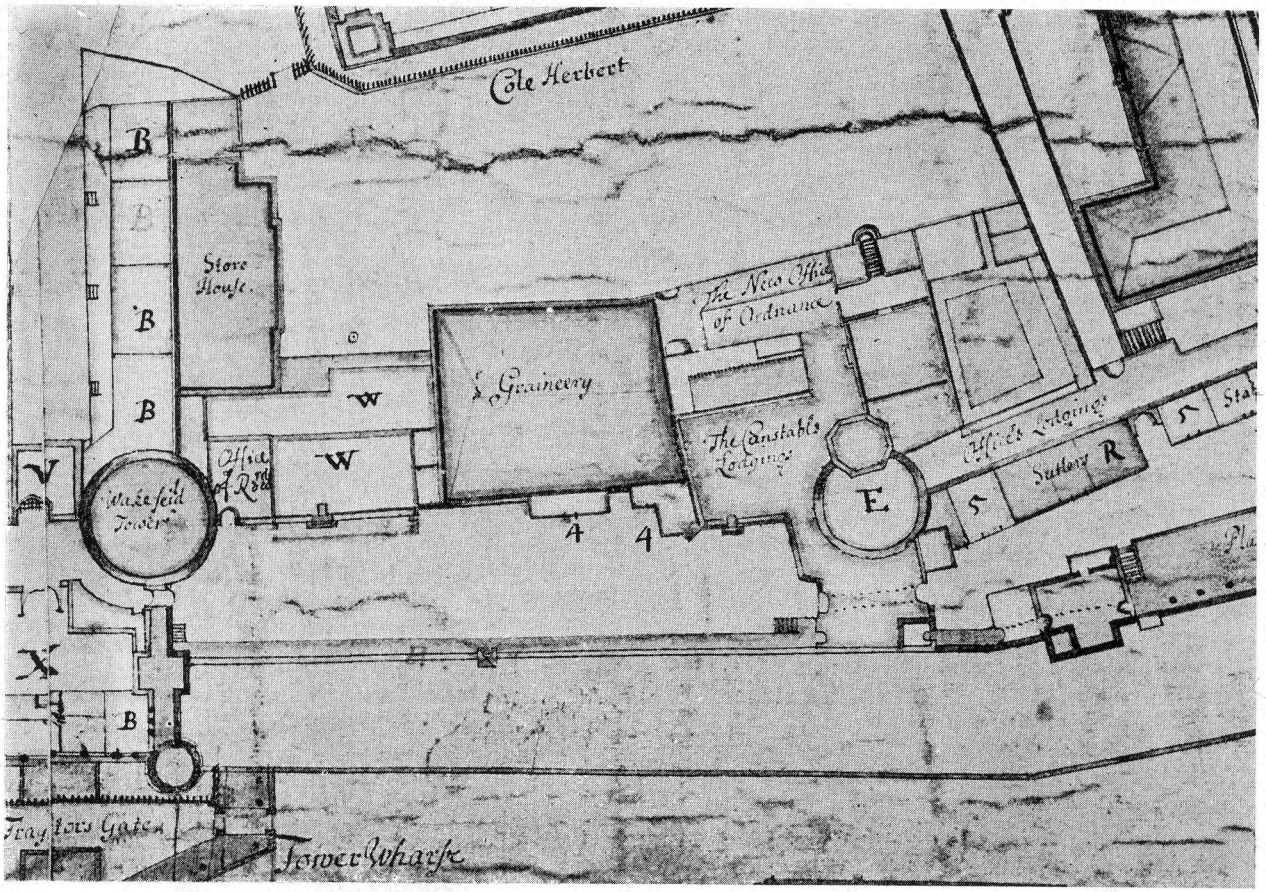

Fig. 1:
Part of Plan, dated *c.*1680, showing Inmost Ward. Period I riverside wall shown in south wall of Constable's Lodgings. Period II riverside wall shown in south wall of Granary. Tudor buttress and period III medieval addition form south-west corner of Constable's Lodgings.

