

THE STORY BENEATH

# the Solent



DISCOVERING UNDERWATER ARCHAEOLOGY

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The Hampshire and Wight Trust for Maritime Archaeology gratefully acknowledges the generous sponsorship provided by the Crown Estate for this publication.

*Published by the*

**Hampshire & Wight Trust for Maritime Archaeology**

Southampton Oceanography Centre  
Southampton SO14 3ZH

© Second Edition December 2000

ISBN 0-9538814-0-7

*Designed and Printed by*

**Studio 6**, Wickham, Hants. • Tel: 01329 832933 • [www.studio-6.co.uk](http://www.studio-6.co.uk)

## FOREWORD

The heritage concealed within our seabed is far greater than previously supposed. The discoveries of fishermen and divers show the richness of maritime archaeology in the Solent, its harbours and adjacent waters. Their reports tell us of the bones of a buried mammoth here, the flint tools of a prehistoric hunter there. Elsewhere they find wine jars from a lost Roman cargo and nearby the timbers from an ancient wreck. Our creek and estuary shores provide the location for the remains of prehistoric settlements, along with those of ships, boats and other craft from many periods in our maritime history.

The Hampshire & Wight Trust for Maritime Archaeology, launched in 1991 with the backing of Hampshire County Council and the then Isle of Wight County Council, seeks to identify, preserve and make people aware of this fragile and mostly unseen heritage.

The first edition of *Story Beneath the Solent* was published by our predecessor trust, the Isle of Wight Trust for Maritime Archaeology, in 1991 and has proved extremely popular. It is timely that the second edition is published in this Millennium Year.

Mary Fagan.

**Mrs Mary Fagan JP**

*Lord Lieutenant of Hampshire*

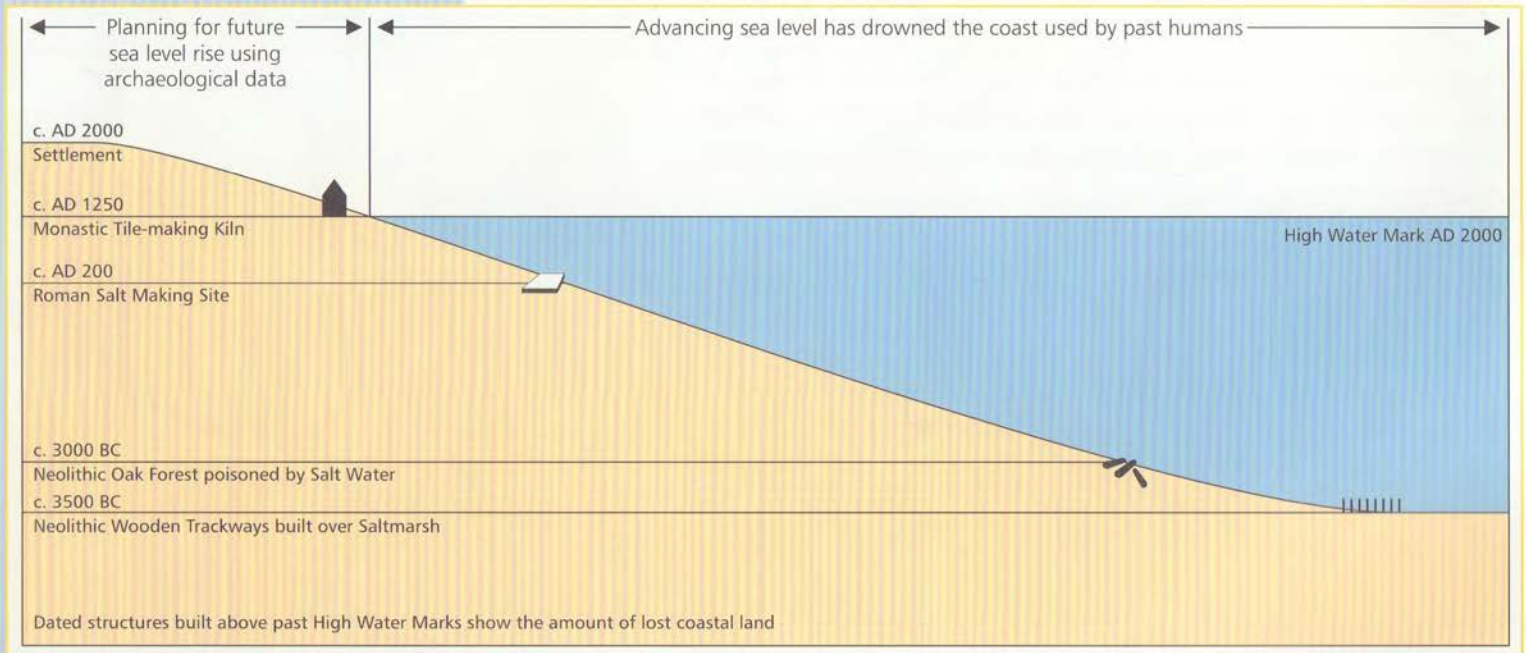
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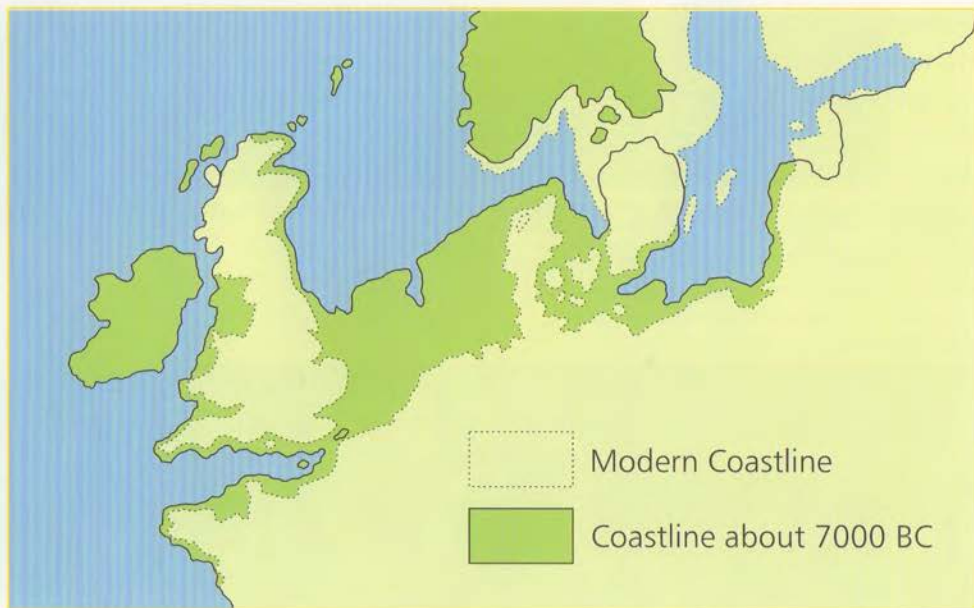


