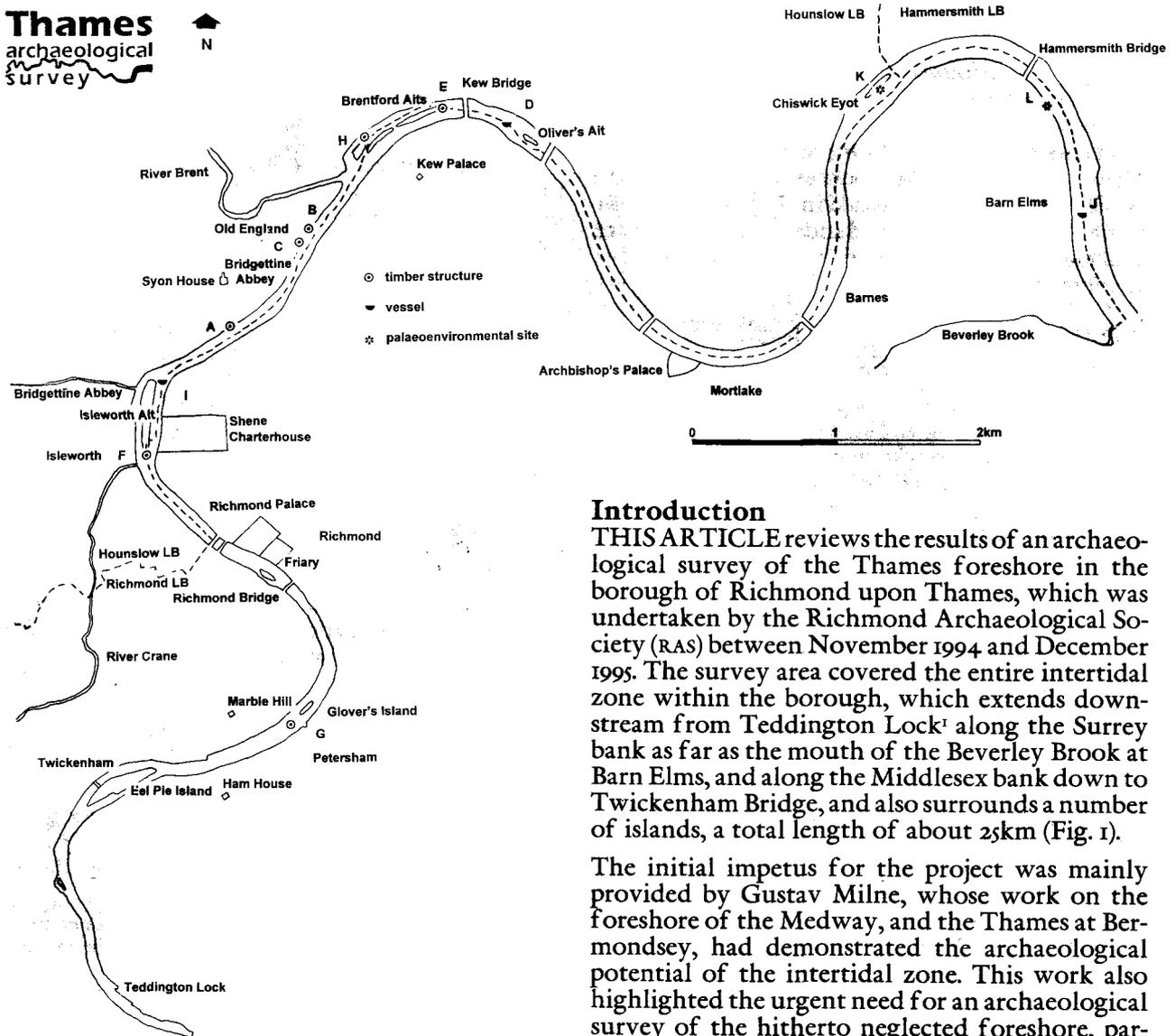


An archaeological survey of the foreshore in the Borough of Richmond upon Thames: part 1, time and tide

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Thames
archaeological
survey



Introduction

THIS ARTICLE reviews the results of an archaeological survey of the Thames foreshore in the borough of Richmond upon Thames, which was undertaken by the Richmond Archaeological Society (RAS) between November 1994 and December 1995. The survey area covered the entire intertidal zone within the borough, which extends downstream from Teddington Lock¹ along the Surrey bank as far as the mouth of the Beverley Brook at Barn Elms, and along the Middlesex bank down to Twickenham Bridge, and also surrounds a number of islands, a total length of about 25km (Fig. 1).

