Notes on the South-East Research Framework public seminar on the Maritime theme (24/11/07)

Chair: Gustav Milne

Speakers: Joe Flatman, Jake Weekes and Gustav Milne

Notes: Jake Weekes

The Aggregates Levy Sustainability Fund (ALSF) and the Gresham Wreck

Joe Flatman (JF)

Before moving on to the specific case study of the recently excavated Princes Channel Gresham Wreck from the Thames Estuary, JF first outlined the contribution to maritime research in the region in general made by the Aggregates Levy Sustainability Fund (ALSF), pointing out that the project, which ends in March 2008 (but may be continued) had recovered evidence of a large number of multi-period sites both on and off the shore line of the region, filling gaps where PPG16 hasn't been applicable. The marine zone doesn't have HER mapping in the same way as the land. Moreover, returning to the same place at sea is very difficult, so exact positioning of finds is paramount.

The English Heritage objectives for the ALSF were:

- Develop capacity to manage aggregate extraction landscapes
- Deliver benefits of knowledge gained through past work in advance of aggregates extraction
- Reduce physical impacts of current extraction where these lie beyond current planning controls
- Address effects of old mineral planning permissions
- Promote understanding of the conservation issues arising from the impacts of aggregates extraction on the historic environment.

A number of significant projects (not all focussed on South-East coasts) have resulted, including:

- 3281 Evolution of the Port of Rye and Landscape of Dungeness
- 3322 Artefacts from the Sea
- 3323 England's Shipping
- 3324 / 3594 / 3877 Wrecks on the Seabed / Multibeam Sonar
- 3645 BPMAPA Protocol for Reporting Finds of Archaeological Interest [referred to later in the session in Jake Weekes' presentation]
- 3767 On the Importance of Shipwrecks

- 3837 Rapid Archaeological Site Surveying and Evaluation in the Marine Environment
- 3916 Identifying Shipwrecks of Historic Importance lying within Deposits of Marine Aggregate
- 3917 Mapping Navigational Hazards as areas of Maritime Archaeological Potential.

JF then considered several pertinent examples in more detail. 3281, Projects 1 and 2 for example have produced a large-scale survey of Dungeness Foreland, outlining a depositional history for gravel beach formation, storms, sediment supply and landscape change during last 5000 years, and an environmental history for evolution of the port of Rye during the last 3000 years, detailing landscape changes associated with development of the sand and gravel beaches. These projects were multidisciplinary, with archaeologists working with geologists and historians; the Archaeology Data Service (ADS) provided important primary archive.

The Artefacts from the Sea project (3322) has focussed on an initial study region between the western Solent and River Tees, with particular emphasis on two smaller areas (Solent, and from Humber to the River Tees), using documentary sources (antiquarian journals), National Monuments Records, as well as 10 local authority Historic Environment Record databases. A database has been produced containing approximately 2300 records of small finds recovered from the sea.

Exclusion zones on the seabed have also been plotted. JF questioned whether this rather 'blunt instrument' for research was in fact desirable. Nonetheless, the work provided detailed information to better estimate the shape and size of exclusion zones around archaeological sites, and would help rationalise the amount of seabed being excluded from dredging licence areas.

Rapid Archaeological Site Surveying and Evaluation in the Marine Environment (3837) has provided a rapid geophysical survey for enhanced investigation of marine sites in sensitive aggregate areas, using enhanced multibeam sonar with a spar-buoy, and a deep-tow arrangement. This was tested on the Stirling Castle wreck (1703) in Goodwin Sands. Such technology allows multiple returns to the site, and checking of its condition etc, also generating a good quality of data: the work is much faster than geophysical survey on land. Historic seascapes have also been mapped using remote sensing techniques, but mostly outside the region; it would be good to carry out such work on the north Kent coast in future. Work on the submerged palaeo-Arun off Sussex gives an idea of the extremely high potential of such work.

JF then reported on the recent find of the Princes Channel Gresham Wreck, a chance find excavated by Wessex Archaeology in the Thames Estuary, as a case study in the management of wreck sites. This Elizabethan merchantman, situated in the outer estuary, was located by advance dredging for the London Gateway: the Port of London Authority funded the archaeological research. Difficult conditions prevailed, with very limited visibility, and it was impossible to moor over the site because of the sheer amount of traffic; JF argued that attempting to carry out an excavation on the central reservation of the M25 motorway was a good analogy for the conditions at sea. This was indeed rescue archaeology, which had a significant impact on methodology.

