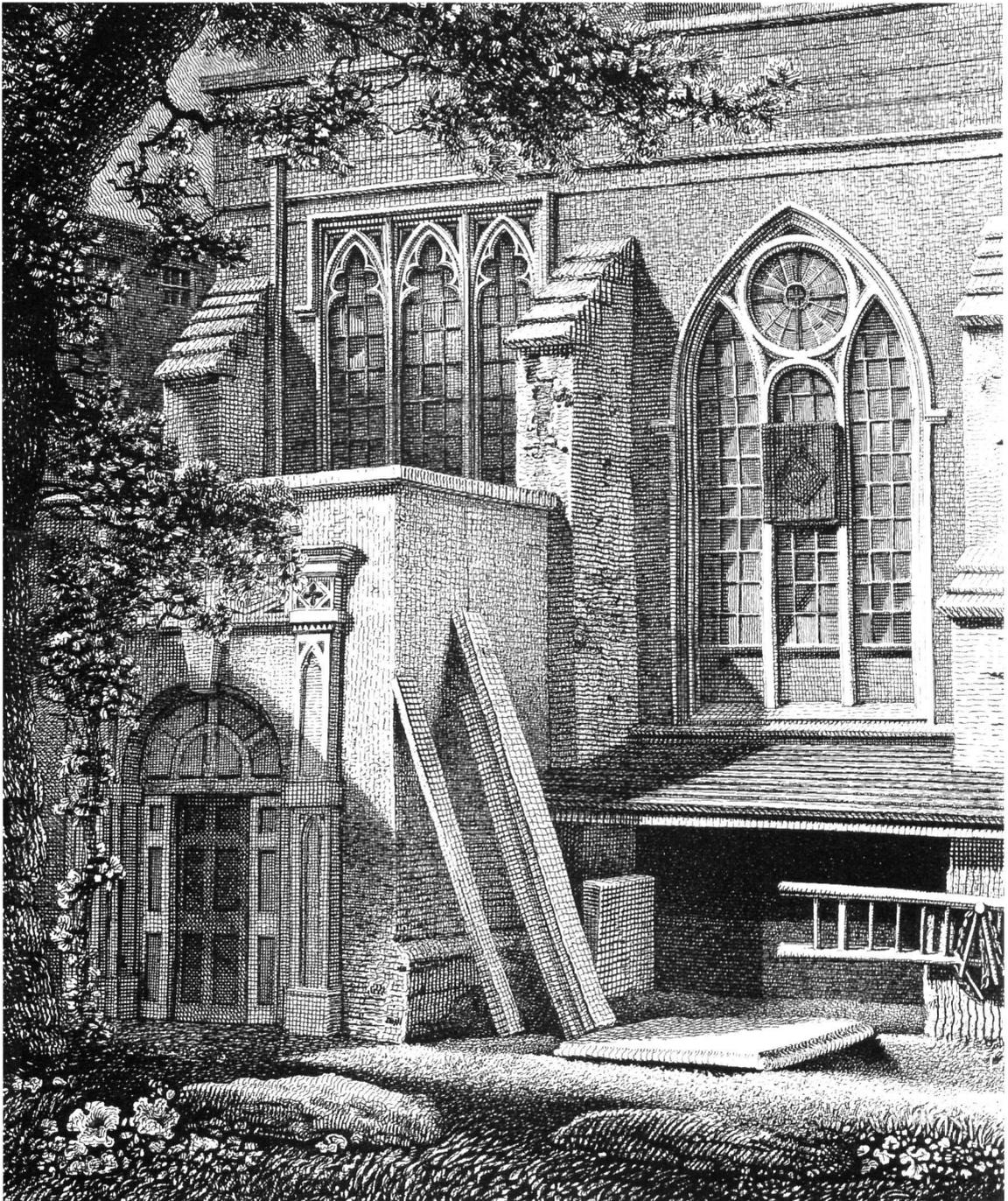
apparently higher roof at the east end, which if correct must be a lady chapel of some distinction (Fig 64). Leake’s plan shows a north side with three protuberances, of which one was probably a north porch.

Chapels are recorded as dedicated to St Mary in 1349 (*Cal Wills* i, 577), St Thomas the Martyr in 1361 (*ibid* ii, 76), the Blessed Virgin Mary in 1376 (*ibid* ii, 376), Holy Trinity in 1398 (ii, 337; *cf* ii, 598). In 1481 William Hariot, draper and mayor, built a chapel in the church (Stow i, 135). There were images to St Mary de Berkyngchapel and St Katherine in the church in 1351 (*Cal Wills* i, 665). The church had four chaplains in 1381 (McHardy 1977, 215), but in 1548 only two altars are mentioned, the Jesus altar and the Lady altar (Kitching 1980, 13).

### St Ethelburga Bishopsgate (38)

Established by the late 12th century (*SBH Cartulary*, 989). The church was badly damaged by a terrorist bomb in April 1993 (Fig 65). The present text describes the church as standing before the explosion, with the addition of some new details discovered during two 1994 projects by the Museum of London Archaeology Service: first, analysis of the retained historic fragments, and secondly, monitoring of building works, also after the bomb, in the building to the south, Hasilwood House.

Twelfth-century moulded stones were found in the bomb debris and must have come from the church walls, suggesting a 12th-century origin for the church. The present church was constructed mostly of ragstone rubble with limestone dressings (plan in 1929, Fig 2). Structurally the chancel and nave were undivided with overall dimensions of 55ft 3in × 17ft. A two-centred arch separated the westerly bay of the nave to form an annexe over which was the timber framing of the tower, the lowest timbers of which were medieval. The south aisle and south chapel narrowed to the east. The piers of the arcade dividing the aisle and chapel from the nave had four attached shafts and supported two-centred arches. All this work is dated 1390–1400 by RCHM (1929, 18–19). The west window was of late 15th-century date, as are the porch posts which were exposed in 1932 when the shops flanking the porch were removed. A porch (presumably to Bishopsgate Street) is mentioned in 1373 (*Cal Wills* ii, 162). The 15th-century inner doorway into the church is now in the Museum of London (Fig 33); the spandrels contain the faces of a man and a lion, the emblems of St Matthew and St Mark, and there was perhaps originally a second door upon whose frame appeared the symbols of the other two Evangelists. Excavations of 1994 connected with the site immediately to the south, Hasilwood House, encroached into the area immediately west of the church and found two human burials beneath where the porch and shops stood (the present pavement of Bishopsgate);



*Fig 63. St Dunstan in the East (35): south aisle windows c.1800, showing windows possibly by Henry Yevele*

until the shops were erected in the middle of the 16th century this would have been churchyard, and the medieval church must have been set back slightly from the street.

A spire is shown on the tower on the copperplate map (Fig 9). Timbers from the spire, retained after the 1993 bomb explosion, appear to be medieval and show joints of several phases of use. A view by West

## *S. Dunston in the East*



Fig 64. *St Dunstan in the East (35) on Hollar's panorama, 1647*

and Toms of c.1736 (Schofield 1993, fig 91) shows that the west end had a stepped gable by that date.

The taxation of the clergy in 1379 mentions the rector but no chaplain (McHardy 1977, 25).

### **St Gabriel Fenchurch St (40)**

Belonged to the Cnihtengild, and given to Holy Trinity Priory, Aldgate, in 1108 (*Holy Trinity Cartulary*, xvii, 109). Known as St Mary Fanchirche in 1362 (*Cal Wills* ii, 70). Land given by Helming Legget in 1376–7 was used as a separate burial ground and for the parsonage. The church was destroyed in the Great Fire and not rebuilt.

During sewer works in Fenchurch Street in 1834, the church was located; it lay in the middle of the street. The west wall was 5ft wide, the east about 6ft wide, and the length of the church 76ft. The east end was apsidal, of ragstone, chalk and ?Roman tile with brick. Within the church were many burials, some in

wood coffins (*Gentleman's Magazine* 1834, i, 156–7, with sketch plan).

The church is shown on the copperplate map (Fig 9). It had one chaplain in 1379 (McHardy 1977, 70). The separate burial ground was surrounded by a brick wall by 1527 (Loengard 1989, 73).

### **St Giles Cripplegate (42)**

Built c.1102–15 by Aelmund the priest (*HMC 9th Report*, 62a); churchyard by c.1250 (Sparrow Simpson 1897, 294). This church has been restored after severe wartime damage. The following description largely follows RCHM (1929, 96–100; plan, Fig 2).

The church was enlarged about 1285 by the addition of a chapel of the Blessed Virgin Mary (GL, MS 142, f.226). Shortly before 1339 George Clerk built a new chapel to Our Lady in the south aisle. A new beam (? at the rood screen) was installed by the vicar at about the same time. The guild certificate of



Fig 65. *St Ethelburga Bishopsgate (38): view of the church shortly after the bomb blast of April 1993. The west wall had fallen into Bishopsgate*

1389 for the Fraternity of Our Lady and St Giles reported that a new aisle had been added to the church, and much expended on the roof (Westlake 1919, 185).

The earliest work visible in 1929 was the lower stage of the west tower and the north and south walls of the chancel, dated to the 15th century by RCHM but possibly being built in 1396 (see below). The church was burnt down in 1545 (though the majority of the tower survived) and was rebuilt with nave and aisles of seven bays; the arcades had pointed arches of three moulded orders and piers of four engaged shafts. The low pitch 16th-century roofs of the north and south aisles, repaired, also survived to the Second World War. A restoration of 1994 by Caroe and Partners has revealed that the masonry of the tower, long encased in grime, is substantially medieval without later restorations, except for Victorian windows in Bath stone. The post-War clerestories to the nave are in Hollington (Shropshire) stone (information M Caroe). The size of the blocks of Reigate stone used for the tower, particularly those of the lower courses, is impressive.

The church is shown from the south by West and Toms in 1739 (Fig 31). Comparison with the plan of

1929 suggests that the rood stair attached to the south wall may have been entered from outside the building.

Fourteenth-century patterned floor tiles, presumably relaid, were recorded in the north chapel (two eastern bays of the north aisle) in 1929 (for one of the types, see *London Museum Catalogue*, 237, fig 76 no.1). Loose stones included medieval tracery and a Purbeck marble moulded capital to a window-shaft of c.1300 (RCHM 1929, 100).

A light of the Blessed Virgin Mary in the nave of the church is recorded in 1345 (*Cal Wills* i, 504), and the chapel of St Mary in 1348 (*ibid* ii, 83); a *via processionis* and the rood of the Blessed Mary in 1352 (*ibid* i, 664). The church had nine chaplains in 1379 (McHardy 1977, 111). The new work of the belfry is mentioned in 1396, and this presumably refers to construction of the lower part of the present tower (*Cal Wills* ii, 350). The churchyard had a common well in 1550 (CCPR St Giles Cripplegate).

#### **St Helen Bishopsgate (44)**

Parish church by c.1140 (*HMC 9th Report*, 64b); a Benedictine nunnery added to the church, 1200–15 (Cox 1876, 5–6); churchyard by c.1250 (Sparrow Simpson 1897, 295).

This combined parish and Benedictine nunnery church, which survives, has a long structural history which has been elucidated by recording work in the 1980s, and (at the time of writing) restoration work following damage by a terrorist bomb in 1992 (Figs 66–8). The following summary, written largely in 1991, will be overtaken and amplified by the report of current research. Three figures by Richard Lea illustrating the development of the church are given here (Fig 68a–c).

The oldest work is probably the south wall of the parish church, which has traces of the east jamb of a doorway and possibly windows with heads of radially-placed tiles; perhaps of 12th-century date. The *Survey of London* 9 (p.31) suggested that the doorway would have been near the 12th-century west end of the church, and that the present 14th-century west end must therefore represent an extension to the west. Recent recording (by R Lea: MoL site HEL86) suggests however that the south nave wall is of one build with the south transept and both may be (?early) 13th century in date. The west doorway to the parish nave is of the 14th century, heavily restored.

The west wall of the south transept, with two blocked lancet windows, and part of the south wall of the transept are of 13th-century date. The transept was extended eastwards in the late 14th century by a two-bay arcade of two-centred arches springing from a central pier with four attached shafts; the openings led into two chapels. Adjoining the south respond of the arcade is a small doorway opening into a circular stairway enclosed in a semi-octagonal turret. The



Fig 66. *St Helen Bishopsgate (44): interior in the early 20th century (NMR)*

transept is now entered through a late 15th-century arch.

The floor levels within the church rose by more than a metre between the 13th and 16th centuries. They were reduced in the 19th century and have been restored to approximately their 15th-century level in 1993–6.

The nuns' choir is divided from the parish nave by an arcade of piers of attached shafts on bases (elongated by the reduction in floor level in the 19th century, but now at the level of a new inserted floor) which date from the late 15th century (Fig 66). The partition before the 1470s was probably formed by a wall, but it is not clear what form of partition functioned with the late 15th-century arcade (perhaps it was a wooden screen). A foundation running between the piers of the 15th-century arcade was recently observed, but this might have been a sleeper wall for a previous arcade or even the north wall of the nave before the nuns' aisle was added.

The date of the present fabric of the north aisle (Nuns' Quire) is not certain. It may have not been contemporary with the 13th-century nave and south transept. One possibly 14th-century lancet window

survives in the north wall at the west end. This suggests that the north aisle was added, or an existing aisle rebuilt, in the 14th century, possibly at the same time as the second arch from the east in the main arcade.

The west door of the nuns' aisle or choir is late 15th-century, as is the small staircase in the north wall (now blocked) entered by a small doorway below the fifth window from the east, the night stair to the nuns' dorter on the north. The parish chancel is divided from the nuns' choir by two arches, the westerly one with half octagonal responds of late 13th-century or early 14th-century date. The eastern arch matches the opening into the south transept and may be contemporary with the nave arcade (Pevsner & Cherry 1973, 157) although the RCHM suggests an earlier date, *c.*1420. Above this arch are traces of an early 15th-century clerestory window. The roofs are partly 15th-century in origin.

The medieval documentary history of the priory is given by *Survey of London* 9, 1–18, and the architectural history *ibid*, 31–5. The will of Thomas of Basing, sheriff in 1269–70, enrolled in 1300, says that he and his brother Salomon constructed (*construximus*) the



Fig 67. *St Helen Bishopsgate (44): the north aisle window blown in by the bomb of April 1992. It has now been replaced by a new window*

church (HR 29)(54); *Survey*, 4–5). This could refer to the arch between the nuns' choir and the parish chancel; or even to the whole building of the nuns' choir (north aisle). The reconstructed form of the church about 1300 is given in Fig 68a.

Before 1363 Adam Francis, mercer, built a chapel dedicated to the Holy Ghost (*ibid.*, 6); this is taken to mean the two transept chapels off the south transept, with the arcade opening into them. A chapel of the Holy Ghost is mentioned in 1374 (*Cal Wills* ii, 171), and a chapel of St Katherine and St Margaret in 1513 (Darlington 1967, no.85). In 1379 the church had eight chaplains, of whom one was parochial, one conventual, and one of the prioress (McHardy 1977, 5). A reconstruction of the church about 1375 is given in Fig 68b. The late 15th-century work can be assigned to bequests by Crosby and others in the 1470s (*Survey*, 31–2). The rebuilt church of 1475 is reconstructed in outline in Fig 67c.

The copperplate map (Fig 9) shows a round-headed south door and at the south-west corner are projections which might be either corner buttresses or a side view of a porch for the southern of the two west doors. A building is shown against the church east of the south

door; a two-storey building in this position, against the west side of the south transept, has been inferred from recent identification of two squints, one on each floor, on the outside of the west wall of the transept (MoL, sitecode HEL86). These are still to be seen. Further recording in 1990 (also archived in HEL86) noted the roof line and possible vaulting of the S side of the cloister on the outside of the N wall of the church.

The notable collection of monuments, brasses, tiles and fragments of stained glass are listed by RCHM (1929, 22–24). From the pre-Reformation period survive recumbent alabaster effigies of late 14th-century date of John de Oteswich and his wife, from St Martin Outwich (Fig 42); the tomb of Sir John Crosby and his first wife Agnes (1476) (Fig 43); the rebuilt tomb of Hugh Pemberton (d.1500) and his wife Katherine, also from St Martin Outwich; and an Easter Sepulchre incorporating a squint, erected as a monument to Johane Alfrey (1525) (Fig 69) (*Survey*, plates 68, 77–8, 90–3, 102–3). The glass included the arms of Crosby, of his wife, and of the Grocers' Company (late 15th century), and other 15th and 16th-century fragments; the few that have survived the bomb blast are now reset in the upper part of the new window at the east end of the north aisle. Several 14th-century inlaid floor tiles, some made in Penn, have been recovered from the church (*London Museum Catalogue*, 237–42); others are relaid in the floor of the south transept chapels. The tiles are of both 'Westminster' and Penn types (see Appendix below).

The *Survey of London* volume listed nine extant brasses of the period before 1600, of which three came from St Martin Outwich; and six further examples, known from other references but not extant in 1924 (36–42, plates 30–40). RCHM in 1929 listed 10 extant brasses, of which two came from St Martin Outwich (RCHM 1929, 22). In 1994 11 were counted and are to be displayed in the refurbished church. The earliest is a fragment of an inscription, commemorating the burial of Robert Cotesbrook in 1393.

Archaeological recording by the Hertfordshire Archaeological Unit during the rebuilding of 1994–5 uncovered several medieval internal features, notably a 13th-century window arch in the south wall of the nave near the south-west corner of the church. This has been left visible and an escape door for the adjacent new west gallery has been placed beneath it.

### **St John the Evangelist Watling Street (47)**

Established by 1098–1108 (Kissan 1940, 60). Known until the middle of the 14th century as St Werburga. Destroyed in the Great Fire and not rebuilt.

During post-War clearance in 1954 the church and churchyard were recorded by I. Noel Hume. The earliest church appeared to have a small nave 27ft by 17ft internally, and a chancel about 10ft 3in wide and probably of the same length (Fig 70). A further wall of

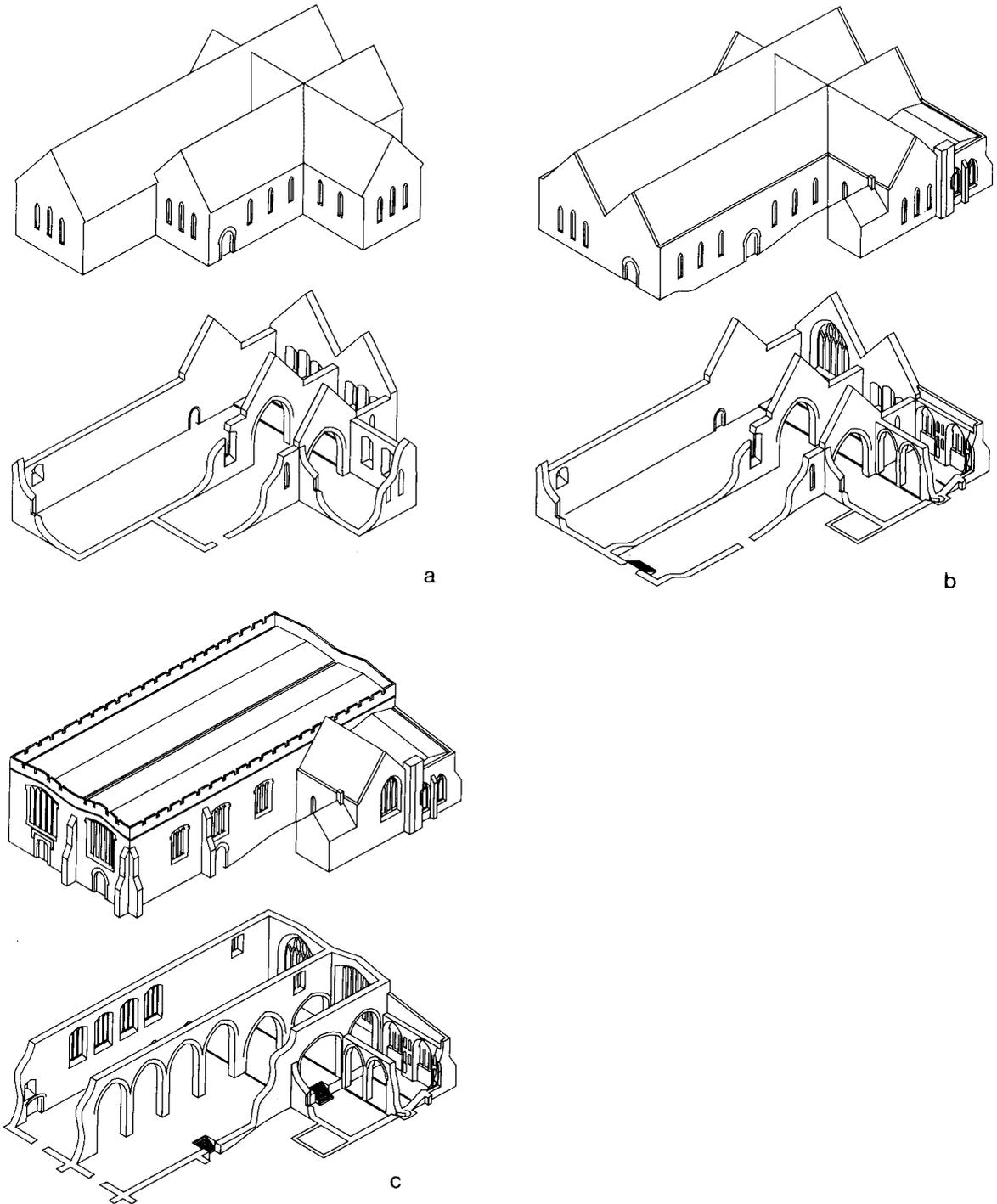


Fig 68. *St Helen Bishopsgate (44): outline reconstructions of the church in (a) about 1300, (b) around 1375, (c) after 1475 (R Lea)*

the first period was traced running south at right angles to the nave and half way along it, for about 6ft. The foundations included ragstone and reused Roman building material laid in gravel, and were 3ft 6in-4ft

wide. The ragstone and mortar walls above, recorded on the north side at junction of nave and chancel, were rendered and 2ft 9in wide. The excavator dated this first phase possibly to the 11th century. In the

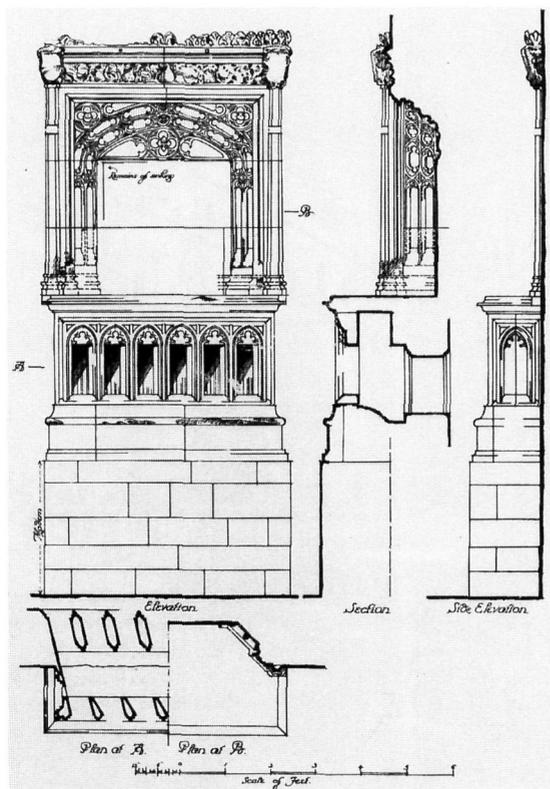


Fig 69. *St Helen Bishopsgate (44): the Easter Sepulchre and tomb of Johane Alfrej, 1525 (from Survey of London)*

13th or 14th centuries, apparently in two distinctly different phases, all three walls of the nave were rebuilt on the original alignment; and the chancel was widened by having new foundations laid alongside and outside the old on the north and south sides. This included a protruberance which may be the base of a buttress on the south side. Within the church were several burials, in coffins and chalk-lined graves; and to the south, the east end of a brick and chalk vault containing 18th-century coffins, a relic of the post-Fire period when the church site was used as a graveyard (MoL archive, sitecode GM160; Excavation Day Notebook I, 85–92). Glazed and decorated floor tiles were found in and around the church; they are of both 'Westminster' and Penn types.

In 1461 William Gregory, skinner, wished to be buried in the chancel beside the seat where he used to sit (*Cal Wills* ii, 546). The church had one chaplain in 1381 (McHardy 1977, 207).

### St Katherine Coleman (49)

One Penn floor tile has been recovered from the site of this church, which was demolished in 1926.

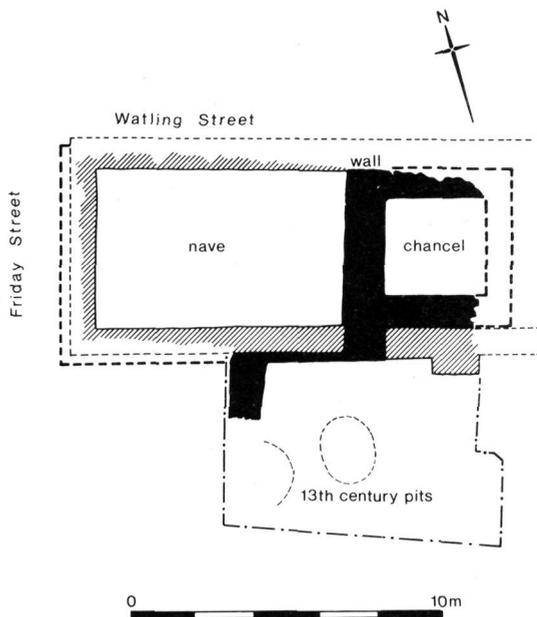


Fig 70. *St John the Evangelist (47): plan (I Noel Hume). Black: first period; diagonal hatching: second period*

### St Katherine Cree (50)

Probably originally a chapel in the churchyard of Holy Trinity Priory Aldgate; a parish church by 1201 (G.Keir pers comm); churchyard of parish a separate entity by 1365 (*Cal Wills* ii, 88). Rebuilt in 1628 (RCHM 1929, 8–10).

Some building of the chapel is recorded during the episcopate of Richard de Gravesend (1280–1303) (Strype 1720, ii, 62–4).

There are traces of 15th-century fabric at the west end of the north wall and the tower at the south-west corner may have been rebuilt in 1504, although in a view by West and Toms (1739) the windows appear to be of 15th-century date and the present quoins are not shown. Henry Snow left £20 for the building of the tower in 1496 (Stow ii, 397(v)). The 1504 tower and roof of the post-1628 church are shown by Hollar in 1647 (Fig 13 top right of the picture).

A pier at the south-west corner of the church is of 15th-century date. A hole dug next to it in 1928 showed that the bottom of the pier base is 3ft 8in beneath the present floor level, resting on a foundation pier at least 6ft deep. The top two courses of this pier were of dressed stone possibly forming a plinth, 1ft 2in deep (GL MS 9370, 147–8).

Plans of buildings of Holy Trinity Priory Aldgate by John Symonds around 1586 (Schofield & Lea in prep) include plans of St Katherine's at ground-floor (Fig 71) and approximately first-floor levels. The church had a nave and two aisles, the tower at the south-west corner

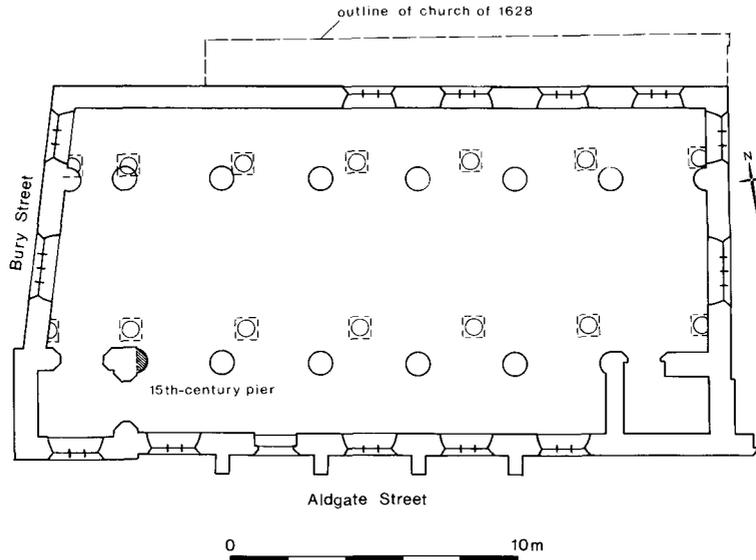


Fig 71. *St Katherine Cree* (50): plan in about 1586 (after survey by J Symonds). The site of the 15th-century pillar and the outline of the 1628 church have been added

and an arrangement at the east end of the south aisle suggesting that the aisle was one bay shorter, leaving space for a sacristy (reconstruction by R Lea in Schofield 1993, fig 32).

There is potentially conflicting evidence about the south entrance into the church. The copperplate map (Fig 9) shows the entrance through the south side of the tower (as at present, after the rebuilding of 1628), but Symonds's plan (prepared about 30 years after the copperplate, and 10 years before the start of rebuilding which produced the present entrance in the tower) apparently shows a south door to the south aisle. In his *Survey* of 1598 Stow (i, 142) thought the church was old, since the entrance had seven steps down from the contemporary street; but he does not say where this entrance was, in tower or aisle, and it could have been either. From the evidence of the north wall at the west end and the pier revealed in 1928, it seems likely that the church had three aisles by the 15th century, perhaps added to the building of the late 13th century.

An altar of St Mary, lately constructed by the testator, is mentioned in 1349 (*Cal Wills* i, 594). In 1379 the church had six chaplains (McHardy 1977, 50).

### St Lawrence Jewry (51)

In 1952, staff of Guildhall Museum took photographs of steps found on the south side of the church, which may be of the pre-Fire church or to a vault in the Wren church, later sealed up. In 1955 a carved stone from a tomb or lintel was found reused in the core of

the wall of the Wren church, at the south-east corner, at the junction of wall with roof. The top of the east wall also appeared to have a number of late medieval and 16th-century flooring tiles reused as a bonding course; three examples were recovered and allegedly retained (MoL archive, sitecode GM200), though they could not be located in Museum stores in 1994.

### St Leonard Eastcheap (53)

The site of this church, which was destroyed in the Great Fire and not rebuilt, was observed during redevelopment at 14–18 Eastcheap in 1988, but nearly all the site had been dug out to double-basement level for the previous building, and all remains of the church had been removed (MoL, sitecode EAS88).

### St Margaret Lothbury (56)

First mentioned c.1197 (Harben 1918, 381); rebuilt in 1440, when Robert Large gave 100 shillings for the work of the choir, and 200 marks for vaulting over the watercourse of the Walbrook, which passed along the east side of the church (Stow i, 282). Damaged in the Great Fire and rebuilt by Wren in 1686–93 (RCHM 1929, 71–4; *Wren Society* ix, 37).

The Wren church has periodically had structural problems arising from its east end being built over the Walbrook. In 1976 repair work in the north-east corner was observed by A Thompson. It appeared that the medieval church was extended over the

stream in the late 15th century; an arched foundation of stone with some brick lay under the present north wall, indicating that the north wall of the Wren church, which has three aisles, was on its present alignment by the 15th century (Fig 72). Part of the east wall of the medieval church before the extension was also observed (MoL sitecode, MAR76). The church is shown on the copperplate map (Fig 9).

A bequest for a belfry was made in 1361 (*Cal Wills* ii, 29), and another to the new work of the belfry in 1368 (*ibid* ii, 112). The porch is mentioned in 1382 (*ibid* ii, 232). The church had five chaplains in 1379 (McHardy 1977, 75). The church had a chapel dedicated to St Clement by the early 16th century, perhaps built by the fraternity of St Clement of the Founders' Company, whose hall was adjacent (Parsloe 1964, 30, 39).

### **St Margaret Pattens (58)**

During builders' operations at 23 Rood Lane in 1935, the arched chalk foundations of the north side of the adjacent church of St Margaret Pattens, Rood Lane, were revealed beneath the party wall. A site plan in Guildhall Museum (now MoL) records also indicates

that the north side of the medieval tower, evidently at the north-west corner of the church, lay at the west end of this foundation and protruded slightly to the north (*ie* into the site), but photographs in the archive do not include this end (MoL archive, sitecode GM59).

### **St Martin Orgar (61)**

Given by Orgar the archdeacon to St Paul's in the 12th century (*HMC 9th Report*, 63; first mentioned 1183-4, G. Keir pers comm); churchyard by c.1250 (Sparrow Simpson, 1897, 296). Destroyed in the Great Fire and not rebuilt. The tower survived the Fire, and was built into chambers (Strype 1720, ii, 190; for a slightly different account, Cobb 1977, 176).

The site, which had been part of the graveyard left open since the Great Fire, was excavated in 1986-7 (MoL sitecode ORG86). Flint and gravel foundations of an eastern apse of Saxo-Norman date were replaced in the 13th century by a square chancel on arches of chalk and ragstone (Fig 73). In the late medieval period a chapel over a vaulted crypt was added to the south of the main part of the church; a portion of the floor of the chapel survived as large Flemish tiles in a chequerboard design around at least two moulded



Fig 72. *St Margaret Lothbury (56): arch beneath north wall of church, recorded in 1976. Scale is 10 × 10mm units*



Fig 73. *St Martin Orgar (61): the church site under excavation in 1986–7, looking west. This shows, A, the chalk foundations of the first church; B, the arched foundations of the late medieval east end; C, a stone burial vault within the pre-Fire church; D, a post-Fire brick burial vault with entrance stair to the north. Scale is 10 × 100mm units*

greensand pier bases of 15th-century style (Fig 74). A ‘Westminster’ tile has also been recovered from the site. The church is shown on the copperplate map (Fig 9).

A chapel of St Mary is mentioned in 1431 (*Cal Wills* ii, 551). William Crowmer, mayor, built a chapel on the south side of the church, and was buried there in 1433 (Stow i, 222–3); it is possible that this was the excavated south chapel. In 1379 the church had six chaplains (McHardy 1977, 80).

So far this church is unique in the City in that, according to provisional analysis, the Saxon nave lay under the medieval south aisle, not the medieval nave, and the church expanded only in a northwards direction to become a church with nave and two aisles by the end of the medieval period (plan in Youngs *et al* 1988).

### St Martin Outwich (62)

Church mentioned by 1217 (*Clerkenwell Cartulary*, 288), but the parish is named c.1196–7 (Goss 1933, 72). There was no churchyard near the church except

possibly for small areas on its south side; a separate churchyard was bought from Masters of the Papey in 1539 (Stow ii, 296, notes), its site in what is now Camomile Street. The church was demolished and rebuilt in 1796 (for the replacement church, see Jeffrey 1989). The parish was united with St Helen Bishopsgate in 1873 (*VCH* i, 402); church demolished 1874.

