The Saxon and Medieval Pottery of London: A Review

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A SERIES of large, datable pottery assemblages has been excavated in the City of London, principally from the Thames waterfront. The archaeological context of these groups and the methods used to date them are reviewed. With confirmatory evidence from elsewhere in the City, these groups provide a closely dated sequence which covers the 10th to the mid 15th centuries.

Quantification of selected groups and petrological analysis have led to the isolation of many of the pottery sources supplying London. The date range, frequency and origin of these wares are described.

The conclusions demonstrate that there existed in the late Saxon period a remarkable trade in pottery from the Oxford area to London; that by the late 12th century a wheelthrown glazed ware industry in the London area was exporting pottery throughout England and beyond; that Rouen ware jugs were being imported to London by the beginning of the 13th century, and providing a prototype for the distinctive London-type Rouen-copy jugs; and that there are distinguishing features which, in London at least, enable late medieval pottery to be identified and dated within a third of a century.

INTRODUCTION

The late Saxon and medieval pottery of London has always had an important place in pottery studies; many national and provincial museums have collections of vessels found during 19th- and early 20th-century development in the City.[1] The largest collection is in the Museum of London, which has over 600 complete medieval pots derived from the combined collections of the London and Guildhall Museums. Despite their size, range and quality, the use of such collections has been severely hampered in the past by the lack of dating evidence.[2] Even where vessels were found in association, as in groups recovered from wells, cellars and cesspits during salvage work in the City, there was no means of giving an absolute date to the group except by applying the dating of imported sherds, such as Saintonge Polychrome and Rhenish stoneware, to the associated English wares. Where such imports are sparse, or imprecisely dated, the accepted dating of London's Saxon and medieval pottery has proved to be incorrect, since it is now possible to provide a more secure chronology. The deposits used to provide this sequence, the means of establishing this chronological framework and the principal results of a large programme of recording and analysis are described below.

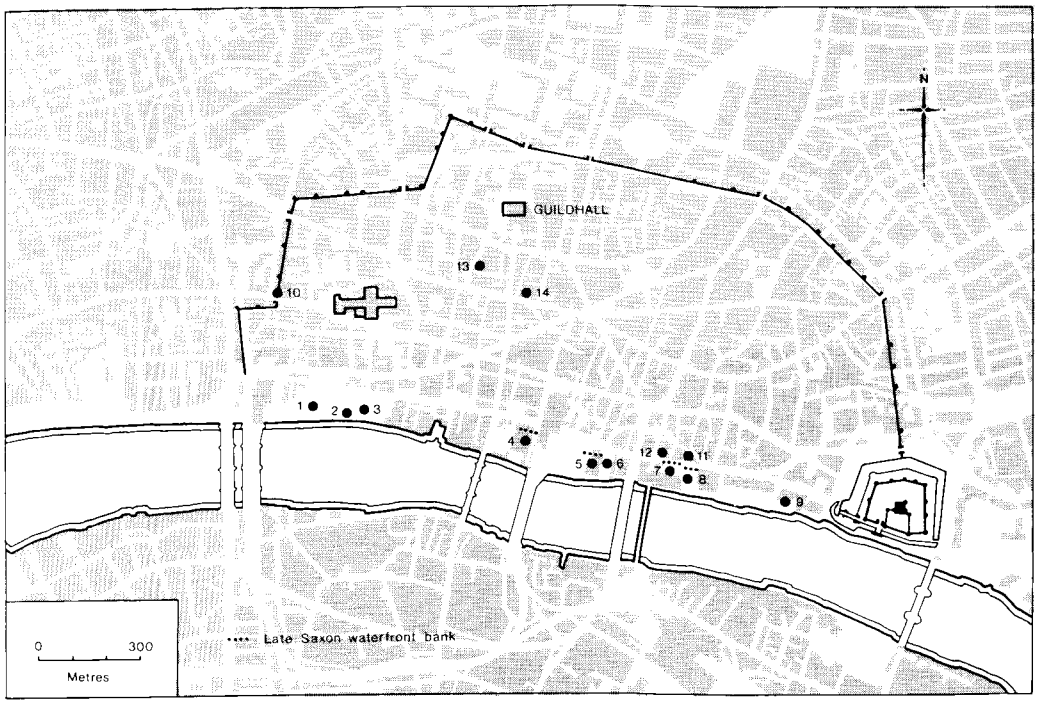

FIG. 1

The City of London showing major medieval features and sites mentioned in the text: 1. 'Baynards Castle dock'; 2. Baynards Castle SE. tower; 3. Trig Lane; 4. Public Cleansing Depot (Dowgate); 5. Swan Lane; 6. Seal House; 7. New Fresh Wharf; 8. Billingsgate Lorry Park; 9. Custom House; 10. Ludgate Hill; 11. Peninsula House (Botolph Lane); 12. Pudding Lane; 13. Milk Street; 14. St Nicholas Acon Church.

THE LONDON WATERFRONT (Fig. 1)

The first medieval waterfront assemblage to be recovered was the untypical foreshore deposit from Dowgate, salvaged in 1959 (Fig. 2) but the importance of the London waterfront for the dating of medieval artefacts only became clear after the excavation in 1972–73 of what was thought to be the stone dock of Baynards Castle[3] containing several thousand artefacts of metal, bone, wood, leather and cloth. All these objects were recovered from a single deposit consisting of contemporary rubbish rather than spoil from such earth-moving operations as terracing, pit-digging or the construction of undercrofts.

Although no other deposit as large or as rich as that from 'Baynards Castle dock' is known, it is now clear that the dumping of contemporary rubbish behind waterfront structures was standard practice during the rapid advance of the waterfront in the 12th and 13th centuries and its slower advance in the 14th and early 15th centuries.[4] The Guildhall Museum and, later, the Department of Urban Archaeology of the Museum of London have excavated a large number of these waterfront deposits so that there now exists a complete sequence of excavated dumps

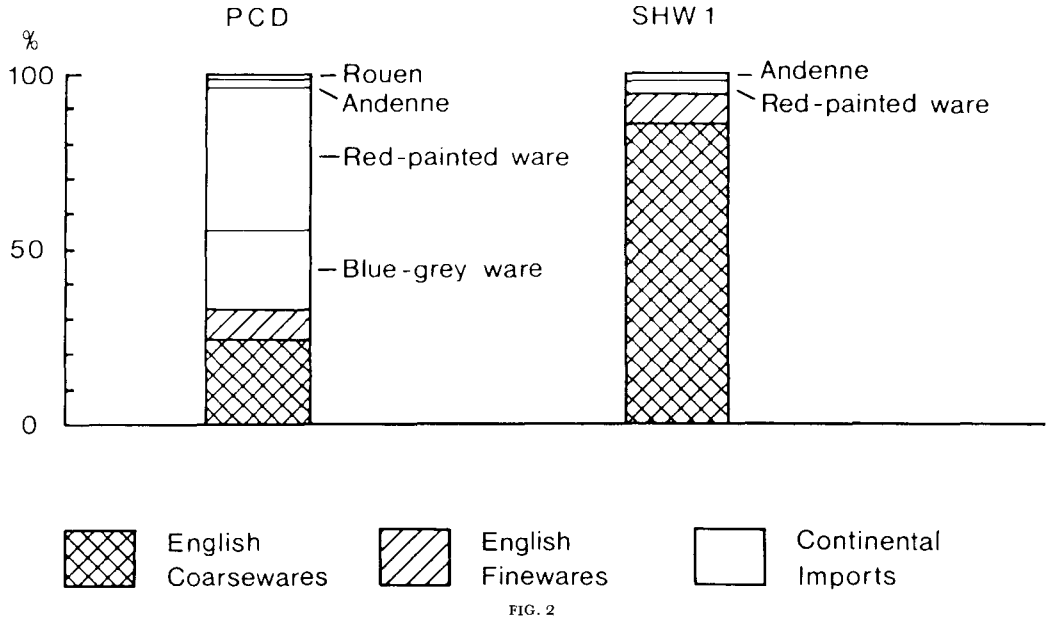

FIG. 2

Comparison of the quantity of imported pottery in 12th-century groups from Dowgate (left) and Seal House (right)

stretching from the mid 12th to the mid 15th century. The earlier and later limits of this sequence are a consequence of the history of reclamation along the waterfront and are unlikely to be altered substantially by further excavation.

The London waterfront, before the mid 12th century, consisted of a foreshore directly overlying deposits of 3rd-century date. At several sites a Saxon riverside bank has been found, constructed between the late 10th and the mid 11th centuries. Where this bank existed, it seems to have been repaired and renewed until the late 11th or early 12th century (Fig. 1). Waterfront deposits (both foreshores and dumps) containing 11th- and early 12th-century artefacts have been found but are not as large or as free from residual material as the later revetment dumps. For the Saxon period before the end of the 10th century there are no large datable groups from the City although it is possible to give a broad date-range (late 9th to 10th century) to some late Saxon deposits. Very few datable artefacts earlier than the late 9th century have been found in the City, either from recent excavations or chance discoveries,[5] and therefore pottery is unlikely to be an exception.

After the mid 15th century there was no general advance of the waterfront until the rebuilding of the City after the Great Fire of 1666, although a few late 15th-century dumps may await discovery: for example, at Trig Lane in 1481 the Guild of Armourers sought permission to straighten the waterfront to stop obnoxious refuse from accumulating in an inlet.[6] The majority of the late 15th-century artefacts found in London come from the present Thames foreshore but by this date the main rubbish dumps for the City must have lain outside the walls. Large quantities of late 16th-century and later rubbish have been found to the north of the City in the area of

Moorfields, dumped as part of the reclamation and improvement of the upper Walbrook valley, and to the east of the City.[7] For these reasons the transition from medieval to post-medieval pottery in London is imperfectly understood.

DATING EVIDENCE

There are two principal approaches towards the dating of the London waterfront sequence. The first is to date the structure into which the finds were incorporated, the second to date the finds themselves. The structures can either be dated directly, using dendrochronology or documentary evidence, or indirectly by examining the sequence of waterfront development and the rate of accumulation of foreshore deposits. Results obtained by these methods at Trig Lane are complementary although the sedimentation rates clearly varied from site to site, depending on the micro-environment, and with time. There was, for example, no accumulation of sediment overlying the Roman waterfront.

Of the finds which can be independently dated, the most important are coins and, to a lesser degree, jettons, tokens and pilgrim souvenirs. Other finds, such as leather shoes and wooden pattens, occur with such frequency that they can be used in certain instances to distinguish between groups which otherwise contain similar assemblages, although they are not usually independently datable.

Given the right circumstances it is possible using dendrochronology to date the timbers of a wooden structure to their year of felling and from this arrive at an accurate construction date. For the Roman period this potential has been realized with remarkable results.[8] Results of this kind depend on having large numbers of samples from a single structure and having at least one sample with bark. These conditions have not been met on the medieval waterfronts.

The dating of the London pottery sequence from the period *c.* 1180 to *c.* 1440 relies more heavily on numismatic evidence than on dendrochronology. Not only has the felling date for the timbers in a structure to be estimated from the heartwood–sapwood boundary, and the number of sapwood rings on a tree can vary from as few as 10 to over 60, but it has been shown on some London waterfronts that timbers from the previous revetment have been reused and that it was possible to replace certain timbers in a revetment without disturbing the original dumped deposit. The effect of this possibility can be circumvented by including in the analysis base-plates and tie-backs buried within the dump and by the careful and detailed study of the timber structure, such as that undertaken at Trig Lane. Dates from inadequately sampled or documented revetments can therefore be misleading. Finally there is always the possibility that seasoned timber was used.

For these reasons it is preferable to have groups dated by coins or other artefacts. Quite apart from these considerations, the coins will normally have been discarded at the same time as the other finds in a group and no allowance has to be made for the length of time during which the rubbish was lying around before burial.[9]

Before *c.* 1180 there are four crucial deposits, the Saxon bank and first revetment at New Fresh Wharf and waterfronts I and II at Seal House, which can only be dated

by dendrochronology. Little confirmatory evidence is available from other dating methods although their dating is consistent with the few coin-dated groups available and does correspond with accepted chronologies for the non-local and imported pottery types found in the groups.

The coins and other numismata from the London waterfronts are the subject of a forthcoming paper by Stott.[10] The use of coins as dating evidence has been discussed by Archibald[11] and due caution has been exercised when using the coins to provide a *terminus ante quem* for the deposition of any group. Where the dating of any particular group depends on numismatic evidence it is discussed below, while a summary is presented in Fig. 37 from which it can be seen that some groups are dated by relatively large coin assemblages that make the *termini ante quem* more reliable. The other value of the coin data is in showing the generally low quantity of residual material in the groups. Apart from two 11th-century pennies from 13th-century contexts at Billingsgate Lorry Park, most of the coins found could have still been in circulation up to the postulated deposition date.

There are some groups where coins alone would give a misleadingly early date. The three late 14th-century groups, from Baynards Castle, Swan Lane and Trig Lane, contain mid 14th-century coins of Edward III but alongside copper-alloy jettons of types dated by Rigold to the late 14th century, *c.* 1380–90.[12] Jettons have also been useful in dating the construction of 'Baynards Castle dock' to the early to mid 14th century.

The abundant lead tokens from the waterfront groups have not been used to date the deposits but do provide valuable confirmation of the sequence of deposition. Mid 13th-century groups contain few tokens but by the 1270s 'Winetavern' tokens, termed 'type D1' by Rigold,[13] are common finds. A wide range of lead tokens is found in 14th-century deposits, belonging to Rigold's classes D2 to D4. In the early 15th century, type D5 tokens appear and rapidly become the standard form.

Pilgrim souvenirs, lead *ampullae* and hat badges, are in the main only usable for dating at one remove, since the shrines which they commemorate were in existence much earlier than the first appearance of the souvenirs in archaeological deposits. There are, however, three cases in which useful confirmation of the suggested dating has been provided by a study of the pilgrim souvenirs. One *ampulla* from Billingsgate, recovered from a group with a *terminus post quem* of *c.* 1180, was a souvenir from the shrine of St Thomas at Canterbury and must date from after the time of the saint's martydom in 1170. *Ampullae* were produced at Canterbury from the late 12th century onwards and in general can only be roughly dated by their style. However, Spencer has suggested that a major boost was given to the souvenir industry by the centenary of the martyr's death in 1270. This may be shown both by the increased numbers of souvenirs found (a large collection comes from Swan Lane, for example) and by a change in shape, from the bag-shaped *ampullae* of the mid 13th century to 'sword-shape' and house-shaped examples.[14] A hat badge from the priory at Toulouse, found in the *c.* 1270s group from Swan Lane, must date to 1264 or later, when work on the construction of the priory began.

Fragments of leather shoes are common finds in the London waterfront dumps, but from the 11th century onwards, when sewn turnshoes replace those held together

with leather thongs, there are very few diagnostic features which will allow close dating. The only feature to be used in the dating of the London sequence, and that solely as confirmation of results obtained from other methods, is the elongated point, or 'pike' sometimes stuffed with moss, found sporadically on late medieval shoes. In the London waterfront dumps the presence of shoes with elongated points is characteristic of late 14th-century deposits and serves to distinguish, for example, the 'Baynards Castle dock' fill from the very late 14th-century Swan Lane deposit.

Wooden overshoes, or 'pattens', made in two pieces with a nailed leather hinge, are another distinctive and diagnostic artefact type. They first occur in late 14th-century deposits and are then common throughout the 15th century.[15] The shape of these pattens follows the fashion in shoes and examples with long points were found in the 'Baynards Castle dock' deposit. The dumps at the SE. corner of Baynards Castle, Trig Lane G15 and the early 15th-century Swan Lane groups all contain fragments of wooden pattens.

THE LATE SAXON AND MEDIEVAL POTTERY SEQUENCE, *c.* 880–1450

It has been possible, using the dating methods outlined above, to produce a chronological framework for the late Saxon and medieval periods in London which enables almost all sizeable assemblages to be dated within a century and many to within the half-century. To illustrate this framework, selected dated assemblages have been analysed using two methods of quantification, Estimated Vessel Equivalents (EVE) and weight. The EVE count, which is obtained by calculating the percentage of the vessel rim which is present, gives a better representation of the relative frequency of vessels of each type (providing large assemblages are used) although uncommon types can be omitted altogether. Weight, on the other hand, gives a more accurate notion of the bulk of goods and can produce reasonable results on groups which are too small for accurate representation using EVEs.[16] A few of the large datable assemblages have not yet been examined using these methods although a qualitative list of the types of pot present has been made.

From the 9th to the late 10th century

Late 9th- to early 11th-century assemblages in London are characterized by large quantities of a shell-tempered ware, Late Saxon Shelly ware. Analysis of these assemblages has produced no convincing evidence for any development in the typology or manufacture of the vessels, nor has any pattern in the relative frequency of different vessel classes been noted. Only three fixed points in the chronology of the period are evident, namely, the starting date for the use of the ware, the point at which a handmade sandy ware — Early Medieval Sandy ware — is first found alongside Late Saxon Shelly ware and, lastly, the end date for the use of Late Saxon Shelly ware.

No stratigraphic evidence for the starting date of Late Saxon Shelly ware has been found. It is, however, now clear that little or none of the pottery from sites in the City need be dated earlier than the end of the 9th century.[17] Whether pottery was

used from the beginning of the late Saxon reoccupation of the town or was only introduced later cannot yet be determined. At Well Court[18] no late Saxon pottery was recovered from the 'dark earth' pre-dating the first surfacing of Bow Lane, nor from the accumulation and make-up over the first surface and sealed by the second. Similarly, at Milk Street[19] an expanse of 'dark earth' pre-dating late 10th-century ground-level buildings was excavated but produced no sherds of pottery later than the 4th century. These and similar excavations in the western half of the City indicate that the street system was probably laid out in areas with little or no previous Saxon occupation. At Botolph Lane[20] in the eastern half of the City, however, sherds of Late Saxon Shelly ware were found in a deposit interpreted as the preparatory make-up for the Lane and the buildings which fronted on to it on the western side. This evidence could either show that pottery was in use from the beginning of the reoccupation or that the Botolph Lane development was later than that to the west of the Walbrook.[21]

Dating evidence for the *floruit* of Late Saxon Shelly ware is difficult to obtain. Two archaeomagnetic dates have been obtained from ovens associated solely with Late Saxon Shelly ware, at Botolph Lane and Well Court.[22] At Well Court the date, of *c.* 950–1000, comes from the latest use of a building whose replacement was probably constructed in the late 11th or early 12th century while at Botolph Lane the date, of *c.* 800–900, was obtained from an oven within a sequence of buildings.[23] Neither date is sufficiently reliable to enable the archaeological sequence to be dated. A possible date may be given by a coin of Edgar (959–73) found at Billingsgate Lorry Park in a context contemporary with the construction of the late Saxon riverside bank. The Saxon pottery from this group is predominantly Late Saxon Shelly ware together with a single Early Medieval Sandy ware dish and a probably imported whiteware cooking pot (Fig. 7a).

The relative duration of the phase during which Late Saxon Shelly ware was used on its own and that in which it was used alongside small quantities of Early Medieval Sandy ware can be roughly estimated by examining the number of occurrences of intercutting features or successive floor levels. This evidence seems to show that the later phase was relatively brief. The end of use of Late Saxon Shelly ware is discussed below and points to an abrupt stop early in the 11th century. Tentatively, therefore, it is suggested that Late Saxon Shelly ware was used in London from some time in the late 9th or early 10th century until the beginning of the 11th century and that for perhaps the last quarter of the 10th century it was used alongside small quantities of Early Medieval Sandy ware.

The fabric of Late Saxon Shelly ware contains abundant fragments of shell which in thin-section can sometimes be seen to be surrounded by a calcareous matrix. Comparison with vessels from Oxford shows that the London and Oxford vessels have the same petrology and probably share the same source, a conclusion which is strengthened by the continuous riverine distribution of the ware (Fig. 6). Most of the forms produced appear to have been thrown on the wheel, although they are thicker than most medieval wheelthrown vessels and never have throwing 'ripples' on the inside of the pot. Large storage jars, of which only fragments are known, appear to have been handmade, probably because they were too large for the

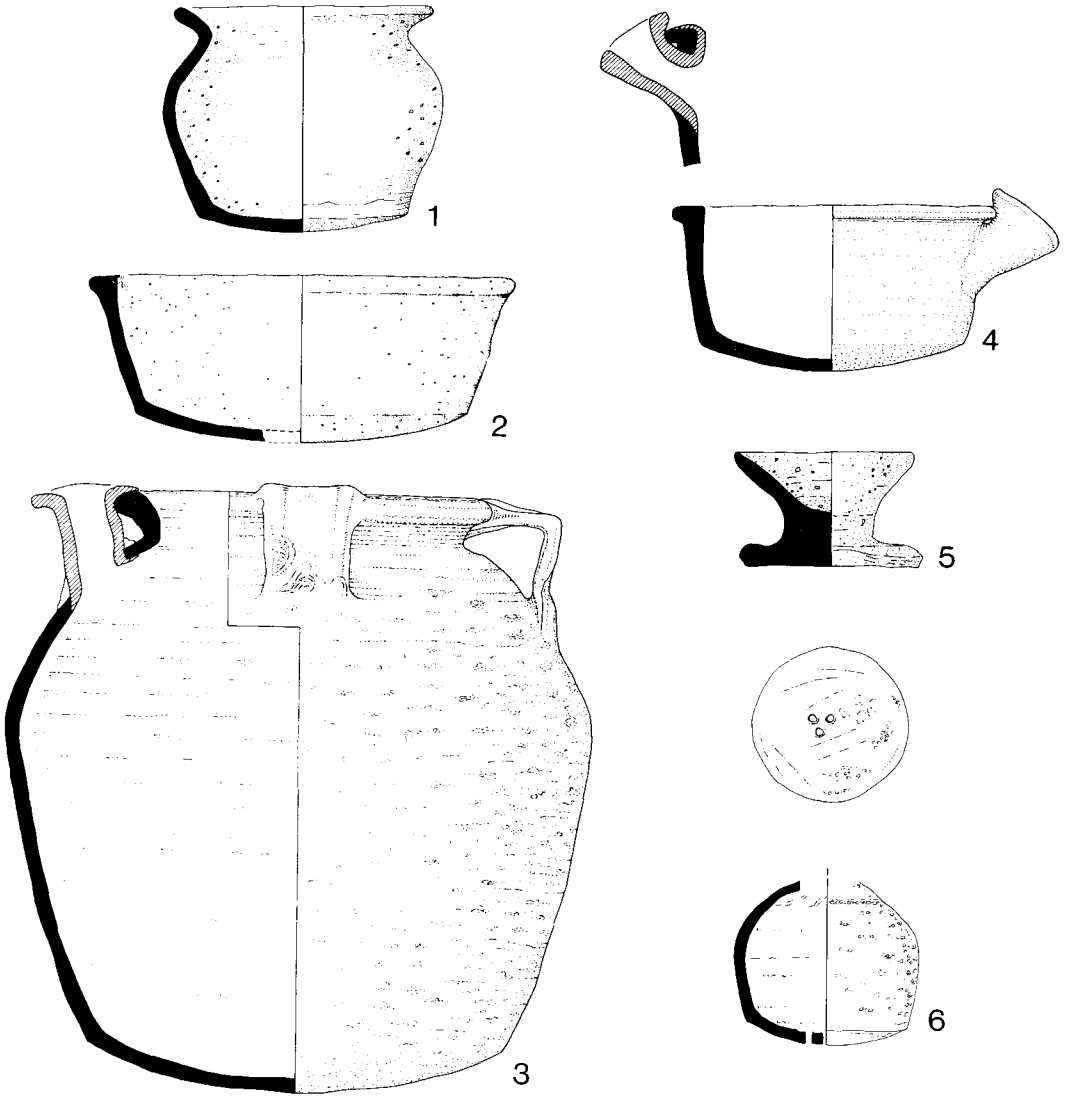

FIG. 3

Late 9th- to early 11th-century Late Saxon Shelly ware: 1. Cooking-pot; 2. Dish; 3. Spouted pitcher; 4. Spouted dish; 5. Lamp; 6. Watering-pot. Scale 1:4

potters' wheel. Cooking-pots are the most common form (Fig. 3, 1), followed by shallow bowls or dishes (Fig. 3, 2). Other forms, such as spouted pitchers, lamps and bowls with socketed handles, are rare (Fig. 3, 4–5). Of particular interest is a small watering-pot, a vessel type usually thought of as a Tudor introduction (Fig. 3, 6). Other late Saxon and early medieval examples are known, for example an Ipswich Thetford-type ware vessel from Ipswich,[24] a late 12th- or 13th-century example in London-type ware and a Stamford ware vessel (Fig. 9, 3). The Late Saxon Shelly

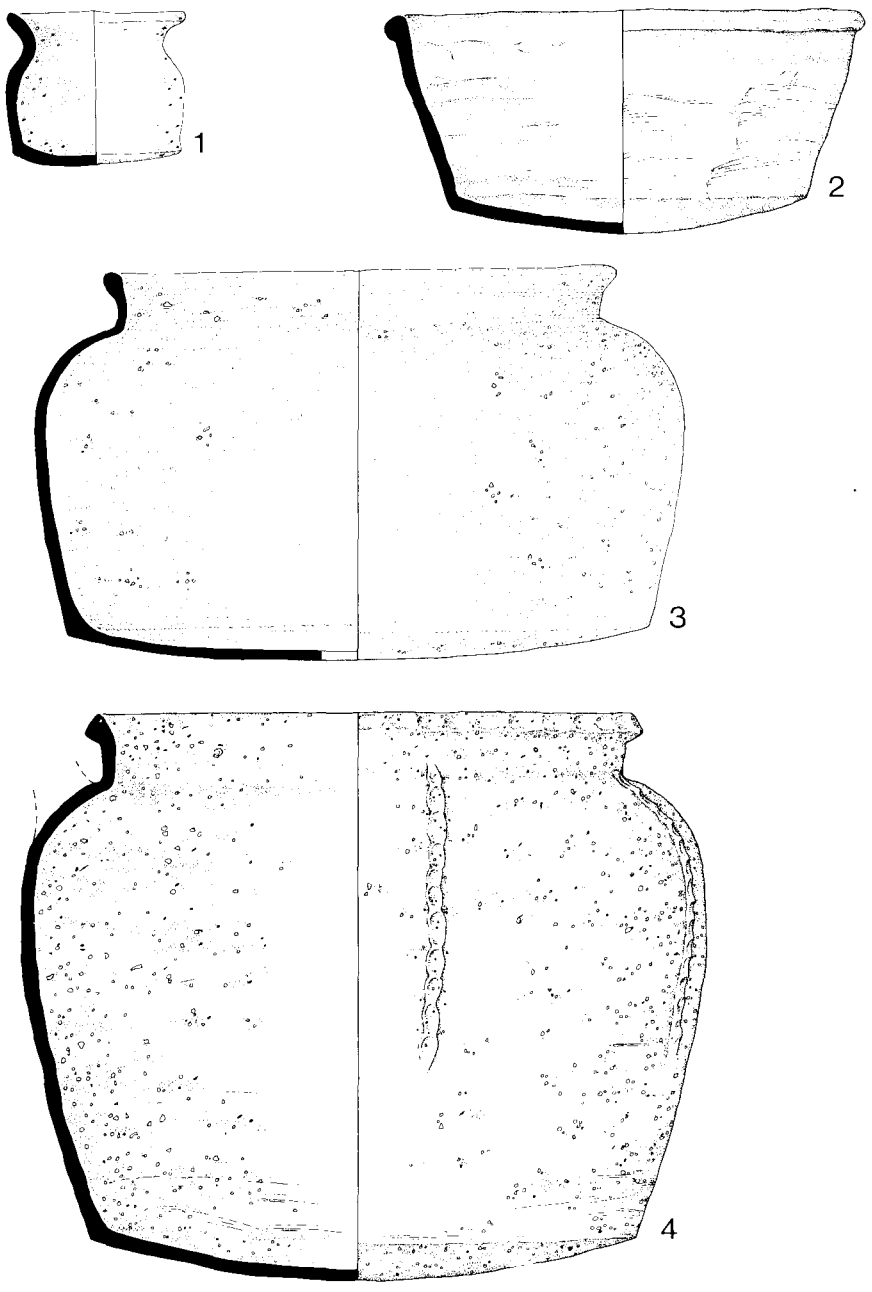

FIG. 4

Late 10th- to 11th-century coarsewares. Early Medieval Sandy ware: 1. Cooking-pot; 2. Dish. Early Medieval Sand and Shell ware; 3. Cooking-pot; 4. Spouted pitcher. Scale 1:4

watering-pot is an unstratified example from the Museum of London reserve collection, but there is no doubt that it is made in the same shelly fabric as stratified 10th-century vessels.

Early Medieval Sandy ware contains abundant sand grains, *c.* 0.5 mm to 1.0 mm across. The majority of the inclusions are of quartz, but sparse calcareous inclusions have weathered out leaving small pock marks in the surface of the pot. The vessels are definitely all handmade and are both thinner and cruder than Late Saxon Shelly ware. Only two forms, the cooking-pot and the shallow dish (Fig. 4, 1–2), have been found in stratified groups. Lamps and spouted pitchers are represented in unstratified collections but manufacture of this ware probably continued throughout the 11th century although later vessels are usually shell-tempered (Early Medieval Sand and Shell). There is therefore the probability that at least the spouted pitchers are actually later than the 10th century.

