

Fig. 1: site location plan

# Excavation and mitigation in *Lundenwic*: a case study

Robert Cowie  
with Lyn Blackmore

## Introduction

SINCE THE publication of the Department of the Environment's Planning Policy Guidance: Archaeology and Planning (PPG 16) in November 1990 the practice of archaeology in London has undergone considerable change. Arguably the most important aspect of this document was the emphasis it placed on the preservation in situ of 'nationally important archaeological remains', which has led to the widespread use of mitigation strategies to minimise the impact of development on surviving

archaeological deposits<sup>1</sup>. Advocates of this policy argue that important deposits will thus be saved for future generations, who would have better recording and analytical techniques at their disposal, and possibly different research interests. In recent years, however, the often perceived uncritical application of PPG 16 has been attacked by those who see it as stifling archaeological research<sup>2</sup>. In London, for example, the issue of excavation versus preservation has been hotly debated on a number

1. Various mitigation strategies are cited in M Corfield, P Hinton, T Nixon & M Pollard (eds.) *Preserving archaeological remains in situ* (1998), especially papers by G P Tilly, 1-7 and T Nixon 39-46.

2. See M Biddle 'What Future for British Archaeology?' *Oxbow*

*Lecture 1* (1994); J Mellor 'PPG16 one year on' *Rescue News* no. 56 (1992) 1; R Morris 'Taking archaeology into a new era' *Brit Archaeol News* New Series no.18 (1994) 9. The issue of preservation in situ is also discussed in S McCracken & C Phillpotts *Archaeology and planning in London - assessing the effectiveness of PPG16* (1995) 41-4.

of occasions, most recently in the case of the Saxon cemetery site at Park Lane, Croydon<sup>3</sup>. It seems timely, therefore, to review the results of archaeological work undertaken by the Museum of London Archaeology Service at Bruce House, Kemble Street, WC2 (NGR TQ3060 8110; Fig. 1), where a relatively complex mitigation strategy was implemented in the early 1990s.

### Archaeological and historical background

Bruce House is one of more than forty archaeological sites in the area around the Strand and Covent Garden that have produced evidence of the Middle Saxon trading port of *Lundenwic* (London). Saxon settlement probably began in this area during the late 6th or early 7th century. At first the settlement appears to have been modest, possibly even seasonal, but during the late 7th century and early 8th century it developed into a major seaport engaged in trade with the Continent and other parts of England. At its peak *Lundenwic* probably covered an area of between 55 and 60 hectares. The site of Bruce House appears to have been located near the eastern edge of the settlement, since there is little evidence for Middle Saxon occupation to the east apart from a scatter of features on the adjacent site of Alexandra House, Kingsway<sup>4</sup>, and St Catherine's House on the east side of Kingsway at the junction with Aldwych<sup>5</sup>. Study of the distribution of pottery from sites analysed before 1992 has suggested that strata in *Lundenwic* could be divided into two main phases<sup>6</sup>. The first probably dates to the period 650-730/750, and is dominated by chaff-tempered and French black and buff wares. In the second phase, which began in the mid-8th century and continued until the mid-9th century, Ips-

wich-type ware is the dominant type. More recent work has shown that a third chronological horizon dating to the late 8th or early 9th century can be defined, which is characterised by the presence of shell-tempered ware<sup>7</sup>. It seems that by about AD 800 *Lundenwic* was in decline, and it was abandoned in the mid-9th century, almost certainly as the result of Viking attacks.

In the medieval period much of the land to the north of the Strand became orchards and farmland<sup>8</sup>. At this time the site of Bruce House, which lay on the east side of 'Aldwichstrate' (now Drury Lane)<sup>9</sup>, was probably pasture. Indeed, archaeological and cartographic evidence suggests that the site was not built on again until the late 16th or early 17th century, when the area around Covent Garden became a suburb of the rapidly growing capital.

### The archaeological evaluation

Plans for the redevelopment of Bruce House were first considered in 1986, and gradually evolved over the next few years, culminating in the early 1990s in a scheme by the Peabody Trust to develop the site to provide social housing. A predetermination evaluation was duly carried out at Bruce House in the spring of 1992, under the supervision of Bruno Barber, in order to assess the archaeological potential of the site<sup>10</sup>. During the evaluation eight test pits were excavated as part of a combined archaeological and structural survey. Those in unbasemented parts of Bruce House<sup>11</sup> revealed relatively intact sequences of archaeological deposits dating from the Middle Saxon period to the 19th century. The Saxon remains included gravel surfaces, pits, rows of stakeholes and traces of at least one timber building. They were overlaid by up to 0.85m of dark earth, which produced pottery ranging in date from the Middle Saxon to post-medieval periods.