The initial impetus for the project was mainly provided by Gustav Milne, whose work on the foreshore of the Medway, and the Thames at Bermondsey, had demonstrated the archaeological potential of the intertidal zone. This work also highlighted the urgent need for an archaeological survey of the hitherto neglected foreshore, par-

1. The river may once have been tidal as far as Staines, but the tidal head has been at Teddington since the lock and weir were built there in 1811.

Fig. 1: plan of the study area showing the location of archaeological sites referred to in the text (A-L).

ticularly as the intertidal zone is continually exposed to erosion, and is under increasing threat from riverside development².

Planning for the survey began in August, 1994³, and the first meeting of participants was held in November. Initial reconnaissance work was almost complete by April 1995, when RAS joined forces with the Thames Archaeological Survey to take part in a pilot study of London's foreshore⁴. This study was carried out by teams from local societies and the Institute of Archaeology, University College London, coordinated by the Thames Survey Officer, Mike Webber.

About thirty members of RAS (over 25% of the society) were involved in the project. Equipment was lent by various organisations and individuals, and stationery (record sheets and guidance notes) and technical support (mainly artefact identification and radiocarbon dating) was provided by the Thames Archaeological Survey. Throughout the project tuition was provided in the recognition of artefactual, environmental and structural evidence and elementary surveying.

RAS took a two-pronged approach to the project: 1) A desk-based assessment to assemble topographical, archaeological and historical information to predict the location of foreshore sites, and help with the identification and interpretation of features found during the survey.

2) A field survey to systematically map and record archaeological sites on the Thames foreshore.

This dual approach is reflected in this article: part 1 outlines the findings of the desk-based assessment, while part 2, in a later issue, will give an account of the field survey.

The desk-based assessment

The study area was slightly larger than the survey zone, for in addition to the river and foreshore, it included a riverside margin about 100m wide extending along both banks from Teddington Lock to Barn Elms and Fulham.

2. See G Milne 'A severe case of neglect: foreshore archaeology on the Thames' *Rescue News* 63 (1994) 1-2.
3. The organising committee comprised Anna Cronin and the authors.
4. The pilot study was promoted by the London Archaeological Research Facility (University College London) and the Museum of London, and was funded by English Heritage. See note in *London Archaeol* 7 no 12 (1995) 327; M Webber 'Thames foreshore: pilot study reveals extent of destruction', *Rescue News* 68 (1996) 4.
5. Supplied by Ian Greig, English Heritage.
6. A particularly useful source is F S Thacker *The Thames Highway I: general history* (1914); *II: locks and weirs* (1920).
7. Many local riverscapes are reproduced in: M Batey, H Buttery, D

Source material

Information was drawn from various sources, including the Greater London Sites and Monuments Record⁵, local histories⁶, unpublished documents, maps, photographs and paintings (many of which are reproduced on postcards and in books⁷).

The large body of artefactual evidence from the study area was considered to be of particular relevance to the project. Numerous artefacts were recovered from the Thames during the 19th century, which were often found by workmen in the course of dredging and the building of bridges and locks. Many were acquired by private collectors, who often paid handsomely for high quality display pieces, but rarely troubled to record exactly where and how the objects were found. This was certainly true of Thomas Layton, of Brentford, a highly eccentric character who amassed a huge body of material during his lifetime⁸. His collection included flint tools, Bronze Age weapons and other objects from the river between Richmond and Wandsworth, which are now in the Museum of London and Gunnersbury Park Museum. Another active local collector was William H. Lloyd, of St Margarets, who acquired various prehistoric relics, including a Late Bronze Age copper-alloy razor and a group of flint and stone implements recovered during the construction of Richmond Lock in 1892. His collection was bequeathed to Richmond Public Library in 1909⁹, and is now in the Museum of London¹⁰.

During the early 20th century George Fabian Lawrence, Inspector of Excavations for the London Museum, was particularly active in the recovery of river finds, and was commonly known to London workmen as 'Stony Jack'¹¹. Unlike his predecessors he diligently recorded the provenance of his acquisitions, most of which he passed on to either the London Museum or the British Museum. He also published an extremely useful paper which catalogued archaeological material from the river, including sites where timber piles had been seen¹².