The overall impression of the 10th-century pottery of London is of a sharp contrast with that of the mid Saxon period.[25] Until the mid 9th century it would seem that London (the extra-mural settlement) was supplied mainly with Ipswich-type ware. A few sherds of chaff-tempered and limestone-tempered pottery may be imports from the middle or upper Thames valley but the majority of the pottery in use arrived, presumably by ship, from the east. Imported wares in the mid Saxon period include Tating ware and Badorf-type amphorae and cooking-pots and these are found not only at the Treasury site, in the London area, but on surrounding sites such as Waltham Abbey and Old Windsor.[26] No such imports are known from the 10th century. Large numbers of stratified 10th-century groups are known from the City but no continental imports have been recognized. Similarly, the products of the Ipswich kilns in the late 9th and 10th centuries are quite easily recognized yet no examples of Ipswich Thetford-type ware are known in secure 10th-century contexts, although they form a small but consistent element in 11th-century groups.

For reasons which are quite unknown, pottery supply in 10th-century London seems to have been a virtual monopoly of the Oxfordshire region. This conclusion is so unexpected, given the distance between Oxford and London and the absence of a similar connection in earlier or later periods, that the evidence of typology and petrological analysis needs to be checked by the analysis of the micro-fauna found in the clay fabric and a chemical comparison of the clays using Neutron Activation Analysis. Nevertheless, the distances involved are comparable with the range covered by Stafford-type ware, the most common pottery found on sites as far apart as Hereford in the south and Chester in the north[27] and the pottery of the Somerset–Wiltshire area where much of the late 10th-century pottery found at sites as far apart as Cheddar Palace to the west, Avebury to the north and Wilton in the south can be shown to have had a single source in south or central Wiltshire (Fig. 6).[28]

From the 11th to the mid 12th century

The majority of the 11th- to mid 12th-century pottery from London was made by hand. The vessels are on average thinner than the Late Saxon Shelly ware types and, whereas the Late Saxon Shelly wares usually have oxidized margins, these 11th- to 12th-century coarsewares are either fired black or have mottled surfaces

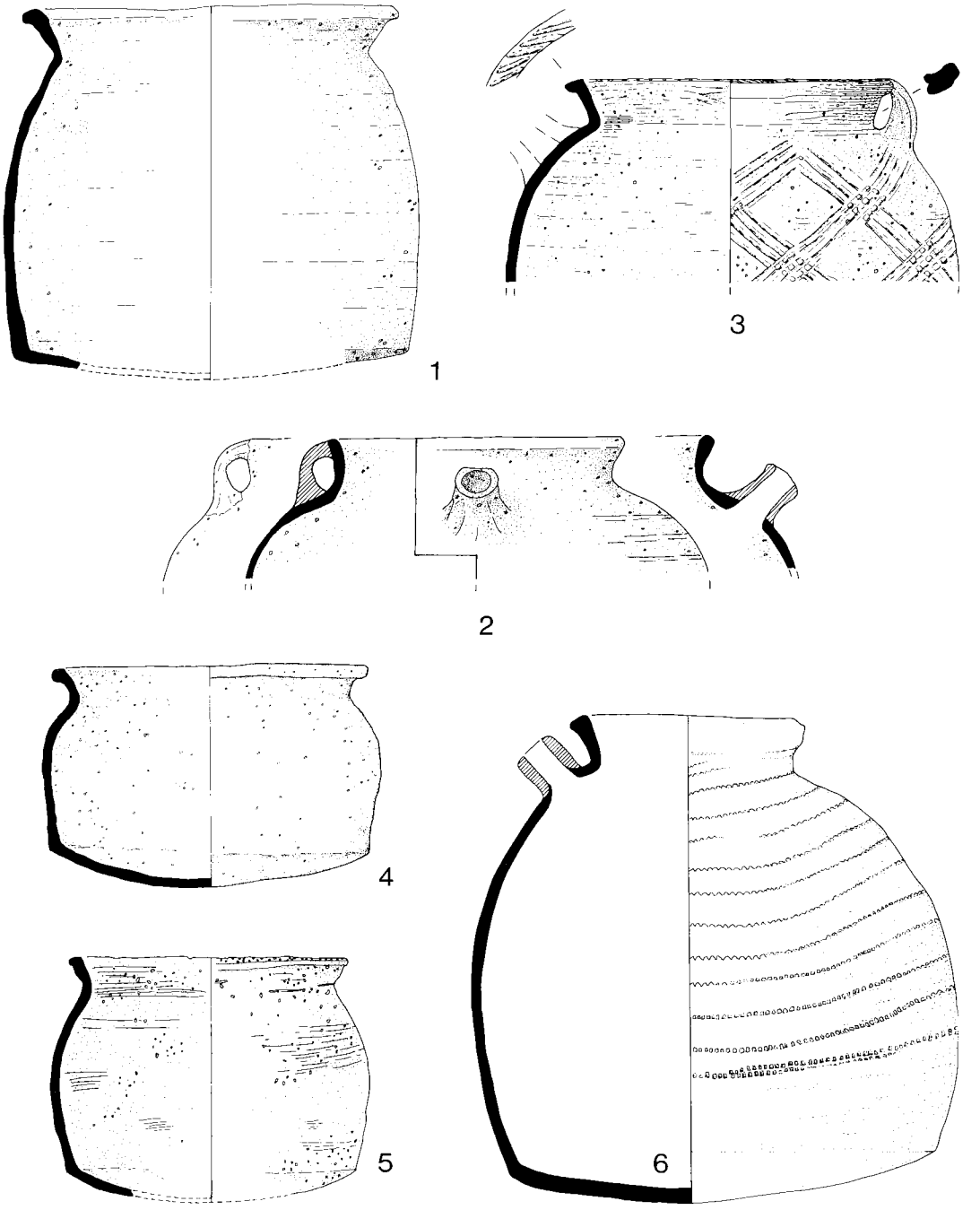

FIG. 5

11th- to early 12th-century coarsewares. Early Surrey ware: 1. Cooking-pot; 2. Spouted pitcher. Early Medieval Chalky ware; 3. Spouted pitcher. Early Medieval Shelly ware; 4. Cooking-Pot. Shelly limestone-tempered ware; 5. Cooking-pot. South Hertfordshire greyware; 6. Spouted pitcher. Scale 1:4

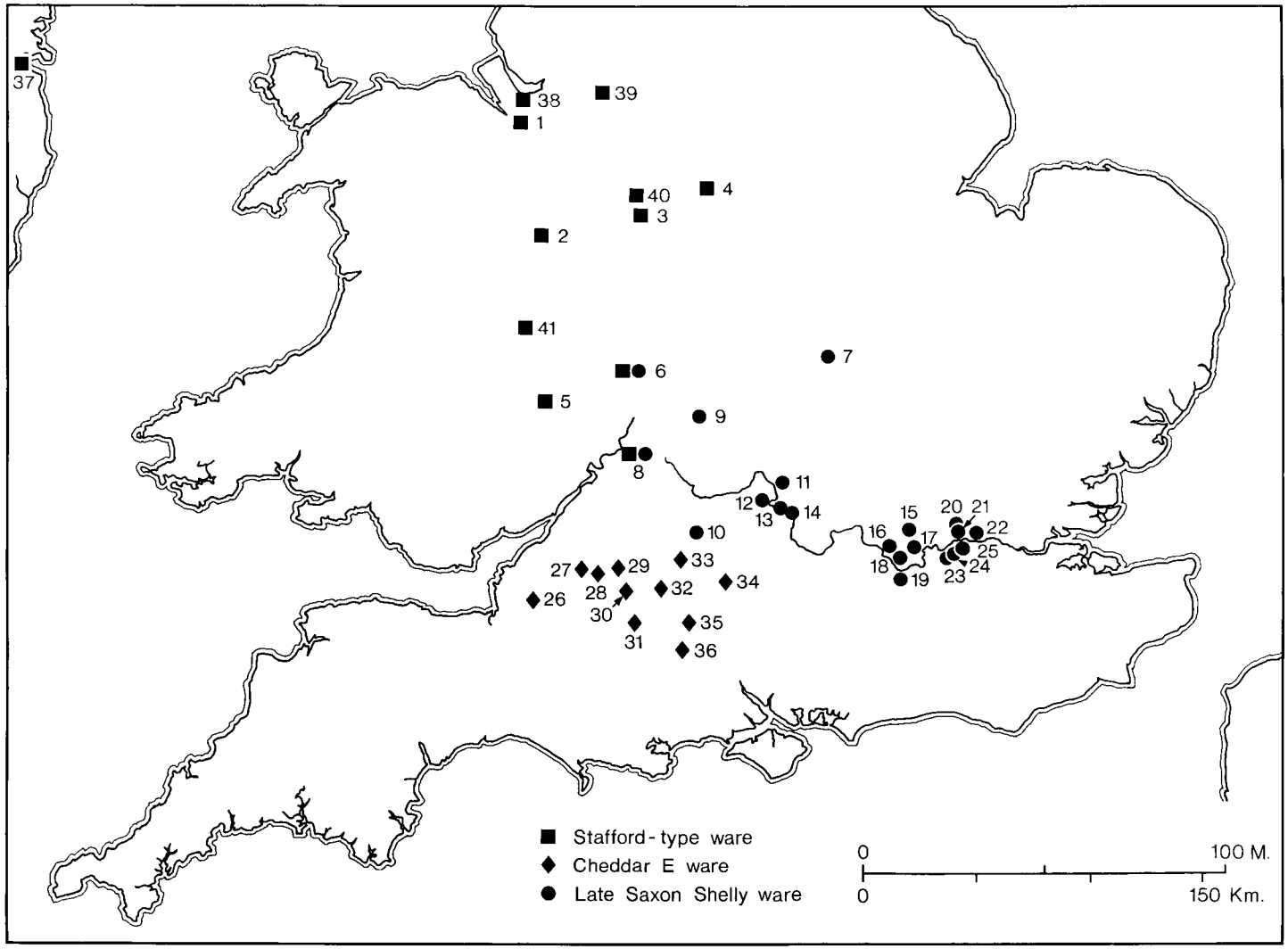

FIG. 6

The distribution of some 10th-century coarsewares in southern England: 1. Chester; 2. Shrewsbury; 3. Stafford; 4. Barton Blount; 5. Hereford; 6. Worcester; 7. Northampton; 8. Gloucester; 9. Upton; 10. Swindon; 11. Oxford; 12. Abingdon; 13. Dorchester-on Thames; 14. Wallingford; 15. Northolt; 16. Wraysbury; 17. Hounslow; 18. Staines; 19. Shepperton; 20. Moorfields; 21. City of London; 22. Silvertown; 23. Battersea; 24. Kennington Palace; 25. Southwark; 26. Cheddar; 27. Saltford; 28. Bath; 29. Box; 30. Trowbridge; 31. Boreham; 32. Potterne; 33. Avebury; 34. Marten; 35. Stonehenge; 36. Wilton; 37. Dublin; 38. Grange-cow-Worth; 39. Tatton Park, nr. Knutsford; 40. Cold Norton; 41. Leintwardine

with a dark core. Both the techniques employed and the efficiency with which they were carried out show a decline in technical standards from those of the 10th century.

The earliest 11th-century groups contain large quantities of Early Medieval Sand and Shell ware. Petrological analysis suggests that this came from the same source as the Early Medieval Sandy ware but with deliberately added shell temper. As in every coarseware of this date, cooking-pots were the most common form (Fig. 4, 3) but other types, such as spouted pitchers (Fig. 4, 4), also occurred. In form Early Medieval Sandy and Early Medieval Sand and Shell vessels are very similar.

Early Surrey coarseware was made in a white-firing clay, although usually containing sufficient carbon to give it a dark appearance. The coarse sand temper consists of rounded, red-coated quartz grains and angular fragments of ironstone and was derived from a coarse ferruginous sandstone, possibly the Lower Greensand which outcrops in West Surrey.[29] The cooking-pots and spouted pitchers found in this ware have a distinctive profile, being almost cylindrical (Fig. 5, 1–2). Production of this ware started some time in the early to mid 11th century and importation to London was at its peak in the late 11th to early 12th centuries.

Two wares with shell-tempered fabrics, neither containing the quartz sand typical of Early Medieval Sand and Shell, are found in London in small quantities. One is a Shelly Limestone-tempered ware, in which cooking-pots and storage jars were made (Fig. 5, 5) while the other, termed Early Medieval Shelly ware, contains shell fragments in a clean matrix. Only cooking-pots are known in the latter ware, which is commonest in late 11th-century contexts (Fig. 5, 4). The rim forms include types reminiscent of Normandy Gritty ware collar rims. This feature has been noted in Somerset as an example of Norman influence but there are no other features on Early Medieval Shelly ware, such as the use of the potters' wheel or decorative rilling on the girth and shoulder, to indicate any foreign involvement in the production of the vessels.[30]

Two wares contain large angular fragments of flint. One, Early Medieval Flinty ware, also contains a quartz sand temper while the other, Early Medieval Chalky ware, contains little quartz sand, has a slightly micaceous matrix and has inclusions of chalk and sparse voids where such inclusions have leached out. Cooking-pots and spouted pitchers occur in the latter ware (Fig. 5, 3). Early Medieval Chalky ware cooking-pots occur in greater quantities in late 11th- to 12th-century contexts in St Albans than in London and were therefore probably produced in the region to the north and north-west of London.

There remains a number of handmade vessels, principally cooking-pots, made in fabrics tempered with a quartz sand. Some of these are similar in fabric to those of later medieval date thought to originate in Middlesex and Hertfordshire but undoubtedly a number of sources are represented. Both the fabrics and forms of these vessels are the subject of current analysis since, although forming a negligible amount of earlier or later medieval assemblages, the quantity of vessels of this type is at its peak in the early 12th century when they can be the commonest vessels found in an assemblage. Amongst these wares a few sherds are distinctive in that they have a coarse, rounded quartz sand temper and were decorated with rough diagonal

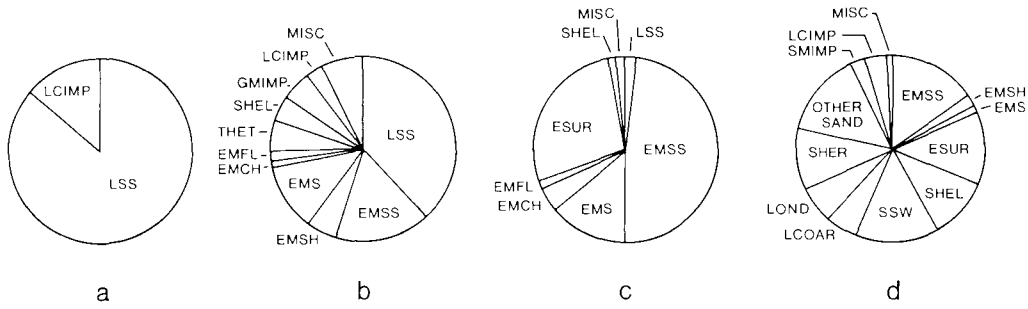

FIG. 7

The relative frequency by rim percentage (EVEs) of pottery in late 10th- to early 12th-century assemblages in London. a. Late 10th century (Billingsgate Lorry Park); b. Early 11th century (New Fresh Wharf); c. Mid to late 11th century (Billingsgate and St Nicholas Acon Church); d. Early to mid 12th century (Seal House and Billingsgate)

Key to Figures 7, 12, 18, 23, 34, 38 and 39

Common names:

AARD	Aardenburg ware
ALKG	Alkaline-glazed ware
ANDA	Andalusian lustreware
ANDE	Andenne ware
ARCH	Archaic Maiolica
BLGR	Blue-Grey ware
CBW	Coarse Border ware
CHAF	Chaff tempered ware
CHEA	Cheam ware
COLS	Colchester slipped ware
DEVS	Developed Stamford ware
DUTR	Dutch Red Earthenware
EGS	Rhenish proto-stoneware
EMCH	Early Medieval Chalky
EMFL	Early Medieval Flinty
EMS	Early Medieval Sandy
EMSH	Early Medieval Shelly
EMSS	Early Medieval Sand and Shell
ESUR	Early Surrey coarseware
FRIMP	French imports
GMIMP	Rhenish imports
KING	Kingston-type ware
LANG	Langerwehe stoneware
LCGR	Low Countries greyware
LCIMP	Low Countries imports
LCOAR	Coarse London-type ware
LLON	Late London-type ware
LMU	Late medieval Hertfordshire glazed ware
LOND	London-type ware
LSS	Late Saxon Shelly
MEDIMP	Mediterranean imports
MG	Mill Green ware
MGCOAR	Mill Green coarseware
NBYC	Newbury Group 'C'
NEOT	St Neots-type ware
NFM	N. French monochrome
NORM	Normandy gritty ware
REDP	Rhenish red-painted ware
ROUE	Rouen ware
SAIN	Saintonge ware
SCAR	Scarborough ware
SHEL	Shelly limestone-tempered ware
SHER	South Herts. greywares
SIEG	Siegburg stoneware
SPAM	Spanish red micaceous ware
SPAN	Miscellaneous Spanish amphora
SPIMP	Spanish imports
SSW	Shelly sandy ware
STAM	Stamford ware
THET	Ipswich Thetford-type ware
TUDG	Tudor Green ware
VALE	Valencian lustreware
WINC	Winchester-type ware

Forms:

BOT	Bottle
CHAF	Chafing dish
COND	Condiment
CP	Cooking pot
DISH	Dishes — all sizes
DJ	Drinking jug
FRYP	Frying pan
PTCH	Glazed spouted pitcher (Stamford and Andenne-type wares)
SPP	Unglazed spouted pitcher

combing on the body of the pot. These are examples of 'M.40' ware, and are found amongst the products of a kiln recently discovered at Denham, in S. Buckinghamshire.

Imported Blue-Grey ware 'ladles' also appear to be handmade and from their coating of soot they were used probably as cooking vessels although it is hard to see how such round-bottomed vessels with a single large side handle could remain stable over a fire (Fig. 8, 1).[31]

Wheelthrown, unglazed vessels are found in London throughout this period, but are not local to the area. Some, such as Rhenish Red-painted ware pitchers and beakers and a few possible sherds of Normandy Gritty ware, are continental imports (Fig. 8, 2–4) while a comparison of the Thetford-type ware from London with that from Ipswich suggests that all the London finds of this type were made at Ipswich (Fig. 8, 5).[32]

A few sherds of wheelthrown white-bodied sandy ware pitchers are of unknown origin. The vessels have a dark grey surface, similar to that found on Blue-Grey ware and a characteristic feature is their occasional decoration of 'dimples' or bosses produced by pushing the vessel out from the inside while pressing the outside with thumb and finger. Dunning thought that a continental origin was probable: the general impression given by the vessels is that they belong to the Thetford-type ware tradition, and thin-section analysis has shown that the fabric has a distinctive micaceous clay matrix and indicates one, unknown, source for all the London examples. Similar vessels are reported from Yarmouth which would make an East Anglian or Low Countries source likely.[33] The context of the few stratified sherds suggests a late 11th- and early 12th-century date.

Wheelthrown glazed pitchers from at least four sources have been found in 11th-to mid 12th-century contexts in London. Of these, only one, Andenne-type ware, is at all common and then only towards the end of the period. Most of the sherds found probably came from large vessels similar to the well-known Lime Street pitcher (Fig. 8, 6) which has three small strap handles. No parallels for this form were found amongst published material from the Andenne kilns.[34] The distribution of the ware along the E. coast of England does, however, make a Low Countries source likely. The next most common glazed ware in London at this period comes from Stamford. Examples of both the sandy, well-glazed early 11th-century vessels and the finer, but sparsely-glazed types of the late 11th and early 12th centuries have been found.[35] Pitchers are the most common vessel types found but other forms are present, mainly amongst unstratified collections (Fig. 9, 3–4). Winchester-type ware is definitely present in very small quantities.[36] A few sherds of the distinctive, highly-decorated pitchers have been found, including one from a late 11th- to early 12th-century context at Billingsgate.

Finally, a few sherds of a northern French glazed ware have been found. The distinctive aspect of these vessels is their decoration of applied, roller-stamped strips arranged in a curvilinear pattern over the body (Fig. 10). Part of a pitcher and its accompanying lid were found at Pudding Lane in a group containing only Late Saxon Shelly ware, suggesting at the latest a late 10th-century date.[37] Fragments of a similar smashed vessel were recently recovered from a site at Lime Street in

association with late 11th- to mid 12-century wares. No residual 10th-century sherds were present and there is therefore no reason to doubt this association.[38]

Large, waterfront assemblages dating from the 11th to mid 12th centuries provide an outline chronology for the period (Fig. 7). The earliest is that from the New Fresh Wharf Saxon bank, dated *c.* 1020. That from Billingsgate Lorry Park, found in a low bank in front of the late Saxon waterfront, can at present be given a probable *terminus ante quem* of *c.* 1080 and when dendrochronological analysis has been completed should also have a secure *terminus post quem*. Seal House Waterfront I is dated *c.* 1140.

These groups provide enough evidence to allow the reconstruction of the pottery sequence in London from the late 11th to the mid 12th century, during which period there were only minor changes. Further or better dates are unlikely to alter the present sequence. For the early to mid 11th century, this is not so. There are significant differences between the New Fresh Wharf and the pre-*c.* 1080 Billingsgate assemblages, and groups of intermediate date are required to determine at what stage changes took place. Non-waterfront sites in the City commonly produce 11th- to early 12th-century assemblages but only a few can be dated other than by their pottery. The beginning and end dates of a sequence of timber buildings from Pudding Lane can be estimated:[39] the earliest structure in it, a sunken-floored building, contained the same range of pottery types in its backfill as the New Fresh Wharf bank, while a penny of Edward the Confessor, minted *c.* 1042–66, and probably lost at or just before the Conquest, was found in an external deposit associated with the use of the latest building. Both the building sequence and the ground level containing the coin were sealed by a make-up deposit for a yard containing pottery probably to be dated to the early 12th century.

Pudding Lane has produced the only substantial stratigraphic sequence covering the period. Other sites have produced coin-dated assemblages. Pit 55 at Milk Street, for example, was coin-dated to 1018–24 or later. It contains such a small pottery assemblage with such a high proportion of residual pottery that the only useful information which it can add is that Early Surrey coarseware was present in a context probably of mid 11th-century date. Three pits were sealed by the earliest structure of St Nicholas Acon Church.[40] One produced a silver penny identified as dating to the second quarter of the 11th century. The church itself is first recorded *c.* 1080, thus providing a further group probably of mid 11th-century date. These pits also contained Early Surrey coarseware and a few sherds of yellow-glazed Stamford ware and Andenne-type ware pitchers. On three sites, therefore, coin-dating suggests that the introduction of Early Surrey coarseware and Andenne-type ware and the disuse of Late Saxon Shelly ware took place before the Conquest, in the early to mid 11th-century. Nevertheless, confirmation of this dating, for example by finding material sealed below Conquest-period structures, is essential before a pre-Conquest date for these types can be accepted unhesitatingly.

Despite this reservation, the general pattern of 11th- to mid 12th-century pottery supply in London is now clear. In many cases vessels of the same fabric and form were used throughout the period but when assemblages of 50 or more sherds are present it is possible to give them a closer date. Early groups contain Late Saxon

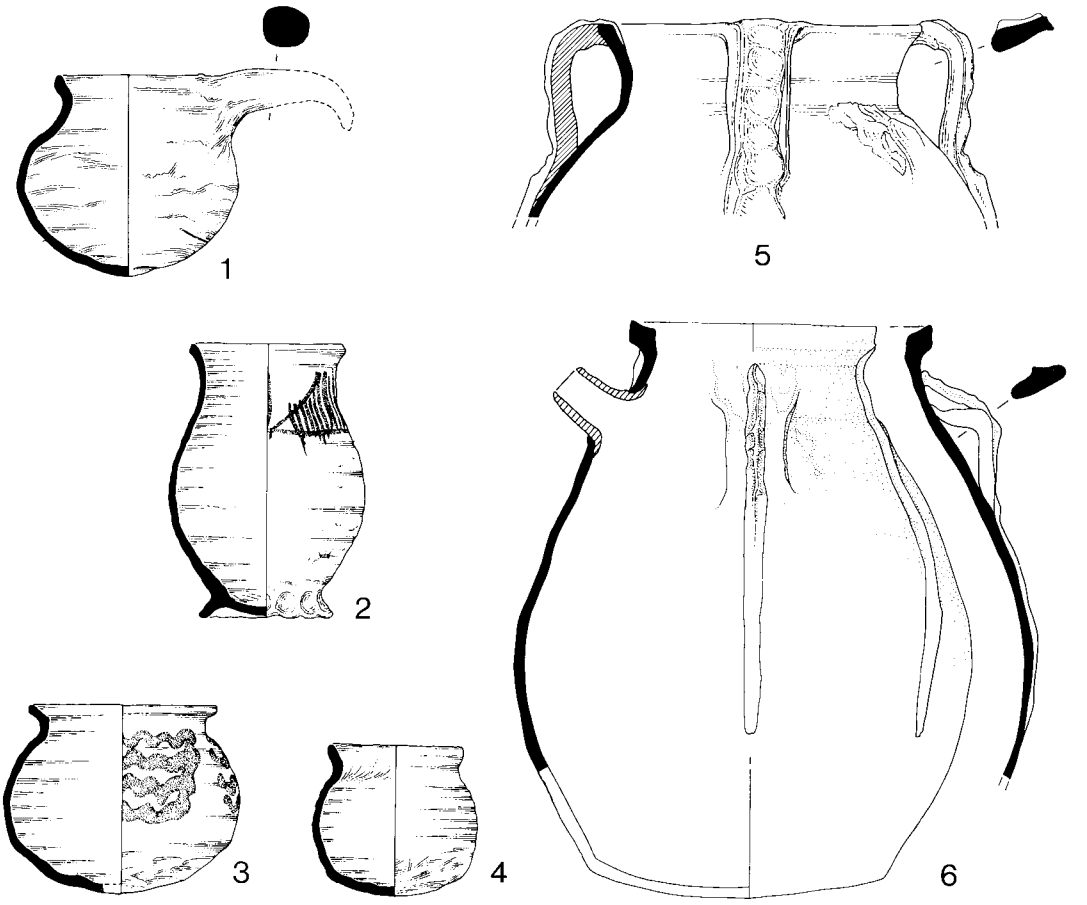

FIG. 8

Imported pottery of 11th- and 12th-century date from London. Blue-grey ware: 1. Cooking-pot ('ladle'); Red-painted ware; 2. Beaker; 3 and 4. Cooking-pots. Ipswich Thetford-type ware; 5. Storage jar or spouted pitcher. Andenne-type ware; 6. Spouted pitcher. Scale 1:4

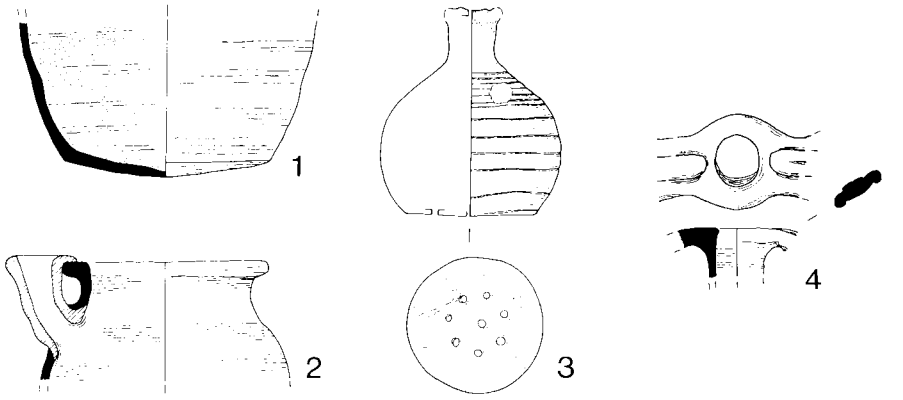

FIG. 9

Stamford-type ware from London: 1–2. Spouted pitcher; 3. Watering-pot; 4. Costrel. Scale 1:4

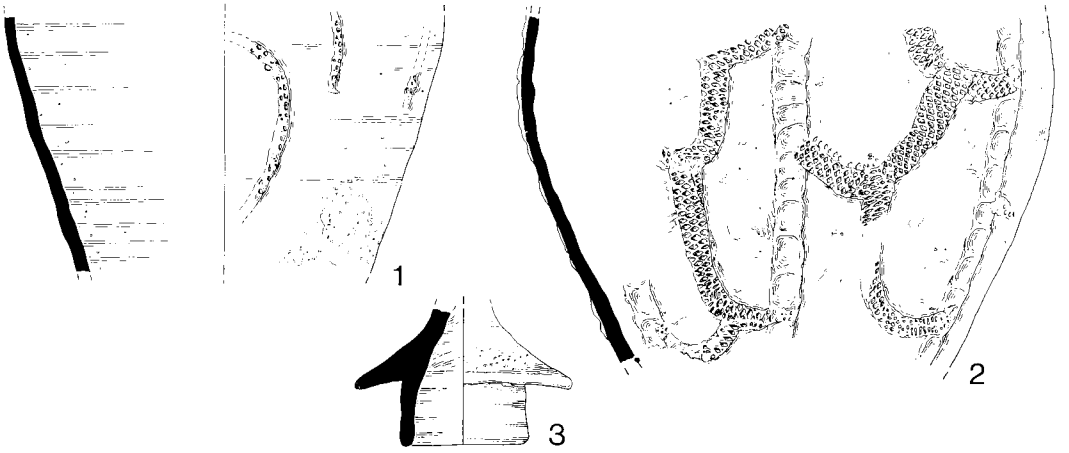

FIG. 10

North French glazed wares from 10th- and 11th-century contexts from London: 1. Pitcher (Pudding Lane); 2. Pitcher (Lime Street); 3. Lid (Pudding Lane). Scale 1:4

Shelly ware, Early Medieval Sand and Shell ware and few if any glazed wares. Middle and late 11th-century groups contain Early Surrey coarseware, sometimes associated with Andenne-type ware, while early to mid 12th-century groups contain these types in association with miscellaneous sandy wares. These changes in supply appear to be slow and regular, in contrast to the abrupt change at the end of the 10th century. This discontinuity has also be noted at Oxford.[41] At Oxford the suggested explanation is a disruption of the pottery supply network by the Viking sacking of the town, in 1010,[42] a terminal date for Late Saxon Shelly ware which would correspond well with all the available evidence from London.