3. H O'Sullivan '82-90 Park Lane, Croydon: a planning case-study' *London Archaeol* 7 no 16 (1996) 424-431; M Welch 'The Anglo-Saxon cemetery at 82-90 Park Lane, Croydon, Surrey: excavation or preservation?' *London Archaeol* 8 no 4 (1997) 94-7.

4. 29-33 Kingsway; site code ALO9I.

5. Site code KWY98.

6. L Blackmore 'The pottery' in R Cowie and R L Whythead with L Blackmore 'Two Middle Saxon Occupation sites: Excavations at Jubilee Hall and 21-22 Maiden Lane' *Trans London Middlesex Archaeol Soc* 39 (1988) 103-108.

7. This was suspected at Jubilee Hall (Blackmore *op cit* fn 6, 102) and Shorts Gardens (site code SGA89), recognised at Whitehall (Huggins *pers comm*) and Bruce House (see fn 18) and confirmed during excavations at the Royal Opera House (Blackmore in prep). See L Blackmore 'From beach to burh: new clues to entity and identity in 7th to 9th-century London' in G De Boe and F Verhaeghe (eds) *Urbanism in Medieval Europe: papers of the 'Medieval Europe Brugge 1997' conference* 1 (1997) 123-132.

8. See Greater London Council *Survey of London: the Parish of St Paul Covent Garden* 36 (1970) 19.

9. The street known as Aldwyche in 1398 had become Drury Lane by 1598 - see J E B Gover, A Mawer and FM Stenton *The Place-names of Middlesex* English Place-Name Society 18 (1942) 178 and 185. Gover *et al*, 166, suggested that the name Aldwyche meant 'the old dairy farm', but since the discovery of *Lundenwic* it has been generally accepted as a reference to the old wic (trading port). Drury Lane was named after Drury House which stood at the south end of the street. The house is thought to have been built either by Sir Roger Drury in the 15th century or Sir William Drury in the 16th century - see E Beresford Chancellor *The Annals of Covent Garden and its neighbourhood* (n.d) 219.

10. Site code BRU92; B Barber 'Report on the archaeological evaluation of Bruce House, Kemble Street, WC2' (1992) MoLAS unpubl report; summary in P Greenwood and C Maloney 'Excavation round-up 1992' *London Archaeol* 7 no 4 (1993) 109.