- Lambert and K Wilkie *Arcadian Thames* (1994); B Gascoigne *Images of Richmond* (1978); B Gascoigne *Images of Twickenham* (1981).
8. D Whipp and L Blackmore 'Thomas Layton, FSA (1819-1911) 'a misguided antiquary'' *London Archaeol* 3 no 4 (1977) 90-96.
9. *Richmond Herald* 28th August (1909).
10. The Lloyd Collection was transferred to the London Museum in 1949, although a few items are now in the Museum of Richmond; Jon Cotton, MoL, and Abigail Thomas, Museum of Richmond, *pers comm*.
11. For biographical details see J Macdonald 'Stony Jack's Roman London' in J Bird, M Hassall and H Sheldon (eds) *Interpreting Roman London: papers in memory of Hugh Chapman* (1996) 243-51.
12. G F Lawrence 'Antiquities from the Middle Thames' *Archaeol J* 86 (1929) 69-98.

Geology, drainage and topography

With the exception of Richmond Hill, the land bordering the Thames in the borough is fairly level and low-lying. The geological drift deposits in this area mainly comprise gravels of the First River Terrace and alluvium¹³. The gravels at Twickenham, Ham and Brentford are overlaid by brick-earth, which was probably deposited as floodloam mainly during the Flandrian¹⁴. An area of 'made ground' immediately behind the foreshore at Barnes was apparently used in the 19th century as a dumping ground for artefact-bearing sediment dredged from the Port of London's navigation channels¹⁵.

Apart from relatively minor land reclamation schemes, notably at Richmond, the position of the main channel of the Thames has probably changed little since prehistoric times. The Thames is joined on the Surrey shore by the Beverley Brook at Barn Elms, and on the opposite bank by the Duke of Northumberland's River and the River Crane at Isleworth, and the River Brent at Brentford. Two minor watercourses, Stamford Brook and Parr's Ditch, once openly flowed into the Thames at Hammersmith, but were converted into sewers in the late 19th century.

There are islands, known as aits or eyots, in the channel at several locations (see Fig. 1). Most of those close to the Middlesex shore are accessible at low tide. Some mentioned in historical sources or shown on early maps have since disappeared. A few may have been destroyed by erosion or dredging, but some were apparently amalgamated, for example, the three small aits that lay opposite Twickenham in 1607 now form Eel Pie Island, and at Richmond a number were absorbed into the riverside by land reclamation.

Prehistoric

Prehistoric hunter gatherers would have been attracted to the Thames as a prime source of fish and game. Indeed, the aits would have been especially

good locations for hunting and fishing, and considerable evidence for prehistoric activity has been found off Isleworth Ait and Chiswick Eyot, while most of the others have yielded at least some prehistoric artefacts. From the Neolithic period onwards the easily cultivated soils of the river valley would have been favoured by farmers.

Many prehistoric artefacts have been found in the study area, with clusters of finds at Teddington, Twickenham, Richmond, Brentford, Kew Bridge, Mortlake and Hammersmith. Indeed, in a recent paper David Field commented that 'the collections of prehistoric artefacts from the river in west London represent one of the most impressive concentrations of archaeological material in the British Isles'¹⁶.

Most of the mesolithic artefacts found in the area come from the river, although struck flints with mesolithic characteristics have also been recovered from riverside sites at Chiswick and Brentford¹⁷. Stratified pottery and struck flints of Neolithic and/or Bronze Age date have been found at riverside sites at Twickenham, Chiswick, Brentford and Kew¹⁸. Neolithic material from the river mainly consists of flint and stone tools¹⁹, although two intact pots were found at Kew and Mortlake²⁰. Bronze Age river finds mainly comprise metal objects, some of which were probably lost accidentally or thrown away, while others may have been washed out from riverbank sites, as at Syon Park where a Late Bronze Age hoard was recently exposed by erosion²¹. However, a significant proportion of river finds, especially weapons (which are generally absent from riverside hoards, but are found elsewhere in graves), appear to have been deliberately deposited in the river as votive offerings. It is thought that some may have been thrown into the river during funerary rites (possibly after excarnation), since several items have been found with human skulls. Many skulls have been recovered from the stretch between Richmond and Mortlake, three of which have been dated by

13. Geological Survey of Great Britain, South London, sheet 270 Solid and Drift edition 130 000 (1981).
14. P L Gibbard, A G Wintle, J A Carr 'Age and origin of clayey silt 'brickearth' in West London, England' *Journal of Quaternary Science* 2 (1987) 3-9.
15. G F Lawrence *op cit* fn 12, 72.
16. D Field 'Tranched axes and Thames picks: Mesolithic core tools from the west London Thames' *Trans London Middlesex Archaeol Soc* 40 (1989) 18.
17. Jon Cotton *pers comm*; G F Lawrence *op cit* fn 12, 76; VCH *Middlesex* 1 (1969) 25-6, A D Lacaille 'Mesolithic facies in Middlesex and London' *Trans London Middlesex Archaeol Soc* 20 (1961) 101-150.