# BENEATH THE SEABED: OUR BURIED PAST

Newspapers and television have made everyone aware of global warming and the possible threat of sea level rise. Residents and visitors to the Hampshire and Wight coasts are familiar with the power of the sea which washes away beaches, spits and cliffs. This erosion has uncovered objects, such as Roman coins and pottery, which have then been found by beach walkers and bait diggers.

Archaeologists have gone on to the beaches to explain these discoveries. Their surveys have extended to the seabed and revealed that generations since prehistory have lost land and property to sea level rise. Now by studying the man-made structures in these drowned landscapes archaeologists around the Solent are contributing new information to help predict future sea level rise.





The first human groups reached the area of Britain around 450,000 years BC. They came on foot, for sea level was lower and the English Channel and North Sea had not formed; Britain was on the north-west fringe of a large European land mass. The sea has since covered extensive plains which were roamed by hunting groups. The remains of these landscapes, living places and the tools used by those people can be found preserved in the seabed.

The Solent coast is a special area for exploring the human past. As late as 8,000 years ago the Isle of Wight was still part of the mainland. The relatively shallow waters of the Solent hide the secrets of changing climates and rising sea level which eventually flooded the intervening river valley. The seabed can also tell how people adapted to the changing environment, learning to use rivers, estuaries and the sea. It is the story of local maritime communities and of Britain as a maritime country.



### Deep & Shallow Prehistory

*The North Sea has been frequently surveyed during oil prospecting. Far offshore a core sample from the seabed in 143m of water contained a flint apparently shaped into a tool 9,000 years ago, when the seabed was still land. Off Bouldner, Isle of Wight, similarly worked flints have been excavated from prehistoric land surfaces in much more shallow water.*

# THE ICE AGES: BRITAIN IN EUROPE

Ancestors of modern humans have lived in Europe for about a million years but occupation of Britain was limited by the extreme cold of intervening ice ages called glacials. Only in warmer periods, called inter-glacials, could grass and woodland flourish in the area of modern Britain. During these times grazing animals moved northward followed by people. Flint tools and the bones of butchered animals are the only evidence of their nomadic life. Such finds show that hunting groups visited the Solent area during the Palaeolithic [*the time of the earliest stone tools: palaeo = ancient, lithic = stone*].

## Hidden Valleys

Palaeolithic tools have been found in gravels around the Solent. These gravels were once river terraces along the Solent and its tributaries, such as the Western Yar which flowed north-east in the area of Compton Bay to cut the chalk ridge at Freshwater and join the main river.

While today's cliff gravels are the remains of valleys eroded by the sea, similar features survive on the seabed. Seismic surveys have located such a palaeovalley in deep water south of the Isle of Wight. Studies of smaller and more accessible examples in the modern Solent have begun to reveal the landscape and climate known to the earliest hunters.



### ANGLIAN GLACIAL (475,000 - 400,000 BC)

Early humans first visited Britain around 450,000 BC. They may have been groups of Homo Erectus roaming northward from mainland Europe. However their campsites and landscape have been wiped out by the ice-sheets of later glacials.

### HOXNIAN INTER-GLACIAL (400,000 - 350,000 BC)

People: Flint tools made at riverside and cave living sites.  
Animals: deer, bison, horse, elephant, rhinoceros.  
Plants: woodland of hazel, yew, alder, oak, elm.  
Land mass: Britain connected to Europe.

### WOLSTONIAN GLACIAL (350,000 - 125,000 BC)

People: improved flint tools made and used on open land, as ice blocks many caves which once offered shelter.  
Animals: mammoth, woolly rhinoceros, reindeer. Plants: grasses, herbs.  
Land mass: Britain connected to Europe.

### IPSWICHIAN INTER-GLACIAL (125,000 - 70,000)

People: little evidence of hunting groups reaching Britain.  
Land mass: Britain cut off from Europe by higher sea level.