An Earlier Roman Riverside Wall at the Tower of London

GEOFFREY PARNELL

FOLLOWING the 1976/early 1977 excavations at the Tower of London, it was suggested that some form of promontory might exist on the south-east corner of the Roman city defences.[1] This idea derived from the discovery of an abrupt southward turn of the late fourth-century riverside wall 14.50m west of the line of the earlier landward wall and in an area of obvious strategic importance. A close study of early Tower of London ground plans revealed that the line of the river wall dictated the alignments of several seventeenth-century buildings occupying its former course (for an example see Fig. 1). These alignments confirmed the wall's southward extension and indicated a subsequent eastward return just south of the present nineteenth-century curtain wall. Potential archaeological support for an eastward return was afforded by a complete scarping of the landward wall's internal bank, close to the Lanthorn Tower, and in an area where the

1. G. Parnell, 'Excavations at the Tower of London, 1976/7,' *London Archaeol.* **3**, No. 4 (1977) 97-9.

bank's position might have been expected to impede the conjectural line of return (see Fig 2).

In response to these indications, the Department of the Environment undertook a small-scale excavation from late October, 1977, for a period of six weeks. A 7m trench was opened in the narrow strip between the south face of the inner curtain wall and Water Lane (see Fig 2).

Results confirmed the existence of further walling where indicated, but unexpectedly the work was found to belong to a second, and hitherto unknown riverside wall, of an earlier date.

Owing to the narrow confines of the excavation, examination of the earlier (period 1) river wall was restricted. It was, consequently, not possible to ascertain the complete width of the wall. In addition, medieval work concealed the wall's eastern extent (see Fig 3); elsewhere, medieval robbing had removed much of the masonry down to foundation levels. Nevertheless, what remained illustrated the wall's considerable size, plus its structural relationship to the southward extension of the late fourth-century (period II) river wall.

Period I riverside wall

The wall was aligned east-west along the length of the trench and parallel with the period II river wall 4m to the north (see Fig 4). At base level the structure lay at 2m O.D. This is at least 2m above any known Roman river level, indicating that the wall's function cannot be regarded as being solely a river embankment.

The foundations of the wall — traced to a maximum width of 2.80m — were substantial and compare favourably with those found under sections of the Roman riverside wall at Blackfriars[2]. Restricted excavation time meant that it was possible to examine them in only a limited area; construction techniques were nevertheless apparent.

Firstly, a series of oak piles was driven-in to pre-existing deposits of sand. The majority of the timbers were squared and on average measured between 26 x 18 cm and 18 x 12 cm. They were almost certainly arranged in uneven rows approximately 20 cm apart. One probable row was found to include at least six timbers; the south section