18. Jon Cotton, *pers comm*; R Sanford 'Neolithic Twickenham' *London Archaeol* 1 no 9 (1970) 199-201; Corney Reach upstream of old Chiswick (LEP89, PSR94, VCR95); R Canham *2000 Years of Brentford* (1978); Jodrell Laboratory, Kew (RGB90); Kew Riverside (KRR93).
19. See R Adkins and R Jackson *Neolithic stone and flint axes from the River Thames* BM Occasional Paper 1 (1978).
20. R A Smith 'Development of Neolithic Pottery' *Archaeologia* 62 pt 1 (1910) 340; S Piggott 'The neolithic pottery of the British Isles' *Archaeol J* 88 (1931) 153.
21. S Needham and C Burgess 'The later Bronze Age in the Lower Thames Valley: the metalwork evidence' in J Barrett and R Bradley (eds.) *The British later Bronze Age* BAR 83 (1980) 445-9.

radiocarbon to the Middle to Late Bronze Age²². It seems that votive offerings continued to be made during the Iron Age, when daggers, shields and other fine metalwork were deposited in the river.

An excavation carried out on the foreshore near Isleworth by Ivor Noel Hume in 1955, uncovered the remains of a platform of timber and wattles, possibly dating to the Early Iron Age²³ (Fig. 1, A). Unfortunately, before recording was completed the delicate structure was swept away by a wave created by a passing pleasure boat.

Roman

A small Romano-British settlement at Brentford appears to have been focused on the London to Silchester road, close to the ford over the Brent and a conjectured crossing of the Thames. The remains of flimsy Romano-British structures on the adjacent foreshore apparently represent an off-shoot of the main settlement, and it has been suggested that they may have been shelters for fishermen²⁴. They were first investigated in 1928 by Dr R. E. M. (later Sir Mortimer) Wheeler of the London Museum, who undertook a trial excavation on the foreshore at 'Old England', which revealed a Romano-British structure comprising timbers and a floor made of alternating layers of clay and wattles (B) (Fig. 2)²⁵. Wheeler's team worked frantically through the night to reveal as much of the structure as possible, and eventually traced it for a distance of 35ft SW-NE. Further investigations were undertaken in the area by Roy Canham of the London Museum in 1966/67, when several hut-sites were seen²⁶. One of the better-preserved sites was chosen for excavation, and was found to consist of two successive Romano-British structures, possibly floors, which were made of hazel saplings and planks (C).

Roman features at East Twickenham, an isolated pit at Corney Reach, and scatters of tile and pottery on the foreshore between Isleworth and Brentford suggest the presence of a series of farmsteads extending along the Middlesex bank for some 4km upstream from Brentford²⁷. There may also be the site of an early Romano-British farmstead near Coldharbour, Ham Fields, where pottery and pieces of quernstone have been collected²⁸.



Fig. 2: the Romano-British structure excavated by R. E. M. Wheeler at 'Old England' (Photo: Museum of London).

Saxon

The sites of Early Saxon riverside settlements have been found at Ham, Brentford, Mortlake and Hammersmith²⁹. The latter three were established on the outside of meanders, at sites possibly chosen for their optimum field of vision.

Numerous Early to Late Saxon spearheads and other weapons have been recovered from the Thames. It has been suggested that some were lost during skirmishes at river crossings. For example, such losses might account for a proportion of the large assemblage of weapons from Brentford, where, according to the Anglo-Saxon Chronicle, King Edmund's army forded the river in 1016 during a campaign against the Danes (although most finds in the Brentford group are dated to the Early to Middle Saxon periods, and are much too early to be connected with this event). Critics of this interpretation argue that spears would float, and that the quantity of finds and the high quality of some items would suggest 'deliberate deposition, either as votive offerings or as grave goods'³⁰. This theory is strengthened by the recent discovery of a skeleton in foreshore deposits on a riverside site at Corney Reach, Chiswick, which produced a radiocarbon date of 1380+/-80 BP, calibrated to AD 410-820³¹. In this context it is interesting to

22. Skulls from other stretches of the the Thames range in date from the neolithic to the mid-Saxon period; R Bradley and K Gordon 'Human skulls from the River Thames, their dating and significance' *Antiquity* 62 (1988) 503-9.