### DEVENSIAN GLACIAL (70,000 - 10,000 BC)

Modern People: 40,000 BC Homo Sapiens using open campsites in Britain. Around 26,000 BC glacial conditions worsen, ice-sheets reach south to the Thames and humans seem to abandon Britain.  
Plants and animals: the climate is too severe for plants and animals until about 12,000 BC when species such as elk, horse and reindeer return.

### FLANDRIAN INTER-GLACIAL (10,000 BC - Present)

People: large plains are occupied as the climate warms.  
Plants and animals: warming climate allows pine and birch then mixed oak woodland, followed by more woodland.  
Land mass: Initially Britain is part of Europe. Then, about 9000 BC, the melting ice-caps raise sea level and flooding begins. By 6000 BC Britain is an island.



*A tool made by the first hunters to roam the Solent area. This Palaeolithic point, chipped from a flint, was found in old river gravels at Grange Chine, Isle of Wight.*

Ice Ages (colder)

Interglacial (warmer)

## Peat and Prehistory

*Peat forms on waterlogged land. Dead plants lie under water where lack of oxygen, bacteria and fungi prevents their complete decay. Leaves and twigs survive and show which plants grew there. Pollen, carried by the wind, tells of plants from further afield. Radiocarbon dating can give an accurate date for the peat while identification of the herbs, grasses and trees reveals the climate which existed when it was formed.*

*Opportunities to discover prehistoric environments on land have been lost as agriculture, drainage and peat digging have destroyed most wetlands. In lowland Britain an estimated 96% of raised peat bogs have been destroyed since 1850.*

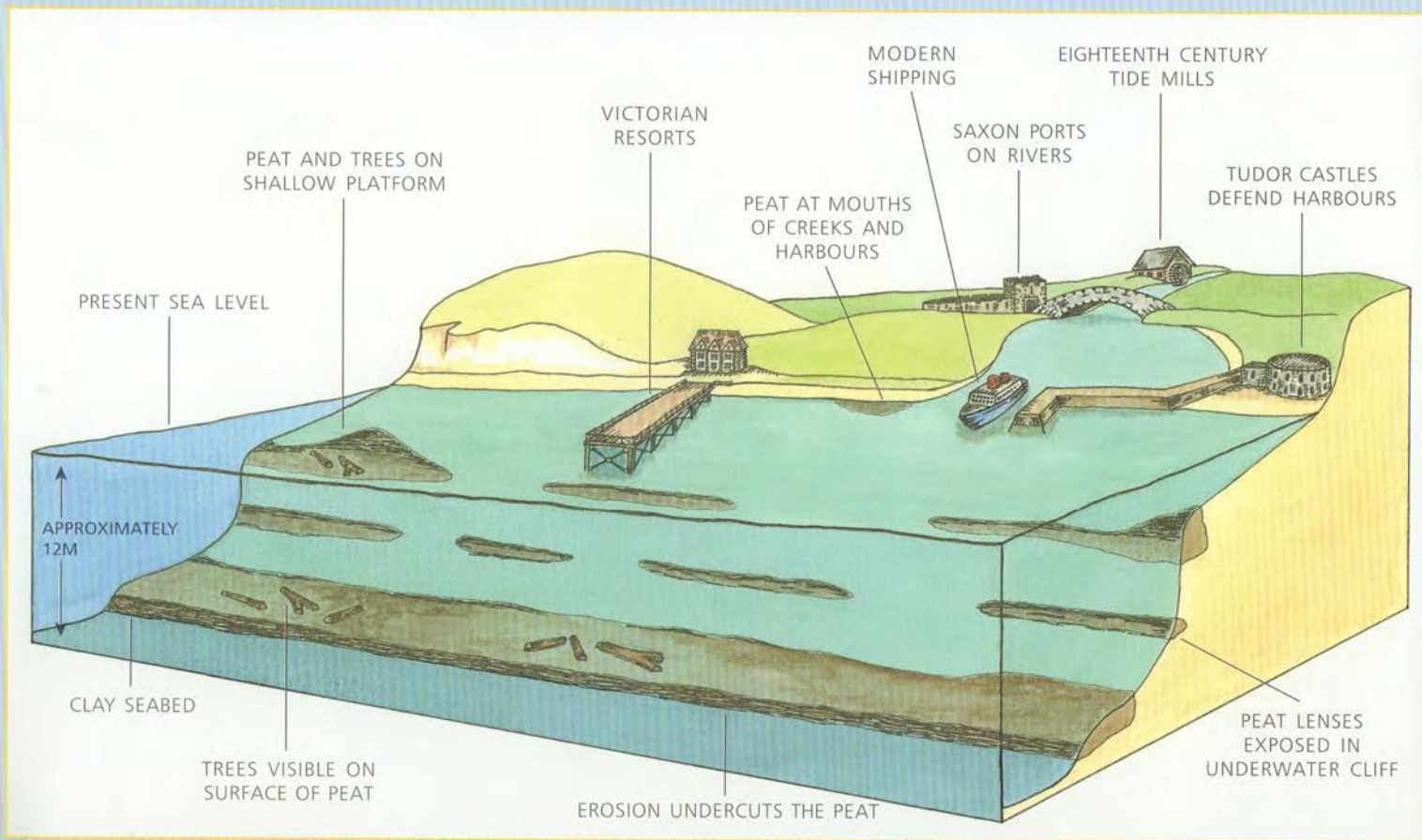
In 1324 large areas of Hayling Island, including the church of St Peter and St Swithun, were flooded by the sea. The waters never withdrew. Similar catastrophes will have overtaken settlements around the Solent for more than 10,000 years. Such rapid destruction often leaves a snapshot of the past as when the eruption of Vesuvius engulfed Pompeii.

