

PORT OF ROMAN LONDON

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Introduction

There has been considerable scholarly attention paid to Roman harbours on the Mediterranean coast at e.g. Ostia, Caesarea Maritima, Carthage and Cosa. Work in the rather less glamorous Northern provinces is less well-known, but is of considerable interest, not least because the design, form and function of the harbours and the associated shipping were rather different. Some of these essential differences will be highlighted in this summary of the long programme of rescue excavations in Londinium, a 1st to 4th-century port on a tidal river in the province of Britannia, the large island lying off the northern coast of Gaul. This report summarises the harbour excavation programme in London, reviews the current picture of the chronology of that development, and suggests reasons for both the rise and the fall of this particular provincial harbour.

The settlement of Londinium lies at the head of the long sinuous estuary of the River Thames that disgorges into the North Sea. The Thames itself rises well to the west of London, passing through an agriculturally-rich valley in the temperate south-eastern corner of the province. The town thus enjoyed the benefit of an extensive and fertile hinterland, fresh water, fish stocks, a long navigable inland waterway as well as direct access to the sea, the channel ports and the European mainland. The Roman town lies below the district known as «the City», the current focus for financial and insurance markets, and was very much smaller than the present day 32-borough conurbation called Greater London. There has been extensive archaeological study of the town (see e.g. Marsden 1980; Merrifield 1983; Perring 1991; Milne 1995; Watson 1998) as well as in its harbour (e.g. Milne 1985; Miller 1986; Brigham 1990).

Discovering the ancient port:

a) three Roman shipwrecks

With the notable exception of a description of a native uprising that resulted in the destruction of Londinium in AD 60, there is next to no surviving documentary evidence for the settlement (Milne 1995, 15-16). Our knowledge of the port's history has therefore had to be built up piecemeal by archaeological endeavour, and is primarily the result of an intensive programme of rescue excavations conducted principally by archaeologists from the Museum of London. That systematic programme of waterfront excavations began in earnest in 1973, but was preceded by an earlier generation of maritime archaeological investigations, beginning in February 1910 with the discovery of the first of three Roman ships. This was uncovered during the building of County Hall on a riverside site in Lambeth. The late 3rd-century vessel may have been some 20m long with a beam of 3m, with side planking rising some 2m above the keel. It was constructed in c. AD 285 using British-grown timber, and the hull planking was edge-joined with free-tenons, the standard technique used for most vessels in the classical period across the Roman world (Marsden 1994, 109-129). However, the other two, the small New Guy's House vessel discovered in 1958 (Marsden 1994, 97-104) and the larger Blackfriars vessel excavated in 1962-3 (Marsden 1994, 33-95), were constructed in an altogether different way. This is described by some as Romano-Celtic (e.g. McGrail 1995) and others as Gallo-Roman (e.g. Rule & Monaghan 1993). Both London vessels made use of large iron spikes driven through the hull planking, through the frames, and then turned over, like large staples. This technique is only known from a handful of examples in England, Wales, the Channel Islands and Belgium (Parker 1992). These vessels therefore belong to a rather different tradition, only known in this corner of the Roman Empire. The examples from London were

prosaic cargo handlers, not the elegant aphracts, biremes and triremes one associates with Mediterranean harbour scenes (Casson 1971).

Discovering the ancient port:

b) the harbour

Thus by the end of the 1960s, Londinium had three Roman ships, but no harbour to accommodate them. However, this was precisely the period in which the adoption of containerisation led to the closure of the old Victorian enclosed docks from 1967 to 1981. A modern container port needs a deep-water berth and acres of open space. The London dockside, by contrast, was flanked by acres of tall stacks of warehouses, and these were also built, not only in the enclosed docks to the east and south of the City, on both banks of the Thames in the City reach itself. The advent of containerisation rendered these warehouses obsolete overnight, and a wholesale demolition programme began, both in the City of London and on the southern shore in Southwark. In their place a new generation of office buildings and other facilities were built, as London changed its role from working port to financial centre.

The major urban redevelopment programme that accompanied this historic change broadly coincided with the establishment of London's first full-time professional archaeological rescue units, and thus the excavation of the historic waterfront became an obvious priority. From 1973 onwards, rescue excavations were regularly undertaken as the redevelopments progressed, all along the London waterfront. This long-running rescue archaeology programme was full of surprises. To begin with, it was discovered that the river bank in the first century AD did not lie below the modern quayside, but some 150m to the north. Many well-reserved sections of heavily-built Roman timber quays structures have now been uncovered. Some survived up to their full height of over 2m, a series of squared baulks of oak, up to 600mm by 400mm in cross-section, with some timbers up to 9m long, stacked one upon the other, up to six tiers high. They usually revetted an infill of gravel and clays thrown in behind the timbers, up to the level of the working surface of the quay. A crucial aspect of this archaeological programme is that many of the timber structures have been closely dated by dendrochronological research from the 1st to the 3rd centuries. The master oak chronology for Roman London currently runs from 252 BC to AD 294.