Nonetheless, much information of considerable significance was recovered. It was noted that the original hull of the vessel had had to be strengthened during its lifetime, with a second layer of framing, or rather waisting, being added to the exterior. The armourment, in the form of a canon, complete with the initials of Thomas Gresham, and a grasshopper motif, was useful in identifying the wreck with historical records. The cargo had included folded iron bars, ingots, and sundry other items. Evidently the vessel had come to grief in this treacherous area of sandbanks, which is why the Thames estuary is an important area for wreck management and also in terms of prospecting for sites. The Goodwin Sands, between the North and South Forelands in off East Kent, is another area where we will continue to find wrecks.

The Gresham site is so important because:

- As ship plans don't exist and written sources are very general and rare, archaeology provides the only means of studying Elizabethan shipbuilding in detail
- There are only very few archaeological finds of English vessels dating to the Elizabethan Period
- The survival of a complete bow section dating to this period is absolutely unique!
- The Princes Channel Wreck has many constructional features which have either not been observed on other shipwrecks or have always been associated with other shipbuilding traditions
- Altogether this wreck provides the unique opportunity to study a "normal vessel", a small merchantman, which was built during an important period of change in shipbuilding, about which very little is known to date.

Discussion:

The Portable Antiquities Scheme has been functioning in some quasi-marine areas (for example with 'mud lark' finds in London), but it is unfortunate that the Scheme doesn't include outreach to fishermen for example. It is illegal to take any finds from sea and coast (which must go to the Receiver of Wreck). A lot of data relating to the sea bed has also been collected for industrial reasons (also in construction of wind turbines off shore) which archaeologists would like to gain access to, and this information will often be free, if permission for access can be gained from private concerns. Sampling strategies need to be worked on, and rapid coastal zone surveys are an important way forward. North Kent has been partially completed, but cliffed areas have had to be left behind. The North East is being surveyed at the moment but English Heritage in the South-East have promised that the South-East will be next.

Maritime studies have tended to focus in the past on designated wrecks, and much of what actually lies on the sea bed in this regard must still be missing from our records. For instance, with the designated wrecks, the earliest is one that dates to the Bronze Age: the next designated wreck chronologically dates to AD 1500, and there are not many more until later. The archive is much skewed towards large warships and East India Company vessels. But it is not just wrecks and hulks at sea and on the coast that

we need to study, but the hulks on land, as well as other land evidence such as vessel fastenings (for example ships planks and nails in Anglo-Saxon inhumation burials in East Kent, which are evidence of Anglo-Saxon ships).

Prehistoric, Roman and the more recent

Jake Weekes (JW)

JW wished to give examples of recent work in the maritime context that has contributed to our understanding of the earliest and the most recent contacts between South-East England and the Continent, drawing out aspects of cultural identity.

JW first spoke about the Dover Bronze Age Boat, which was discovered during developer funded work in 1992, about 6m beneath the modern surface and 200m inland from present shore. The vessel, dating to the middle Bronze Age, had a sewn plank hull, and would originally have been as much as 15m long, mainly constructed of massive oak timbers stitched with yew withies. Interpreted as an ocean going vessel, it could have carried a crew of 16 as well as three tons of cargo and could survive 1m of swell. A journey time of four or five hours across the Channel is estimated in the right conditions.

Peter Clark (PC) had gone into considerable detail at the middle Bronze Age/Iron Age seminar earlier in the SERF series, pointing out that much evidence now pointed to the boat being a relic of a maritime culture centred on the English Channel at this time, rather than being based specifically either in South-East England or the Continent. PC had argued that the hoard of bronze tools from Langdon Bay, just north of Dover (found in 1975) has been interpreted as a group of objects imported from France by English scholars, but that such finds made nearer the coast of the Continent are often linked to Britain by continental archaeologists. JW wished also to raise the possible ceremonial aspect of the Dover Boat, suggested by Tim Champion in the published report on the find. There is some evidence to suggest that the vessel was a special offering deposited in what was perceived as a liminal place between the sea and the land. Other apparently special deposits of metalwork hoards (especially in East Kent) and of metalwork in watery places generally, are ubiquitous in the period during which the Dover Boat was deposited.

