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Search ANNUAL REPORT 2000/2001







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*Denotes full time staff

Text in this report written by B Sparks, G Momber and J Satchell unless otherwise stated

FOREWORD

This year the Trust celebrates its tenth year of operations and this important milestone is being marked by the publication 'A Decade of Diving, Delving and Disseminating - the HWTMA 1991-2001', along with a seminar 'Uncovering Solent Secrets'.

This ten year review describes how, following an initiative of Hampshire County Council and the (then) Isle of Wight County Council, the Hampshire and Wight Trust for Maritime Archaeology, has been undertaking research to reveal the wide range of local maritime sites. This has included work on both wreck and non wreck sites, in the Solent, its harbours, its rivers and along, and off, the coasts of Hampshire and the Isle of Wight. Disseminating the results of this research has been achieved through exhibitions, lectures, publications and web sites. Three key themes throughout the past decade have been the involvement of volunteers in many of the research projects, education in its widest sense and the forging of partnerships in both the public and private sectors.

2001 has seen the 150th Anniversary of the America's Cup celebrations, based in Cowes, and the second Portsmouth located, International Festival of the Sea. Both of these major events have demonstrated the continuing interest, specialist and general, in maritime matters locally, nationally and internationally. It coincidentally, and very fittingly, saw the opening of the *HMS Hazardous* diver trail, the first of its kind around a Protected Wreck Site off the English coast.

The second edition of the booklet '*The Story beneath the Solent*' was published by the Trust last December and I thank the Crown Estate for their major sponsorship of this popular publication. '*Our Changing Coast: a survey of the intertidal archaeology of Langstone Harbour, Hampshire*' was published, by the Council for British Archaeology, and is the culmination of a number of years' work on the Langstone Harbour Project, in which the Trust played a major role. Similarly the final report on the European LIFE 2 Project '*Coastal Change, Climate and Instability*', in which the Trust was a partner, was also published in 2000.

Last October we welcomed Mr Michael Aiken, Chairman of Wightlink Limited as a Patron of the Trust and I am grateful to him, Sir Charles Tidbury and Mr Maldwin Drummond for help, in particular, with private sector sponsors.

I also thank the Department for Culture, Media and Sport, English Heritage, Hampshire County Council and the Isle of Wight Council, along with those other authorities, companies, organisations, trusts and individuals who are listed in this report for their sponsorship and support over the past twelve months.

Finally, I pay tribute to my predecessor Dudley Keep, who stood down last year following his second term as Chairman. I am delighted that he continues his association with the Trust as our Vice-Chairman.

DAVID GUY

Dail G-1

CHAIRMAN October 2001

THE TRUST'S POLICY STATEMENT

AIM

The Hampshire and Wight Trust for Maritime Archaeology will promote interest, research and knowledge of maritime archaeology and heritage in Great Britain with core activities concentrated in the counties of Hampshire and the Isle of Wight and the adjacent South Coast areas.

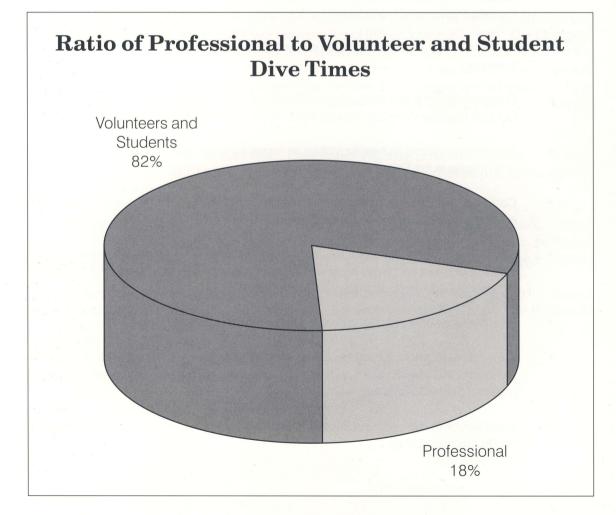
KEY OBJECTIVES

The Trust will:

- Promote maritime archaeological study in accordance with professional and museum codes of conduct and practice.
- Promote the in situ preservation and management of important archaeological sites in its area of interest.
- Support local, regional and national initiatives for improvements to the legislation regarding the preservation and management of the maritime archaeological heritage.
- Promote public awareness, enjoyment and participation in the maritime archaeological heritage.
- Provide a maritime archaeological service to Hampshire County Council, the Isle of Wight Council, Southampton City Council, Portsmouth City Council and other Local Authorities.
- Ensure that maritime archaeology plays an important role in coastal planning, management and policies in the Solent and Wight areas.
- Carry out maritime archaeological surveys and investigations for incorporation into environmental assessments and similar studies.
- Compile and maintain a database, and base chart, of all known maritime archaeological sites in the Solent and Wight areas and exchange information with local SMR holders and the National Archaeological Record (Maritime Sites).
- Promote archaeological awareness and competence amongst divers.
- Support, and where possible, assist in the publication of the results of maritime archaeological investigations, surveys and research undertaken in the Solent, Wight and adjacent South Coast areas.
- Liaise with other local, regional and national organisations involved in maritime archaeology and related disciplines.

SUMMARY OF PRINCIPAL FIELDWORK ACTIVITIES September 2000 - August 2001

46
146
192
97
2,322
10,291
12,613



The Solent Marine Archaeological Project

The 2001 marine archaeological field season in the western Solent witnessed several levels of activity. The previous three years' diving had demonstrated the area's potential and helped define the nature of the resource. Based on this intelligence, it was deemed necessary to deploy more technically advanced methods of survey if significant advances in our understanding of the seabed were to be recognised. To this end collaboration with SEA (Advanced Products Ltd)) and the New Forest District Council led to large tracts of detailed geophysical survey, this in turn was followed by diver survey and finally by sampling and underwater excavation.

In addition to the work on the submerged landscapes, searches were carried out for suspected and known shipwrecks. A scatter of wreck material was sighted by divers off the mouth of Keyhaven and a second wreck was located and surveyed in Alum Bay. On land, liaison with the Keyhaven Nature Reserve and the Hampshire County Council has enabled access to areas that hold the remains of salt making industries which flourished along the coastline for hundreds if not thousands of years. Teams of volunteers were deployed to record the network of channels and embankments.

All the results are being assessed and interpreted. The value of this work can not be understated as it does not only enlarge the archaeological record, but also encourages social inclusion and education. The projects have helped to inform the public of the importance of the archaeological resource underwater which, in turn, is slowly contributing to an enhanced awareness and appreciation.



SoIMAP volunteers make ready to leave Keyhaven (Garry Momber)

A large component of the project was run from the Sea Scout Hut at Keyhaven and would not have been possible without their help and the assistance of members of the local community. Thanks are also given to New Forest District Council, Hampshire County Council, the Keyhaven River Warden, Yoeman Marine, Echo Pilot, Keyhaven Nature Reserve, Keyhaven Yacht Club and 3H Consulting and John Cross of Coastal Research.