23. I Noel Hume *Treasure in the Thames* (1956) 43-6; I Noel Hume 'Iron Age and Roman discoveries in Syon Reach' *PLA Monthly August* (1956) 226-9; the site was located 260yds (238m) east of the corner of Syon Park — see I Noel Hume 'Finds from excavations on the north foreshore of the Thames between

Isleworth and Brentford, 1955' (unpubl. report, MoL file 57.10).

24. R Canham *op cit* fn 18; A Parnum and J Cotton 'Recent work in Brentford: excavations and observations 1974-82' *London Archaeol* 4 no 12 (1983) 318-25.

25. R E M Wheeler 'Old England', Brentford' *Antiquity* 3 no 9 (1929) 20-32.

26. R Canham *op cit* fn 18, 32-4.



Fig. 3: the dug-out canoe from Kew, which for a long time was thought to be prehistoric, but in the mid-1970s it was dated by radiocarbon to c. AD 1250 (photo: Museum of London).

note the discovery of a number of Late Saxon foreshore burials at waterfront sites in the City (eleven from the former mouth of the Fleet to the west of Blackfriars Lane, and two from Bull Wharf).

Medieval

During the medieval period the area flourished under royal and ecclesiastical patronage. By the early 14th century a royal palace had been established next to the river at Shene (later Richmond). In the 1380s a new jetty was built next to the Palace, and a large house was built for the royal household on one of the nearby aits³². The palace was rebuilt in 1414 by Henry V, who also founded a Carthusian

priory a little to the north, and Bridgettine abbey at Isleworth. The latter was moved to the site of Syon House in 1431. Further downstream at Mortlake the riverside manor house, owned by the Archbishop of Canterbury, was converted into an archiepiscopal palace. Settlements grew up close to the palaces at Shene and Mortlake, and also next to the river at Twickenham, Isleworth, Chiswick and Brentford, which from 1306 had its own weekly market. Most of the limited archaeological evidence for medieval occupation in the area comes from Brentford, where the remains of buildings, pits and wells have been found³³. Scatters of medieval pottery associated with burnt material, animal

27. Heathcote Road Nursery (HRD92), S Hoad 'Romans in Twickenham' *London Archaeol* 7 no 14 (1995) 378-382; Corney Reach (PSR94); I Noel Hume *op cit* fn 23, 44; Syon foreshore (SF78).
 28. D Field 'Ham: the Edwards Collection' *Surrey Archaeol Collect* 74 (1983) 169-184.
 29. Ham Field note in *Surrey Archaeol Collect* 52 (1952) 101-2; 233-246 Brentford High Street (BRE70) R Canham *op cit* fn 17, 30-1; 107 Mortlake High Street (MTK96); Winslow Road, Ham-

mersmith (HAM90) *London Archaeol* 6 no 8 (1990) 224.
 30. R Poulton 'Saxon Surrey' in J Bird and D G Bird (eds.) *The Archaeology of Surrey to 1540* (1987) 201.
 31. Corney Reach (VCR95); David Lakin and Jane Sidell, MOLAS, *pers comm*.
 32. J Cloake *Palaces and Parks of Richmond and Kew, 1: The Palaces of Shene and Richmond* (1995) 24.
 33. R Canham, *op cit* fn 18.

bones, and oyster and mussel shells on the foreshore at 'Old England'³⁴ probably represent dumps of domestic refuse from either Brentford or the Bridgettine abbey. Evidence for occupation was also found at Isleworth, where buildings belonging to the moated manor house of Richard, Earl of Cornwall, brother of Henry III, were uncovered during trial excavations³⁵.

The Thames was a major routeway in the Middle Ages, and was used for the transport of passengers and goods. The latter included produce from farms and market gardens bordering the river, and pottery from the production centre at Kingston, much of it bound for London. The nearest bridge over the Thames was at Kingston (built in the late 12th

century), and therefore ferries were established at several key crossing points, including Richmond and Brentford. Vessels would have ranged from royal barges serving Shene Palace to humble dug-outs such as the one dredged from the river between Oliver's Island and Kew Bridge in 1911 (D)³⁶ (Fig. 3). With the increase in water traffic came the need for landing stages, wharves and facilities to build and repair boats.

