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REIMAGINING ROMAN PORTS AND HARBOURS: THE PORT OF ROMAN LONDON AND WATERFRONT ARCHAEOLOGY

Summary. This paper explores some theoretically informed ways in which to use the rich evidence relating to ports, harbours and other waterfront installations in archaeology. It argues that studies of waterfront structures within the specialisms of nautical/maritime and wetland archaeology are extremely important in their own right but they could also be used to explore broader issues connected with their use and context. These include the cultural and religious significance of water and its dangers, the symbolic significance of landscape change, the relationship between people and their environment and the negotiation of the land/water interface. Examining the evidence of the port of Roman London as a case study, this paper explores the archaeology in its local setting and addresses a number of subjects relating to both its temporal and spatial position. It focuses on the religious significance of water and the implications of altering waterscapes through artificial construction.

INTRODUCTION

Predominantly, there have been two main ways in which ports and harbours have been studied archaeologically: exploring in detail the construction methods, technologies and chronologies of individual installations (e.g. Hurst 1994; Keay et al. 2005; Oleson 1988); or examining the relationship between different ports and harbours through trade routes and the geography of connectivity (e.g. Collis 1984; Cunliffe 2004; Horden and Purcell 2000; Jones 2009). These studies have been crucial to our understanding of waterfronts but the material could be used further by examining the social and religious contexts of artificial waterfront development and the impact of these installations in terms of the alterations they made to land and water. Ports and harbours were

special places: they were unique environments, providing different experiences from those gained inland (cf. Rainbird 2007). The association of these structures with water, in the form of seas and rivers, might seem an obvious point, and is often taken for granted, but there are many social issues that can be considered in connection with this involvement including those relating to the religious connotations of water and its dangers. These will have been important aspects in the meanings attached to, and experiences associated with, ports and harbours in their local contexts.

Using the well-preserved evidence of the port of Roman London as a case study, this paper will examine the cultural attitudes to ports and other waterfront installations with a special focus on religious responses. Some of the earliest recorded finds relating to the Roman waterfront on the north (City) side of the Thames at London were in the nineteenth century (Price 1870, 74-5; cf. Milne 1985, 15), but starting in the 1970s some major discoveries have been made. There is an important account of these excavations by Milne (1985) *The Port of Roman London*, along with some publications of individual sites (e.g. Miller et al. 1986; Swift 2008; Tatton-Brown 1974) and discussion articles (Brigham 1990; 1998; Bateman and Milne 1983), but there has never been a comprehensive report incorporating these sites. Across the Thames at Southwark there have been numerous excavations, some of which incorporating waterfronts (e.g. Cowan 2003; Yule 2005), and there is now an important volume summarising current knowledge (Cowan et al. 2009). Within the context of ritualised and symbolic landscapes and waterscapes, the paper will also explore how the construction of the monumental waterfront at London will have had a major impact on the way in which the relationship between land and water was negotiated. Before that, the paper will examine the concentration of religious structures and material on the waterfront.

WATERFRONT ARCHAEOLOGY

Roman ports and harbours are a popular, though largely specialised, area of study with the *International Journal of Nautical Archaeology* providing one useful outlet for research (e.g. Blackman 1982a; 1982b; Hohlfelder et al. 2005; Rickman 1988). The assessment of waterfront structures in Roman Britain, however, is still in need of further work (cf. Fryer 1973; Cleere 1978). In

addressing the situation at the end of the 1970s, Boon (1978, 2) stated that “little is known of Roman ports in this country”. This position has now changed but the subject area has remained largely isolated from broader issues and developments in Roman archaeology. Summaries and analyses of known evidence of Roman and later waterfronts appeared in *Waterfront Archaeology in Britain and Northern Europe* (Milne and Hobley eds. 1981) and then *Waterfront Archaeology: Proceedings of the third international conference on waterfront archaeology* (Good et al. eds. 1991). These were important works raising awareness of the subject area but they were predominantly descriptive accounts without developing discussions of the social significance of the material. A recent publication on the subject is *The Maritime and Riverine Landscape of the West of Roman Britain* (Jones 2009) which provides an important survey of current knowledge of ports and harbours, principally in the West of Britain, but its perspective is predominantly on economics and trade.