The church (plans, Fig 40 and Fig 75, varying in detail) consisted of a nave and south aisle (overall dimensions 67ft × 37ft) with a tower at the south-west corner. The two eastern piers and responds of the nave arcade were octagonal (Fig 26). The windows of the north and east sides, shown in a view by West and Toms in 1739 (Fig 47) are of several different 15th-century styles.

The copperplate map (Fig 9) shows the church as a simple rectangle, with the tower apparently at the north-west corner; West and Toms, more correctly, show the tower at the south-west corner (Fig 47). The plan shows that there was no particular strengthening of the masonry at ground-floor level to support the tower; it is perhaps possible that the tower shown by West and Thoms was a rendered timber structure, as at nearby St Helen Bishopsgate.



*Fig 74. St Martin Orgar (61): detail of a 15th-century pier base and floor tiles in the north-west corner of the southern chapel, possibly of 1433; also shown is the broken vault of an underlying burial vault. Looking north; scale is 2 × 100mm units*

Bequests to the belfry and to the altar of St John the Baptist are recorded in 1356 (*Cal Wills* i, 695); St John was the patron saint of the Merchant Taylors' company, whose hall was adjacent. Several medieval internal features were still in position up to the date of demolition though they are not all shown in Wilkinson's plan of 1797 (Fig 40). In the north-east corner of the church was the tomb of William Clitherow (d.1469) and his wife Margaret (Goss 1933, 41; Stow, i, 181). In the east wall adjacent to the high altar was a recess with an arched head with two subsidiary pointed arches (Fig 76); next to the altar on its south side, forming a screen between the altar and the south aisle, was the tomb of Hugh Pemberton (seen in Fig 26, later rebuilt in St Helen's), incorporating a squint to give a view of the high altar from the south aisle (described in detail in *Survey of London* 9, 63–4 and plates 77–8). In the south-east corner was a tomb with 14th-century alabaster effigies of John de Oteswich and his wife, now in St Helen's. The original recess for the tomb is shown in the sketchplan in Fig 75 (north is to the bottom of the plan) and perhaps in Fig 77. The location of this tomb suggests that there was a chapel here, at the south-east corner, by the late 14th century. The south aisle around it seems to be of the 15th century, perhaps the earlier part: the

tracery in the window at its east end (Fig 47) is paralleled by those at North Cadbury church of 1415–23 (Harvey 1978, fig 125). The bulge in the church wall around the tomb allows the suggestion to be made that the chapel was first, in the late 14th century, and then subsumed into the aisle.

In 1500 the will of Dame Elizabeth Nevill required her burial in a vault in the chapel of Our Lady in the church, where the bodies of her husband Richard Naylor (d.1483) and two of her children lay; this is thought to be at the south-east corner of the church (Goss 1933, 44; Stow i, 180). In 1514 Matthew Pemberton, merchant tailor and presumably a relation of Hugh Pemberton, gave £50 for the repair of St Lawrence's chapel (Stow i, 181).

Three brasses from St Martin's are now also in St Helen Bishopsgate; two of rectors, John Breux (1459) and Nicholas Wotton (1483), and broken indents from the tomb of Hugh Pemberton (*Survey of London* 9, 36–8). The church had one chaplain in 1379 (McHardy 1977, 84). The positions of the two brasses of priests in St Martin's are shown by Wilkinson in 1797 (Fig 40); one lay below the step of the altar area, and the other lay on the south side of the same area. The tiling of the choir is mentioned in the churchwardens' accounts for 1514–15 (Goss 1933, 89).

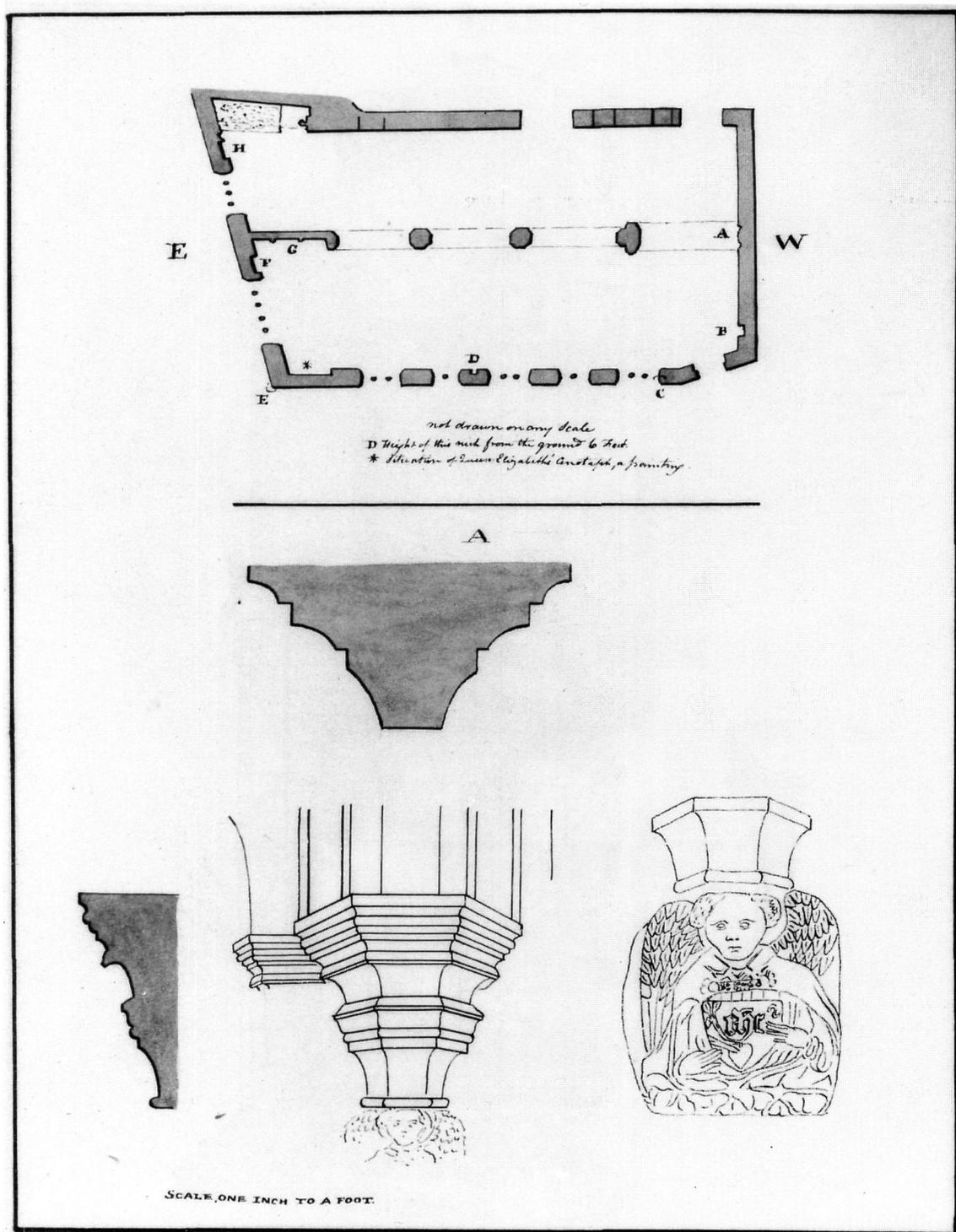


Fig 75. St Martin Outwich (62): sketch plan and details of internal corbels, c.1820 (GL)

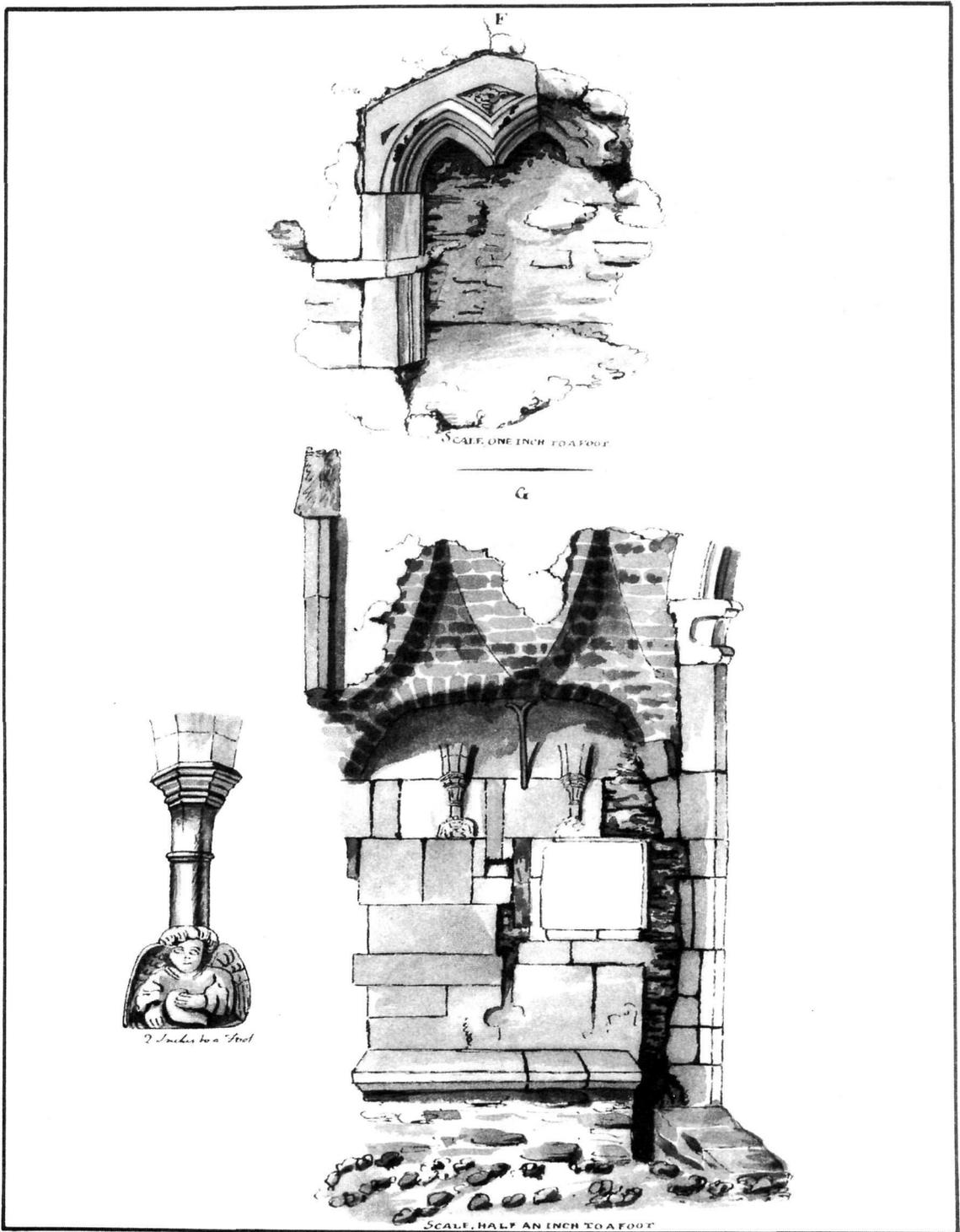


Fig 76. St Martin Outwich (62): details of aumbry and the wall tomb of Pemberton at points F and G on the plan on Fig 75, c.1820 (GL)

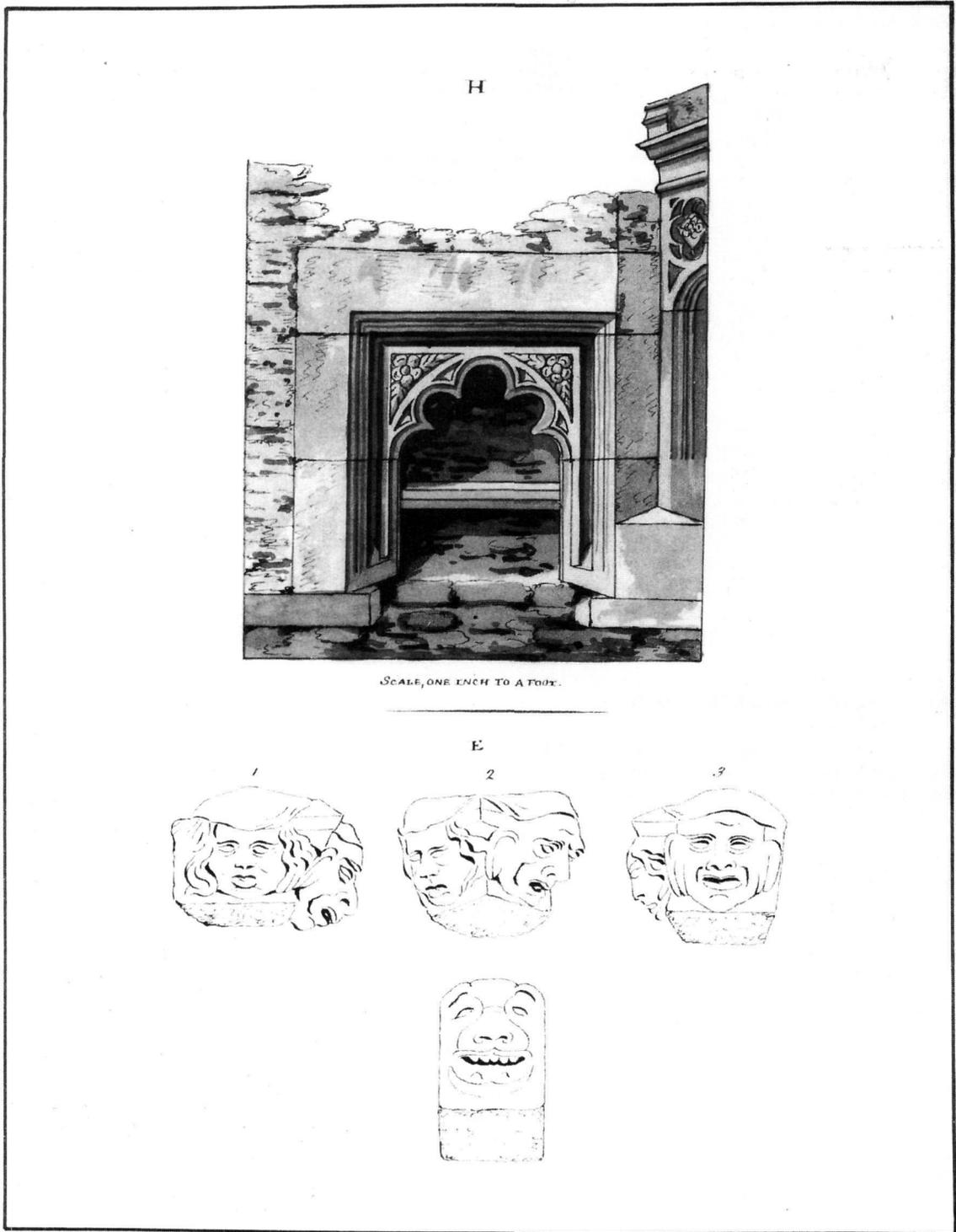


Fig 77. St Martin Outwich (62): details of second aumbry and external corbels at points H and E on the plan of Fig 75, c.1820. The stonework right of the aumbry appears to be a canopy for the adjacent tomb of John de Oteswich, which has not survived (GL)

In sum, the church seems to have been embellished and largely rebuilt during the 15th century, possibly during the first half. One of these rebuildings produced the late medieval south aisle.

### St Martin Vintry (63)

Established by ?1096, 1100–7 (*Regesta*, ii, 410); churchyard by 1211 (*Historic Towns Atlas*, 89). Destroyed in the Great Fire and not rebuilt.

The church may be that referred to as *baermanecyrce* (OE *baerman* = carrier, porter) in a charter of 1067, but the charter is said to be ‘probably a forgery’ (Harben 1918, 386). The church is known as ‘Sancti Martini ubi vina venditur’ [where wine is sold] in 1200 (*ibid*, 387).

Rebuilt according to Stow by Mathew Columbars, a Bordeaux merchant, in 1399, his arms being in the east window; but Harben (1918, 387) showed that Columbars’s will actually dated to 1282, suggesting that the rebuilding was in 1299. Columbars was King’s Chamberlain and taker of wines throughout England in 1279 (*Cal LB B*, 280). If this reference can be taken to be of the 13th century, it is the earliest to glazing with personal arms in the City.

In 1378 the rector complained to the City that a house adjoining the churchyard had a jetty overhanging into it for a length of 14 yds 16in and a width of 21½in so he could not build there (*Assize of Nuisance*, 619); though he was unsuccessful in his plea, this possibly indicates an intention to extend the church in some way. A bequest to lengthen the church and raise a belfry was made in 1394 (*Cal Wills* ii, 327), and the campanile of the church is mentioned in 1396 (HR 125/105). Sir Ralph Austrie, fishmonger and mayor, roofed the church with timber and covered it with lead, before his death in 1494 (Stow i, 248). The copperplate (Fig 9) shows the roof with lead sheets, and presumably the tower of the 1390s. The church had a cloister in 1508 (Darlington 1967, no.96).

The plan of the western half of the church was recorded by I. Noel Hume under salvage conditions in 1956. Walls were generally of mortared ragstone and chalk. The church had a nave about 21ft wide, with north and south aisles: the north wall was not recorded, but the aisle was probably about 12ft wide; the south aisle was about 15ft wide. The foundations of the tower were located at the west end of the south aisle, suggesting a tower about 24ft square. Immediately north of the tower, in the west end of the nave, may have been a separate room. The east end was not recorded (MoL archive, sitecode GM155; Excavation Day Notebook IV, 46–8). Excavations again on this site, when the 1957 building was demolished in 1986, found seven skeletons from the churchyard, and a semi-sunken building with timber foundations and brickearth floors sealed by the northern edge of the churchyard (MoL, sitecode QUN86).

A rood is mentioned in 1350 (*Cal Wills* i, 643). Stow (i, 149) describes the tomb of Richard Lyons, sheriff and wine merchant (d.1381): ‘his picture on his grave stone very fair and large’ with fine details of carved clothing. This grave was at the entry to the choir. Lyons’s will bequeathed money for three images of the Holy Cross, St Mary, and St John, and for ‘a large and honest pulpitem’ with an altar for six chaplains (Kingsford’s notes to Stow, ii, 397(xiii)). In 1379 the church had five chaplains (McHardy 1977, 82). An altar of St Europius the martyr is mentioned in 1442 (*Cal Wills* ii, 516) and Knolles chapel (probably of Thomas Knolles, grocer) in 1461 (*ibid* ii, 557). One Penn tile has been recovered from the site.

Property on the west side of the church was described as contiguous with it in 1259 (HR 2/52); and in 1379 as contiguous and annexed to the church (HR 108/106). The property was assigned to the church for the upkeep of a chaplain in 1396 (HR 130/1).

### St Mary Abchurch (64)

Established by 1182–98; churchyard by 1211 (*Historic Towns Atlas*). Rebuilt by Wren in 1681–7 (RCHM 1929, 40–3; *Wren Society* ix, 40).

Protruding south from the south wall of the church, under the churchyard, is a medieval vaulted chamber (Fig 30a-b); this was not recorded by RCHM, since it was revealed after war damage. It was built after the construction of the arched foundations for the present south wall, and had an external entrance, now blocked, from the churchyard on its south side.

The copperplate map (Fig 10) shows a tower at the south-west corner with a newel stair at its own south-west corner; but Hollar shows what is probably the church with a tower at the north-west corner and this is the position of Wren’s tower, with the stair at its south-west corner. It therefore seems likely that the copperplate map is in error and that the pre-Fire tower was at the north-west, to be reused by Wren.

There were chapels of St Mary and St Trinity in the church (Strype 1720, i.ii, 183–4); the church had four chaplains in 1379–81 (McHardy 1977, 63).

On 12 December 1683, during the period of building of the Wren church, the surveyor John Mills and five colleagues were called to the site. They found that there had been settlement in the north wall and north-east corner of the church occasioned by the recent digging of a cellar 2ft lower ‘than one of the legs of the foundation whereby the church wall is undermined and rent from the top to the bottom at the east end and also all the arches in the foundation of the north side are split whereby the foundations must be shored with timber and planks’ (Mills & Oliver, v, 190).

### St Mary Aldermanbury (65)

Established by 1107–47 (*CAD* A, 7309); churchyard by c.1250 (Sparrow Simpson 1897, 294). Rebuilt by Wren in 1670–86 (*RCHM* 1929, 90–2; *Wren Society* ix, 48). Destroyed in the Second World War and its superstructure moved to Fulton, Missouri, USA.

This church was destroyed in the Fire but then rebuilt to the pre-Fire ground plan. The dimensions of the post-Fire church were 74ft × 44ft with a nave, chancel and aisles, all of five bays. The lower three stages of the post-Fire tower were of 15th-century masonry, but re-faced (Fig 78). Leake's map shows that the pre-Fire west tower protruded from the aisles. The bombed church site was examined after the War by Grimes but not reported in his 1968 account. The foundations are now displayed in a public garden. Hauer & Young (1994) have incorporated interim statements by Grimes (including conversations with him) in their history of the church and publish a plan of the pre-Fire church based on a panel which hangs in the Wren church in Missouri. The phasing as reported by Hauer & Young (1994, 41) is of a nave and chancel to which chapels were added, north and

south of the chancel, in the 13th century. It is not clear from this account when the medieval aisles were added, though presumably they were present by the end of a rebuilding in 1438 at the charge of Sir William Estfield, mayor in 1438, who built the tower and gave £100 to the other works of the church (Stow i, 292); he died in 1445 (*Cal Wills* ii, 510–11). It is possible that this church is another example of the building of chapels north and south of the choir before the addition of aisles, but this is not certain.

An altar of St Peter is mentioned in 1354 (*Cal Wills* i, 680). The church had four chaplains in 1379 (McHardy 1977, 60). Several pieces of moulded stonework from the church site are in the GM collection: nos 24068–92. They include fragments of tombs, some datable to the 15th century.

A number of floor tiles have been recovered from the site at various times: they include 'Westminster', Chertsey (13th-century), Penn and Flemish tiles. Fragments of ledger slabs are also incorporated into the present ruins. They comprise parts of (i) a mid 15th-century slab and indent of a civilian, (ii) two fragments of slab, originally about 1.8m by 1.1m, with part of a marginal black-letter inscription and merchants' marks, of about 1500; (iii) two other fragments of Purbeck marble (Bertram 1987, 144–6).

### St Mary Aldermary (66)

Established perhaps by 1020, but definitely by 1098–1108 (Stow ii, 238). Rebuilt by Wren by 1682 (*RCHM* 1929, 81–3; a story that the sponsor demanded that the new church should be a copy of the old is contested by Pevsner & Cherry 1973, 168).

Rebuilt by Henry Keble, grocer and mayor, who died in 1518 and was buried there in his own vault, with a monument, on the north side of the choir, though the monument was destroyed by Stow's time. Thomas Hinde, mercer, gave ten fodder of lead for the middle aisle roof. Charles Blunt, Lord Mountjoy, was buried here about 1545, his arms appearing in the east window. Sir William Laxton, grocer and mayor (d.1556) and Thomas Lodge, grocer and mayor (d.1563) were buried in Keble's vault (Stow i, 253).

This church was rebuilt by Wren after the Fire in Gothic style on the medieval ground plan. The remaining pre-Fire features are the lower stage of the tower (built c.1510; Colvin 1981, 24–31) 12ft square with an arch into the south aisle, the second stage of the tower (rebuilt 1626: Strype 1720, I.iii, 18) and 16th-century tracery in Caen stone in the windows of the south aisle. During restoration work in c.1839 observation of the masonry indicated that the lower mouldings, string course, buttress and ashlar work in the north wall up to the base of the windows were original work of the c.1510 rebuild which had been left intact by Wren (Wilson 1840, 15–17); the north exterior, now fully exposed, no longer shows this, and



Fig 78. *St Mary Aldermanbury (65): the west end of the Wren church, before removal to the USA. It is probable that much of this facade was of pre-Fire origin (GM)*

must have been refaced in the 19th century. It is therefore probable that the Wren outline of nave and two aisles, with the tower projecting south from the south aisle at its west end, is the pre-Fire plan also.

Cobb (1977, 58) has argued that the design of the tower of 1511 is based on a drawing of the intended, but never built, tower of Henry VI at King's College Cambridge. Harvey (1987, 330–1) further suggests that the detail in the drawing has parallels in the middle of the 15th century, and 'as there can be no question that the drawing was produced for showing to the King' it might be the work of Robert Westerley, the king's chief mason responsible for Eton college, and be datable to a few years after 1448.

The copperplate map (Fig 10) shows a simple tower with virtually no ornament. The church is probably shown by Hollar in 1647 (Fig 11, left hand edge near St Mary le Bow), with more prominent corner turrets.

A chapel of St Thomas, built by the rich pepperer Thomas Romain, is mentioned in 1349 (*Cal Wills* i, 651; Nightingale 1995, 94); a chapel of St Mary, where the testator and his father used to sit, and of St John in 1436 (*ibid* ii, 505). The altar of St Mary and St Anne is mentioned in 1349 (*ibid* i, 590); the altar of St Anne was to be rebuilt by a bequest of 1396 (proved 1399) (*ibid* ii, 341; cf *ibid*, 328). The church had five chaplains in 1381 (McHardy 1977, 204).

### St Mary Axe (67)

First mentioned in the late 12th century (*Historic Towns Atlas*, 89); churchyard by 1348. The parish was united with that of St Andrew Undershaft in 1565 and St Mary's church let to be a warehouse for a merchant (Stow i, 160). The church is shown on the copperplate map as having an axial tower and a chancel (Fig 10), but does not appear on Ogilby and Morgan's map of 1677.

The site of the church at 37, 43 and 45 St Mary Axe (street-numbers of 1918) was observed during redevelopment in 1950–1. Disturbed medieval burials were observed on the sites of nos 43 and 45, the southern part of the site. Also in this part was a chalk foundation pier 5ft 9in long north-south, 5ft wide at the north end and 4ft wide at the south end. About 12ft to the east was a further fragment of chalk walling (MoL, sitecode GM115). These are presumably parts of the church.

In 1379 it was reported that 'the rector has scarcely enough to live on' and there was no chaplain (McHardy 1977, 62). In 1544 the parsonage, on the north side of the church, measured 20ft 7in along the street and 14ft 6in wide; it had a gallery at the back which ran east-west for a further 17ft, adjoining a northern graveyard (Loengard 1989, 66).

### St Mary le Bow (69)

Perhaps established by 1087 (Kissan 1937, 436–44); certainly by 1090 (Kingsford in Stow ii, 328); churchyard 1157–59 (*Historical Gazetteer*, site 104/0). Rebuilt by Wren in 1670–80 (RCHM 1929, 76–81; *Wren Society* ix, 44–7). Damaged in the Second World War and restored.

The surviving 11th-century crypt is rectangular and comprises a nave subdivided into bays, three in width and four in length. The west end of the south aisle opens into a bay beneath the site of the later medieval tower and it is likely that before the construction of the tower there was access from here into the churchyard. It is possible that there was corresponding access at the west end of the north aisle. Of the nave, only the six easterly bays remain, the west side having been disturbed by the post-Fire rebuilding. The columns which divide the bays have chamfered square bases and cushion capitals. The responds on the arcades and the side walls are of three square orders with plain chamfered imposts. The brick vaulting is late 17th century but on one of the northern responds some of the original springers remain, and in the easterly bays some of the original wall ribs. The walls, restored, are of ashlar with wide joints and some diagonal tooling. The piers are of ashlar and the arches are round-headed with some re-used Roman bricks.

At the north-west angle cutting through the original north and west walls into the crypt is a square projection with a doorway in the south face, which is the entry to the newel stair found during restorations in 1934 and 1955–9 (Fig 19). Two carvings of simple interlace patterns were found on the newels (Fig 20); these can still be seen. In each bay of the north, south and west walls are blocked round-headed windows. The floor of the crypt is c.11ft below present street level and, from excavations nearby in the 1970s, would have been about 1ft below 11th-century ground level.

A reconstruction of the plan of the 11th-century crypt has been made by Gem (1990, 59–62). He proposes that all four sides would originally have had windows; he omits both possible entrances through the west wall at the north-west and south-west corners and assumes that the only entrance was the newel stair at the north-west corner. He points out a close similarity with the contemporary crypts below the eastern arms of Christ Church and St Augustine's, Canterbury, and Rochester Cathedral, though there was clearly no intention that the crypt at St Mary le Bow was to be part of a larger church (a better candidate for this would be the undercroft of similar style found in the early 19th-century on the site of the church of St Martin le Grand). Gem further suggests that if the crypt of St Mary le Bow, built by a workshop with Canterbury connections, dates from after the London fire of 1087, then perhaps the

rebuilding of St Paul's itself after 1087 was related to the Canterbury workshop.

The name *le Bow* (*de Arcubus*) has sometimes been interpreted as an allusion to the arches of the tower crown, as described below, but Florence of Worcester refers to Bow church in 1090 as 'ecclesia quae ad Arcum dicitur' (Kingsford's notes to Stow, ii, 328). The word *arcum* might be translated as *arch* or *vault*; a vaulted church (that is, in addition to the vaulted undercroft) would be a noteworthy sight in late 11th-century London.

St Mary le Bow had a tower by 1196, when the popular leader William Fitz Osbert vainly took refuge there (Page 1922, 118). A tower, presumably the same, fell down in 1271, damaging the adjacent house of Christchurch Canterbury (which lay on the north side of the church) (*Eyre 1276*, no.221). This suggests that the stair at the north-west corner led to the tower as well as from the crypt to the ground floor. A new steeple projecting west from the south aisle was built in 1512, with a crown of arches of Caen stone (Stow i, 256). The church is shown on the copperplate map (Fig 10) and by Hollar (Fig 11, 'Bow Church'); the south-west tower with its arched crown was a feature of the City skyline. This crown was however rebuilt between the dates of the two drawings by mason Edmund Kinsman in 1636 (Colvin 1995, 588).

The copperplate map also suggests clerestories on the south side of the nave. The history of the body of the church above the crypt is less well known. In 1955 a 13th-century pierbase was found reused in the post-Fire works in the crypt (Fig 79); it is the only evidence for an otherwise undocumented period of building in that century (note by D Keene in MoL archive, site GM223).

Surveying by E. Underwood in 1932 revealed, at the south-east corner, a wall running along the south wall of the Wren church and south of the line of the Norman church (which stops short of the S wall as rebuilt by Wren, compare the plans of crypt and



Fig 79. *St Mary le Bow* (69): 13th-century pier base found in 1955, re-used in post-Fire building works in the crypt. Scale is in feet (GM)

present church). The wall was 3ft 6in wide and turned to the south 4ft 6in west of the south corner of the church. The wall was about 14ft high with its top about 2ft below pavement level. Its recorded length was 16ft (MoL archive, site GM262). This could represent a small appendage at the south-east corner of the pre-Fire church, or be of an adjacent secular building.

Within the church, the chancel of St Nicholas the bishop is mentioned in the will of John de Holegh, hosier, in 1348, along with the new work of the belfry and a bequest for painting an image of the Blessed Virgin Mary in the choir and for the purchase of a crown to be placed on her head (*Cal Wills* i, 656). The altar of St Nicholas is mentioned in 1361 (*ibid* ii, 208), and an altar of Holy Trinity in 1468 (*ibid* ii, 578). The church had six chaplains in 1381 (McHardy 1977, 203).

In 1523 the parsonage lay on the north side of the church, abutting Bow Lane; it was 33ft 10in long and 14ft 6in wide (Loengard 1989, 56).

### St Mary at Hill (71)

Established by 1170–97 (*CAD A*, 1997, no.2); churchyard on north side by 1299 (HR 28/68). Rebuilt by Wren in 1670–6 (RCHM 1929, 16–18; *Wren Society* ix, 41); badly damaged by fire 1988, now largely restored.

Many details concerning the pre-Fire church are found in the churchwardens' accounts (Littlehales 1904–5): the north aisle dates from 1487–1503 (p.11), and the south aisle was extended to the west over the site of the kitchen of the house of the Abbot of Waltham in 1500–1 (p.200). Both aisles were re-roofed in 1526 (p.334–8). A porch is mentioned in 1420–1 (p.61); this was repaired with a ton of Northern stone in 1428–9 (p.70–1). In 1427 William Serle, carpenter, contracted with the parish to make a roodloft and a clerk's chamber, and was further paid £12 for the stalls and £8 for the new porch (Harvey 1987, 272). The tower was repaired in 1479–81 (p.102–3); perhaps it underlies the present tower as left by Gwilt in 1787–8.

In 1513–14 John Warner, mason, was paid £24 for making the battlements of the middle aisle (*ie* nave), and £3 for those of the south aisle; according to Harvey (1987, 315), the south aisle had probably been designed about 1501 by Robert Vertue, King's Mason and designer of Bath Abbey church. This attribution rests on the payment of £1 to 'Maister Vartu' for unspecified work on the church (Littlehales 1904–5, 244–5, 254, 257).

The west part of the pre-Fire north wall and the heads of two pointed segmental-arched windows were exposed when plaster and render was stripped from internal and external elevations in 1984 (Figs 80–1; MoL sitecode MAH84). A circular window by Wren above the north door was centred on the west of the two windows. The mouldings and window forms are



Fig 80. *St Mary at Hill (71): the north aisle of 1497–1503, partially revealed within the Wren structure in 1984*



Fig 81. *St Mary at Hill (71): detail of one of the windows of 1497–1503*

of late 15th or 16th-century type, and they are presumably part of the new north wall and aisle built in 1487–1503. During restoration after the fire of 1988, further evidence was uncovered of the medieval tower, two medieval doors (one of 14th-century date, from mouldings) in the south wall, and a third, probably of c.1500, in the north wall (MoL, sitecode SMY88; Jeffery *et al* 1992).

The church is not shown on the copperplate map; there is no apparent reason for this deficiency.

A chapel of St Katherine is mentioned in 1428 (*Cal Wills* ii, 464), and one of St Stephen in 1431; the latter lay on the north side of the choir, and was built by William Cambrugge (*Cal Wills* ii, 463); in 1494 it had pews (Littlehales 1904–5, 215). In 1469 there were three chapels: of St Stephen, St Katherine (which also adjoined the choir), and St Anne, the last enclosed by screens with doors (*ibid*, 251). St Katherine's chapel contained men's pews in 1495–6 (*ibid*, 219). Altars of St Edmund and St John the Baptist are mentioned in 1486 (*ibid*, 2, 11). The church had three chaplains in 1379 (McHardy 1977, 69).