Fishing would have been a common occupation of those living next to the river. There were fisheries at Petersham, Isleworth, Brentford, Mortlake and Fulham, many of which were owned by monasteries or bishops. Most would have been weirs or traps extending out into the channel³⁷, but in the 15th

34. R. E. M. Wheeler *op cit* fn 25.

35. 3-23 Church Street, Isleworth, note in *London Archaeol* 5 no 10 (1987) 275.

36. London Museum Acc. No. L55; S McGrail *Logboats of England and Wales part 1 BAR* 51 (1978) 226.

36. See CR Salisbury 'Primitive British fishweirs' in G L Good, R H Jones and M W Ponsford (eds.) *Waterfront Archaeology* CBA Research Report 74 (1991) 76-87; S Godbold and R C Turner 'Medieval fishtraps in the Severn Estuary' *Medieval Archaeol* 38 (1994) 19-54.

37. VCH *Middlesex* 3 (1962) 139.

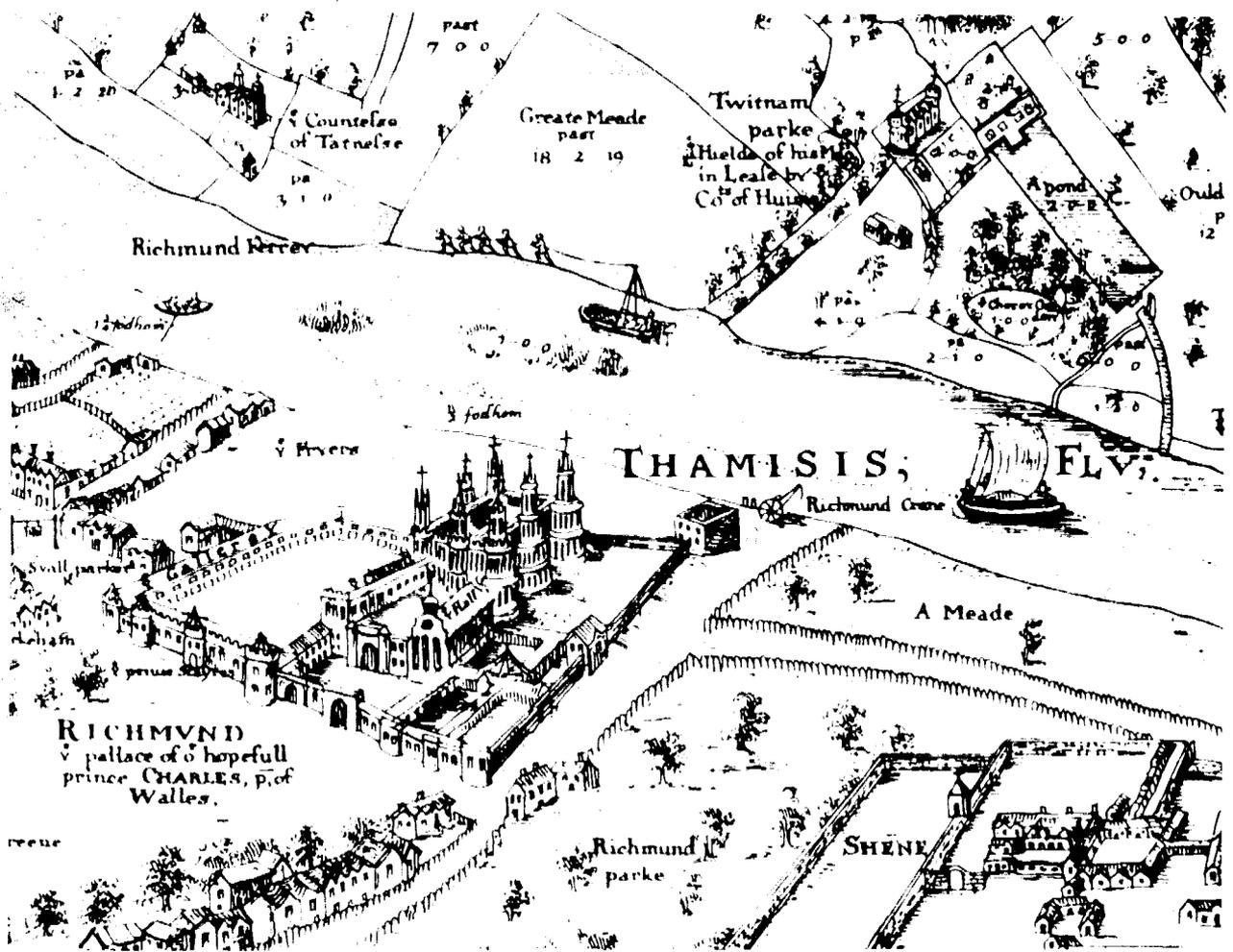


Fig. 4: detail from Moses Glover's map of 1635 showing Richmond Palace and Crane (the site of Crane Wharf).