There was also a much larger number of sources supplying the City in the 11th to early 12th century than in the previous period. Comparison with contemporaneous collections in the London region shows that there were significant differences between the supply of London and, for example, that of Lambeth and Westminster.[43] These sites are less than two miles from the City and yet the suggested sources of much of the pottery found within the City are much further afield. This suggests that pottery was being carried from quite large distances into the City, for use mainly within the walled area, while the surrounding regions were being supplied by potters who did not sell their wares in the London markets.

Pottery evidence shows contact between London and a number of areas, principally the Rhineland and the Low Countries but also northern France and areas of southern and eastern England (Fig. 11). This evidence conforms to some extent with the origins of the traders documented in Ethelred II's law code, dated *c.* 1000.[44] Merchants from Rouen, Flanders, Ponthieu, Normandy and the Ile de France are mentioned, implying cross-channel trade with the coastal region from the Cotentin peninsula to the Rhine delta, although the only pottery that could have come from these areas are the northern French glazed pitchers and the sherds of Normandy Gritty ware, both of which are extremely rare. On the other hand,

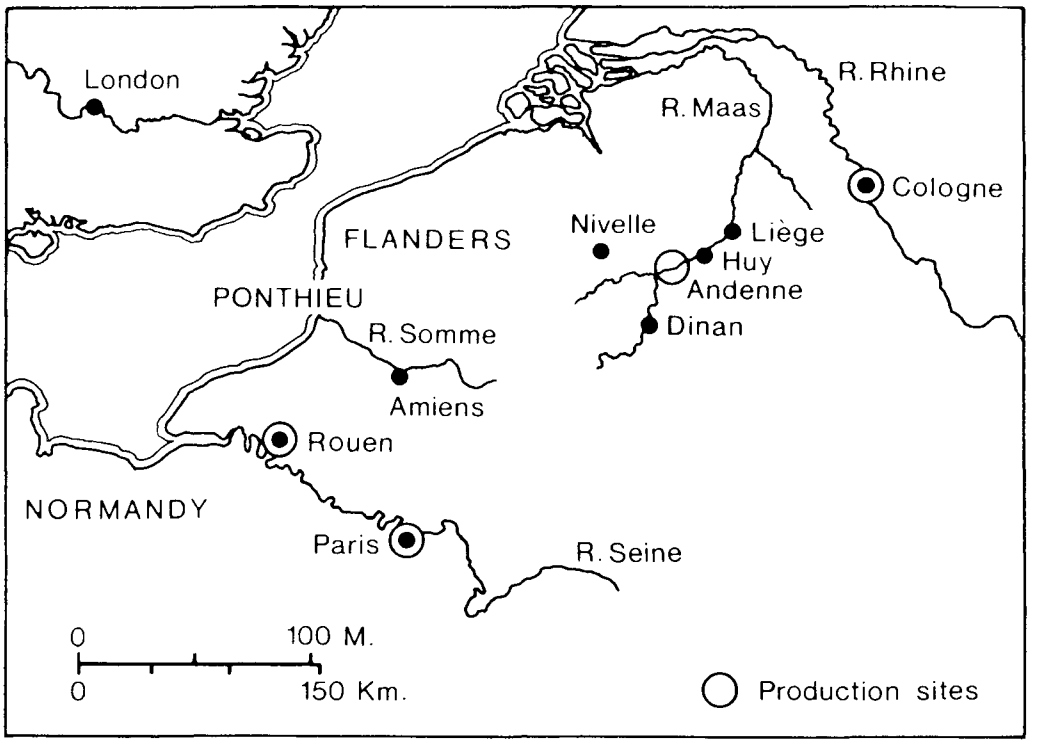

FIG. 11
Late Saxon and Norman cross-channel trade

merchants from Huy, Liege, Nivelle and Cologne ('subjects of the Emperor') are also mentioned: the first three towns lie on the Meuse, in the area of Andenne, while Cologne is probably the departure point if not the source for the Rhenish Red-painted ware found in London.

From late 12th to the mid 13th century

Small quantities of the coarsewares and imports found in early 12th-century groups are also present in late 12th-century groups: these include Early Surrey coarseware, Andenne-type ware and Blue-Grey ware. There is a possibility that these types were still in use but it is more likely that they are residual. It seems therefore that, as at the end of the 10th century, there was a rapid change in pottery types and technology around the middle of the 12th century.

Three coarsewares provided the majority of cooking vessels during the period. All were wheelthrown and the earliest, Shelly-Sandy ware, has a very similar petrology to that of London-area clays and pottery fabrics. It is therefore probably a local ware, although there is only slight evidence, in the form of occasional glaze spots, that it was produced alongside local glazed wares. The main form is the globular, sagging-based cooking-pot with a flat-topped rim (Fig. 13, 1) but bowls, large cauldrons and other forms do occur.

Coarse, sand-tempered, wheelthrown greywares are present from at least the late 12th century and are similar in fabric and form to examples of South Hertfordshire grey ware from kiln sites and occupation sites in S. Hertfordshire and Middlesex.[45] The main form is a cooking-pot of similar shape to that produced in Shelly-Sandy ware (Fig. 13, 2). Unglazed rounded jugs, with highly decorated handles, are a minor but distinctive product (Fig. 13, 3) while other forms, such as large storage jars with a frilled base (Fig. 13, 4), bowls, bottles and 'drinking-jugs' are known. There is no apparent development in typology or form from the late 12th to the mid 13th centuries.

There are four major glazed wares in London from the late 12th to the mid 13th centuries. Of these, Coarse London-type ware and London-type ware are both thought to originate very close to the City, although probably not within the walls.[46] They are both made in iron-rich fabrics which in thin-section can be paralleled with samples of sands and brickearths from London. The difference between the two fabrics is that the Coarse London-type ware is tempered with a mixed sand (consisting of quartz, ironstone, sandstone, flint or chert and shell fragments) in a relatively fine clay matrix while London-type ware is tempered with the brickearth, a poorly-mixed silty sand. Coarse London-type ware went out of use by the early 13th century, but during the 12th century it was used for the same range of forms as the finer fabric. The glaze was usually applied by 'splashing', but in general the upper two-thirds of the vessel are well-covered with glaze. Both clear and copper-stained glazes were used, sometimes over a cover of white slip. A wide range of forms was produced, including the earliest known examples in this country of the pipkin, the dripping-dish and the chafing-dish (Fig. 14). The most common form, however, was the jug.

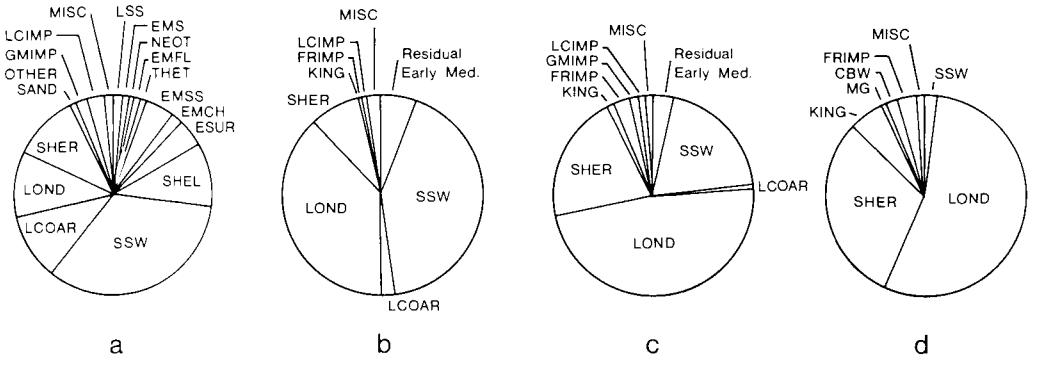

FIG. 12

The relative frequency by rim percentage (EVEs) of pottery in late 12th- to mid 13th-century assemblages in London. a. Late 12th century (Seal House and Billingsgate); b. *c.* 1180 or later (Billingsgate); c. Early 13th century (Seal House and Billingsgate); d. Mid 13th century (Seal House and Billingsgate)

The range of jug forms changed considerably during the period (Fig. 15). The earliest forms are rounded jugs with a rilled shoulder and collar rim (Fig. 16, 1). The bases are usually sagging, possibly having been pushed into a former, and both strap handles and rod handles occur. Decoration, mainly of applied slip lines, is common.

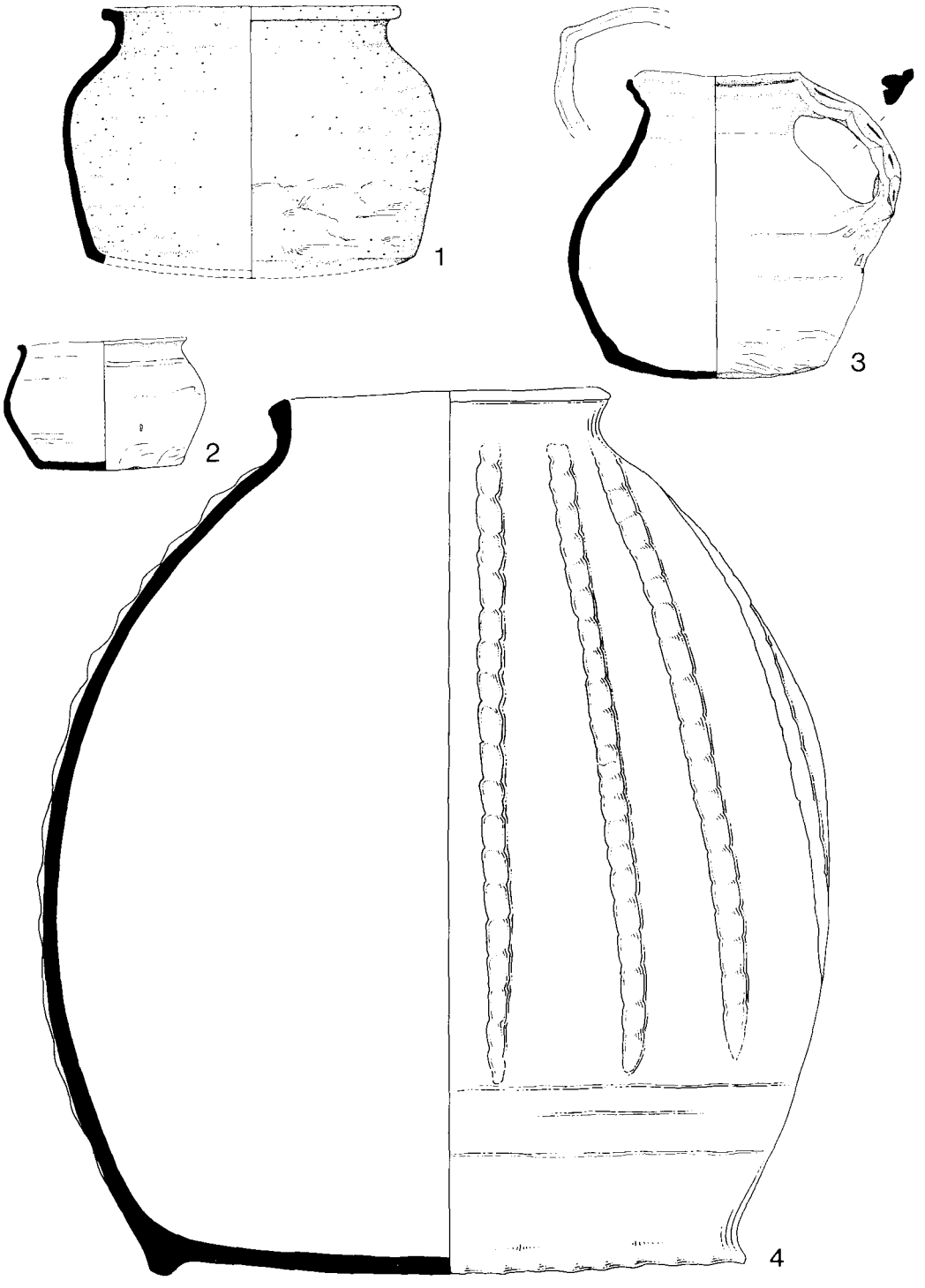

FIG. 13

Late 12th- to mid 13th-century coarsewares from London. Shelly-sandy ware: 1. Cooking-pot. South Hertfordshire greyware; 2. Cooking-pot; 3. Jug; 4. Storage jar. Scale 1:4

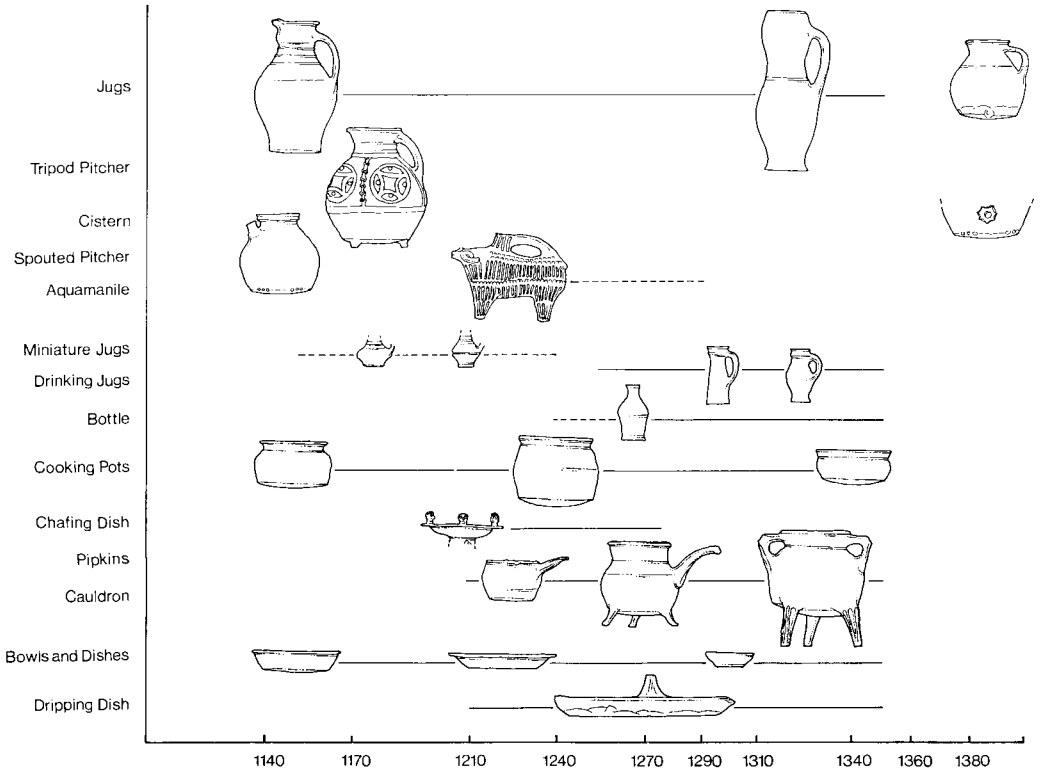

FIG. 14
The date-range of London-type ware vessel forms

In the early 12th century rounded jugs were replaced by vessels copying Rouen ware forms and decoration (Fig. 16, 2; Pl. III). Individual and roller stamps were used, in combination with applied slip, usually of two colours — white and red. These Rouen-copy jugs had a clear lead glaze but similar forms occurred with an overall green glaze (Fig. 16, 3). The decoration applied to the green-glazed jugs consists of repeating vertical bands starting at the rim or neck and extending down to the girth or base. Rouen copies, by contrast, usually have a central horizontal zone in which repeating triangular patterns are found. The necks of the Rouen copies have horizontal lines of slip, sometimes combined with small pellets of white clay. The closest parallels for both the green-glazed and Rouen-copy jugs are in northern France.

These two types became, during the 13th century, the prototypes of a wide range of forms, including highly decorated, clear lead-glazed types with applied slip motifs, sometimes emphasized with a green glaze (Fig. 16, 4). By the middle of the 13th century, however, the proportion of decorated to plain jugs had declined and the commonest form is a plain baluster jug with a flaring rim (Fig. 16, 5).

The third glazed ware, Kingston-type ware, is made in a white-firing sand-tempered fabric.[47] The earliest examples from the City occur in mid 13th-century

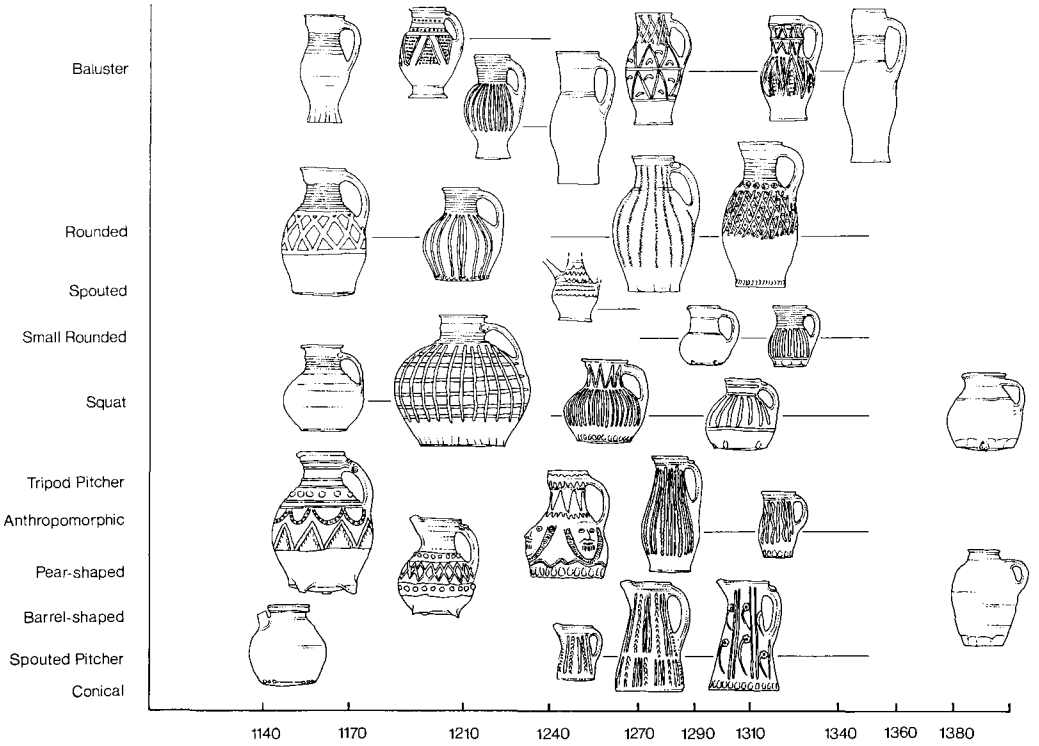

FIG. 15
The date-range of London-type jug forms

groups and are similar in form and decoration to contemporary London-type jugs (Fig. 17, 1). A fourth glazed ware, also a white-firing sand-tempered ware, is also first found in the mid 13th-century. Coarse green-glazed whiteware jugs, cooking-pots and bowls are found, albeit in very small quantities. They are similar in form and petrology to wares produced in the Surrey–Hampshire border in the later Middle Ages and are termed 'Coarse Border ware'.

Pottery from other areas of England is extremely scarce in deposits of the late 12th to mid 13th centuries. A few sherds of Developed Stamford ware jugs are found in late 12th- and early 13th-century contexts, as are rare sherds of handmade tripod pitchers from E. Berkshire, Newbury C ware, but by and large it would seem that the strength of the London area pottery industries deterred non-local potters. Scarborough ware jugs occur first in early 13th-century contexts but only in very small quantities.

Imported pottery is also less common in late 12th- to mid 13th-century groups than in earlier deposits. Rhenish Red-painted ware vessels were certainly still being imported throughout this period and were perhaps more highly fired than their predecessors. The form is usually difficult to identify from sherds but a complete profile of a small cooking-pot was found at Swan Lane in a late 13th-century context (Fig. 8, 4).[48] French wares are the commonest imports. 'North French

Monochrome' ware occurs throughout the period, as does Rouen ware. The similarity in fabric of these two wares suggests that the London finds are mainly from one source in the Rouen area, although N. French potters from other areas may well have been exporting pottery to other parts of the English coast.[49] A few examples of Rouen ware have been found in association with late 12th-century local pottery, earlier than the London Rouen-copy jugs, but in general the presumed prototypes and their derivatives occur in the same groups (Pl. III). Sherds of a medieval Spanish amphora were found in an early 13th-century waterfront deposit at Seal House.[50] The similarity in fabric and form with examples of Roman date makes identification of these imports difficult unless virtually no residual Roman pottery is present.

For the late 12th to the mid 13th centuries the London waterfront provides a large body of well-stratified pottery (Fig. 12). Three main sites cover the period, Seal House, Billingsgate Lorry Park and Swan Lane, and it is therefore possible to compare contemporary groups from different areas of the waterfront. Since Seal House is dated by dendrochronology while Swan Lane and Billingsgate are dated by coins (with the prospect of dendrochronological results), the two methods of dating can be compared. The results show that the dating and sequence of events for the period are correct.

The earliest groups can be dated to the last quarter of the 12th century (Fig. 12a and b). Seal House waterfront II is dated *c.* 1170 while two groups from Billingsgate cover this period, the later of which contains Short Cross pennies dated *c.* 1180 or later. Similar coin-dating is found at Swan Lane.

The next series of groups can be dated to the first half of the 13th century (Fig. 12c). Seal House waterfront III is dated *c.* 1210 while coin-dating is provided by a group from Billingsgate Lorry Park. The Swan Lane early 13th-century group is not dated by coins or dendrochronology but is stratified later than late 12th-century groups and earlier than mid 13th-century ones.

Thirdly, three groups can be dated to the middle of the 13th century (Fig. 12d). Of these only one, at Billingsgate Lorry Park, is dated by external means, but the coin-dating for this group is probably extremely reliable. The Seal House and Swan Lane groups are dated by their relative position, being later than early 13th-century groups and, in the case of Swan Lane, earlier than a group of *c.* 1270–80.

There are differences between late 12th-, early 13th- and mid 13th-century London pottery assemblages, which enable relatively close dating to be given even to small assemblages of pottery. This is extremely useful to the excavator, but in terms of the general supply and use of pottery in the City these differences are of little importance. Late 12th- to mid 13th-century pottery assemblages in London are dominated by products of London-area kilns. In the previous half-century little if any pottery can be demonstrated to have been made in London or its suburbs and these new industries probably mark the first appearance of commercial potting in London since the Roman period (of the earlier handmade coarsewares only Early Medieval Sand and Shell ware might have a London origin). During the period, however, the London-area products gradually declined in importance, at the expense of Kingston-type ware and South Hertfordshire greyware. A cursory examination of the evidence for the medieval pottery sequence in these areas

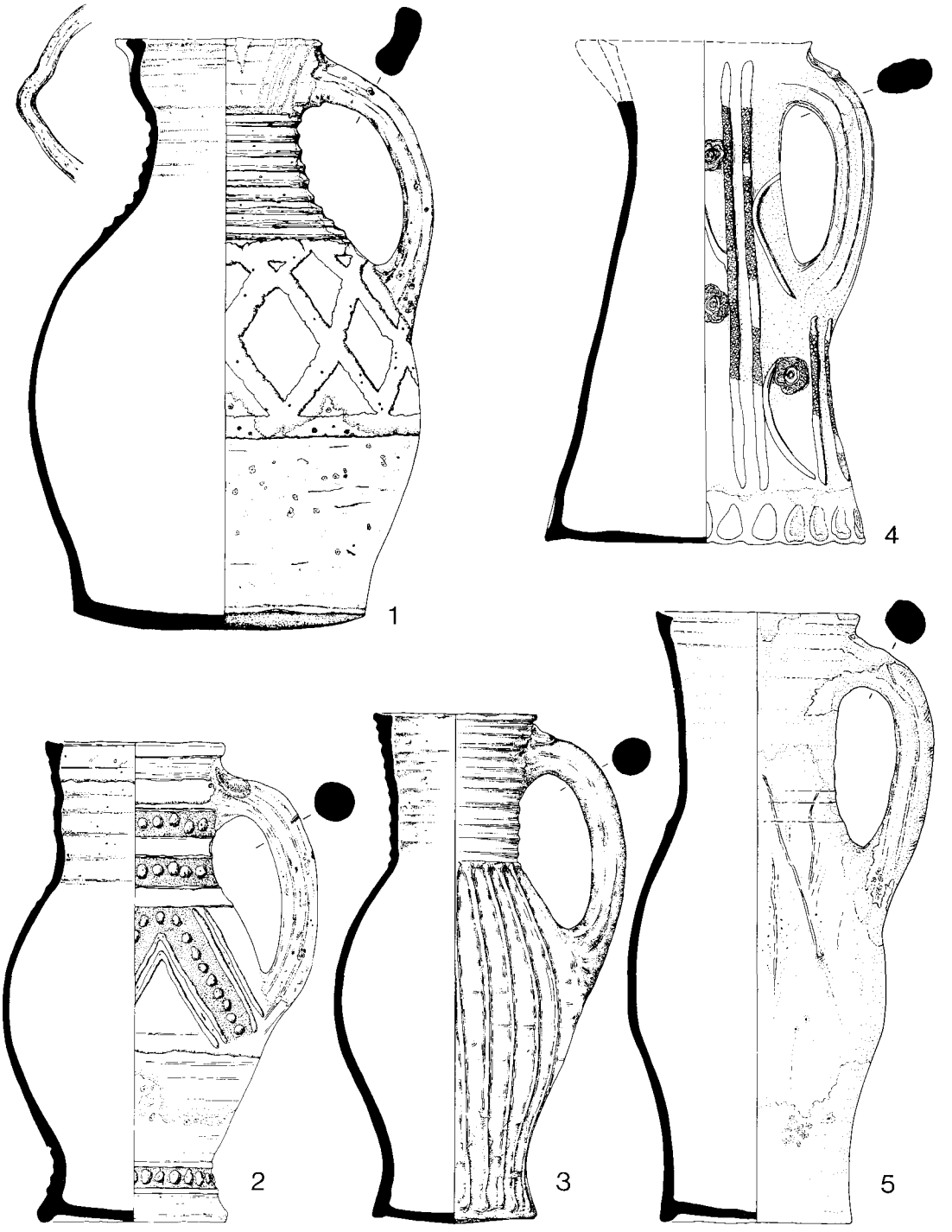

FIG. 16

Late 12th to mid 13th-century London-type jugs from London: 1. Early rounded jug; 2. Rouen-style jug; 3. North French style jug; 4. Highly decorated, 'polychrome' conical jug; 5. Flaring-rimmed baluster jug. Scale 1:4

suggests that the industries producing Kingston-type and South Hertfordshire greywares were new foundations, in the mid 13th and late 12th centuries respectively, but with typology and manufacturing techniques hinting that London-area potters may have been involved in the operation of the new potteries. This is a pattern which was to be continued in the succeeding period (see below).

Non-local English pottery is extremely scarce in London at this period and in most cases, where a pottery trade can be demonstrated with London, pottery was travelling from London, not into it. Foreign pottery too is rare and, for the first time, dominated by northern French products. The connection between northern France and London is also shown by the character of the early 13th-century London-type jugs which may have been produced by potters trained in northern France. An earlier French connection is also possible since some of the late 12th-century London-type rounded jugs have thin strap handles with a characteristic 's'-section. These were produced by being thrown on the wheel and their only contemporary parallels appear to be on continental pottery.[51]

From the late 13th to the early 14th century

London-type ware and Kingston-type ware continue to be the most common glazed wares in London in the late 13th to early 14th centuries. Kingston-type ware, however, is much commoner than in the mid 13th century, at the expense of London-type ware. The forms made in both wares are different from those in the earlier groups. The London-type jugs, with a few highly decorated exceptions, are plain baluster jugs, on which the rim is slightly enclosed, like a tulip (Fig. 19, 1). New London-type ware forms include 'drinking-jugs', bottles and cauldrons (Fig. 19, 2–5). Kingston-type ware forms include several distinctive types of jugs. The commonest of these types, as in the mid 13th century, was the highly decorated baluster jug (Fig. 17, 1). Smaller vessels copying metal ewers are a new type (Fig. 17, 3). Some of these vessels have a bichrome glaze, yellow on the inside with a green exterior. Jug decoration can take the form of elaborate plastic decoration, combined with individual and roller stamps; an overall pellet decoration, giving an effect like a pine cone; or stamped bosses (Fig. 17, 2). Many difference boss designs are known, sometimes with two stamps used on the one vessel. Although found for the first time in the late 13th century, some of these Kingston-type innovations may have their origin in the mid 13th century. The quantity of stratified mid 13th-century Kingston-type ware is too low to be certain that these forms were not being made then.

Mill Green ware, a green-glazed, white-slipped redware, is first found at this date, and forms a moderate proportion of the groups.[52] Two forms of jug are the commonest products, a tall conical or pear-shaped vessel (Fig. 20, 1) and a squat jug (Fig. 20, 2). Tall baluster jugs with polychrome decoration (white and red slips and green and clear glaze) are absent from the late 13th-century groups, but present at Ludgate Hill and other early 14th-century deposits (Fig. 20, 3). Cooking-pots, some with internal glaze, made in a coarser version of the Mill Green fabric, are found in smaller quantities (Fig. 20, 4–5).

Other English wares are present in minor amounts. Coarse Border ware is commoner in late 13th- to early 14th-century contexts than in the mid 13th century but there is no appreciable difference in the forms found. Large rounded jugs with cross-hatched combing on the walls are a distinctive form, although usually found as body sherds (Fig. 21, 3), but cooking-pots and bowls are as common (Fig. 21, 1–2). South Hertfordshire greywares are still found but in smaller quantities than before. The range of forms is similar to that of the previous period with the exception of rare small bottles and 'drinking-jugs'. Scarborough-ware jugs occur in small quantities in late 13th- to early 14th-century contexts as do white-slipped jugs made in a coarse quartz sand-tempered fabric. In form these vessels have parallels in both Surrey (at Kingston) and Essex (at Mill Green). Some Kingston-type whiteware vessels have a light-brown fabric under a whiter slip but the texture of their fabric is much finer than is the case with these slipped jugs. A source in the London region is likely.