Moving on to the Roman period, JW noted an important and long known area for finds of Samian Ware (*terra sigillata*) from the seabed just to the north of Whitstable and Herne Bay on the North Kent Coast, generally known as ‘Pudding Pan and Pan Sands’. Samian Ware, manufactured at various locations in Gaul on a North Italian model (*Arretine*) mainly in the first two and half centuries AD, was a fine table ware associated both with the Roman army and also with apparently middle class display in fledgling Romano-Celtic cultures of the North West provinces. Recent research carried out by a team from the University of Southampton (in particular Michael Walsh), in association with Oyster fishermen of Whitstable, has used sonar and diving to try map the distribution(s) of the material, and isolate clusters that might indicate the presence of a wreck of wrecks (for detail go to the University of Southampton web pages at: http://www.arch.soton.ac.uk/Research/PuddingPan/).

Nothing to indicate a wreck site has been found, but Roman tile fragments have also been dredged up in the nets; the evidence therefore perhaps indicates the discarding of material overboard on a known sea route between the mouth of the Rhine and the Thames. Again, as well as the recognisable economic and broadly 'cultural' aspects of Samian, JW pointed out that this material became part of the ritual life of the region, with the pottery becoming an integral part of many funerary customs both before, during and after the burial of cremated human remains.

The Pudding Pan and Pan Sands sonar and diving survey also encountered more than one WWII mine, which had to be detonated under controlled conditions by the Royal Navy's bomb disposal experts. And this led JW to consider some finds of more recent date from the region's coastal waters, and further evidence of its changing relationship with the Continent. As a result of the Aggregates Levy Sustainability Fund Protocol for Reporting Finds of Archaeological Interest from material dredged from the seabed, workers at wharfs sorting aggregates material have recently reported wreckage and human remains deriving from a number of lost WWII war planes, and such finds are likely to continue. In particular, JW thanked Stephanie Arnott of Wessex Archaeology for information on parts of a German *Junkers* JU88 bomber, as well as a human right *humerus*, recovered from the Wharf at Erith in North Kent (although dredged from an area off the Suffolk coast). The crash was dated to *ca*. 1940 on the basis of dates on machine gun ammunition found in a magazine, and the type of plane identified from its idiosyncratic compass mechanism.

JW reflected that this same model of plane had also been used in night fighter defence against the RAF's area bombing campaign of German cities in WWII, and recommended Martin Middlebrook's excellent expositions of the various battles of Hamburg, Berlin etc, which not only deal in detail with tactics, combats and losses, but also with the often horrific experiences of those flying the bombers and their night fighter assailants, and indeed those 'under the bombs', in the cities under attack. The *Junkers* 88, modified to carry special radar sets as well as the lethal fuselage mounted (upward firing) cannon, code-named by the Luftwaffe 'Scrägemusik' ("Jazz Music"), flew so called 'Tame Boar' (radar guided) missions against heavy bomber formations over the North Sea and mainland Europe. A quick assessment of the figures Middlebrook gives for bombers lost over or near the Dutch coast alone must mean there remains much wreckage of British aircraft in those waters. Also, Manston, on the furthest Easterly point on the Kent coast, was a beacon for returning bombers in difficulties from the perils of night fighters, flack etc, and coastal waters off Kent and Sussex are also likely to contain bomber wrecks, as well as aircraft casualties of other phases of the war, not least the Battle of Britain.

As a precursor to the Defence seminar (following the seminar on the Maritime theme that day), therefore, JW finally presented a copy of a wartime poster depicting an idyllic view of rolling green Downland and coast with the slogan: "*your* BRITAIN. *fight for it now*". JW argued the need to recognise that all research into the historic environment is not carried out in a political vacuum, and that the history and archaeology of WWII (and earlier conflicts) in particular have ideological resonances in post-industrial Britain, both generally in the formation of national identity through the perception of a shared past, and, arguably, specifically in the generation of images of a 'war footing' against aggressors from overseas. The question: "why are we interested in the past", therefore, is perhaps one that could be most obviously

addressed when dealing with Maritime and Defence themes, but it also points the way to questions about the role of archaeology and history in the generation of cultural identities more generally; why we are interested in these subjects and how we draw up an agenda for researching them raises the question: whom do "we" represent?