century there was a wheel for taking fish opposite Twickenham Park³⁷. The location of the fisheries is uncertain, but one may have been built across the channel between the east end of the Brentford Aits and the Middlesex shore, where some thirty stakes were once observed³⁸ (E). Another may have been located at the south end of Isleworth Ait, which is shown on the 1915 edition of the 25 inch Ordnance Survey (OS) map as the site of 'ancient stakes' (F). Indeed, the adjacent riverside area acquired the name Railshead in the Middle Ages after the stakes or rails at the head of the fishery⁴⁰. Pictorial evidence suggests that the medieval weir at Petersham (or more probably a successor of it) may have survived into the mid-18th century (G)⁴¹.

Post-medieval

Henry VII rebuilt Shene Palace, which he renamed Richmond after his earldom in Yorkshire (Fig. 4). He also established a house of Observant Franciscans immediately to the south, which passed to the Austin Friars in 1534 before being dissolved in 1536. The abbey at Syon and the Carthusian priory at Richmond were suppressed in 1539, although both were briefly revived during the reign of Queen Mary. In 1547 the monastery at Syon was given to the Duke of Somerset, who built Syon House on the site. Indeed, during the Tudor period many nobles were attracted to the area, particularly to the riverside hamlet of Kew, which was conveniently close to Richmond Palace. In the following centuries the area continued to be favoured by the rich and famous, many of whom built villas overlooking the Thames, such as Ham House, Marble Hill House, and the Dutch House (later Kew Palace). Most of Richmond Palace was demolished during the Commonwealth, although its gatehouse and a range of buildings known as the Wardrobe still survive.

For much of the post-medieval period the largest riverside settlements remained little more than villages within a predominantly rural landscape. However, the 19th century saw a marked growth in their size, which was accelerated by the coming of the railway in the 1840s.

The area became increasingly important for growing fruit and vegetables, large quantities of which were transported by barge to London. Indeed the Thames continued to be heavily used for the

transport of a wide variety of goods well into the 20th century. In the Tudor period there were wharves at Richmond, Isleworth and Mortlake. The remains of a wharf, possibly connected with the Franciscan house at Richmond, were found about 12ft below ground level behind the offices of the Richmond and Twickenham Times in King Street during building work in 1922. They consisted of walls made of unfrogged brick and camp-shedding laid across piles, which 'apparently formed the sides of a creek or dock leading up from the river'⁴². In the following centuries many more wharves were built, especially along the Middlesex bank from Brentford to Fulham. Nevertheless the river's importance as a communication route suffered as roads improved and bridges were constructed at Kew in 1758, Richmond in 1774 and Hammersmith in 1827.

Undated

From time to time groups of stakes have been found on the foreshore and in the riverbed. One of the earliest recorded discoveries was made in 1881 by Mr. B. Hanson, a contractor from Southall, whose excavations on the river bank below 'Old England' revealed three rows of stakes with wattle-work interlaced around them (H). More extensive alignments of stakes were recorded between Isleworth Ait and Kew Bridge by Mr. Haig, foreman of the Thames Conservancy works at Kew Bridge, who carefully mapped the position of stakes extracted from the river bed during dredging. An account of these discoveries was published in 1906 by Montagu Sharpe⁴³, who, following comments by Caesar in *De Bello Gallico*, believed that the stakes were the remains of a defence work constructed by the Ancient Britons.

Among the more notable finds made during the early 20th century were the remains of at least four undated logboats. Three were found on the Surrey shore at Isleworth Ferry⁴⁴ (I), two of which were excavated by the Port of London Authority (PLA), but disintegrated while being extracted, and there is no mention of what happened to the third. Another was dredged from the river opposite Barn Elms (J) by the PLA in 1920, and is now in the Museum of London reserve collection⁴⁵. A timber fragment found at Mortlake before 1920 may have been the curved end of a canoe; it is now missing⁴⁶.