Roman studies has been criticised for its general resistance to archaeological theory (Gardner 2007; Johnson 1999), even though all archaeological interpretation is implicitly theoretical and must be analysed as such. Maritime archaeology is another sub-discipline that has been noted for its resistance to theoretical debate and its reliance on ‘scientific rigour’ to provide answers about the past; shipwrecks, cargoes and waterfront installations are identifiable features that are often analysed in isolation from their wider contexts (cf. Flatman 2003; Westerdahl 1992). The multi-period nature of the specialism can create assumptions that ports, harbours and other features relating to the archaeology of water were associated with the same meanings in successive periods. We have Vitruvius’ description of how to construct a harbour (*De arch.* V.12.1-7), written at the end of the first century BC, and we know from archaeological investigation that artificial ports and harbours start to appear in the Mediterranean from around the Late Bronze Age (Cunliffe 2004), but we should be careful when we apply modern or post-medieval assumptions onto the way in which these structures were used or experienced.

According to the Oxford English Dictionary (1989), a harbour is a place where vessels can be stored or seek shelter. They can be artificial, constructed with breakwaters, sea walls or jetties, or they can be natural, surrounded by prominences of land. A port, on the other hand, is an artificial construction on

the sea, lake or river shore where vessels are loaded and unloaded. Components of ports can include harbours and also wharves, quays, jetties, docks, piers and warehouses. A wharf can be a stone structure or wooden structure supported on piles parallel to the shoreline alongside which vessels can lie. It can be either in continuous contact with the land or off-set from it and connected to it by approach structures (McGrail 1997, 54). A jetty can be similarly constructed but it projects at right angles from the shoreline or from a wharf (*ibid.*). These functional definitions are important but within archaeological studies it is easy to rely on the perceived familiarity of these structures, relating to the modern world, without assessing their local meaning and the impact of their construction in the past. We tend to convert, or translate, archaeological evidence into something that we can understand and assume that it was essentially the same in the past (*cf.* Shanks and Tilley 1987, 115-7). But it is important to consider the individual contexts of these archaeological features and the way in which they may have been understood in these situations. These installations will have been charged with meaning provoking different reactions from different people.

Ports and harbours, like artefacts and other structures, have a materiality – they can be considered in terms of material culture – and as such they were “actively and meaningfully constituted” (Hodder 1993, xvii). They were produced by human agents and will have had specific contextual meanings as well as invoking a multitude of responses. They had ‘biographies’ and ‘life-stories’ in the past in same way as objects and as such they had a relationship with people, acting on them as people acted on objects. As Gosden and Marshall (1999, 169) state: “as people and objects gather time, movement and change, they are constantly transformed, and these transformations of person and object are tied up with each other”. For the Roman period there are, of course, written texts but these do not present a value-free view of the past and they are no less complex to interpret than artefactual evidence (*cf.* Johnson 1999, 155-6).

Architecture generally creates space for practice but it is also itself meaningfully constituted through construction processes and human decisions. Construction technologies themselves are an integral element of architecture as material culture with different materials and methods resulting from different motives, world views and desired outcomes (Gardner 2007, 179). Through examining the

construction and use of waterfronts we can explore the active involvement of people as well as their relationship with the wider world (cf. Giddens 1984). The modern Western perspective of seas and rivers is predominantly of water that is to be controlled in order to aid transit and exploit resources. McNiven (2003, 330) has argued that this is one reason why archaeological studies have focused so much on shipwrecks, which are instances where water failed to be tamed, and on technological installations such as lighthouses. The Western perspective reconstructs the seascape, including ports and harbours, as a “techno-scape” (ibid.). In the past, however, and amongst non-Western viewpoints today, seascapes and riverscapes were associated with many different meanings and could be engaged ritually. Beyond subsistence and technology there were also ritualised waterscapes; seas and rivers being defined by cosmologies that influenced perception and action.

Waterfronts lie between land and water, and they interact with water; harbours can also contain and control water. They are marginal or liminal places and points of transition from the state of being on land to being on/in water (or vice versa). This position can be dangerous, unstable or ambiguous; the path from land to boat can be charged with danger and anticipation: a place of transition between two worlds (Westerdahl 2005, 10-11). It has been argued that for prehistoric Britain the meanings associated with these transition points meant that waterfronts could become important gathering places where rituals took place including the deposition of objects into the water (cf. Allen 2009). Travelling on or in water can evoke considerable physical, emotional and psychological responses, including those relating to the perceived dangers of water. The religious significance of water in the Roman period and in prehistory (e.g. Green 1986; Kamash 2008; Rogers 2008; Willis 2007) will also have had a substantial influence on waterfront construction and waterfront activity.