11. The unbasemented part of Bruce House extended across roughly the south-west half of the building.

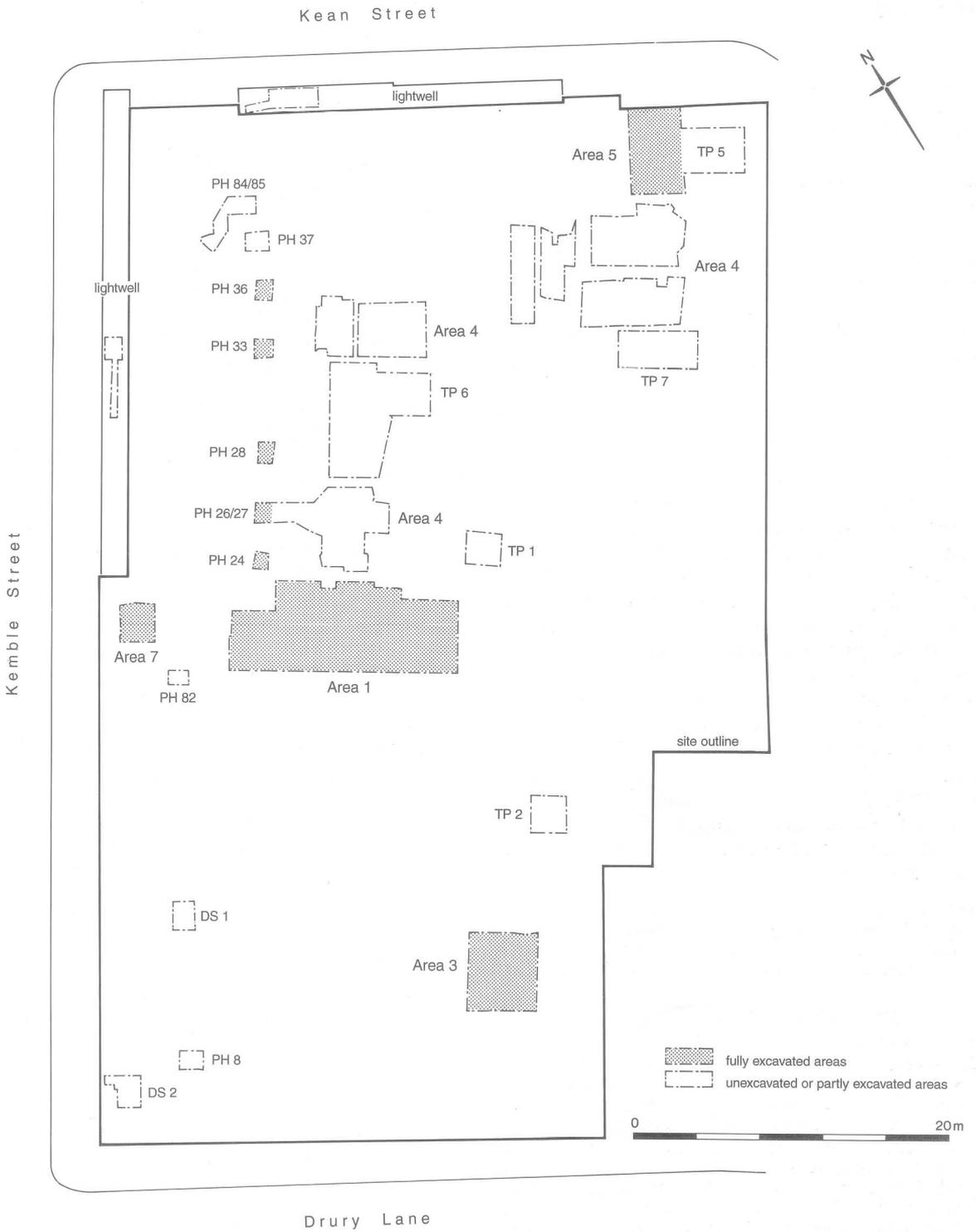


Fig. 2: plan showing the location of the fully excavated areas, and the partly excavated areas

Test pits in basemented areas revealed truncated Saxon, medieval and post-medieval features cut into the natural brickearth.

### The mitigation strategy

Following the evaluation a review of the proposed development was jointly undertaken by the developer's architects<sup>12</sup> and engineers<sup>13</sup>, together with archaeologists from English Heritage. The original intention was to use a tripod rig to insert a large number of small-diameter piles, which would have led to the destruction of deposits across about 15% of the piled area, but during the ensuing discussions the design of the proposed building and its foundations was modified to minimise the effect of the development on the archaeological remains, so that only 3.5% of the area would be disturbed. This was achieved by reusing the existing foundations as far as possible, and by reducing the area of the proposed basement extension by 75%. The level of a car park was raised, while the piling scheme in areas where new foundations were needed was also redesigned to reduce the number of piles. In



Fig. 3: general view of the site looking south-west. The basemented area (4) is in the foreground (MoLAS)

addition, the pile bores were lined to prevent concrete from seeping into the surrounding deposits<sup>14</sup>. Despite these measures, there were still some areas, such as those designated for lift pits and pile holes, where the destruction of archaeological strata could not be avoided. It was therefore proposed that these areas should be excavated.

### The excavation:

#### Methods

The excavation was undertaken from March to June 1993<sup>15</sup>. A number of areas (1, 3, 5, 7) and 'pile holes' were fully excavated (Figs. 2 and 3). In one basemented area (4) the existing floor was removed to expose truncated pits and other features cut into the natural brickearth. The exposed surface was cleaned and all archaeological remains were recorded (Fig. 4). Those features threatened by piling were excavated, but the remainder were left intact and reburied under terram and a protective layer of salt and lime free sand (Fig. 5).

An extensive programme of environmental sampling was undertaken for the recovery of animal and plant remains. Bulk samples were mainly taken from pits, although ditches and dump layers were also sampled. They were processed by wet-sieving and flotation. In addition, dark earth in Area 1 was systematically sampled to see if the spatial distribution of artefacts and ecofacts within it might provide evidence for features that had otherwise been obliterated by biological reworking. The dark earth was divided into one metre squares, and then excavated in 100mm thick spits. Soil from the south-west quadrant of each square was wet-sieved, while artefacts and animal bone in the remaining quadrants were collected by hand. To increase the recovery rates of metal objects excavated spoil was regularly scanned with metal detectors.