38. VCH *Middlesex* 3 (1962) 139.

39. M Sharpe *Antiquities of Middlesex in British, Roman and Saxon times* (1906) 22.

40. A C B Urwin *Railshead* (1974) 1.

41. VCH, *op cit*, facing page 143; F S Thacker, *op cit* fn 6, I, 480.

42. *Richmond and Twickenham Times* 19th August (1922).

43. M Sharpe *op cit* fn 39.

44. G F Lawrence *op cit* fn 12, 78.

45. London Museum Acc No B775; S McGrail *op cit* fn 36, 263-4.

46. London Museum Acc No A20297 (1919); S McGrail *op cit* fn 36, 242.

The Anglo-Saxon cemetery at 82-90 Park Lane, Croydon, Surrey: excavation or preservation?

Martin Welch

REGULAR readers of *London Archaeologist* will be aware of the Public Inquiry on the English Heritage proposals for a mixed package of preservation and limited excavation on this relatively small surviving pocket of an Early Saxon cemetery in Croydon¹. This was the same burial ground which had been uncovered in 1893-94 at Edridge Road, immediately to the west of the present site. As one of the participants in the Public Inquiry, I would like to place this Inquiry and its outcome into context, as well as discuss some of the implications for London's archaeology into the third millennium. The Croydon case is a scandal which should never have happened. It is a demonstration of what occurs when archaeological bureaucrats are allowed to elevate policy decisions over best practice, in the process rejecting expert advice because of course they know better and continue to allege they do, even pursuing their policy after it has been demonstrated to be inadequate.

I. H. O'Sullivan '82-90 Park Lane, Croydon: a planning case-study' *London Archaeol* 7 (1996) 424-31.

Palaeoenvironmental sites

Although foreshore deposits, and the plant and animal remains they contain, can provide valuable information about the nature of the surrounding countryside, and changes in river level, tidal patterns and pollution, this source of data was largely overlooked by archaeologists until well into the 20th century. Nevertheless, there were exceptions, notably the 19th-century antiquarian F. C. J. Spurrell, who described alluvial and peat deposits at Tilbury, an important sequence which was used many years later to identify fluctuations in sea level during the prehistoric and Roman periods⁴⁷. Peat was subsequently observed at various places upstream⁴⁸, possibly including the foreshore at Syon Reach where an 'organic deposit' containing an Iron Age potsherd was found in 1955⁴⁹. However, the first palaeoenvironmental site in the study area to receive serious attention was at Chiswick Eyot, where shelly sands and gravels were sampled by M. P. McGann and J. W. Simons during a number of visits between 1956 and 1960⁵⁰ (K). They recovered eleven species of gastropod, including *Planorbis acronicus* (now extinct in the Lower Thames), eight

species of bivalve, and the remains of horse, ox, pig, sheep and deer. The deposits could not be closely dated, but the presence of domestic mammals indicated that they were post-glacial. Simons also discovered shelly sand on the Surrey shore between Kew Bridge and Twickenham Railway Bridge, and reported that beds containing freshwater mollusca had been seen at Brentford Ait. Some years later a layer of sand containing molluscan remains and mammalian bones were recorded on the Surrey shore 120m downstream from Hammersmith Bridge⁵¹ (L). However, this deposit produced objects of suspiciously late date, including pieces of 18th-century wine bottle and an early 19th-century clay pipe.

Conclusion

The desk-based assessment clearly demonstrated that the river has been the focus of a wide range of human activity since the end of the last glaciation. It was for the field survey to assess the nature and extent of the archaeological evidence left by this activity on the foreshore. The often surprising results of the survey will be discussed in part 2.

47. F C J Spurrell 'Early sites and embankments on the margins of the Thames Estuary' *Archaeol J* 42 (1885) 269-302; R J N Devoy 'Flandrian sea level changes and vegetational history of the Lower Thames Estuary' *Phil Trans Roy Soc London B* 285 (1979) 355-407.

48. G F Lawrence *op cit* fn 12, 70.

49. I Noel Hume *op cit* fn 23, 44.

50. J W Simons 'Note on the occurrence of Holocene shell deposits at Chiswick Eyot' *Lond Natur* 43 (1964) 150-3; E A and J B E Jarzembowski 'Two Thames foreshore deposits in West London' *Lond Natur* 59 (1980) 6-7.

51. E A and J B E Jarzembowski *ibid*.