Low sea level during the Devensian Glacial left Britain joined with Europe. Yet for much of the time the area was uninhabitable for humans because the extreme cold limited the numbers of animals and plants. About 12,000 BC the climate in the Solent region warmed and the hunters returned to a changing landscape. The thick ice-sheets were melting. Relieved from the great weight of ice, land in northern Britain actually began rising. This had the affect of bending the earth's surface and forcing downwards the lowlands between the south coast and the Netherlands. At the same time, the melting ice was raising sea level, which had flooded vast lowland areas by about 9,000 BC.

During this period the Solent was a river with many tributaries where groups of people hunted in the grassland and marsh. The Solent seabed has begun to reveal the story of these people by showing how their landscape changed as sea level rose eventually to sever Britain from Europe and, by about 6,000 BC, leave Wight an island.

For years flint tools and animal bones have been trawled up by Solent fishermen. Recently divers have explored peat exposed on the seabed. The peat, some of which is in distinct layers, is the remains of ancient land surfaces and it holds the secrets of the environment experienced by people in prehistory. Divers have already found flint tools in the peat. With luck they may also find organic remains, such as the wooden tools and structures, lacking on dry land sites.





### The Unseen Past

*Around the Solent historic buildings are visible reminders of centuries of coastal history. Beneath the Solent, layers of peat can tell of the millennia during which the Solent formed. The peat grew at times of lower sea level and the sediment above it was deposited as the sea rose and flooded the land. The successive levels of peat give divers a unique opportunity to study the whole timescale of the Solent's development. However, any fragile remains are vulnerable to further erosion, chemical changes in the water, and destruction by trawls or anchors dragged across the seabed.*

# THE FIRST SOLENT SEAMEN

## The Dover Boat

*Found deep below street level beside an old river bed this well preserved boat comprised four immense carved oak planks, with the remains of further side planks. All were stitched together with yew withies, held firm with wedges and made watertight with moss.*

*Reconstruction suggests a boat 11m long and 2.4m wide with a flat stern. A crew of 20 paddlers could carry 3 tonnes of cargo through calm waters in light wind conditions.*



*Reconstruction of one of the Humber boats.*

In the 18th century Britain developed as an industrial country with colonies around the world. Prosperity depended on merchant ships exporting manufactures and naval vessels defending their interests. The sole industries of many coastal towns were shipbuilding, trading and fishing. For centuries governments had fostered the important skills of these communities. Elizabeth I ordered fish to be eaten on Wednesday so as to encourage the fishing industry which provided seamen for her navy. These maritime skills had begun at least 3,000 years earlier in prehistoric coastal communities.

The earliest European plank boats (as early as 1,550 BC) have been discovered on the Humber, Severn and in Dover. They show that Bronze Age boatbuilding skills were advanced and that transport by water was well understood. The nomadic lifestyle had slowly given way to more settled farming communities, and boats developed to meet the needs of individuals and groups. Boats enabled individuals to explore, families to reach fresh land and groups to exchange gifts or goods with their neighbours.

Bronze Age seamen were navigating around the Solent region. Land sites show that goods were not only carried along the coast but across open sea from mainland Europe. Were these voyagers a handful of adventurers who visited distant places and returned with souvenirs? Or were coastal communities profiting from boats and trade? A wreck site near Dover certainly suggests that old tools and weapons, made on the Continent, formed a cargo of scrap metal.



### Caergwrle Bowl

Discovered at Caergwrle, North Wales this Bronze Age bowl is made in the form of a boat. The decoration clearly shows paddles and waves beneath the bow. Made of shale from Kimmeridge, Dorset, it may have been transported to Wales in the type of boat which it represents.

### Jadeite Axes - How Long a Journey?

In Britain there is no outcrop of the green mineral jadeite. Neolithic axes found around the Solent area came from Europe, possibly northern Italy. Carrying them to the English Channel required a long journey either around the coast or along the rivers of Europe.



- Jadeite Axes
- Bronze Age Boats/Wreck Sites

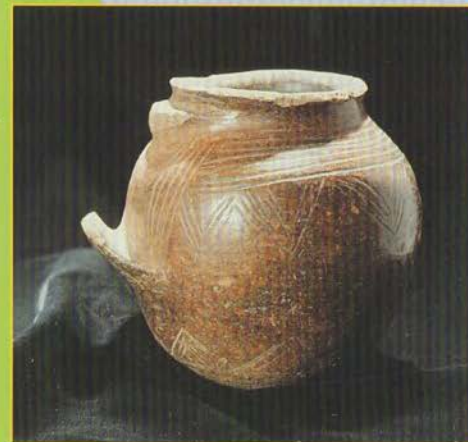


### Ballast or Cargo?

Overlooking Lyme Bay in Dorset is a Bronze Age burial mound. The burial was protected by a cairn made from large slabs of Bembridge limestone. The stone can only have come from an outcrop between Wootton and Ryde on the Isle of Wight. A boat of the Dover type could have transported the stone as cargo or ballast.