The following account is based on the preliminary assessment of the results from the evaluation and the excavation.

### Geology

The site is located on brickearths comprising silty and sandy clay, which lie above river terrace depos-

12. Levitt Bernstein Architects.

13. Ove Arup & Partners.

14. For information about piling archaeological sites see M Biddle *op cit* fn 2, 9-14; Ove Arup & Partners and York University, *York Development & Archaeology Study* (1991) 48-52. A project is currently underway to monitor the ground conditions on a piled site in York, see J Oxley 'Planning and the conservation of archaeological deposits', in Corfield *et al*, *op cit* fn 1, 51-4.

15. Summary in P Greenwood and C Maloney 'London field-work and publication round-up 1994' *London Archaeol* 7 no 13 (1995) 352.



Fig. 4: recording Middle Saxon features in Area 4. Most features were reburied (MoLAS)

its (terrace number 3a) comprising clayey or sandy gravels<sup>16</sup>. Geological strata were revealed in most excavation areas, and in unbasemented areas brick-  
earth survived up to a height of 18.62m OD.

#### Undated (pre-mid 7th century)

The earliest features were two small irregular pits cut into the natural brickearth in Area 1. One contained occasional animal bone and the other a piece of burnt flint. They were sealed by material described by the excavators as 'weathered or disturbed brickearth'. Micromorphological analysis suggested that this was a soil horizon overlaid by disturbed topsoil. The latter contained very small fragments of occupation debris, which appeared to comprise bone, human coprolitic material, daub and slag<sup>17</sup>, and was almost certainly intrusive. The only datable artefacts recovered from these deposits by manual collection were two sherds of intrusive 13th/14th-century pottery. Similar deposits in Area 3 produced a few small fragments of Roman tile. The soil would seem to antedate the Saxon settlement.

16. British Geological Survey (1982) Sheet TQ 38SW 110560.

17. R I Macphail and G M Cruise *Assessment of the soils at Bruce House, Kemble Street, London* (1994) unpubl report.

#### Middle Saxon (Fig. 6)

Study of the pottery and finds from Bruce House shows that the site was first intensively occupied in the second half of the 7th century<sup>18</sup>. The earliest Middle Saxon activity was mainly represented by cess pits, rubbish pits and wells, many of which had been dug through the brickearth and into the underlying river terrace gravels. The pits generally contained pottery associated with the first ceramic phase, and one in the north-east part of the site produced one of the earliest coins to be found in *Lundenwic*, a primary series *sceat* provisionally dated to 690-725. The presence in this area of features apparently dating to between 650 and 730/750 is interesting since it suggests that *Lundenwic* extended further east at this early stage than was hitherto suspected. Together with finds from Jubilee Hall and Maiden Lane, it dispels the impression that 7th-century settlement was concentrated in the Trafalgar Square/Charing Cross area<sup>19</sup>, and it now seems more likely that the initial occupation extended along the putative early routes of the

18. L Blackmore *The pottery from Bruce House: a summary and assessment* (1994) MoLAS, unpubl. report; see fn 7.

19. See A Vince *Saxon London: an archaeological investigation* (1990) 17.



Fig. 5: a protective layer of salt and lime-free sand being spread across the unexcavated archaeological features in Area 4 (MoLAS)

Strand and possibly the southern part of Drury Lane<sup>20</sup>, before spreading northwards in the later 7th to early 8th century.

Direct evidence for at least one timber building was found. This consisted of the remains of a burnt daub wall in a construction cut, with two beamslots at right angles to it (Fig. 6; Building 1). The presence of other buildings on or near the site was also indicated by numerous fragments of burnt wall daub, many with wattle impressions<sup>21</sup>. Few fragments could be directly associated with structures, although a thick layer of burnt daub above a layer of brickearth may have been the remains of a collapsed wall overlying an earthen floor (Fig. 6, ?Building 2). Elsewhere, rows of truncated stakeholes and postholes may have marked the position of walls or, more probably, fences.

The uppermost fills of some early pits produced pottery from Ipswich, which was apparently deposited after 730/750 and is associated with the second phase of *Lundenwic*; a few features also contained shell-tempered ware, which defines the third main ceramic phase. These deposits probably represent either later fills which accumulated after subsidence of the main fill, or subsequent occupation layers that had slumped into the pits.