2. C. Hill. 'The London riverside wall,' *Current Archaeol,* No. 57, (1977).

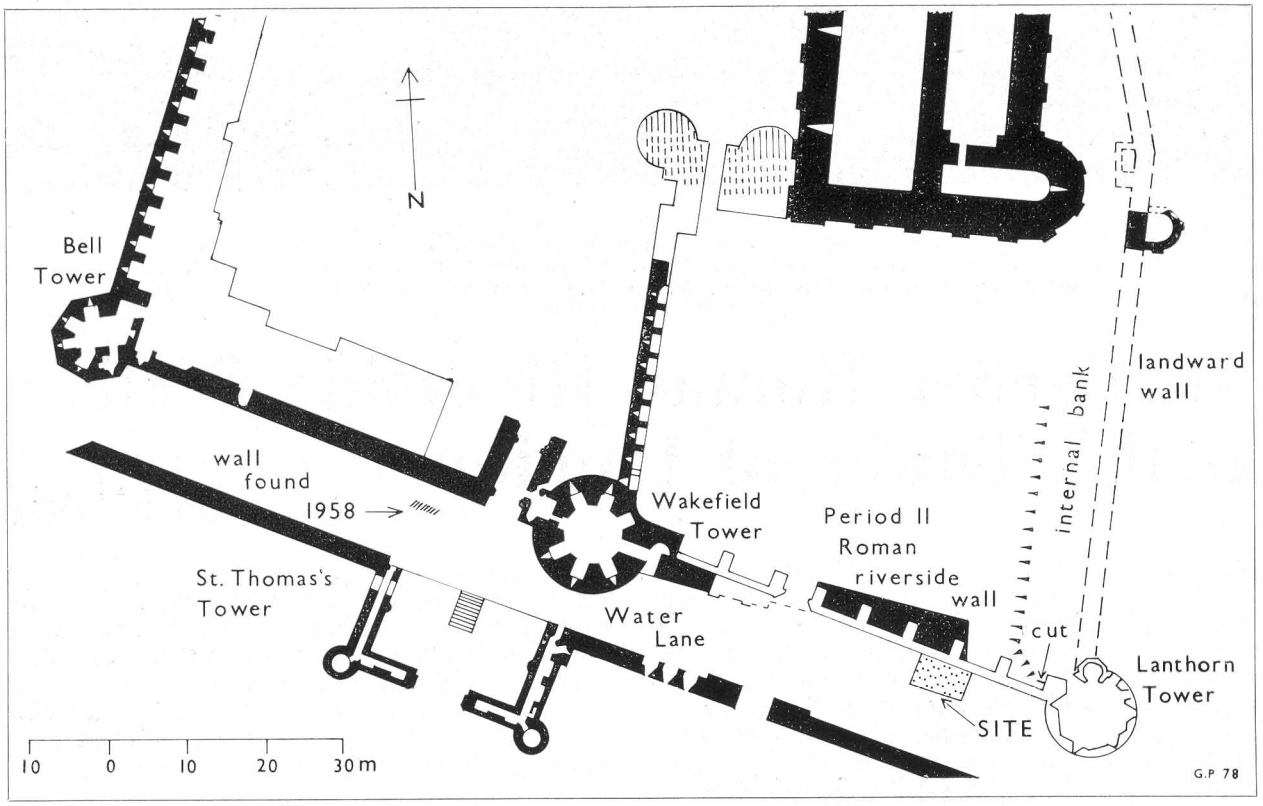

Fig. 2
Tower of London: location of site and associated features.