### Pots from Brittany

A burial mound dated about 1,900 BC on Gallibury Down, Isle of Wight contained an unusual pot. This had been made on the coast of Finistère, Brittany. Three other examples have been found close to the Solent.



# DEFENCE AND TRADE: SHORELINE SETTLEMENTS

## Iron Age Forts

*The ports of ancient seafarers are difficult to identify but some clues have been left by the coastal communities which they visited. For example, the excavated settlement on Hengistbury Head by Christchurch Harbour had many imported goods. The importance of navigable rivers and safe anchorages is also shown by the hillfort called Buckland Rings near the Lymington River, and also the fortified settlements at Exbury on the Beaulieu River and Tourner Bury near Chichester Harbour.*

## Roman Haven

*The Romans saw the Solent with its many creeks as one centre for trade and defence. In the 3rd century the Roman fleet based in Britain was repelling pirate attacks. A huge fort was constructed at Portchester to guard the natural harbour which we still know as a naval base.*

*A second port was located on the River Itchen, Southampton. Both river banks were occupied and linked by a river crossing from which wooden piles survive dating to the 2nd century AD. A fort, Clausentum, was built close by.*

The forts in Spithead are a reminder of the Victorians' need to defend the Solent. Looking inshore we can see their concern was shared three hundred years earlier by the Tudor monarchs. The 16th-century forts defended every river mouth, sheltered inlet or open beach where an invading force might land. The importance of controlling such landing places can be traced into prehistory through the remains of Roman and Iron Age sites.

The geography which made the Solent so vulnerable to attack also made it ideal for trade by sea. Ships require easily accessible and safe landing places to unload their cargoes. These are plentiful among the rivers and natural harbours of the Solent coast. Rivers such as the Test and Itchen also provided routes to carry goods far inland.





Even major ports offered only mud berths in tidal rivers, where cargoes were unloaded by hand from small ships lying aground. Settlements grew around these landing places but their success was not certain. A silting river, for example, could become impossible to navigate, or merchants in a competing port could offer better trade.

The construction of 19th century docks and quays and modern land reclamation has buried old waterfronts. Yet surveys have successfully located remains of ancient ports surviving in the waterways of the Solent.

### Convoys and Anchorages

*The Isle of Wight shelters several anchorages which have been used for centuries to assemble fleets and convoys.*

### Domesday Communities

*The Saxon church of Freshwater stands alongside the River Yar. The Domesday Book notes this parish as one of three main settlements in the north of the Isle of Wight, all on navigable waterways. Other Domesday settlements are similarly situated where they might prosper by trading or fishing.*

### Prosperity and Decline

*Southampton's Saxon settlement of Hamwic was on the River Itchen but the Normans chose to site their town and port on the Test. By the 15th century Southampton was prospering in a triangular trade with the Mediterranean. Venetian galleys visited the port with luxury goods, left for Antwerp with English wool and returned home laden with Flemish cloth.*

*By the mid-16th century Southampton townsmen were complaining because they could not pay their taxes. The wool exports had declined as the Mediterranean merchants traded elsewhere. Prosperity only returned when new docks attracted steamship companies.*

# WOOTTON HAVEN: THE CHANGING WATERFRONT

## Riverside Communities

*Around 4,000 years ago small creeks flowed across the area of the present beach to a coast which was some 2-4 km to the north. Stakes are left from basket fishtraps which were set in the creeks. There are many discarded crude flint axes, perhaps used in cutting timber. Seaweed attachments transport them along the beach.*