The best preserved sequence of Saxon strata was in Area 3, where occupation levels included a series of dump layers and eroded surfaces or paths. In most

20. It has been suggested that Drury Lane may have Middle Saxon origins. See Vince *ibid.*, 124. The maximum extent of the settlement was probably reached by the mid-8th century, although there may have been expansion and contraction in different zones before and after this.

21. R Goffin *The building material from Bruce House* (1994) MoLAS, unpubl. report.

22. R I Macphail and G M Cruise *op cit* fn 17, 3.

areas, however, the Saxon land surface did not survive. In places it may have been truncated by later features and basements, but this was clearly not the case in Area 1, where a thick blanket of dark earth overlay truncated Saxon pits. Here Saxon occupation levels had not been thick enough to survive reworking by soil fauna and roots during dark earth formation. However, an indication of the original thickness of the Saxon strata was provided by micromorphological analysis, which detected traces of reworked strata in the bottom 130mm of the dark earth<sup>22</sup>. This suggests that Saxon occupation levels at Bruce House were generally thinner than those on sites nearer the centre of *Lundenwic*. This could have been because the site was occupied for a shorter period, although the presence of shell-tempered wares in some features suggests that some form of occupation continued in the late 8th or early 9th century. Given the poor survival of the later horizontal strata it is not possible to establish the end-date of the site, but this must have occurred by the mid-9th century when *Lundenwic* was abandoned. Another plausible explanation for the thinness of the occupation levels is that the site was less densely occupied than the more central sites.

The rubbish dumps and pits contained a mixture of industrial waste and domestic refuse. Waste from bone and antler working was more common at Bruce House than on previous excavation sites in *Lundenwic*, which suggests that combs and other items were manufactured on or near the site. Most of the 204 pieces of red deer antler consist of branch and tine offcuts, although they also include flat rough-outs and comb blanks. About thirty sawn fragments of ?cattle longbones were also recovered. Two particularly interesting finds are part of an iron saw blade, which may have been used in boneworking, and a cow metatarsal which had been modified for use as an ice skate<sup>23</sup>. Loom-weight fragments are also fairly common. The range of other types of artefact, however, was relatively limited compared to that found in the core of the settlement. A few knife blades were recovered, but other household and personal items such as fragments of glass vessel glass and combs are scarce, and no dress accessories were found<sup>24</sup>.

23. Another possible Saxon skate has been found on the Royal Opera House site (Blackmore in prep).

24. L Blackmore *The accessioned finds: a summary and assessment* (1994) MoLAS, unpubl. report.

25. The discussion of the plant and animal remains from Bruce House are based on the following reports: J A Giorgi *The assessment of the plant remains from Bruce House* (1994) MoLAS, unpubl. report; A Pipe *Assessment of the animal bone from Bruce House* (1994) MoLAS, unpubl. report.

Plant remains and animal bones<sup>25</sup> were mainly recovered from pits, and are very similar to those found at sites towards the centre of *Lundenwic*. The charred plant remains mostly comprise cereal grains, dominated by bread wheat and six-row hulled barley, with very few oat and rye grains present. As at other sites in *Lundenwic* there are generally very few weed seeds, which suggests that 'cleaned' wheat and barley grain was imported from the surrounding countryside, together with smaller quantities of cultivated rye<sup>26</sup>. There is evidence that cereals were supplemented by other edible plants, for example, one pit produced burnt hazelnut fragments, while two others yielded charred legumes. Waterlogged plant remains include seeds of fig (possibly indicating trade with the Continent), apple/pear, elder, blackberry/raspberry and strawberry. Apple/pear pips were also sometimes mineralised, which may point to the use of some features as cesspits.