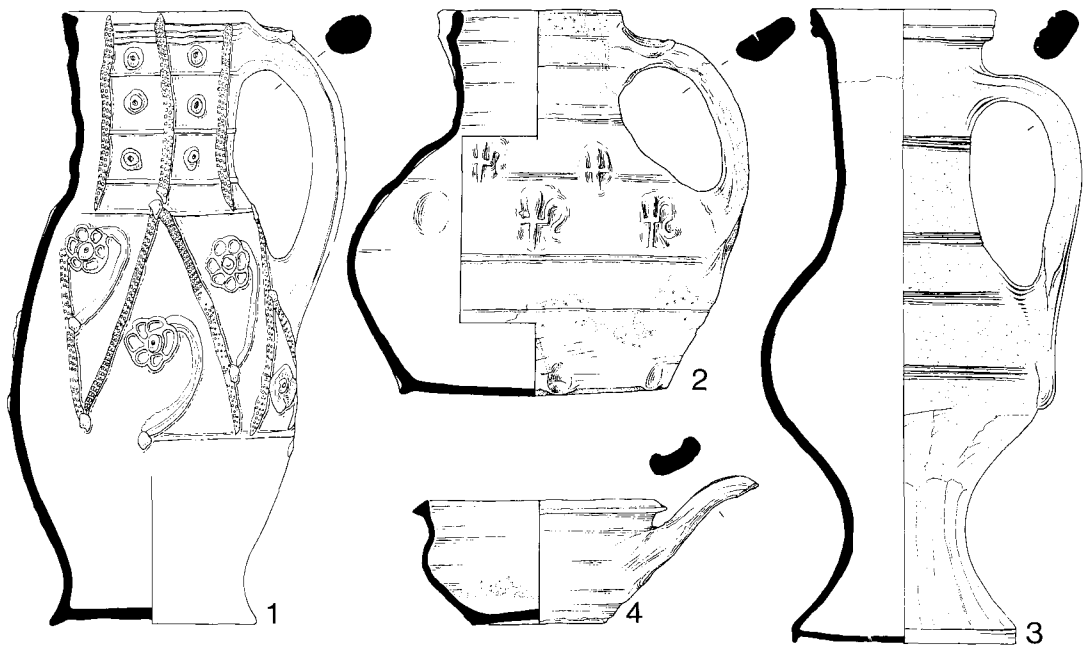

FIG. 17

Mid 13th- to early 14th-century Kingston-type wares from London: 1. Highly decorated baluster jug; 2. Bossed rounded jug; 3. 'Metal copy' baluster jug; 4. Pipkin. Scale 1:4

The commonest imported pottery in late 13th- and early 14th-century contexts in London is Saintonge ware (Fig. 22, 5–6).[53] However, even this ware is not common and there is probably little overall increase in the quantity of imported pottery in use from the late 12th to mid 13th centuries (compare Figs. 12 and 18). In the *c.* 1270 groups the Saintonge vessels are mainly tall jugs with parrot beaks, a foot-ring base and a mottled green glaze while by the early 14th century these

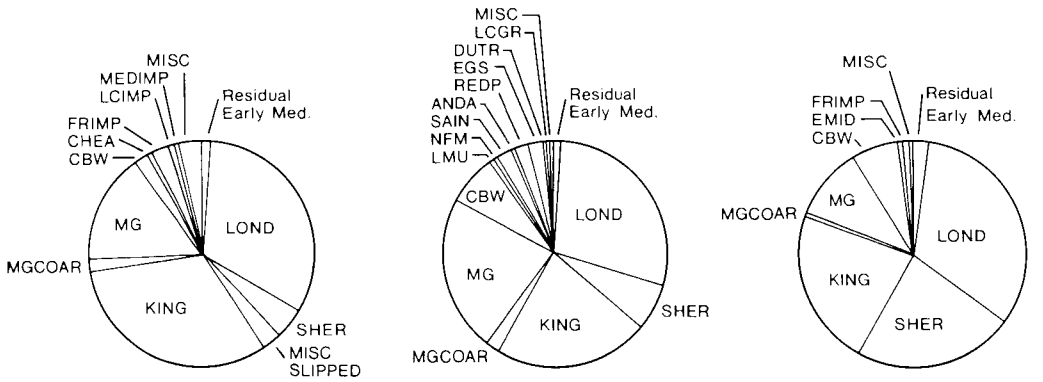

FIG. 18

The relative frequency by rim percentage (EVEs) of pottery in late 13th- to early 14th-century assemblages in London. a. Late 13th century (Trig Lane); b. *c.* 1270 (Swan Lane); c. Early 14th century (Ludgate Hill)

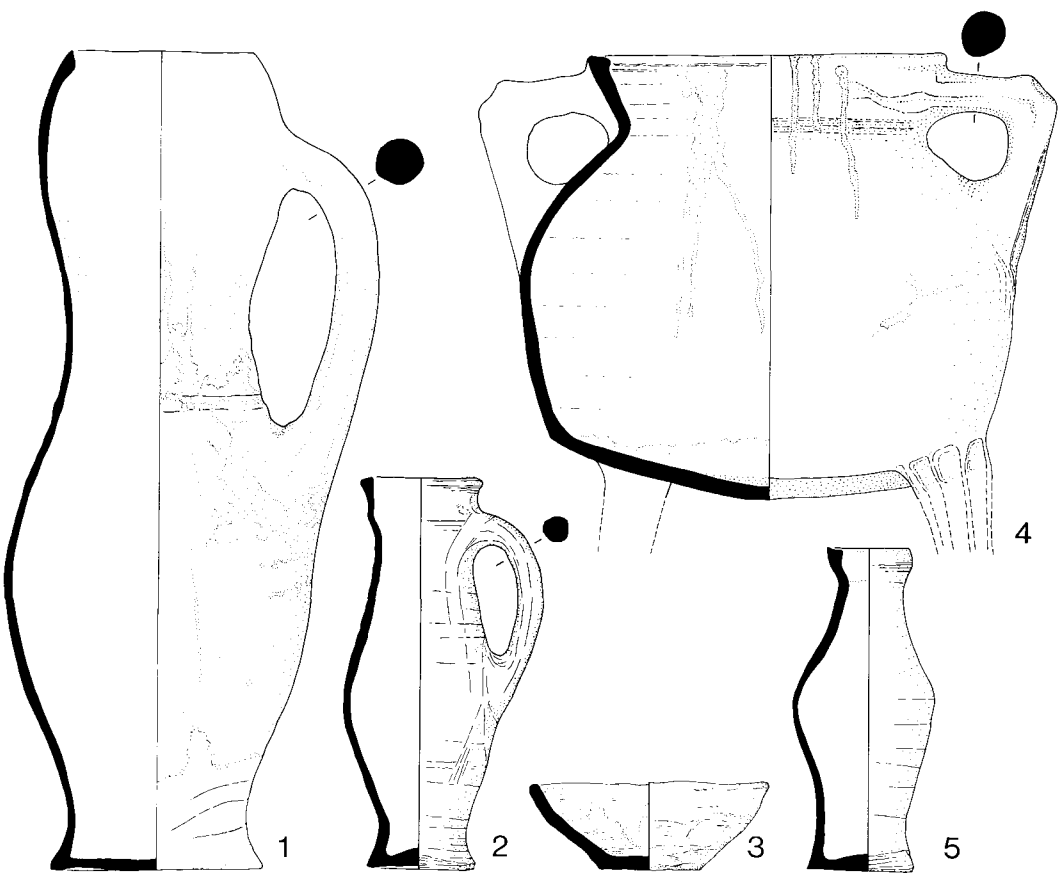

FIG. 19

Late 13th- to mid 14th-century London-type ware from London: 1. Tulip-necked baluster jug; 2. Drinking jug; 3. Dish; 4. Cauldron; 5. Bottle. Scale 1:4

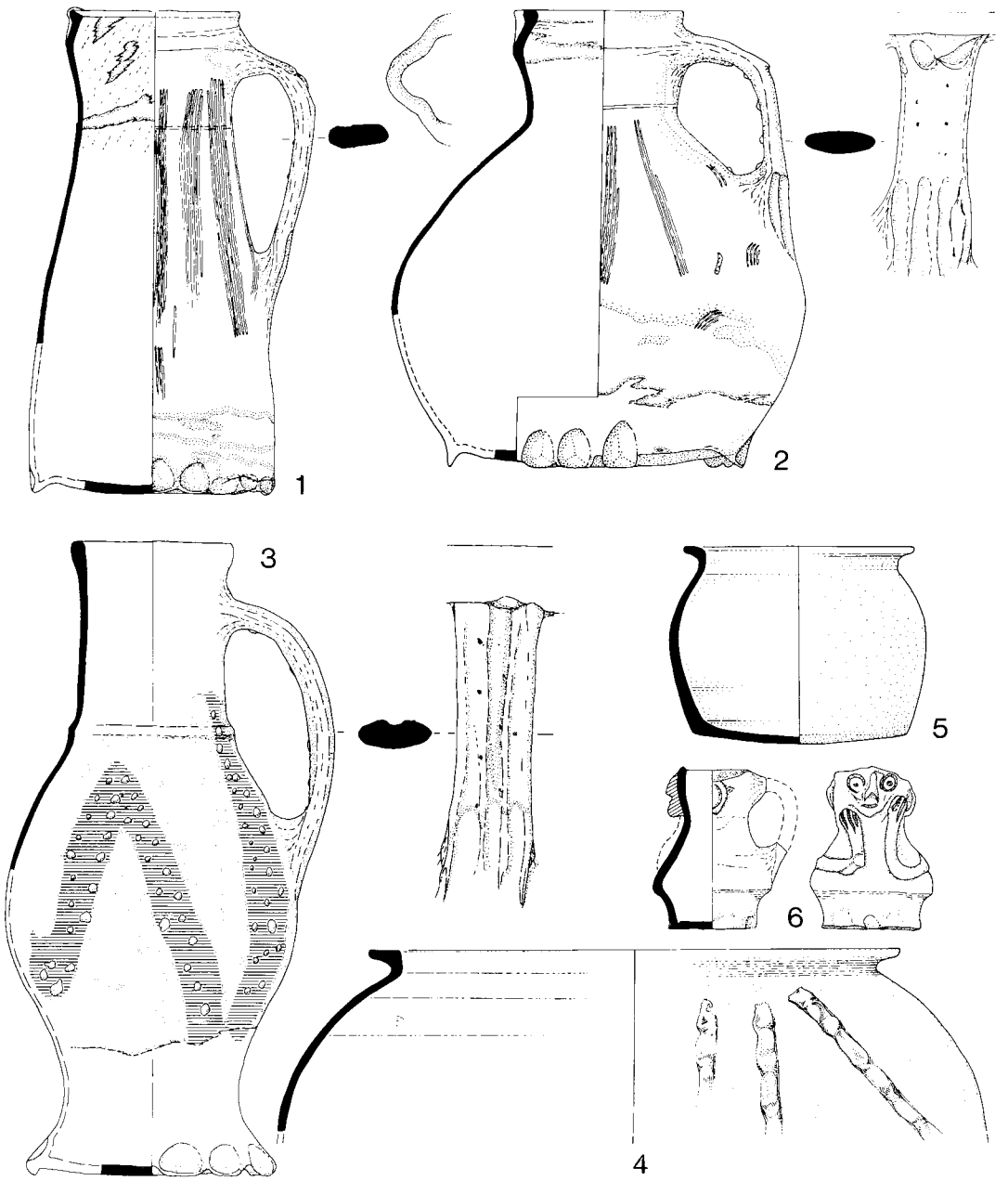

FIG. 20

Late 13th- to mid 14th-century Mill Green ware from London: 1. Conical or pear-shaped jug; 2. Squat or rounded jug; 3. Polychrome-decorated baluster jug; 4–5. Coarseware cooking-pots; 6. Miniature anthropomorphic jug. Scale 1:4

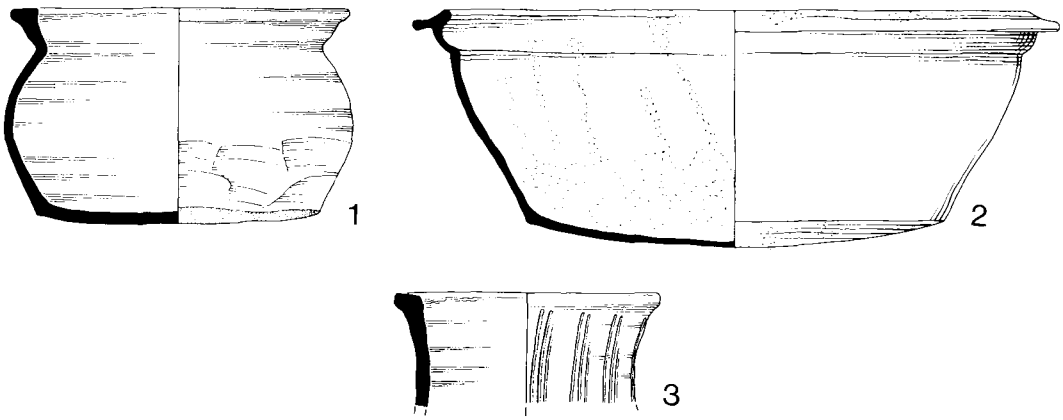

FIG. 21
Late 13th- to 14th-century Coarse Border ware from London: 1. Cooking-pot; 2. Bowl; 3. Large rounded jug. Scale 1:4

mottled green-glazed jugs were accompanied by polychrome vessels and those with an even green glaze (which is sometimes used on the interior of the polychrome jugs). Rouen and North French Monochrome ware may still have been imported in the late 13th and early 14th centuries but in much smaller quantities than previously. Amongst these imports is at least one green-glazed jug with a hollow handle, from Swan Lane. This form is typical of the pottery of the Paris region.[54]

Rhenish 'proto-stoneware' vessels occur first in mid 13th-century groups. Jugs with a brown, pimply ash glaze are the commonest form (Fig. 22, 1; Pl. IV, A).[55] A small stoneware beaker with a brown wash and a fine white fabric was found in a late 13th-century group at Swan Lane, raising the possibility that some of the brown surface colouration on the jugs was caused by a deliberate iron-rich slip, rather than accidental ash-glazing. No 'proto-stoneware' sherds have been found in later contexts and they may have been replaced by white-bodied Siegburg stoneware vessels. The Siegburg sherds occur in such small quantities in early 14th-century assemblages from London as to make their context insecure and the alternative conclusion is that there was a hiatus in the importation of Rhenish pottery at this time.

Rare sherds of green alkaline-glazed Magrebi ware albarellos from the Magreb

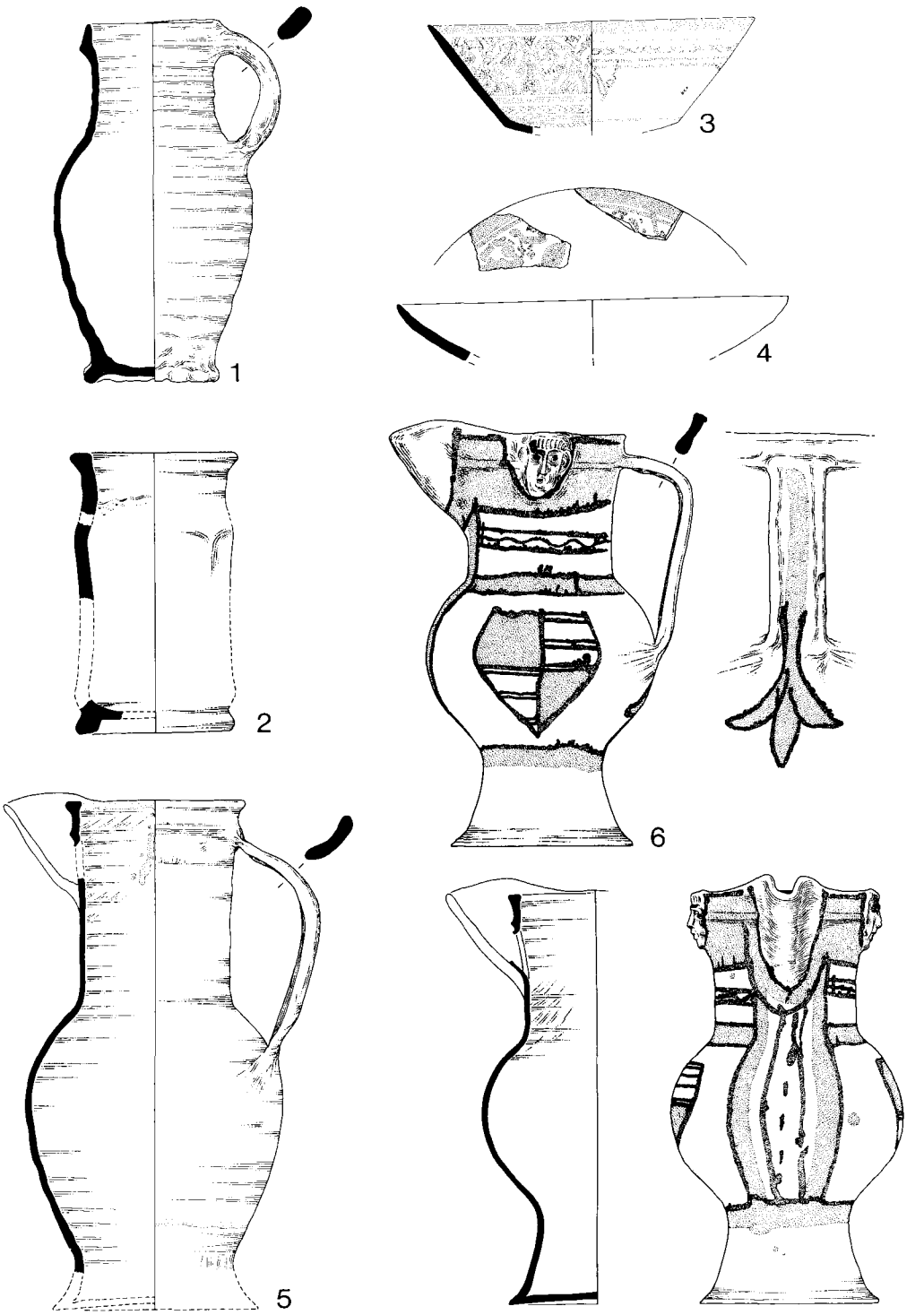

FIG. 22

Late 13th- to mid 14th-century imported wares from London. Proto-stoneware: 1. Jug. Magrebi ware; 2. Polygonal albarello. Andalusian (Malagan) Lustreware; 3. Bowl; 4. Bowl or dish. Saintonge ware; 5. Good quality green-glazed jug; 6. Polychrome jug. Scale 1:4

coins and pilgrim souvenirs to *c.* 1270–80 (Fig. 18b). No other large datable late 13th-century groups have been excavated but the Ludgate Hill site provides a large group of early 14th-century date and is coin-dated later than 1302 (Fig. 18c). The differences between these groups are so slight that it is unlikely that the pottery supply of London underwent much change during this period. This makes close dating of assemblages within this period difficult. Saintonge polychrome and jugs with an evenly applied green glaze first appear later than *c.* 1270–80, as do polychrome Mill Green jugs. However, these types are rare even in early 14th-century groups and their absence cannot be used to date groups to the late 13th century. There were, however, notable changes in pottery supply between the mid and late 13th centuries. There was a decline in the proportion of pottery from sources in the London area. Shelly-Sandy ware vessels were no longer produced while London-type ware was of less importance. In their place, Kingston-type and Coarse Border wares were commoner while Mill Green ware occurs for the first time. It is possible that these changes represent a movement of the potting industry out of the London suburbs and into the hinterland. If this is so, then several factors might be responsible, of which the most likely is the increasing pressure on land in the suburbs caused by the growth in population and wealth of the City.

No bias towards particular source areas or methods of distribution can be seen when looking at the origin of the pottery used in London at this time. Riverine trade in goods other than pottery is probably responsible for the importation of Kingston-type and Coarse Border wares, while South Hertfordshire greyware and Mill Green ware were carried overland to the City. One can similarly imagine a reciprocal trade from London to Essex and Hertfordshire in other goods. The imported pottery shows a shift away from the Rhineland and northern France, the traditional sources of imported pottery in the City, towards south-western France and the Mediterranean world.

From the mid 14th to the mid 15th century

Although there is a major shift in pottery supply from the early to the mid 14th century, London-type and Mill Green wares continued to be used into the mid 14th century albeit in small quantities (Fig. 23). There is little evidence for any development in forms from the early 14th century and both wares had probably ceased to be used in London by the late 14th, although Mill Green ware is thought to have been still in use in S. and central Essex in the late 14th century. Kingston-type ware, by contrast, is present throughout the 14th century, but was almost certainly out of use early in the following century. A new range of forms is present, including a high proportion of plain forms and jugs decorated solely with a band of grooved lines on the shoulder (Fig. 24). Kiln wasters from Kingston-upon-Thames and Bankside in Southwark belong to this late phase and raise the possibility that Kingston-type ware was produced over a wide area on the S. bank of the Thames.[57] Definite evidence of production, rather than waste disposal, has still to be found in Southwark.

Coarse Border ware is by far the commonest ware from the mid 14th to the mid 15th century. The vessels are less heavily tempered than their late 13th- to early

14th-century predecessors but there does not appear to be any great difference in the range of forms used within the period. Large rounded jugs are the commonest type, some of which probably have bung-holes (Fig. 26, 1–2). Some of these jugs have simple red-painted decoration in the form of three lines arranged as an arrow on the side of the pot. Large cooking-pots with flat-topped rims are another common later 14th-century form (Fig. 25, 1). In the early to mid 15th century the lid-seated or 'bifid' rim replaced the flat-topped rim on cooking-pots, bowls and cisterns (Fig. 25, 2). A small number of fineware vessels, mainly cups, were also produced throughout the period (Fig. 26, 3). These vessels often have two glazes, yellow-brown and a copper green and can be distinguished from Tudor Green vessels only by microscopic examination of the fabric.

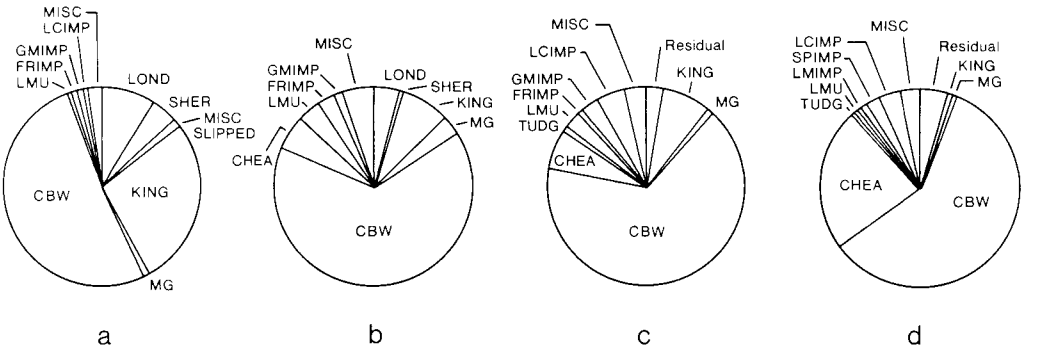

FIG. 23

The relative frequency by rim percentage (EVEs) of pottery in mid 14th- to mid 15th-century assemblages in London. a. Mid 14th century (Trig Lane); b. *c.* 1360 (Trig Lane); c. *c.* 1380 (Trig Lane); d. Early to mid 15th century (Trig Lane)

Some lobed cups and other thin-walled vessels were produced not in the quartz sand-tempered Coarse Border ware fabric but in a fine white clay, 'Tudor Green' ware (Fig. 27). These vessels first occur in the late 14th century and are absent from Trig Lane G10, dated *c.* 1360. They form less than 1% of assemblages by both weight and estimated vessel equivalent (Fig. 23).

Cheam whiteware is first found in the late 14th century, later than *c.* 1340 but before *c.* 1360. The late 14th-century forms include biconical 'drinking-jugs' as well as flat-based globular cooking-pots, dishes and other forms (Fig. 28). In the early to mid 15th-century, when Cheam ware was much commoner, most of these forms continued in use but the biconical forms were replaced by 'barrel-shaped' vessels of two sizes, large pouring jugs and small 'drinking-jugs'.[58] Although large later 15th-century groups have not been found in the City there is an indication from assemblages associated with Raeren stoneware that Cheam ware continued to grow in importance in London during the century before being replaced late in the century (or early in the following) by a variety of sparsely-glazed red earthenwares, including vessels produced at Cheam.

Late Medieval Hertfordshire Glazed ware is first found in London in the mid 14th-century and was either in decline or no longer being imported by the early to mid 15th century.[59] The range of vessels found is limited. Plain, green-glazed cooking wares and jugs, mainly of rounded form, which were decorated either with a band of grooved lines or stamped bosses are the commonest forms (Figs. 29–30). To the naked eye, the fabric and treatment of this ware is very similar to that of products of the Brill-Boarstall area of Buckinghamshire (Oxford Fabric AM) but in thin-section and under the binocular microscope distinguishing characteristics can be seen.

Late London-type ware is indistinguishable in fabric from the earlier London-type ware. However, there is a period of perhaps half a century, *c.* 1350–*c.* 1400, in which no London-type ware is found, so that there can be no continuity between the two industries. Late London-type ware forms a small proportion of all the early to mid 15th-century groups. The most common forms are rounded jugs and bung-hole jugs or cisterns with a similar profile (Fig. 31, 1) but open-ware vessels, mainly flanged bowls, are also found (Fig. 31, 2, 5, and 6). Both forms have a sagging base, no longer found at this date on other local wares. The appearance of these vessels, which have a sparse clear splash-glazed 'bib' and a distinctive strap handle with a single thumb impression at the rim join, is reminiscent of later Tudor forms.

Another early to mid 15th-century ware, Late London Slipped ware, was made in a hard red sandy fabric. Thin-section analysis has shown that the ware contains a mixed quartz and flint/chert sand identical to that of London-area products although less abundant than that in London-type ware. The forms are all white-slipped, green-glazed cooking wares including dripping-dishes and 'bifid rim' cooking-pots (Fig. 31, 3–4).

From the middle of the 14th century onwards pottery imported from the Continent began to be used in London in large quantities. From this time onwards imported pottery forms a regular component in archaeological assemblages and may have had a significant effect on local pottery industries. The imported types are mainly from sources in the Rhineland and Low Countries. Dutch Red Earthenware vessels, although first present in the late 13th century, first become common in mid 14th-century deposits and increase in frequency until the end of the London sequence. The three commonest forms are three-footed, two-handled cooking-pots, dripping-dishes and frying-pans (Fig. 32, 4–6).[60] Unglazed greyware jugs in a fine sand-tempered fabric are thought possibly to be a type of Low Countries Greyware (Fig. 32, 8). They first occur in late 14th-century groups and there is an interval between their appearance and the disappearance of English unglazed greywares. It would otherwise prove difficult to distinguish the two groups, although thin-section analysis does show that samples of 'Low Countries Greyware' and Dutch Red Earthenware from London differ in firing rather than petrology.[61]

Siegburg stoneware is the commonest import in the mid 14th century.[62] There is no noticeable development in form from the isolated examples of late 13th- to early 14th-century date to the commoner finds of late 14th-century date. Tall drinking-jugs with rilled necks and a cordon at the shoulder are the commonest form found (Fig. 32, 1). In the early 15th century, however, these were accompanied, or

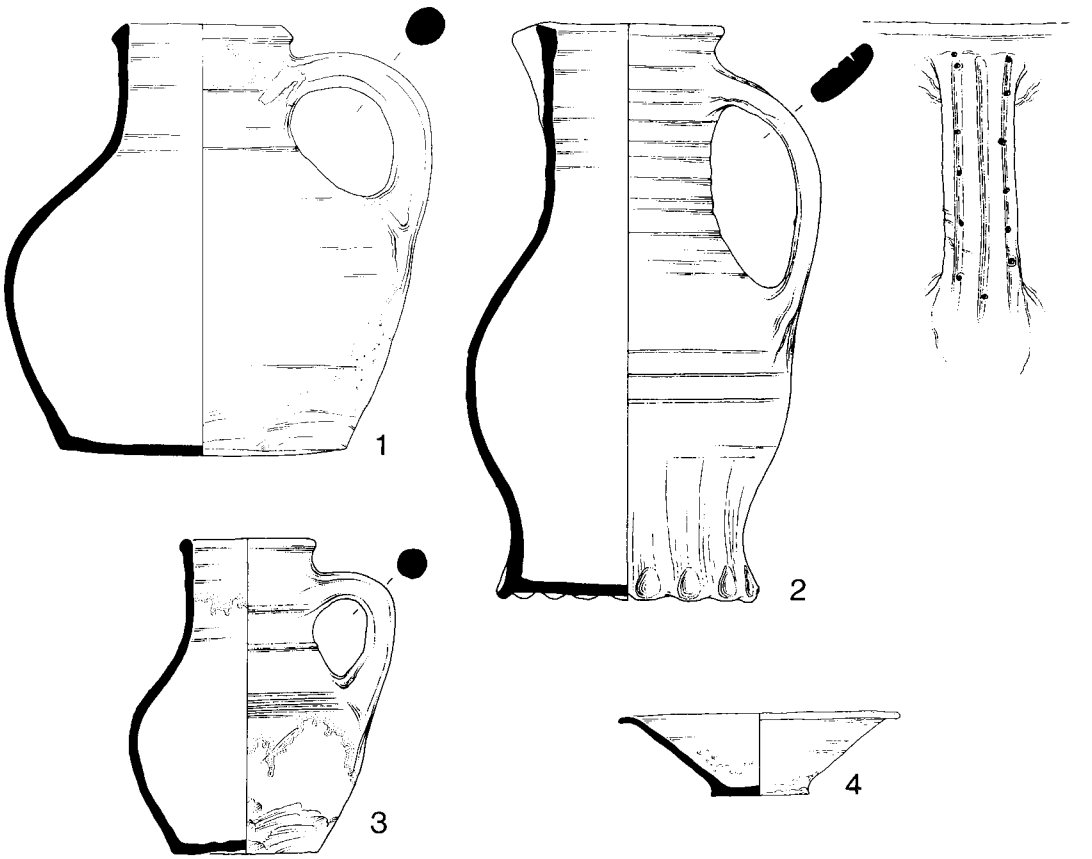

FIG. 24
Mid to late 14th-century Kingston-type ware from London: 1. Rounded jug; 2. Baluster jug; 3. Small rounded jug; 4. Dish. Scale 1:4

replaced, by small beakers with globular bodies and a flaring rim (Fig. 32, 2). Some examples are decorated with applied medallions. Small drinking-bowls also occur in late groups (Fig. 32, 3). Langewehe stoneware 'drinking-jugs' and storage-jars are found from *c.* 1360 onwards and increase in frequency into the early to mid 15th century.[63]

French imports continue to be found in some quantity, especially in the mid 14th century. All are probably Saintonge ware and the mid 14th-century types include polychrome and 'good quality' green-glazed jugs. The *pégau*, a squat, three-handled jug with a large parrot beak and a sparse mottled green glaze, is first found in late 13th-century contexts.