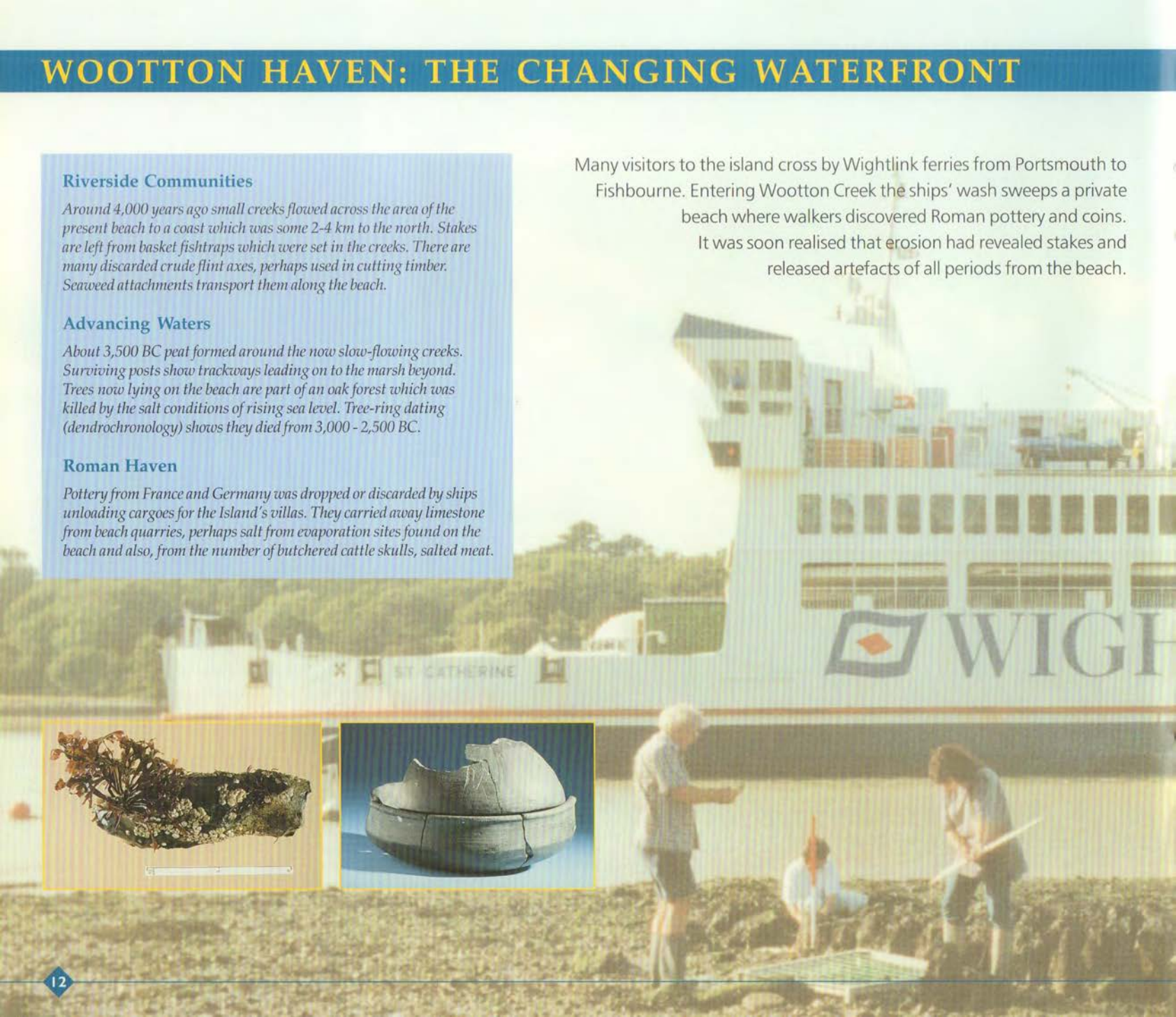
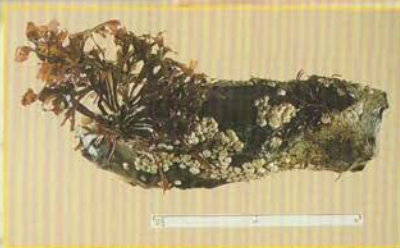
## Advancing Waters

*About 3,500 BC peat formed around the now slow-flowing creeks. Surviving posts show trackways leading on to the marsh beyond. Trees now lying on the beach are part of an oak forest which was killed by the salt conditions of rising sea level. Tree-ring dating (dendrochronology) shows they died from 3,000 - 2,500 BC.*

## Roman Haven

*Pottery from France and Germany was dropped or discarded by ships unloading cargoes for the Island's villas. They carried away limestone from beach quarries, perhaps salt from evaporation sites found on the beach and also, from the number of butchered cattle skulls, salted meat.*

Many visitors to the island cross by Wightlink ferries from Portsmouth to Fishbourne. Entering Wootton Creek the ships' wash sweeps a private beach where walkers discovered Roman pottery and coins. It was soon realised that erosion had revealed stakes and released artefacts of all periods from the beach.



Between 1989 and 1994, survey of 4km of intertidal area identified more than 160 features. Using cores the underlying sediments were mapped, radiocarbon dated and their pollen content analysed. From this information sea-level rise was traced back 6,000 years.

### Saxon Shoreline

*Around AD 800 a 1km long line of stout posts was erected along the shore. Was it a sea defence or defending the coast? Before the Normans arrived a large fishtrap was set up in Binstead Creek.*

### The Merchant Abbot

*Near to Wootton Haven stands the Cistercian abbey of Quarr which was founded in the 12th century. The abbey traded overseas, owning warehouses in Portsmouth and wharves in Great Yarmouth.*

*Limestone was being shipped to the mainland. Fragments of Saintonge pottery found on the beach show that imports came from the abbey's French homeland. One intriguing find is a Viking cloak pin of the 10th/11th century, a type usually found in Ireland or Scotland.*



# THE PAST PROTECTED: HISTORIC WRECKS

## Grace Dieu

*Lost:* 1439  
*Type:* carrack, warship  
*Discovery:* identified 1934  
*Survival:* lower portion of hull  
*Environment:* river mud  
*Built:* 1418, Southampton



## Yarmouth Roads Wreck

*Lost:* 1567 Santa Lucia?  
*Type:* merchant carrack?  
*Discovered:* 1984 during archaeological survey of the seabed  
*Survival:* hull sections buried in individual hollows  
*Environment:* clay, fierce tidal currents  
*Built:* Mediterranean?



## Studland Bay Wreck

*Lost:* early 16th century?  
*Type:* Iberian Merchantman?  
*Discovered:* 1984 by divers freeing caught fishing nets  
*Survival:* two sections of hull; pottery cargo  
*Environment:* sand over clay