Discussion:

The question of whether aircraft crash sites officially constitute war graves was briefly discussed, and the apparent difference in this regard between Navy and Merchant shipping with respect to such status.

Maritime themes

Gustav Milne (GM)

GM pointed out that the Maritime theme is not just about boats and wrecks, but should be extended much more broadly to encompass the material evidence for ships and harbours in economic, social, political and environmental context. In fact, the Maritime theme could be said to be fundamental to the study of the South-East in particular, as it is indeed a peninsula which has always been key to Britain's contacts with the Continent and beyond. The subject, then, rather than dealing merely with wrecks at sea, should consider all aspects of:

- Maritime Landscapes (which might actually include whole of the South-East, especially if one considers the significance of goods from overseas within the material culture of the region since the earliest times)
- Maritime Industries
- Maritime Transport.

This is also a multi-period investigation (considering evidence from prehistory and the Roman period, through to the Medieval and Post-medieval) and an inter-disciplinary study, including:

- Geo-archaeology
- Nautical archaeology
- Waterfront archaeology
- Foreshore archaeology
- Underwater archaeology
- Artefact studies (on sea and land)
- Cartography
- Iconography
- Port-books and place-names.

South-East England has particular need to develop a coherent approach, given its historically crucial location and long coastline, including the English Channel, North Sea, Thames and Medway. The Defence seminar (following) would also bear ample testament to this.

Understanding the environmental backdrop of maritime landscapes is of paramount importance, and establishment of the environmental context relating to relative sea level change and associated changes in estuaries, tidal head, navigable waterways and the depth/width/extent of foreshore exposed at various periods needs to be undertaken in order to understand the true context of maritime activity. As a starting point for such a study in the region, GM proposed the following preliminary approximate dates at which the marine and coastal environment might most usefully be characterised in this way:

- AD 100
- AD 300
- AD 600
- AD 1000
- AD 1200
- AD 1500

These dates are all significant in terms of associated changes in coastscape, headlands, marsh, sand banks, lagoons/tidal head/foreshore/navigable waterways (as well as historical developments, see below). Future study could build on the template that such a study would provide, with the ultimate aim being, through multidisciplinary methods, to draw up coastal route maps for each period, showing depth of waterway, estuaries, landing places, ports, settlements and seamarks. A combination of map regression and chart regression would form an important foundation for the work. Geo-technical bore holing in association with map and chart regression will also help to build a picture of localised cycles of silting up, inundation and erosion (as at Romney Marsh, for example).

As well as coastal changes there have been many changes in ship technology which would require different types of harbours over time. Researchers need to establish sea level curve and coastal change curve in tandem with significant technological aspects for each period in order to begin to understand such factors and to locate sites where the evidence might survive. There are also historical factors to consider as mechanisms for change. Maritime landscapes extend to the whole economic, political and social life of the region, as well as more marine specific aspects, such as the maritime industries.

From the 1st century AD, for example, the *Classis Britannica* policed the Channel and North Sea area off the region's coast, working for the governor of the province, but also for procurator. This meant considerable involvement with procutorial estates and therefore the Wealden Iron industry (and probably stone from Maidstone and Folkestone). A lagoon in the modern day lower Rother area was almost certainly the main place for ship building, as well as a base for the fleet. From the 3rd century the *Classis Britannica* ceased to function as procuratorial machine, and the military had to look after their own maritime affairs (Dover is an important source of evidence for these changes).

In the Medieval period the Cinque Ports system was instituted; there is quite a lot of work ongoing on this, but Hythe is a notable exception, and we have much more to do to find the harbours.

Other maritime industries include (with associated settlement sites and artefacts):

- Fishing (including hooks, net weights, etc): Townwall Street, Dover provides an excellent, but as yet rather rare example of an investigation of this type of industry in the region, which also elucidated other social aspects, such as diet, using environmental analyses
- Salt working
- Shipbuilding/repair/ breaking (it is possible to track movement of these over time)
- Ferries.