Andalusian Lustreware is found infrequently throughout the 14th and early 15th centuries (Fig. 33, 1–2). The Valencian industry is known to have begun *c.* 1380[64] and there is perhaps one Valencian lustreware vessel from the City, from the Billingsgate watching-brief, found with late 14th-century pottery. In early to mid

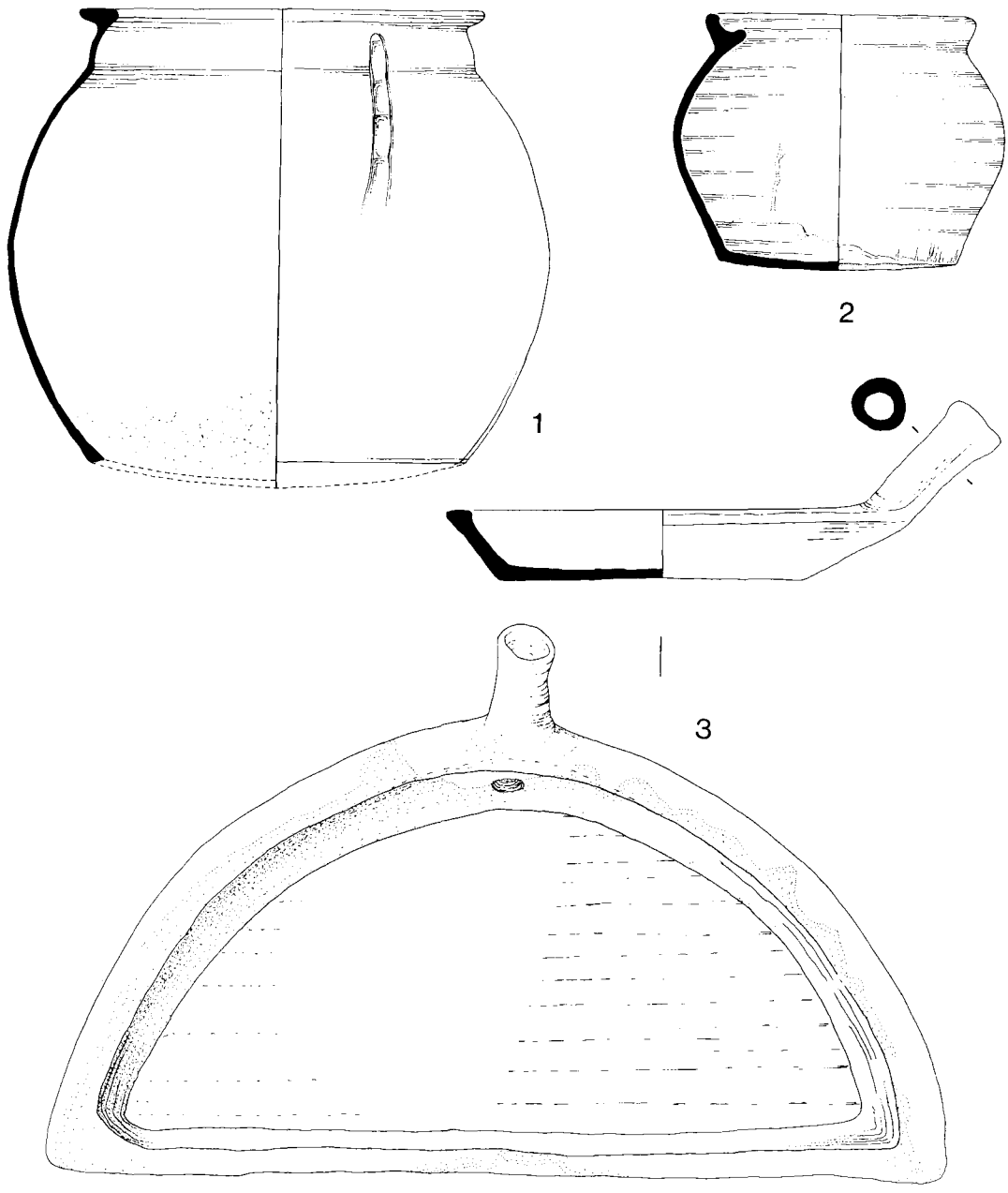

FIG. 25

Mid 14th- to mid 15th-century Coarse Border ware from London: 1. Cooking-pot; 2. Lid-seated ('bifid') cooking-pot; 3. Frying-pan. Scale 1:4

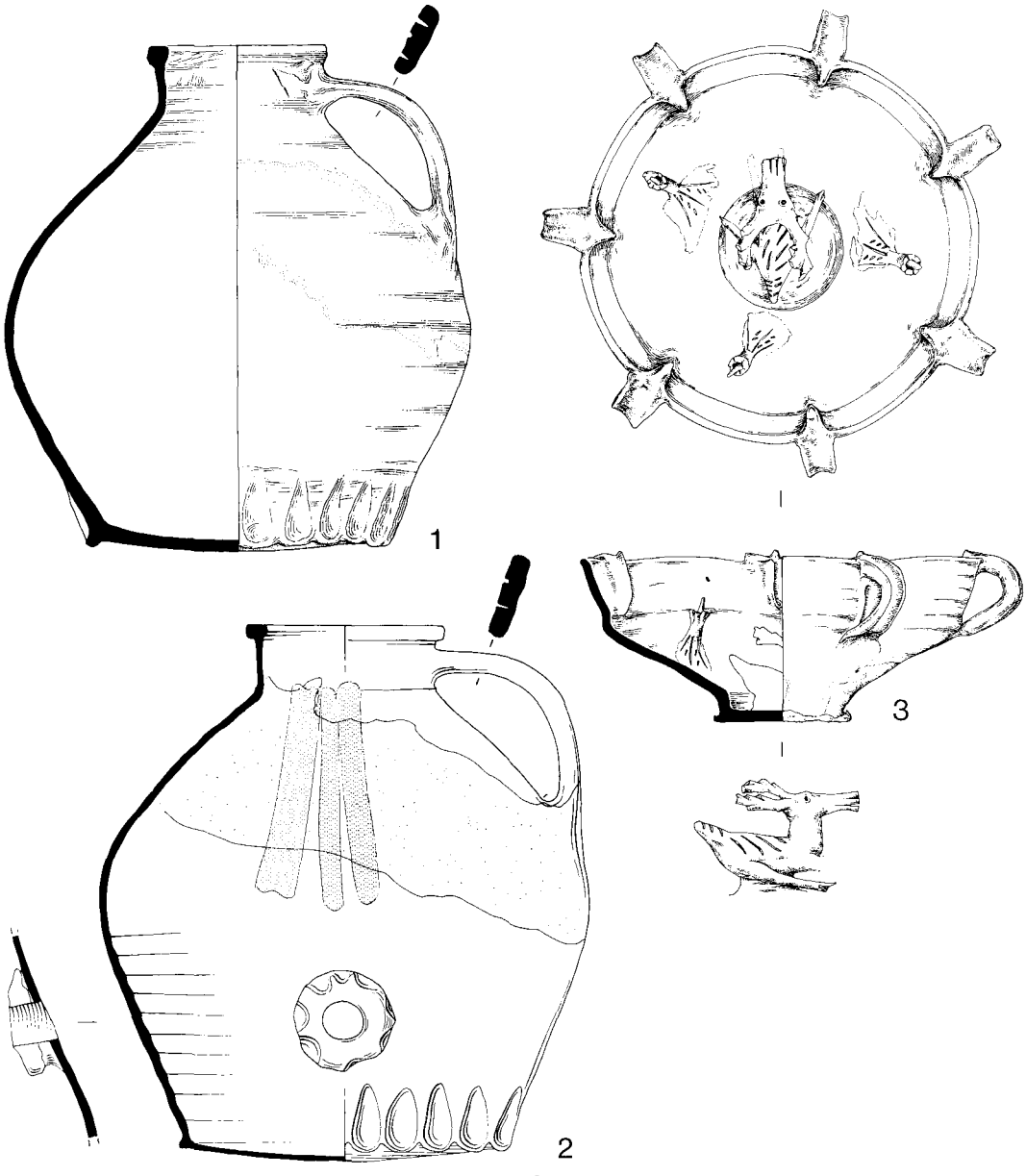

FIG. 26

Mid 14th- to mid 15th-century Coarse Border ware from London: 1. Rounded jug; 2. Bung-hole jug or cistern; 3. Lobed cup containing a stag and trees. Scale 1:4

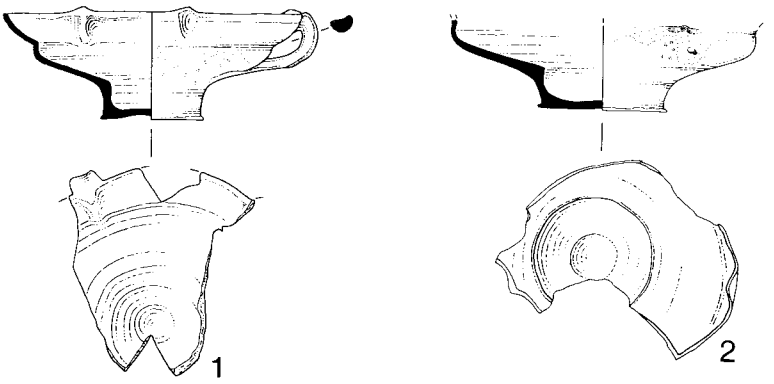

FIG. 27
Late 14th- to mid 15th-century Tudor Green ware from London: 1 and 2. Lobed cups. Scale 1:4

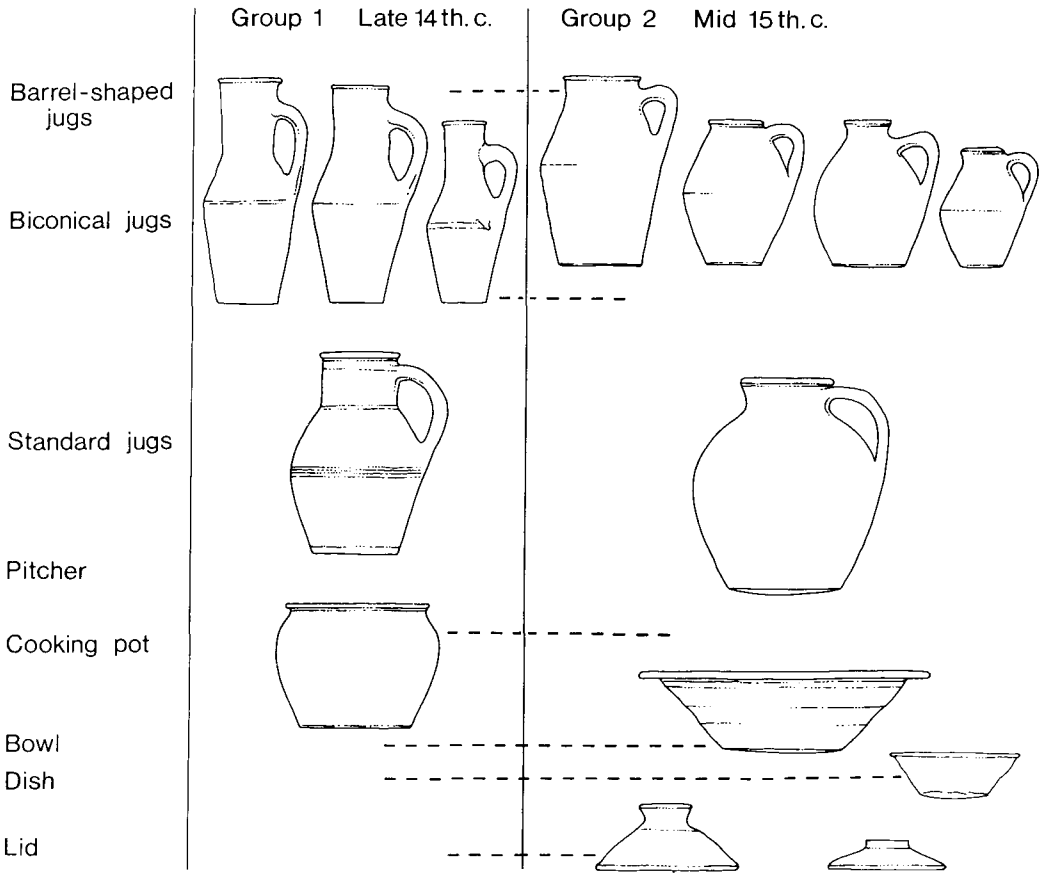

FIG. 28
The main forms of Cheam whiteware (after Orton)

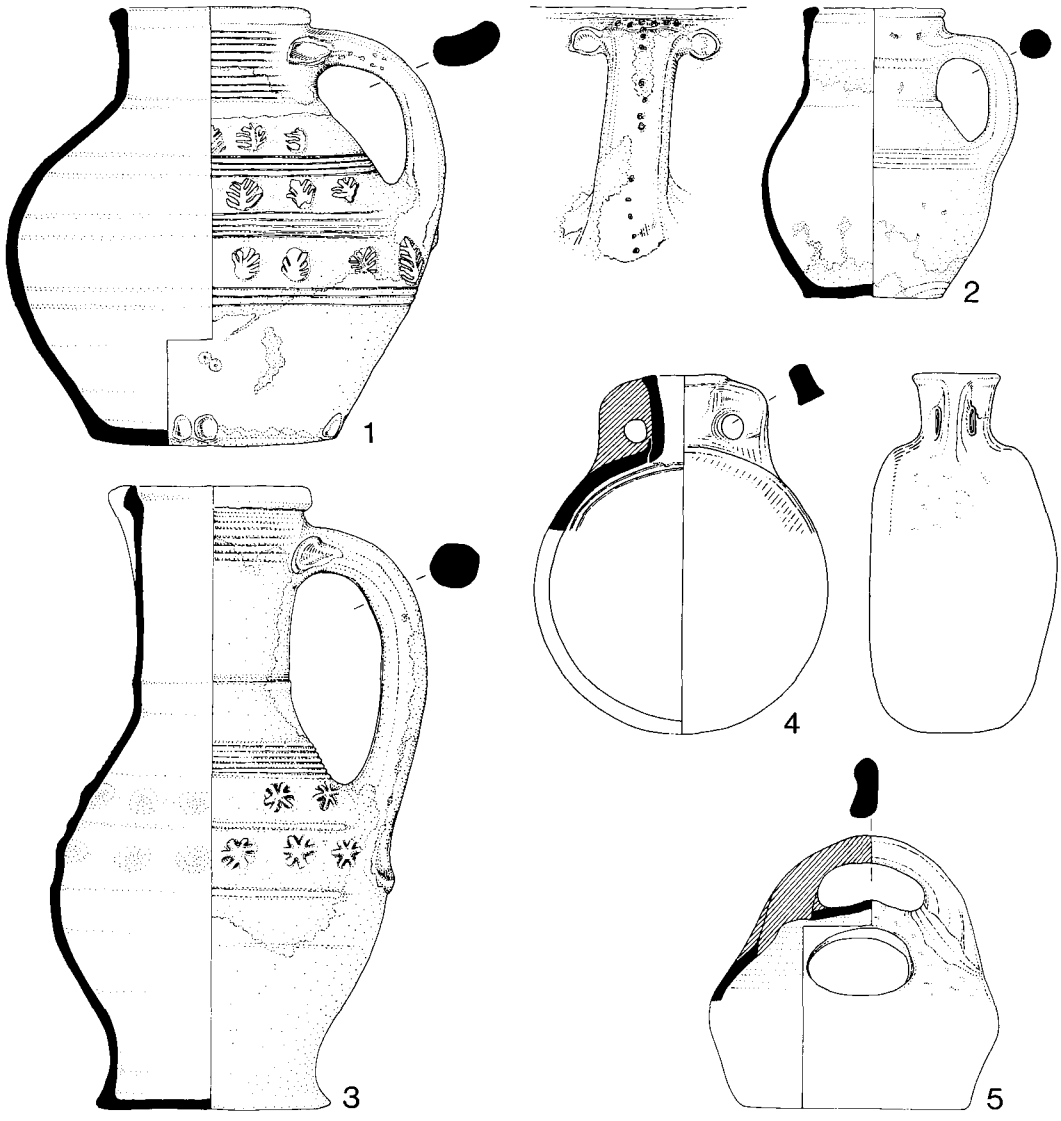

FIG. 29

Late medieval Hertfordshire glazed ware from London: 1. Bossed rounded jug; 2. Small rounded jug; 3. Bossed baluster jug; 4. Costrel; 5. Urinal. Scale 1:4

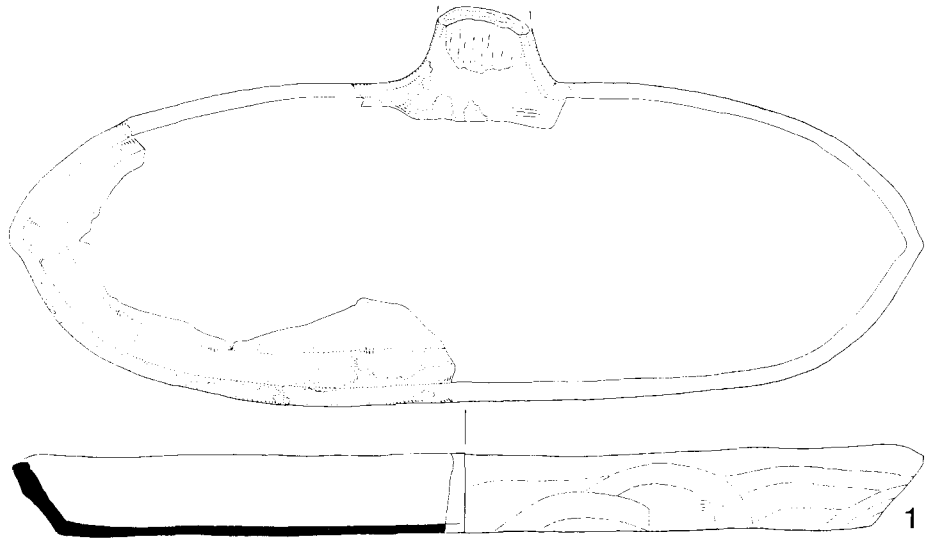

FIG. 30
Late medieval Hertfordshire glazed ware dripping dish from London. Scale 1:4

15th-century groups Valencian Lustreware is commoner than Andalusian Lustreware (Fig. 33, 3–4; Pl. IV, B), although sherds of the latter are found. Samples of the stratified lustreware sherds from London have been subjected to Neutron Activation Analysis by Dr M. J. Hughes, British Museum Research Laboratory. This has shown that the Andalusian lustrewares can be identified even when no fragments of Malagan schist are visible in the fabric. The analyses of the Valencian sherds cluster with those from the kiln site at Manises. An unstratified Valencian bowl, decorated in blue and without lustre, falls within the Valencian cluster but is part of a subgroup of vessels produced at Paterna, a provincial industry.

Red Micaceous ware costrels of S. Portuguese origin first occur in mid 14th-century contexts. In fabric they are identical to the post-medieval vessels which are relatively common on English sites but they often differ in firing. Whereas the later vessels are fired to an even brick red colour these medieval imports have a patchy oxidization with grey and brown surface mottling.[65]

Rare sherds of Mediterranean maiolica occur in 14th- and 15th-century contexts, mainly unidentifiable body sherds with blackened glaze, and a complete white-slipped Italian jug has been found in a late 15th-century cess-pit at Eastcheap (Fig. 32, 7). Syrian or Egyptian Alkaline glazed ware[66] vessels decorated with blue and black are found infrequently in 14th-century and later contexts. They include a fluted bowl from Trig Lane G15 (Fig. 33, 5) and small sherds of jars or albarellos (Fig. 33, 6).

The late medieval period, from the Black Death to the accession of the Tudor kings, is a notoriously difficult period for pottery studies. The reasons for this are not hard to find. In urban excavation sequences it is the late medieval features which suffer most from later destruction. Many properties were less heavily occupied or

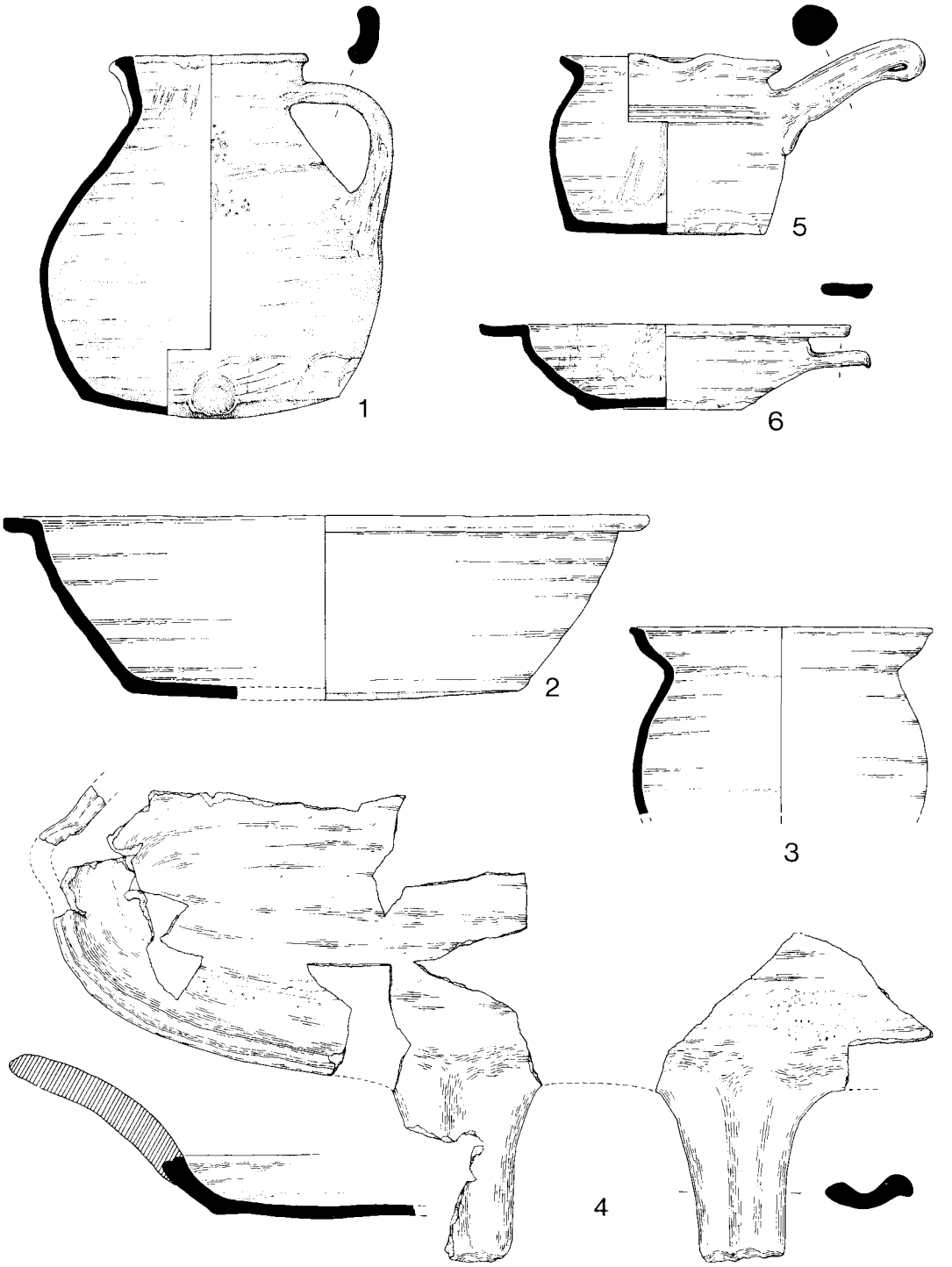

FIG. 31

Early to mid 15th-century Late London-type ware and London slipped ware from London. Late London-type ware: 1. Rounded jug; 2. Bowl; 5. Pipkin; 6. Handled bowl. London slipped ware; 3. Cooking-pot; 4. Two-handled (?) dripping dish. Scale 1:4

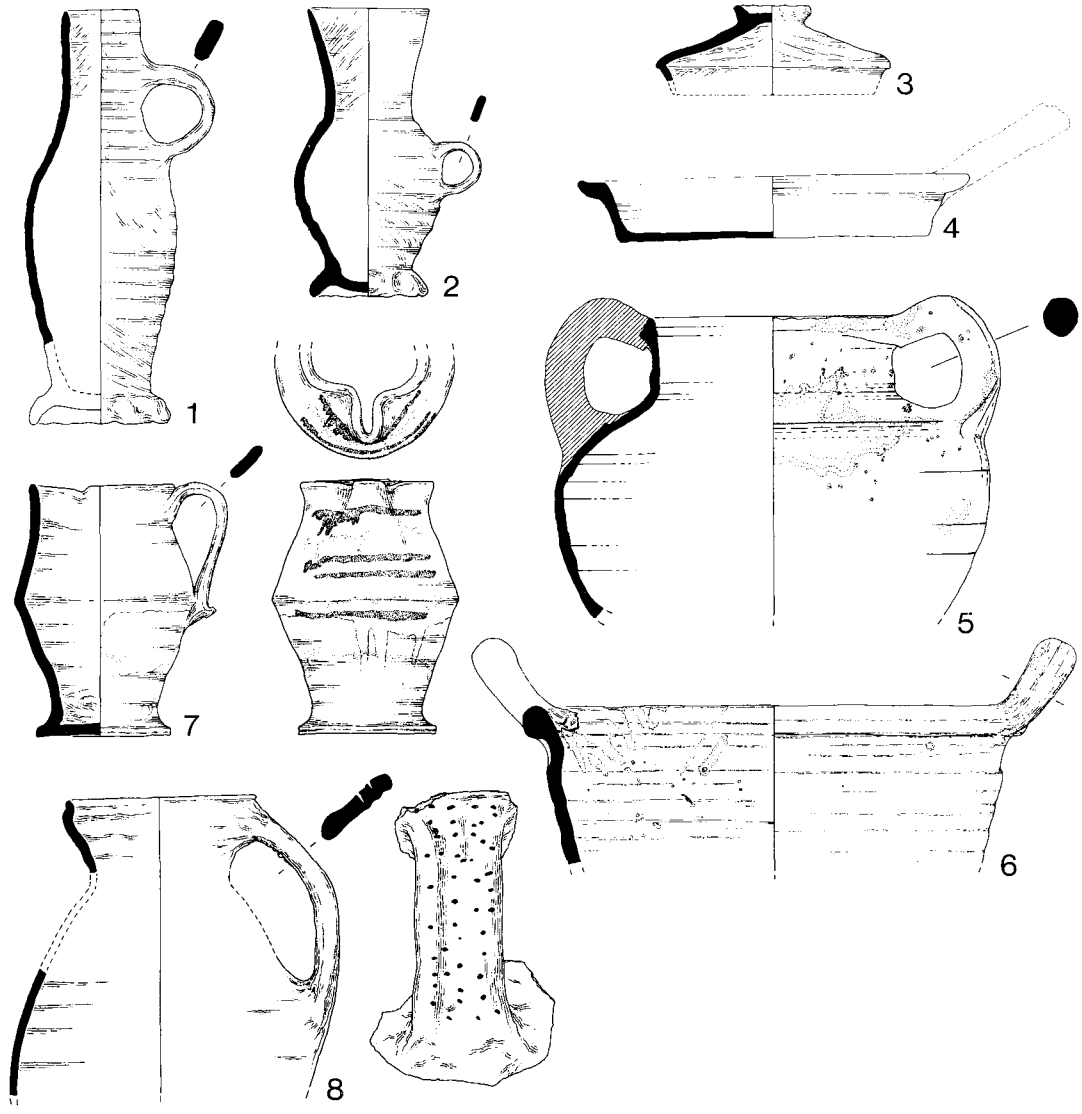

FIG. 32

Mid 14th- to mid 15th-century imported pottery from London. Siegburg stoneware: 1, Drinking jug; 2. Beaker; 3. Lid or dish. Dutch Red Earthenware; 4. Frying-pan; 5. Cauldron; 6. Handled bowl. Italian white-slipped ware; 7. Jug decorated with green (copper) and brown (manganese). Low Countries Greyware; 8. Jug. Scale 1:4

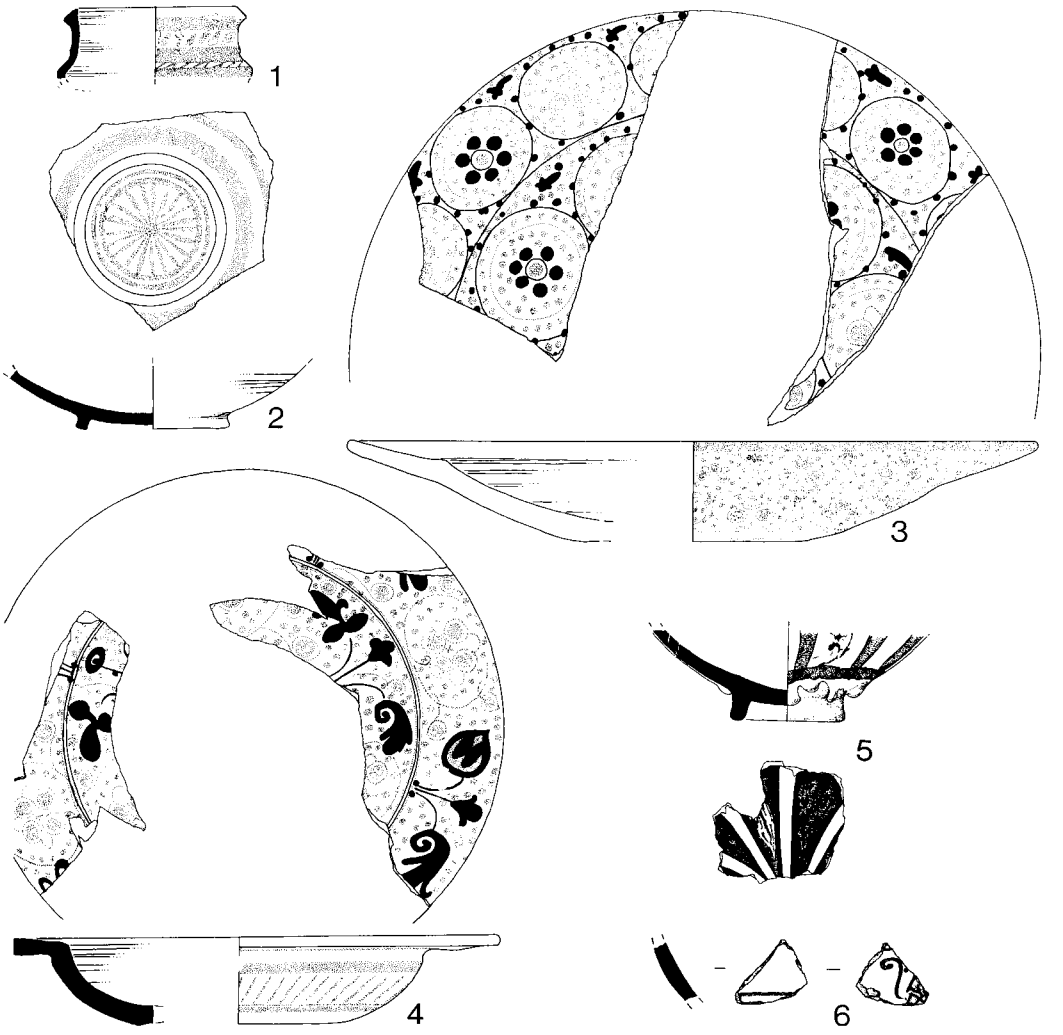

FIG. 33

Mid 14th- to mid 15th-century imported pottery from London. Andalusian (Malagan) Lustreware: 1. Albarello; 2. Bowl. Valencian Lustreware; 3. Plate; 4. Bowl. Alkaline Glazed ware; 5. Bowl; 6. Jar. Scale 1:4

abandoned at this period and the use of stone footings to support timber base plates led to a lesser build-up of stratigraphy in the first place. Similarly, when late medieval contexts are found their absolute date is difficult to determine. Late 13th-century coins of Edward I were still current in the early 15th century while the mint output of the reign of Edward III was so great that many late 14th- and early 15th-century hoards are dominated by mid 14th-century pieces. It is therefore probably the mid 14th- to mid 15th-century groups from the London waterfront which are of greatest importance for the dating of medieval pottery.