## Needles Wreck Site

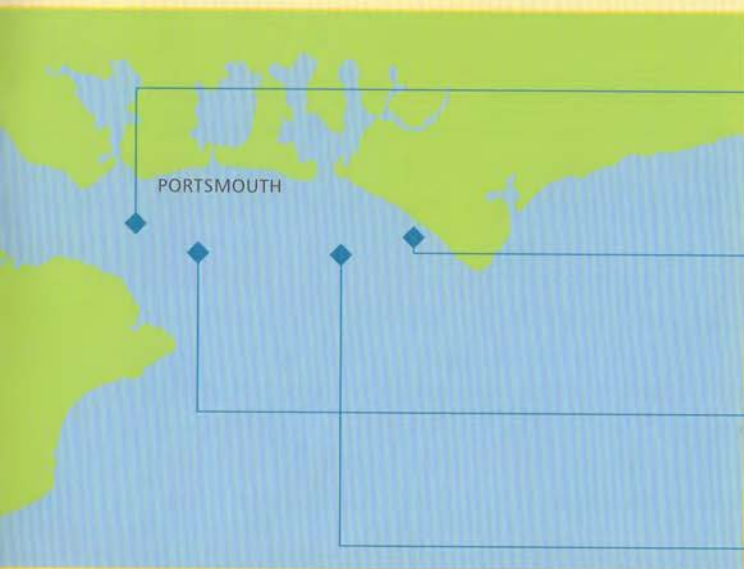
*Lost:* 1811 HMS Pomone  
*Type:* 38 gun frigate  
*Discovered:* 1970 sport divers  
*Survival:* scuttler of objects  
*Environment:* chalk rock, heavy swell  
*Built:* 1805, River Medway  
Also site of HMS Assurance lost 1753  
*Type:* 44 gun, 5th rate  
*Built:* 1747, Bursledon



For any community building a ship was a great endeavour, requiring organisation and skill. Equipping it for a voyage meant gathering everything which the crew and passengers needed to survive for many months. A ship provided contact with other people, a way of exchanging not only goods but ideas. Therefore a wreck is a special type of archaeological site which can reveal a great deal about the everyday life of individuals and the organisation of their society.

No matter how fascinating or valuable the objects, if the components of an historic wreck are brought to the surface in a piecemeal manner the story of the past is lost. In 1973 dismay at such undisciplined salvage resulted in a new law to protect wrecks considered of importance for their historical, archaeological or artistic value.





### ◆ *Mary Rose*

*Lost:* 1545  
*Type:* 4-masted carrack  
*Discovered:* 1971 research and seabed survey  
*Survival:* half hull and extensive contents  
*Environment:* silt  
*Built:* 1509, Portsmouth



### ◆ *HMS Hazardous*

*Lost:* 1706  
*Type:* 54 gun, 4th rate  
*Discovered:* 1977 by sport divers  
*Survival:* bow section and scattered contents  
*Environment:* sand and rock  
*Built:* 1698, France; rebuilt 1704 Portsmouth



### ◆ *HMS Invincible*

*Lost:* 1758  
*Type:* 74 gun, 3rd rate  
*Discovered:* 1979 by divers freeing caught fishing nets  
*Survival:* port side of hull and extensive contents  
*Environment:* sand  
*Built:* 1744, Rochefort, France; captured 1747



### ◆ *A1*

*Lost, salvaged and recommissioned* 1904;  
*moored target* 1911  
*Type:* submarine  
*Survival:* hull  
*Environment:* sand  
*Built:* 1902, Barrow-in-Furness

Any unauthorised interference with a Protected Wreck Site is a criminal offence. Survey and excavation can only be carried out under licence with the guidance of an archaeologist. The wrecks are inspected by the Archaeological Diving Unit which reports to the licensing authority.

In the first 25 years of the Act only 47 wrecks were protected. Set against the many documented ship losses and known wrecks this is a pitifully small number. Wrecks are often found by accident or through the thorough searches made by sport divers. With more people joining archaeological training schemes it is hoped that wrecks will frequently be put forward for protection and responsible investigation.

Eight Protected Wrecks lie in the Solent area. This relatively large number can be attributed to: intense maritime activity in the past; the many activities taking place today, from trawling and sport diving to scientific research; and to increasing local interest in maritime archaeology.

# SHIPWRECK SURVIVAL

## Needles Wreck Site

*A dramatic, contemporary painting records the loss of HMS Pomone. Divers worked in deep gullies, swept by fierce tides and wave surges, to place datum points and record the position of every item from the wreck. Although no hull timbers survive, the spread of artefacts still corresponds with their positions in the ship and her orientation, shown in the painting, as she struck the Needles. The survey has been fine-tuned by a sophisticated seismic survey providing a 3D image of the complex seabed topography.*

- During the long history of the Solent thousands of trading vessels have navigated the waters around the Isle of Wight. Their crews have faced the hazards of rocky shores, shallow sandbanks and fierce tidal currents. Those that have foundered represent every development in boatbuilding and every form of trade.

Discovering our past through a wreck site is like solving a complex three dimensional puzzle in which no element can be overlooked. Learning about the people who built and used the ship depends on reconstructing the vessel as it originally existed, and understanding every object as part of the whole. Painstaking recording must include objects, ship structure, any layers of sediment which have covered and preserved the site and, most importantly, the relationship of each to the other.