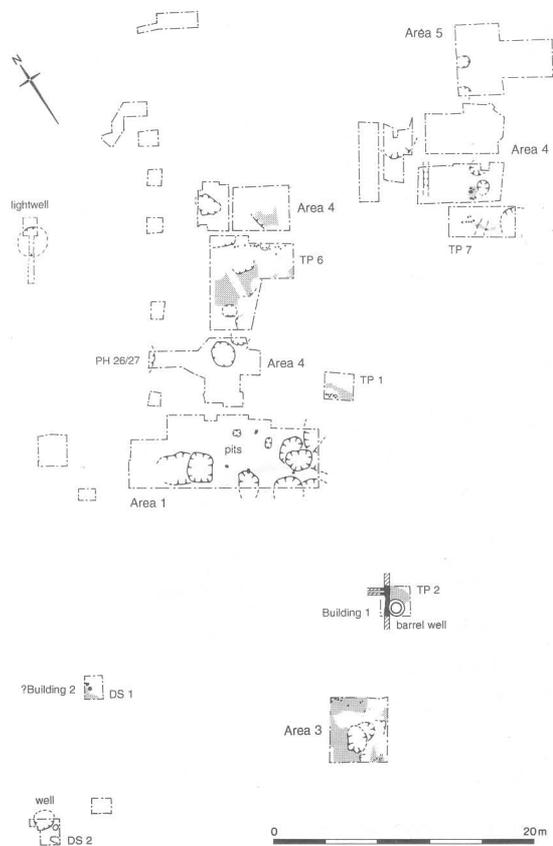
The animal bone assemblage from Bruce House, like those from other Middle Saxon sites in *Lundenwic*, *Hamwic* (Southampton) and *Eorforwic* (York), is characterised by relatively little diversity of *taxa*. It was dominated by cattle, sheep/goat and pig, while other domesticates, such as chickens and geese, and wild species although present, are poorly represented. The main domesticates at Bruce House, as at a number of other sites in *Lundenwic*<sup>27</sup>, are chiefly represented by bones from parts of the body that were of moderate to good meat-bearing quality, while foot bones and horncores are relatively scarce. It is possible that poor quality cuts of meat were trimmed off animal carcasses elsewhere in the settlement, such as the conjectured butchery site at Exeter Street<sup>28</sup>, or the possible farm at the National Gallery<sup>29</sup> on the west-

ern edge of the settlement. Dressed carcasses may also have been imported from farms in the surrounding countryside, such as the Treasury site<sup>30</sup>.

### The dark earth

After the site was abandoned, dark earth began to form and continued to accumulate until the urban development of the area in the late 16th or early 17th century.

The dark earth in Area 1 was excavated in four 100mm thick spits. The pottery in the dark earth progressed from predominantly Saxon at the bottom to mainly post-medieval at the top. The hand-collected pottery from the lowest spit was exclusively Saxon in date, although four very small medieval sherds, probably intrusive, were recovered by sieving. The dark earth of the overlying second spit contained traces of reworked strata, and Saxon pottery was predominant, although the presence of medieval wares and tile fragments suggests either disturbance and/or further soil formation in the 12th and 13th centuries. This was cut by a 0.24m deep ditch (Fig. 7, Ditch 1), and its 0.54m deep recut (Ditch 2), both of which produced pottery dated to 1350-1500. The ditches were aligned at right angles to Drury Lane and may have marked a field boundary. In the third spit, medieval pot-



26. See A Davis and D de Moulins 'The plant remains' in R Cowie and R L Whytehead with L Blackmore 'Two Middle Saxon occupation sites: Excavations at Jubilee Hall and 21-22 Maiden Lane, WC2' *Trans London Middlesex Archaeol Soc* 39 (1988) 14-7.

27. For example Jubilee Hall and Maiden Lane; see B West and J Rackham 'Birds and mammals', *op cit.* fn 26, 156.

28. S Farid and G Brown 'A butchery site in *Lundenwic*' *London Archaeol* 8 no. 6 (1997) 146-152.

29. R Rackham and B West 'Animal remains' in Whytehead *et al* (1989) 170.

Fig. 6: plan of Middle Saxon features

tery predominated, although a considerable number of Saxon sherds was also found, as well as a few sherds of mid-16th/mid-18th-century pottery, which may have been intrusive. In the uppermost spit the post-medieval wares ranged in date from 1500 to 1750, although most were probably of late 16th-century date.

The later wares in the upper three spits were mainly from the south-east end of Area 1<sup>st</sup>. This suggests that originally the land surface sloped down from north-west to south-east at a shallow angle; so that at any given height the dark earth at the south-east end would be later than the deposits at the opposite end of Area 1.

### Medieval (Fig. 7)

During the medieval period the site appears to have been agricultural land. The distribution of artefacts in the dark earth indicates that there was little reworking of this deposit, and given the absence of ploughmarks in the underlying surface, it would appear unlikely that the land was used for arable farming. In addition to the ditches in the dark earth in Area 1 (see above) three pits in Area 4 appeared to be of medieval date. Another ditch (3), found in the pile holes to the north-west of Area 4, was also apparently medieval, for among the few artefacts it produced were potsherds dated to 1270-1500. This feature may have been the precursor of a ditch (Fig. 8a, Ditch 4) found on the same alignment in Area 1.