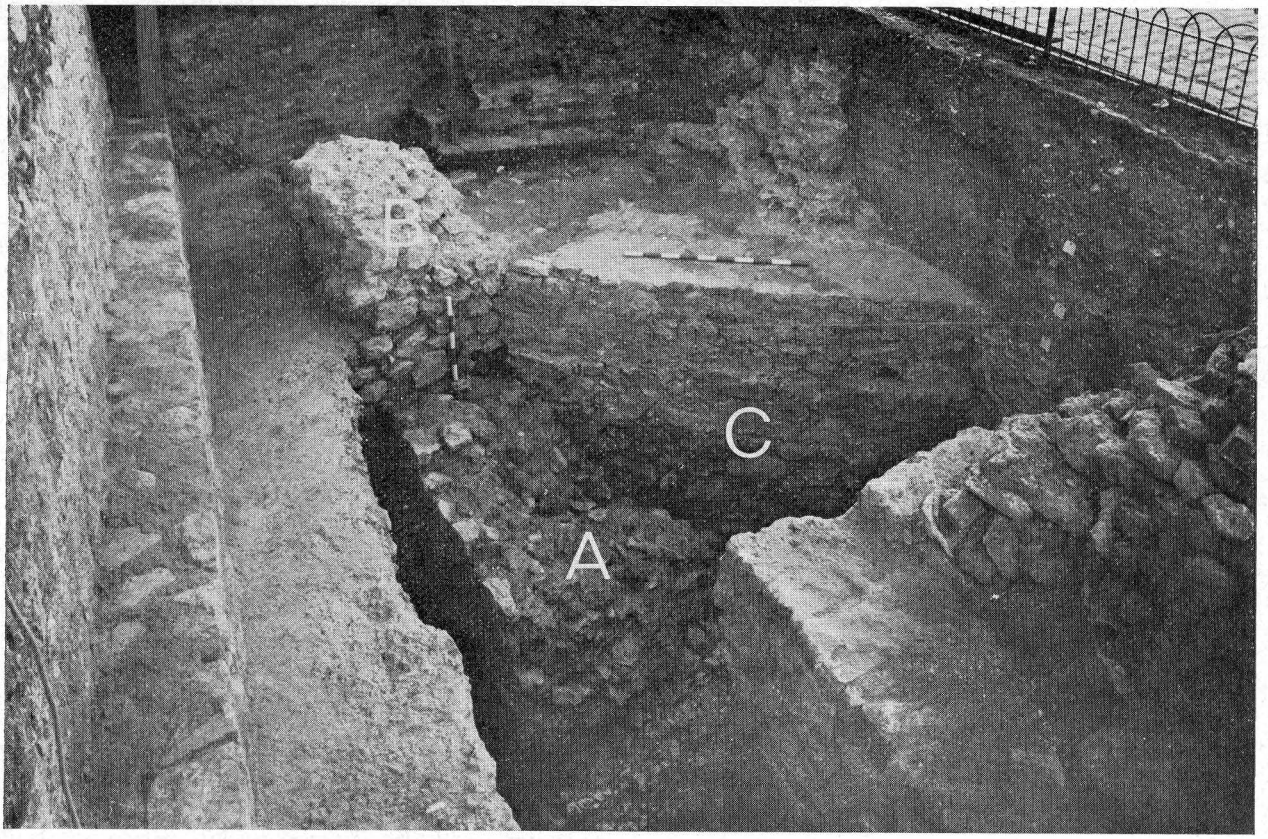

Fig. 3:
View of excavations looking east. A, Period I Roman riverside wall. B, Period III medieval additions. C, Tudor buttress.

prevented any further count. Next, a thick 30 cm layer of chalk was rammed between and over the piles. With its permeable quality the chalk provided a stable raft on to which the main body of the wall could be constructed.

The surviving portion of the wall was standing to a maximum height of 1.20m; the remaining width was 1.60m. The north (landward) face of the wall, which comprised eight neat courses of ragstone, lay 20cm back from the edge of the chalk raft: the main body of the wall, therefore, cannot have been less than 2.40m in width.

The core of the wall revealed an extremely hard mixture of mortar and ragstone. In a culminating process, the initial exterior facing stones were positioned on to the chalk raft, then a layer of core material poured between them. Once this had set, another course of stones was applied and the process repeated.

At present, a suggested date for the construction of the wall awaits radiocarbon and dendrochronological tests which are being carried out on a number of piles from beneath the wall. However, the scarping of the landward wall's internal bank remains a likely association, and pottery recovered from its back-fill might tentatively suggest a late third or early fourth-century date.

Period II riverside wall

A small section of the wall's southward extension was found to butt against the north face of the period I wall. Although a limited working area permitted only the most restricted examination, it was apparent that the alignment of the face had diverted from its previously recorded 90° and was now running parallel with the opposing east face at 100°. The point at which this change occured is mirrored by a dog leg in the line of the medieval period II's chamfered plinth (see Fig 4). If the 100° west face is projected northwards it comes conveniently close to the truncated end of the plinth and subsequently demonstrates that the 90° face is, in fact, part of a hitherto undiscernable projection oc-