Identifying the submerged landscape in the western Solent

The western Solent conceals a legacy of palaeoenvironmental and archaeological treasures. The geomorphological evolution of its coastline as a result of climatic changes and sea level fluctuations in the last 10,000 years has allowed the accumulation of silt and sediments with a high potential for preservation. Within and under these deposits, human activity has left its mark on ancient landscapes.

Along the northern shores of the western Solent, salt marsh has been eroding rapidly over the last 200 years. As the mud flats are lost, areas of peat and submerged forest have been seen on the lowest tides and a large number of Stone Age flint tools have been dragged up by oyster fishermen. Beneath the water further expanses of peat remain. It appears that the overlying sediments are being washed from the top of an ancient drowned landscape containing the remains of human occupation. The depths of deposits range from about 4m below OD in the south, terminated by small cliffs, and rising gently towards the shore. This is comparable to the upper peat beds found below Bouldnor Cliff where, the base of the deposit has been dated to 4525 - 4330 Cal BC. Archaeological artefacts undoubtedly remain in this drowned landscape which, together with the palaeoenvironmental material can aid our understanding of its occupants and past climatic events within a calculable timeframe. Initial searches provided information on the seabed environment and have helped map the deposits although it has been a slow process.

A key objective for the 2001 fieldwork season was to locate seabed topographic variations that lie within the peat deposits. Laterally consistent undulations can be signatures for ancient palaeo-channels where there is a high potential for the remains of human occupation. These may include structures, indications of boat activity and evidence of fishing with fish traps.

The first step was to gain a comprehensive understanding of the seabed. To achieve this, swath bathymetry was conducted in conjunction with SEA (Advanced Products Ltd), with support from the New Forest District Council where selected areas of submerged landscape within the western Solent were targeted. The results highlighted a myriad of ancient major and minor drainage channels cutting through the seabed deposits. The next task was to prioritise sites for sampling and deploy divers to do so. This was begun during the summer fieldwork, based in Keyhaven and continued with growing success in August by the Poole Bay Archaeological Research group (PBARG). The area worked by PBARG was due south of Tanners Hard, to the east of the Lymington River (see below).

Underwater sampling off Tanners Hard

At the end of July this year, Poole Bay Archaeological Research Group divers returned to the Solent to continue the study of an area of ancient peat beds that they had identified during the 2000 fieldwork.

This season's activities were centred on a peat-claypeat 'sandwich' that is visible as an underwater cliff rather more than 1m high. This cliff forms an irregular boundary between the exposed peat seabed in the shallow water towards the shore, and the mainly gravel seabed which slopes gently away in to the Solent on the seaward side. The cliff and associated peat layers show clear signs of active erosion.

The 2000 survey indicated that the upper peat contained a substantial amount of wood, including tree trunks up to around 25cm diameter. The lower peat had been seen only as a fragmentary and badly eroded layer at the foot of the cliff. The bathymetric survey of the area revealed the possibility of old stream beds or natural drainage channels in the shallow water inshore of the cliff edge. As part of SoIMAP 2001, the PBARG were tasked with their investigation.

There were two main aims of the 2001 diving work:

- a detailed visual survey of a small area of the seabed near to the top of the cliff, in order to identify any wood that might be dateable by dendrochronology, and to provide a baseline against which future erosion could be assessed;
- a small excavation into the face of the cliff, to give access to the lower peat and to allow the extraction of a core sample through the whole height of the cliff including both peat layers.

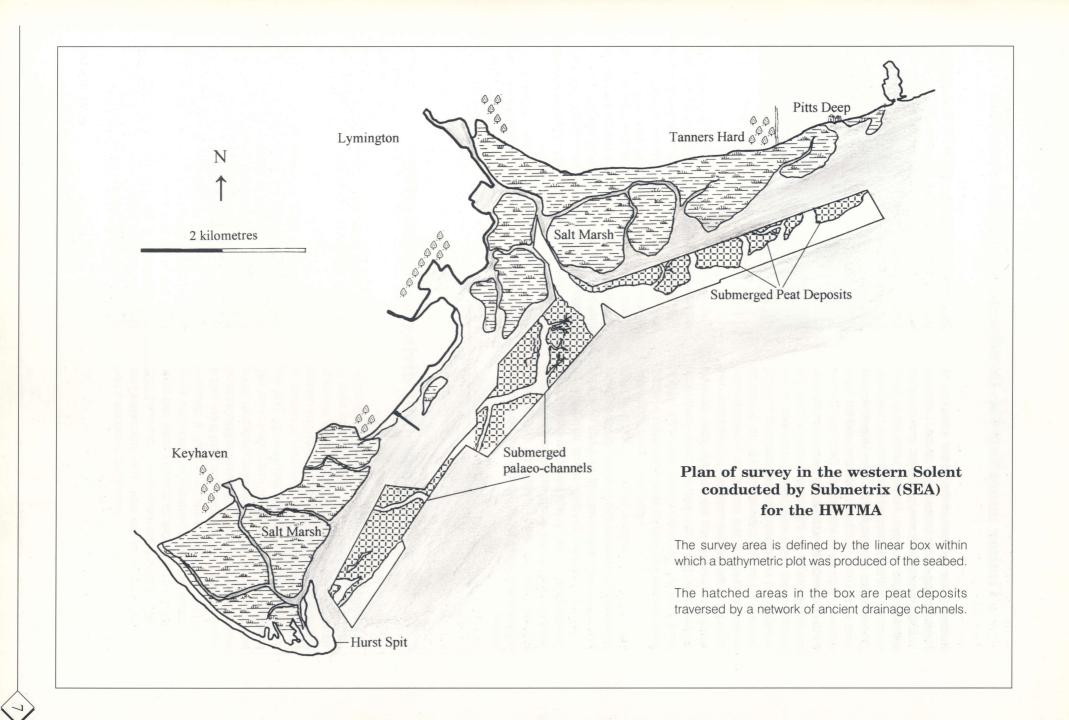
The visual survey of the exposed upper surface of the top peat layer was carried out over a rectangle, 20m long along the edge of the cliff and extending 10m back from the cliff towards the shore. The area was searched in 1m wide lanes. Two small gullies were identified, where the underlying clay was fully exposed and the peat absent. Each of these ran out diagonally over the edge of the cliff, with the clay cliff showing signs of active erosion at the edge in both cases. It is likely that these gullies are of recent origin. The positions of several substantial logs were noted, including some that are probably oak.