PORTS AND RELIGION

The structures at ports and harbours were not simply based on function and utility. Tuck (2008) has shown that there were often monuments with triumphal imagery at these locations reflecting the power of Rome. These were also often a concentration of religious structures, altars and statuary at

ports and harbours reflecting the religious symbolism of waterfront locations as well as the dangers of being associated with water and water travel. At Portus, on the coast near Rome, for example, there was a large number of temples associated with the port identified through fieldwork and known inscriptions and statuary (Keay and Millett 2005a, 310-1). To the east of the hexagonal Trajanic port, where the canal meets the Tiber, aerial photography has identified a number of possible temples which may have been marking this point of transition from land to water (ibid., 311). The harbour and city of Caesarea Maritima, on the Mediterranean coast of Israel, has a large amount of evidence relating to temples and shrines including numerous statues of the city goddess Tyche of Caesarea depicted with one foot on the prow of a ship and accompanied by the personification of the port (Gersht 1996). Tyche probably also had a temple or temples at Caesarea but these have not yet been located; the platform of a monumental temple to Roma and Augustus constructed on a natural ridge overlooking (and highly visible from) the sea which had been deliberately raised by importing a fill of earth which was retained by masonry walls (Stabler and Holum 2008).

At two sites in the Netherlands, Domburg on the coast of the former island of Walcheren and 25 km to the east at Colijnsplaat on the coast of the former island of Noord-Beveland, there were shrines to the goddess Nehalennia. These sites were also important harbours serving ships trading between the coastal regions of Gaul and the east coast ports of Britain as well as between the Rhineland and *Gallia Belgica*. Unfortunately little is known about the harbour structures but traded goods have come from the sites as well as tiles with the imprint of the Roman Navy (Hondius-Crone 1955). It is thought that the name Nehalennia means ‘guardian’ or ‘guiding’ goddess and this reflects the desire of traders to seek the protection of the goddess before leaving sheltered waters and moving onto the sea (Hassall 1978, 43).

Whilst an equivalent shrine and concentration of altars and statues, perhaps relating to the same communications route, is not yet known in Britain, a plaque dedicated to Ocean and Tethys, his wife, is known from York dating to the AD 80s. It related to the expedition of Britain’s offshore islands at this time and the desire that it be conducted in safety (Braund 1996a, 12). Altars dedicated to Neptune and Ocean are also known from Newcastle (ibid., 12) and it could be argued that the monumental

triumphal arch constructed at Richborough in Kent (Strong 1968) after the Roman invasion reflects not only the power of conquest of land but also of Ocean. Tuck (2008) has demonstrated that Roman harbours were also often used to display triumphal imagery.

Britain as an island across Ocean is significant. With the sea and rivers associated with gods, Braund (1996b, 45) has argued that sailing on them was akin to riding on a deity. The artificial seascapes and reconstructions of sea battles, *naumachia*, in specially constructed arena, suggest that the sea had a special place in the Roman psyche and command of the sea was an important reflection of power (cf. Coleman 1993). Lying across Ocean, Britain may have had a mythical quality and danger in the Roman mind (cf. Braund 1996a, 12) and the act of travelling there will have invoked many experiences and stories.

There are some texts referring to experiences of water relating to Britain's mythological and dangerous position across Ocean although the perspectives and motives of the authors will have been influential in the nature of their composition. It is recorded that storms and rough seas caused problems on a number of occasions including Julius Caesar's trips to Britain in 55/54 BC (*B Gall.* IV.28-9) and in AD 16 when Germanicus' fleet was hit by a storm and some ships were swept over to Britain: "not a man returned from the distance without his tale of marvels...things seen or things believed in a moment of terror" (Tac. *Ann.* II.24). We also have the accounts from Cassius Dio (LIX.25), writing in the late second and early third centuries AD, and Suetonius (*Calig.* ILXI), writing in the early second century AD, of Caligula ordering his soldiers to gather on the shore facing Britain and collect shells. Rather than a further reflection of his misrule, this may have been a genuine attempt on his part to appease Ocean through a physical engagement with it, which was fraught with many dangers. These dangers were also recognised in AD 43, according to the account of the invasion led by Aulus Plautius: "he had difficulty in inducing his army to advance beyond Gaul. For the soldiers were indignant at the thought of carrying a campaign outside the limits of the known world" (Cassius Dio LX.19).