In 1516 the leaves of the high altar, evidently a leaved picture of some kind, were given new hinges (Littlehales 1904–5, 293). There were representations in the church of St Mary, 'Our Lady of Pity', St Thomas Becket and St Nicholas (*ibid*, lxii). The rood, which had four evangelists on it in 1428, was rebuilt in 1496–8 (*ibid*, 70, 224–8). A lectern in the roodloft is mentioned in 1501–2 (*ibid*, 243). A new pulpit was made in 1503–4 (*ibid*, 251–2).

Five decorated floor tiles have been recovered from the church, transferred at an unknown date from the Royal Albert Museum, Exeter (information J Clark). The tiles are both Penn and Flemish types.

**St Mary Magdalen Milk Street (72)**

Several Penn tiles have been recovered from this site, but their present whereabouts is unknown. The church was not rebuilt after the Fire.

**St Matthew Friday Street (79)**

Several floor tiles, of 'Westminster', Penn, and an unknown type, have been recovered from the site of this church which was demolished in 1885.

**St Michael Aldgate (80)**

The chapel of St Michael near Aldgate is mentioned in early documents concerning properties belonging to Holy Trinity Priory, Aldgate (from 1108: *Holy Trinity Cartulary*, 11). Its site has never been definitely identified, but the following suggestion is made by the present author (Schofield & Lea, in preparation).

In 1314 the prior and convent of Holy Trinity Priory leased to John de la Marche land in the parish of St Katherine Cree bordered on the north by the chapel of St Michael and its cemetery to the south west of the chapel. Some subsequent occupiers paying quit rent are noted in the cartulary until the 'Abbot of Evesham' in 1426 (*Holy Trinity Cartulary*, 55–7; the reading *cimiterium* rather than *civitas*, apparently read by the editor of the cartulary, is confirmed by Husting Roll 46(67)). In 1366 Margery, widow of Thomas Broun, gave five messuages and 36 shops to Evesham Abbey; the cartulary shows that this included the property in question. In 1541 the crown granted the property to Edward and Alice Cornwallis (*Letters & Papers* xvi, 55); in 1556, now called 'Principal Place', it was described as a large messuage with a large garden adjoining, when it formed the estate of Alice Cornwallis, along with 16 tenements or houses and three stables in Billiter Lane which were presumably attached and which may have formed the Billiter Lane frontage indicated in the priory lease. The house is shown on Ogilby and Morgan, in the area outside that of the Fire, as Whitchurch House, which in 1678 was leased by the African Company. Excavation on the site in 1975 uncovered small fragments of foundations of early medieval character, which may have been of the chapel, but there were not enough to form any meaningful plan (Woods *et al* 1975). The church is not mentioned in the cartulary after 1314, and was presumably part of the Broun property by 1366 when the site passed to Evesham.

**St Michael Bassishaw (81)**

Established by c.1158–80 (*HMC 9th Report*, 20b, no.232); churchyard by 1370 (*Historic Towns Atlas*, 90).

Rebuilt by Wren 1676–87 (*Wren Society* ix, 50); parish united with St Lawrence Jewry in 1897 (*VCH* i, 403); church demolished 1897–1900.

This church has been excavated twice, in 1897–1900 when the Wren structure was being taken down, and again in 1965 during redevelopment of the site. The first excavation (Eeles 1910; for additional photographs, Cohen 1995, figs 8–9) found the 15th-century floor level just over 4ft below that of the Wren church. The medieval tower was originally at the west end of the nave. Several rough, low arches said to be of 13th-century date supported the south wall; the 13th-century floor was 6ft 2in below that of Wren, and doorways were found in both north and south walls at this level. The floor of the medieval tower was of large thick red tiles, patched with bricks and stones, and the floor of the south aisle of large plain green and yellow tiles, found beneath the Wren vestry. Wren's south arcade, but not his north arcade, was founded on medieval arches. The bases of 15th-century responds for the north and south aisles were found on *both* sides of the tower, indicating that the aisles went further west. An east-west wall was found north of the centre of the chancel; perhaps this was the north wall of the early medieval church (?the aisleless nave). Further excavation in 1965 (Marsden 1968, 14–16) found the east end of the nave and an apsidal chancel, attributed to the 12th-century church (Fig 82). The foundations were of chalk and gravel. Pits in the area of the chancel produced 12th-century pottery and scattered post holes were found beneath the area of the church. Two piers of chalk and ragstone in mortar may be the squaring up of the chancel, perhaps in the 13th century.

In summary, the church seems to have had a nave and apsidal chancel in the 12th century (rebuilt with a square end in the 13th century), a south aisle and possibly a north aisle in the 13th century, and new arcades, a rebuilt exterior and tower in the 15th century—this last phase presumably the rebuilding financed by John Barton, mercer (d.1460) and Agnes his wife, which included painting the roof of the nave (GL MS 9171/5, f.303–7; Stow i, 289; Harding 1992, 130). A porch is mentioned in 1517 (Darlington 1967, no.38).

A chapel of the Blessed Virgin Mary is mentioned in 1278 (*Cal Wills* i, 36); one of St Mary in 1347 (*ibid* i, 495). The church had five chaplains in 1379 (McHardy 1977, 69). Sir James Yarford, mercer and mayor (d.1527), built a chapel on the north side of the choir and was buried there with his wife (Stow i, 289).

**St Michael le Querne (86)**

Two stone walls, about 5ft apart and aligned east-west, were exposed for a length of 8ft 9in beneath the centre of the present roadway at the west end of Cheapside, nearly opposite Old Change. They lay at a depth of 4ft 7½in below the modern street surface,

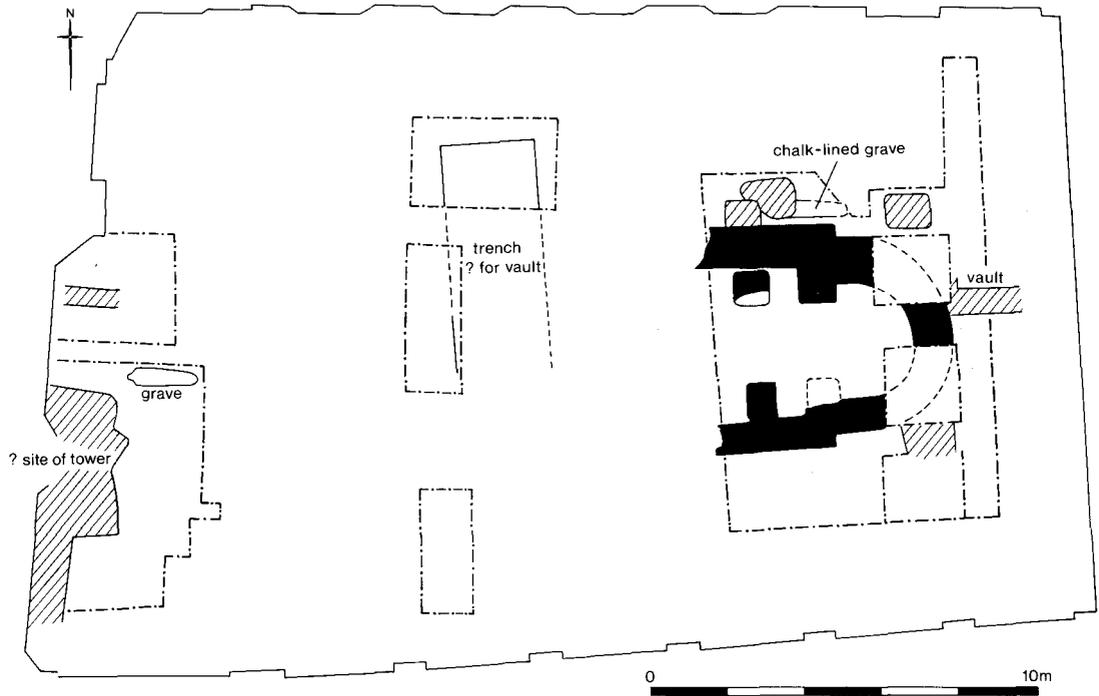


Fig 82. *St Michael Bassishaw (81): plan of excavation (Marsden)*

extending below the bottom of the excavation at 7ft 3in. The north wall had a fine tooled south face of rectangular stone blocks and the south wall, the faces of which had not survived, was built of ragstone and brown mortar (Marsden 1967, 215). These were possibly remains of *St Michael le Querne* church, first mentioned in the 12th century and not rebuilt after its destruction in the Great Fire of 1666; or equally of the Little Conduit which adjoined the church at its east end (see the south elevation of the church and Conduit by Treswell, 1585, published in Schofield 1987) (MoL archive, sitecode GM40).

### St Michael Wood Street (Huggin Lane) (87)

Established by c.1158–80 (*Historic Towns Atlas*, 90); churchyard by 1422 (Norman 1902, 196). Rebuilt by Wren in 1670–87 (*Wren Society* ix, 54); parish united to St Alban Wood Street 1894; church demolished 1897.

During demolition in 1897 some features of the medieval church were recorded by Norman (1902). Foundations of chalk and clunch, probably of an early church, were observed near the south wall c.20ft from the east end, and between the tower and the north wall similar foundations c.5ft–6ft thick and c.12ft deep were noted below the tower.

Wren had reused the pre-Fire foundations and

medieval walling was incorporated onto the east end of the north wall and in the lower stages of the tower, which retained 15th-century arches in its walls. In the north-west angle of the tower was a turret stair, entered from the nave by a doorway with 15th-century mouldings in Reigate stone. A 15th-century window was still visible in the south wall of the tower in the 19th century (Norman 1902, fig 4). Finds from the site included floor tiles from the tower, 14th-century window glass and a stone coffin. Four floor tiles from the church, of both Penn and Flemish type, are now in MoL.

In 1429–30 John Broun, saddler, bequeathed a house he had lately acquired, 'and which I have of late totally destroyed for the purposes of the enlargement of the said church towards the west and the adding of a belfry' (HR 158/32; Norman 1902, 196). This would provide a construction date for the tower.

A chapel of St John of Bridlyngton is mentioned in 1418 (*Cal Wills* ii, 417). The church had seven chaplains in 1379 (McHardy 1977, 57).

In 1382 the executors of Robert Lucas, goldsmith, sold a piece of land on which the vestry of the church stood, at the north-east corner of the church; this passed to the parish in 1388–9 (HR 111/101; Norman 1902, 194). It measured five yards east-west and two and a half yards north-south. There was however no

protruberance at this point in the Wren plan. The cemetery of the church lay to the west of the church in 1422 (*ibid.*, 196).

### St Mildred Bread Street (88)

Established by c.1170–c.1186 (*Historic Towns Atlas*, 90); churchyard acquired 1428 (*Cal Wills* ii, 452). Rebuilt by Wren in 1681–7 (RCHM 1929, 25–7; *Wren Society* ix, 55); destroyed in the Second World War and not rebuilt.

In 1973–4 excavation recorded parts of the medieval church (Marsden *et al* 1975). The church overlay a late Saxon sunken-floored hut and pits; one fragment of foundation, in a ‘gravel-filled hollow’ and running north-south, was recorded in section towards the east end of the Wren church; another perhaps running east-west inside the Wren west end (*ibid.*, 187 and figs 4, 9). The published report suggested that the church also overlay a 12th-century pit, and thus must have been of 12th-century date or later. The plan (*ibid.*, fig 9) however shows that this pit was only cut by arched foundations of the south-west tower, and it is possible that the pit post-dated the earliest stone church.

Beneath the walls of the post-Fire Wren church were further fragments of medieval arched foundations: below the south wall (in two phases) and near the north east corner. A foundation seen beneath the south wall of the tower seemed to be of the same character as the second phase of foundation below the south wall.

According to Stow the church was rebuilt or substantially renovated by Lord Trenchant around 1300 (i, 347–8); possibly the arched foundations were part of this rebuilding. In 1428, John Shadworth, mercer, bequeathed to the rector and parish a tenement near the church as a house for the rector or chaplain, and a parcel of land for a burial-ground (*Cal Wills* ii, 452). The bequest establishes that a vestry lay at the south-east corner of the church, and that the south-west tower already existed (T. Dyson in Marsden *et al* 1975, 191–2). The tower of the Wren church lay at the south-east corner, perhaps on the site of the former vestry.

The location of medieval foundations suggests that the medieval and Wren churches were the same size, though the Wren tower was on a different site. The small area of the church and the size of the medieval tower foundations, which lay inside the church, in relation to that area suggests that the medieval church may have had only one aisle. The church had seven chaplains in 1379 (McHardy 1977, 79).

### St Nicholas Acon (90)

Established by 1084 (Harben 1918, 437); churchyard by 1342 (*Cal Wills* i, 463). Destroyed in the Great Fire and not rebuilt.

Excavations in 1963–4 revealed late Saxon pits, post-holes and a ragstone wall 2ft 3in thick retaining the west side of a hollow, probably of the 11th century, containing debris and white-painted plaster. One pit containing a coin of the second quarter of the 11th century was overlain by a foundation of the church, which originally comprised a nave and square chancel on foundations of chalk and gravel about 4ft thick. Later a south aisle and a well-founded structure at the north-east corner were added, on foundations of mortared chalk (Fig 83). The addition of the south aisle, when the existing south wall was replaced by two piers on foundations of mortared chalk, may have been at the same time as a lengthening of the nave from 46ft to about 59ft (Marsden 1967, 208, 219–20). Finds include many floor tiles of Penn and Flemish type. Some of the church walls survive beneath the modern courtyard.

The church was repaired and given battlements by John Bridges, mayor in 1520 (Stow i, 204). The copperplate map does not show the church.

A font and the rood are mentioned in 1341; a chapel of St John is mentioned in 1349 (*Cal Wills* i, 449, 572); of St John the Baptist, 1361 (*ibid* ii, 23); a chapel of St George was made by George Lufkyn, tailor to Henry VII (Stow ii, 397(ix)). One chaplain is mentioned in 1379 (McHardy 1977, 89).

In 1909 a fragment of fresco, said to have been found during one of several reconstructions of bank buildings on the site of St Nicholas in the 19th or early 20th century, was given by the London and County Bank to the parish of St Edmund (which had incorporated that of St Nicholas after the Fire); for this fragment (Fig 37), which is probably a copy or fake, see the main text above.

### St Nicholas Shambles (93)

First mentioned in 1187, possibly established c.1144 (T Dyson in Schofield, in prep); parish united with Christ Church Greyfriars 1547 and the church demolished.

The site of St Nicholas Shambles was excavated in 1975–9 (Schofield, in prep). The excavated fragments comprised foundations only; no walls or floors survived. Five phases of construction were apparent:

1. the earliest church comprised a nave and slightly thinner chancel (1050–1150, before 1144; Fig 16);
2. the chancel was extended with a sanctuary or new chancel (1150–1250 or later);
3. chapels were added to the north and south of the sanctuary (1340–1400);
4. a north aisle was added, and possibly a south aisle (?1375–1450); by the end of this period, the church also had a tower, apparently at the west end of the nave, and a south porch;
5. a vestry was added on the north-east side, involving

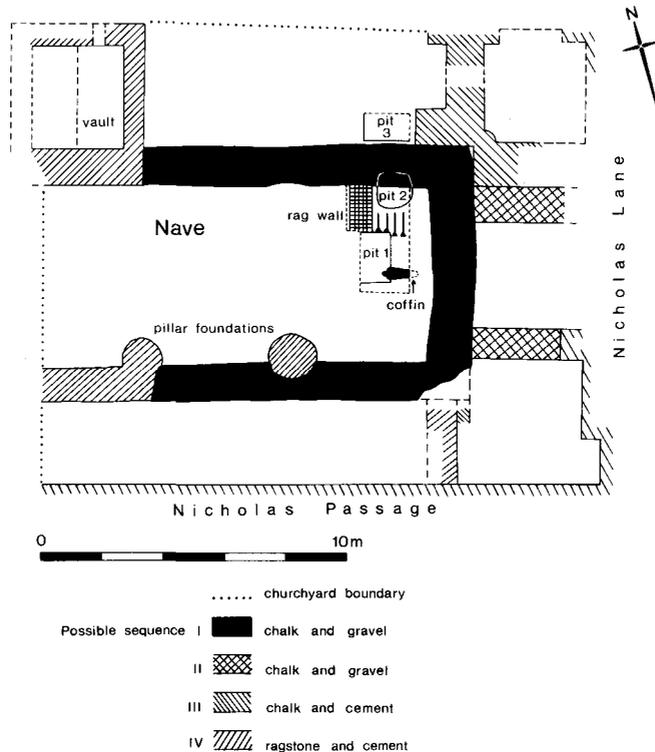


Fig 83. *St Nicholas Acon (90): plan of excavations (Marsden)*

rebuilding of part of the north wall of the church (1400–1450; mentioned 1456–72).

Moulded stones from the excavations included fragments of a pier-base and an arch of 12th-century date, one fragment with traces of red and black or blue paint; a lancet window of 1200–1270; a pier and matching capital of late 13th or early 14th-century date, also bearing traces of red and black or blue paint; parts of a pier or respond, arch mouldings, hood moulds, and a small glazed traceried window of 1300–1550; two glazed and traceried windows of 1375–1450; a large glazed traceried window, and parts of others, of 1400–1550.

A chapel of St Mary is mentioned in 1342 (*Cal Wills* i, 456); of St Thomas in 1360 (*ibid* ii, 16–17); St Luke's chapel, where the Butchers (the Fraternity of St Luke) stored their Company chests and hearse cloth, in 1484 (Jones 1976, 48). The church had six chaplains in 1379 (McHardy 1977, 87).

### St Olave Hart Street (95)

Established by 1170–97 (*Holy Trinity Cartulary*, 152; churchyard by 1345 (*Cal Wills* i, 486). Survived the Great Fire but destroyed in the Second World War; now restored (Cobb 1977, figs 147–8). A detailed

description of this church before the War is given by RCHM (1929, 180–3).

Below the west end of the nave is a crypt of two bays with quadripartite vaulting divided by a two-centred transverse arch (Fig 28). The plain-chamfered ribs, of Caen stone, spring directly out from the wall without any corbels or responds. The infilling is of chalk. In the west wall and in the south wall of the east bay are traces of windows, now blocked, and in the south wall of the west bay traces of jambs, probably of the original entrance (plan, Fig 3). Parts of the west wall of the nave and the crypt are of late 13th-century date and possibly mark the extent of the structure until its rebuilding in the 15th century. In the west wall of the nave is a 13th-century window, now blocked. The windows to the crypt beneath the west end would imply that there was no tower, and probably no south aisle, during the 13th century.

The church was totally rebuilt in the 15th century. The nave and aisles, each of three bays, are divided by arcades. The quatrefoil piers of Purbeck marble (probably re-used late 13th-century material, according to Pevsner & Cherry 1973, 175) each have four attached shafts with moulded capitals and bases supporting two-centred arches with responds of attached shafts. The clerestory has mainly early 16th-century windows. The square tower adjoins the south

aisle at the west end; the two lower stages are of stone and date from the 15th century. In the north and east walls are 15th-century arches and in the southwest angle is a circular staircase in a projecting turret.

The low-pitched tie-beam roof, destroyed in 1941, was probably also of the mid 15th century (Fig 27). The moulded timbers rested on angel-head corbels on the north side and shields with merchants' marks on the south side. At the intersections were foliated bosses with traces of paint; the roofs of both aisles were thickly studded with small leaden stars. The carpenter Thomas Coventry was owed £8 by the churchwardens of St Olave's in 1464, and he forgave a further debt on condition that the ceiling of the north aisle, then in progress, would follow the pattern already begun; it seems likely that Coventry was the builder of the main ceiling (Harvey 1987, 72). Stow records that prominent benefactors and builders of the church were Richard Cely (d.1481) and Robert Cely his son; they were merchants of the Staple in the reign of Edward VI (Stow i, 132; ii, 289).

The copperplate map (Fig 10) shows a simple battlemented church with a comparatively large tower surmounted by a cross. In the 16th century windows were replaced in the north and south sides; they survived until 1941. A view of the church from the north east by West and Toms in 1736 (Fig 23) shows an extra window on the north side, not evident in 1929. The upper part of the tower was added by John Widdows in 1731–2 (Colvin 1995, 1048). The east window shown in Fig 27 was rebuilt with Gothic tracery by J.B.Gardiner in 1823 (Colvin 1995, 391).

An altar of St Mary is mentioned in 1303 (*Cal Wills* i, 157); the chapel of St Stephen in Richard Cely's will (1481), an image of St Olave in 1496, an altar of St George, and the chapel of our Lady and St George in 1529 (Povah 1894, 54). The church had two chaplains in 1379 (McHardy 1977, 97).

One pre-Reformation monument, that to Sir Richard Haddon (Lord Mayor 1506, 1512; d.about 1524), has survived. It is a slab of Purbeck inlaid with small brasses comprising two groups of mourners and five shields, including those of the Mercers' Company and the Merchants of the Staple (detailed description and illustration in Povah 1894, 66–8). This monument formerly stood on the north side of the chancel.

On the finding of fragments of alabaster retables in the parish in 1882, see main text. These figures might have come from any parish church or from the church of the Crutched Friars, which lay about 80m to the east.

### St Olave Jewry (96)

Established by c.1127 (*Historic Towns Atlas*, 91); churchyard by 1348 (*Cal Wills* i, 532). Rebuilt by Wren in 1670–9 (*Wren Society* ix, 58); parish united to St Margaret Lothbury in 1886 (*VCH* i, 402) and the church demolished in 1887, except for the tower.

Redevelopment of this site has been recorded twice, in 1888–9 (GL, prints 445/OLA) and in 1985–6 (MoL sitecode OLC86).

In the south-west corner of the outline of the Wren church (Fig 84) was a small church consisting of at least a nave and a western appendage which was probably a tower (Shepherd 1987). Parts of the walls stood 2m high, built of roughly coursed mortared ragstone with Roman tiles or bricks, generally laid horizontally and occasionally in rough courses, on foundations of ragstone, tiles and gravel. The north-west corner of the nave, the entrance to the western chamber and the jamb of a south doorway were emphasised with quoins of Roman tiles (Fig 17). The walls appeared to be originally rendered inside and out.

During demolition of the church in 1888–9, it was observed that the Wren structure, including the west tower, stood on pre-Fire foundations. Below the tower was part of a vault or crypt. The bases of two medieval responds were found, forming part of the 14th-century east tower arch and the west respond of the 15th-century north tower arch which must have opened into a north aisle (truncated by Wren) (Fig 85).

The church had two chaplains in 1379 (McHardy 1977, 96). T. Morsted, surgeon to Henry IV, Henry V and Henry VI, and sheriff in 1436, built a north aisle for the church and was buried there in 1450 (Stow i, 281–2). John Fetipace bequeathed £40 for the 'reparation and sustentation' of the church in 1464 (Stow ii, 397(xvi)). Presumably this period of rebuilding in 1435–65 included the north tower arch and the brick foundations noted in 1888–9. Figure 84 shows, on the right, a brick arch with a stone keystone. Arched undercrofts were being built in brick at this time on domestic sites in the City, so a date of 1450 is quite possible.

The pre-Fire tower of the church is shown on the copperplate (Fig 10); it has no special features.

### St Pancras (98)

Established by 1098–1108 (Kissan 1940, 57); land granted for churchyard 1379 (Harben 1918, 455). Destroyed in the Great Fire and not rebuilt.

The site was excavated in 1963–4 (plan, Fig 16). A stone church had a nave 19ft 4in wide, and an apsidal chancel to the east. The walls, of mortared ragstone, were about 3ft wide. The exterior face of the north wall was built of roughly squared blocks above a plinth. North of the chancel was the south-east corner of a room rendered internally with white painted plaster. The interior of the nave was similarly rendered, and in the absence of doorways in the recorded portions, the entrance probably lay to the west. Some patterned floor tiles were recovered, of both 'Westminster' and Penn types, with one patch of tiling *in situ* (Marsden 1967, 216–8; on the tiles, see

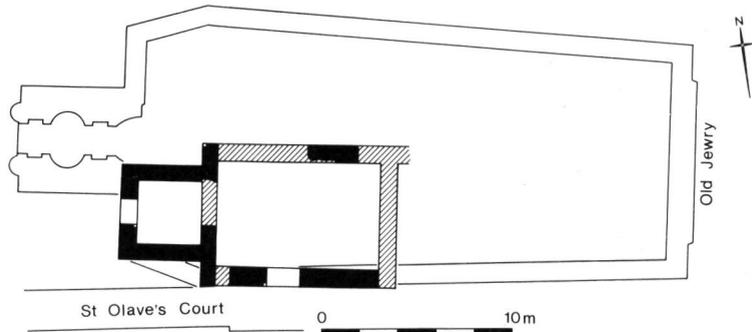


Fig 84. St Olave Jewry (96): the position of the Saxon church within the outline of the Wren church, after investigations of 1986



Fig 85. St Olave Jewry (96): features recorded in 1888–9 (GL)

Appendix below). The copperplate map (Fig 10) shows only the tower.

A clock is mentioned in 1368 and 1405 (*Cal Wills* ii, 112, 417); and in 1374 the archbishop of Canterbury granted an indulgence of 40 days to all who would contribute to the support of *Le Clok*. The description of the previous deceased rector, as *fundator campane* suggests that he built the tower (Malcolm 1803–7, ii, 167). The church had six chaplains in 1381 (McHardy 1977, 206).

### St Peter Cornhill (99)

Established by c.1040 (Harben 1918, 469). Churchyard by 1231 (*Eyre 1244*, 70). Destroyed in the Great Fire and rebuilt by Wren in 1677–87 (RCHM 1929, 85–8).

Fragments of the pre-Fire church have come to light at various times. In 1816, an anonymous antiquary drew details of a 15th-century column base and rib fragments which had been found in foundations (GL,

prints 469/PET). Shortly before 1906, beneath the south wall of the Wren church, P. Norman recorded two pointed arches of chalk, probably foundation arches. They were about 4ft apart, 11ft wide, and 11ft 3in high with the tops of the arches at about 6ft below street level. About 15ft to the south of the present south wall was another chalk wall, about 4ft wide, which extended under the edge of Gracechurch Street. He also noted a vault under the present tower (Norman & Reader 1906).

The church was repaired, especially the roof and glazing, in the reign of Edward IV (Stow i, 194–5). In January 1622/3 the parish decided to take down the steeple, though Strype reported it as being repaired in 1628–9 (GL, MS 4165/1, f.174<sup>v</sup>; Strype 1720, ii, 139). A repair or rebuilding of 1622/3 might account for the slight differences in appearance of the tower in two of the panoramas, the copperplate map in 1559 (Fig 10) and Hollar's view of 1647 (Fig 13); on the latter it has a stair-turret at its south-west corner, and this is presumably the 'round tower' of the pre-Fire church mentioned in the vestry minutes in October 1667 (GL, MS 4165/1, f. 390<sup>v</sup>). A plan by Wren of the fire damaged church (Summerson 1970, fig 24a; redrawn here, Fig 86) shows that it had three aisles, the north aisle and nave of the same length but the south aisle shorter, and a porch to Cornhill on the north. Slightly thicker walls suggest the tower was at the south-west corner, as shown by Hollar, and on the same site as the present Wren tower

The vestry minutes also record that in 1668, as part of the post-Fire rebuilding, a strip of land at the east end of the church was given up to widen Gracechurch Street: 11ft at the north end, and 9ft at the south end, and 53ft long (the width of both the pre-Fire and post-Fire churches) (GL, MS 4165/1, f.408<sup>v</sup>; cf Oliver & Mills, IV, 48b). This post-Fire reduction has been

added to Figure 85, in approximately the correct position.

There was an anchorite living in the church in 1345 (*Cal Wills* i, 483). The church had a porch in 1360 (*ibid* ii, 46), presumably that to Cornhill on the north. An altar of Holy Trinity is mentioned in 1375 (*ibid* ii, 173); the church had five chaplains in 1379–81 (McHardy 1977, 102).

The church had a grammar school by 1446–7, one of four established or confirmed in the City by Act of Parliament; in this case a schoolmaster is known earlier, in 1425 (Strype 1720, ii, 139). Stow mentions an old stone library adjacent to the church, rebuilt in brick by the executors of Sir John Crosby, as witnessed by his arms on the south end (i, 194–5). Perhaps this building included the foundation south of the church observed by Norman.

### St Peter the Less (Paul's Wharf) (100)

Established by c.1170 (*Historic Towns Atlas*, 92); described in the judges Eyre of 1244 as on the king's highway (*Assize of Nuisance* 1970, 199). A plot of land north of the church was given as a burial ground in 1430 (HR 159/5). The church was destroyed in the Great Fire and not rebuilt.

Remains of this church, at the junction of St Peter's Hill and Upper Thames Street, have been observed on three occasions. In 1961 workmen clearing the churchyard to a depth of 10ft below street level uncovered chalk walls up to 2ft deep. A sketchplan indicates that the walls formed the north-east corner of the church, with two other fragments forming a chamber attached to the north wall at the corner; *ie* in the position of the sacristy in other London churches (MoL archive, sitecode GM137; Excavation Day Notebook VIII, 2, 5).

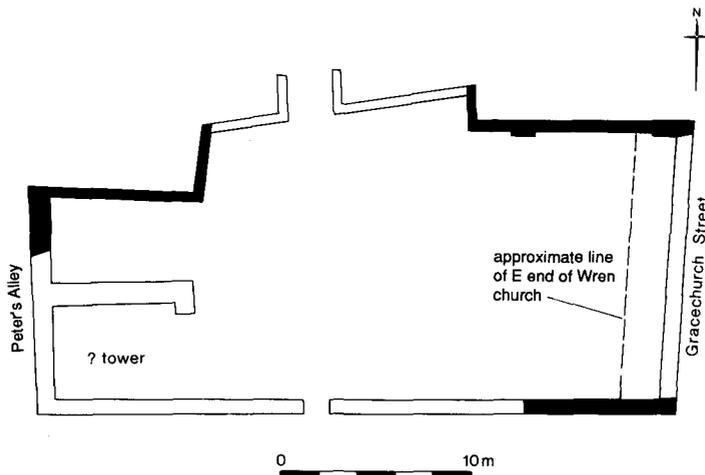


Fig 86. St Peter Cornhill (99): plan of fire-damaged church, c.1667 (after Summerson 1970)

Excavation of the site of 223–225 Upper Thames Street in 1981 recorded the foundations of the west end of the church (perhaps of 12th-century date; MoL sitecode PET81). A separate watching brief associated with the building of the City of London Boys' School to the south in 1984 recorded details of the south and west walls, early graves, and traces of the post-1666 graveyard (MoL sitecode TIG84). Floor tiles from the site include both Chertsey, Penn and Flemish types.

An image of St Katherine in St Mary's chapel is mentioned in 1375 (*Cal Wills* ii, 175). The church had three chaplains in 1379 (McHardy 1977, 101). Stow recorded that 'in this church no monuments do remain' (ii, 6).

### St Peter le Poor (101)

First mentioned in 1181 (Harben 1918, 470; Sparrow Simpson 1897, 295); churchyard by 1378 (*Cal Wills* ii, 204). Parish united to St Michael Cornhill in 1906 (*VCH* i, 402) and the church demolished 1908.

A plan was made by T. Hoxton of the medieval church before it was rebuilt c.1790 (Fig 87). The main east and west windows are of 14th-century character and the other windows 15th century, as are the piers. The original tower was c.8ft square in the west bay of the north aisle but it had been resited immediately to the west, in brick, in 1616 (Strype 1720, ii, 112–3). Beneath the church was a brick crypt or burial vault, probably of post-Fire date. With his plan Hoxton draws details of the 15th-century aisle piers and their arches, mouldings and sketches of the east and west windows (which had the same mouldings) and of the three south windows, one of the angel corbels supporting the roof, and two shields from the windows (one of them the City arms).

The copperplate map (Fig 10) shows the church against the bulk of the Austin Friars. Comparison with the plan suggests that the battlemented portion east of the tower is the church; the building west of the tower must be an adjacent building, perhaps of the friary.

The rood is mentioned in 1341 (*Cal Wills* i, 453). The church had one chaplain in 1379 (McHardy 1977, 100).

### St Sepulchre without Newgate (103)

Established by 1137 (Kerling 1972, 25); churchyard by c.1240 (*SBH Cartulary*, no.170). Burnt in the Great Fire and restored by the parish with outline supervision by Wren in 1670–77 (Fig 2; RCHM 1929, 134–7).

The church is of 15th-century date, restored in the 19th century. The undivided nave and chancel are of eight bays with the two eastern bays of the north and south aisles now forming chapels where they flank the chancel. In the first bay from the east of the north

aisle is a doorway which led to the rood loft and the second and third bays open into a 15th-century chapel to the north. At the west end of the south aisle is a 15th-century stone porch, with modern exterior and upper floor, but original vaulting on the ground floor. The tower is 16ft 3in square, of four stages; the doorway to the tower stair (recorded by Henry Hodge in 1878, Fig 88) was moulded with a double ogee, roll and casement hollow, of 15th-century date.

Protruding from the north wall is the 15th-century chapel of St Stephen, with three 18th-century windows to the north; 17th-century piers form a two-bayed opening to the aisle. In 1878 Hodge recorded a recess in the north wall of the chapel, probably a monument; it had a coved ceiling of cusped rectangles (Fig 41), which is still visible.

Three *piscinae*, also discovered in 1878, were recorded in 1929, at the east end of the north (chapel) aisle, in the south wall of the south nave-aisle, and in St Stephen's chapel (recorded by Henry Hodge in 1878, Fig 89); these survive, restored. Hodge also recorded a second recess in the south wall, under the fourth window from the east end (Fig 90). This was presumably a tomb-recess. Parts of two stone indents for brasses of late 15th or early 16th-century date are set in the walls of the porch (Bertram 1987, 147–8).

A chapel on the south side of the choir and the porch were built at the cost of Sir John Popham (d.1463) (Stow ii, 33, 362). His image in stone was fixed over the entrance to the porch, but was 'defaced and beaten down' by the time of Stow. In 1473 a bequest was made for the workmanship of the battlements on the south side of the church (Bradford 1940, 171–2). There is otherwise at present no further documentary evidence for the wholesale rebuilding which produced the present church; a date of c.1470 is assumed here.

A cross in the south churchyard is mentioned in 1370 (*Cal Wills* ii, 137); and in 1379 a bequest was made to replace the wooden cross in the 'north part of the churchyard' (does this mean the same, or a churchyard north of the church?) with one of stone (*ibid* ii, 207).

A view from the south by West and Toms in 1739 (Fig 32) shows that the south churchyard had built up against the nave and windows of the porch. In contrast to the plan in 1929, an extra window of different character is shown at the east end of the south wall. Perhaps this is a window to the chapel endowed by Popham in the middle of the 15th century. An engraving of 1837 in Godfrey and Britton's *London Churches* (1838, pl opp p.1) shows that the south nave windows had been replaced in 1790 with round-headed windows with plain glass and no tracery.