An excavation 1m wide was cut 0.5m into the face of the cliff. The upper peat, despite its very eroded appearance from above, was easily cut out in very solid blocks. The lower peat appeared to be rather less well compacted, and contained large fragments of yellow reed-like stems. On the top surface of the lower peat, there was a scattering of what seemed to be small pieces of charcoal. Samples were collected for detailed analysis. A core approximately 100mm wide was extracted from the side of the excavation, covering its full height. A line of auger cores was taken running back from the cliff edge, for a distance of 30m, to complement the information obtained from the excavation.

The programme was finished off with a very brief visual inspection of a 200m transect running inshore from the edge of the survey grid. This confirmed the existence of a substantial gully in the seabed well back from the cliff edge, which was revealed by the bathymetric survey. It also proved that the upper peat layer extends well beyond the cliff edge towards the shore.

Over the four days a total of ten PBARG divers took part, logging almost 32 hours in the water. Cover was provided by the dive tender Peveril Myth.

Mike Markey



Timber sampling for Dendrochronological Analysis

Following the success of the timber sampling by Nigel Nayling of the University of Wales, Lampeter, in 2000, the strategy was continued in conjunction with the 2001 surveys. Further sections of trees exposed on the submerged land surfaces have been recovered for analysis both on the Mesolithic peat shelf at Bouldnor Cliff and the later, and far more extensive exposures around Pitts Deep and Tanners Yard. The main objective of this work has been to provide material for the construction of tree-ring chronologies from oak trees preserved in the waterlogged sediments. Precise dating of tree-ring sequences could provide the key to a clearer understanding of the timing of environmental changes in the development of the Solent including sea-level change since the last glaciation. Analysis of samples from the earlier trees, dating to approximately 8000-8500 years ago, may help to extend existing British tree-ring curves which presently run back no further than about 7000 years ago. Work on samples taken in 2000 suggests possible links to Mesolithic material from the Severn Estuary being studied as part of a NERC-funded research project. Diving in the challenging environment of the Solent has also allowed the development of sampling procedures suited to SCUBA diving and improved underwater assessment techniques which can be applied elsewhere.



Nigel Nayling sampling timber for dendrochronolgical analysis (Garry Momber)

The abiding impression left from 2001 is the huge potential of the submerged landscapes of the Solent. From a dendrochronological perspective, they offer a rare opportunity to investigate a period of our deeper past when lowland river valleys and coastal plains occupied by hunter-gatherer communities were swathed in oak-rich forests before being lost to the sea along with the great land mass of Doggerland of the southern North Sea.

Nigel Nayling

Bouldnor Cliff diving and monitoring

Investigations of an underwater cliff off Bouldnor, (dropping from -4m to -13mOD), north east of Yarmouth in 2000, suggest past periods of accretion and sedimentation. Here, three layers of peat deposit have been overlain with alluvium, a matrix of materials that also includes archaeology. This cliff presents an opportunity for investigation on two levels. First it contains the potential to harbour much well preserved archaeological material from a period where relatively little is known and from a site that is now 11m below the water. Secondly, it attests a sequence of marine inundation which has been interrupted by episodes of falling or static sea level, thereby allowing the shoreline to advance and reclaim land from the sea. The archaeological material and palaeo-environmental evidence found

within these drowned deposits can provide a temporal framework for climatic and environmental events.

Excavations in 2000 revealed archaeological deposits in *situ* within the submerged cliff. Their discovery was a product of erosion causing the cliff to retreat. The rate of erosion however, is unknown so one of the objectives during 2001 was to continue monitoring. To this end, sections of timber were removed, weighed and returned to the seabed to be periodically inspected and monitoring pins have been laid in the sea floor at fixed points. Another site, 100m east of that worked in 2000, has been chosen for detailed survey. Survey has begun below a 6-7m vertical cliff, capped by two peat deposits.

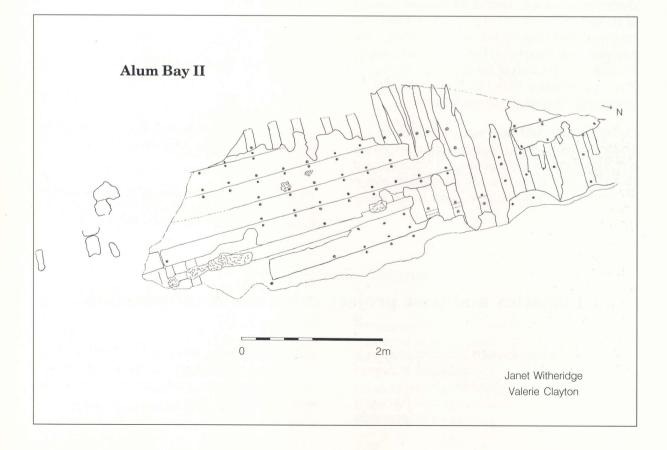
More mysteries in Alum Bay

A large section of wooden hull lies in 7m of water tucked amongst reefs in an area of fine sand, below the cliffs of Alum Bay. It measures over 20m in length and up to 4m wide. The remains appear to be that of the upper, port section of a large wooden ship lying with its external planking face down in the seabed. The visible features elevated above the sea floor are the internal fixtures and fittings which include two lines of knees and iron supports, numerous copper pins holding the frames to the planks and a couple of large lead lined hawse holes. Diagnostic features include broad arrows on the bolts and copper sheathing. These and other structural elements suggest a Royal Naval vessel built somewhere around the beginning of the 19th century.

Over the past three years, survey and excavation have produced an accurate scale drawing at 1:10 of all the exposed and some excavated structure. The surveys, conducted by students of marine archaeology and NAS trained volunteers, provided underwater excavation training in a discipline that seldom presents such opportunities to perpetuate its practical skill base and it established baseline data to be used for the monitoring and management of the site. Indeed, it has drawn attention to a catalogue of disturbance over the past few years. A number of iron knees have been physically torn from the structure leaving behind fresh scars of exposed red iron. The damage was most probably caused by yachtsmen unwittingly anchoring over the site, or possibly by lobster and crab fishermen, whose pots and adjoining ropes are often dropped on the reef around the site, both types of incident having been witnessed at first hand.

The 2001 season focused on another section of wreck less than 100m to the west, brought to the Trust's attention by New Dawn Divers. This is of much lighter construction than its neighbour, lying upside down with the keel and an area of planking exposed. Floor timbers and frames can be seen where the outer planking has eroded, in total stretching some 12m across the sea floor. The timbers that survive are in a very good state of preservation which suggests they are often protected under sand. Other features have been identified around the site which warrant further investigation.

Additional progress in 2001 included a bathymetric and side scan sonar survey over the areas being investigated. It covered both sections of wreck structure and large areas of geological and biologically interesting reef in between. A future objective is to gather data on the sea bed communities in and around a zone containing the



hulk sections. This information will add 'meat' to the digital skeleton that was acquired during the survey. As the amount of information collected grows, a meaningful map can be created that divers will be able to follow. This could be a good base for the creation of a marine archaeological and biological diver trail. In addition, now that the threedimensional digital data has been collected, it will be possible to generate a simulated swim through. This could enable non-divers to experience the underwater trail without getting wet.