Chronological development of the harbour

Current thinking on the development of the Roman harbour may be summarised thus: it now seems that the first really significant attempt at establishing a major harbour facility here was not in c. AD 50, when the first settlement was founded, but in c. AD 62-3. These were in those fraught years immediately following a devastating native rebellion that all but ended the Roman occupation less than 20 years after it had begun. This was a period of great uncertainty, possible famine and economic hardship. Recent evidence from the Plantation Place excavations on the eastern of London's two low hills suggests that a modest area of the settlement had been fortified by a bank and ditch to protect it from any further native insurrections. On the waterfront to the south, the first major timber quay was recorded below Regis House (Watson 1998, 23-30), a site that was first initially examined in the 1930s, when part of the Roman quay was uncovered. The re-excavation of the site 60 years later revealed warehouse buildings as well as a well-preserved section of the same first-century quay. Some of the timbers from that quay had clearly been taken from military stock piles, since the end-grain has been branded with stamps, one of which may have read TRAEC AVG, perhaps attesting to the presence of a Thracian unit. Other evidence for military involvement in its construction, apart from the scale and style of the structure, include fragments of scale armour and part of a leather tent. Thus it can be surmised that London's first major harbour facility was built by the state (rather than by private merchants) representing a genuine desire on the part of the authorities to provide the essential infrastructure to kick-start the shattered economy of the province.

The site immediately to the west produced evidence of a large open-work landing stage, erected slightly later in c. AD 70, perhaps representing part of a ferry terminal before the bridge was constructed. Certainly the energetic programme of harbour development that began in the early to mid AD 60s continued into the late 1st, 2nd and 3rd centuries. This programme saw a timber bridge built, certainly by AD 85-90, as well as a succession of timber structures, each one set further out into the river (Milne 1985; Miller et al 1986). The sequence also extended to the east of the initial bridgehead focus, and west, first as far as the mouth of the Walbrook stream, and then, by AD 200, beyond it (Brigham 1990).

The 3rd-century quay structures did not survive in as pristine condition as their 1st-century predecessors had. On the Thames Exchange site, for example, the front wall was been deliberately robbed down to the basal members, and the braces on the landward side have clearly been severed in antiquity. The evidence thus showed that the quay has been forcibly dismantled in the late 3rd century, and the remains allowed to silt up (Parry 1994). One possible reason for this dramatic reversal in fortune might be the construction of a large defensive riverside wall all along the Thames waterfront, in the late 3rd century. This structure would have comprehensively separated the Thames from the town, the harbour from the port (Hill 1980).

The archaeological evidence for the cargoes handled here in Londinium when the port was thriving include commodities such wine, fish sauce and olive oil, all of which were transported in amphorae, a most common find in London and on waterfront sites in particular. A remarkable 2nd-century inscription was recently excavated from a temple complex site in Southwark by a team from PreConstruct Archaeology. It actually provides the name of a merchant of London (moritix Londiniensi) called Tiberinius Celerianus. The gentleman was a citizen of the Bellovacii, an area near Beauvais in northern France, but appears to represent a clear personal and commercial link between the province of Gaul and the province of Britannia. The inscription has been translated by Roger Tomlin, from Oxford University. Another major import was tableware: the London waterfront assemblages include large quantities of broken but unused Samian ware, representing breakages in transit or warehouse clearance of old stock. Another mishap associated with the transit of Samian ware is the wreck site near Pudding Pan Sands, off the Thames estuary, a location from which barnacle-encrusted Samian ware pottery has been trawled up from the sea bed, perhaps representing a vessel that sank en route to the port of Roman London, or a cargo jettisoned during a storm at sea.

Exports included lead ingots representing the mineral wealth of the province, and three stamped examples were recovered from a recent excavation of a waterfront warehouse (Watson 1998, 28-9). There would also presumably have been wool and textiles, as well as the oft-quoted grain, hunting-dogs and slaves, items that, we are told, leave little trace in the archaeological record. However, the recent find of a Silver Fir writing tablet from the excavations at No 1

Poultry actually record the sale of a slave girl, Fortunata, for 600 denarii (two years salary for a legionary) in about AD 100. The translation of this tablet was by Roger Tomlin (University of Oxford).