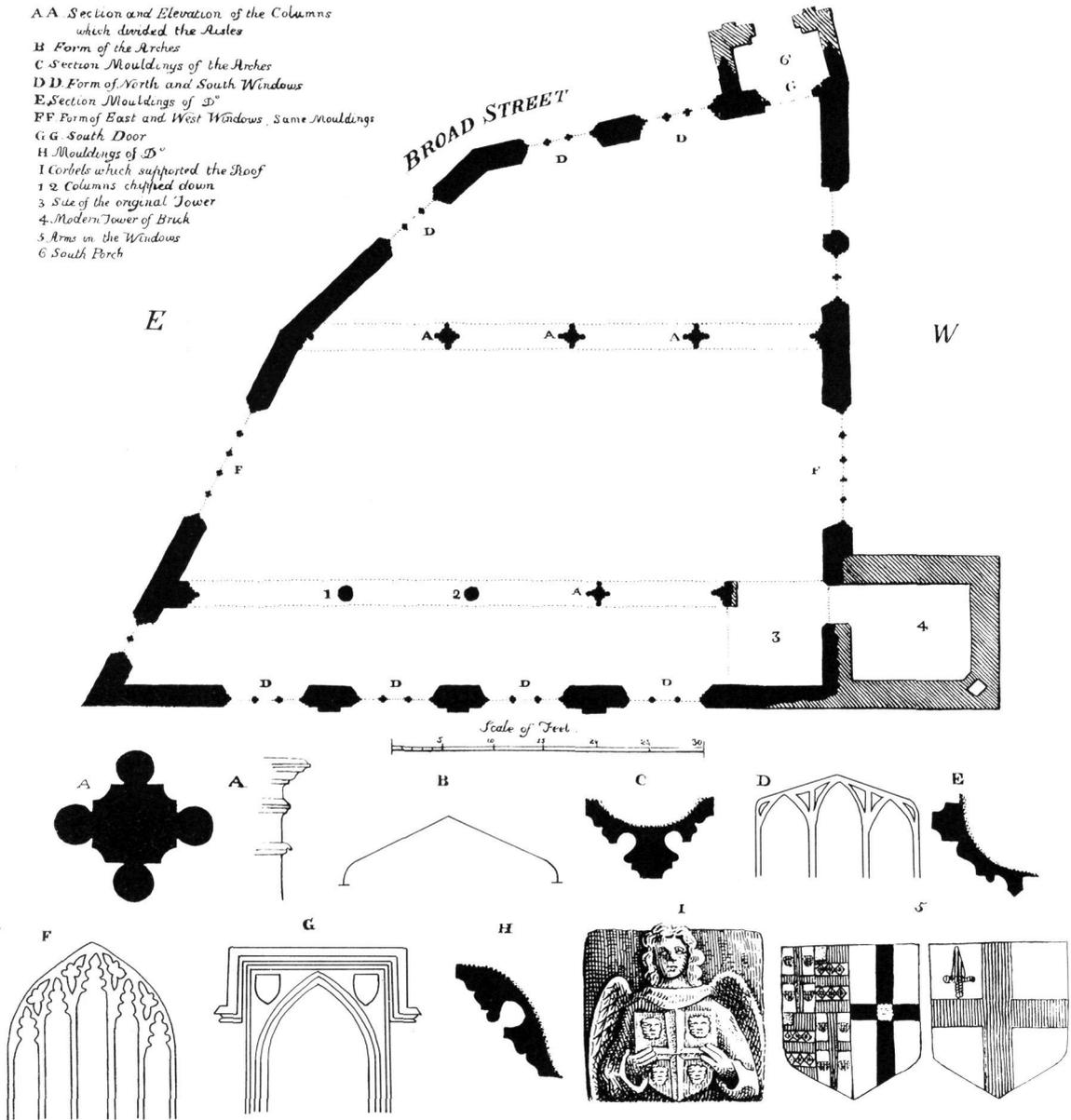
According to Bradford (1940) there were four altars in the nave; and chapels of Corpus Christi, St George, St John the Baptist, Our Lady and St Stephen, and another to St Stephen (*ie* apparently five chapels, though there may have been some doubling-up). A

in **BROAD STREET, LONDON.**

Rebuilt A. D. 1807.

**REFERENCES**

- A.A Section and Elevation of the Columns which divided the Aisles
- B Form of the Arches
- C Section Mouldings of the Arches
- D.D Form of North and South Windows
- E Section Mouldings of D
- FF Form of East and West Windows, Same Mouldings
- G.G South Door
- H Mouldings of D
- I Corbels which supported the Roof
- 1 2 Columns chipped down
- 3 Site of the original Tower
- 4 Modern Tower of Brick
- 5 Arms in the Windows
- 6 South Porch



Drawn, Engraved and Published July the 1<sup>st</sup> 1807, by Tho<sup>s</sup> Fisher & Horton

Fig 87. St Peter le Poor (101): plan and details of church before rebuilding in 1790, published 1807 (GL)

fraternity of St Katherine is mentioned in 1361 (*Cal Wills* ii, 45). The church had seven chaplains in 1379 (McHardy 1977, 107). The fraternities of St Katherine, St Stephen, 'St Mary and St Stephen', and 'St Mary,

Stephen and Gabriel', continued to receive bequests into the early 16th century (*Cal Wills* ii, 100, 514, 603, 616). I am grateful to Mr Anthony New and Mr Charles Brown for discussion of this entry.

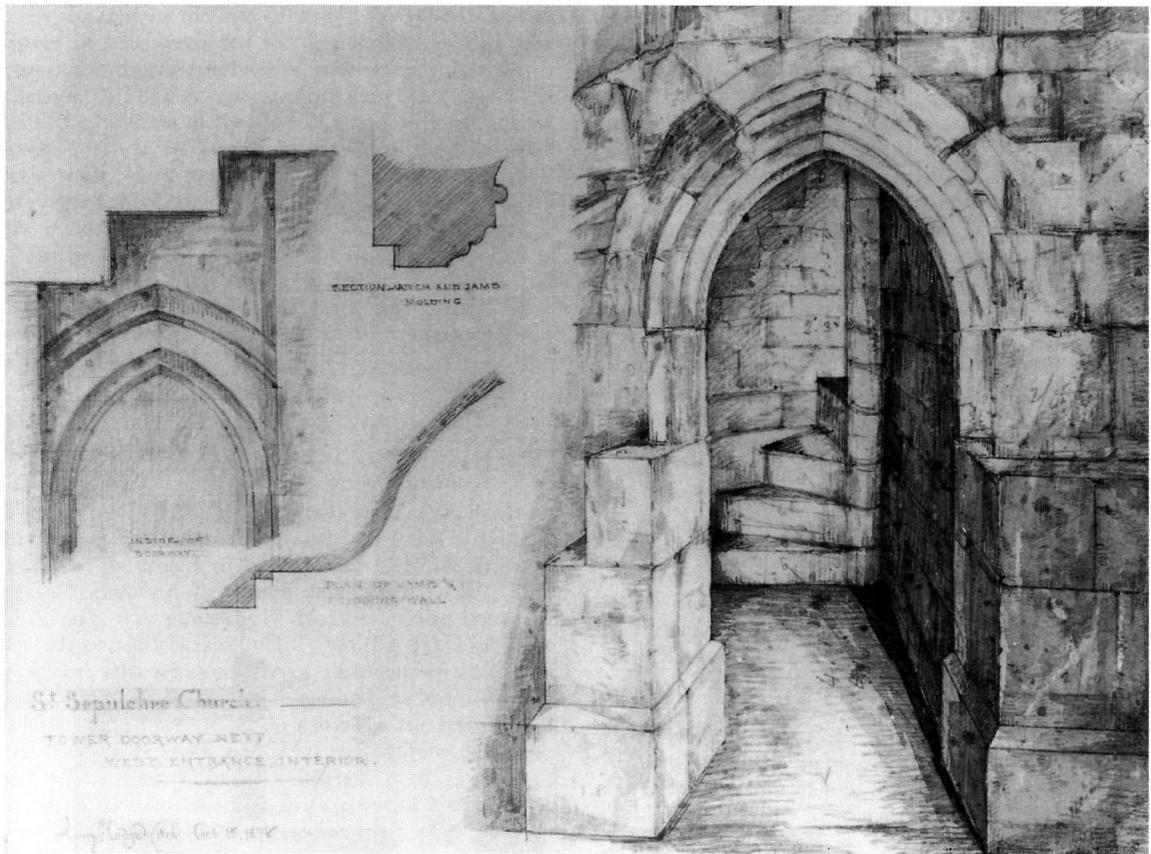


Fig 88. *St Sepulchre without Newgate (103)*: detail of door to the tower, drawn by Henry Hodge in 1878 (GL)

### St Stephen Coleman Street (104)

The church existed in the time of Ralph de Diceto (1181–1204), and was a chapel of St Olave Jewry by 1322. It became a parish church in 1465 (Kingsford's notes, Stow ii, 336, correcting Stow's version; Kingsford also states that Stow's description of the church as formerly a Jewish synagogue is a mistake, and possibly a confusion with the Chapel of the Friars of the Sack). Destroyed in the Great Fire and rebuilt by Wren in 1674–81 (RCHM 1929, 74–5; *Wren Society* ix, 62). Destroyed in the Second World War.

Traces of the medieval and Wren churches were recorded by E. Rutter during clearance of burials on the site in 1955–6. Foundations of several different builds and therefore probably of several periods were noted (plan, Fig 91). One fragment of chalk and gravel foundation under the south wall of the (Wren) church indicates an early medieval date; other arched foundations suggested a church of nave and one aisle, with the west end within the Wren outline and coinciding with the inner, east wall of the Wren tower. Part of a medieval pier, with traces of red paint, was

recorded on the north side, where the division between nave and chancel would be expected (MoL archive, site GM42; Excavation Day Notebook VI, 40, 43, 57, 59). It is not clear from these discoveries which of the two compartments of the medieval church was the nave; but as a gallery was inserted into the south aisle in 1629 (Strype 1754, i, 574–5), it seems likely that the nave was the northern compartment, and that the pre-Fire church only had one aisle, on the south side.

The church had a chapel to St Mary in 1346 and 1373 (*Cal Wills* i, 487; ii, 162). At the Dissolution, Thomas Audley sold five lesser bells from Holy Trinity Priory, Aldgate, to the parish (Stow i, 142).

### St Stephen Walbrook (*second site*) (105)

Salvage work on the large site of Bucklersbury House, between Walbrook and St Swithin's Lane, revealed three short lengths of arched chalk foundations running north-south beneath the east end of the standing Wren church of St Stephen. They were not dated, but are consistent with the known building-date of 1428 for the medieval church (MoL archive, sitecode GM158).

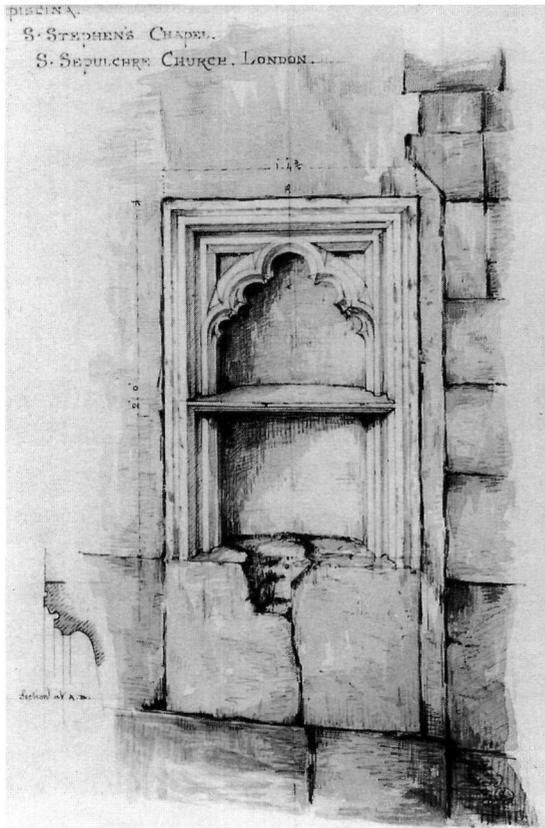


Fig 89. *St Sepulchre without Newgate (103): piscina in St Stephen's Chapel, drawn by Henry Hodge in 1878 (GL)*

### St Swithun London Stone (106)

Established by the late 12th century (*Historic Towns Atlas*, 92); churchyard by 1285–6 (*Cal Wills* i, 75). Rebuilt by Wren in 1677–87 (RCHM 1929, 196–8; *Wren Society* ix, 68). Destroyed in the Second World War and not rebuilt.

The site was excavated by Grimes in 1961 (Grimes 1968, 199–203). Three parallel walls, largely robbed to the bottom layer of chalk foundations, suggest a nave 16ft wide and a south aisle 8ft wide; if the church was as long as its successors, 45ft long. Eleventh-century pits preceded its construction. A late medieval rebuilding comprised a nave and two aisles, with an overall area of 52ft × 46ft—*ie* longer north-south than east-west; pier bases survived as square foundations, which may have carried low arches between them. The second pier base eastwards on the north side was larger and this may indicate the corner of a tower in the north west corner of the church, on the same site as Wren's tower. The north and south aisle foundations, at the east end, had been laid up against the foundations of the previous east end.

The church was rebuilt by several benefactors at

the opening of the 15th century, among them John Hinde, draper and mayor 1405; he had a monument and a glazed window in the church (Stow i, 108); Stow says that licence was procured to extend the church and steeple in 1420 (*ibid*, 223–4), though a record of 1408 shows that Richard Thorpe, the parson, had licence for alienation in mortmain of a plot of land for the enlargement of St Swithun's and the making of a new belfry. In 1418 Richard Elton bequeathed £20 for the steeple on condition that it was built within two years (Stow ii, 397(x-xi)). A date of c.1400–20 is therefore suggested for the rebuilding of the church, and of c.1420 for the tower.

The copperplate map shows the church (Fig 10) on Candlewick Street, with its entrance through the south-west tower (*ie* not as in the Wren church, and perhaps not agreeing with the archaeological evidence), and a bellcote on the roof of the nave.

In 1961 a fragment of medieval grave slab of Purbeck marble was found reused in the foundation of the south east corner of the Wren church. It had an incised drawing of a lady holding a heart, and a Lombardic inscription referring to the burial of the heart of Joanna, wife of Fulke de St Edmond, sheriff in 1289–90; he left money to provide a chantry for his own soul and those of his two wives who had predeceased him (Marsden 1963, 77). The church had four chaplains in 1379 (McHardy 1977, 106). In 1461 Thomas Aylesby left a *tablam* (*ie tabulam*, which can mean screen, table, board, or flat reliquary) to the altar in the chapel of SS Mary and George (Stow ii, 397(xi)).

### St Vedast Foster Lane (108)

Established by 1139–61 (*Historic Towns Atlas*, 92). Burnt in the Great Fire and rebuilt by Wren in 1670–3 (plan in *Wren Society* ix, 69).

The church was rebuilt or embellished through several bequests in the early 16th century, including the building of a chapel to St Dunstan by Henry Coote, sheriff and goldsmith (d.1509) (Stow i, 314).

In 1992–3 the stonework on the south side of the church was repointed and some rendering removed. This revealed a stretch of historic masonry about 10m long and 3m high from pavement level (Milne & Reynolds 1993). The west half, being the foot of the Wren period tower, appeared to be rebuilt after the Fire; but the eastern half seems to be pre-Fire. It comprises dressed ragstone rubble laid in courses, with a chamfered plinth about 1m above present street level. The wall incorporates the west half, both jambs and four-centred head, of a stone doorway, with jambs of Caen stone (Fig 92). The wall has been left exposed, and is a rare example of surviving pre-Fire church walling. The doorway is presumably a south entrance into the church, and may well date from the rebuilding of the first quarter of the 16th century. In this case

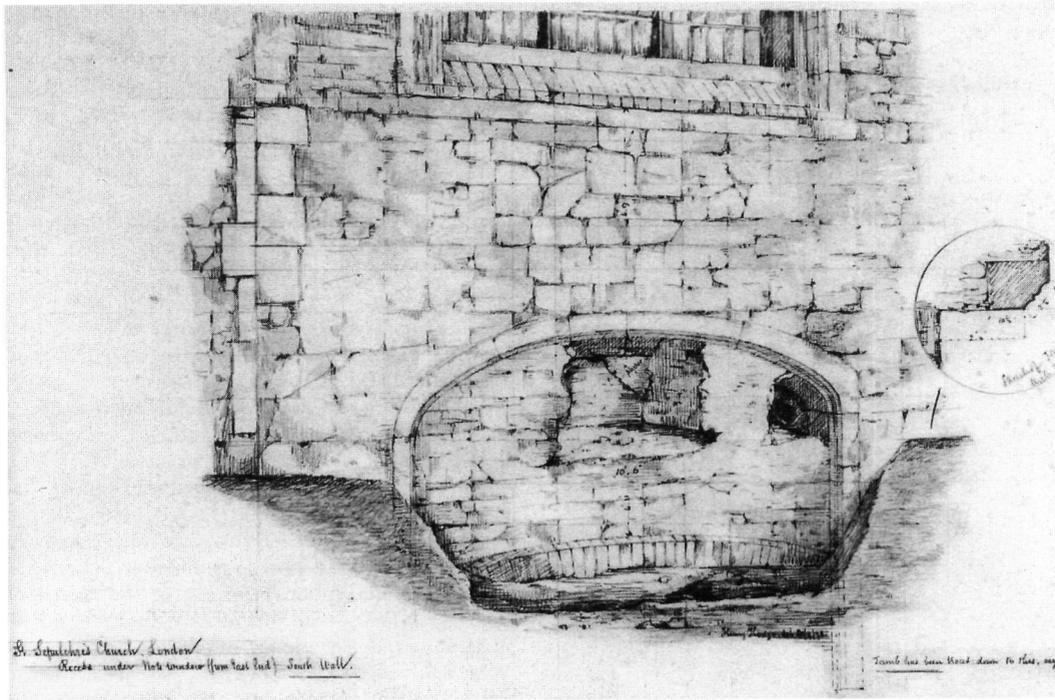


Fig 90. *St Sepulchre without Newgate (103)*: tomb recess (now not visible) in south wall of nave, drawn by Henry Hodge in 1878 (GL)

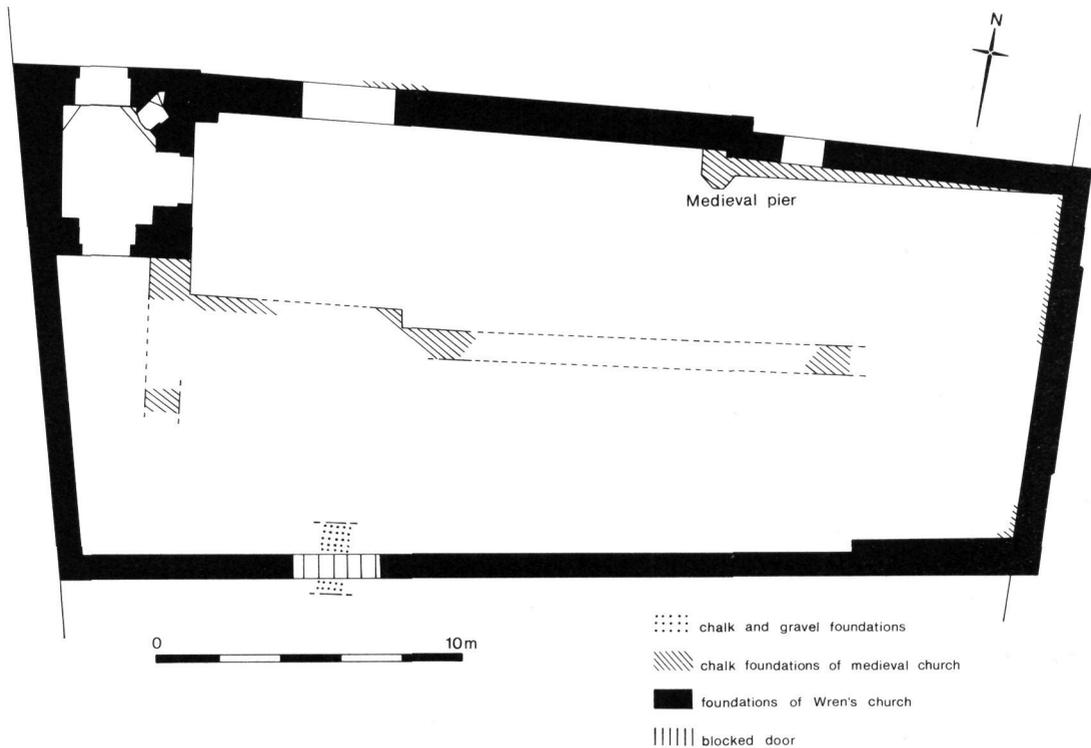


Fig 91. *St Stephen Coleman Street (104)*: plan, after observations in 1955 (GM)



Fig 92. *St Vedast Foster Lane (108)*: south door to nave, revealed in 1992–3 after removal of rendering

the church may have had two entrances, here and through the tower.

## APPENDIX: MEDIEVAL FLOOR TILES IN LONDON CHURCHES

*Ian Betts*

From the surviving evidence it would seem that many, if not most London churches would have had areas of either plain or decorated glazed floor tiles during the medieval period. The number of floor tiles which still survive must be only a tiny fraction of the total number originally used. Many were lost during the Great Fire of 1666 which destroyed most parish churches in the City, while further losses undoubtedly occurred when churches were being rebuilt and repaired over the next three centuries. Certain floor tiles survived only to be lost by bomb damage during the last war.

There are only three churches in the City of London where medieval tiles can still be seen *in situ*: All Hallows Barking (1), St Bride Fleet Street (31) and St Helen Bishopsgate (44). Archaeological excavation has revealed the existence of 18 other parish churches which contained, or would formerly have contained areas of tiled flooring. The

majority of these tiles are now in the various collections held by the Museum of London. Most tiles collected before the 1970s are decorated examples; there seems to have been a reluctance in the past to retain examples of what were perceived to be less interesting plain glazed floor tiles. Floor tiles from a further five churches, now lost, are referred to in museum records.

The relatively few examples which survive show remarkable consistency when floor tiles from various churches are compared (Table 2). Plain and decorated 'Westminster' series tiles predominated in the 13th century, while in the 14th century the overwhelming majority of decorated tiles came from Penn in Buckinghamshire. By this date most plain glazed tiles seem to have been imported from Flanders. Other sources of decorated tile can be identified, but these appear to have been of only minor importance.

Table 2. *Floor tile groups in City parish churches*

Tile type	No of churches
'Westminster'	11
Chertsey	2
Eltham Palace?	1
Lesnes Abbey	1
Penn	20
Flemish	10
Other	2

### Major floor tile groups

#### 'Westminster' series (13th C)

Tiles of 'Westminster' type are so called because they were first recognised in the Muniment Room at Westminster Abbey. Their origin is uncertain, but they may have been made at the decorated floor tile kiln found near Farringdon Street in the last century. Certainly their distribution would suggest an origin somewhere near London. Tiles of 'Westminster' type are found *in situ* at Lambeth Palace chapel where they are dated c.1225–1250 (Degnan & Seeley 1988, 18). Other tiles in this series may, however, be later in date.

Many 'Westminster' tiles are very poorly made. The surface of the tile is rarely flat and on the decorated examples the white slip is often smudged resulting in a blurring of part, or most, of the pattern. 'Westminster' series tiles are made with distinctive clays which, although they exhibit slight differences, strongly suggest that they were produced at a single tilemaking area. It is the analysis of inclusions in the clay, known as fabric analysis, which allows identification of plain glazed 'Westminster' examples. The origin of other plain glazed tiles, discussed in more detail below, has also been determined using the same method of fabric analysis.

#### Chertsey tile (13th C)

These tiles were made at Chertsey Abbey (Surrey) where a kiln used for manufacture of floor tiles was excavated in 1922

(Eames 1992, 48). Chertsey tiles have been found at the churches of St Mary Aldermanbury (65) and St Peter the Less (100), and may also have been used in St Nicholas Shambles (93).

#### *Eltham Palace tile (early 14th C)*

Tiles in this series were first identified at Eltham Palace (Kent) where they were used to pave Antony Bek's hall sometime around c.1300–1305 (Eames 1982, 238). The tiler supplying these tiles is not identified, but the rarity of such tiles elsewhere (one tile is known from Lesnes Abbey, Greenwich and only a few examples are known from London) suggests production was short-lived. Two worn tiles found *in situ* in a medieval tiled floor at St Botolph, Billingsgate (29) seem to belong to this series.

#### *Lesnes Abbey tile (probably late 13th or early 14th C)*

Decorated tiles in this series were used at Lesnes Abbey (London Borough of Greenwich). The date of these tiles is not known, but it is unlikely to differ greatly from the Eltham Palace tiles discussed above. Eames (1982, 243–244) has already drawn attention to the close similarity between many of the designs found at Lesnes and Eltham, which are less than five miles apart. Certain designs are so similar that she believes that both were probably made by the same tilemakers.

What does seem fairly certain is that, as with those of Eltham type, very few Lesnes design tiles were used elsewhere. The tiles found associated with the church of St Benet Sherehog (25) are, at the time of writing, the only examples known from the City of London.

#### *Penn tile (mid to late 14th C)*

Penn in Buckinghamshire was the location of one of the most successful commercial medieval tileries known in Britain. Two tilers are recorded as working in the Penn and Taplow area as early as 1332, although the first documentary record of the tiler dates to 1344 (Eames 1992, 55). The earliest decorated floor tiles were slightly larger and better made than later tiles. The former seem to have been made prior to the Black Death in 1349. These early Penn tiles are extremely rare in London, and none are known to have been used in any parish churches in the City.

The main period of Penn floor tile production occurred after the Black Death when large quantities of predominantly decorated tiles arrived in London between the 1350s and the 1380s. There are no documentary references to the import of Penn floor tiles into London after 1388 (Eames 1992, 57), although production may have continued for a few more years.

A number of Penn tiles can be more closely dated to the mid 14th century. These are the designs which occur on tiles of c.1354 which are still *in situ* at the Aerary at Windsor Castle. City churches with these mid 14th-century Penn designs are All Hallows Lombard Street (6), St Benet Sherehog (25), St Botolph Billingsgate (29), St Giles Cripplegate (42), St Mary Aldermanbury (65), St Mary Magdalen Milk Street (72), St Michael Wood Street (87) and St Nicholas Shambles (93).

The small percentage of plain glazed Penn floor tiles suggests that by the mid 14th century such tiles were normally being obtained from elsewhere. Presumably the plain Penn tiles that were required were used as borders or as plain strips in decorated pavements. There is no evidence that such tiles were used independently to form large areas of totally plain glazed flooring.

#### *Flemish (14th C onwards)*

All but one of the Flemish tiles found associated with parish churches in the City of London are either plain glazed or plain unglazed; the solitary decorated example comes from St Mary at Hill (71). Flemish tiles can normally be distinguished by the presence of nail holes in their top surface coupled with their distinctive fabric types. The majority of smaller sized tiles (c.105–129mm) have fabrics characterised by the presence of frequent calcium carbonate inclusions, whilst most larger sized tiles (c.130mm and above) have varying amounts of cream coloured silty pellets and lenses.

Nail holes are normally located either in two diagonally opposite corners, or in all four corners. Sometimes there is an additional nail hole in the tile centre. Generally speaking, most larger sized tiles are of the two nail hole type, while the smaller tiles are more variable with two, four or five nail holes.

The dating of plain glazed floor tiles is especially difficult. Documentary and archaeological evidence points to large-scale importation into eastern England during the late 14th and 15th centuries (Drury 1981, 130). In London this large scale importation may have begun somewhat earlier. Four merchants of the Hanse were importing Flemish tiles into the City as early as 1302 (Schofield 1995, 113). Presumably, such tiles would not have been needed, at least in any quantity, during the 13th century when plain glazed 'Westminster' floor tiles seem to have been readily available. Conversely, the scarcity of plain Penn tiles suggests that most plain tiles were coming from elsewhere. As the only other plain glazed tile found in large quantities are imported this would imply the large scale use of Flemish tile in London at least by the mid 14th century.

What is much less certain is when the various sizes of Flemish tile used in London were individually introduced. The limited evidence collected so far (Betts 1991) suggests the smaller sized tiles used in parish churches in the City were available up until the mid to late 15th century, when they were replaced by importation of larger size tiles. This would account for the use of larger sized Flemish floor tiles in the later medieval period at churches such as St Botolph Billingsgate (29) and St Martin Orgar (61).

These larger sized Flemish tiles were initially plain glazed but plain unglazed examples were in use at St Botolph Billingsgate (29) by the time of the Great Fire of 1666. The date of this change from glazed to unglazed is not certain, but it may have occurred when the use of decorated glazed floor tiles fell out of fashion around the mid 16th century (Eames 1992, 66).

#### *Hand-painted tiles*

Only three of these very curious floor tiles have so far been found in London. All have crude white slip decoration

painted onto the top of the tile surface prior to firing. Unfortunately, none are in distinctive fabric types so there is little indication of either date or origin, although they would appear to be English. One tile, from St Dionis Backchurch (34), is made from a clay containing slightly more quartz, but would seem to be from the same kiln source as the other two tiles.

These two tiles, from the church of St Matthew Friday Street (79), measure 97mm × 99mm and 101mm × 105mm respectively with a thickness of 22–27mm. They are fairly crudely made and have a similar appearance to poor quality 13th-century 'Westminster' tiles. The larger sized tile is also the same size as certain 'Westminster' tiles. In contrast, the St Dionis Backchurch tile is larger, 110mm × 114mm, and thinner, 17–18mm, and is better made. This tile is more similar in appearance to those made in the 14th century at Penn.

If the three handmade tiles are roughly contemporary, which would seem possible, there must be some reason why one tile is so different in appearance to the other two. The differences could simply reflect the work of different tilemakers, but it is also possible that the St Matthew tiles were made to replace or repair floor areas of 'Westminster' tiles, while the St Dionis Backchurch tile was used as a Penn floor tile replacement. None of the crude designs present is, however, paralleled on either 'Westminster' or Penn tiles, although there are a number of 'Westminster' tiles with shield decorations.

## Identification of decorated floor tile designs

The designs on all surviving decorated floor tiles have been examined and are listed for each individual parish church in the Catalogue below. Many of the designs are illustrated in Eames' (1980) catalogue of medieval floor tiles in the British Museum; these tiles are identified by the letter 'E' before the design number. One of the standard works on Penn tiles is a catalogue of 174 designs published by Hohler in 1942. Hohler's design numbers are also given, being denoted by the letter 'P'.

A small number of other decorated designs found on tiles in London's churches has also been published by Degnan & Seeley (1988) or are included in the published London Museum Catalogue of 1954. The tiles, where they still exist, are now in the Museum of London reference collection, referred to as 'Ref Coll' in the Catalogue. Most of the remaining extant tiles are also in the Museum of London, and these are referred to by their excavation site code. The Catalogue also lists the number of tiles which still survive from each church, all of which have been examined by the author.

## Catalogue of church sites with medieval tiles

The small Roman numerals dividing each entry refer to types of tiles, not to groupings by position or stratigraphy in the church. The numbers in bold after the name of each church refer to the churches as numbered in the Gazetteer above. The term *in situ* used of certain groups of tiles includes for this purpose those groups of tiles which have been relaid, mostly in modern times.

### All Hallows Barking (1)

(Location of tiles: All Hallows church)

i) **Flemish?** (probably late 15th to mid 16th C). 4 tiles.

A very small area of *in situ* flooring still survives next to the north wall of the nave. All these tiles are plain glazed, with either a yellow, brown or mottled dark and light green glaze.

The tiles are fragmented and partly mortar covered along the edge, which makes calculating the number of tiles present uncertain; a close examination suggests that only four tiles are present. Two of these have length/breadth measurements of c. 240–245mm, which would suggest a late 15th to mid 16th-century date. These tiles are similar in size to some of Flemish origin found *in situ* at St Martin Orgar (61). Where the glaze has come off the tiles from All Hallows Barking, the clay body seems to have a silty texture, a characteristic feature of most late medieval Flemish floor tiles.

ii) **Flemish** (probably late 15th to mid 16th C). ? tiles.

A large number of tiles, mostly broken fragments, are set into part of the floor of the undercroft. Some of these can be identified as Flemish floor tiles by their distinctive silty fabric and, on one tile, the presence of a nail hole in one corner. All the complete and almost complete tiles are of similar size: 191–206mm square. Almost all are very worn, but one fragmentary tile still has the remains of white slip and a small area of yellow glaze. It seems possible that all these Flemish tiles would originally have been glazed.

iii) **Penn** (mid to late 14th C). 9 tiles.

Decorated designs: E2037, E2262/P130, E2336/P75?, E2460/P107, E2773/P136, P111.

Eight detached tiles are set in a wooden panel in the undercroft while another small detached fragment rests on the *in situ* floor discussed above. Presumably all originally paved part of the church floor.

iv) **Origin?** (date?). 1 tile, plain, dark green glaze.

This tile is also mounted into the panel in the undercroft. Because the clay from which it is made cannot be examined its origin is uncertain. Its size, 109mm square, suggests it is either of 13th-century 'Westminster' type or of 14th-century Penn origin.

### All Hallows Lombard Street (6)

(London Museum Catalogue 1954; Hohler 1942; Location: MoL Ref Coll)

i) ?**'Westminster'** (13th C?). 1 tile.

Decorated. This unpublished design is on a tile which has the same size and thickness (133mm × 131mm × 24–26mm) as a number of larger decorated 'Westminster' tiles. It is also in a similar clay type.

There are, however, certain differences between the All Hallows tile and those of 'Westminster' type. The sides of the All Hallows tile are straighter and the base is completely scraped smooth. 'Westminster' tiles normally never have scraped bases. The glaze is also different being a light brown colour rather than the darker brown found on most 'Westminster' decorated tiles. The size and fabric type would indicate that the All Hallows tile is probably of 13th-century date, but it is no means certain whether it was made by the 'Westminster' tilemakers.

ii) **Penn** (mid to late 14th C). 34 tiles.

Decorated, designs: E1803, E1837/P112, E1843, E2226/P50?,

E2233, E2337, E2353/P58, E2388/P64, E2390/P63, E2396/P76, E2460/P107, E2537, E2552/P85, E2842/P134, P120, P151. Three different unpublished designs. Design E2337 shows slight differences to the drawing published by Eames, but is probably still the same design. In addition to the decorated tiles listed above, there are references to other Penn tiles from All Hallows which can no longer be found (*London Museum Catalogue* 1954; Hohler 1942). These have designs E1804/P38, E1827/P73, E1833, E2200/P69, E2255/P146, E2342/P68, E2377/P101, E2535/P88, P70, P89 and P109.