It is clear from the above that for these initiatives to be implemented controlled management and protection of the site is necessary. Currently, the most effective form of protection is under the 1973 Protection of Wrecks Act, which, although preventing unlicensed interference, still enables divers to visit the site in controlled circumstances.

Similar work is already under way on the Needles Protected Wreck Site where a dive trail is undergoing trials. The addition of the Alum Bay site as a complementary trail would make a very valuable adjunct not least because the most favoured hypothesis for the identity of the wreck is currently *Pomone*. If this is so, it will be the only known section of remaining structure associated with the *Pomone* after it broke apart in 1811.

Salt-making in Keyhaven Nature Reserve

The New Forest was once a major centre for marine salt production. Its shores retain scars from the industry which date to the Iron Age of over 2000 years ago.

Review of historical charts and maps for the north west Solent reveal a coastline alive with salterns, and an infrastructure of creeks and harbours that evolved to support this once prolific industry. The workings, which covered large tracts of the intertidal zone between Lymington and Hurst Spit have been divided by a sea wall. Most of the remains seaward of the wall are now gone but much can still be found on the landward side to the north, protected in the Keyhaven and Pennington Nature Reserve. Despite the scale and longevity of the activities in the region, little archaeological work has been undertaken to record and interpret remaining features.

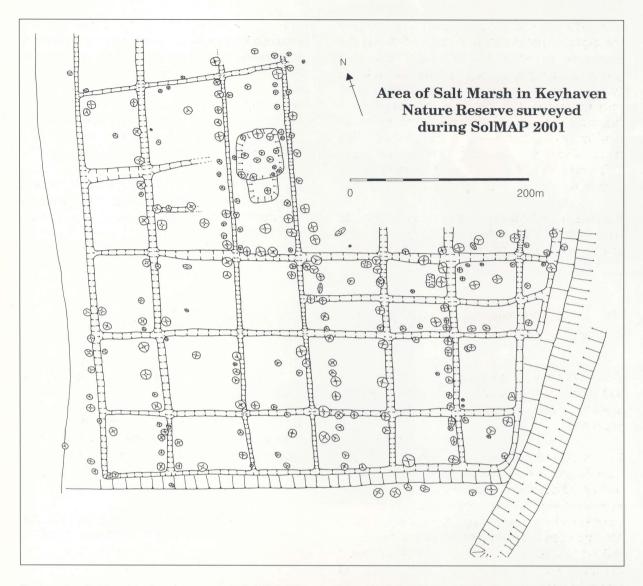
During SolMAP 2001 work was undertaken on salt working remains, giving gave non-diving volunteers a chance to gain some experience in archaeological recording techniques. The site investigated was in the Keyhaven Nature Reserve, close to the shorebase. A group of 6 - 8 volunteers supervised by Trust staff began by field walking an area of high potential. It soon became obvious that the area was teeming with earthworks, many of them related to the salt industry. As surveying the whole area with the small team was impossible it was decided to gain a sketch plan of the larger area and a more detailed plan of a smaller one.

An area with a prominent ditch and mound complex adjacent to a raised earthwork dock was chosen for planning. Baselines were used to survey the archaeological features. These were then plotted at a scale of 1:100 from which a detailed plan has been produced. The regular pattern of ditches and channels are clearly visible as are the associated mounds which we assume were produced from clearing silt deposits. The substantial earthwork banks and depressions of the dock and system of holding ponds will require further work in the coming years to gain a more comprehensive plan of the whole area.

We would like to thank Keyhaven Nature Reserve for their assistance and allowing us access to the Reserve.

Logistics and post project collation of information

Over 40 people were involved in the organisation of the Solent Marine Archaeological Project. Numerous individuals and organisations were consulted during the preceding year to ensure a logistical framework and finances were in place to support the operation. In total, 12 boats were involved in the work, performing detailed geophysical surveys and facilitating divers who spent almost 10,000 minutes underwater.



During the fieldwork, all volunteers participated in the collection and creation of archaeological data. Their activities needed to be fully recorded and collated. This information is recorded on paper, entered into a database and filed. The Trust's recording system has been developed to cope with all types of archaeological activities; paper or permatrace pro-forma sheets are available for the participants to fill in either under water, in the field or on return to base. It is vital that these record sheets are filled in as they form the archaeological archive. The more archaeological work undertaken, the greater the amount of paper work and information generated. For SoIMAP 2001 the arduous task of data processing was alleviated by access to Peter Holt's 'Site Recorder' database which he kindly helped modify to cope with the submerged landscape projects.

As the fieldwork draws to a close, the task of analysing and cataloguing the season's discoveries will need to be completed while the organisation for next year's fieldwork begins again.

Project conclusion

The work over the last few years in the western Solent has opened our eyes to the vast potential beneath the waves and the threats the resource faces. It is becoming clear that the harder we look, the more we find. It is also true that most of the older archaeological material has been discovered because it has become exposed and as a consequence is under threat from erosion. This raises questions of management and sustainability that need to be addressed as a matter of urgency. In the meantime, the Trust plans to continue monitoring known sites, the results of which will hopefully be used to inform coastal managers and aid the decision making process.



Keyhaven Sea Scout Hut played host to over 30 people of all ages during SolMAP 2001 (Margaret Sparks)

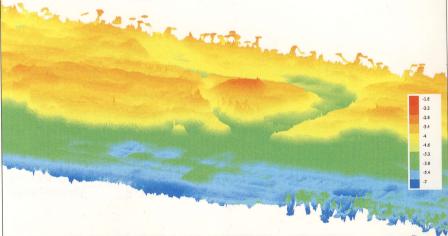
Augering the submerged landscape in the western Solent (Emmy Kelly)



Augering the 'Saltern' dock complex in Keyhaven Nature Reserve (Garry Momber)

Bathymetric survey south of Tanners Hard detailing ancient channels in the drowned landscape of the western Solent

Conducted by SEA (Advanced Products Ltd) with logistical support from New Forest District Council on behalf of the HWTMA



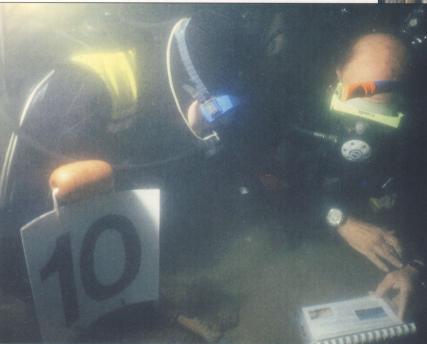


Survey of inter-tidal hulks at Warsash, Hamble (Julie Satchell)

Surface supply diver being 'dressed in' at the International Festival of the Sea (Julie Satchell)



England's first combined marine archaeological and biological Dive Trail opened on the protected site of *HMS Hazardous* in August 2001 (*Garry Momber*)





Friends of the Trust help search for clues to wrecked vessels along the beach at Brook Bay (Julie Satchell)

A Hazardous trail: towards social inclusion

On Sunday 12th August at 1pm the *Hazardous* Dive Trail was officially opened. It is the first such trail in England promoting awareness of and participation in underwater archaeology and marine biology.