Thus a busy waterfront market can be envisaged, at least in the 1st to early 3rd, focussed on the riverside *horrea*. These were open-fronted (although there was evidence for removable timber shuttering), timber-floored, and set some 5m behind the quay front (Milne 1985, 68-78). The plan-form of such waterfront buildings is well-known from other harbour sites in the Roman world. Such building may have served a similar function to latter-day transit sheds, the temporary storage facilities used in more recent times. The contrast can be made with longer-term storage needs in more secure warehouses, an essential element of any port that depended on sailing ships to transport produce, since the sailing season was often limited to the less stormy summer months.

However, a similar picture of dramatically-changing fortunes to that represented by the fate of the timber quays is encapsulated in the history of the London waterfront *horrea*. By the 4th century the floors in the warehouse bays are no longer all at the same level: solid partition walls subdivide the range; each individual room develops as a separate unit, and some even have hearths in them. This evidence strongly suggests that the *horrea* buildings are now no longer used for bulk storage but have been converted into residential units. This was precisely the same fate that befell the obsolete warehouses of the 19th-century port: as London's great Victorian docks closed, so the last surviving warehouses were converted into apartment buildings. Thus the dramatic change of use of the ancient *horrea* provides further evidence for the demise of the Roman harbour.

Environmental factors

The River Thames itself has also been the subject of detailed study showing that its width, depth, salinity and tidal range have all changed markedly since the 1st century. In London today, the Thames is little more than a tidal canal, restricted to a width of some 250m between solid river wall on both banks. In the Roman period, the situation was very different: although the tidal range was only just over 1m, the difference between the riverine topography at low tide and high tide was particularly dramatic on the south bank. Here, at high tide, were low islands just

projecting above the water, with a river up to 1km wide to the east. At low tide, the river retreated to reveal an inhospitable expanse of marshes and mud-flats, in contrast to the steeply rising dry hillside on the north bank (Milne 1985, 79-86). The environmental studies of the river do not stop there, with the picture of a tidal river in the C1st and 2nd. Work has gone further and has also shown that the level of the river relative to the land actually fell in the late Roman period, a situation quite at odds with the long-term trend, that otherwise show as inexorable, dramatic and continuing rise in the level of the river, relative to the land (Brigham 1990). Indeed, it seems that late Roman London was not even influenced by the tide: the tidal head (often seen as the natural limit for sea-going navigation) must have drifted further east, taking with it part of the primary rationale for the settlement of London to serve as a port at all (Milne 1995, 78-81).

The port, the Procurator and the Classis Britannica

There is thus plenty of evidence for the port's decline and fall, but before considering the detailed implications of that, we should revisit the earlier phase of the port and consider the possible reasons for its initial energetic development. We have already noted the hand of the state in this phase, and that is surely to be expected in a «backward» province. Whereas in other provinces with a longer history of contact with Rome, it might prove possible to requisition, adapt or otherwise make use of «private» merchant vessels, Britannia simply did not have an indigenous merchant fleet. If the new province was to prosper, then such a fleet would have to be provided to support not just the military machine but also the nascent programme of urbanisation as well. A country with no tradition of monumental masonry building, for example, would clearly have to import or develop all the requisite technology, expertise and facilities to start such a programme. It would also have to build and maintain a fleet of stone-carrying barges to transport the required stone tile and timber in the quantity required to transform the province. It has recently been suggested that the Classis Britannica served that particular role, in addition to providing the more obvious services of troop transport for the legions (Milne 2000): the following section summaries that argument.

The Classis Britannica had its origins in the fleet raised in AD 43 to facilitate the Claudian invasion of Britain but, significantly for the Port of London, disappears from the written record in c. AD 250. Its presence was first identified archaeologically in Britain by Charles Roach-Smith working at Lympne, Kent, when he discovered a mid 2nd-century altar on which was recorded the name Aufidius Pantera, Prefect of the Classis Britannica. A standard account of the documentary and epigraphic evidence for the fleet was compiled by the Professor Starr 60 years ago, since when there has been considerable archaeological research that has extended our knowledge of the history of this provincial fleet (Mason 2003). Archaeologists have studied the Fleet bases at Boulogne and also at Dover, where the 2nd-century Classis Britannica fort was excavated (Philp 1980). Like London, Dover had a quay built from massive squared timber beams: a small part of that structure was recently uncovered during a rescue excavation in 1992. This quay was presumably designed and built by the engineers from the Classis Britannica. Such expertise may well have been used in Londinium too.