Three series of groups can be distinguished (Fig. 23). The earliest series consists of groups containing pottery of types absent from the Ludgate Hill and similar early 14th-century groups. Four such groups are known, of which one, Trig Lane G7, is stratified between G3 (*c.* 1290) and G10 (*c.* 1360), although it is not independently dated (Fig. 23a). The other three are from the Public Cleansing Depot, Custom House and the construction of 'Baynards Castle dock'. Only the last group is dated numismatically and that by three jettons which can be given a *terminus post quem* of *c.* 1302 (or possibly *c.* 1320) from their similarity to the Sterling coinage of Edward I–II.

The remainder of the sequence can be dated by both coins and dendrochronology and is in agreement with the results of studies of the pilgrim souvenirs, jettons, tokens, shoes and pattens. At Trig Lane Groups 10 and 11 are dated *c.* 1360 and *c.* 1380 by dendrochronology (Fig. 23b–c) while the fill of 'Baynards Castle dock' is dated later than 1356 by coins and later than *c.* 1380 by jettons (using the Rigold chronology). The very late 14th-century dump at Swan Lane is likewise dated post-*c.* 1344 by coins, post-*c.* 1380 by jettons, and post-1394 by dendrochronology. Given the nature of late 14th-century coinage, this discrepancy is not unexpected and should not diminish confidence in the jetton dating.

Four large datable groups of early 15th-century date have been excavated. That at Trig Lane, Group 15, is dated by dendrochronology (although the correlation with the earlier Trig Lane sequence is not good) (Fig. 23d).[67] However, even if the dendrochronology is doubtful, the G15 dump is still dated *c.* 1430 or later by the jettons stratified below it (Fig. 22d). The Swan Lane early 15th-century foreshore and dump are dated to *c.* 1426 or later by coins. The Baynards Castle SE. tower group can be dated using documentary evidence to *c.* 1428. The pottery from these four groups confirms that they are roughly contemporary in date.

The most notable feature of mid 14th- to mid 15th-century pottery assemblages from London is the dominance of the Coarse Border ware industry. Whereas in late 13th- to early 14th-century groups Coarse Border ware forms less than 10% of assemblages, by the mid 14th century this had increased to over 50% and by the late 14th century to *c.* 66% of assemblages (whether quantified by sherd count, weight or Estimated Vessel Equivalents). The growth of this Hampshire–Surrey border industry did not affect solely the London area but was a factor in the decline and disappearance of many southern and south-eastern English industries. Unfortunately, there were probably many local factors determining the ability of these industries to survive competition from the Coarse Border ware industry and the point in the local ceramic sequence at which Coarse Border ware begins to dominate assemblages may not be contemporary throughout the south-east.

Assemblages from sites in the London area dating from the mid 14th century to the mid 15th century (and quite probably the remainder of the 15th century) will contain mainly sherds of Coarse Border ware vessels whose methods of manufacture and range of forms hardly change. Nevertheless, it is possible to assign large contemporary assemblages within this period to one of three groups using the presence or absence of minor local wares and imports.

i. Those in which Late Medieval Hertfordshire glazed ware, Dutch Red Earthenware and Siegburg stoneware are present together with types common in the late 13th to early 14th centuries (such as Kingston-type ware, London-type ware and Mill Green ware). These date to the middle of the 14th century, are later than *c.* 1320 and earlier than *c.* 1360.

ii. Those in which London-type ware and Mill Green ware are absent while Langerwehe stoneware, Low Countries Greyware, Tudor Green ware (rarely) and Cheam whiteware drinking-jugs are present. These date to the late 14th century, are later than *c.* 1340 and earlier than *c.* 1420.

iii. Those in which Kingston-type ware is absent while Cheam whiteware barrel-shaped vessels, Late London-type ware and Valencian Lustrewares are present. These groups will also contain lid-seated Coarse Border-ware vessels and a higher quantity of Tudor Green ware. These date from the early to mid 15th century, are later than *c.* 1380, but may include assemblages deposited up to *c.* 1480.

The sources of imported pottery in the mid 14th to mid 15th centuries show a shift in emphasis from south-western France back to the Rhineland and Low Countries. Vessels from southern Europe and the Mediterranean are present throughout the period in as great or greater quantities than in the previous periods, but in comparison with these northern European imports they are very poorly represented.

CHANGES IN POTTERY FORMS

The ceramic sequence for London can be used to study trends in the use of pottery, such as the range of forms produced and the sources from which pottery was obtained. Numerous different forms of vessel were used in medieval London, differing in size, shape, method of manufacture and decoration. Nevertheless, the main changes in pottery forms through time can be clearly seen by examining the relative quantities in which identifiable sherds occur (Fig. 34). By far the clearest trend visible is the introduction, during the 12th century, of the jug and a corresponding relative decline in the number of cooking-pots produced. It will be noted, however, that if all cooking vessels are counted, including specialized forms with handles, feet or an open profile (frying-pans and bowls), then there is no evidence for a further decline in the late medieval period. In other areas the relative quantity of cooking-pots declined sharply in the late 13th or 14th century, perhaps as a result of competition from metal vessels.

In some areas an increase in cooking-pot capacity has been noted during the 11th or 12th centuries. Too few complete profiles can be reconstructed from stratified assemblages for this trend to be examined directly in London but sufficient

complete vessels exist of known type and date to show that no major change took place. The main reason for this appears to be that although Late Saxon Shelly ware cooking-pots were wheelthrown they were produced with the same squat profile as the handmade early medieval vessels of the later 10th to 12th centuries. In other areas, by contrast, late Saxon wheelthrown vessels have a taller, 'jar-shaped' profile. This difference in profile may be partly responsible for the suggested difference in capacity.

The distinctive globular cooking-pot with a flat-topped rim (found in Shelly Sandy ware, South Hertfordshire greyware, Mill Green ware and Surrey whitewares) first appeared in the mid 12th century. Most earlier vessels had an almost cylindrical body, curving in at the shoulder, combined with a rolled-out or everted rim. This change was probably partly a change in fashion but it was also related to the method of manufacture since it is easier to produce the cylindrical form using coiling techniques.

Specialized cooking-pots, having added handles, and sometimes feet and pouring lips, were first made in England in the early 13th century, although imported Blue-Grey ware handle vessels were in use throughout the previous century. Small pipkins, with no feet and a horizontal handle, were produced in London-type ware, Kingston-type ware, Late Medieval Hertfordshire glazed ware, Cheam whiteware and Coarse Border ware (Figs. 17, 4 and 31, 5). Larger pipkins, with three feet, and pottery imitations of metal cauldrons first appeared in the late 13th century in London-type and Kingston-type wares (Figs. 19, 4 and 32, 5).

Oval dripping dishes, with a single side handle and two pouring lips, were produced in London-type ware from the early 13th century and subsequently formed part of the output of the Kingston-type and Late Medieval Hertfordshire glazed ware industries (Fig. 30). By the early 15th century dripping-dishes were mainly imported from the Low Countries, although Late London Slipped vessels were still produced locally, one example possibly having two handles (Fig. 31, 4).

Deep bowls, often with sooted exteriors, occurred first in the late 13th century as part of the output of the Coarse Border ware industry (Fig. 21, 2). This move from enclosed to open cooking vessels has also been noted in the later medieval period in the Severn Valley.[68] Shallower dishes, also sooted and sometimes with socketed handles, form a small element in late Saxon assemblages (in both Late Saxon Shelly and Early Medieval Sandy wares) but became rare finds (in coarseware fabrics, such as Shelly Sandy ware and South Hertfordshire greyware) until the late 13th century, when they are known as 'frying-pans'. They were produced in Coarse Border ware and Dutch Red earthenware but were never very common (Figs. 25, 3 and 32, 4). Much smaller dishes, similar in form to wooden examples, are found in London-type ware and all the Surrey whitewares from the mid 14th century onwards. Some were divided into compartments by a central wall and there is little doubt that they were used at table, for sauces or condiments (Figs. 14, 28 and 32, 3).

Spouted pitchers, mainly of cooking-pot or jar form with tubular spouts and handles, are found from the 10th to the mid 12th century. The appearance of the vessels differs considerably between wares, due, no doubt, as much to the varying methods of manufacture as to any variation in function. There is a big typological

difference between the late Saxon wheelthrown spouted pitchers found in Late Saxon Shelly ware and Ipswich Thetford-type ware (Figs. 3, 3 and 8, 5) and those found in the early medieval handmade wares. The wheelthrown types, which include glazed Stamford ware vessels (Fig. 9, 1–2), have a large tubular spout attached to the rim and between one and three handles. On the handmade early medieval vessels the spout is free-standing and placed on the shoulder (Figs. 4, 4 and 5, 2–3) while no multihandled vessels are known. There is a third group in which vessels have a free-standing spout but no handle. The rim and neck are narrower and they were not therefore produced by adapting the basic shape used for cooking vessels. Examples are known in Coarse London-type ware and South Hertfordshire greyware suggesting a mid to late 12th-century date for this type, confirmed by rare stratified examples (Fig. 5, 6 and Fig. 14).

Jugs, with a neck, a handle and often a pouring lip or spout, are found first during the mid 12th century. Several readily recognizable forms exist and can be recognized among the complete vessels in the Museum of London reference collection. However, no adequate method of describing and comparing jug forms has yet been devised and classification is extremely arbitrary. Individual attributes of interest and decorative styles and techniques can be easily studied using archaeological material and this forms the basis for the London medieval pottery type series. Nevertheless, it is the form of the vessel, and its size, which are much more relevant to its function and such characteristics are very difficult to identify, let alone quantify, in sherd collections.

The earliest jugs used in London mainly have a rounded profile (Fig. 16, 1), a form thought to have originated in northern France. Several centres were producing these vessels in the SE. Midlands from the mid 12th century onwards. In southern England, however, London is unique in the high quantity of jugs used at this date. Rounded jugs remained a common product of the medieval pottery industries supplying London throughout the period. In the London-type industry they were produced in the early to mid 13th century, using the same decorative styles and techniques as the Rouen style and northern French vessels. During the later 13th to early 14th centuries rounded jugs were not popular but they were the commonest form produced in the Kingston-type industry during the late 14th century and in the Coarse Border ware industry into the mid 15th.

Several other jug forms common in the later medieval period were also being produced in the London area and S. Hertfordshire by the end of the 12th century. These types include the squat and baluster forms (Fig. 15) which make their first appearance elsewhere in the late 13th century. Slender baluster jugs with a narrow waisted base were made in a number of local industries, starting with London-type ware in the late 12th century. The form was commonest in the late 13th and early 14th centuries but late 14th-century examples are known. Small rounded jugs are another type first seen in quantity in the late 13th century. They are much smaller than the baluster or large rounded jugs and probably had a distinct function. Jugs of this size and shape are also found in several late 14th-century wares (such as the Late Medieval Hertfordshire glazed ware, Cheam ware and Kingston-type ware). Conical or pear-shaped jugs are found in London-type ware in the late 13th to early 14th

centuries, often with 'polychrome' decoration. They are the main form produced at Mill Green and are also found in the Kingston-type and Coarse Border ware industries. The presence of zones of grooves and raised bands running around the body at intervals suggests wooden prototypes for this form.

Several small jug-shaped vessels were probably too small to be used for serving liquid. They fall into two groups, London-type ware or, more rarely, South Hertfordshire greyware. These vessels are usually unglazed and poorly finished. They may have been rough measures, perhaps to be used in the kitchen.[69] The second group, found in the Surrey whitewares, Late Medieval Hertfordshire glazed ware (rarely) and Rhenish stonewares from the mid 14th century onwards probably functioned as drinking vessels (Fig. 32, 1). Cheam whiteware jugs tend to be made in three sizes sharing the same forms. The largest of these are interpreted as storage vessels, the intermediate as 'break of bulk' vessels (i.e. used in serving but too small for practical storage) and the smallest as drinking vessels (Fig. 28).[70] Jugs of this type came into common use at the end of the 14th century.

Lobed cups were produced in all the Surrey whitewares by the late 14th century and waster sherds are known from both Kingston and Cheam.[71] Most vessels were simple, two-handled cups although elaborate vessels with central figures, such as an equestrian figure or a stag, have been found (Fig. 26, 3). Although unstratified, the existence of an example made in Kingston-type ware shows that this elaborate form was produced by the late 14th century.[72] By the early 15th century, Tudor Green ware vessels outnumbered those in other fabrics.

Other vessel types, such as aquamaniles, lamps, watering-pots and curfews, are found infrequently in the London sequence (Fig. 34, bottom). Of particular interest are the early dates by which some of these types were being made. Parts of a London-type ware chafing-dish were found in the Seal House waterfront III group, but were initially thought to be a post-medieval intrusion. However, there is now sufficient evidence to show that chafing-dishes, similar in shape and construction to those of the Tudor period, were being produced in London-type ware in the early 13th century (Fig. 14). They appear to have been a limited, exotic product at that time and are not found again until the late 14th century, when a few examples in Tudor Green ware are known. Aquamaniles occur in London-type ware from the early 13th century, whereas examples in other areas of southern England are of late 13th-century or later date.

Both roof finials and elaborate castellated louvers were being produced in London-type ware and Coarse London-type ware by the late 12th century. Again, examples from other areas of southern England are of late 13th-century and later date. Yet despite the early use of ceramic roof furniture made in the same fabrics as were used for pottery vessels (and paralleled by the production of 12th-century flat roof tiles),[73] London never had the wealth of later medieval decorated ridge tiles which are prevalent on many urban sites in southern England. It is not uncommon to find fragments of Coarse London-type louvers which from their fabric are unlikely to have been made later than *c.* 1200, in early 15th-century or later contexts. Perhaps there were sufficient louvers made in the late 12th century to supply the London market for the rest of the medieval period.

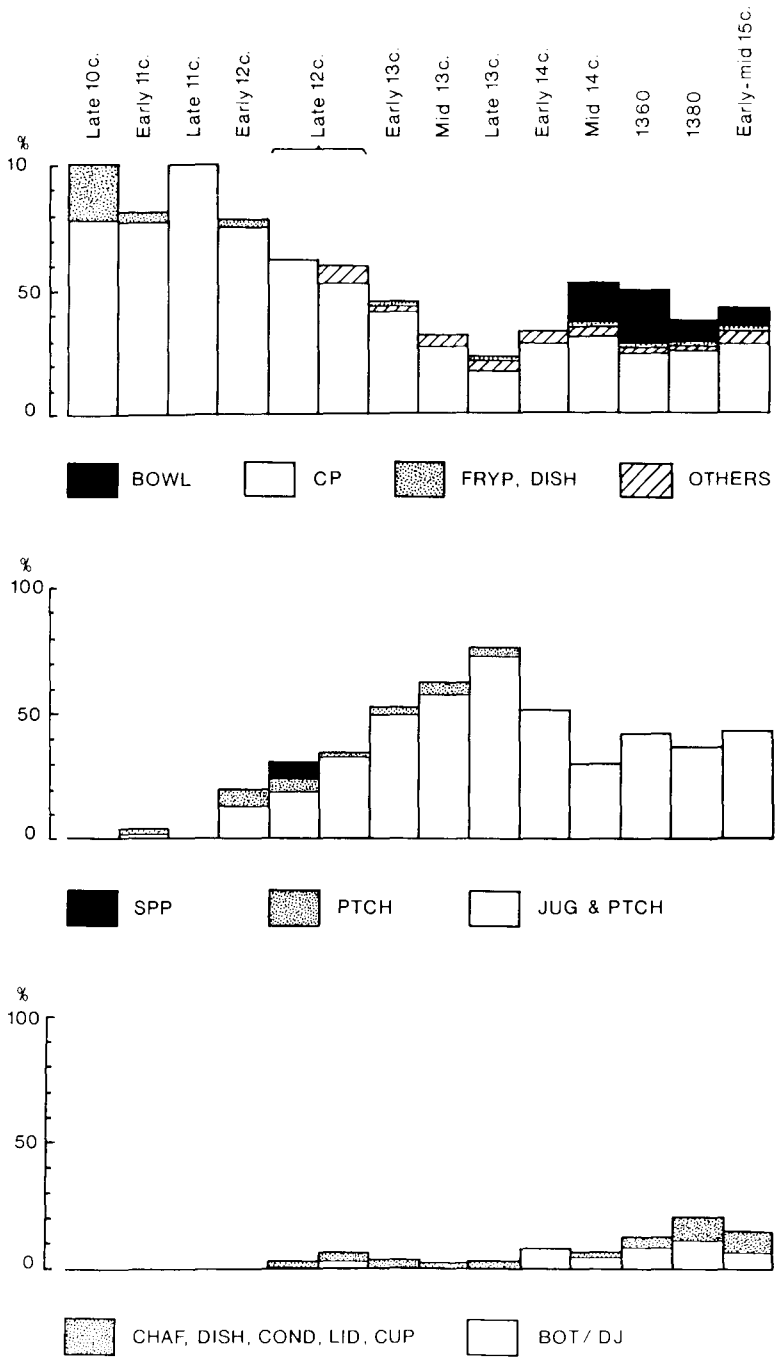

FIG. 34

The relative frequency of identified vessel forms in London by rim percentage (EVEs). Top: Cooking vessels. Middle: Serving vessels. Bottom: Minor forms

THE SOURCES OF LONDON'S MEDIEVAL POTTERY (Figs. 35–36)

To identify the sources of the pottery used in medieval London is a long process but one which, in conjunction with the study of pottery made in London or distributed through London, can be used to demonstrate the stages by which the hinterland of London developed. There are severe problems in re-creating the sequence of medieval pottery use in some areas of the south-east of England and there are large areas of the immediate hinterland, now within Greater London, which are a complete blank. It is also potentially interesting to compare the London sequence with those of other large towns, for example comparing the range and quantity of continental imports found, but further problems are encountered if this is attempted. Few other English towns have as complete a sequence as London and for the late medieval period there are almost no comparable data. Where large stratified collections exist there are usually problems in determining the quantity of residual pottery present so that one has to restrict quantitative analysis to a few, possibly unrepresentative, features which can be demonstrated to have been filled with a

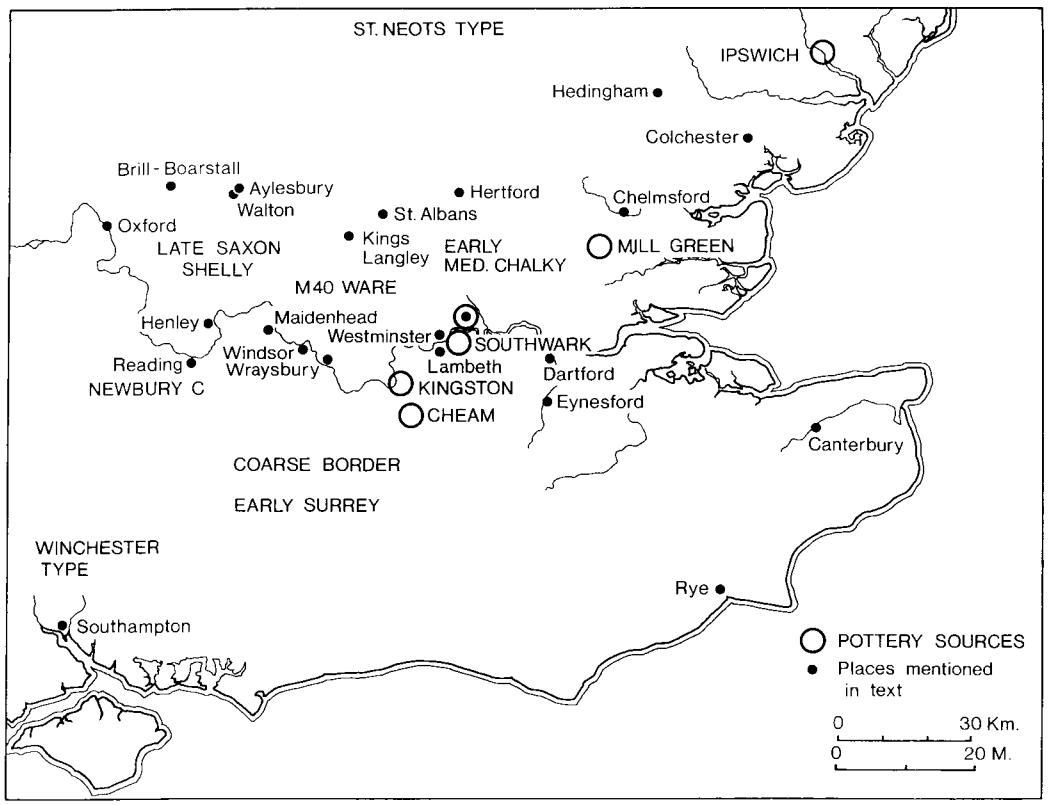

FIG. 35
Sources of late Saxon and medieval pottery found in London

contemporary pottery assemblage. The following section therefore makes no attempt to compare the London sequence quantitatively with those from other sites, while recognizing that it is probably the study of quantitative differences between sites which will reveal details of local trade of most interest in the wider study of the medieval economy.

To the north of the Thames pottery was at one time or another obtained from localities as far west as Oxfordshire and as far east as central Essex. Late Saxon Shelly ware is thought to have been made close to Oxford and if it is accepted that there was a substantial trade in pottery from the Oxford region to the lower Thames in the 10th century, it is perhaps surprising that the later wares which supplied Oxford are rarely found in the London area. Some of these types, for example the Oxford-area tripod pitchers of the late 12th and early 13th centuries and the decorated jugs of the Brill and Boarstall kilns on the Buckinghamshire border, are well-made products which were widely traded.

Immediately to the north and north-west of London, as shown by sites such as Walton and Aylesbury in Buckinghamshire and St Albans in Hertfordshire, St Neots-type ware was in use during the 10th and 11th centuries. Few sherds of this ware have been found in London, showing only a casual trade with the area. In the late 11th and early 12th centuries two wares found in London probably came from this area. Firstly, some of the miscellaneous handmade sand-tempered cooking-pots from London are visually similar to vessels from St Albans. These vessels were probably produced in the same centres as the later wheel-thrown South Hertfordshire greywares. Also common in St Albans are handmade cooking-pots tempered with chalk and flint, probably to be equated with Early Medieval Chalky ware in London. Stamford ware, if carried overland to London rather than round the coast, would also have travelled through Hertfordshire. The quantity of Hertfordshire and/or Middlesex products found in London rises considerably during the late 12th and 13th centuries with the introduction of wheelthrown South Hertfordshire greyware. Stamford wares of this date occur in London but are very rare. Trade in pottery to London probably continued into the 14th century on a small scale and Late Medieval Hertfordshire Glazed ware is evidence for its continuation during the late 14th and into the early 15th century.

Evidence for a complementary trade in London-area pottery to the north is limited. The majority of late 12th-century glazed ware sherds at Hertford are of London-type ware.[74] At St Albans, late 12th-century glazed wares were handmade tripod pitchers but a few 13th-century London-type jugs have been noted, together with a single late 13th- or early 14th-century Kingston-type jug. To the east and north-east, in Essex, the first pottery traded to London was Mill Green ware from the late 13th to the mid 14th centuries. Other distinctive wares are known, especially Hedingham ware, which in range of decoration and date is similar to London-type ware, but no examples of these types have been found in London. Similarly, few examples of late 14th-century Mill Green ware are known from London. There is a trade in early 13th-century London-type, and, later, Kingston-type and Coarse Border wares through London to Essex but except at sites in the extreme south-west of the county they occur only as isolated vessels.

To the south-east of London the pottery used in the late 11th and early 12th century was mainly obtained from local sources not supplying London, although a few vessels from Dartford may be of London Early Medieval Sand and Shell ware. By contrast, in the later 12th century through to the early 14th most of the glazed wares used in the area are either of London-area origin or were traded through the City. In the later medieval period evidence is sparse but seems to show that the area once again relied on other sources for its pottery.

In E. Kent distinctive locally produced glazed wares and coarsewares, such as those produced at Tyler Hill, were used but not traded to London. Finds of London area vessels, mainly London-type jugs of late 12th century and later date, are found mainly at coastal sites although they form a high proportion of contemporary glazed wares at Canterbury.

To the south of London, at Southwark, the pottery sequence is, not surprisingly, almost identical to that in the City. As one moves south or west, however, differences are soon visible. Even at Lambeth the range of late 11th- and 12th-century coarsewares present is different from that in the City, although very similar to that found at sites in Westminster which lie immediately across the Thames. Excavations at Merton Priory have produced a few sherds of Early Medieval Sand and Shell ware which show a London connection in the 11th or early 12th centuries. At Kingston, too, before the inception of the local whiteware industry, there is evidence for the use of London-type jugs, although most of the pottery used came from other sources.

Late 11th- and early 12th-century Early Surrey coarseware is common in the extreme west of Surrey and NE. Hampshire but occurs infrequently on sites in western Surrey. This distribution implies that the ware was being carried to the Thames and then by river direct to London. Local products were used in W. Surrey in the late 12th to early 14th centuries, some of them being glazed whitewares. However, few of these wares occur in London although there is evidence for the occasional use of London-area products in S. and W. Surrey. Excavations at the production sites of Earlswood and Limpsfield and at occupation sites in Reigate and the surrounding area show that the extreme south-east of Surrey was neither regularly receiving pottery from the London area nor exporting Earlswood ware to London.

In the late 13th and 14th centuries, from *c.* 1250, the Kingston area was one of the main sources of pottery for London and distribution evidence shows that Kingston-type ware was traded through London to sites in Essex and Kent. By the late 14th century, however, the Kingston area industry was in decline, following the rapid rise of the Coarse Border ware industry of W. Surrey. Despite this, Kingston-type ware was still made and traded to London until the end of the 14th century while a totally new industry, at Cheam, began production in the late 14th century. There was even a rise in the quantity of Cheam ware used in London in the early 15th century.