The trail runs around the wreck and into the adjacent reef. It has been designed to reach the most interesting parts of the site introducing divers to both archaeological and biological features where large sinkers have been positioned at selected points. Lines, buoyed with reference numbers, have been laid between the sinkers forming a 'circular' trail measuring almost 200m. Eleven base stations have been created which relate to information sheets in a small booklet, which was successfully tested over the summer. The stations highlight examples of wreck and biological/geological features on the seabed. Participation in the underwater trail experience includes two lectures before the dive, one on the marine archaeology and one on marine biological aspects of the site. It is followed by a visit to the Hazardous display at Earnley Gardens where the adventure is completed.

Stuart Bryan of the Advisory Committee on Historic Shipwrecks and archaeological co-ordinator for the Sub Aqua Association launched the trail with a sip of bubbly, the snip of a ribbon and delectable discourse: 'This new venture of the diver trail is most welcome,' he stated, adding that 'This means of giving public access to our historic wrecks is encouraged by the Advisory Committee on Historic Wreck Sites (ACHWS). It allows divers to see what historic wreck is all about, and removes the elements of secrecy that the 1973 Act seems to generate. The more the diving public is allowed to see robust sites, the more they will appreciate why our heritage is protected from indiscriminate salvage.'

Mr Bryan outlined events that led to the creation of a HMS Hazardous dive trail. 'She was built at Port Louis in 1698 as a French 3rd rate ship-of-the-line with 50 guns. 'Reduced to a perfect wreck and captured by the British in an engagement in 1703, the vessel was then towed into Portsmouth. Rebuilt and fitted out within six months, the armaments were increased to 54 guns and she was commissioned in 1704. In 1706 the ship was travelling up the Channel with HMS Advice (as it turned out, bad advice) when Advice signalled her to make for anchorage at the eastern end of the island, because of the bad weather. The vessel was driven towards the shoals along the Sussex coast where she attempted to anchor. Her main and mizzenmasts were cut, but she still continued to drag towards the shore. Finally the anchor cables were cut, allowing the ship to run to shore without serious loss of life.

The wreck was discovered in 1977 and, shortly afterwards, Sub Aqua Association Club 308 was formed to investigate her. Norman Owen realised the potential of the wreck, and it was decided to investigate her properly. In 1986 she was designated under the Protection of Wrecks Act 1973.'

Stuart continued by putting the project in a national prospective. 'As a diver who has worked on many archaeological projects, a member of the ACHWS, and archaeological co-ordinator for the SAA, I like to think that I am doing good work in looking after our historic wrecks. But my efforts are feeble, compared to the hard work of the 308 club who have been working on the site for many more years than the vessel actually floated. In spite of the tragic loss of key members of the team, they are still keen to record this important wreck that is now disappearing all too rapidly.



The HMS Hazardous launch, August 2001 (Brian Sparks)

More recently, they have formed new alliances in particular with the Hants and Wight Trust for Maritime Archaeology, who, with support from Southampton University, the Mary Rose Trust and from the Nautical Archaeology Society, has provided advice and help in many ways. These volunteers and professionals have shown what working together can do, to pool the diversity of the knowledge and skills, all for the common good.

One of the main problems of the project over the years has been the shortage, or rather absence, of funding. Lack of funding for the underwater heritage over the years, since the Protection of Wrecks Act was enacted in 1973, has been a national disgrace. I wish I could say that the problems at an end, but unfortunately they are not. It will still take a concerted effort by all concerned to make inroads into funding.'

The Hazardous Dive Trail is being run by the Hazardous Project with support from the Hampshire and Wight Trust for Maritime Archaeology. The operation of the Trail is in collaboration with Wittering

Divers, with additional support from West Sussex County Council, South East Wildlife Trusts and the Marine Conservation Society.

The Hamble River Project

Work on the Hamble has been gaining momentum in the last year. Building on the field walking and site survey of 1999/ 2000, the maritime archaeological remains here have come under further scrutiny.

The banks of this once bustling river are littered with the remains of hulks and past maritime industries. Identifying the extent of this resource is an important task which has involved carrying out desk based study, fieldwalking and a boat trip. Many sites have been identified and preliminary records produced for their entry on to our maritime database. Historical maps and charts are yielding large amounts of information on sites and changes in the river, areas identified as having a high potential have then been fieldwalked at low tide to see if sites still remain visible. There are still many miles of river bank yet to be fieldwalked at low tide, this work is set to continue for many seasons.

Following initial identification further visits to sites for more detailed survey have taken place, at Warsash two old crabbing vessels, an oyster bed, and a shipbuilding yard have been the subject of recording work. These sites lie within 100 meters of each other, they have been surveyed into the surrounding foreshore using a total station by John Cross (Coastal Research, University of Southampton). More work over the autumn will complete the detailed drawings. Survey of another hulk on Satchell Marsh has begun with the establishment of a network of datum points for use in future recording.

Work at Bursledon Point on the 18th century shipbuilding yard has continued. At a low spring tide the site was surveyed using a total station (John Cross, Coastal Research) and the resulting contour plan has given a graphic illustration of the slipways. Detailed plans of the timber features are underway with further visits to the site planned for the autumn. Historical research on the shipyard is illuminating its fascinating past, several vessels built here went on to have distinguished naval careers, and the yard owners are not forgotten as they were buried close by in Bursledon church yard.

In addition to the work on the Hamble River Project the Trust has been supporting other maritime archaeological work on the river. On the protected wreck site of the *Grace Dieu*, Dr Mark Jones (Mary Rose Trust) & Paul Simpson have been laying wood and textile samples around the outside of the wreck to monitor the effects of the surrounding environment on the samples. This is part of a programme investigating the in situ preservation of archaeological material which is being funded by English Heritage. The project is being carried out in conjunction with the Isle of Wight Council, Mary Rose Trust, Royal Holloway Institute for Environmental Research and the Centre for Maritime Archaeology (CMA), University of Southampton, and is being supported by the Trust with staff time and boat logistics.