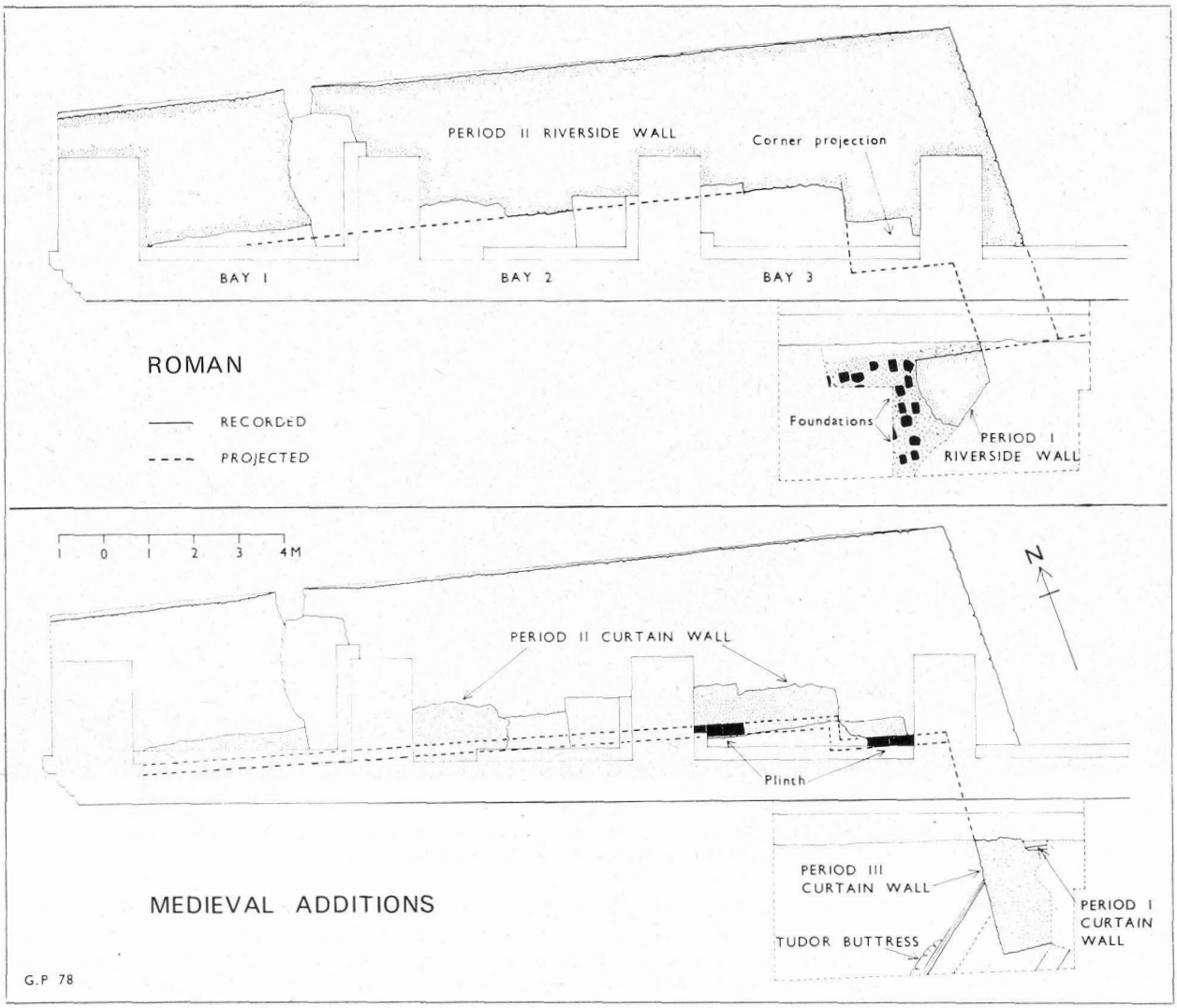

Fig. 4:
Plan of Roman riverside walls and medieval additions.

cupying the outside angle of the wall[3].

The interpretation of this walling is greatly hindered by the presence of the nineteenth-century wall concealing crucial areas from view. In addition, much of the exterior Roman facings that would have been accessible is masked by medieval refurbishings. Nevertheless, there can be no doubt that the period II wall connected on to a length of the earlier river wall, and that part of this length was allowed to remain standing to the west of the connection, thereby forming a corridor between the two. The eastern end of the corridor is closed by the southward extension of the period II wall, which, as we have seen, incorporates a curious angular projection. Furthermore, it can be demonstrated that the eastern end of the corridor was sealed by dumping, as the mortar pointings on both phases of walling showed no sign of weathering.

Combined, these observations might suggest that some form of gate existed in the corner of the period II wall with the corridor providing additional defence to its approaches. It is known that the

3. This has largely been substantiated by the discovery of a late 19th century plan which shows the 'Old foundations' that were encountered while the construction trench for the existing curtain wall was being dug.

ground surface behind the period II wall was raised at the time of the wall's construction. The dumping at the end of the corridor, therefore, might be seen as a ramp from a gate to the lower lying external waterfront area.

Medieval

The earliest phase was represented by a fragment of wall built on the line of the period I river wall (see medieval period I, Fig 4). The wall was encased within later medieval masonry and no dating evidence survived. However, the three courses of ragstone forming the north face (the lowest course pitched, below two courses of roughly squared blocks) are suggestive of an early medieval date.