### *St Benet Gracechurch* (24)

(Eames 1980; Location: British Museum)

**Penn** (mid to late 14th C). 1 tile.

Decorated, design E2411.

### *St Benet Sherehog* (25)

(Location: MoL archive, site ONE94)

i) **'Westminster'** (13th C). 30 decorated tiles, plus ? plain tiles (see below).

Decorated, designs: E1368, E1821, E2055, E2288, E2776; Degnan & Seeley types 2, 5, 6, 9, 13 and 18. Six different unpublished designs. Plain, black, brown, dark green, yellow glaze.

ii) **Lesnes Abbey** series (late 13th to early 14th C). 3 tiles.

Decorated: E1991, E2634.

iii) **Penn** (mid to late 14th C). 13 tiles.

Decorated, designs: E1398/P123, E1827/P73, E1846/P153?, E2037, E2230/P52, E2262/P130, E2336/P75?, E2337, E2773/P136.

iv) **Flemish** (probably late 15th to mid 16th C). ? tiles (see below).

Plain, mottled brown and yellow, green, yellow glaze.

All the decorated tiles found during excavation of the church in 1994 have been examined. A large number of plain glazed tiles were also recovered, but not all of these have yet been examined in detail. The majority of the plain glazed tiles are of 13th-century 'Westminster' type, many of which are complete. There are also a number of fragments of plain glazed Flemish tile, only one of which is complete. This measures 216mm square, and is probably of late 15th to mid 16th-century date.

### *St Botolph Billingsgate* (29)

(Hohler 1942; *London Museum Catalogue* 1954; Betts 1991; Location: MoL Ref. Coll; site BIG82)

Parts of three *in situ* tiled floors were found during excavations on the site of St Botolph. In addition, a large number of loose tile, most of which almost certainly paved some part of the church floor were recovered. Tiles from the first *in situ* tiled floor (laid 1550-1600):

i) **'Westminster'** (13th C). 18 tiles (+3 probable 'Westminster' tiles).

Decorated, design: E2209.

Three tile designs cannot be identified precisely, but must be one of the patterns designated E2049 to 2052. Four different unpublished designs. Plain, mottled yellow and green, green, brown glaze. There are also three designs (E2458 and two unpublished) which probably belong to the 'Westminster' tile series.

ii) **Eltham Palace** series (? c.1300-1305). 2 tiles.

Two tiles found in the floor seem to be decorated with Eltham Palace design type 3, although exact identification is difficult as both are badly worn.

iii) **Penn** (mid to late 14th C). 35 tiles (+1 probable Penn tile). Decorated, designs: E1399/P121, E1827/P73, E1837/P112, E2223/P46?, E2231/P54, E2262/P130, E2353?/P58?, E2394, E2409?/P66, E2535/P88. One probable Penn design, unpublished. Plain, greenish-black glaze.

iv) **Flemish** (date ?, probably 14th or 15th C). 21 tiles.

Plain, dark green, yellow, brown glaze.

There are two groups of tile. The first measures 117-121mm square and has four nail holes. The second measures 130-136mm square and has just two nail holes. The smaller sized tiles are probably earlier in date.

Tiles from the second *in situ* tiled floor (not securely dated, but presumably also laid 1550-1600, as it lay beneath the third floor):

**Flemish** (date ?, probably late 15th to mid 16th C). 5 tiles.

Plain, brown, dark green, yellow glaze or unglazed. The four glazed examples measure 211-216mm square.

Tiles from the third *in situ* tiled floor (laid about 1600, possibly disturbed by burials):

i) **Flemish** (date ?, probably late 15th to mid 16th C). 49 tiles.

Plain, brown, dark green, yellow glaze or unglazed.

There are four groups of tile: a) 180mm square, glazed; b) 197-201mm square, glazed; c) 195-205mm square, unglazed; d) 258-260mm square, unglazed.

All these Flemish tiles seem to be of the two nail hole type. The unglazed examples were probably added shortly before the church was destroyed in the Great Fire of 1666.

ii) **Flemish?** (date ?, see above). 7 tiles.

This series of seven tiles, measuring 215-220mm square, lack visible nail holes. They are, however, made from clays which would suggest a probable Flemish origin.

Other tiles thought to be from St Botolph:

i) **'Westminster'** (13th C). 44 tiles (+10 probable 'Westminster' tiles).

Decorated, designs: E2048, E2049-51, E2504, E2049-52, E2108. Seven different unpublished designs. Plain, brown, green, yellow glaze.

Design E2504 is listed in Eames 1980 catalogue as belonging to a group of high quality tiles found at Westminster Abbey chapter house dated 1258. The two St Botolph examples, however, belong to the same poorer quality Westminster Abbey muniment room group as the other 'Westminster' tiles from the church. The probable 'Westminster' tiles comprise design E2458 and two different unpublished designs.

ii) **Penn** (mid to late 14th C). 116 tiles (+19 probable Penn tiles).

Decorated, designs: E1399/P121, E1827/P73, E1845?, E1846?/P153?, E2030, E2037, E2070/P94, E2074/P92, E2231/P54, E2343, E2353?/P58?, E2391, E2394, E2409?/P66, E2535, E2551, E2552, E2805, E2819-20?, E2839, P48, P81, P108, P135, P155. Three different unpublished designs. Plain, yellow and green mottle, yellow glaze.

The 19 'probably Penn' tiles all show the same unpublished design. These probably originate from the tiliary at Penn.

At least one other tile (now lost) with design P109 has also been recorded from St Botolph.

iii) **Flemish** (date ?). 100 tiles.

Plain, green and yellow mottle, brown, green, yellow glaze. At least three sizes of tile are present, 113–125mm square, 155mm square and above 167mm square.

iv) **Origin ?** (date ?). 25 tiles.

Plain, green and yellow mottle, brown, dark green, yellow glaze.

At least two sizes of tile are present, 115–117mm square and 129–134mm square. These tiles, which are mostly fragmentary, are not in distinctive clay types and thus could be either English or Flemish.

### *St Bride Fleet Street (31)*

(Betts in prep; Location: St Bride's church; MoL site WFG62)

A small area of medieval floor tiles still survives *in situ* in the base of what was originally a detached tower on the south side of the nave. There are also a number of loose tiles which almost certainly originally paved part of the church. All the decorated loose tiles have been examined, but only around half the plain glazed examples have been studied so far.

*In situ* tiled floor:

i) **'Westminster'** (13th C). 1 tile.

Decorated, this tile has an unpublished design.

ii) **Penn** (mid to late 14th C). 6 tiles (+ 1 probable Penn tile). Decorated, designs: E1803, E1846/P153?, E2199/P71, E2842/P134.

iii) **Origin?** (probably 13th to 15th C). 89 tiles.

Plain, mottled green and yellow, brown, dark green, yellow glaze.

There are two distinct sizes of plain glazed floor tile. The smaller size (107–121mm square) could be of either 'Westminster', Penn or Flemish origin. The larger tiles (123–134mm square) are almost certainly Flemish.

In addition to the tiles listed above, there are 24 *in situ* tiles which are so worn that it is not possible to say whether they are plain or decorated.

Other tiles from St Bride:

i) **'Westminster'** (13th C). 15 tiles.

Decorated, designs: E2034, E2286, E2364. Two tiles with unpublished designs, and one very worn tile with another apparently unpublished design. Plain, black, green, yellow glaze.

ii) **Penn** (mid to late 14th C). 55 tiles.

Decorated, designs: E1803, E1846/P153, E2030, E2037, E2199/P71, E2225, E2231/P54, E2328?, E2355, E2819/P139?, E2842/P134, P120. Two unpublished designs. Plain, dark green, yellow glaze.

iii) **Flemish?** (date ?). 9 tiles.

Decorated, two unpublished designs.

These tiles are believed to be Flemish tiles as they are in the same fabric and of the same size (132mm square) as a group of detached Flemish plain glazed floor tiles from St Bride. However, unlike the plain glazed tiles none of the decorated examples have nail holes so a Flemish origin cannot be confirmed.

iv) **Flemish** (date ?). 30 tiles.

Plain, mottled yellow-brown, black, brown, green, yellow, glaze.

These occur in the following size groups, which are probable of different date: a) 106–116mm square, five nail holes; b) 125–129mm square, four or possibly five nail holes; c) 130–134mm square, two? nail holes; d) 203–206mm square, ? nail holes.

Although the tiles cannot be dated, the four and five nail hole types are almost certainly earlier.

v) **English/Flemish** (date ?). 5 tiles.

Plain, mottled yellow-brown, brown, yellow glaze.

There are two tile groups: a smaller, earlier group measuring, 116–117mm square, and a larger, later group, none of which are complete. There are also incomplete broken fragments, the largest of which measures 147mm in length.

### *St Christopher le Stocks (Bank of England) (32)*

(Hohler 1942; *London Museum Catalogue* 1954; Location: MoL Ref Coll)

**Penn** (mid to late 14th C). 3 tiles.

Decorated, designs: E1833, P66. One tile has a design too blurred to identify.

The London Museum Catalogue lists a tile from St Christopher (no. A28076) as design 25, which is of 'Westminster' type. This is a mistake, the tile should be listed under design 4, which is Penn type P66 listed above.

In addition to the three surviving tiles in the Museum of London, there is also a documentary reference to the use of Penn design P109 (Hohler 1942, 115).

### *St Dionis Backchurch (34)*

(Location: MoL Ref. Coll.)

**Source?** (date ?). 1 tile.

This tile has decoration which has been hand-painted on to what would otherwise be a plain glazed surface. Two similar tiles were found at St Matthew Friday Street.

### *St Dunstan in the East (35)*

(see Gazetteer above)

Parts of a medieval floor comprising glazed decorated tiles were found beneath the Wren floor in 1818–19. The whereabouts of these tiles is not known.

### *St Giles Cripplegate (42)*

(*London Museum Catalogue* 1954; Hohler 1942)

**Penn** (mid to late 14th C).

Decorated, designs: E1398/P123, E1802/P37, E1804/P38, E1837/P112, E2231/P54, E2262/P130, E2377/P101, E2342/P68, P109, P157, P158.

The location of the Penn tiles referred to in the references is currently unknown. These tiles may well have been the decorated tiles noted in the north chapel (two eastern bays of the north aisle) in 1929. These were described as of 14th-century date, which would imply tiles of Penn type.

*St Helen Bishopsgate (44)*

(*London Museum Catalogue* 1954; Eames 1980; Location: St Helen's church; British Museum; MoL Ref Coll)

*In situ* tiled floor:

i) **Penn** (mid to late 14th C). 24 tiles.

Decorated, designs: E2342<sup>2</sup>/P68<sup>2</sup>, E2388/P64, E2396/P76, E2460/P107, P70, *London Museum catalogue*, no. 23.

A number of relaid Penn and plain glazed tiles survive *in situ* in the south transept chapels.

ii) **Origin?** (date?). 7 tiles.

Plain, brown, green, yellow glaze.

Fragmentary plain glazed tiles are arranged as a border around the panel of decorated Penn tiles. It is not certain whether these are English or Flemish in origin, although one has a light green coloured glaze characteristic of certain Flemish-made tiles.

In addition to the seven plain glazed examples, there are also two border tiles which are so worn that it is not possible to say whether they are plain or decorated. Another border tile shows part of a decorative design but is too worn to be identified as a Penn design.

Other tiles from St Helen:

i) **'Westminster'** (13th C). 1 tile.

Decorated, design: Degnan & Seeley type 6.

ii) **Penn** (mid to late 14th C). 12 tiles.

Decorated, designs: E1827/P73, E1935/P129, E2388/P64, E2552, *London Museum Catalogue*, design no. 13.

*St John the Evangelist Walling Street (47)*

(Location: MoL Ref. Coll.)

i) **'Westminster'** (13th C). 3 tiles.

Decorated, designs: Degnan & Seeley types 9 and 13.

Plain, yellow glaze.

ii) **Penn** (mid to late 14th C). 6 tiles.

Decorated, designs: E2037, E2334/P74, E2343, E2552/P85.

Penn designs E2343 and E2552/P85 show minor variations compared to the examples published by Eames. These differences may be due to the wooden stamps, used to mark the design onto the clay, sustaining minor damage at some stage in their lives.

*St Katherine Coleman (49)*

(Hohler 1942; *London Museum Catalogue* 1954; Location: MoL Ref Coll)

**Penn** (mid to late 14th C). 1 tile.

Decorated, design: E2390/P63.

*St Lawrence Jewry (51)*

(see *Gazetteer* above; MoL, site GM200)

A number of floor tiles were reused as a bonding course on top of the east wall at the junction between the wall and the roof. These tiles, which are presumably plain glazed, are described as of late medieval or 16th century date. Three

tiles were described as retained (MoL site GM200, ER number 273) but these could not be found in the Museum of London store in November 1994.

*St Martin Orgar (61)*

(Location: MoL site ORG86)

i) **'Westminster'** (13th C). 1 tile.

Decorated, design: E2049.

ii) **Flemish** (probably late 15th/mid 16th C). 24 tiles.

Plain, green, yellow glaze.

A number of plain glazed floor tiles, 15 of which were complete, were found *in situ* in a chapel added at the south-east corner of the main part of the church in the late medieval period. These tiles, which were laid in a chequerboard design, are of Flemish type. There are five nail holes in the top surface, one near each corner and one in the centre. Certain tiles, however, seem to lack the central nail hole.

The large size of these tiles (average size is 253mm square) suggests that they are of late medieval date which corresponds with the dating of the chapel.

*St Martin Vintry (63)*

(Location: MoL site GM155)

**Penn** (mid to late 14th C). 1 tile.

Decorated, design: E1833.

*St Mary Aldermanbury (65)*

(Location: MoL site WFG22a)

i) **'Westminster'** (13th C). 4 tiles.

Decorated, designs: Degnan & Seeley types 6 and 18. One unpublished design. Plain, yellow glaze.

ii) **Chertsey** (13th C). 4 tiles.

Decorated, designs: E1852, E2650. Plain (probably Chertsey), mottled yellow and green, brown glaze.

Decorated design E1852 has twin round nail holes in the top surface near one of the two surviving corners. A parallel set of twin nail holes were probably located in the, now missing, diagonally opposite corner. Design E2650 has a single nail hole in the surviving corner. Design E2650 occurs at Chertsey Abbey where it is dated c.1290–1300.

iii) **Penn** (mid to late 14th C). 20 tiles.

Decorated, designs: E1399/P121, E1842, E2337, E2410, E2537 or E2538, E2819/P139<sup>2</sup>, E2834, E2871/P171 or P172, P111. One unpublished design. Plain, dark green, black glaze.

iv) **Flemish** (date ?, but see below). 3 tiles.

Plain, mottled yellow and green, yellow glaze.

There are two sizes of Flemish tile. Two tiles of smaller size, around 115mm square, probably with four nail holes although most are covered by slip. These are probably of 14th to late 15th-century date. A single tile of larger size, measuring 210mm square, has irregular shaped nail holes in two, diagonally opposite, top corners. This is probably late 15th to mid 16th-century date.

*St Mary at Hill (71)*

(Location: MoL Ref Coll)

i) **Penn** (mid to late 14th C). 1 tile.

Decorated, design: E1849.

ii) **Flemish** (date?). 4 tiles.

Decorated, unpublished design. Plain, mottled light and dark green glaze.

The plain glazed tiles from this church have four nail holes in the upper surface in an extremely rare configuration. They are located near the edge, midway between the tile sides, rather than in corners which is the normal practice. Only a small part of the decorated Flemish tile survives, but this has a nail hole in the same position. This would also suggest that both the plain and decorated Flemish tiles are contemporary in date. The plain glazed examples measure 113–116mm square and have a thickness of only 13–18mm. The size would suggest a possible 14th or 15th-century date.

*St Mary Magdalen Milk Street (72)*

(Hohler 1942, London Museum Catalogue 1954)

**Penn** (mid to late 14th C).

Decorated, designs: E2535/P88, P70, P89.

The location of these Penn tiles is currently unknown.

*St Matthew Friday Street (79)*

(Hohler 1942; Location: MoL Ref Coll)

i) **'Westminster'** (13th C). 4 tiles.

Decorated, design: E2287. Three different unpublished designs.

ii) **Penn** (mid to late 14th C). 3 tiles.

Decorated, designs: E1398/P123, E1399/P121, E2552/P85.

There is also documentary references to Penn tiles with designs E2199/P71 and E2388/P64 (Hohler 1942, 110–111).

iii) **Source?** (date?). 2 tiles.

These tiles are extremely unusual in having the decorative design hand-painted on to what would otherwise be plain glazed tiles. A similar tile was found at St Dionis Backchurch.

*St Michael Bassishaw (81)*

(see Gazetteer above)

The floor of the medieval tower observed in 1897–1900 was of large red tiles, patched with bricks and stone; the floor of the south aisle of large plain green and yellow tiles. None of these are known to survive but would seem most likely to be Flemish tiles of late medieval or early post-medieval date.

*St Michael Wood Street (87)*

(Hohler 1942; Location: MoL Ref. Coll.)

i) **Penn** (mid to late 14th C). 3 tiles.

Decorated, designs: E2353/P58, E2426/P86.

ii) **Flemish** (date?). 1 tile.

Plain, dark green glaze.

The tile has five nail holes in the top surface, one near each corner and one in the middle. It measures 113mm square and has a thickness of 24–26mm, which suggest a probable 14th or 15th-century date.

*St Nicholas Acon (90)*

(Location: MoL site GM129)

i) **Penn** (14th C). 1 tile.

Plain, dark green glaze.

ii) **Flemish** (date?). 2 tiles.

Plain, green, yellow glaze.

These tiles were found on the site of St Nicholas Acon and are believed to have floored part of the church.

*St Nicholas Shambles (93)*

(Betts 1990; Location: MoL site GPO75)

A large number of plain and decorated medieval floor tiles were recovered during excavation on the site of St Nicholas Shambles. Although no areas of flooring still survived intact certain tiles were found in the foundations of the church, while others came from church demolition debris. There seems little doubt that most of the tile listed below originally formed part of the church floor.

i) **'Westminster'** (13th C). 48 tiles.

Decorated, designs: E2034, E2050?, E2185, E2286, E2316?, E2471, E2478, E2775, Degnan & Seeley type 18. Four different unpublished designs. Plain, brown, green, yellow, greenish-black glaze.

ii) **Chertsey** (c.1290–1300). 1 tile.

Decorated, design: E2651.

This tile was found unstratified during excavations on the site of the church. It is not certain whether it originally came from the church itself.

iii) **Penn** (mid to late 14th C). 19 tiles.

Decorated, designs: E1804/P38, E1845?, E2220/P51 or E2221, E2353/P58, E2355? or P60A?, E2819?/P139?. Two different unpublished designs.

Many of the Penn floor tiles from St Nicholas are very worn which has made positive identification of the designs very difficult. It is possible some may have been plain glazed.

iv) **Flemish** (date?, but see below). 19 tiles.

Plain, green, yellow glaze.

These Flemish tiles are 115–121mm square and are probably either of 14th or 15th-century date. No tiles are complete, but the surviving fragments seem to be of either two nail hole or five nail hole type.

v) **Flemish?** (date?). 6 tiles.

Plain, green, yellow glaze.

These tiles lack nail holes but are in probable Flemish fabric types. One tile measures 128mm in length, similar to the tiles discussed above.

vi) **Origin?** (date?). 7 tiles.

Decorated, design?: Plain, brown, dark green, yellow glaze.

One decorated floor tile from St Nicholas is so worn that it is not possible to identify its design or origin, although it is almost certainly English. The other six tiles, which are probably all plain glazed, could be either of English or Flemish manufacture.

*St Pancras (98)*

(Location: MoL site GM184)

i) **Westminster** (13th C). 14 tiles.

Decorated, designs: E2209, P78. Three different unpublished designs. Plain, yellow and green, brown and green?, dark green, black glaze.

The inclusion of Penn design P78 in the 'Westminster' category is not a mistake. Although it is clearly Hohler's Penn design P78, examination of the fabric, the method of application of the glaze and size clearly shows that this tile belongs to the poor quality 'Westminster' group, and is not of Penn origin. The St Pancras tile also shows far more of the pattern than was published by Hohler.

ii) **Penn** (mid to late 14th C). 2 tiles.

Decorated, designs: E1837/P112 and possibly E1399/P121.

The corner of the tile with the latter design shows a minor difference from the tile illustrated by Eames. This may be due to damage of the wooden stamp used in impress the pattern into the clay.

*St Peter the Less (100)*

(Location: MoL site PET81)

i) **Chertsey** (13th C).

Decorated, unpublished design.

ii) **Penn** (mid to late 14th C). 3 tiles.

Decorated, designs: E2070/P94, E2232?/P44?, E2841/P138.

iii) **Flemish** (date?). 2 tiles.

Plain, green, yellow glaze.

iv) **Origin?** (date?). 2 tiles.

Plain, brown glaze.

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**NOTES**

<sup>1</sup> This paper does not deal in detail with those parish churches, some new built, which were formed out of religious precincts at the Reformation or after, such as St Bartholomew Smithfield or St James Duke's Place (1622).

<sup>2</sup> The drawings are not in the RIBA as stated in the article, and cannot now be traced.

<sup>3</sup> Sparrow Simpson gives a date of c.1250, but a date of c.1181 is preferred by Brooke & Keir 1975, 130, n.3.

<sup>4</sup> Those consulted in detail were: All Hallows London Wall (1455–1536: GL, MS 5090/1, Welch 1912); All Hallows Staining (1491–1500: GL, MS 4956/1); St Andrew Hubbard (1454–1524: GL, MS 1279/1); St Anne and St Agnes (accounts and other records 1478–1550, McMurray 1925); St Botolph Aldersgate (1466–1550, GL, MS 1454); St Margaret Pattens (accounts and other records, 1506–1550, GL, MS 4569); St Mary at Hill (accounts, wills and deeds 1486–1500, Littlehales 1904); St Michael Cornhill (1455–76, 1547–50, Overall 1871) and St Peter Westcheap (1435–45, 1535–6, GL, MS 645/1).

<sup>5</sup> The earliest include those for St Dunstan in the East which start in 1537, St Lawrence Jewry in 1556, St Martin Orgar in 1557, St Mary Aldermanbury in 1569, St Michael Cornhill in 1563, St Bartholomew by the Exchange in 1567, and St Margaret Lothbury in 1571 (all records in GL).

<sup>6</sup> For objects on the Milk Street site, Pritchard 1991, 175–84.

<sup>7</sup> The second example is accepted as from St Paul's in Kendrick 1949, 100.

<sup>8</sup> Outside London, aisles were often built at different times, as at St Peter, Barton-upon-Humber, where the south aisle is of the mid-late 12th century, and the north aisle in the late 12th century (Rodwell 1981, 29–31).

<sup>9</sup> Two late medieval bell-frames have been recorded after the recent bomb damage at St Ethelburga and St Helen Bishopsgate (information R Lea).

<sup>10</sup> Information from M Caroe; this is most evident on the north side of the tower.

<sup>11</sup> At York, chantry foundations were particularly popular at two periods, 1310–40 and the early 15th century (Dobson 1967, 29); but the correlation with any surges in building chapels there has not yet been studied.

<sup>12</sup> The reference to the Eton clock as 'the earliest mechanical clock in England' may require revision if the St Paul's clock was made in 1344.

<sup>13</sup> For a general study of segregation in medieval churches, see Aston 1990.

<sup>14</sup> Information from Dr Sharon Cather, Courtauld Institute.

<sup>15</sup> MoL accession numbers 11179–98. I am very grateful to Nigel Ramsay for the comments and attributions in this paragraph.

<sup>16</sup> This survey does not cover vestments, altar cloths, movable furniture (organs and chests), books, and other church goods. Walters (1939) translates all the available parish church inventories made in London at the Reformation.

<sup>17</sup> The churches were St Peter Paul's Wharf, St Michael le Querne, St Augustine Watling Street, St John Walbrook, St Michael Queenhithe, and St Mary Magdalen Milk Street. For a study of burial choice among those making wills in London, Harding 1992, esp 122–3.

<sup>18</sup> References for the rebuildings in this table are mostly in the text or gazetteer, except for All Hallows the Less 1330, *Stow* i, 106; St Antholin 1400, *ibid*, 108; St Michael Paternoster Royal 1409, *Cal LB I*, 77–8; St John Walbrook 1412, *ibid*, 102.

<sup>19</sup> The stone vault below the choir of All Hallows the Less, 26ft north-south and 19ft 6in east-west, lay with one end on Thames Street, and belonged to the adjacent great house of Coldharbour; it was ordered to be rebuilt in 1544 (Loengard 1989, 186).

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# RECENT ARCHAEOLOGICAL WORK AT THE TOWER OF LONDON

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## SUMMARY

*The Historic Royal Palaces Agency (HRPA) appointed the Oxford Archaeological Unit (OAU) as term archaeology consultants in 1993 for a five-year period. The two organisations have worked together since on several projects of various sizes at the Tower of London. This report summarises the results of several related projects completed by the end of 1995. The principal discoveries comprised: a section of the Roman city wall incorporated as a foundation to the Bowyer Tower; fragments of several medieval storehouses and one wall of the late medieval Wardrobe building, also various post-medieval structures. The most important post-medieval structure was undoubtedly the Grand Storehouse. This once-imposing building was gutted by fire in 1841, and was subsequently demolished to make way for the Waterloo Barracks which now house the Crown Jewels. Much of the post-medieval masonry survives just below the surface, however, and was exposed in several places. Other projects which are still in progress will be described in future reports.*

## INTRODUCTION

### A brief history of the Tower

The historical background to the Tower of London has been summarised admirably in recent years (see especially Charlton 1978; Allen Brown & Curnow 1984; Parnell 1993), and there is little point in rehearsing that history in any detail in this brief report. The most salient facts, however, do require restatement. The Tower lies on the N bank of the river Thames, in the SE angle of the Roman urban and riverside defensive walls of *Londinium*. The marshy riverside area later occupied by the Inmost Ward of the Tower had been reclaimed by the end of the 1st century

AD, and excavations have revealed the presence of at least one substantial masonry building under the White Tower. The defences were first built in c.AD 200, and were remodelled in the late 4th century (Parnell 1993, 12–16).

Medieval construction at the Tower started very soon after the Norman Conquest. The White Tower is traditionally ascribed to 1078; the *Textus Roffensis* certainly suggests that it was being built in 1077 (Allen Brown & Curnow 1984, 9). The White Tower lay in the SE angle of the Roman defences, and the initial Norman work comprised a ditched enclosure corresponding to the Inmost Ward. Expansion took place during the 13th century under Richard I and Henry III, with a two-phase enlargement of the defended area (Inner Ward). Edward I added the Outer Ward in the late 13th century, while the Wharf was built during the 14th century (Allen Brown & Curnow 1984, 12–31; Parnell 1993, 17–40). Thereafter the three wards (Inmost, Inner and Outer) had a long and complex structural history. Various buildings were built, rebuilt and demolished over the centuries, and the configuration of the site varied considerably during the medieval and post-medieval periods. Much of the site suffered extensive damage during Victorian redevelopment and refurbishment (Parnell 1993, 90–108), while several buildings took direct hits from bombs during the Second World War (Parnell 1993, 114–7).

### Archaeology at the Tower

The historical significance of the Tower of London is reflected in the extent of archaeological investigation at the site. It has been studied as a

historic monument since the 18th century at least, and major advances in understanding the site occurred in the 19th century. Much of this work involved the examination of the standing buildings in the Tower, including some which have since been demolished. Advances in the archaeology of the Tower have mostly been made in the 20th century, especially in the last 50 years (see Parnell 1993). Much of the work has been on a small scale, but several substantial excavations have also been undertaken (see especially Parnell 1982 and 1985).

### **The Historic Royal Palaces Agency**

The HRP A was established in 1989 to manage the Tower of London, Hampton Court, Kensington and Kew Palaces (the latter with Queen Charlotte's Cottage), and the Banqueting House Whitehall. HRP A therefore has the responsibility of care for some of England's most important historical and archaeological sites. The Tower of London is a World Heritage Site and a Scheduled Ancient Monument (Greater London No 10). The Historic Royal Palaces are covered by Crown exemption, however, and applications for works are therefore treated as non-statutory applications for Scheduled Monument Clearance, rather than the more familiar Consent. Since 1993 OAU has been involved in excavation, watching brief and building survey projects for HRP A at Kensington and Hampton Court Palaces and the Tower.

## **THE PROJECTS**

### **Reasons and methods**

Several of OAU's projects at the Tower during 1993–5 comprised watching briefs and small excavations associated with the new Crown Jewels display and the related programme of upgrading the Tower's electricity supply. The existing electrical cables were becoming increasingly unreliable and in some cases dangerous, while the power requirement of the new Crown Jewels display was equal to the total existing supply for the entire site. Work had already taken place on laying new cables across the moat and into the buildings of the Outer Ward before OAU began working for HRP A. OAU's work therefore covered the cabling in the Inner and Inmost Wards (Figs 1 and 2).

The first project (June July 1993) involved several small excavations and a watching brief on cabling work behind (north) of the Waterloo Barracks which houses the Crown Jewels display. Further small excavations and an intensive watching brief were carried out from December 1993 to August 1994 on the extension of this cabling to provide a continuous loop or ring around the Inner Ward, extending into Water Lane. HRP A asked OAU to be involved in the design of the latter cable route (the Inner Ring Main) from an early stage so that the predictable impact of excavation on archaeological levels could be minimised, and a desk-top study of past archaeological work in the Inner and Inmost Wards formed an important part of this process (OAU 1993). An equivalent desk-based study was undertaken in July 1995 when proposals were put forward to renew the White Tower's electrical supply by laying new cables to connect with the Inner Ring Main. A watching brief on this trench took place during October 1995 (OAU 1995).

The cable trenches were planned to follow existing service runs and other recently disturbed ground as far as possible, making use of a Property Services Agency survey of services and other technical and engineering data (see Pl 1). In some areas an initial surface strip of 1.6m width was made so that deposits lying immediately below the modern tarmac *etc* could be assessed for the best route (*ie* that which provided the least or no disturbance to *in situ* pre-Victorian stratigraphy). The small area excavations were also used to guide the cable excavations past likely pinch-points. The cable trench itself was 0.8m wide and typically 0.8m deep.

Other projects relating to the Crown Jewels display comprised a series of watching briefs on minor works such as the digging of pits for railing posts. These generally had little impact on significant archaeology, but a few pits did reveal important deposits and features; this proved the value of an intensive watching brief even on apparently low-risk work. OAU was also asked to maintain a watching brief during construction work on the approach to Tower Pier. This work was commissioned by Alan Baxter & Associates, not HRP A, but it is included here because Tower structures were revealed.