Topographical survey at Bursledon Point revealed the outline of slips in which 18th century warships were built (Julie Satchell)

Adjacent to the *Grace Dieu* may lie the *Holigost*, another of the 15th century ships which were believed to be moored together. Aerial photos show a ship shaped anomaly in the river, and various attempts have been made to auger the site which is up to 4m deep in sediment. Investigations on this site have involved remote sensing by Dr Justin Dix (CMA/ School of Ocean & Earth Science) to try to locate and define the limits of the site; again the Trust has provided staff time and boat cover. This busy season on the Hamble has proved very productive, we continue to identify more sites, many of which have a high potential for preservation and are of significant archaeological importance. We look forward to future work on the river.

Itchen River Project

The work on the Itchen River has been a collaborative venture, working with the Southampton City Archaeology Unit to identify, record and interpret the often-overlooked archaeological resource. Over the last four years the Trust has identified many hulks, riverside features and submerged landscapes. The results of the work are now being synthesised in a report highlighting the issues with the aid of case studies.

A major component of the work on the Itchen has been to encourage the role of students and volunteers. The hulks on the Itchen offer an ideal training ground for students to gain practical survey experience while gathering data for the project. Volunteers from the local community have been encouraged to participate wherever possible. During their involvement they learn about the maritime history of the city as well as mastering basic survey skills. This heightens their awareness of the past and enables them to act effectively upon discovery of something themselves. The results of the work have been disseminated on a dedicated Web Site, published in the public realm, the subject of lectures and it is envisaged that display boards will be erected at choice locations around the river.

Three of the hulks surveyed have been adopted by the Trust as part of the 'Adopt a Wreck' initiative by the Nautical Archaeology Society and the Receiver of Wreck. Plans are afoot to revisit these wrecks and conduct further monitoring surveys.

The project has also been included in the European LIFE study on 'Coastal change, climate and instability', where it was used as an example of a river bordered by urban development. As it has been a centre of activity for a long period it holds a wealth of archaeological evidence dating back to the Stone Age. Investigations as part of the project have demonstrated that incursions into the river banks by hard engineering and into the riverbed by dredging have been detrimental to the archaeological and palaeo-environmental resource. Fortunately, the attention being drawn to these features through this work should help mitigate against future losses.

Brook Bay Wrecks

Responding to reports from the Isle of Wight Archaeological Unit of pieces of shipwreck being washed ashore in Brook Bay, the Trust has begun investigating the bay and its environs. This is being approached from land and sea through beach walking and metal detecting and with planned diving on the ledges which run submerged across the mouth of the bay in future years.

Not to be outdone by the 'Dinosaur Island' teams, we launched into some metal detecting on the beach (permission for this was kindly granted by the National Trust). We were joined by Friends of the Trust who helped us have a closer look at the southern end of the beach, from where most of the timbers were being reported found. Using tapes as a guide a 60 metre long stretch of beach was detected down to the water line. Numerous contacts

were made, several of them being pieces of an old metal fence which had fallen from the cliff above. However, some interesting items were discovered, they included a metal bracket and iron bolt which could have originated from a shipwreck. These were recorded on a proforma sheet and a photographic record was taken.

Further investigations were carried out by Gavin Stone while he was on a work placement with the Trust during July. He undertook a fieldwalking exercise along Brook beach and parts of the neighbouring beach. A number of finds were discovered around the beach and particularly lodged in rock formations. This geology stretches out to sea a considerable distance and these rocks are also likely to hold further interesting evidence. Gavin also visited the local church where there are many memorials to shipwrecks in the bay, he then compiled a list of all the recorded vessels lost in the locality using a variety of historical sources. A number of local inhabitants have been contacted to see if they have any further information on wreck material from the beach. It appears that the beach is a rich area for finds; a number have been reported and some have been lent to the Trust to be drawn and added to the archaeological record.

We look forward to continuing investigations in and around Brook. It is an area very rich in shipwreck material, this further highlights the treacherous nature of the area to shipping past and present, and the extent of the resource which we are working to record and protect.

In and around Langstone Harbour

Early this year 'Our Changing Coast: the Langstone Harbour Project' was published by the Council for British Archaeology, this is the culmination of years of work carried out by Hampshire County Council, Wessex Archaeology and the HWTMA.

However, the Trust's involvement with Langstone Harbour has not stopped! Several sites within, and just outside the harbour, have been dived this year.

Church Rocks: this site was dived by Alexander Mckee, one of the pioneers of maritime archaeology in the Solent region. He managed to find worked stone blocks on the seabed, it is believed that the site of a Frisian monestary lies submerged here (hence the name). However, the area of 'Church Rocks' is large and will take many more dives or high definition remote sensing to relocate such stones. Our diving this year gave us an idea of the seabed and geology, it would seem that the illusive stones are somewhere within a gullied stone seabed, making the task of finding them even more tricky! Submerged peat beds and forest: a dive was made to the east of the Harbour entrance to try to locate traces of peat and trees that have been spotted in the area at very low tides over the past decades. As the sands of the harbour entrance are often shifting, it would seem they are currently covering these deposits. Using a auger core to try to gauge how far down the peat lies proved inconclusive. We will return to the site next year to see if winter sediment movements have uncovered the peats.

Sinah Circle: an inspection dive was carried out on the circle to compare with the previous season. Bad visibility hampered attempts to find the upright posts, a circular search helped find 9 stakes, one of which had been snapped off. The site is much reduced from when it was originally surveyed, and one of the buoys marking the site is still missing, it appears that the site may have been disturbed when the buoy was removed.

Chichester Harbour Project

Preliminary reconnaissance in this joint Chichester Harbour Conservancy, West Sussex County Council, University of Portsmouth, HWTMA project has been carried out but planned field walking and work in the intertidal zone in the spring of 2001 was affected by the Foot and Mouth Disease crisis and the subsequent constraints on access. Work has now been rescheduled for later this autumn. A side scan sonar survey was carried out in March 2001 by the High Resolution Seismology Group, School of Earth and Ocean Sciences, University of Southampton, led by Dr Justin Dix and in conjunction with the HWTMA. The survey covered all the main navigable channels. The results will be analysed later in 2001.

Portsmouth Harbour Project

Photographs and details of most of the historic buildings located within Portsmouth Naval Base have been inserted into an expanded Portsmouth Harbour website. These include the Block Mills, the Old Naval Academy, Admiralty House, the Parade and Short Row, all of which are situated in areas of the Naval Base which are rarely open to the public. We are most grateful to Dominic Fontana, Geography Department, University of Portsmouth for carrying out this important addition to the website: www.envf.port.ac.uk/geog/research/ portsmouth

Such information complements that amassed by Trust member, Ted Sutton, on hulks and other features on the Gosport side and helps to build up our overall archive of Portsmouth Harbour.

Ted Sutton's work in Portsmouth Harbour

Trust member Mr Ted Sutton has been interested in the Portsmouth Harbour area for some years. He has spent many hours compiling a record of the hulks and interesting features found along the western edge of the harbour and particularly in the tributary Forton Lake.