Upon reaching Britain, there were also the rivers to negotiate. A tamed and controlled river can be a symbol of the justification and benefits of conquest and the correctness of Roman imperialism (Braund 1996b, 46). Crossing rivers also had religious connotations and bridges were imbued with religious meaning (cf. Holland 1961). To build a bridge could be to risk angering the river since, in effect, the bridge chained it (cf. Braund 1996b, 45). Consequently, the construction of the first bridge across the Tiber, the *pons Sublicius*, was a major religious undertaking and rituals were performed on it regularly afterwards by the Vestals and *pontifices*, a term which probably means ‘bridge-builder’ (Holland 1961). As Dilke (1971, 33) has put it, therefore, “bridge building was regarded as needing some sort of magic powers”. Bridge building was used with great symbolic effect in the expansion of the Roman Empire and the construction of the first bridge across the Thames at London (cf. Watson et al. 2001) could well have been associated with this symbolism.

FIGURE 1 HERE

Religious activity of Roman date is known not only to have been in association with the Thames but also its tributaries the Walbrook and Fleet (see Figure 1). Excavations in the area of the mouth of the Fleet, which flowed to the west of the town, uncovered a number of Roman finds that could be interpreted as ritual deposits at the waterfront including a group of five toilet instruments (Crummy 2008, 219). An unusual octagonal temple on a hilltop overlooking the Fleet (Bateman 1998, 56) may relate to the religious significance of the river valley and the perils of sailing on the river and onwards towards the sea. A large number of Roman period finds have come from sites excavated along the Walbrook valley, which flowed through the centre of the town, including quantities of metal objects often in pristine condition including pins, needles, styli, awls, knives and other tools and personal items. Wilmott (1991) argued that they represented waste material or accidental losses connected with craft and domestic activities in the area. But the excellent condition of much of the material and its origins from the riverbed suggests that ritual activity connected with the river valley is a more likely explanation (Merrifield 1995).

The Walbrook Valley was also the focus for a number of religious structures. The Temple of Mithras, first built in the third century in a wet and unstable location by the side of the Walbrook, has received considerable study (Shepherd 1998). There are also traces of other possible religious structures which are less well known because of the limited nature of the evidence and the conditions of the excavations at the time. These include the burnt remains of a wooden structure with an arcaded timber panel which could have been a shrine; associated with these remains was a face pot standing upright (Merrifield 1995, 37-8; Wilmott 1991, 178). Associated with the mithraeum were also sculptures relating to other cults and there may have been shrines devoted to Bacchus and to the Dioscuri (the twins Castor and Pollux) in the area (Henig 1998, 232); Henig (*ibid.*) has noted that mithraea were often situated in the vicinity of other shrines. Bird (1996) has suggested that an unusual pot sherd with a representation of a frog from the area may be related to a shrine of the cult of Sabazius in the vicinity. Similar representations have been found on pottery vessels associated with Sabazius, a Thracian-Phrygian cult, elsewhere in Europe (*ibid.*). It is unfortunate that so little is known about the context of this material but the concentration of these unusual finds within the Middle Walbrook Valley suggests that this area was a focus of special activity and that the mithraeum was just one of a number of religious structures here.

On the Thames waterfront itself there is a relatively high concentration of monumental buildings including the Cannon Street Station complex, the Huggin Hill bath building and the so-called 'Pre-Allectan palace' complex on the north side of the water. First constructed around AD 80-100 the Cannon Street buildings were originally interpreted as the governor's palace (Marsden 1975) but reanalysis has since demonstrated that this was a complex with a number of components of different dates probably including some kind of pool and temple structure (Milne 1996). Westwards past the Huggin Hill bath building is another enigmatic building sometimes known as the 'Pre-Allectan palace' complex, so called because it pre-dates the late third century 'Allectan Palace'. Evidence consists mainly of material relating to free-standing structures that had been reused in later buildings in the vicinity including a monumental arch depicting figures of gods, a screen depicting deities and two altars which would probably have stood within temples (Hill et al. 1980; Williams 1993). More

recent excavations relating to the second complex on the site identified part of the massive podium of a temple (Bradley and Butler 2008) indicating a continuation of religious activity here rather than a palace connected with the usurper-emperor Allectus.