The Cheam and Coarse Border ware pottery industries co-existed throughout the 15th century, supplying both London and a wide surrounding area. Although there may have been some redistribution through London, for example along the N. bank of the Thames estuary, the distribution of Cheam white ware suggests that it was mainly traded from the production sites themselves or from nearby markets.

Further west, only a few vessels of 12th-century 'M.40' ware and late 12th-century Newbury C tripod pitchers are found in London, although there was a trade up-river as far as Henley-on-Thames in London-type jugs and Shelly-Sandy ware cooking-pots.

COASTAL AND OVERSEAS TRADE (Fig. 36)

A few London-area products have recently been recognized at distant sites most readily accessible to London overland, for example Gloucester and Hereford. These sherds, of late 12th-century London-type jugs, occur in extremely small quantities but do show that most of lowland Britain would have had access to London-type ware in small quantities and that the influence of these vessels on local pottery production could have been as strong, for example, as that of the better-known

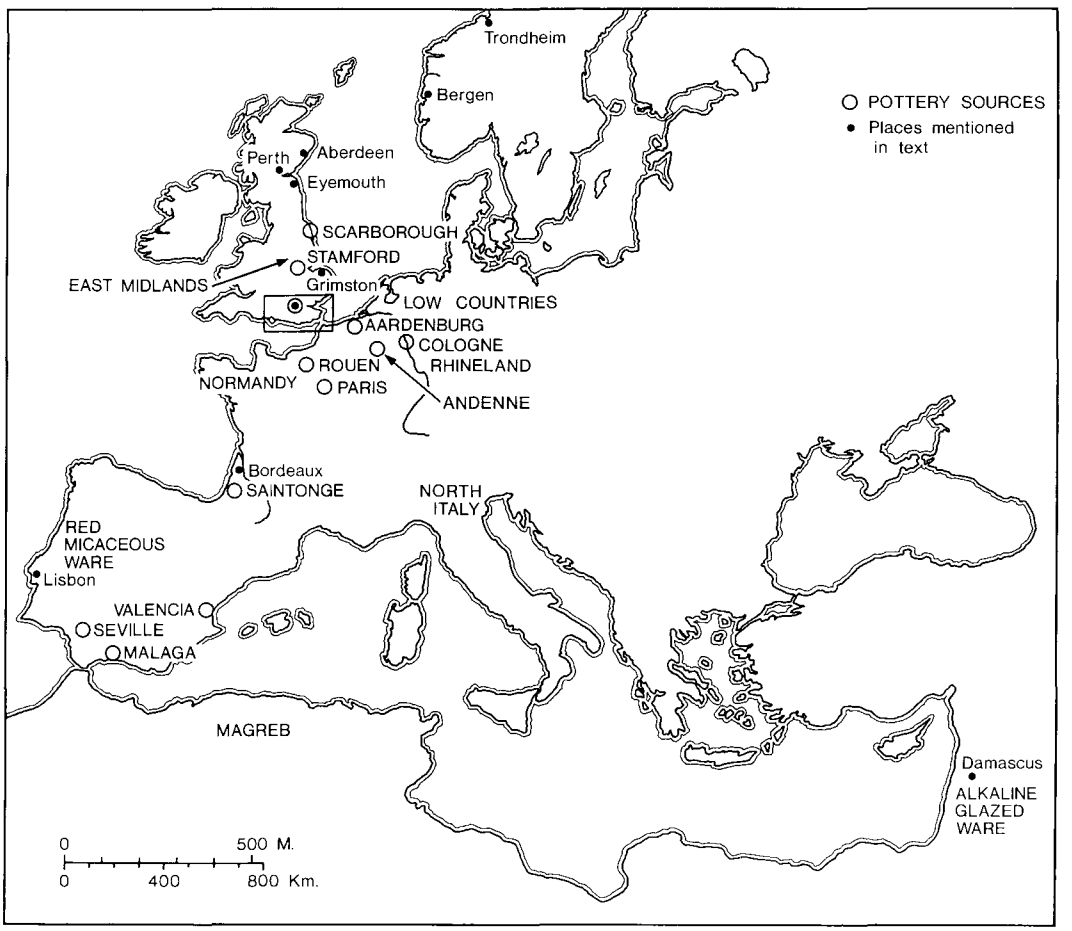

FIG. 36
Sources of late Saxon and medieval pottery found in London (Rectangle shows extent of Fig. 35)

products of Stamford. Some reciprocal movement of pottery from inland sites to London may have taken place but must have been on a much smaller scale than the trade of London-type ware. For example, even high quality wares such as Stamford and Winchester-type wares in the late 11th century are found in remarkably small quantities in London.

London-area pottery reached an even wider area through coastal shipping, especially in the late 12th century. The relative quantities of London-type ware at different coastal sites have not yet been determined but there are clear differences in the range and date of types between sites. For example, Exeter, although not itself a port, has produced several London-type late 12th-century jugs while Southampton, a major port, has not produced any.[75]

Recent excavations at sites along the E. coast of Scotland have produced large quantities of 12th-century and later pottery. The glazed wares from a site in Perth, dating to the late 12th century, consisted almost totally of London-type jugs. Smaller quantities of London-type jugs of the early 13th century are to be found in eastern Scotland, for example at Aberdeen and Eyemouth (Berwickshire), but there is no evidence whatsoever for any London-area pottery of the later 13th century or later reaching the country. This distribution pattern must indicate direct transportation of cargoes including London-type ware to eastern Scotland, since much less London-type ware is found at English E. coast ports. A similar trade probably existed with Scandinavia. Excavations at Bergen and Trondheim have produced quantities of English pottery, amongst which sherds of London-area products are to be found. Cataloguing and analysis of this material is still in progress and the relative quantity and date range of these exports cannot yet be given.

Both Scotland and Scandinavia had little or no indigenous pottery production during the time when London-area products were imported. No imports of London-area wares have been reported from areas of western Europe whereas good or better quality pottery was available locally, although one would expect the provisions of the various campaigns of the Hundred Years War to have included English pottery.

Conversely, there is remarkably little pottery in London which probably arrived there through coastal trade. Ham Green ware and other west country products were widely traded through Bristol. There was a large industry in N. Devon, whose products reached S. Wales. Late 13th-century Rye ware jugs occur, for example, on coastal sites in Kent. There was an extremely productive, if low quality, pottery industry at Grimston whose products traversed the North Sea, and London-type wares occur in the main port for Grimston ware, at Kings Lynn. No vessels from any of these potteries have been found in London, even though they were produced in areas which both documentary and archaeological evidence testify enjoyed substantial trade with the capital.

There are only two known examples of pottery traded along the coast to London. Ipswich supplied the majority of pottery used in the mid-Saxon settlement along the Strand and small quantities of Ipswich Thetford-type ware were used in the City in the 11th century.[76] There is thus a hiatus in the Ipswich trade during the 10th century. Recently, a medieval industry has been recognized in Ipswich, at Fore Street, but the products of the late 13th- or 14th-century kiln are so similar in visual

appearance and decoration (but not in form) to late 12th-century London-type jugs that there is little chance of recognizing medieval Ipswich imports in London from sherd material.[77] The other example is Scarborough ware, found in London mainly in mid 13th- to early 14th-century contexts.

Imports from the Rhineland and Meuse valley are common finds in London. The earliest examples, mainly red-painted vessels and a few possible sherds of Blue-Grey ware, date from the late 10th or early 11th century. By the late 11th century Blue-grey ware was definitely being imported, as were Andenne-type yellow/brown glazed pitchers although the majority of finds were still unglazed red-painted vessels. This range of imports continued through the 12th century, and is exemplified by the large Dowgate assemblage. Small quantities of Red-painted ware and probably also Andenne-type ware were being imported during the later 12th and early 13th-century groups. By the early 14th century, rare sherds of Siegburg stoneware are found although the main influx began in the mid 14th century. Langewehe stoneware is found from *c.* 1360.

Pottery from the Low Countries is first found in London in the late 13th century, despite the fact that the Rhenish imports must have travelled through the Low Countries to reach London. Both slip-decorated Aardenburg ware and plain Dutch Red Earthenware vessels are found, but both are rare. As with Rhenish stonewares, there was a sharp increase in the mid 14th century and a steady growth in their relative frequency during the late 14th and early 15th centuries.

Imports of pottery from northern France are among the most common types found in late 10th- to mid 13th-century groups but there are significant differences between the quantity and range of imports found in London and those, for example, from excavations in the medieval town at Southampton. There, the overall frequency of northern French pottery is much greater than in London. Early medieval imports to Southampton consist of fine, wheelthrown cooking-pots, often with lid-seated rims. This ware (from the Beauvaisis?) has not been recognized in London while in the later 11th to early 13th centuries the majority of the French wares found at Southampton are of Normandy Gritty ware or glazed vessels with a similar but finer fabric. These types are uncommon, though present, in London.

The London finds consist in the late 10th to early 12th centuries of rare yellow-glazed vessels and, from the late 12th century, of Rouen ware and 'North French Monochrome' jugs, probably all from the same source.

In the late 13th century, northern French pottery rapidly fell out of use in London, although it is to this period that the one jug probably of Parisian origin belongs. Saintonge ware jugs first appear in groups of *c.* 1250, and by *c.* 1270 form the majority of French whitewares. A few sherds of jugs with decoration cut through a brown slip in *scgraffito* have been found in mid and late 13th-century contexts and are thought to be of SW. French origin. Outside London, the shift to south-western French wares does not seem to have been so pronounced. For example, at Southampton complete Rouen ware jugs have been found in association with the SW. French wares. The importation of Saintonge pottery into London was probably continuous from the late 13th to the early 15th century, with a marked decline in frequency in the late 14th century.

FIG. 37

Table showing occurrence of coins, tokens and jettons in selected London assemblages

	Coin	Token	Jetton
MLK76–Pit 55	Cnut 1018–24		
PDN81	Edward the Confessor 1042–66		
BIG82–PL6	William I 'trial pieces' 1077–80?		
SH74–W1	Emperor Henry IV 1056–1105		
SWA81–L12	Hen II 'Tealby' 1158–80 2 Hen II SX 1180–09		
BIG82–PL13	Aethelred II 1003–09 Edw Conf/Harold 'trial piece' 1066? SX (unid) 1180–1247		
SWA81–E13	Hen II 'Tealby' 1158–80 SX (unid) 1180–1247		
BIG82–PL15	Hen II SX1/2? 1180–91		
BIG82–PL16	French (Phillip II) 1180–1223 2 SX 1205–47	1/4 lead blank	
SWA81–M13	John Irish penny 1199–1216		
BIG82–PL17	1 SX (unid) 1180–1247 1 SX1–4 1180–1205 1 SX 1205–47 2 SX7 1217–42 3 LX1–3 1247–50	4 D1 3 'AMOR VINCIT' 1 Uncertain	
TL74–G2		1 D1	1 pierced blank
SWA81–L13	13 LX1–4 1247–51 15 LX5(A-C) 1251–53 1 LX5(D-G) *c.* 1253–58 1 LX5(F) 1258–72 5 LX5(unid) 1251–72 3 LX(unid) 1247–72 3 Scottish (Alex III), (1st Coinage) 1250–80 2 Continental?	94 D1	1 sterling (intrusive)
LUD82–Ditch	Edw I halfpenny 1302–10		
BC72–250		D2–4	2 sterling
TL74–G10		2 D2–4	
TL74–G11		11 D2–4	3 post-sterling 1 'Anglo-Gallic' 1 blank
BC72–Silt			1 post-sterling
BC72–Dock	Edw I 1280–81 Edw III 1344–51 Edw III 1356–61	1 D2–4	1 sterling 3 French (L14th c.)

FIG. 37 (*continued*)
Table showing occurrence of coins, tokens and jettons in selected London assemblages

	Coin	Token	Jetton
SWA81–L14th c.	Edw II 1307–27 Edw II 1310–14 Edw III 1344–51 Continental ?	28 D2–4	2 French (L14th c.) 1 French (?)
TL74–G15	2 Hen V 1413–22 1 Hen VI? 1427–30	2 D2–4 3 D5	1 Sterling 2 French (E15th c.)
SWA81–E15th c. Foreshore	Edw III 1327–77 Edw III 1352–55 2 Ric II 1377–99 Hen IV 1402–12 Hen V 1413–22 Low countries (E–M15th c.)	7 D2–4 5 D5 12 others	13 French (L14/E15th c.)
SWA81–E15th c. Dump	Ric II 1377–99 Scottish (Rob III) 1390–1406 3 Hen V 1413–22 Portuguese (?John 1383–1433)	26 D5 1 D2–4 12 others	11 French (L14/E15th c.)

Key: SX = Short cross LX = Long cross

Pottery from the Iberian peninsula is first found in mid 13th-century contexts in the form of rare amphorae, probably from the Seville region. Amphorae from three sources have been recognized in late 13th century and later contexts, including highly micaceous vessels of unknown origin and two probable Sevillian fabrics, including vessels similar to those from 13th-century contexts. The only other Iberian coarsewares from medieval contexts are Red Micaceous ware costrels, from late 13th-century and later contexts.

From *c.* 1270–80 onwards sherds of Spanish Lustreware vessels are found occasionally. The earliest sherds marginally pre-date the first documented use of this ware in the City,[78] but the waterfront groups datable to *c.* 1250 are sufficiently large to show that lustrewares were not present by that date. Lustrewares continued to be imported into the post-medieval period but in even lower quantities and the latest sherds occur in groups of the first half of the 17th century. Until the late 14th century all the lustreware from London was from Malaga, as is a proportion of that from early 15th-century groups. The early 15th-century lustrewares are mainly from Valencia, comparing well with samples from the Manises kiln site. A single London find, from Lovat Lane, probably originated at Paterna, in Valencia.[79]

Other pottery from the Mediterranean world has been found, but only as isolated sherds or vessels. A small quantity of Mediterranean Maiolica sherds occur in mid 14th-century and later contexts. Their fabric contains few visible inclusions and fires to a red colour. A few Magrebi ware sherds from the Magreb region of N. Africa occur in late 13th-century contexts and are all from cylindrical or polygonal-sided albarellos. Sherds of Alkaline-glazed ware jars and bowls are found in very small numbers in 14th-century and later contexts and come from a Syrian or, less likely, an Egyptian source.

FIG. 38

Table showing quantities of pottery by fabric group in selected London assemblages (by EVEs)

Fabric groups	BIGPL4	NFW	BIGPL6B	BIGPL10	BIGPL11	BIGPL13	BIGPL15	BIGPL17	TLG2	LUD	TLG7	TLG10	TLG11	TLG15
*LSS	1.05	4.74	0.07	—	0.25	0.19	0.19	—	—	—	—	—	—	—
*EMSS	—	2.12	1.91	1.36	0.69	0.46	0.03	—	—	0.39	—	—	—	0.18
*EMSH	—	0.63	—	0.18	—	0.06	—	—	—	—	—	—	—	—
*EMS	—	1.47	0.53	0.09	0.14	0.09	—	—	0.05	—	—	—	—	—
*NEOT	—	—	—	—	0.11	—	—	—	—	—	—	—	—	0.05
*EMCH	—	0.14	0.16	—	0.34	0.22	0.12	—	—	—	—	—	—	—
*EMFL	—	0.24	0.05	—	0.11	0.07	0.03	—	—	—	—	—	—	—
*ESUR	—	—	1.10	1.21	0.74	0.70	0.30	—	0.04	0.36	—	—	0.19	—
*THET	—	0.66	—	—	0.15	—	—	—	—	—	—	—	—	—
*SHEL	—	0.54	0.05	0.98	1.58	0.44	0.26	—	—	—	—	—	—	0.40
*SSW	—	—	—	1.30	5.21	19.09	6.45	0.40	0.26	0.13	—	—	—	0.22
*LCOAR	—	—	—	0.50	1.57	0.81	0.19	—	—	—	—	—	0.15	—
*LOND	—	—	—	0.58	1.62	17.55	15.32	12.89	14.14	15.34	1.88	0.53	1.06	1.85
*SHER	—	—	—	0.96	1.72	4.05	6.85	7.35	2.01	10.85	1.04	0.08	0.51	1.28
*OTHER SAND	—	—	—	1.32	0.12	—	—	—	—	—	—	—	—	—
*KCOAR	—	—	—	—	—	—	—	—	1.12	—	0.25	—	—	—
*KSLIP	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*KING	—	—	—	—	—	0.20	0.27	1.41	13.90	10.32	6.17	1.19	5.89	0.67
*MGCOAR	—	—	—	—	—	—	—	—	0.76	0.11	—	—	—	—
*MG	—	—	—	—	—	—	—	0.12	6.74	4.97	0.22	0.44	0.52	0.25
*CBW	—	—	—	—	—	—	—	0.50	0.99	3.15	11.69	9.81	50.74	55.08
*CHEAR	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*CHEA	—	—	—	—	—	—	—	—	0.22	—	—	0.80	5.13	21.70
*TUDG	—	—	—	—	—	—	—	—	—	—	—	—	0.57	0.96
*LMU	—	—	—	—	—	—	—	—	—	—	0.11	0.57	2.22	0.32
*EMID	—	—	—	—	—	—	—	—	—	0.30	—	—	—	—
*WINC	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*STAM	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*DEVS	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*SCAR	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*FRIMP	—	—	—	—	—	0.30	0.93	0.72	1.13	0.35	0.23	0.45	0.44	0.35
*SPIMP	—	—	—	—	—	—	—	—	—	—	—	—	—	0.91
*GMIMP	—	0.65	—	0.25	0.30	—	0.44	—	—	—	0.24	0.17	2.36	2.32
*LCIMP	0.17	0.41	—	0.35	0.47	0.33	0.39	—	0.21	—	0.10	—	3.57	3.24
*MEDIMP	—	—	—	—	—	—	—	—	0.05	—	—	—	—	0.03
*MISC	—	0.89	0.07	0.07	0.18	0.79	0.52	0.14	1.70	0.31	0.50	0.80	3.12	2.55
*OTHER	8.01	—	1.93	1.47	1.13	4.32	3.21	0.17	0.62	—	0.31	0.16	0.17	1.02
Totals	9.23	12.49	5.87	10.62	16.43	49.67	35.50	23.70	43.94	46.58	22.74	15.00	76.64	93.38

FIG. 39

Table showing the relative quantity of pottery by form in selected London assemblages (by % EVEs)

Pottery forms	BIGPL4	NFW	BIGPL6B	BIGPL10	BIGPL11	BIGPL13	BIGPL15	BIGPL17	TLG62	LUD	TLG7	TLG10	TLG11	TLG15
*CP	77.87	77.19	100.00	75.34	62.27	53.35	41.18	27.88	17.90	28.39	30.19	24.32	25.07	27.73
*PIP	—	—	—	—	—	5.71	3.91	6.08	2.87	2.04	3.14	—	0.37	5.48
*TPIP	—	—	—	—	—	—	—	—	—	1.55	0.45	—	—	0.78
*CAUL	—	—	—	—	—	—	—	0.08	0.85	1.03	0.40	—	—	—
*DRIP	—	—	—	—	—	0.11	0.85	0.51	0.12	2.00	0.36	0.35	0.26	—
*FRYP	—	—	—	—	—	—	0.34	—	1.04	—	0.90	2.49	1.92	1.34
*DISH	22.13	3.71	—	2.24	0.58	0.97	1.16	0.21	0.99	0.04	13.75	1.04	10.49	4.56
*BOWL	—	5.57	—	3.03	3.68	3.39	2.79	3.36	1.71	1.81	15.45	20.51	8.51	6.42
*JUG-MINI	—	—	—	—	—	0.53	—	—	—	—	—	—	—	—
*JUG	—	2.03	—	12.67	19.19	32.21	48–26	57.08	72.31	50.71	23.05	34.86	27.15	33.52
*PICH	—	1.95	—	6.73	3.75	0.27	1.25	4.42	1.42	—	6.11	5.34	9.10	8.73
*SPP	—	—	—	—	7.43	—	—	—	—	—	—	—	—	—
*PEGAU	—	—	—	—	—	—	—	—	—	—	0.13	—	—	0.38
*CIST	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*SJ	—	5.22	—	—	0.97	0.49	—	—	—	2.15	—	—	0.13	0.53
*AQUA	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*AMPH	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*COST	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*BOT	—	—	—	—	—	0.33	—	—	—	7.58	—	—	—	0.11
*DJ	—	—	—	—	—	—	—	—	0.36	—	5.17	8.66	10.53	5.15
*BEAK	—	4.33	—	—	—	—	—	—	—	—	—	—	0.39	0.27
*CUP	—	—	—	—	—	—	—	—	—	—	0.45	1.39	3.40	0.42
*ALB	—	—	—	—	—	—	—	—	—	—	—	—	—	0.13
*LID	—	—	—	—	—	0.33	—	—	—	—	—	1.04	1.74	3.33
*COL	—	—	—	—	—	—	—	—	—	—	—	—	—	0.05
*COND	—	—	—	—	—	—	—	—	—	—	—	—	0.46	—
*MEASURE	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*CAND	—	—	—	—	—	—	—	—	—	—	—	—	—	0.24
*LAMP	—	—	—	—	—	0.33	—	—	—	—	—	—	—	—
*MBOX	—	—	—	—	—	—	—	—	0.04	—	—	—	—	—
*CHAF	—	—	—	—	—	—	—	—	—	—	—	—	0.38	0.12
*VASE	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*SHAVD	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*CRUC	—	—	—	—	2.13	1.75	0.25	0.38	0.39	2.69	0.45	—	0.08	0.63
*ALEMBIC	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*CURF	—	—	—	—	—	0.22	—	—	—	—	—	—	—	0.08
*FINIAL	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*LOUVER	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*ROOFF	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

To conclude, the London waterfront sequence is sufficiently large and well-dated to determine the sequence of English sources supplying the City from the 10th to the early 15th century. Most of the sources are within 30 km of the City, the exceptions being the source of Late Saxon Shelly ware in the 10th century and the source of Coarse Border ware in the late medieval period. Little pottery was being imported from inland sites further afield and there are many distinctive local industries operating from the 11th century onwards which were located less than 30 km from the City but which did not supply it with an appreciable quantity of pottery.

Trade in pottery up and down the Thames can be recognized both through the finding of London-type ware and Shelly-Sandy ware vessels on sites upriver, as far as Henley-on-Thames, and by the rare discovery of 'M.40' ware and Newbury C vessels in the City. There is a strong possibility that river transport was used to carry Surrey whitewares from Kingston, Cheam and W. Surrey into the City and the use of river transport can probably also be seen at sites bordering the Lower Thames Estuary, in Essex and Kent, which produce large quantities of London-area products.

Trade in pottery by sea is also represented both by imports and exports. Exported pottery does not show the steady decline in frequency from London that one might expect if pottery was simply a part of all cargoes sent out from the City. Instead there must have been a deliberate policy to send pottery to areas like eastern Scotland and Norway where there was no local competition. In the late 13th century, either for political reasons or because of competition from industries closer at hand, the North Sea trade in London pottery ceased. At the same time, there is less evidence for the coastal distribution of London-area pottery in England.

Pottery imported to the City by sea includes only one type from an English source, Scarborough ware, and comes mainly from sources immediately across the North Sea. The only continental areas to export coarsewares regularly to London are the Rhineland and the Low Countries. Even potteries on the northern French coast, which supplied the southern English ports with coarsewares, only supplied high-quality glazed jugs to London. Shifts in both the preferred sources and the quantities of imports through time have been noted. Between the late 9th and the late 10th centuries very little pottery was imported to London by sea but from the early 11th century onwards imports are regularly found, both on waterfront and inland sites. There was a slight overall decline in imports during the 12th century, corresponding to the emergence of a strong local glazed ware industry in the London area and at the same time there was a relative decline in the proportion of Low Countries and Rhenish wares amongst the imports in favour of first northern and then south-western French products. The second half of the 14th century saw a decline in the quantity of French wares and a rise in the quantity of both Rhenish and Low Countries products.

From the middle of the 13th century vessels of Mediterranean origin were imported, from a variety of sources from Portugal in the west to Syria in the east. Such vessels were never common and include high quality lustrewares and maiolicas which may have been imported as highly prized goods as well as undecorated and

sometimes unglazed coarsewares, which may have been imported as containers, as part of the equipment of a pilgrim or other traveller or simply as souvenirs or exotica.

APPENDIX: THE SITES

In this section those groups which have been used to construct the London Saxon to medieval pottery sequence are described. It will be seen from Fig. 1 that they span the whole of the London waterfront, from west to east, together with one large inland dump from Ludgate Hill.

Revetment dumps are usually composed of black, highly organic refuse interleaved with recognizable tips of material such as building debris and oyster shells. Foreshore deposits on the other hand consist mainly of silts and gravels, also often highly organic. Unlike the dumps, which seem to contain rubbish brought from a wide area of the City, the foreshores can be expected to contain material discarded from the waterfront itself as can be suggested at Dowgate (Fig. 2). In most instances, however, the foreshore deposits contain a similar range of pottery to that found in the revetment dumps but, since the deposits are smaller in volume, they contain smaller assemblages, which accumulated over a longer period. Although examined, they have whenever possible been excluded from the quantified pottery analysis presented in this paper.

'BAYNARDS CASTLE DOCK' (Fig. 1, 1)

Excavations in the area of Baynards Castle produced three large datable deposits, two of which are of medieval date and the third dates to the early 16th century.[80]

i. The construction of the 'dock'

The N. wall of the 'dock' was formed by utilizing an earlier timber waterfront, and the E. wall was a pre-existing stone wall. The W. wall, however, was formed by reclaiming an area of foreshore within a stone wall. The dump behind this wall can be dated by jettons to the 1330s or later.

ii. The use and filling of the 'dock'

A layer of silt within the dock contained a moderate-sized assemblage of pottery, and a jetton. These suggest that it was in use in the mid to late 14th century. A vast assemblage was recovered from the back-fill of the dock, behind a further stone wall, blocking the 'dock'. Coins, pilgrim souvenirs and jettons suggest a deposition date in the last quarter of the 14th century.

BAYNARDS CASTLE (Fig. 1, 2)

The SE. corner tower of Baynards Castle, exposed briefly in 1972, was re-excavated in 1981.[81] In front of an earlier timber waterfront was a stone river wall, probably part of the Castle, and between the two a reclamation dump from which came a small group of mid to late 14th-century finds, dated only by pottery. In front of this wall and abutting on to it was the SE. corner tower of the Castle and a contemporary river wall extending eastwards from the tower. A collection of finds came from dumps contemporary with this reconstruction.[82] Associated pottery and wooden pattens suggest an early to mid 15th-century date, consistent with the documented reconstruction of Baynards Castle by Humphrey, Duke of Gloucester, in 1428.[83]

TRIG LANE (Fig. 1,3)

The Trig Lane waterfront sequence has been fully published although the detailed analysis of the pottery from the excavation only began after the structural report and an abridged finds report had been completed.[84]

i. Groups 2 and 3 (Fig. 18a)

Although a mid to late 13th-century waterfront structure (Period 1) was revealed in the excavation very few finds were recovered in association with it. The first large groups of finds came from dumping behind the G2 revetment. Only the base-plate of this waterfront remained, the G3 superstructure having been rebuilt about 20 years later. The pottery from the dump associated with G3 is remarkably

similar to that from G2, including some sherds from the same vessels. This suggests that the G3 finds are in fact derived from the G2 dump, which was dug out and then backfilled when the back-braces of the G3 waterfront were inserted. In this paper the finds from the two dumps are treated as a single assemblage, dated *c.* 1270, but with the possibility of contamination in the G3 assemblage by finds dated *c.* 1290.

ii. Group 7 (Fig. 23a)

A substantial foreshore in front of the G3 revetment was sealed by the dump behind the G7 structure. There is no independent date for G7; the date of *c.* 1340 given in the excavation report is based on a combination of pottery dating and an estimation of the time needed after *c.* 1290 and before *c.* 1360 for the foreshore to accumulate.

iii. Group 10 and 12 (Fig. 23b)

A further advance of the waterfront was represented by the G10 revetment, which sealed a foreshore deposit. The G10 dump is dated by dendrochronology to *c.* 1360. It was repaired over part of its length in *c.* 1430 (G12). Examination of the pottery from G12 shows that this dump is composed mainly of redeposited spoil from G10 and the data have therefore been excluded from further analysis.

iv. Group 11 (Fig. 23c)

A large group of finds comes from the dump behind the G11 revetment, dated *c.* 1380 by dendrochronology, jettons and pilgrim souvenirs.

v. Group 15 (Fig. 23d)

The foreshore in front of the G11 revetment was examined over a wide area and produced a group of datable jettons and pilgrim souvenirs. The dump above this foreshore was associated with a stone river wall, G15, resting on a timber base-plate, dated *c.* 1440 by dendrochronology. Jettons in the underlying foreshore were dated *c.* 1430. No later advances of the waterfront could be recorded.