### **Projects and codes**

HRP A already operated a coding system for collections management and other purposes. This

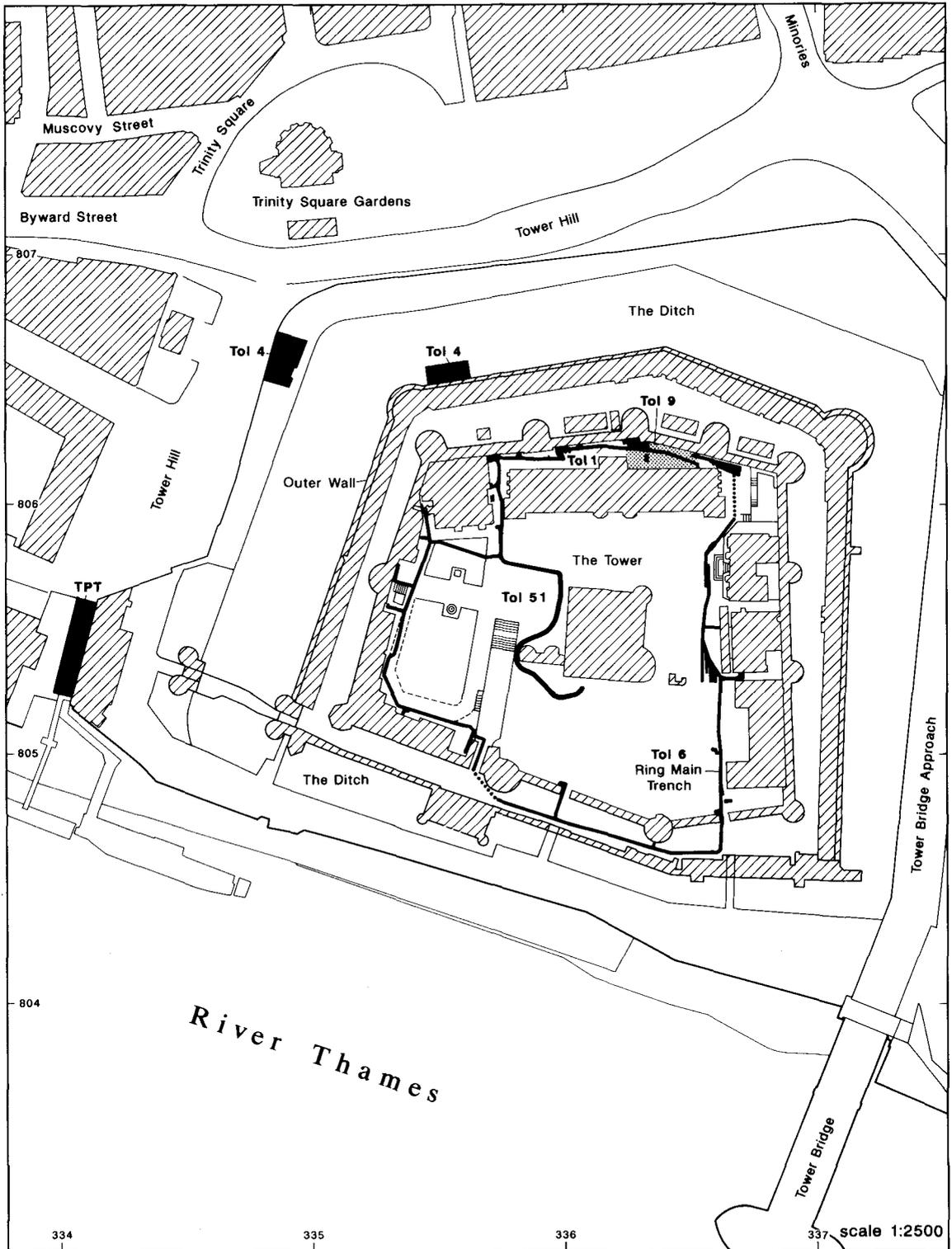


Fig 1. Tower of London: location of the excavations; TOL is the prefix of the site codes assigned by the Historic Royal Palaces Agency; the code TPT was issued by the Museum of London

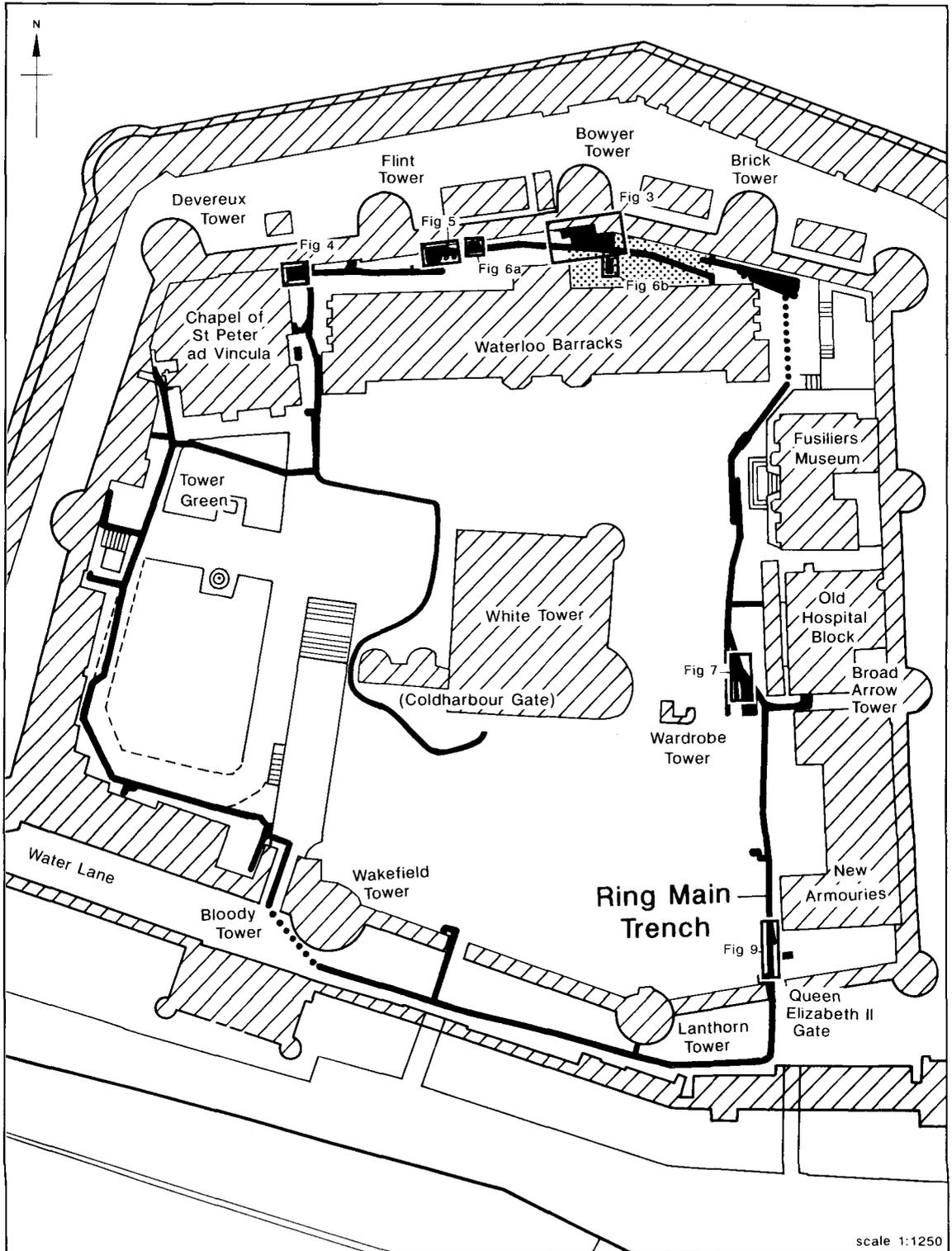


Fig 2. Tower of London: detailed location of the Crown Jewels Project, Inner Ring Main and White Tower cabling excavations



Plate 1. Tower of London: modern services exposed during the TOL 6 watching brief, with the White Tower behind

uses a three-letter code based on the site name, so that the Tower of London code is TOL. HRPAs issues instructions and work orders to OAU using this code and a numerical suffix so that every project has a unique identification code. The work behind the Waterloo Barracks, for instance, has the code TOL 1 while the Inner Ring Main project is TOL 6. The work at Tower Pier Approach fell outside the HRPAs contract and was assigned a Museum of London code, TPT 94. Individual project codes are noted in the following text as relevant. Every project has an archive, currently (January 1996) stored at the OAU's Oxford offices but to be deposited with HRPAs at the Tower of London in late 1996 or 1997. Each archive contains all the primary documentation, including project designs and site records, as well as post-fieldwork documentation as appropriate. The final report is also included, and full data for the projects described here are therefore in the archives.

Some of the projects undertaken by OAU so

far are either ongoing (and will therefore be reported on at a later date; this applies to work in the moat and on 4–5 Tower Green), or are too minor to deserve more than a passing mention. A watching brief (TOL 2) on the Wharf, for instance, revealed modern make-up below the existing cobble sets. An evaluation (TOL 4) of the gardens on the NW side of the Tower moat in advance of building an underground gas meter chamber only found evidence for thick layers of fill, a finding confirmed by a subsequent watching brief. Recording work during insertion of a stair in the White Tower (TOL 5) revealed evidence for earlier timber floors. Further recording took place in the White Tower in 1995 (TOL 49), and during 1996 (TOL 60); consideration of the TOL 5 results has therefore been reserved until more data are available for interpretation. OAU has also been assisting HRPAs in the establishment of an archaeological archive store at the Tower, and numerous TOL codes (TOL 18, TOL 20–48, and TOL 55–6) have been assigned retrospectively to projects undertaken at the site by various individuals and organisations from the 1950s to the early 1990s.

## TOWER PIER APPROACH (TPT, Fig 1 and Pls 2–3)

### Introduction

Tower Pier Approach consists of an alleyway leading on to the timber decking of the pier itself. A proposal to provide a canopy along the Approach necessitated stripping out the existing concrete surface and the excavation of 14 foundation pits for concrete stanchion bases (Pl 2). The site lies on the E side of the Tower Dock and W of the former Lion Tower. The latter had been protected by a brick-built Bulwark from c.1480. Parts of the Bulwark, which was swept away after the Great Fire of 1666, were recorded during excavations N of the Approach on Tower Hill West in 1985 (Hutchinson forthcoming).

### Results

The foundation pits were excavated mechanically during March and April 1994; half of the pits had already been excavated before OAU was



Plate 2. Tower of London: Tower Pier Approach seen from the N

asked to monitor the work, but records of the pits were made after excavation. Most pits were shallow (typically 0.5m deep) in line with the original design, but several had to be dug to considerable depth because of soft, unconsolidated ground which would not bear the weight of the structure. These patches of soft ground represented infill layers within below-ground structures. At least one of these appeared to be a cellar, perhaps associated with the Ram's Head inn shown on Haiward and Gascoyne's *Survey of the Tower and its Liberties* of 1597 (see Parnell 1993, fig 36). A brick wall noted in most of the pits along the west side of the Approach represented the E side of the Tower Dock; the wall continued below the maximum excavated depth of 1.8m below the stripped surface and had rubble packed against it. Two offsets were present, the first (0.23m wide) 0.8m down from the surface and the second (0.18m wide) 1.4m down (*ie* 0.6m below the first offset).

The most important structure was found in the northernmost pit on the E side of the Approach, where loose soil in the E face of the pit fell away to expose brick masonry (contexts [18],[22]) lying obliquely to the N-S axis of the pit and the E boundary wall of the Approach (Pl 3). At least 14 courses of soft, dark reddish orange bricks were present, bonded with pale grey to buff, fairly hard sand/lime mortar. The bricks were laid in a simple but irregular stretcher pattern. The most notable features of the wall were a probable return to the E at its S end and an opening at its N end. As with the dock wall, the masonry continued beyond the maximum depth (2m) of excavation.

### Discussion

Interpretation of structure [18/22] is difficult because of the very limited exposure. The 1985



Plate 3. Tower of London: Tower Pier Approach, detail of masonry [18/22]

excavations on Tower Hill West revealed what appeared to be bastions at the N end of the Bulwark, parallel walls representing its W defences, and cellared structures built against the W wall (Hutchinson forthcoming). The masonry survived in good condition immediately below the modern make-up. The W wall was exposed in two places, approximately 14m apart. The alignment provided by these exposures joins up with the N end of the Tower Dock's E side. This means that [18/22] could not be part of the defensive wall as such, unless there was a drastic change of alignment immediately N of the Approach which seems unlikely, especially given the orientation of [18/22].

There is little doubt that the wall found in 1994 is at least broadly contemporary with the Bulwark. The bricks certainly appear to be of the same type. It is conceivable that the masonry is equivalent to the cellared buildings against the west wall recorded in 1985. The opening in the

wall, and the apparent return (door jamb?) may be significant in this respect. It must be admitted, however, that the alignment of the walls appears to be incorrect. If the W defence did join with the E side of the dock, cellared buildings within the Approach should perhaps be aligned parallel to the dock. Wall [18/22], however, is some 12° askew. Poor laying-out of the building during construction could explain this, but alternatively [18/22] could be associated with the moat around the W side of the Lion Tower. This was built in the late 13th century during the expansion of the Tower which saw the construction of the Outer Ward and moat. The Lion Tower had its own stone-lined moat to the W (Parnell 1993, 40–1). Wall [18/22] lies approximately 2.5m behind the presumed face of the Lion Tower moat. It seems unlikely that the wall forms the rear face of the moat lining, but it could belong to a (cellared?) building cut back into the infill between the moat and Tower Dock.

## THE CROWN JEWELS/WATERLOO BARRACKS PROJECT, THE ELECTRICITY INNER RING MAIN AND THE WHITE TOWER CABLE (Fig 2)

### Introduction

OAU excavated four small areas (1–4; see also Figs 3, 5, 6a and 6b) behind (N of) the Waterloo Barracks (TOL 1), and a further ten (unnumbered) areas during the Inner Ring Main works (TOL 6). The smallest of these excavations was little more than 1m square, while the largest measured 10m × 4m. All four of the TOL 1 areas contained significant archaeology, but services and other truncation had removed the archaeology within the 0.8m depth of excavation in three of the TOL 6 areas (NE corner of Waterloo Barracks, E of Wardrobe Tower, and N of Queen Elizabeth II Gate). Excavation was also undertaken as necessary during the watching briefs on the cable trenches and associated minor works (TOL 1, 6 and 51; and TOL 9, 11 and 12 respectively) to ensure that the digging did not damage any significant deposits, structures or features. Contexts were assigned in blocks of numbers from a continuous sequence to avoid duplication across the related projects. Contexts [1–129] were used during the TOL 1 excavation, while [150–170] were assigned to the TOL 1 watching brief. Numbers [250–289, 293–330, 333–547, 600–676 and 700–807] were used during the TOL 6 excavations and watching brief. The remaining watching briefs used numbers [201–214] (TOL 9), [290–292 and 331–332] (TOL 12), and [1000–1072] (TOL 51). A series of letter codes was used to identify some 55 individual railing post-pits in TOL 11.

The limited exposures, especially in the trench but also in the small excavations, makes detailed interpretation of the results difficult and in several cases effectively impossible. Nevertheless an attempt has been made to place the various structures *etc* into their historical context, using primary and secondary historical, cartographic, pictorial and photographic sources for assistance. The descriptions below provide brief summaries of the main findings during these projects, followed by discussion of their context.

The extent of Victorian and modern truncation of archaeological deposits deserves some mention. Service runs of various kinds and associated manholes were found in extraordinary profusion, and about half of the 700 or so recorded contexts

were services. Some of these mains were recorded by the PSA, but more were not: these principally consisted of Victorian features, but some services had been inserted since the PSA survey was drawn up in the early 1980s. Regrettably these most recent services had truncated important structures in at least two places N of the Waterloo Barracks, and possibly also E of the Wardrobe Tower. There appears to have been no archaeological record of these works.

Many of the service trenches were relatively superficial (though some were very deep, and storm drains in particular lay well beyond the limit of excavations; their fills were obvious even so). Unfortunately so was some of the most significant archaeology. A time:depth trade-off cannot be assumed at a site like the Tower of London: Roman levels sometimes lie quite close to the surface (see below; also *cf* Parnell 1982, 101–5), and medieval to post-medieval structures also survive only at shallow depths, as was graphically demonstrated on several occasions during the watching briefs described here.

### Description: stratigraphy

#### *Roman wall* (Fig 3)

A N-S wall [107] was found under the Bowyer Tower (Pl 4) in Area 3. The wall consisted of three courses of ragstone above an offset triple string course in tile, projecting 0.06m. A further course of ragstone underlay the offset (Pl 5). The masonry was bonded with a fairly hard, very pale orange-brown mortar. The exposed masonry was up to 1.37m long and 0.72m high, continuing below the maximum depth of excavation. Only 0.4m was visible in width, as the Bowyer Tower stair turret had been built over the masonry on a slightly different alignment (see Fig 3). The S end of the wall [107] had been crudely truncated. The 13th-century Inner Curtain wall butted the W face of [107] with a carefully-built vertical joint.

#### *The Inner Curtain wall, Coldharbour Gate and late medieval storehouses*

The defensive circuits of the Tower have been refaced or rebuilt in several places. Much of this work occurred during the 19th century because of redevelopment (see Parnell 1980), dilapidation

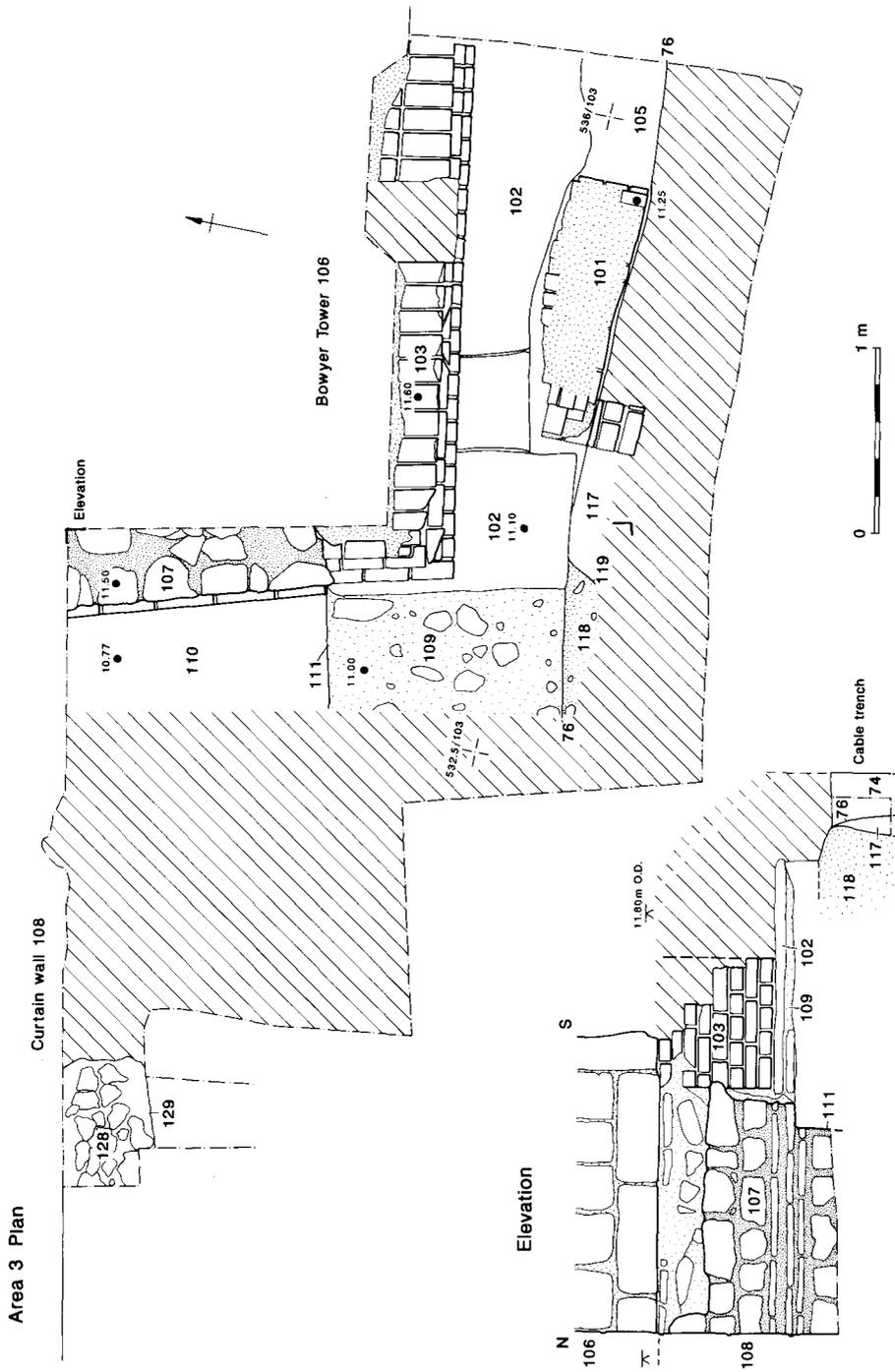


Fig 3. Tower of London: plan of Area 3, the Bowyer Tower, with elevation of the Roman wall (TOL 1)



Plate 4. Tower of London: the Bowyer Tower area seen from the S during excavation (TOL 1 Area 3), with the Roman city wall under the stair turret and Grand Storehouse masonry and paving at front right

or catastrophic damage (*eg* during the destruction of the Grand Storehouse by fire in 1841: see below). The original masonry of the Inner Curtain wall was found surviving below Victorian rebuilds in several places: E of the Brick Tower, W of the Flint Tower ([613], Fig 4), and possibly under the modern gateway E of the Wakefield Tower; the latter exposure may in fact have been the foundations of the Victorian rebuild, as the alignment did not conform to the known original line (Parnell 1980; 1985, 23–5). The Victorian masonry was always offset over the original build.

The medieval build of the Inner Curtain wall survives largely intact E of the Flint Tower. The wall was traced downwards to a maximum depth of 1.75m below the modern paving in exposures for a new manhole in Area 1, immediately E of the Flint Tower (Fig 5). The masonry was roughly coursed and quite crudely faced, with a variety of stone types (*eg* Kentish ragstone, sandstone, and flint) and tile used. A damaged uncoursed

layer of limestone [40] was found at a depth of 1.55m; it extended up to 0.32m from the wall face, but an intact S edge could not be identified because of later truncation.

The White Tower electricity cable trench (TOL 51) skirted the W side of Coldharbour Gate, exposing part of the buried courses of its W tower. A length of 2.55m of the masonry was uncovered, forming the E side of the trench. Three courses of limestone blocks were revealed, each offset from the one below, and the offsets were between 0.04m and 0.1m wide. The lowest projected 0.22m from the face of the tower. The stonework comprised very closely set courses of large and medium-sized limestone blocks. No medieval soil horizons remained against the masonry because excavation of the previous electricity trench had truncated the archaeology here.

Several medieval walls were found abutting the Inner Curtain Wall in Areas 1 and 2: walls



Plate 5. Tower of London: detail of the Roman city wall under the Bowyer Tower stair turret, seen from the W

[7, 26, 27, 33 and 37] were in Area 1 (Fig 5 and Pl 6), and wall [113] was in Area 2 (Fig 6a). None of the walls had consistently coursed masonry, but they did have carefully dressed, flat faces where these survived. Structures [27 and 33] (and possibly [113]) butted against and were built approximately at right-angles to the Inner Curtain wall. Structure [27] contained an even mixture of chalk blocks and Reigate sandstone with a bonding matrix of fairly crumbly pale creamy-brown mortar incorporating c.20% crushed chalk. The structure was traced for 1.2m to the S, but excavation could not continue beyond this because of live services. The S end had been truncated but not completely removed by a Victorian or later service trench. The maximum height was 1.4m, and the width was up to 0.48m. The W face had been mostly robbed out, but a few facing stones did survive *in situ*.

Structure [33] lay 2.1m to the W of and slightly out of parallel with [27], and was built of chalk (80%) and limestone (18%) with occasional flint and brick/tile fragments. The masonry was bonded with a very hard, pale creamy-brown

mortar. A length of 1.5m was exposed within the available area; the S end of the structure was truncated by the same service which cut [27]. The E face of [33] was vertical in its upper part, but bulged out slightly in its lower levels; this gives the impression of an offset in Figure 5. The W face was completely robbed away, but the minimum width was 0.6m. The structure survived to a height of 1.4m. Structure [33] overlay the stonework [40] associated with the Inner Curtain wall.

Both [27] and [33] were abutted by other masonry features. The former was abutted by a chalk (75%) and limestone (20%) structure [26] with occasional inclusions of flint and brick/tile. The bonding matrix was a fairly hard, light orange sandy mortar. The structure had been truncated along its S face, and its E limit lay beyond the edge of Area 1. The original dimensions, therefore, could not be determined, but the visible portion was 1.5m long (E-W), 0.7m wide, and 0.56m high.

Structure [7] abutted [33], and was bonded with a chalk surface [37] which abutted wall [27]. The surface lay at a depth of 1.7m below

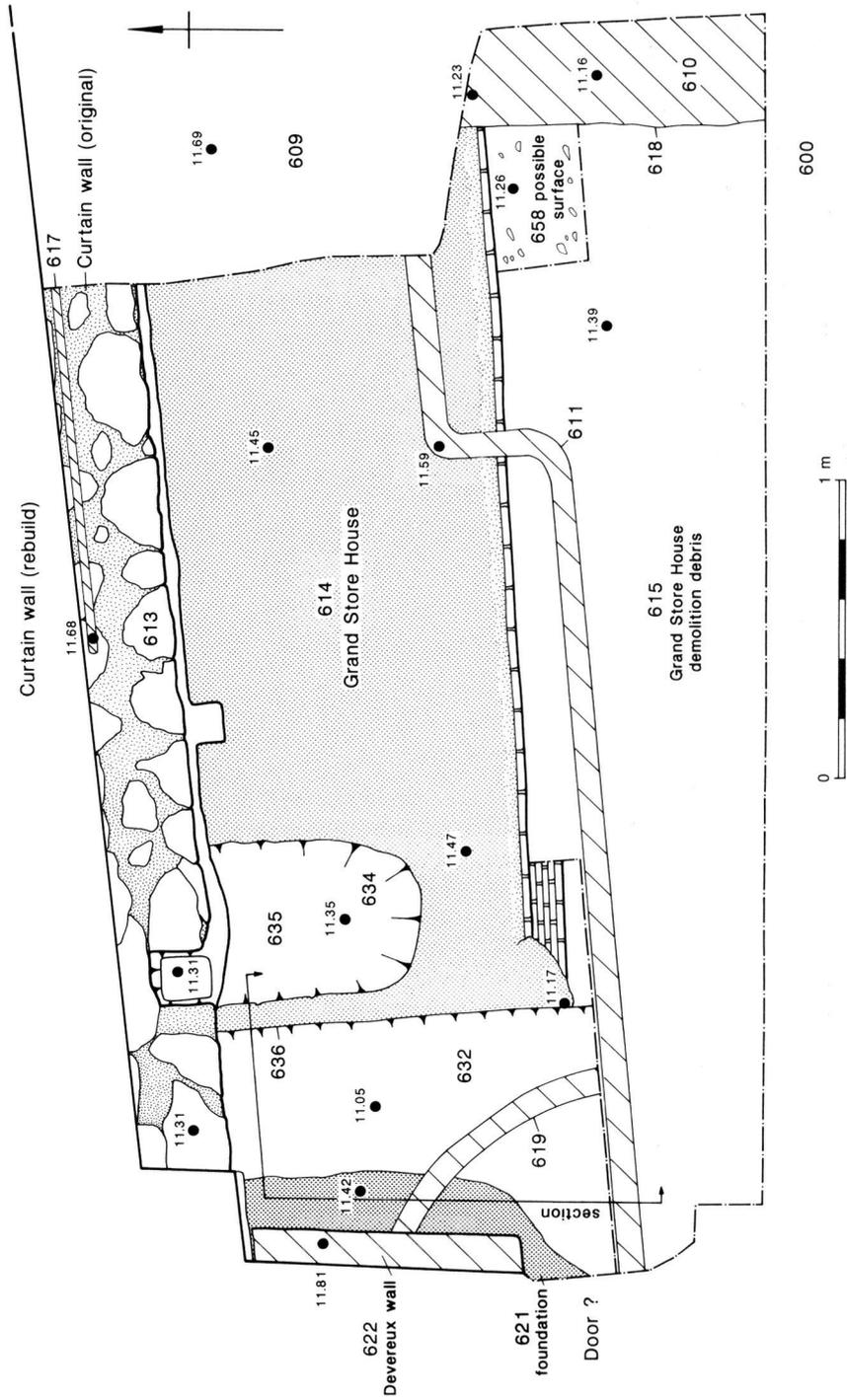


Fig. 4. Tower of London: plan W of the Flint Tower (TOL 6)



Fig. 5. Tower of London: plan of Area 1, E of the Flint Tower (TOL 1)



Plate 6. *Tower of London: the medieval walls exposed in TOL 1 Area 1 seen from the W; note the modern service trenches cutting the masonry*

the modern paving. Structure [7] consisted of a large rectangular area of masonry, virtually all of chalk blocks, with occasional use of limestone and inclusions of brick/tile. The bonding matrix was a fairly hard light orange sandy mortar. The structure was largely intact, except that a Victorian or later drain had cut away the upper part of the S face. The service trench which cut [27] and [33] ran along the S face of [7], but fortunately did not cut into it. The E face featured a 0.1m-wide offset approximately 0.35m down the surviving masonry. This was not carried around the S face. Maximum dimensions were 1.46m E-W (including the offset)  $\times$  0.84m  $\times$  1.4m.

Structure [113] (Fig. 6a), only seen in plan, had slightly irregular faces (although this may be the result of post-medieval activity—see structures [112] and [114], below). It projected at a right-angle for 1m from and abutted the Inner Curtain wall. The feature was virtually all of chalk, with

occasional use of flint, bonded with a hard pale yellow-brown mortar. The structure was up to 0.38m wide.

A number of medieval or possibly medieval deposits were noted during the TOL 1 and 6 excavations and watching briefs. These deposits were mostly seen in the sides of existing service runs followed by the cable trench, but they were occasionally revealed in plan during the excavations. The deposits were mostly layers, although one or two could have been feature fills. They were left unexcavated in most cases, and no significant artefact assemblages were recovered.

#### *The Wardrobe* (Figs 7–8 and Pl 7)

Excavation in the Wardrobe Tower area uncovered perhaps the most important archaeology on the Inner Ring Main route. Wall [382] was aligned E-W and consisted of coursed chalk, flint and limestone pieces bonded with a yellowish-brown sandy mortar. The S side was faced with bricks [389] bonded with a yellowish-brown sandy mortar including chalk flecks. The masonry survived to a height of 0.87m and was 1.16m wide. Wall [382] was set in a construction trench [414] which cut a clay layer to the N. Pottery from the fill [413] of the construction cut dates to the late medieval period and cross-joins with a sherd from a layer [412] abutting the S face of the wall. The construction trench cut through the fill of an (unexcavated) feature [416], fill [415] to the south, which in turn cut a deposit of mortar, [417]. Fortunately, and after considerable efforts by OAU and the contractor, an alternative trench route was found so that the masonry could be left *in situ*.

Deposits to either side of the wall differed considerably. A series of loam layers, superimposed on each other to the S, were placed or accumulated against the brick face. These layers contained late medieval and post-medieval pottery and probably represent garden soils or similar material. A possible construction layer of mortar [387] abutted the N face of [382] and was overlain by a thick layer of broken bricks [386], which in turn was sealed by layers of soil.

#### *Possible medieval building N of Queen Elizabeth II Gate* (Fig 9)

An E-W aligned masonry structure [450] was found 2.5m to the N of the Queen Elizabeth II

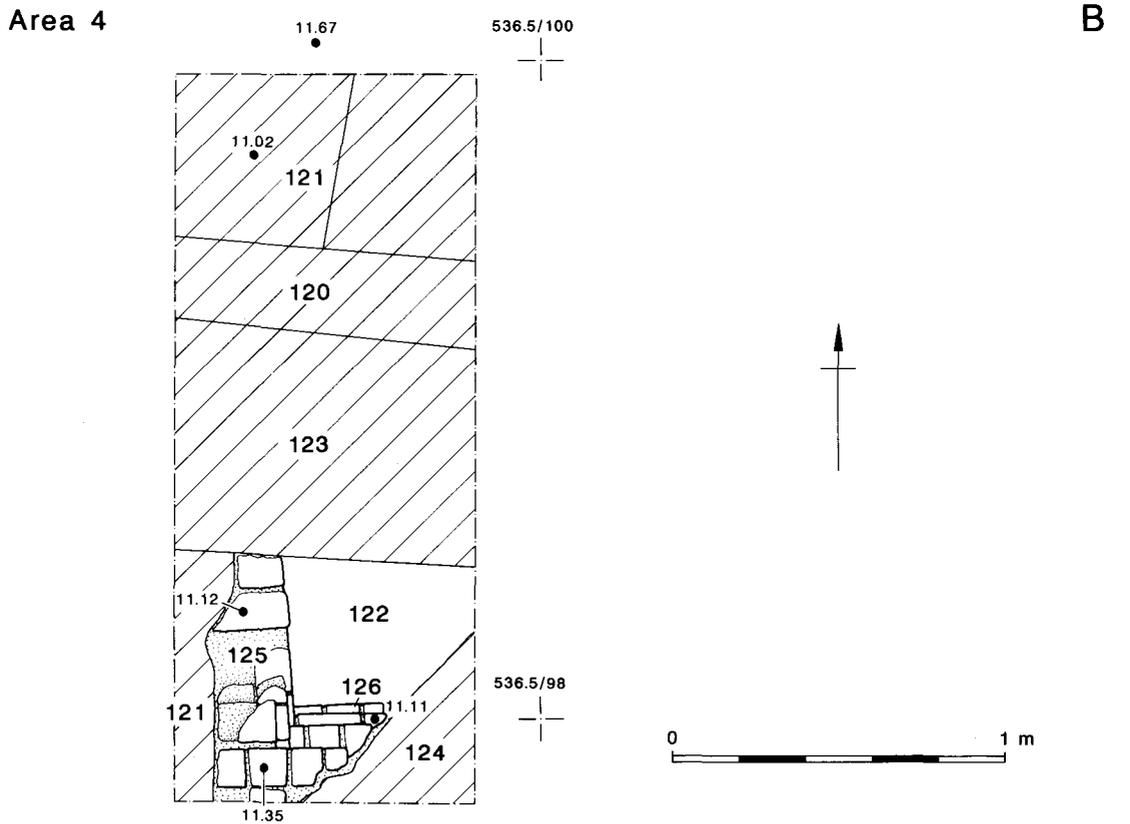
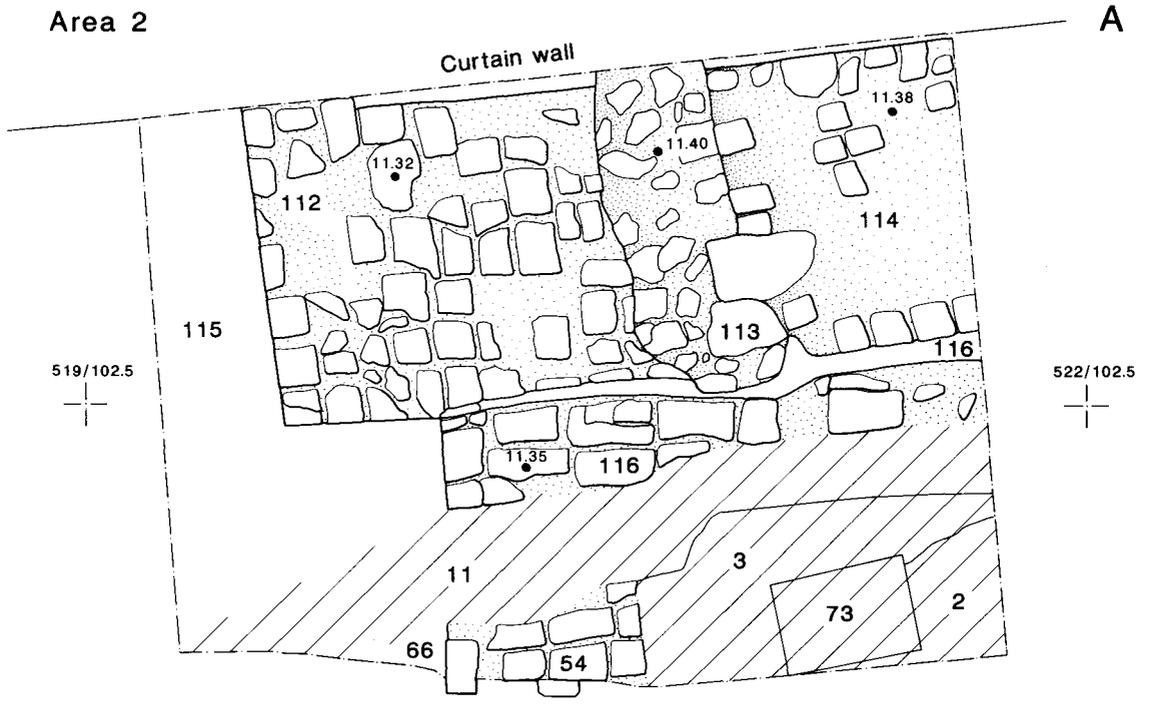


Fig 6. Tower of London: a) plan of Area 2 (TOL 1); b) plan of Area 4 (TOL 1)