On the other side of the river at Southwark there is another monumental complex on the waterfront at the Winchester Palace site consisting of large masonry buildings and a bathhouse (Yule 2005). The function of this structure remains unclear but it could well have had some religious functions. Also at Southwark excavations at Tabard Square uncovered the remains of two aligned Romano-Celtic temples measuring around 11 by 11 m in diameter. Deposited in a pit between them was a panel with an inscription dedicated to the Divinities of the Emperors and to the god Mars Camulus (Durrani 2004). The text begins to describe the actions relating to a *moritix*, a term known to have been applied to Gauls engaged in seaborne trade between Britain and the Continent (Hassall 1978, 42). Unfortunately details of these actions are missing but it is possible that the temples were connected with an association (*collegium*) of traders or sailors and related to their protection (Tomlin et al. 2009, 30). The concentration of religious material in connection with the waterways at London reflects the symbolism associated with this waterscape as well as the more practical concerns of using the waters for travel and trade.

TRANSFORMING LAND: ARCHITECTURE AND CONTEXT

We can also explore the symbolism and religious significance of waterfronts in terms of the way in which they altered land both as a local action and in the context of monumental waterfront construction. Changes to seashores and riversides due to erosion and other factors mean that evidence relating to pre-Roman waterfronts in Britain may well have been lost (cf. Cunliffe 1990, 31), but it is likely that ‘natural’ harbours and landing places would have been the predominant form of access to and from vessels before, and probably also during, the Roman period. In prehistory it is known that timber or gravel ‘hard standings’ were laid down on soft beaches to prevent the hulls of boats sinking, and there were also monumental timber causeways which could have acted as landing stages or

mooring points in some instances (McGrail 1997, 52-3). They also provided paths across wetlands and platforms for ritual deposition (Van de Noort and O'Sullivan 2006). In the Somerset Levels, for example, a platform of brushwood of Neolithic date has been interpreted as a 'hard standing' and causeways, such as the well-known Sweet Track, were also present here (Coles and Coles 1986). On the North Ferriby foreshore in the Humber estuary in northeast England the remains from at least three sewn-plank boats (Ferriby 1-3) dating to the early Bronze Age (c. 1900 BC) have been found (Wright 1990). Here, also, were light timbers and hurdles pegged to the beach in the intertidal zone which may have been contemporary with the boats and represent some kind of mooring point.

There have been a number of studies exploring trade routes and harbours in Iron Age Britain but their locations have mostly been identified by natural settings and finds of imported material (Cunliffe 1988; 2005; Matthews 1999). Little is known about the extent to which there were also artificial waterfront constructions relating to these places. Excavations at Hengistbury Head in Dorset did locate evidence of a fairly substantial gravel 'hard standing' dating to around 100 BC (Cunliffe 1990, 29-31). The gravel had apparently been quarried from the nearby gravel bars which lay either side of this low-lying marshy area and would have involved the quarrying and movement of hundreds of tons of gravel representing a considerable undertaking. More recently at Poole Harbour, also in Dorset, investigations in the water have revealed evidence of what appear to have been two artificial moles or jetties probably dating to the second century BC (Markey et al. 2002). Each construction was around 8 m wide and standing over 7 m above the seabed; the southern mole ran for around 160 m whilst the northern mole was around 55 m in length. They were built from wooden piles formed from tree trunks driven into the seabed. It appears that rather than beaching boats on the shore they were tied up alongside these structures (ibid.), there was a deliberate attempt to build an infrastructure here but perhaps without altering the waterfront itself – an action which must have had social and ideological, as well as practical, implications. Altering the waterfronts would have transformed the waterscape and changed the way in which the water was accessed and experienced.