Ted was kind enough to lend the Trust his folder of data, this included hulk record sheets, photos and slides. Surviving vessel remains were detailed, some of these have been identified, others are still anonymous hulks which lie rotting on the foreshore. One example is an unimposing wooden vessel lying between Forton Lake and Fraten Lake on the western side of the harbour. This is the Whip, a large wooden motor barge which was built in Newport in 1923 and plied the waters of the Solent transporting sand and gravel between the Island and the mainland. During the war the Whip was requisitioned by the Admiralty and was utilised in the Dockyard carrying batteries to demagnetise warships to defend them against magnetic mines. Post war saw the Whip employed by British Road Services carrying flour, but in the 1960s a major change in use occurred when the vessel became a floating nightclub off the Island, with a piano in the hold. Various stints as a houseboat

followed and eventually the vessel was cut in half and ended up in its present position. With further research we may be able to identify some of the other vessels.

Forton Lake on the western side of the harbour is practically cut off from boat traffic by a swing bridge across its mouth. It is an area that can certainly be called a ships' graveyard. The skeletons of many wooden, and some iron, ships in various states of repair line the banks, these are a testament to the intensity of maritime traffic in the past, and also to the declining use of Forton Lake which has been relegated to a dumping ground for unwanted vessels. As often happens, the rubbish of the past leaves a rich resource for archaeologists, and here in particular for the study of local vernacular craft of the past two centuries and perhaps more.

The data on these sites has been copied by the Trust and added to our maritime database. A copy of the information has also been sent to the Hampshire SMR and the National maritime database. We would like to say a big Thank You to Ted Sutton, without whose work the maritime record for this area would be much more sparse.

Poole Harbour Project

Useful links are maintained with colleagues in Dorset through the medium of the Poole Harbour Project Steering Committee. A company, Poole Harbour Heritage Project Limited, sponsored by the Poole Maritime Trust, was set up last year as a vehicle for channelling financial and other support into the project. Good progress has been made underwater in the associated NAS project 'Wreckmap Dorset', Trust Archaeological Assistant, Julie Satchell was able to dive with the team, taking part in the ground truthing of potential sites in Studland Bay.

Work on the HWTMA maritime database

Keeping track of the fieldwork results gained from the last 10 years of Trust activities is a substantial task. Over the last four years this has been achieved by in-putting data into a specially designed access database. However, this format of data entry was very wreck orientated. As the Trusts work on the wider submerged landscape resource of the Solent has gained momentum it has been necessary to redesign the database.

One of the key factors is to be able to display the information gathered in a more graphic format to produce images for publication and display. This is being achieved through the use of Geographic Information System software which makes it possible to plot data spatially rather than just as a text reliant database. The work to redesign the database for the 21st century is currently being carried out. Time and effort is being put into getting the new database 'right' in terms of displaying the whole range of information the Trust collates and making the format compatible with those used by other Sites and Monuments Records and the National Maritime Database.

Ultimately our archaeological work is being carried out to enhance the record of maritime sites on a local basis, this in turn works towards building a more comprehensive regional and national picture of our maritime heritage. Electronic means of storing and interrogating this information is essential in our technologically expanding world. Our improved database will help us maintain records in a widely accepted format, and will take on the challenge of finding innovative ways to display data from the submerged archaeological resource.

2000 Annual Lecture

The Trust's 2000 annual public lecture was held on the 23 November in the Medina Theatre on the Isle of Wight, in the presence of the Lord Lieutenant of the County of the Isle of Wight and attracting an audience of over 250 people. Mr David Motkin had kindly agreed to talk on the subject 'A birds eye view of our coastal heritage: aerial archaeology of the Isle of Wight'. His fascinating collection of slides had been accrued over many years with the Island County archaeological service.

Mr Motkin began by defining aerial archaeology (its not the archaeology of aeroplanes!). The practice of interpreting the images is not as straightforward as it may seem. Marks visible on the ground are caused by a number of different elements within the soil. For instance a buried wall would cause a crop to grow poorly, whereas over an old ditch a crop would be more abundant. It is not only buried features which are investigated through aerial photography, structures which are still standing can be given a completely different dimension when viewed from the air.

As the Island erodes more archaeology is becoming visible around the coasts. Aerial photos are a good way of assessing how far and quickly the erosion is taking place. Remnants of structures from the World Wars, once well inland, are now seen hanging precariously close to the edge of cliffs. Changes in sea level are also important to the Island now and in the past. Through another type of aerial survey - Lidar, a type of high definition radar - it is possible to identify areas which were once intertidal or marsh land. This is particularly evident at Brading which evolved as a sea port but is now inland.

Neolithic mortuary enclosures are visible as earthworks as are whole Bronze Age barrow cemeteries, these tend to be found on hill tops but would once have been in the valleys which have since been ploughed out. The Romans settled on the Island exploiting its position and resources; these remains are also well represented in the aerial photograph collection. The stretch of the Solent between the Needles and Hurst is particularly fascinating to see from the air, the 18th century forts and batteries line its edges. The presentation contained many more exciting images of site types and finds, all periods of prehistory being represented right up to the more recent remains from the wars.

Finally, we were reminded of the continuing loss of sites of archaeological and historical importance through the ongoing problem of coastal erosion, the heritage is at risk of being lost without adequate recording.

'Wessex and Water' the CBA Wessex Region Annual Conference

On November 4 2000, the CBA Wessex Annual conference took place, in collaboration with the Trust, at Abbey Hall, Netley. This waterside venue was an apt location for the subject of the conference. After some of the worst flooding in recent years, CBA Wessex members, students and interested members of the public turned out to hear more on a watery theme.

Our Chairperson for the day was Valerie Fenwick. As editor of the International Journal for Nautical Archaeology and CBA national representative for maritime archaeology, she was well placed to preside over the day's lectures. The subjects covered were varied, beginning with Jon Adams and his recent work in Guernsey Harbour on the Medieval wrecks which are increasingly at threat from the wash of ferries. Following this lan Wykes gave a fascinating presentation on water meadows in the region, demonstrating their form, function and variety. After a break for coffee John Silman took us through examples of water mills in Wessex, and the work the Hampshire Mills group had been carrying out restoring mills.

After lunch Jill York talked on the deposition of Bronze Age metal work in rivers, this was illustrated with some impressive slides. Then it was the turn of the Trust's own Archaeological Officer, Garry Momber, who presented the ongoing work on the submerged landscapes in the Solent. This theme was continued by the final speaker, David Tomalin, who talked on the conservation and management of the submerged resource.

An Inner Space Odyssey

Between 29th March and 1st April 2001 the 5th Underwater Science Symposium was held at the Southampton Oceanography Centre. Titled, Visualizing the Underwater Environment 2001 an Inner Space Odyssey, it attracted over 100 delegates from across the UK and overseas.