During the later medieval period, most of the earlier Roman river wall, lying to the west of the point where the period II river wall butted against it, was robbed down to its chalk foundations and the area back-filled with deposits of soil and clay. Pottery recovered from the dumping has been dated to the second half of the thirteenth century. A new curtain was then constructed on the line of the southward extension of the period II river wall, engulfing the earlier medieval masonry and skirting the broken end of the earlier river wall, before turning eastwards at a right angle (see medieval period III, Fig 4).

It seems likely that until this time, the original Roman lay-out had largely been retained, as the surviving earlier medieval work represents either a refurbishing or a rebuilding of the Roman alignments. Historically, the remodelling might relate to the programme of work carried out by Edward I, and would have taken place in the wake of his expansion of the Tower's defences to their present outer circumferal limits, late in the thirteenth century.

Post medieval

No further activity was recorded until the construction of a buttress against the corner of the period III curtain wall during the sixteenth century (see Tudor buttress, Fig 4). The massive foundations of the buttress rested partly on the remains of the earlier Roman river wall and became progressively deeper as the Roman masonry tailed off. Before concealment under the south section of the trench, the foundations were recorded to a depth of 2.80m, the width being 2.40m.

There is little doubt that the buttress and ajoining northward stretch of the period III curtain wall, escaped the demolition of the Inmost Ward palace area during the Commonwealth era, and were subsequently incorporated in to the ensuing extensive late seventeenth-century redevelopment (see Fig 1). An Ordnance plan dated 1788 shows the buttress and remaining curtain forming the west side of an alley called the "Major's Passage."

Two walls belonging to the seventeenth-century complex were found, one constructed in brick, the other in stone. In 1788, these walls were in turn demolished in advance of the construction of the enormous Ordnance Office, part of whose large brick and stone south wall was also recorded.

Discussion

If the discovery of an earlier riverside wall at the Tower of London finally explains the origins of a dog leg in the southern line of the inner curtain defences, its implications for Roman London are far more wide reaching.

The prolonged dispute over the existence of any defensive riverside wall was only laid to rest in 1975, following Charles Hill's work at Blackfriars. Within eighteen months, the remarkable length of river wall at the Tower (now on permanent display) was disclosed, providing evidence of a construction date in the 390's — the latest known date for a structure of this kind anywhere in Britain[4]. Now,

4. An article on the wall will be appearing in the new DoE publication *Historic Conservation 1977.*

A.G.M. of the London Archaeologist

The ninth A.G.M. of *the London Archaeologist* was held on 19th May in the Lecture Theatre of the Museum of London. The following officers were elected:— Editor, Clive Orton; Assistant Editors, Rhoda Edwards and Beth Richardson; Secretary, Nesta Caiger; Advertising and Promotion, Betsey Kentish; Subscriptions, Sally Petchey; Managing Editor, Nicholas Farrant — and the auditors were re-elected. Representatives to serve on the Publication Committee were elected from the Museum of London and the following societies: Barnet, City of London, Greenwich and Lewisham, Hendon and District and London and Middlesex. Following the close of business, John Schofield spoke on "London's Waterfronts."

in the same strategically important south-east corner of the city, comes the discovery of an earlier wall a short distance to the south.

Clearly more information is needed to interpret the extent of the defences in regard to their chronological development, and speculation would be unwise whilst dating evidence is still being analysed. However, it would not be premature to cite some of the questions that this latest discovery inevitably provokes, and in doing so, offer some further observations.

Two principle questions that arise are, firstly, how far along the water front did the earlier river wall extend? And to what extent was this replaced by the later wall? It seems unlikely that the earlier wall represents a short return attached to the landward defences, as this would simply be outflanked by any sea-borne attack. Consequently, the wall perhaps continued at least some 400m further upstream to the bridge head — the nearest defendable position for termination. Indeed, the wall might well have continued westwards to cover the entire river frontage, in which case the Blackfriars section of wall might be associated.