### Post-medieval (Fig. 8)

The 'Agas' map of the 1560s and the Braun and Hogenberg map of 1572 suggest that by the third quarter of the 16th century the site was still farmland, probably used for pasture. However, the post-medieval strata and features recorded during the excavation were mainly associated with the subsequent urban development of the area, and comprised brick walls, wells, cesspits, rubbish pits and dump layers. The clearest sequence was recorded in Area 1. Here the dark earth was cut by a substantial ditch, which was aligned approximately at right angles to Drury Lane (Ditch 4). The ditch was probably Tudor in date, for although the lowest excavated fill produced pottery dated to the 11th or 12th centuries most of the overlying fills contained early post-medieval pottery. The latest fill produced a clay pipe dated to 1610-1640, suggesting that the backfilling of the ditch was completed during the early 17th century. To the south-east of the ditch were the remains of two walls, represented by footings of chalk and flint (one also incorporated sandstone, brick and tile). The stratigraphic relationship of the ditch to the walls is unclear. If the walls were later, as the excavator suggests, they may have been associated with buildings shown on Hollar's map of c.1658 fronting onto Princes Street (now Kemble Street). The walls were demolished and covered over with garden soil, possibly in the late 17th or early 18th century. The southern part of Area 1 appears to have been a garden. Here a 17th-century barrel-

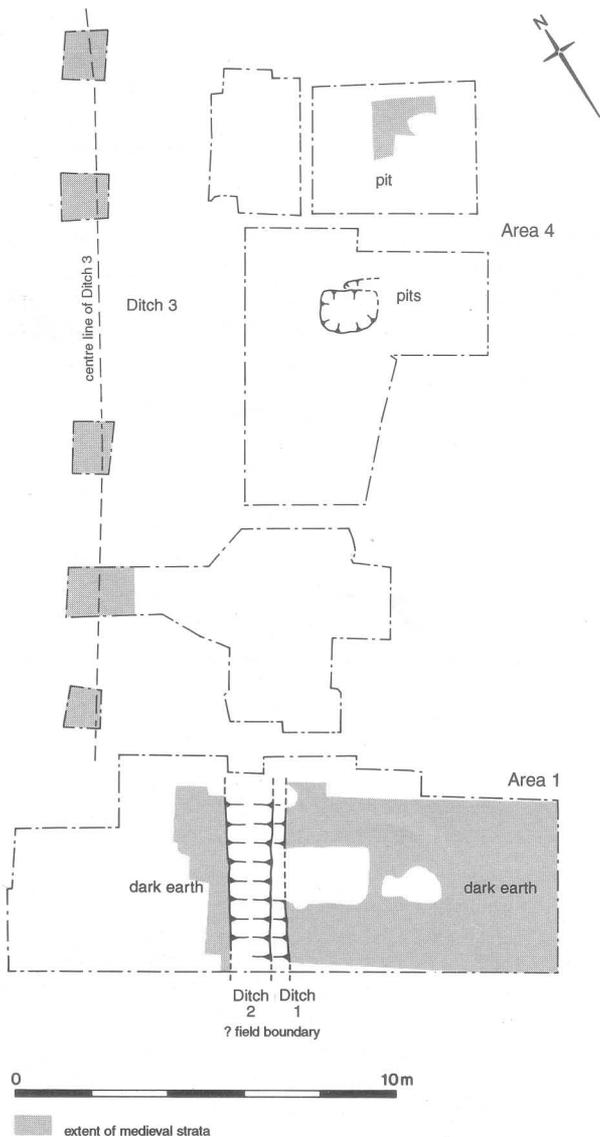


Fig. 7: plan of medieval features

30. At least part of the faunal assemblage at the Treasury was interpreted as 'commercial debris'. See R E Chaplin *The Study of Animal Bones from Archaeological Sites* (1971) 136.