The Trust helped with the organisation of the symposium, put on an archaeological display and presented a paper. The talk given by the Archaeological Officer was titled 'Looking Underwater to Visualise the Past'. The new finds from the submerged landscapes of the Western Solent were described, their discovery being a product of highly technical geophysical survey and direct visual searching by archaeological divers. The forum was used to stress the social, cultural and scientific value of archaeological investigation into landscapes that have become inundated since the last Ice Age. It was demonstrated that despite advances in modern technology, the need for 'real' divers was still apparent. Mr Momber concluded by stating that 'Investigation of submerged archaeology in the Solent is an example where the eyes of the diver are indispensable and technologically unsurpassed'.



Society of Friends

The number of Friends of the Trust continues to grow and we are most grateful for all their support, particularly their involvement in fieldwork, the annual refurbishment of the Fort Victoria Maritime Heritage Exhibition and assistance with manning of displays.

Anyone wishing to be become a Friend of the Trust should contact our office, details of which may be found on the back cover of this report.

Volunteers are never too young to help and learn about archaeology underwater (Brian Sparks)

Fort Victoria Maritime Heritage Exhibition

Recent major changes to this permanent exhibition have continued to bear fruit and, despite some knock effects of the foot and mouth crisis, good attendance figures have been achieved this year. That said, ideas for further changes to bring the exhibition even more into line with 'the story beneath the Solent', are being examined.

We are grateful to Nick and Paul Blake for their day to day management of the exhibition and to Martime Woodward for the loan of artefacts from the Bembridge Maritime Museum.

The exhibition, located in the Fort Victoria Palmerston fort, approximately one mile west of Yarmouth, is open from Easter to the end of October; opening hours are 10 am to 5pm.

International Festival of the Sea 2001

In conjunction with the Nautical Archaeology Society, the Trust took part in the International Festival of the Sea, held in Portsmouth Naval Base in August. As with the previous Portsmouth based IFOS (1998), this prestigious and enjoyable event attracted over 200,000 visitors. The NAS/ Trust diving demonstrations in Number 4 Dock, combined with panel displays and publications close by, attracted considerable interest throughout the four days of the festival. We are particularly grateful to Sean Cahill and Glen Skelton of Sea Tech Commercial Diving Limited for providing diving equipment and for supervising the diving demonstrations.

IFOS will return to Portsmouth in 2005 for the bicentennial celebrations of the Battle of Trafalgar when we look forward to showing the HWTMA flag again.

Standing Conference on Problems Associated with the Coastline

Close links are maintained with SCOPAC who are being provided with copies of all HWTMA publications and reports. Geophysical surveys and subsequent 'ground truthing' of specific areas of the seabed are particularly relevant to SCOPAC whose continued support is much appreciated.

Solent Forum

Brian Sparks and Garry Momber gave a presentation on the work of the Trust to the Solent Forum in September 2000, during which the importance of maritime archaeology to coastal zone and shoreline management was emphasised and how maritime archaeology can play a key role in

predications of future sea level and other environmental changes. Opportunity was also taken to emphasise that the historic environment was as equally important as the natural environment and their intrinsic, overlapping relationship.

Further 'Spreading of the Word'

The importance of disseminating the results of our research and making people more aware in general of maritime archaeology cannot be over emphasised. During the past twelve months, in addition to the annual public lecture, the CBA Wessex Conference and the presentation to the Solent Forum, talks and presentations have been given to the, the Mayflower Club, the Nautical Archaeology Society, archaeology students of University College, London, Calshot Activities Centre staff, Friends of St Barbe Museum, Lymington Rotary, Solent Association of Women Graduates, Friends of the HWTMA, Keyhaven Yacht Club, Dolphins Cruising Club, Christchurch Local History Society and the Society for Underwater Technology. Garry Momber continues to represent the Trust at meetings of the Joint Nautical Archaeology Policy Committee, the Executive Committee of the Nautical Archaeology Society and the Underwater Science Group of the Society for Underwater Technology. Julie Satchell has represented the Trust at meetings of the Hamble Estuary Management Group Plan Stakeholder Group & the Solent European Marine Sites Strategic Advisory Group.

The Trust's website (www.soc.soton.ac.uk/HWTMA) is regularly updated with information on fieldwork, projects, events and other Trust activities.

Publications

Annual Report 2001 Newsletter 'The Story beneath the Solent', A Gale, 2nd edition 2000 Focus Magazine Nautical Archaeology Society Newsletter CBA Wessex Newsletter Solent News Young Archaeologist Newsletter Contributions to :

'Our Changing Coast: a survey of the intertidal archaeology of Langstone Harbour, Hampshire' CBA Research Report 124, Council for British Archaeology 2000

'Coastal Change, Climate and Instability' European LIFE Project LIFE - 97 ENV/UK/000510 (1997-2000), Isle of Wight Council

For Your Diary

2001 Annual Public Lecture

The Trust's tenth annual public lecture will be given by Commander John Bingeman. Entitled '*Historic Shipwrecks of the Solent*', the lecture will be given on Thursday 15 November at 7 pm, Lecture Theatre A, Avenue Campus, Highfield, Southampton. Admission free. All Welcome

Nautical Archaeology Society Annual Conference

Saturday 24 November 2001, Posthouse Hotel, Portsmouth. The NAS conference is open to all and will offer a day of presentations with a varied and international flavour including Irish vernacular craft, 20 years of research on the Earl of Abergavenny wreck site (1805) and work on the wreck of the Dimitris (1918-1953). For further information please contact the NAS at Fort Comberland, Fort Cumberland Road, Eastney, Portsmouth, PO4 9LD, Tel/ fax: 023 9281 8419. www.nasportsmouth.org.uk e-mail: nas@nasportsmouth.org.uk

Hampshire Field Club & Archaeology Society Annual Conference & AGM

Saturday 17 November, 'Seacoasts an Seafarers' 10am-5pm, Boldrewood Conference Centre, University of Southampton. For more details phone Robin Iles on 01962 848269

6th International Conference of Waterfront Archaeology

20-22 September 2002

'Working on the Waterfront: shipbuilding, fish processing and related maritime industries'. Will be held at the Avenue Campus, University of Southampton, to be co-hosted by the CMA University of Southampton, UCL and the Trust.

The Trust gratefully acknowledges the generous support of the following: September 2000 - September 2001

Grants and Donations

Department for Culture, Media and Sport • English Heritage
National Monuments Record • The Crown Estate
Hampshire County Council • Isle of Wight Council
West Sussex County Council • Southampton City Council
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Solent Protection Society • Society for Nautical Research
British Marine Aggregates Producers Association • Wightlink Limited
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Wight Trust for MARITIME Archaeology

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