It is possible to trace a typical cycle in the development of ship building industries in the Medieval period, with initial fishing activity giving way to slipways (often littered with nails and roves). Usefully for archaeologists, the same sites did not tend to be used for consecutive ship building episodes, the work tending to begin on adjacent sites and creep along the coast over time.

Of course, the region has a rich heritage of maritime centres, different ports and harbours that flourished at different times:

- Roman forts and ports including the *Classis Britannica*: Richborough, Reculver, Dover, Lympne, Pevensey etc
- Medieval (Cinque Ports & limbs) and later centres like Sandwich, Dover, Hythe, Romney, Hastings, Rye, Winchelsea, as well as Margate, Ramsgate Faversham, Fordwich, Deal, Walmer, Folkestone, Lydd, Pevensey and Seaford.

There is much potential at these sites for survival of archaeological evidence of quays, landing places, warehouses, cranes etc. Maritime defences, both against the sea itself and against invasion from the sea, form another important area for research beyond a focus merely on maritime transport.

Maritime transport, then, forms but part of a much wider picture, but even within this strand there is room for much further scope in terms of research. Numbers of protected wrecks (as designated under the Protection of Wrecks Act 1973) are not in any way representative of original numbers or more ubiquitous types of vessel. Other significant sites include:

- Hulks in creeks/marshland (e.g. Whitewall Creek)
- Hulks on land (e.g. the Dover Boat, Graveney Boat, Sandwich Ship)
- Vessel fragments on land (e.g. at Smallhythe)
- Nails/roves from ships that turn up in other contexts (e.g. early Saxon cemetery sites)

It is unfortunate therefore that hulks are not protected in the same way as submerged wrecks, and this vital resource is being constantly eroded by natural processes and human activity. The Medway hulks are a prime example; these include massive punts at Chatham, and Thames sailing barges in the Medway marshes, which also have the last surviving military timber vessels: three minesweepers. About 80 vessels were

extant in the area of the Medway Tunnel before it was built: some were destroyed without being recorded.

Discussion:

The debated site of the Claudian invasion was raised, instigating thoughts that reconstruction of what the coast was like in AD43 and an increased understanding of the physicality of the coastscape might give an idea as to where it might have been sensible to land (we also need to consider changing tides). It is interesting that, of the Saxon Shore Forts, only Dover has a directly associated harbour, and the Medieval Cinque Ports (e.g. Winchelsea), tend not to focus on the harbour. In terms of the Roman period lagoon, we would need to dig quite deep into deposits to get to the level of the harbours.

The hinterland of maritime network has tended to attract very local microstudies thus far: there is a need to develop an integrated coastal zone research package. Localised studies include warehouses (timber framed) identified by Sarah Pearson at Sandwich in Kent, and also work on the undercrofts of Winchelsea by the Martins, as well as interesting work on Faversham, which was heavily involved in transporting material to London from the Medieval period. Recent projects on cross-Channel contacts based at the University of Greenwich, and the Victoria County History work by Andrew Hann on the lower Medway were also mentioned (the latter in terms of transporting cement to London).

London has, since the Roman period, been a fulcrum of traffic and trade, although there have also been fluctuations in its fortunes, to which changes in environmental conditions would have contributed. For example, in the later Roman period the sea level and tidal head dropped, so after about AD 250 the premier port for the South-East had to move somewhere eastwards: and we have yet to find it. Even the Roman bridge disappeared by 225. As well as environmental changes, political change can also have a significant impact, bringing new significance for different areas, and thereby directly changing the trajectory of different ports. Costs of transporting grain to London have actually been a gauge of economy since the Medieval period. Proximity to the coast and navigable waterways would have been at a premium.

Examples of the importance of westerly Maritime links had come up in previous seminars: Portable Antiquities Scheme data from Andrew Richardson (Finds Liaison Officer for Kent) show interesting correlations between the material culture of East Kent and the Isle of Wight area, for example, both in the late Bronze Age (components of deposited metalwork hoards), and Early Medieval period (brooch forms). There is huge potential for public interest and involvement in Maritime research, and the foreshore is an excellent place for community projects as it is relatively common land. Even modern finds are important and indicative of our changing relationship to the water. For example, a recent community project focussing on the Thames in East London recovered a large number of ceremonially deposited Diwali lamps, adding a new example to a long standing pattern, known from prehistory, of ritual deposition in watery contexts.