There is also a difference between seafront installations and riverine structures and their relationship with water. The seafront allows for far greater elaboration and monumentality in installation

construction with a greater possibility of land transformation whilst the nature of rivers means that the structures have to be fairly constricted. These massive constructions, and the significance of these structures as monuments, was exploited as symbols of power. Their association with water was especially important; interacting with water, and transforming its relationship with land, they inverted nature (DeLaine 2002, 211). Portus, for example, had a clear practical function allowing improved accessibility to the city for importing grain and other goods and materials (Mattingly and Aldrete 2001, 144) but it was also associated with additional meanings. The construction of this monumental harbour was initiated by Claudius in AD 42 (Keay and Millett 2005b, 11) around the same time as his attempts to drain the Fucine Lake (Zevi 2005, 38). Both were massive projects that altered land's relationship with water. The harbour was a major engineering feat transforming a large lagoonal area to the north of the Tiber mouth, and as such it was also an ideological statement representing the supremacy of the Roman world (Keay et al. 2005). Trajan made additions to the harbour by initiating the construction of a hexagonal basin which was also a statement of power; there have also been doubts expressed regarding whether this unusual harbour shape had any practical benefits over straight jetties (Zevi 2005, 40).

The construction of the harbour and city of Caesarea Maritima was initiated by Herod between 23-15 BC. The harbour (known as Sebastos) is another example of a desire to confront the sea in huge proportions and has been the subject of long-term study; it was a massive feat of engineering involving technologically sophisticated procedures and large quantities of material (Brandon 2008; Oleson 1985; Oleson et al. 2006). Land and sea were transformed on a large scale and Roman engineers and pozzolana sand were brought down from Italy (Oleson 1985). As part of this symbol of power Herod also constructed a palace on land jutting out into the sea. Like people, conquered land and water could be enslaved in the Roman period through agriculture, the exploitation of resources, draining wetlands and controlling rivers (cf. Braund 1996b; Herendeen 1985). The stone frieze from Aphrodisias in Turkey portraying the physical attack of Britannia by Claudius (Erim 1982) represents both the real and symbolic violence that could be afflicted not only on people but on the land (as personified in Britannia).

Ports and harbours, then, were not just about trade, economics and technology; they also had social, political and spiritual aspects (cf. McGrail 1997, 49). They were the interface between water and land, intimately involved with water, and inverting nature by turning water into land (Delaine 2002, 211). They were ritualised entrances and exits from one element to another, from land to water, and water to land (Rickman 1996, 290). Transforming land and its relationship with water had religious implications; but, as we have seen, even the alteration of natural harbours and riverfronts through artificial construction could not dispel the dangers of boarding ships and sailing on water. The monumental nature of the port at London considerably altered the waterfront and will have led to different reactions. Whilst for some it may have been seen in terms of an enhancement of the relationship between the land and water, for others it could have been a physical attack of the land/water interface.

RITUAL, SYMBOLISM AND WATERFRONT CONSTRUCTION AT LONDON

It is often stated that the site of Roman London was chosen because of the crossing point and the need to bring supplies inland along the river (Milne 1995, 39; Perring 1991, 5); the local topography is considered to be key to the town's development as an economic centre, superseding the earlier foundation at Colchester (Camulodunum) (Crummy 1997, 70). The town on the north side lay on the steeply-rising bank of the Thames but on the other side of the river is the low-lying land of Southwark where archaeological work has been able to reconstruct a pre-Roman landscape of islands (or eyots) separated by marsh, mud flats and braided channels of the Thames (e.g. Cowan 2003; Cowan et al. 2009; Sidell et al. 2002; Taylor-Wilson 2002). Analysis of foreshore deposits has also demonstrated that the river was tidal up to London and at low tide, the northern island at Southwark projecting into the water would have provided the lowest bridging point (Milne 1995, 39). Very little is known about the Roman bridge, or sequence of bridges, here and there has been some debate about when a bridge was first built and whether a ferry service preceded it (Perring 1991; Watson et al. 2001, 5).