The fleet was also heavily involved with iron-working in the Weald, stone quarrying and tile industries. In addition to its overtly military role supporting and transporting the legions serving the provincial governor, then, it is suggested that the Classis Britannica also played a major role in the economic development of the province. This was all the more crucial for an island province: the umbilical link with the rest of the empire was a maritime one, based around the Fleet's continuous shuttle service between Boulogne and Dover. It was along this axis that much of the exports and imports to and from Londinium passed, and thus the role of the fleet in underwriting London's prosperity, was of considerable significance.

The economic importance of the Classis Britannica for London and for the economic exploitation of the province as a whole needs to be stressed. It was during the reign of Claudius (i.e. the period when Britannia was taken over) that steps were taken to integrate the military and civil staff working for the imperial administration. The naval praefect was put on a par with the financial officials known as procurators, and the title of the praefect now ran procurator Augusti et praefectus classis. This new ruling meant that some prefects could now be freedmen without any military background, which seems to suggest that the fleets may have been taking on a

role more akin to that of a merchant navy. Even though Vespasian subsequently removed the procurator Augusti from the prefect's title there is now increasing evidence that the Classis Britannica continued to work very closely with the procuratorial office in Britannia, being significantly involved with the taxation and economic exploitation of the province. Indeed Maenius Agrippa, who was Prefect of the Fleet in c. AD 130, is also recorded as serving as the provincial procurator.

One way of demonstrating the importance of the Classis Britannica to the port of London is to compare and contrast the activities in the period during its active life (i.e. before c. AD 250) with the harbour after c. AD 250, the time after which the Fleet disappears from the epigraphic record and seems to have been disbanded. It has already been noted that the harbour works may well have been built and maintained by engineers from the Classis Britannica: the London harbour was energetically maintained up to AD 250 and allowed to collapse thereafter. However, the problem of stone supply also highlights the same issue: when London's town wall was being built in AD 200 many tons of freshly quarried stone would have to be transported to Londinium from the quarries in Kent along the River Medway and up the Thames to the City. Such major public-building programmes would have relied heavily on the Classis Britannica to supply the vessels required. The Blackfriars barge would have been ideally suited to the mundane but essential task: it must have been one of a large fleet of similar vessels, without which such a large building programme could not have been completed.

The situation in the later 3rd century is quite different. This is the period when the riverside section of the City defences was built, but at a period when the services of the Classis Britannica could no longer be called upon. The result is significant: instead of large quantities of freshly-quarried stone being utilised for the new wall, the construction here makes extensive use of reused material from locally-demolished structures. The stone quarries in Kent were still there: they had not been exhausted, but the fleet to transport the stone seems to be the element that was missing. As a result, the foundations of the late 3rd-century defensive wall excavated on the Baynard's Castle site in 1975-6 incorporated over 52 sculptured blocks from a variety of hurriedly dismantled temples, monumental arches and similar monuments

(Hill 1980). The final irony may be seen in the reused blocks found in the footings of a late Roman bastion near Tower Hill: this was examined initially in 1852, when part of the tombstone of the Procurator, Julius Classicianus was uncovered. Another fragment from the same monument was uncovered in 1935. Here, ignominiously dumped as hard core in the footings of a wall because there was no longer a well-maintained fleet of stone barges able to bring fresh stone to the city in sufficient quantities, are the fragments of the tomb of the very man who personally sanctioned and planned the initial development of the Port of Roman London in the aftermath of the Boudican uprising. It was this official, the Procurator, who laid the foundations for the success of the port by making best use of all the forces at his disposal including, crucially, the Classis Britannica.

His plan flourished after his death, and the success of the port was arguably instrumental in the upgrading of the modest *municipium* of Londinium and a significant expansion by AD 100. However, late Roman politics & major economic change saw London's role diminish: by end of the 4th century, the area for which the town and port of London had direct oversight was confined to the south-east corner of Britannia. The port of Roman London was thus a state-sponsored initiative on a tidal river in a backward province: when, as the result of wider political and economic change, the state withdrew a measure of its support and when the tidal head withdrew from the City reach, the fate of the port was sealed.

This, then, is an interpretation of the results of the excavation programme, a programme that was itself caused by the collapse of the Victorian port. Other interpretations of the evidence are of course possible, but it does now seem that history has indeed repeated itself: the Roman port collapsed as completely as the modern port did, some 1,500 years later.

Summary bibliographies

a) Roman London and its harbour

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- Abbreviations:
- BAR: British Archaeological Reports.
- CBA: Council for British Archaeology.
- LAMAS: London & Middlesex Archaeological Society.