THE PUBLIC CLEANSING DEPOT (DOWGATE) (Fig. 1, 4)

Although examined only under salvage conditions, two series of assemblages of medieval pottery were recovered from the Public Cleansing Depot or 'Dowgate' site (now Walbrook Wharf) which lies on the E. site of the Walbrook inlet, close to the Steelyard.

i. The 12th-century foreshore

The earliest post-Roman activity observed on the site was the construction of a clay riverside bank, resting on a raft of timbers. A few sherds of late 11th- or early 12th-century pottery were found underneath and within the bank, suggesting a later date for this structure than for those found at New Fresh Wharf and Billingsgate. In front of this bank was an extensive foreshore deposit, from which a remarkable finds assemblage was recovered.[85] A very high proportion of imported pottery was present (Fig. 2) and re-examination of this collection has determined that all of these imports had been used: the Blue-Grey ware ladles had sooted sides and the frilled bases of the Red-painted ware pitchers were badly chipped and ground. It is therefore unlikely that this deposit resulted from the disposal of pottery broken in transit. It could be refuse from ships moored in the river channel or from occupation on the shore nearby. External dating evidence is absent and the imported pottery types are found in the London waterfront from the mid 11th to the early 13th centuries. Analysis of the local pottery shows that the collection spans a considerable period of time from some date in the late 11th or 12th century through to the beginning of the 13th century. The majority of the local wares, however, are probably earlier than *c.* 1150.

ii. The 14th-century waterfronts

Assemblages dated by pottery to the middle of the 14th century and closely comparable in composition with those from other waterfront revetment dumps were also recovered from Dowgate. Unlike the 12th-century foreshore deposit, there is no abnormally high quantity of imported pottery present.

SWAN LANE (Fig. 1, 5)

The 1981 excavation and watching-brief at Swan Lane uncovered an almost complete sequence of activity on this site from the late Saxon period to the middle of the 15th century.[87] The earliest post-Roman activity observed was a riverside bank, from which a small collection of pottery dating

somewhere between the late 9th and early 11th centuries was recovered. The foreshore in front of this bank contained pottery dating between the late 11th and middle 12th centuries.

i. The late 12th-century waterfronts

Immediately above the foreshore deposit were revetment dumps containing late 12th-century pottery. In virtually every case the timber revetment itself had been destroyed to reuse the timbers so that the distinction between one dump and the next was unclear. There is little sign from the associated finds of any distinction in date between these dumps. The latest dumps were found behind *in situ* revetment walls. Coin-dating indicates a deposition date later than 1180.

ii. The early 13th-century waterfronts

In front of the late 12th-century revetments a further series of dumps behind *in situ* timber revetments was dated by their associated pottery to the first half of the 13th century. Two coins were found, neither of which provide a close date for the groups.

iii. The mid 13th-century waterfronts

A further series of dumps behind *in situ* timber revetments was observed in front of the early 13th-century revetments. A single penny was found but does not provide a close date for the group.

iv. The late 13th-century waterfronts (Fig. 18b)

The most productive dumps found at Swan Lane lay in front of the mid 13th-century revetments. A large series of coins and tokens was recovered, showing that the waterfront across the middle part of the site was reclaimed at a single period, if not as a single operation. Coin-dating alone suggests a date between *c.* 1270 and *c.* 1279 for the deposition of the dumps. The pilgrim souvenirs suggest a date after 1270.

v. The early 15th-century waterfronts

In the extreme SE. corner of the site large groups of finds were recovered from either side of a timber revetment. Those behind the revetment date to the very end of the 14th century or beginning of the 15th century, while those in front (which could be divided into those from the foreshore and those from the revetment dump above) can be dated by coins to *c.* 1426 or later. The latest coin came from the foreshore but analysis of the lead tokens shows that the dump contains a higher proportion of later types. This would suggest that there was little or no difference between the date of the latest material in the foreshore deposit and the date of material in the dump but that the foreshore contained a proportion of earlier finds, dating from the construction of the previous revetment and later.

SEAL HOUSE (Fig. 1, 6)

The excavation at Seal House produced a medieval sequence starting in the late 11th to early 12th century with a foreshore deposit overlying the timbers of a Roman quay.[87] Small but useful groups of 12th-century pottery were recovered from the succeeding revetment dumps together with large groups of early and mid 13th-century date.

i. Waterfront I

The earliest dump was associated with a collapsed and robbed revetment, waterfront I, from which a dendrochronological date of *c.* 1140 for the felling of the latest timber was obtained.[88] Although this group contains some obviously intrusive early 13th-century sherds and may well also be contaminated by later 12th-century pottery from waterfront II, it is still crucial to the dating of the London pottery sequence. Types of pottery which predominate in late 12th-century groups form only a small proportion of this group, so that even if they belong to the waterfront I assemblage they indicate that these types were rare before *c.* 1140.

ii. Waterfront II

The second dump was found behind a timber revetment which was partially intact. A date of *c.* 1170 for the felling of the latest timber was obtained from the revetment.[89] The pottery assemblage appears to be of one date, containing no obvious residual or intrusive sherds.

iii. Waterfront III

The third dump was found behind an *in situ* revetment. A date of *c.* 1210 was obtained for the felling of the latest timber in the revetment.[90] The dump was cut through to insert a timber-lined drain from

which a date of *c.* 1220 was obtained by dendrochronology.[91] At the time of discovery the pottery assemblage was considered much too late for this dating, since it contained large numbers of highly decorated glazed jug sherds, for which a starting date in the 1240s was postulated. Since there is no evidence for reuse of any of the sampled timbers, it is now considered that the felling date of the timbers is close to the date of construction of the revetment and the deposition of the revetment dump.

iv. Waterfront IV

The latest excavated dumps at Seal House post-date the waterfront III revetment and were found on either side of a large mortared stone wall foundation, resting on the foreshore. Three groups were distinguished on stratigraphic evidence but are all probably of one date. Pottery is the only dating evidence and suggests a date of *c.* 1250.

NEW FRESH WHARF (Fig. 1, 7)

Two excavations and a subsequent watching brief have been conducted at New Fresh Wharf.[92] Between them, they provide a coherent picture of the late Saxon and medieval waterfront development immediately down-stream of London Bridge. The earliest observed post-Roman activity consisted of a grid of stakes driven into the foreshore. No post-Roman finds were stratified earlier than this structure and none could confidently be associated with its use. However, much of the pottery in the surrounding silt, sealed by the succeeding clay and timber bank, may have been deposited during the construction and use of the first structure, although not sealed until the construction of the succeeding bank. A tenative dendrochronological date in the mid 10th century was obtained.[93]

i. The 11th-century bank (Fig. 7b)

The clay and timber bank was constructed in sections separated by N.–S. rows of stakes. To the west, towards London Bridge, where the bank was absent, rows of stakes may have bordered an inlet.

The silt underlying the clay bank and the bank itself produced substantial quantities of pottery. A small amount was also recovered from the bank during the watching brief. Analysis of these groups showed few differences between the earliest stratigraphic group and the latest. There were types present in the bank not present in the underlying silt but only in such small quantities that their occurrence is more likely to be due to sample size than to a difference in date.

The bank is dated by dendrochronological analysis of reused timbers incorporated within it.[94] The felling dates cluster around the end of the 10th century, with one early in the 11th. The date of construction of the bank must therefore post-date *c.* 1000. An estimate of the interval between the felling of the timbers and their incorporation within the bank can be obtained by reference to the average suggested life of domestic timber buildings in the City and the average observed life of timber waterfronts. Using these figures, an interval of *c.* 20–30 years is likely. This would give a construction date of *c.* 1020.

BILLINGSGATE LORRY PARK (Fig. 1, 8)

The Billingsgate Lorry Park excavation in 1982 examined a large area of late Saxon and medieval waterfront.[95] The late Saxon deposits, however, were only exposed on a small scale. Finds recovery on a scale unprecedented in London was undertaken using metal detectors and sieving. Despite this, datable artefacts were few until the late 12th century. The late Saxon to medieval sequence can nevertheless be dated accurately by a combination of coin-dating, estimates based on the structural sequence and pilgrim souvenirs.

i. The late Saxon bank and inlet

The late Saxon bank consisted of a clay and timber core with a vertical stave-built face. The staves were held in place by tie-backs buried within the bank during construction. The staves themselves could have been replaced and do not therefore provide a means by which the original structure can be accurately dated. A *terminus post quem* is provided by a coin, minted after 959 and officially out of circulation by 973, which was stratified in a layer of gravel contemporary with the construction of the bank (although not sealed below it). A small quantity of pottery was recovered from the bank (Fig. 7a).

In front of the stave revetment was evidence of attempts to consolidate the foreshore with wattle hurdles and stakes and a later clay bank was piled up against the front, presumably to prevent its collapse. A small group of pottery was recovered from this bank. Above this small bank was a deposit of gravel, from which several lead coin 'trial pieces' of William I were recovered. They provide a *terminus post quem* of *c.* 1080 for the deposition of the gravel which was sealed by the forward collapse of the stave front.

The stave bank revetment was replaced with another, less massive, stave front, and several modifications to the surface of the bank occurred before its final replacement by reclamation dumps. In particular, the original bank included a narrow inlet, possibly to allow access to the foreshore. In the latest phase of the use of the bank, this inlet was blocked off and a timber revetment constructed in front of it.

Associated artefacts, other than pottery, are rare in the later bank deposits, but a date in the early to middle of the 12th century for the blocking of the inlet is likely, on the basis of the structural sequence.

ii. The later waterfronts

From the middle of the 12th century onwards the sequence of reclamation at Billingsgate was similar to that discovered elsewhere. The junction of two properties with different reclamation sequences was recovered on the site. The interrelationships of these revetments, and the occupation deposits on top, allow a very long stratigraphic sequence to be constructed with groups deposited in some cases only 10 to 20 years apart.

From *c.* 1180 onwards these groups can be given an absolute date by the associated artefacts. The first such group is coin-dated to 1180 or later, and includes a pilgrim souvenir datable later than 1170.

The next large dump can be coin-dated to the early years of the 13th century and this was replaced soon afterwards by a revetment which contained a group of coins probably deposited soon after 1250. Pilgrim souvenirs and lead tokens provide confirmation of the date of these groups.

CUSTOM HOUSE (Fig. 1, 9)

The Custom House excavations took place at the extreme eastern end of the City waterfront, just to the west of the Tower.[96] A foreshore deposit overlying remains of Roman timber quays contained a small quantity of early 13th-century pottery in its lower levels (group D2) and early to mid 14th-century pottery in its upper levels (Group D1). The majority of the usefully stratified medieval finds came from a revetment dump overlying this foreshore and deposits stratified later than this dump.

i. Group C2

The filling behind the group C2 timber revetment can be dated by pottery to the early 14th century or later. A tentative dendrochronological date for the revetment gives a *terminus post quem* of 1318 and there is documentary evidence for waterfront activity in the late 1330s, associated with defensive works at the start of the Hundred Years War.[97]

ii. Group C1

Material from the silting in front of the group C2 revetment can also be dated to the early to mid 14th century by the pottery.

iii. Group B

Material from the robbing of a structure in front of the timber revetment can be dated by pottery between *c.* 1380 and *c.* 1420.

LUDGATE HILL (Figs. 1, 10 and 18c).

Excavation of a butt-end of the City ditch at Ludgate Hill showed that the main filling was a single-period dump.[98] Dating evidence consists of a coin minted 1302–10 while documentary evidence shows that the area was occupied by houses by 1340.[99]

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The process of analysis and recording of late Saxon and medieval pottery in London began in 1974 under M. Rhodes and C. R. Orton. The results summarized here would not have been possible without the foundations laid then.

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NOTES

[1] Many of the vessels illustrated in B. Rackham, *English Medieval Pottery* (2nd ed., London, 1972) have a London provenance.

[2] J. G. Hurst, 'Anglo-Saxon and Medieval', 60–67, in *The Archeology of the London area: Current knowledge and problems* (London Middlesex Archaeol. Soc. Special Paper 1, 1976), 61–62, 65–66.

[3] Tony Dyson comments 'The "dock" was not so much a dock as a public lane (or watergate) leading from Thames Street to the river between private properties on either side. Furthermore, at the time when the "dock" was filled it was not part of Baynards Castle, but was separated from it by three tenements in private hands'.

[4] A. Dyson and J. Schofield, 'Excavations in the City of London Second Interim Report, 1974–1978', *Trans. London Middlesex Archaeol. Soc.*, 32 (1981), 65–70.

[5] A. G. Vince, 'The Aldwych: mid Saxon London Discovered', *Current Archaeol.*, VIII, no. 10 (August 1984), 310–12.

[6] G. Milne and C. Milne, 'Excavations on the Thames Waterfront at Trig Lane, London, 1974–76', *Medieval Archaeol.*, XXII (1978), 98.

[7] For example at Cutlers Gardens, excavated in 1978 by S. O'Connor Thompson, Site code: CUT78. Large waterfront deposits of 16th- and 17th-century date have recently been destroyed by redevelopment at Wapping.

[8] The monumental structure at St Peters Hill has been dated by J. Hillam to *c.* 294 using dendrochronology on timbers which retained their bark.

[9] C. Orton, in G. Milne and C. Milne, *Medieval Waterfront Development at Trig Lane, London* (London Middlesex Archaeol. Soc. Special Paper 5, 1982), 92–93.

[10] P. Stott, 'Coins, Jettons and Tokens from the London Waterfront' (forthcoming).

[11] M. M. Archibald, 'English Coins as Dating Evidence', 234–71 in J. Casey and R. Reece, *Coins and the Archaeologist* (Oxford, Brit. Archaeol. Rep. Brit. Ser. 4, 1974), 247–48.

[12] S. E. Rigold reports on finds of jettons in the following: P. Rahtz, *Excavations at King John's Hunting Lodge, Writtle, Essex* (Soc. Medieval Archaeol. Mono. Ser. 3, 1969), 79–81; J. G. Hurst, 'The kitchen area of Northolt manor, Middlesex', *Medieval Archaeol.*, V (1961), 288; G. Beresford, 'The medieval manor of Penhallam, Jacobstow, Cornwall', *Medieval Archaeol.*, XVIII (1974), 142–43; P. J. Huggins, 'The excavation of an 11th-century Viking Hall and 14th-century rooms at Waltham Abbey, Essex', *Medieval Archaeol.*, XX (1976), 125–27; D. S. Neal, 'Excavations at the Palace of Kings Langley, Hertfordshire', *Medieval Archaeol.*, XXI (1977), 145–47; G. H. Smith, 'The excavation of the Hospital of St Mary of Ospringe', *Archaeol. Cantiana*, XLV (1981), 106; G. L. Good and C. J. Tabraham, 'Excavations at Threave Castle, Galloway', *Medieval Archaeol.*, XXV (1981), 106; Milne and Milne, op. cit. in note 9, 99–102.

[13] S. E. Rigold in Milne and Milne, op. cit. in note 9, 103–06.

[14] B. Spencer, 'The ampullae from Cuckoo Lane', 242–49 in C. Platt and R. Coleman-Smith, *Excavations in medieval Southampton 1953–69: Vol. 2. The Finds* (Leicester, 1975).

[15] E.g. see Van Eyck's 'Portrait of Giovanni Arnolfini and his wife', *c.* 1434.

[16] A fuller description of the methods used can be found in C. R. Orton, *Pottery Archive: user's manual* (Museum of London, Department of Urban Archaeology, 1978).

[17] A. G. Vince, 'The Topography of Mid Saxon London' (forthcoming).

[18] Dyson and Schofield, op. cit. in note 4, 57 Well Court. Site code: WEL79.

[19] S. Roskams and J. Schofield, 'Milk Street, Part 2', *London Archaeol.*, 3 (1978), 227–34.

[20] G. Milne, 'Saxon Botolph Lane', *London Archaeol.*, 3 (1980), 423–24.

[21] A possibility suggested through topographic analysis by V. Harding and D. Keene, *Cheapside and the development of London before the Great Fire* (forthcoming).

[22] Archaeomagnetic dates supplied by Dr A. Clarke, Ancient Monuments Laboratory.

[23] Milne, op. cit. in note 20, 423–30, figs. 2, 4, 6, 7 and 9.

[24] Found at the Buttermarket, Ipswich. Ipswich City Museum acc. no. 1936.222.

[25] A. G. Vince, 'New light on Saxon Pottery of London', *London Archaeol.*, 4.16 (1984), 431–39.
[26] G. C. Dunning, 'Pottery of the late Anglo-Saxon period in England', 31–78 in G. C. Dunning, J. G. Hurst, J. N. L. Myres and F. Tischler (eds.), 'Anglo-Saxon Pottery: A Symposium', *Medieval Archaeol.*, III (1959), 53.
[27] Also known as Chester-type ware, from the late 10th-century hoard pot found in 1950 in Chester: A. G. Vince, 'The pottery', in R. Shoesmith (ed.), *Hereford City Excavations 3: The Finds* (London, Counc. Brit. Archaeol. Res. Rep. 56, 1985, 62–63). I am grateful to J. Rutter and C. Cane for informing me of recent finds of this ware in the NW. Midlands, shown on Fig. 6.
[28] A. G. Vince, 'The medieval ceramic industry of the Severn Valley', Ph.D. Thesis (University of Southampton, 1983), I, 130.
[29] Pers. comm. Dr I. Freestone, British Museum Research Laboratory.
[30] B. K. Davison, 'Castle Neroche: an abandoned Norman fortress in South Somerset', *Proc. Somerset Archaeol. Soc.*, 116 (1972), 42–56.
[31] Dunning, op. cit. in note 26, 56–60, fig. 31.
[32] Ibid., 55–56, fig. 28.
[33] Ibid., 67, fig. 37, 1.
[34] Ibid., 62, fig. 33.
[35] K. Kilmurry, *The pottery industry of Stamford, Lincolnshire, c. AD 850–1250: its manufacture, trade, and relationship with continental wares, with a classification and chronology* (Oxford, Brit. Archaeol. Rep. Brit. Ser. 84, 1980), 8–9 (Fabric descriptions), 11–12 (glaze classification) and 131 (dating of fabrics). Most of the Stamford ware from London is of fabrics B or G with glazes 1 or 2. A few examples of fabric A with glazes 4 to 6 are found, for example fig. 9.1–2, but unfortunately very few are in useful stratified contexts.
[36] M. Biddle and K. Barclay, 'Winchester ware', in V. I. Evison, H. Hodges, and J. G. Hurst (eds.), *Medieval Pottery from Excavations: Studies presented to Gerald Clough Dunning* (London, 1974), 137–65.
[37] Pudding Lane. Excavated by G. Milne. Site Code: PDN81 Context: 294. Similar vessels have been found in 11th-century contexts at New Fresh Wharf (a yellow-glazed lid) and Watling Court, Site code: WAT78. Two unglazed N. French whiteware sherds were also found at New Fresh Wharf, one with traces of vertical red-painted lines *c.* 10 mm wide and the others with a band of diamond rouletting on the shoulder.
[38] Lime Street. Excavated by T. Williams. Site code: IME 83. Context: 155.
[39] V. Horsman, 'Saxon buildings Near Billingsgate', *Popular Archaeol.*, 5.4 (Oct. 1983), 28–32. Buildings AC to AF.
[40] P. V. R. Marsden, 'Archaeological finds in the City of London 1963–4', *Trans. London Middlesex Archaeol. Soc.*, 21.3 (1967), 219–20 and figs. 16–17.
[41] M. Mellor, 'Late Saxon pottery in Oxfordshire: evidence and speculation!', *Medieval Ceram.*, 4 (1980), 17–28.
[42] *Anglo-Saxon Chronicle, s.a.* 1009.
[43] At the Treasury site, Westminster, a large 12th-century assemblage was recovered from a ditch traversing the site. Report by R. Huggins, *Trans. London Middlesex Archaeol. Soc.* (forthcoming); The late 11th- to 12th-century pottery from Lambeth comes from an excavation at the Palace by R. Densem, for the Dept of Greater London Archaeology, Museum of London, and appeared to be part of an extensive make-up deposit.
[44] A. J. Robertson, *The Laws of the Kings of England from Edmund to Henry I* (Cambridge, 1925), IV Ethelred 2.
[45] A. Hooson, 'A dated type series of medieval pottery from London: South Hertfordshire greywares', *Trans. London Middlesex Archaeol. Soc.* (in preparation).
[46] J. E. Pearce, A. G. Vince and A. Jenner, *A dated type series of London medieval pottery, Part 2: London-type ware* (London Middlesex Archaeol. Soc. Special Paper 5, 1984).
[47] A. Jenner, J. E. Pearce and A. G. Vince, 'A dated type series of London medieval pottery. Part 4: Kingston-type ware', London Middlesex Archaeol. Soc. Special Paper, forthcoming.
[48] Swan Lane. Site code: SWA81. Context: 2053.
[49] For example, the N. French monochrome vessels found at Norwich include some with hollow handles and jugs with 'loops' of applied clay, but neither trait is common amongst the London finds: H. Clarke and A. Carter, *Excavations in King's Lynn 1963–1970* (Soc. Medieval Archaeol. Mono. Ser. 7 (1977)), 225, fig. 101, 18–20.
[50] A. G. Vince, 'Medieval and post-medieval Spanish pottery from the City of London', in I. Freestone, C. Johns and T. Potter, *Current research in ceramics: Thin-section studies. The British Museum Seminar 1980* (London, British Museum Occ. Paper 32, 1982), fig. 15.3, 22.
[51] J. E. Pearce, 'Getting a handle on medieval pottery', *London Archaeol.*, 5, no. 1 (Winter 1984), 17–23.
[52] J. E. Pearce, A. G. Vince and R. White, 'A Dated Type Series of London Medieval Pottery. Part 1: Mill Green ware', *Trans. London Middlesex Archaeol. Soc.*, 33 (1982), 266–98.
[53] G. C. Dunning, 'Inventory of medieval polychrome Jugs found in England and Scotland', 126–30 in C. Fox and C. A. Ralegh Radford, 'Kidwelly Castle; including a survey of the polychrome pottery found there and elsewhere in Britain', *Archaeologia*, LXXXIII (1933), 126–30, figs. 12–14 and 16.
[54] K. J. Barton, 'The medieval pottery of Paris', *Medieval Archaeol.*, X (1966), 59–73.
[55] M. Biddle, 'Imports of medieval stoneware from the Rhineland', *Medieval Archaeol.*, VI–VII (1962–63), 298–300. Two of the vessels published by Biddle, stated to have been found in Oxford, were in fact purchased in London but incorrectly registered when acquired by the Ashmolean (pers. comm. D. A. Hinton).
[56] Pers. comm. D. Whitehouse.
[57] M. Hinton, 'Medieval Pottery from a kiln site at Kingston upon Thames', *London Archaeol.*, 3.14 (Spring 1980), 377–83; G. Dennis and P. Hinton, 'Medieval kiln group from Bankside, SE1', *London Archaeol.*, 4.11 (Summer 1983), 283–87.
[58] C. R. Orton, 'The Excavation of a Late Medieval/Transitional pottery kiln at Cheam, Surrey', *Surrey Archaeol. Coll.*, LXXIII (1982), 49–92.

[59] A. Jenner and A. G. Vince, 'A dated type series of London medieval pottery. Part 3: A Late Medieval Hertfordshire Glazed ware', *Trans. London Middlesex Archaeol. Soc.*, 34 (1983), 151–70.
[60] H. Janssen, 'Later medieval pottery production in the Netherlands', 121–86 in P. Davey and R. Hodges (eds.), *Ceramics and Trade: The production and distribution of Later medieval pottery in north-west Europe* (University of Sheffield, 1983), figs. 9.9—18.
[61] Unpublished petrological analyses by R. Rattray and A. G. Vince. Musum of London thin-sections MTS 262–67 (Low Countries Greyware) and MTS 268–73 (Dutch Red Earthenware).

Assemblages from St Albans indicate that Hertfordshire greywares were no longer made by the late 14th century while the vessels from the Surrey greyware kilns at Limpsfield, which may well continue in production into this period, are apparently easily distinguished from these London finds (pers. comm. M. Russell, University of Southampton).
[62] B. Beckmann, 'The main types of the first four production periods of Siegburg pottery', in V. I. Evison, H. Hodges, and J. G. Hurst (eds.), *Medieval Pottery from Excavations: Studies presented to Gerald Clough Dunning* (London, 1974), 183–220.
[63] J. G. Hurst, 'Langerwehe stoneware of the fourteenth and fifteenth centuries', 219–38 in M. R. Apted, R. Gilyard-Beer and A. D. Saunders, *Ancient Monuments and their interpretation: Essays presented to A. J. Taylor* (London, 1977).
[64] There are indications that potters making 'Malaga work' were already active in Manises by 1342 and by 1362 Manises potters were called upon to produce lustreware tiles for the palace at Avignon: A. W. Frothingham, *Lustrewares of Spain* (New York, 1951), 79–83.
[65] J. G. Hurst, 'Spanish pottery imported into medieval Britain', *Medieval Archaeol.*, XXI (1977), 68–105; A. G. Vince, op. cit. in note 50; J. G. Hurst, 'Late medieval Iberian pottery imported into the Low Countries', *Rotterdam Papers*, IV (1982), 101.
[66] J. G. Hurst, 'Near Eastern and Mediterranean medieval pottery found in North-West Europe', *Archaeologia Lundensia*, 3 (1968), 195–204.
[67] Pers. comm. I. Tyers.
[68] A. G. Vince, 'The medieval and post-medieval ceramic industry of the Malvern region; the study of a ware and its distribution', 257–305 in D. P. S. Peacock (ed.), *Pottery and Early Commerce* (London, 1977), 266.
[69] J. C. Thorn, 'Medieval pots from Friday Street', *London Archaeol.*, 2.2 (1973), 62–63. This interpretation is favoured by R. Rattray, whose analysis of their capacity shows that they cluster around divisions of the wine gallon of Henry III: R. Rattray in J. E. Pearce *et al.*, op. cit. in note 46.
[70] Orton, op. cit. in note 58.
[71] M. Hinton, op. cit. in note 57, 381.
[72] A fragment of an animal, Museum of London Acc. No. 5686, is probably part of a lobed cup.
[73] K. Armitage, J. Pearce and A. G. Vince, 'Early medieval roof tiles from London', *Antiq. J.*, LXI (1982), 359–62.
[74] Pers. comm. H. Borrill.
[75] Pers. comm. Duncan Brown, confirmed by examination of the vessels published by C. Platt and R. Coleman-Smith, op. cit. in note 14.
[76] A. G. Vince, 'New Light on Saxon pottery in the London area', *London Archaeol.*, 4.16 (Autumn 1984), 431–39, fig. 5.1, 2 and 5.
[77] S. M. Youngs, J. Clark and T. B. Barry, 'Medieval Britain and Ireland in 1982', *Medieval Archaeol.*, XXVII (1983), 204.
[78] The earliest recorded importation of Spanish lustreware was in 1289 at Portsmouth. A more specific reference to Malaga as the source of this pottery occurs in the port book for Sandwich in 1303: G. C. Dunning, 'A group of English and imported medieval pottery from Lesnes Abbey, Kent; and the trade in early Hispano-Moresque pottery to England', *Antiq. J.*, XLI (1961), 1–12.
[79] This is indicated both by design, which is in blue without lustre, and by the results of Neutron Activation Analysis carried out by M. Hughes, British Museum Research Lab.
[80] L. E. Webster and J. Cherry, 'Medieval Britain in 1972', *Medieval Archaeol.*, XVII (1973), 162–63, fig. 60.
[81] Supervised by John Burke-Easton. See S. M. Youngs and J. Clark, 'Medieval Britain in 1981', *Medieval Archaeol.*, XXVI (1982), 192, pl. VII, A.
[82] J. Burke-Easton, 'BYD81 Level III report', Period 3.6.
[83] Baynards Castle is recorded as being heavily damaged by a fire on 30 October 1428. *Gregory's Chronicle*, in *The Historical collections of a citizen of London in the 15th century*, ed. J. Gardiner (Camden Soc., 1876), 163. Documentary research by Tony Dyson and Colin Taylor has shown that by 1430 the Castle had been rebuilt with corner towers, since rent was paid to St Pauls for the encroachment needed to build one tower from that date.
[84] G. Milne and C. Milne, op. cit. in note 9.
[85] Published by Gerald Dunning, op. cit. in note 26, 73–77.
[86] Supervised by G. Egan, see Youngs and Clark, op. cit. in note 81, 193; Youngs *et al.*, op. cit. in note 77, 194–95.
[87] J. A. Schofield, 'Seal House', *Current Archaeol.*, 49 (1975), 53–57.
[88] R. Morgan and J. Schofield, 'Tree rings and the archaeology of the Thames waterfront in the City of London', 223–38 in J. Fletcher (ed.), *Dendrochronology in Europe* (Oxford, Brit. Archaeol. Rep. Int. Ser. 51, 1978), 231–33.
[89] Ibid., fig. 5. Dated *c.* 1170 by seven timbers.
[90] Ibid., fig. 5. Dated *c.* 1210 by five timbers. A loose timber felled in 1203 was associated with the use of the revetment.
[91] Ibid., fig. 5. Dated *c.* 1220 by three timbers.
[92] New Fresh Wharf was excavated in three stages, Site Codes: NFW 74, SM 75, FRE 78, but is treated as a single

site for archival purposes. The late Saxon sequence is summarized by L. Miller, 'New Fresh Wharf 2: The Saxon and early medieval waterfronts', *London Archaeol.*, 3 (1977), 47–53. The results of the 1978 watching brief and the dendrochronological analysis are briefly described in Dyson and Schofield, op. cit. in note 4, 48–52, 61 and figs. 7 and 12.

[93] R. Morgan and J. Hillam, 'New Fresh Wharf: Tree-ring analysis', unpublished level III report, Museum of London, Dept of Urban Archaeology.

[94] Ibid.

[95] Billingsgate Lorry Park, site code: BIG82, supervised by S. Roskams: see Youngs *et al.*, op. cit. in note 77, 191–92.

[96] Directed by T. Tatton-Brown in 1973 for the Guildhall Museum: see T. Tatton-Brown, 'Excavations at the Custom House', *Trans. London Middlesex Archaeol. Soc.*, 25 (1974), 117–219; T. Tatton-Brown, 'Excavations at the Custom House Site, City of London, 1973 — Part 2', *Trans. London Middlesex Archaeol. Soc.*, 26 (1975), 103–70.

[97] J. Fletcher, 'The dendrochronology', in Tatton-Brown, op. cit. in note 96, 211–15.

[98] Youngs *et al.*, op. cit. in note 77, 194. Site directed by P. Rowsome, Site code: LUD82.

[99] Information from A. Dyson.

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