Even with these practical reasons for the town location, it is important to recognise that the settlement did not develop in a completely empty or ‘natural’ landscape: “places are always already place-like as soon as we are aware of them, use them, and consume them” (Thomas 1996, 83; cf. Insoll 2007). Places have a narrative and accretional quality, acquiring meanings over time. The London landscape was already deeply embedded with meanings and histories and changes to the land will have evoked reactions and responses. Holder and Jamieson’s (2003) analysis of the north side of the Thames has demonstrated the extent to which pre-Roman layers have been lost due to truncation caused by later activities. But even if there had been no large settlement here, as it does appear at present, there is evidence to suggest that this was an important place in prehistory with a religious focus on the Walbrook stream, a tributary of the Thames, which ran through the centre of the later town. A variety of prehistoric material has come from the Walbrook Valley including a large number of human male skulls with radiocarbon dates ranging from the Bronze Age to the Roman period, suggesting veneration over a long period of time (cf. Bradley and Gordon 1988). The Thames itself received ritual deposits of metalwork including the famous Battersea Shield and Waterloo Helmet (Merrifield 1983, 9; Sidell et al. 2002, 30). Fitzpatrick (1984) has documented over 100 finds of La Tène metalwork from the Thames with many being found during dredging operations.

The ritualised waterscape also included the islands, marshes and mudflats of what was pre-Roman Southwark where there is more evidence of settlement than on the north side of the river including traces of roundhouses, pottery and inhumation burials (Cowan et al. 2009; Sidell et al. 2002). The construction of the waterfront installations must be analysed in the context of the meanings and activities already associated with this place, even if it was a coincidence that this spot was considered the best location for the town. It is the margins of the waterscape, the liminal zone between land and water, that was most affected.

The first stage in this construction of the port saw embankments and revetments bounding the north side of the Thames and this was followed by the construction of monumental timber wharfs in front of them (Milne 1985). The evidence for the earliest of these came from sites at Regis House (Brigham et al. 1996), Miles Lane (Miller 1982) and Arthur Street (Swift 2008) where there were sections of quay

of fairly monumental construction with a solid frontage of squared oak beams retained by tie-backs running to a rear wall of timber. These formed a series of boxes which were filled in with dumped material and dated to the AD 60s. At another site, Pudding Lane/Peninsular House, there is evidence of what was probably a landing stage constructed with a front wall comprising of horizontally stacked timber baulks. This structure was not in-filled but remained an open framework which probably supported timber decking (Bateman and Milne 1983, 212-4).

FIGURE 2 HERE

In the first half of the second century AD the waterfront was rebuilt and extended further out into the Thames by at least 15 m (see Figure 2). The Regis House and Miles Lane quay was extended to replace the Neronian quay (Milne 1985, 29) and at the Pudding Lane/Peninsular House site, the timber landing stage was replaced with an in-filled quay constructed of massive timbers laid face to face and stacked one upon the other (Bateman and Milne 1983, 214-5). This became part of what appears to have been a larger-scale extension and reconstruction of the waterfront in the AD 120s. The monumental nature of these constructions suggests an official involvement: the first major transformation of land and river here may well have been regarded in terms of dominance over this waterscape.

From around the AD 140s the waterfront extended further out into the Thames and further along it represented by sites upstream of the bridge at Seal House and Swan Lane (Brigham 1990) and downstream of the bridge at the St Magnus House/New Fresh Wharf site (Miller et al. 1986). There was now far less attempt at uniformity and different construction methods were used. Then in the early to mid-third century it appears that there may have been an attempt to make the waterfront more unified (Brigham 1990; Tatton-Brown 1974). At the Custom House site, the quay was rebuilt and unlike the earlier box quay, this was in-filled with deposits of clay and building material indicating a more monumental undertaking (Brigham 1990, 119). There were also now monumental quay constructions at the St Magnus House/New Fresh Wharf site represented by five tiers of large oak beams held in position by a framework of braces and piles driven into the foreshore (Miller et al.

1986, 8). The attempted uniformity and the scale of the building might suggest official involvement once more (see figure 3).

At the site of the timber quay at St Magnus House, New Fresh Wharf, on Lower Thames Street there is some evidence of possible religious activity relating to its construction. This quay was constructed in the early third century and was part of the large-scale extension into the river (Miller et al. 1986). Deposited within the fill of the box-quay was a find of over 400 unused samian vessels including cups, bowls and lion head mortaria. Some of them were complete but the majority had broken as they fell. The homogenous nature of the pottery suggests that the deposition took place in one or a small number of acts (*ibid.*, 49). Most of the samian fell into two groups with vessels of Gaulish production dating to around AD 170-80 and then from the Rheinzarben in Germany dating to around AD 235-45. It has been argued that this pottery represented material that was unsold, stored in warehouses and then dumped to remove the old or damaged stock (*ibid.*, 6; Perring 1991, 95).