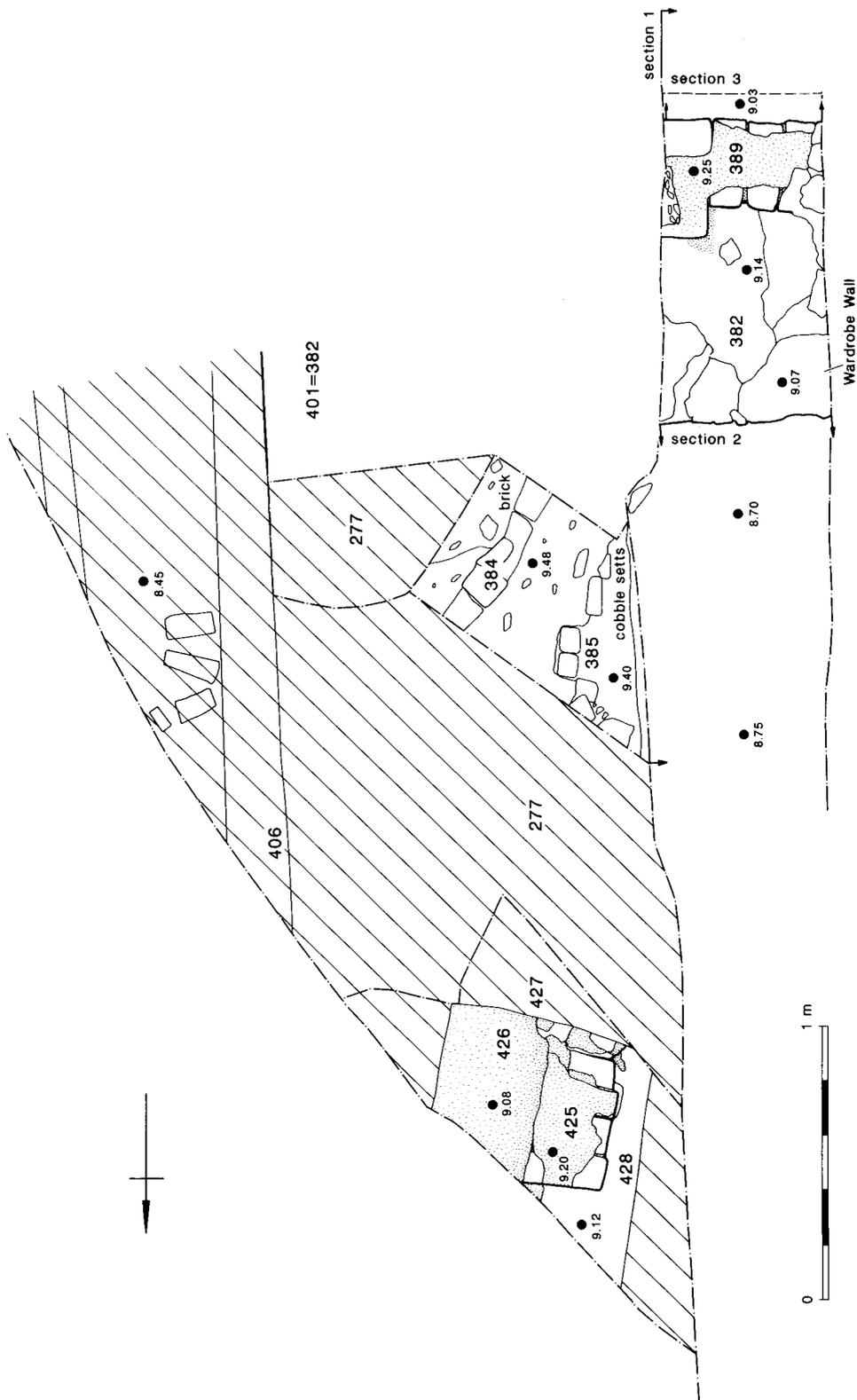


Fig 7. *Tower of London: plan of the Wardrobe area (TOL 6)*

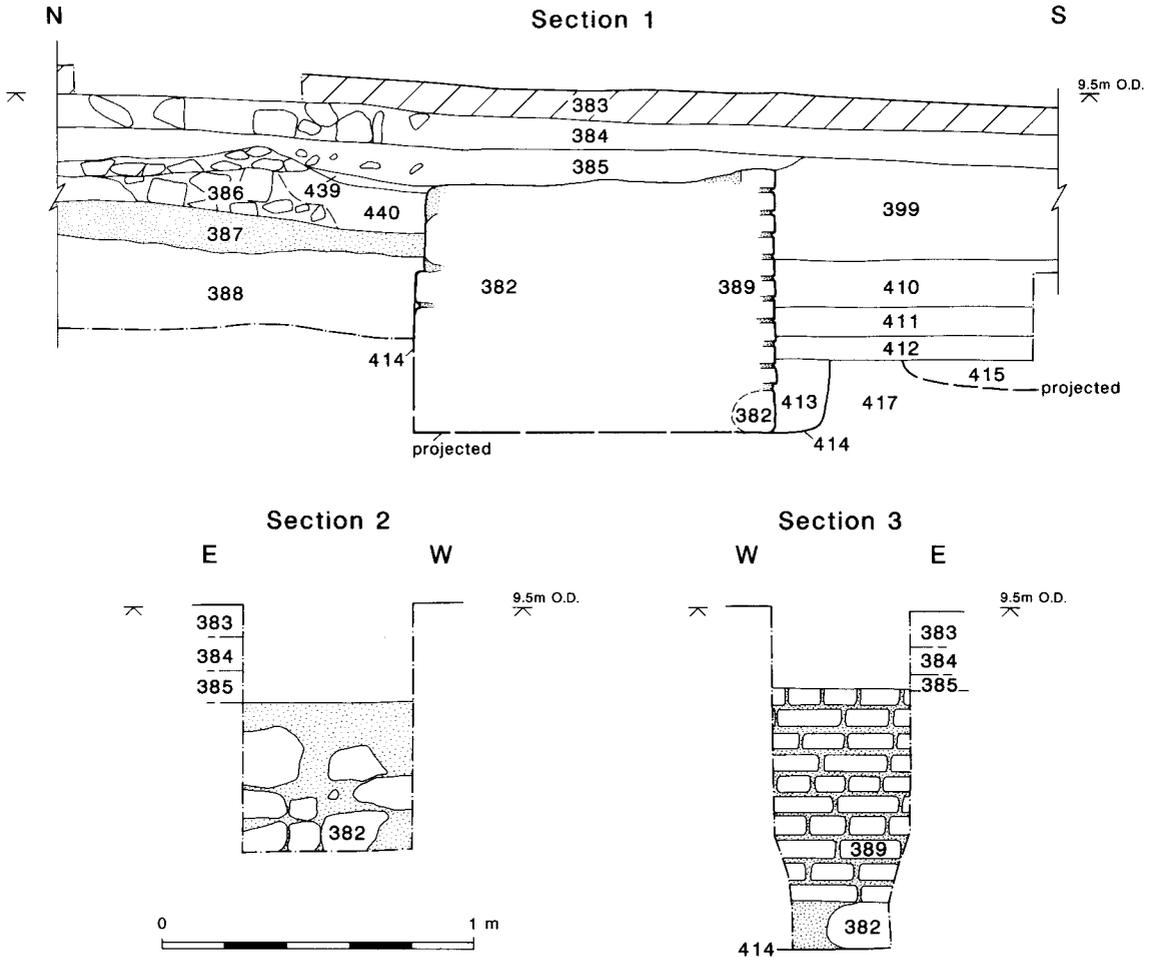


Fig 8. Tower of London: sections of the Wardrobe area (TOL 6)

gate. The masonry comprised limestone and sandstone blocks bonded with yellow-brown sandy mortar. A portion of stonework at least 1m wide lay *in situ*, but the true width could not be established owing to the presence of overlying pipes. A deposit of dark grey loam [448] abutted the north side of [450] and was overlaid by a portion of red brickwork [449]. Five courses bonded with white mortar were visible. The structure lay flat at the base of the trench, presumably where it had fallen after being demolished.

*The late 17th-century Grand Storehouse*

Several features associated with the Grand Storehouse were found. These included fragments

of the rear (N) wall and the rear stair turret. A small area of intact paving was also found. In all cases, however, the features had suffered extensive damage in the Victorian and modern periods.

Brickwork [54] was first exposed in the cable trench, and was subsequently recorded in plan in Area 2 as context [116] (see Fig 6a). The masonry had been truncated by a modern manhole and an electricity cable trench, so that only the W face and core survived. Brickwork [116] extended for 1.65m eastwards within Area 2, and appeared to continue beyond the E limit of excavation. The N face of [116] abutted a pair of brickwork features [112 and 114] which flanked the earlier chalk masonry [113] to its W and E respectively. Only the top course of these features was revealed. [112] measured 1.2m

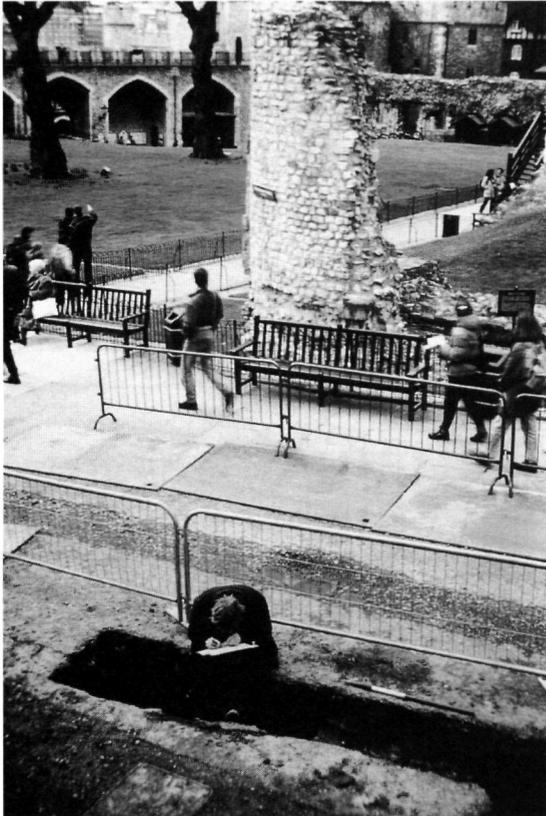


Plate 7. *Tower of London: the Wardrobe wall seen from the E, with the Wardrobe Tower behind*



Plate 8. *Tower of London: Grand Storehouse walls [125 and 126] seen from the N in TOL 1 Area 4, showing the destructiveness of modern services*

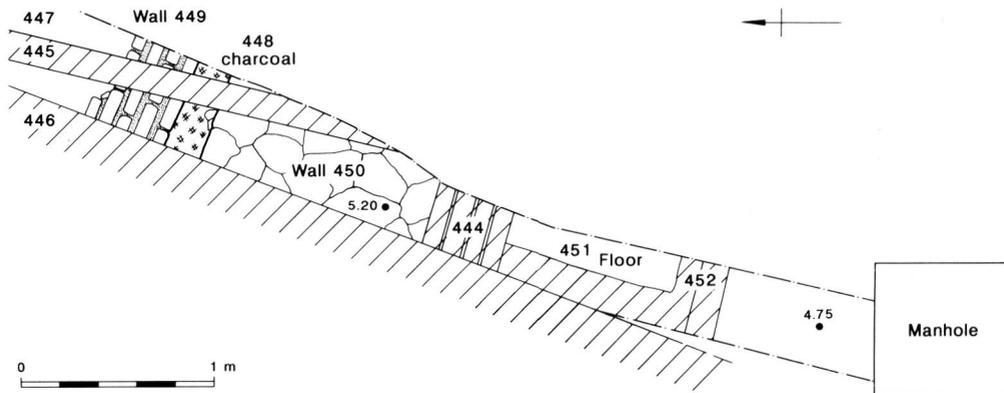


Fig 9. *Tower of London: plan of possible medieval building N of the Queen Elizabeth Gate (TOL 6)*

(E-W) × 1m; [114] was 0.9m long (N-S) and extended E beyond the edge of Area 2.

Brickwork features [101] (Fig 3), [55 and 125] (Fig 6b, Pl 8) were part of the same N-S structure. [101], at the N end, was 1.4m wide; three courses

at least of bricks stood above ground. The N edge of the feature had been damaged by a later service trench, but the bricks and pointing survived sufficiently to show that the edge was original rather than being the result of truncation.

The masonry had been cut to the S by a service trench which also cut away the N side of [55]. The latter consisted entirely of foundations in a wide trench [86]. Twelve courses of brick were present, apparently in English bond.

Structure [125], in Area 4 (Fig 6b), lay 2.8m S of the cable trench. Five courses were exposed in the E face of the area; the fourth and fifth courses from the bottom were offset. The core and N extension of the structure had been removed by later service trenches. Structure [125] abutted E-W structure [126]. Five courses were revealed, with offsets in the second, third, and fourth courses from the bottom; these offsets were more pronounced than in feature [125] (0.04m-0.06m compared to 0.02m). A later service had removed the E extension of the structure; the S face lay beyond the limit of excavation, but will also have been truncated by the service. Not enough survived of either wall to determine the bond type.

Structure [93] lay 19.6m E of [126]. The N face had been removed by, and the S face had been scoured but not destroyed by, later services. The wall was later observed during the TOL 1 and 9 watching briefs, where it survived immediately below the make-up for the existing tarmac level. Structure [203] was 8.40m long with the S face intact, and a maximum width of 0.7m and depth of 0.34m were observed (Pl 9). Structure [203] was constructed of red bricks, formed by alternate layers of headers and stretchers. The N face had been removed by a modern service trench and an E-W line of sandstone blocks, but the N face was recorded in a further exposure immediately to the W [170]. Extrapolation of the two faces shows that the N wall was approximately 1.4m wide.

The bonding material was lime mortar. This was usually fairly soft, although the mortar for structures [112 and 114] was hard. The colour was usually grey-white, although [114] had yellow-brown mortar.

Three stone paving slabs [102] survived around the N side of structure [101] (Fig 3, Pl 4). They underlay brickwork underpinning the Bowyer Tower and had therefore survived later robbing. The slabs were 0.07m thick, and lay on a layer of hard, greyish white mortar which could have been laid as a bedding, but it was compact enough to have acted as a floor in its own right. It appeared that the mortar had been laid against a solid structure, but only a layer of silty sand [110] was found to the N.

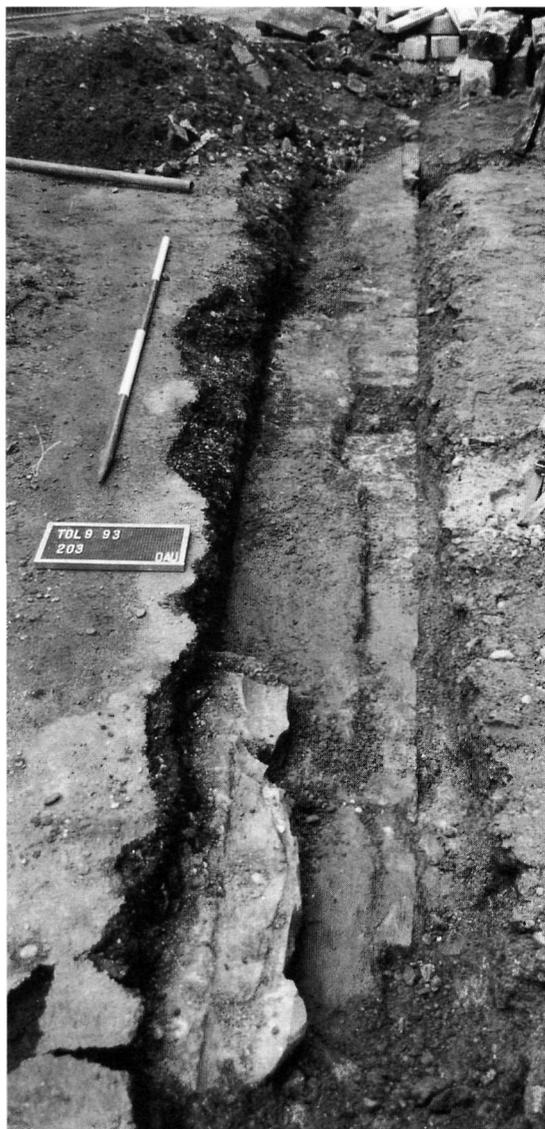


Plate 9. Tower of London: Grand Storehouse wall [203] revealed during the TOL 9 watching brief; seen from the W

Wall [614] was found in the angle between the Devereux Tower wall and the Inner Curtain wall, NW of the Waterloo Barracks (Fig 4). The wall was 1.05m wide and was traced to a depth of 0.54m. The purple-red hand-made unfrogged bricks were bonded with grey-white lime mortar. The brickwork extended E-W for 2.1m towards the Devereux Tower wall, and abutted the Curtain Wall (Pl 10). Seven courses were revealed, each one offset from the course below. The offsets were between 0.02m and 0.04m wide.



Plate 10. Tower of London: Grand Storehouse wall [614] (TOL 6) from above

The uppermost offset only survived as a line of mortar on the top of the wall, indicating the level at which demolition of the building stopped. A mixed deposit of silty loam and sandy gravel [615] containing brick and stones abutted the S face of [614]. A later feature [636] had removed the westward extension of the structure.

A fragment of brick masonry was exposed in the section of a feeder trench to the Flint Tower. The brick type and bonding material were identical to [614], and the masonry was felt to be part of the same structure. Here the brickwork was 1.72m wide and traced to a depth of 0.26m below services. Three offset courses survived.

Structure [668] lay 18m to the south of wall [614], and on a similar alignment to it. The bricks were purple-red and bonded with grey-white lime mortar. A length of 1.02m was revealed. Three courses of the N face were present, but the courses were not offset. The S face lay outside the excavated area.

#### *Other post-medieval structures*

A portion of N-S aligned brickwork [1044] was found at the brow of the terraced slope in front (N) of Coldharbour Gate. The masonry was 0.85m wide and at least 0.12m tall. The bricks were bonded with a hard grey-white mortar and were constructed of header build. Another section of brickwork [1045] of similar type lay to the W of [1044]. Two courses of brickwork survived, the W extent of the structure having been truncated by the excavation of the original cable trench. No original edges or faces for the brickwork were observed, but [1045] appeared to lie at a right-angle to [1044]. Several pits in the trench to the N of these walls may have been associated with them. Brick and other building rubble found in the same area probably relates to demolition of a structure.

A N-S aligned brick structure [1066] was revealed at the base of the cable trench S of the White Tower (Pl 11). The masonry comprised two courses of red bricks covered with a layer of light greyish-white lime based mortar (which obscured details of brick size and build). The structure had been truncated by the excavation of the original cable trench, so that a depth of only 0.12m survived in the trench section. The wall was 0.56m wide and extended for 0.68m across the cable trench.

A fragment of brick wall [311] was found just N of the Royal Fusiliers Museum. The 0.35m-wide masonry was aligned roughly N-S, and was built of hand-made unfrosted red bricks bonded with a yellowish-white sandy mortar. A maximum length of 0.85m of this structure was exposed within the confines of the trench. The wall was truncated by a large tree root.

Two structures were identified in a 1m-square excavation between the Royal Fusiliers Museum and the Hospital Block. Structure [421], aligned E-W, was constructed of red and yellow bricks in English Cross style and bonded with white mortar. The width of the brickwork was not seen, but it was butted by a 0.7m-wide N-S structure [420] of similar bricks but bonded with cement. Both structures were overlain by concrete.

A fragment of a red brick structure [425] was found 2.5m NE of the Wardrobe building wall (Fig 7). Wall 425 was aligned *c.* N-S, extended for a length of 0.54m, and was 0.34m wide. The structure was built in English Cross style and was bonded with light grey mortar.



Plate 11. Tower of London: the cable trench (TOL 51) S of the White Tower seen from the E, with walls [1065 and 1066] respectively in front of and behind the ranging pole, and concrete structure [1064] at the bottom right

#### *Victorian and later archaeology*

The vast majority of Victorian and later features were service trenches (electricity, gas, security cabling, water, and rain/foul drainage). Many of the pipes *etc* lay within the excavated depth of the cable trench and/or excavation areas. They had sometimes truncated earlier archaeological features, such as the chalk structures in Area 1, the Wardrobe building and the brickwork of the Grand Storehouse (see Pl 8). Some of the features were so deeply cut that the service was not reached. Many of the services (especially water and drain pipes) were clearly no longer active, but most of the electrical services were live.

Several more substantial Victorian structures were exposed in the cable trench W and S of the White Tower in 1995. They were readily distinguishable from earlier post-medieval walls by the use of yellow frogged stock bricks set in

hard cement-like mortar. A 3m-long stretch of N-S aligned structure [1051] abutted the W drum of Coldharbour Gate and overlaid its offset footing. The masonry was at least 1m wide and 0.48m tall, but an eastward return towards the White Tower had been heavily truncated so that only a 0.5m length survived at the excavated level. A floor [1053] of compacted small pebbles, mortar and loam butted [1051] in the corner between the N-S wall and the eastward return (Pl 12). No dating evidence was recovered from the exposed surface of this deposit, although clearly it was stratigraphically later than the wall itself.

Two further brick structures were observed W of [1051]. Masonry [1070] comprised a single course of several quarter and half bricks bonded with a thick layer of white mortar, and was recorded in the W face of the trench. The bricks and mortar lay on a layer of thin grey slate



*Plate 12. Tower of London: brick wall [1051] and floor [1053] seen from the E*

pieces. The structure extended for a length of 1.12m and was 0.16m tall, but it had been heavily truncated by the excavation of the old cable trench. Structure [1062] lay to the SE of [1070] and formed the corner of a building. The masonry survived just below the level of the topsoil and turf to a height of 0.55m, and consisted of yellow bricks in alternate courses of headers and stretchers. The E face of the brickwork was rendered with a 0.02m-thick layer of concreted mortar.

Structure [1065] lay 1.5m to the E of post-medieval wall [1066] (Pl 11) and was constructed of red and yellow stock bricks bonded with a hard grey cement. The structure was 0.24m wide and, like [1066], extended across the trench. Four alternate courses of headers and stretchers were present. Walls [1051, 1062, 1065 and 1070] were butted and/or overlain by a series of similar rubble deposits, often containing high proportions

of broken and complete bricks. Some of these were still mortared together.

A large concrete structure [1064] was found under the staircase to the White Tower, 3.5m NNE of [1065] (Pl 1). The concrete was aligned E-W, and its S and upper surfaces had been rendered with hard cement. The 0.66m-tall structure filled the width of the trench.

Grand Storehouse wall [614] and layer [615] (Fig 4) were cut by a linear N-S feature [636] containing compacted sandy gravel deposits, [620 and 621], and backfilled with a dark grey brown clay loam [632]. The Devereux Tower wall [622] was constructed on fill [620] and was clearly bonded to the Victorian rebuilt Inner Curtain wall. Victorian and later modifications to the Inner Curtain consisted of either wholesale rebuilding or irregular patching using a mixture of building materials such as ragstone, sandstone, tile and flint. Other evidence for Victorian

activity included minor walls possibly for garden borders, and brickwork underpinning the W entrance to the Chapel of St Peter ad Vincula.

### Description: artefacts

Very small quantities of artefacts and ecofacts were recovered during these projects. Most of the material is not worthy of publication, but specialist reports are held in the relevant project archives (principally TOL 1 and 6). Summaries of the only two categories (pot and clay pipes) of any significance from the excavations and watching briefs on the cabling works are provided here, and again more details are available in the TOL 1 and TOL 6 archives.

#### Pottery

##### *Lucy Wittingham and Catherine Underwood-Keevill*

The pottery from the Waterloo Barracks (TOL 1), Inner Ring Main (TOL 6) and White Tower cable trench (TOL 51) projects was counted and weighed by context groups and recorded with reference to published fabric type series (Redknap 1983, Vince 1991 and Pearce and Vince 1988). Museum of London fabric codes were used wherever possible. All assemblages were small, and individual groups were often mixed in date. A total of 240 sherds (3.45kg) was recovered: TOL 1 produced 112 sherds (1.5kg) from 15 contexts, TOL 6 113 sherds (1.8kg) from 29 contexts, and TOL 51 15 sherds (0.15kg) from six contexts. Roman and medieval material was commonly residual in late 18th to 19th-century contexts. Average sherd size tends to be small, and few diagnostic vessel forms are present.

The three assemblages contain a range of fabrics typical of a domestic site in London, occurring in different proportions in each assemblage. The majority (76%) of the TOL 1 assemblage is post-medieval with the Roman (8%) and medieval pottery (13%) occurring as small and predominantly residual components. Similar proportions are evident in TOL 51 (6.7% Roman, 26.6% medieval and 66.7% post-medieval, although the numbers involved are very small). In contrast the majority (60%) of the TOL 6 assemblage is medieval, again mostly residual, with the post-medieval pottery (30%)

mostly found *in situ*. The earliest material is Roman, found in the TOL 1 and TOL 51 assemblages as residual sherds. Greywares, Black Burnished ware and mortaria dated from the 2nd and 3rd centuries AD are present in TOL 1, while the single occurrence from TOL 51 is an amphora sherd, possibly imported. The post-Roman material is of similar character in each assemblage. A small number of 11th to 12th-century wares (EMSS, EMCH, EMFL, EMSH, EMIS, LOGR) are present including one typical cooking pot rim form (see Redknap 1983 fig 7 no 5 and Vince 1991 fig 2.38 nos 67–74).

Local wares made in or near to London dominate the 12th to 14th-century pottery. They include undiagnostic sherds of South Hertfordshire Greyware (SHER), Coarse London-type ware (LCOAR), London-type ware (LOND) jugs with North French and Rouen styles of decoration, Late London-type ware jugs (LLOND) and various products of the Surrey/Hampshire whiteware industries. These include jugs in Cheam (CHEA), Kingston upon Thames (KING) and Tudor Green ware (TUDG), and cooking pots and bowls in Coarse Border ware (CBW) (Pearce and Vince 1988, fig 114 no 465 and fig 118 no 501).

The early post-medieval assemblage is again dominated by wares produced in the vicinity of London. These include fragments from 16th-century cooking pots, tripod pipkins and short rounded jugs in Tudor Red/Brown ware (TUDR/TUDB), and a shallow dish, porringer and chamber pot in Surrey/Hampshire Borderware (BORDY/BORDG). 17th- to 18th-century utilitarian vessels are represented by fragments of cooking pots, tripod pipkins, flanged dishes, storage jars/cisterns, deep bowls and collar-rimmed shallow bowls in a coarse and fine red earthenware (PMR/PMFR), and tankards in Post-Medieval Black glazed ware (PMBL). Undiagnostic sherds of Tin-Glazed ware (TGW) are likely to be of 17th-century date.

A small number of imported medieval and early post-medieval wares are present. These consist of: a small decorated jug sherd in Rouen Ware (ROUL) of mid 13th to mid 14th-century date; a strap handle in a red micaceous sandy ware (possibly Spanish Red Micaceous ware, SPAM) of 14th to 17th-century date; Siegburg stoneware (SIEG) of 14th to mid 16th-century date; Rhenish Stoneware drinking jugs from Raeren (RAER) and Cologne/Frechen (KOLS); and Dutch Red Earthenware cooking pot/pipkin

sherds (DUTR). The Rouen, Spanish Micaceous and Siegburg products are less common imported wares in the City of London. The late 18th to 19th-century wares which dominate the TOL 1 assemblage include Creamware, Pearlware, Transfer-Printed wares and English Stonewares.

#### *Clay tobacco pipes*

*Dr David Higgins*

A total of 43 fragments of pipe from nine contexts were recovered from TOL 1, comprising 14 bowl fragments, 28 stem fragments and one mouthpiece. With the exception of three 17th-century stem fragments all of this material dates from the late 18th or 19th century. Twenty-six fragments of pipe were recovered from nine contexts in TOL 6, comprising 10 bowl and 16 stem fragments. Nine of the bowls and seven stems came from late 17th-century layer [547], and the size of some of the pieces (*eg* a bowl with 85mm of surviving stem) suggests that the material had been little disturbed since deposition. The TOL 6 pipes include a higher proportion of post-medieval types. Full details of all the pipes are contained in the archive.

The pipe groups from this work are too small and dispersed to draw any firm conclusions about the nature of pipe use and deposition on this site as a whole, although a few general points can be made. As a high status Royal site with a marked military presence it might be expected that the pipes would show differences from general domestic assemblages from elsewhere in London. This could manifest itself in terms of the quality of the products or in the range of forms, for example, with special types being used or with duplicated forms resulting from central purchasing for the stores. From the small sample recovered this does not appear to be the case. The degree of milling around the rim and the presence of burnishing both affected the price of a pipe and so can be used as a guide to status. Two of the fragments from TOL 6 context [547] were burnished and the level of milling amongst the 1650–70 pipes was generally quite good with two being fully milled, one three quarters milled and one half milled. Despite this, these finishing techniques are not sufficiently different from domestic groups of the period to suggest that higher quality pipes were in use at the Tower. Likewise, the group of pipes from [547] as a

whole includes a typical range of London forms with an average overall quality of finish.

The 19th century deposits also included standard London styles of the period, the only point to note being the large number of fragments from long-stemmed pipes in TOL 1 context [30]. This might suggest a preference for the more traditional, and expensive, 'churchwarden' type of pipe rather than the cheaper, short-stemmed 'cutty'.

## Discussion

### *The Roman city wall*

Wall [107] in Area 3 is part of the Roman city wall. The character of the masonry, and especially the use of tile string/offset courses, established this very clearly. The exposed part represents the internal (W) face of the wall. The medieval construction works in the area appear to have removed any trace of an internal rampart; at least, no such feature was present in the excavation. The bottom level of *c.*10.75m OD can be compared with the Roman ground level of 10.45m OD at the standing portion of the Roman Wall adjacent to Tower Hill tube station (Parnell 1982, 123–7). There is a gradient down from Tower Hill towards the Thames, so that the contemporary ground level by the Roman Wall at the Wardrobe Tower is *c.*9m OD (Parnell 1982, 105–118). The masonry exposed in 1993, featuring the offset of three tile courses with a course of masonry below, suggests that the wall was exposed at the first offset 1m or more above the contemporary ground surface rather than at plinth level (*cf* Merrifield 1965, 104–5, figs 12–13, plates 40–2, 47).

The location of the wall is somewhat E of the anticipated position as shown on published plans (*eg* Allen Brown & Curnow 1984, fig 1). This is partly a mapping error (Geoffrey Parnell *pers comm*), but it is interesting to note that part of the wall was also found under the floor of the Bowyer Tower in 1911 (Merrifield 1965, 299; Allen Brown & Curnow 1984, 78). It has not been possible to establish the position of the wall within the Bowyer Tower precisely, but there does seem to be some discrepancy with the line of the W face as exposed in 1993. This raises the intriguing possibility that the Bowyer Tower was built over an internal turret such as the one adjacent to the Wardrobe Tower (Parnell 1993, fig 3).

*The medieval storehouse buildings*

The various exposures of the original Inner Curtain wall and the Coldharbour Gate do not require further comment except to note that the Victorian rebuild of the curtain N of the Waterloo Barracks was slightly set back from the medieval masonry. This has implications for the interpretation of post-medieval plans of the area, in that the reconstruction work changed the local topography.

The chalk-built structures in Areas 1 and 2 post-date the 13th-century construction of the Inner Curtain wall, and they pre-date the 17th-century construction of the Grand Storehouse (see below); structure [113] was abutted by Grand Storehouse brick masonry and the other buildings would be crossed by it. The dating evidence from the excavations does not give any greater definition; pottery from the sandy deposits which post-date the masonry is 16th century at the earliest. A brief study of the extant structures within the Tower shows that chalk is comparatively rare, and certainly does not appear to be used in any post-medieval buildings. Chalk can be seen, however, in some 13th-15th century structures (*cf* Tatton-Brown 1991, 365-6). Examples include the main drain of Henry III's palace, exposed to the E of the Wakefield Tower, and a vice in the first floor of the Bloody Tower (Allen Brown & Curnow 1984, 52-3). Therefore the excavated structures are probably of late medieval date.

The structures were probably part of the late medieval and early post-medieval Ordnance Stores. The Stores were built end-on to the Inner Curtain, and all the excavated N-S walls would therefore be principal structural elements. There can be little doubt that [27] and [113] belonged to these buildings, but [33] is more difficult to interpret. Its W face had been robbed away, but even so the wall is substantially wider than [27] and [113]. Furthermore it was not aligned in parallel with wall [27], despite the narrow space between them. It seems unlikely that walls [33] and [27] belonged to one building. Wall [33] may have been part of a N-S store building, but equally it may have belonged to a stair turret attached to the Flint Tower. Such buildings are shown on both Haiward and Gascoyne's 1597 survey and, more clearly, on Holcroft Blood's of 1688 (Parnell 1993, fig 45). A plan of 1682 (Parnell 1993, fig 58) also shows structures on the SE and SW corners of the tower. Unfortunately

archive plans in the Public Record Office offer little help in this respect, although MPH/892 shows a kink in the curtain ('Line Wall') at approximately the position of the excavated masonry (Pl 11). The 19th-century rebuilding here may have destroyed any evidence for its original ground plan to the W.

*Other medieval evidence*

A structure was found N of the Queen Elizabeth II Gate. The four courses of collapsed brickwork found immediately to the N of the stonework presumably represented a facing from the wall. The bricks were similar to those from the Wardrobe building. Haiward and Gascoyne's 1597 survey of the Tower depicts a small block of buildings on the N side of the Queen's Gallery in the approximate position of the masonry located in the ring main trench. The stone structure may therefore be part of the late medieval royal lodgings.

*The Wardrobe wall*

The E-W stone wall with a brick S face immediately W of the Wardrobe Tower corresponds with the long, narrow building running from that Tower to the Broad Arrow Tower depicted on the 1597 survey. The timber-framed Wardrobe was built in 1532-3 (Parnell 1980, and 1993, 53-7; Allen Brown & Curnow 1984, 71) as part of a general refurbishment of the royal apartments in the Inmost Ward and the SE corner of the Inner Ward, before the coronation of Anne Boleyn as queen in May 1533. The Wardrobe was demolished in 1663 to make way for the New Armouries building (Parnell 1980, 147; 1993, 64). The limited dating evidence associated with the wall broadly confirms this sequence. The only potsherd recovered from its construction trench was of late medieval date, while the soils found against the S face contained late medieval and early post-medieval pottery. The latest garden soil contained a single sherd of probable 17th-century date.

Unfortunately only one side of the Wardrobe was located, and it is not clear which this is. The brick facing could be internal or external (though the latter seems more likely). The possible construction level to the N of the wall could be a floor layer. The build-up and character of soils

against the wall's S face, however, suggests that this represented the S side of the building. This accords well with the 1597 survey, which shows the range built against the N side (or perhaps even behind) the Wardrobe Tower and running to the N side of the Broad Arrow Tower. If the excavated wall represented the N side of the Wardrobe the S side would have to run in front (S) of the tower, and this seems unlikely on the basis of the available evidence. The reason that only one wall was found almost certainly lies in the topography of the site. The excavation clearly shows that the Wardrobe had been terraced into the S-facing slope. The N wall could quite easily lie beyond the excavated depth of the trench. It is equally possible, of course, that the extensive service runs in this area had already removed the N wall.

#### *The Grand Storehouse* (Fig 10)

By 1687, the Ordnance Stores against the N side of the Inner Curtain wall were in poor condition, and it was agreed that they should be replaced by a single building occupying the same area. This was the Grand Storehouse (Pl 13). Surviving plans, sections and elevations show an elegant brick structure, two storeys high with an attic. The façade was especially impressive, with projecting bays and entrance surmounted by a magnificent pediment. The new storehouse was provided with a large stair turret centrally in its rear (N) wall; this contained the Grand Staircase, and a lesser one which gave access to the attic level (Pl 14). The first floor of the storehouse contained the Small Armoury, with extraordinary displays of weaponry (Parnell 1993, 70–5).