31. J Sidell Bruce House (BRU92): the assessment of the 3-D dark earth programme (1994) Museum of London, unpubl. report.

lined well was found within a large rectangular construction cut. The well was excavated to a depth of 3.10m, but probing of the remaining fill suggested that it was at least 4.20m deep. Traces of what may have been a gravelled path were found leading up to the south side of the well. Numerous small pits and postholes of 17th- to mid 18th-century date were also found (Fig. 8b). Many of the postholes appeared to be roughly aligned at right angles to the street frontage, perhaps indicating the presence of a property boundary. A later phase of building was represented at the north end of the area by a large 18th-century brick-lined cesspit. Its primary fill produced a clay pipe dated to 1700-1770.

### Discussion

The excavations at Bruce House have provided important evidence about the nature and development of the eastern part of *Lundenwic*. The pottery conforms to the pattern already established, but it is particularly interesting that occupation on this site appears to have begun during the second half of the 7th century, at a relatively early stage in the development of the Saxon town, and to have continued until the late 8th century, if not later. It also seems that the settlement became more dispersed towards its eastern edge. Although the site produced evidence for domestic occupation, activity may have been oriented more towards craft work (bone-working, and to a lesser extent weaving) than at some other sites.

The mitigation strategy at Bruce House was an experiment, in as much as a relatively new approach to archaeology was being applied for the first time to a site in *Lundenwic*. The exercise was worthwhile in that it explored new ways of managing the archaeological resource, and provided an opportunity for architects, engineers and archaeologists to work together on the problem of preserving archaeological deposits.

However, the mitigation strategy did present the excavators with some serious difficulties, especially with the dating and interpretation of features, which was often difficult in those areas where only partial excavation was allowed. For example, one ditch (3) was only recognised as such because, quite fortuitously, its course happened to coincide with a row of pile holes. The mitigation strategy certainly ignored Philip Barker's dictum that 'only total or near-total, excavation will yield results which are not deceptive'<sup>32</sup>.

32. P. Barker *Techniques of Archaeological Excavation* (1977) 42. Barker's book is regarded by many as the standard text on fieldwork and excavation.

The final outcome of the experiment will not be known for many years. Only when the site becomes available for further archaeological work will the full implications of the mitigation strategy be realised. However, we cannot be certain about the immediate and long-term effects of the construction work on the archaeological strata. Nor can we say whether future archaeologists would wish to bother with some of the deposits that we were at pains to preserve. For example, will it be seen as cost effective to reinvestigate areas that have already been partially dug, and only contain truncated cut features? Only time will tell.

### Acknowledgements

The project was funded by the Peabody Trust. The Museum of London Archaeology Service is grateful to staff of Levitt Bernstein Architects and Ove Arup & Partners for their help and cooperation during the excavations.

The authors are particularly grateful to a number of colleagues at MoLAS including: John Giorgi, Richenda Goffin, Alan Pipe and Jane Sidell for information about artefacts and environmental evidence from the site. Particular thanks go to George Dennis (the project manager), Bruno Barber and Barney Sloane for commenting on drafts of the text. The drawings are by Susan Banks.

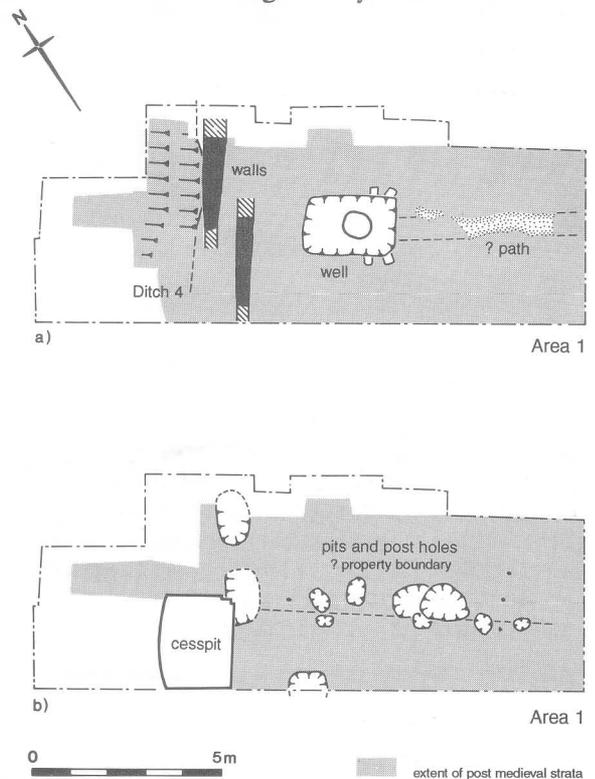


Fig. 8: plans of post-medieval features in Area 1