The context of deposition, however, suggests that the act may well not have been mundane and that it can be placed within the context of ritual depositions identified across Roman and prehistoric Britain (e.g. Clarke 1997; Hill 1995). Willis (1997) has identified a number of large groups of unused and near-complete samian vessels on sites in Britain and demonstrated that they all appear to have been deposited at times of structural or occupational change at settlements and times of site refashioning. The association between ritual activity and the negotiation of structural and landscape change can also apply to the installation of waterfronts. Although additional evidence of religious activity would be useful, the possible ritual deposits here could relate to an attempt to accommodate the changes to land and water or they were perhaps a reaction to the tensions caused.

FIGURE 3 HERE

On the south side of the Thames at Southwark, the waterfront constructions took on a very different scale and appearance. Excavations in northwest Southwark have revealed a number of small-scale waterfront installations on a series of sites (see figure 4; Cowan 2003). The evidence consists predominantly of the remains of small post-and-plank installations. It is unclear whether these

structures extended around the entire north side of Southwark but similar types of waterfronts have been found at the Winchester Palace site (Yule 2005, 15) and at Toppings Wharf near the site of the Roman bridge (Watson et al. 2001, 12). On the eastern side of the island, however, excavations did not locate any conclusive evidence of revetments or quays on the waterfront although some lengths of post-and-plank revetments have been found along the water channels between the islands, such as those excavated at the Guy's Hospital site (Taylor-Wilson 2002, 7-9). At present it appears that the waterfronts may only have been constructed in specific places where needed.

FIGURE 4 HERE

Whilst these waterfront structures might seem unremarkable, they are important for comparison with the structures on the north side of the Thames. Milne (1985, 145-8) concluded that the initial construction of the installations on the north side was not initiated by merchants but was part of a corporate plan; the town developed the port rather than the port forming a focus for the town construction. He also concludes, through a study of the finds, that the port was never particularly busy with the majority of goods staying within the town rather than being distributed across the country (ibid., 147). The monumental nature of the structures, however, suggest a definite purpose and deliberate programme of land alteration: they changed the waterfront, for what was apparently the first time, and extended the land by building out into the river. These initial alterations of the waterfront perhaps demanded official attention and sanction; but overtime, individuals then felt able, and prepared, to undertake constructions for themselves.

It is possible that the smaller-scale structures on the south side of the Thames related to a deliberate desire to avoid extensively altering the relationship between the river and land. The physical act of construction will also have involved interaction with the water itself and the marshy uncertainties of the water/land interface. Different sections of waterfront on both sides of the Thames represent decisions regarding this interaction with water and the alteration of the waterscape, actions which not only had practical results but also religious connotations.

CONCLUSIONS

This paper has argued that we can use the evidence of port and harbour constructions to approach aspects of the lives and experiences of the people that built them, used them and lived near them. They were more than simply technologies to enhance trade and economics. Their association with water in the form of rivers and the sea and their location at the liminal point of the land/water interface means that they could never be regarded as 'ordinary' structures and they had a huge impact on the waterscapes in which they were built. Travelling on or in water was an action that was also steeped in dangers and symbolism and involved religious responses; constructing waterfronts will have altered the way in which water from the land, or land from the water, was approached. Water was dangerous and despite the power and prestige represented in waterfront construction, there was also always risk involved which encouraged religious observance and a concentration of religious structures and material at these locations.

In its local context, the port of Roman London was situated at a crossing point on a tidal river within a ritualised waterscape perhaps focused on the Walbrook and the islands at Southwark. Altering this waterscape in a major way for the first time, through constructing the port and bounding the river, was a significant act beyond the practical and economic value that it brought. It will have changed the way in which the landscape was traversed and experienced. The construction of the port can be examined in terms of the responses to these actions and the way in which the willingness to alter the land developed over time and evoked religious responses. The concentration of religious monuments on the waterfront reflects the continuous religious significance of this waterscape as well as the power relating to its transformation and mastery. Where it survives, waterfront archaeology often has a high level of preservation of material which can provide considerable opportunity for analysing issues relating to landscape, religion and identity. The specialist work of maritime and wetland archaeology can be enhanced by embracing theory from other areas of archaeology and the rich evidence relating to the use and experience of water in the past.

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