Plans in the Public Record Office show that the area behind (*ie* N of) the Grand Storehouse contained a number of other buildings in the post-medieval period, and that the towers and curtain as they stood then appear to be very different from their Victorian/modern configurations (see above). The area is shown as vacant space in one plan (Works 31/109); as store and survey rooms in another (MPH 892, Pl 13), which also shows the back stair of the Grand Storehouse as contiguous with the Bowyer Tower; and finally as the Iron Vault (Works 31/108, and 31/196, Pl 15), attached to the Grand Storehouse. At least two plans show the Flint Tower extending back to and conjoining with the Grand Storehouse (Works 31/108, and MPH 892).

The Grand Storehouse survived until 1841, when it was gutted by a fire started in a Small Gun Office workshop in the Bowyer Tower (Parnell 1993, 90, 95–6). The blaze also spread to and badly damaged the Brick and Flint Towers. The Flint Tower had only recently (*c.*1796) been rebuilt by the Ordnance Department. Much of the Inner Curtain wall was also damaged, especially at parapet level. The fire led to a major programme of reconstruction of the wall and all three towers.

The brickwork structures N of the Waterloo Barracks belong to the Grand Storehouse. The only element of doubt rests on structures [112] and [114] in Area 2. These clasp the chalk masonry, [113], and could conceivably belong to the documented 16th-century reconstruction of the Ordnance Stores. The bricks and mortar, however, were the same as those used in the other walls.

The excavated features represent elements of the back (N) wall of the Grand Storehouse, and its associated stair turret. The latter appears to have been built after the former, as wall [125] abutted wall [126] (see Fig 6b, Pl 8). It is likely that this represents more of a constructional device than a major gap in the construction programme. Interestingly, however, one of the PRO plans (Works 31/109) does show the stair turret walls abutting the rear wall of the main building. The staircase itself is shown as slightly off-centre to a line produced through the centre of the main entrance in the S façade. This may have been a surveying error caused by the need to place the smaller staircase to the attic level (the 'Back Stair' on PRO MPH/892, Pl 14) on the E side of the Grand Staircase itself. It also tends to confirm that the stair turret was a secondary build to the storehouse itself.

The excavated walls allow the archival plans to be compared with the existing layout of the walls and towers, although there are internal contradictions among the plans themselves. In general terms the stair turret is in its expected position, and it clearly abuts the curtain wall and the Bowyer Tower, as shown by the plans (although it does not cut into the curtain wall, at ground level at least, as is shown on PRO Works 31/109 and 31/196). The wall between the Grand and back stairs shown on the various plans (see Pl 14) was not found in the excavations. It is conceivable that the wall has been completely removed by later activity such as the digging of service trenches. The wall is shown as a minor

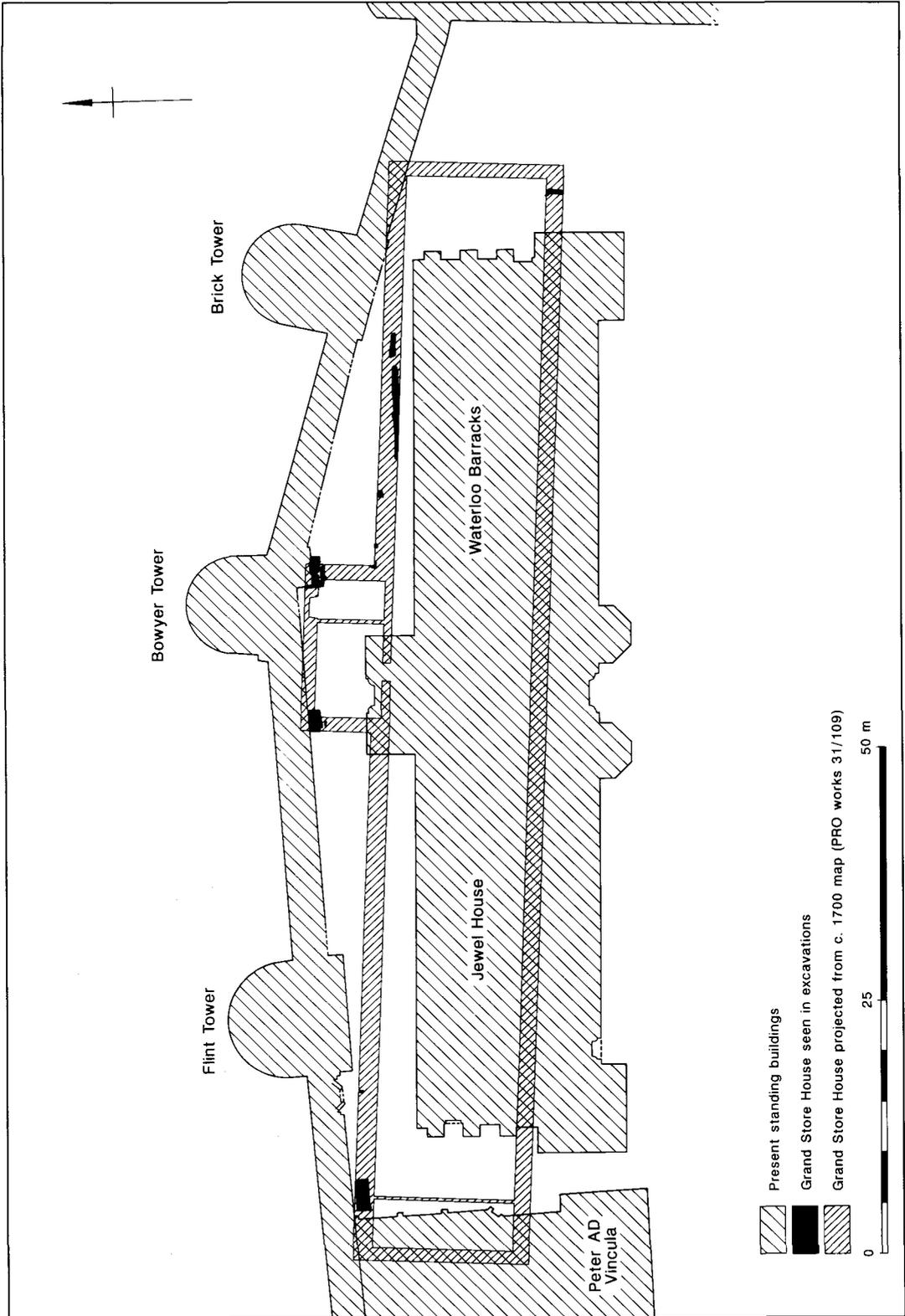


Fig 10. Tower of London: summary plan of excavated evidence for the Grand Storehouse

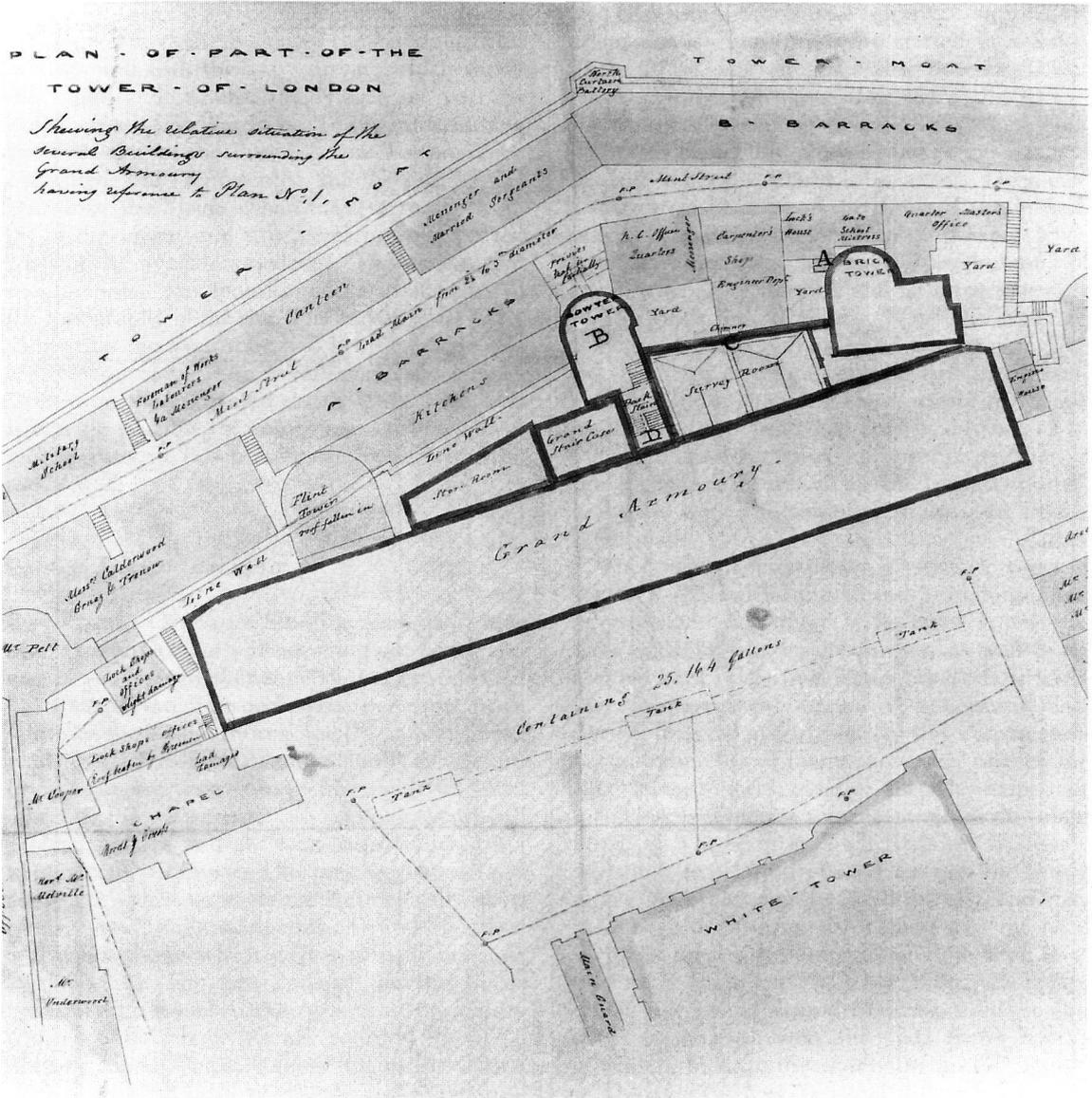


Plate 13. Tower of London: plan of part of the Tower of London drawn in 1841 with an assessment of the fire damage to buildings around the Grand Storehouse (the title Grand Armoury is probably a confusion of the main building with the Small Armoury which it contained); original in the Public Records Office, PRO MPH/892

feature compared to the scale of the load-bearing walls, however, and it may only have had shallow foundations, or even none at all.

The load-bearing walls were at least 1.4m wide. This was proved in the case of wall [101/55], which survived to its full width despite extensive truncation, and by extrapolation of the faces of walls [93, 170 and 203]. The limited exposure of wall [54/116] in Area 2 makes it

difficult to interpret the surviving, but much-truncated masonry. The 'width' of [116] (at least 1.65m E-W) is greater than one might expect. This could be for structural reasons, but it is also possible that [116] is part of a corner, returning eastwards along the Inner Curtain wall. The available evidence, however, cannot prove this. The evidence from walls [101, 125, 126 and 614] suggests that offsets were built into the brickwork

PLAN AND SECTIONS  
OF PART OF THE TOWER OF LONDON

No. 1.

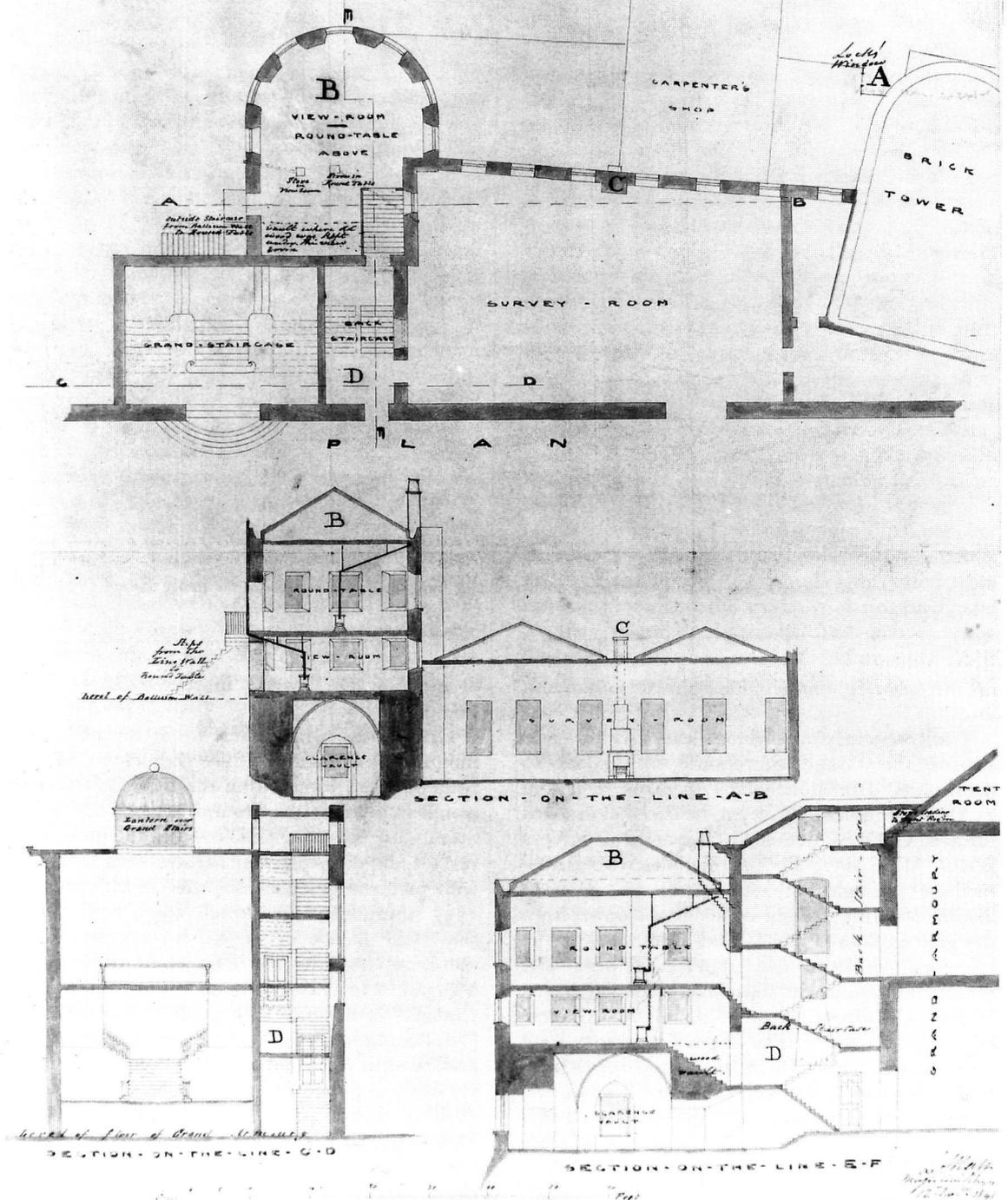


Plate 14. Tower of London: detailed plans and sections of the Grand Storehouse staircase in 1841; original in the Public Record Office, PRO MPH/892

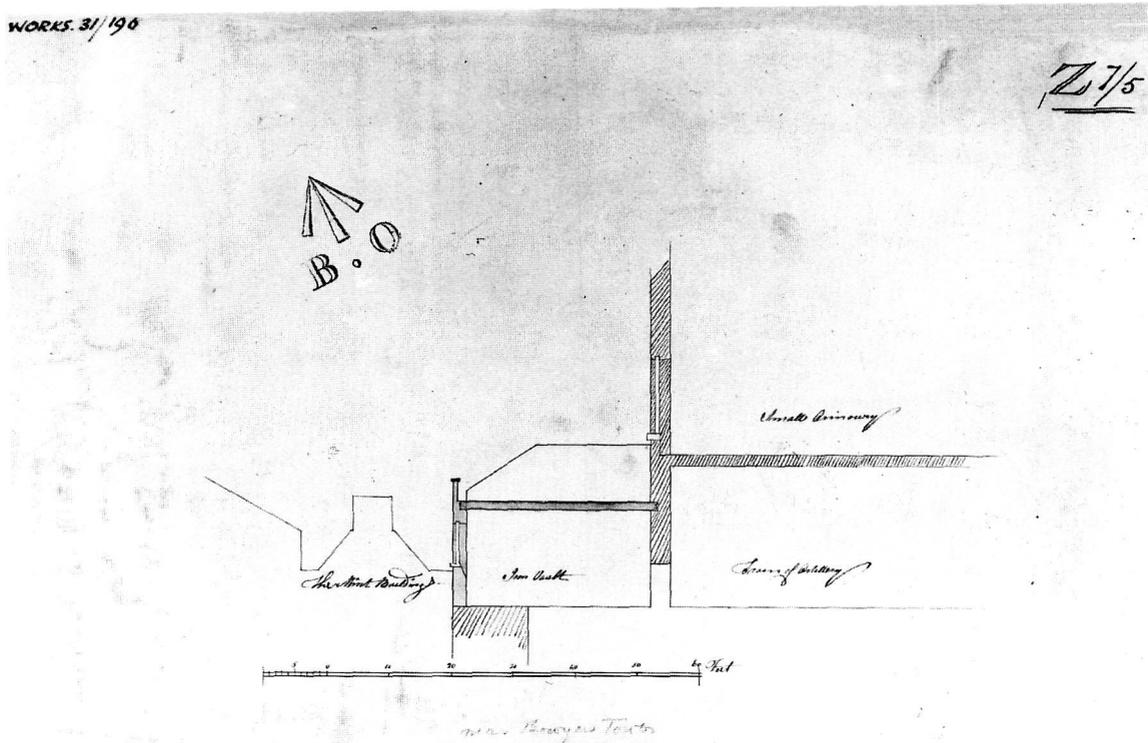


Plate 15. Tower of London: cross-section of the Grand Storehouse and Iron Vault (nd); original in the Public Record Office, PRO Works 31/196

in the courses immediately above foundation level.

The contemporary floor level within and outside the Grand Storehouse is difficult to determine. The stone slabs in Area 3 lay at 11.1m, approximately 0.7m below the modern surface. The most detailed of the archival surveys (PRO MPH/892, Pl 14) includes two cross-sections through the stair turret and Bowyer Tower, showing a flight of five stairs down from the ground floor of the Grand Storehouse to the Clarence Vault in the Bowyer Tower. The present door into this has been widened (Allen Brown & Curnow 1984, 78), and the concrete floor is also modern. The original level may have been lower, although it may not have been significantly so (*cf* the survival of the Roman wall under the current floor). It must be stressed that caution is required in interpreting the archaeology on the basis of the documentary sources. It is notable, for instance, that none of the plans referred to above includes the doorway in the E side of the stair turret defined by the N face of wall [101] (and presumably by the original build

of the Bowyer Tower stair turret for the other side of the door).

Floor [102], which must be at the bottom of the flight of stairs, may be close to the contemporary level within the Bowyer Tower. It would imply that the ground floor of the Grand Storehouse lay at a similar level to the current surface, or perhaps even higher. This correlates with pictorial evidence such as an engraving of 1737 (reproduced in Parnell 1993, fig 60). This shows the façade of the storehouse rising from the same level as the Chapel of St Peter ad Vincula, a level which does not appear to have changed significantly into modern times. Surface [102] continued outside the stair turret to the E, and beyond the limit of excavation. This area is variously depicted as a store house (PRO Works 31/109) and a survey room (PRO MPH/892, Pl 14). Unless there were stairs to a higher level, this would have had a ground floor below that of the Grand Storehouse.

The extreme disturbance caused by service runs around the NE corner of the Waterloo Barracks had removed any trace of the Grand

Storehouse within the excavated depth in this area. Observations during projects TOL 1 (excavations and watching brief) and TOL 9 (watching brief), however, showed that the N wall would pass extremely close to the E end of the Brick Tower and would then run against the Inner Curtain Wall. The original medieval build of the curtain was set forward from the Victorian rebuild, and the truncation of the medieval wall face here may well reflect construction of the storehouse. Two archival plans of the Grand Storehouse are somewhat contradictory in their depiction of the NE corner. One (PRO Works 31/109) shows the corner cutting into the curtain line immediately to the E of the Brick Tower. The other (MPH/892, Pl 13), however, shows an obtuse angle in the N wall suggesting that it had been built against the curtain rather than cutting into it. Most plans agree that this occurred at the W end, and the ring main project produced clear corroboratory evidence for this. The evidence at the E end is weak, however, because of the extensive service cutting already referred to. The damage to the medieval curtain wall face could have been caused by the storehouse cutting into it, but equally the damage could have been the result of modern service runs and the storehouse wall could have run alongside the curtain. Unfortunately the available evidence cannot prove either case.

The E end of the storehouse was not found, largely because there was no need to continue the excavations around the E end of the Waterloo Barracks. Useful evidence regarding its position (and the location of the S wall) was recorded by Derek Gadd (1993a and b) in the early stages of the Crown Jewels project in the Waterloo Barracks. Observation of excavations for a service feed and a hoarding posthole revealed brickwork identical in character to that recorded by OAU. The service trench provided a complete section of masonry, with a definite S face containing three offsets in the excavated depth (Gadd 1993b, fig 1). It is difficult to determine whether a N face was present; the photographs in the report do not make this clear (Gadd 1993b, fig 3 does not appear to include a built face). The E wall would be slightly to the W of the position anticipated on the basis of historic plans, but the difficulty in matching 17th and 18th-century cartographic sources to the Victorian/modern site probably account for the discrepancy.

The excavations at the NW corner of the Waterloo Barracks located the N wall butting up

against the medieval curtain wall, with the offset Victorian rebuild clearly post-dating the demolition of the storehouse after the 1841 fire. More offsets were noted in this exposure than in any other location, but this may simply reflect the position of the wall close to the NW corner of the building. The corner itself was not found, but the historic plan evidence would place it on the W side of the Devereux Wall. The foundation for the latter had cut the Grand Storehouse wall. Otherwise the archaeological evidence is in close accord with the plans, which show a slight angle in the N wall taking it alongside the curtain rather than cutting into it. The fragment of storehouse wall exposed in a feeder trench section immediately W of the Flint Tower is slightly wider than elsewhere. Some plans (eg MPH/892, Pl 13, PRO Works 31/108) show the tower extending to conjoin with the storehouse. The extra width of the wall W of the tower probably represented infill of a small and redundant space.

The S side of the storehouse was not found in the excavations and trench watching brief along the W side of the Waterloo Barracks. A fragment of brick masonry was found against the Chapel of St Peter ad Vincula, but this lay approximately 2m S of the line of the S wall anticipated from historic plans and the evidence from the E end of the Waterloo Barracks (see above). The function of the masonry is therefore unclear. It could be associated with the Chapel or with the Furbishers Yard (see below).

The area W of the stair turret is called the Iron Vault on Works 31/108 and 31/196 (Pl 15). The latter term need not be taken as evidence for an underground vault. No evidence for such a structure was found in the excavations (indeed the survival of the ?late medieval masonry abutting the Inner Curtain Wall E of the Flint Tower argues directly against an underground structure, as such a building would certainly have removed the earlier walls). Documentary and cartographic evidence shows that the Iron Vault was a single-storeyed building (perhaps with attic space in use as well) attached to the W end of the Grand Storehouse between the latter and the Line (Inner Curtain) Wall. The vault was built from the same surface level as the storehouse, and skylights provided some illumination. The ground floor Train of Artillery room within the storehouse (Parnell 1993, 71) opened directly into the Iron Vault (see also the section on PRO Works 31/196, Pl 15). In 1732–3 the door between the buildings was enlarged (Works Office 51/132 folio 16r),

while the floor was replaced at the same time. One document (WO 51/135 folio 25v) explicitly states that this was necessary to take spare carriages, presumably from the Train of Artillery. The vault had brick arches, and WO 51/109/109v (1721) refers to 16,280 place bricks for 'turning over a brick arch on part of the Iron Vault'. Another document refers to the use of 38 tons of clay for 'covering the brick arch made over part of the Iron Vault' (WO 51/111 folio 43r, 1721-2). Repairs to the roof were necessary in 1714 (WO 51/92 folio 33r) and 1722 (replacing the old lead; WO 51/112 folio 24v).

#### *The 1717 Main Guard and Carriage Storehouse*

The Board of Ordnance cleared away a series of medieval buildings from the S side of the White Tower in 1667-1674, and immediately afterwards built a series of timber stockades ('Pallizadoes'; Parnell 1980, 154-5). Timber sheds were erected against the S and W stockades in 1685-6 (Parnell 1993, 69; see also Holcroft Blood's 1688 bird's-eye view of the Tower). These makeshift buildings were in turn cleared away in 1717 when new and much more substantial ranges were erected. The Carriage Storehouse was constructed along the S side of the White Tower, while a new Main Guard now fronted the W face. The Carriage Storehouse was demolished in its turn in 1825 to make way for the Horse Armoury (Parnell 1993, 96). The S face of the White Tower was again cleared of all buildings in 1883, when the Horse Armoury was torn down (Parnell 1993, 106 and fig 76). The Main Guard (Parnell 1993, 82 and fig 63), meanwhile, had been demolished in c.1846, after which the ground was raised and terraced (Parnell 1993, 92).

Wall [1066] S of the White Tower was probably part of the Carriage Storehouse. Plans in the PRO (Works 31/95, dated 1753, and Works 31/99, dated 1754) show that this building comprised a long, narrow range with E and W entrances. The storehouse itself was physically separate from the White Tower, although the two were joined at the W end by a substantial staircase leading up to the original medieval entrance into the tower. The narrow strip between the entrance staircase and the SE corner of the White Tower was known as the Surveyor-General's Garden in 1754 (PRO Works 31/99). The location of wall [1066] would be consistent with the W entrance into the Carriage Storehouse itself.

Walls [1044 and 1045] on the terrace edge in front of Coldharbour Gate undoubtedly belong to the 1717 Main Guard. This building was a two-storey structure with a W-facing arcade fronting onto an open paved area which had a retaining wall to the S counteracting the slope southward on the W side of the White Tower (PRO Works 31/99). The character of the masonry attests to this date, and the location of the walls corresponds either to the main structure, or to the support walls for the paved yard area; it is impossible to be certain which option is correct on the basis of the limited evidence from the watching brief. The demolition debris found to the N of the walls probably represents the demolition of the building.

#### *The Old Hospital Block*

The Old Hospital Block built in 1718-19 (Parnell 1993, 84) replaced a conglomeration of structures between the Constable and Broad Arrow Towers. It was a lodging for officials of the Ordnance Office, and appears on PRO Works plans 31/24 and 27. The building suffered severe bomb damage in 1940 (Parnell 1993, 114), when the northern quarter was destroyed. Comparison of the surviving structure with a photograph of the bomb damage (Parnell 1993 fig 91) shows that the entire N half of the block was rebuilt. The brick type is different in the N half, while the original attic dormer fenestration has been changed. There had been two dormer windows in each half of the frontage; there are still two in the S half, but there are now four to the N. Parnell 1993 fig 91 also shows that a wall originally ran parallel to and outside the N wall of the block; stairs up to the terrace in front of the building lie between the two walls. The same arrangement can be seen on the 1875 1:1760 Ordnance Survey map (London Sheet 7.77), though not on PRO Works 31/24 or 27. The E-W wall found in the small excavation between the Hospital Block and the Royal Fusiliers Museum certainly corresponds with the wall shown on the OS map and the photograph. Interestingly there is a distinct scar or edge in the existing tarmac surface running back to the Inner Curtain wall, and this corresponds to the line of the block's outer wall. The latter would appear to be a later post-medieval addition to the original early 18th-century work.

*Other post-medieval buildings*

The small fragment of brick wall found at the NW corner of the Royal Fusiliers Museum is difficult to interpret as so little was found. The 19th-century museum building itself is cellared and its construction will no doubt have destroyed most underlying archaeology. The bricks in the wall fragment appeared to be relatively early, perhaps late medieval or early post-medieval. It is extremely unlikely that they relate in any way to the museum itself (no associated structures are shown on Victorian OS or other maps). Various cartographic sources, however, show either buildings or gardens in this area from the late 16th to early 18th centuries. A range of structures is depicted against the N end of the Inner Curtain wall's E arm by Haiward and Gascoyne (1597), but these would probably be too far E for the excavated wall. Conical or pyramid-shaped stacks of unidentified function lie closer to the area, but it seems unlikely that the wall belonged to these. The 1682 Board of Ordnance survey of the Tower shows buildings in the same location, with gardens in front; these appear to be bordered by walls, and the excavated fragment could belong to one of these. Holcroft Blood's bird's eye view of 1688, however, shows substantial new buildings on the site. These are also shown on early 18th-century maps (eg PRO works 31/24, c.1720, and PRO Works 31/27, 1726).

The brick wall fragment found to the NE of the Wardrobe is problematic. It cannot belong to any of the pre-18th-century structures on the Hospital Block site as these all lie further E, effectively within the footprint of the block. PRO Works 31/27 depicts a wall with squared corners extending out W of the terrace in front of the block but the excavated fragment appears to be too far S to belong to this. PRO Works 31/27 also shows a line of trees running N-S between the Hospital Block and the White Tower. It is conceivable that walls were associated with this landscaping/plantation, and the excavated wall perhaps reflects this.

*Victorian structures*

The most unusual structure that is believed to be Victorian is the Devereux Tower wall to the W of Waterloo Barracks. This wall runs from the Victorian rebuild of the Inner Curtain wall to

the NE corner of the Chapel of St Peter ad Vincula. The ashlar masonry is similar in character to the Victorian rebuild but incorporates extremely weathered apparently late medieval architectural features. Post-medieval pottery was found in the earth-filled trench below the wall, which is clearly bonded in (and therefore contemporary) with the rebuilt Inner Curtain wall. Furthermore the trench under the wall cuts the demolished N wall of the Grand Storehouse and associated demolition deposits. The Devereux wall lies on or just within the W end of the Grand Storehouse, and is clearly a secondary feature.

The area W of the wall (and above crypts associated with the original Chapel of St Peter ad Vincula) contained furbishers' workshops from the late 17th century (Parnell 1993, 95), and numerous records in 18th-century Works account books refer to this area. Some describe a passageway at the W end of the Grand Storehouse into the Furbishers' Yard (eg WO 51/107 folio 88, dated 1820). There appears to have been a wall into the yard, but this was of brick (WO 51/95, folio 82, dated 1716, refers to place bricks and stock bricks used 'about a doorway into the Frobushers Yard'). At least one record specifies work on the roof and 'Upper Roome' of the Furbishers' shop here (WO 51/101, folio 78, dated 1718), and this may already have been a replacement for an earlier version. WO 51/92 folio 32 (dated 1714) describes 'Taking down the old Frobushers Shop behind the Chappell at the West end of the Grand Store House, enlarging the way to get the new Timber in, making it good again, and rebuilding the said Shop'. Presumably the yard and its buildings were cleared away as part of the reconstruction of the whole area following the 1841 fire (see Pl 11), and the Devereux wall probably dates to this time as well.

The substantial concrete block [1064] found beneath the S wall of the White Tower relates to a munitions railway that ran from the Wharf into the basement of the White Tower and was in use from the 1840s; the railway still exists under the lawn S of the White Tower. The entrance into the basement is shown on archival plans (PRO Works 31/496 dated 1893) and can still be seen as a filled void in the basement's brickwork. The concrete block overlies the infilled entrance and effectively acts as a lintel. Wall [1065] lines up with the W side of the munitions railway, and the bricks and mortar used in its

construction are consistent with the date of the railway.

Structures [1051, 1062] and the traces of brickwork [1070] observed to the SW of the White Tower are likely to be part of the enlarged Main Guard building constructed between 1898–1900 to the N of the Wakefield Tower (Parnell 1993, 108). This building replaced the 1846 Main Guard (on the same site) which had been constructed around the shell of a storehouse built in 1670–1. The 1898–1900 building extended much further N and W than its predecessor, and structures [1051, 1062 and 1070] match the location of the later building; they do not correspond to any depicted element of the earlier guard. The bricks, furthermore, are characteristically late in appearance (fabric, surface colour and frogging). The 1898–1900 Main Guard was severely damaged by fire on 29/30 October 1940 (Parnell 1993, fig 87). The brick rubble deposits found in the trench across the Coldharbour lawn clearly belong to the demolition of this building.

Brick and tile culverts were noted in several places, especially in the western run from the Royal Fusiliers Museum to the Queen Elizabeth II Gate, and along Queen's Lane. There would appear to have been a complex network of such structures around the Tower. The Property Services Agency survey of 1982, for instance, identified such a culvert around much of the moat circuit and another one draining into the moat from the W half of the Inmost Ward. It seems clear that most (probably all) of these brick culverts were main drains, especially for storm water. Some may have been foul water drains, such as the one found at the S end of the Hospital Block. All appear to be of Victorian date (though an earlier origin cannot be entirely ruled out in one or two cases) and they had all been inserted from close to the top of the soil profile as exposed in the ring main trench.

## CONCLUSIONS

The archaeological projects reported here have added several important footnotes to the history of the Tower of London. The work was generally on a small scale, but the archaeological sensitivity of the Tower of London is such that the utmost care has to be taken with this fragile resource at all times. Archaeology may well be unchallenged as a source of unexpected problems for

development programmes, but it is incumbent on this generation, as with any other, to ensure that the existing resource is not damaged, diminished or removed if this is at all avoidable. Avoidance is usually possible, but a degree of prediction is essential and this requires detailed study and planning. Such work is undertaken as a matter of routine by HRP, using the skills and experience of OAU whenever necessary.

One aspect of the Waterloo Barracks, Inner Ring Main and White Tower cabling projects deserves further comment, because it is so important to all future planning for the site. It is a commonly-held belief that the upper levels of any given site will comprise modern material of little or no archaeological sensitivity. This is demonstrated all too often in the term 'made ground' in borehole logs, a description which might cover thick layers of archaeology ranging in date from Roman to post-medieval. Such an attitude appears to have applied in the past at the Tower, when service trenches have been dug with little regard for archaeological features and structures. The most recent work, however, demonstrates that important archaeology can survive very close to the modern surface. The Grand Storehouse walls, for instance, usually lay 0.3m or less below the surface, and the Wardrobe wall had an equally shallow cover of soil. Every effort must be made to ensure that unnecessary damage of the sort which has occurred in the past does not occur in the future. HRP and OAU are committed to making such efforts.

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