The seond river wall might be regarded as a large, but localised remodelling of the earlier wall. However, this theory becomes less plausible if the discovery of an unidentified wall below Water Lane (see Fig 1) in 1958, has any bearings on the matter[5]. The reason why the earlier wall needed replacing is itself uncertain. As already stated, it was well clear of the river level, so the possibility of water erosion can be ruled out. This would seem to leave two alternatives: either it was taken down and re-sited for some structural or military reason, or it was deliberately slighted and subsequently replaced at a later date.

5. The eroded remains of a wall resting on timber piles were found south of the curtain wall between the Bell Tower and Bloody Tower. Its location does not relate to any known or conjectural plans, and lying south of the late twelth-century curtain, which has always been assumed to be on the line of the Roman riverside wall, it might be interpreted as an earier river wall. However, it could represent an unknown early medieval wharf, or for that matter a Roman one.

Excavations & Post-Excavation work

City, by Museum of London. Department of Urban Archaeology. A series of long term excavations. Enquiries to Brian Hobley, Chief Urban Archaeologist, DUA, 71 Basinghall Street, E.C.2. (01-606 1933/4/5). For information on post-excavation work, contact Penny MacConnoran at this address.

Brentford, by West London Archaeological Field Group. Excavation and processing. Enquiries to Alison Farnum, 71-72 Brentford High Street, Brentford, Middlesex. 01-560 3880).

Fulham, by Fulham Archaeological Rescue Group.
(1) Fulham Palace, Bishops Avenue, S.W.6. Excavation work under the floor of the great hall and other rooms will reveal medieval foundations and cellars, known from 18th century plan and surveys. Enquiries to K. Whitehouse, 86 Clancarty Road, S.W.6 3AA. (01-731 0338).
(2) Sandford Manor, Rewell Street (New Kings Road), S.W.6. Excavation work in grounds of 17th century house, traceable back to at least 14th century, hopefully will find medieval and earlier occupation. Enquiries to Excavation Director, C. E. Oliver, 18 Albany Court, Ashburnham Road, Ham, Richmond, Surrey. (01-948 2633 or 661 1421) or K. Whitehouse.

Hammersmith, by Fulham Archaeological Rescue Group. All types of work and finds: prehistoric, Roman, medieval and later. Tuesdays, 7.30 - 10 p.m., 2 Clancarty Road. S.W.6. Contact: K. Whitehouse, 86 Clancarty Road, S.W.6 3AA (01-731 0338).

Inner London Boroughs, by the Inner London Unit. Several rescue site in various areas. Enquiries to Irene Schwab (01-242 6620).

Kingston, by Kingston-upon-Thames Archaeological Society. Rescue sites in the town centre. Enquiries to Marion Smith, Kingston Museum, Fairfield Road, Kingston (01-546 5386).

North-East Greater London, by Passmore Edwards Museum. Enquiries to Pat Wilkinson, Passmore Edwards Museum, Romford Road, E.15. (01-534 4545).

Putney, by Wandsworth Historical Society. Two acre site at junction of Felsham Road and High Street lies on Roman and medieval settlements. Alternate weekends. Enquiries to Nicholas Farrant, 7 Coalecroft Road, S.W.15. (01-788 0015).

Southwark, by Southwark and Lambeth Archaeological Excavation Committee. Several sites from the Roman period onwards. Enquiries to Harvey Sheldon, S.L.A.E.C., Port Medical Centre, English Grounds, Morgan's Lane, S.E.1 2HT. (01-407 1989).

Surrey, by Surrey Archaeological Society. Enquiries to David Bird, Field Officer, S.A.S., Castle Arch, Guildford, Surrey. (0483-32454).

Vauxhall Pottery, by Southwark and Lambeth Archaeological Society. Excavation at weekends only. Processing of excavated material continues three nights a week. All enquiries to S.L.A.S., c/o Cuming Museum, 155 Walworth Road, S.E.17. (01-703 3324).

GENERAL EXCAVATIONS

The Council for British Archaeology produces a monthly Calendar of Excavations from March to September, with an extra issue in November and a final issue in January summarising the main results of fieldwork. The Calendar gives details of extra-mural courses, summer schools, training excavations and sites where volunteers are needed. The annual subscription is **£3.00** *post-free, which should be made payable to C.B.A., 112 Kennington Road, S.E.11.*