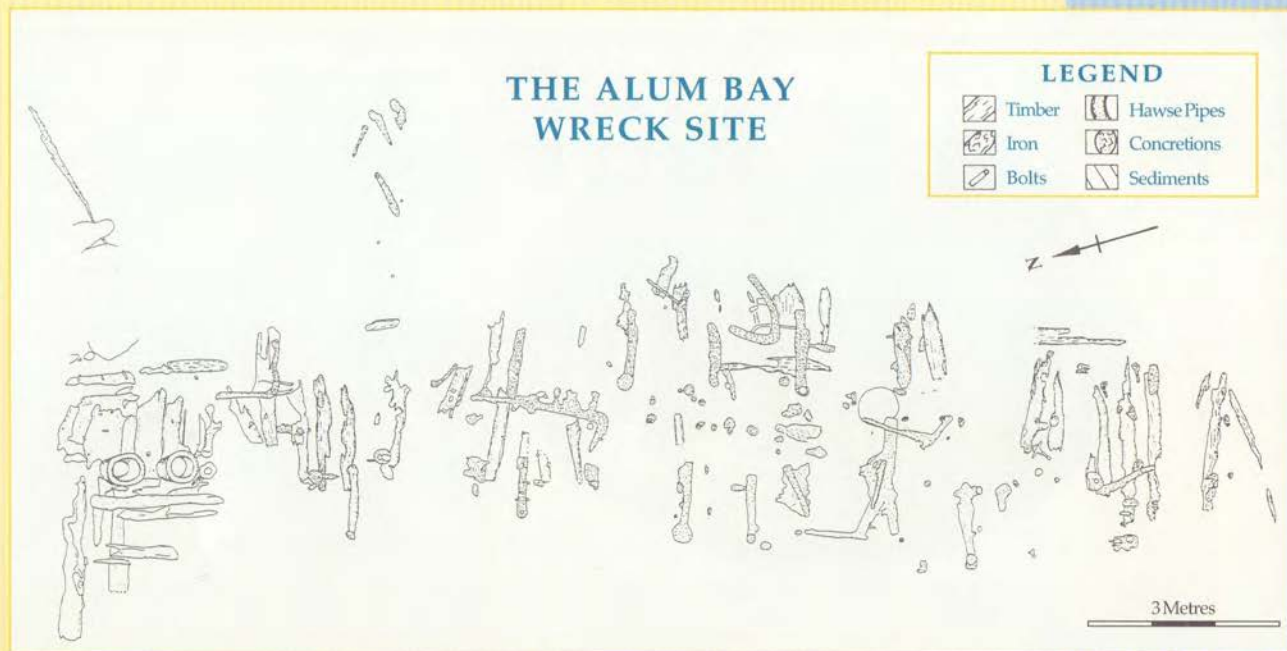
Solent wreck sites have been discovered in many different seabed environments. Hulls could sink into soft sand or mud where their timbers survive for many centuries. On rocks ships broke up, timbers washed away or decayed, to leave large objects like iron cannon and anchors on the bare seabed. Smaller items like navigational instruments and coins might collect in rock gullies.

How much of the ship's equipment, crew's kit and passengers' belongings are found depends, firstly, on the amount recovered by contemporary and later salvors. As early as the 17th century a Dutch salvage diver was employed on Solent wrecks, and 19th-century divers raised guns from the *Mary Rose*. Many objects would simply float away or fall to pieces. Fragile items or organic materials like leather and wool survive if they become buried and sealed within the seabed, an oxygen free environment.



### Alum Bay Wreck

Not far from the Needles Wreck Site, erosion of soft sand uncovered a section of wooden hull. This was a portion of the port side of a vessel, some 20m by 4m, lying with its inboard face uppermost.



A detailed survey and drawing using gridded planning frames enabled details of the planking, ribs, fittings and iron fastenings to be recorded. The ship has yet to be identified.

Janet Witheridge  
Valerie Clayton  
Mark Jarmym

# OUT OF SIGHT, OUT OF MIND: HERITAGE AT RISK

*There are many sea-borne activities which may unknowingly damage archaeological sites:*

- ◆ Development uses gravel dredged from the seabed.
- ◆ Ships use channels cut by dredgers; their wash erodes foreshores.
- ◆ Fishing trawls are dragged across the seabed.
- ◆ Coastal development drains marshes and obliterates foreshores.
- ◆ Chemicals used by factories and farming including those far inland can drain into the sea and disturb the equilibrium.
- ◆ Wreck salvage raises artefacts without accurate recording of the whole shipwreck site.

Most underwater archaeological sites are found by chance. They are discovered by people working or spending leisure time on the sea and beaches.

The chance for archaeological study is all too easily missed. The importance of a discovery may not be realised. Fishermen have simply discarded pottery from their oyster dredges and some divers have salvaged objects with little concern for careful study of the past. The act of discovery may also destroy sites: powerful grab dredgers can break up shipwrecks and natural erosion can reveal but also devastate sites.

Once damaged or destroyed an archaeological site cannot be replaced. The fragile materials within a site survive because they reach a state of balance and stability, or equilibrium, with their environment. Any physical, biological or chemical change will upset the balance and decay will begin.



Destruction of archaeological sites on land often causes public outrage. Planning Authorities, advised by Archaeological Officers, are expected to safeguard our heritage while enabling necessary development for housing and industry. In contrast the use of the sea and seabed is controlled by many different organisations, few of which have responsibility for the heritage. Increasingly, however, archaeological sites are taken into consideration by developers who exploit seabed resources, such as oil, gas, sand and gravel, or carry out coastal work such as constructing sea walls or sewer outfalls.

Local Authorities around the Solent include the coast and seabed in their archaeological databases - Sites and Monuments Records. The Hampshire & Wight Trust for Maritime Archaeology has a Maritime Sites and Monuments Record which can assist with pre-development archaeological assessment, survey and recording.

### Working for Heritage

*Concern for the local environment has led to the creation of organisations which work to safeguard the Solent area. In response to information from the Hampshire & Wight Trust for Maritime Archaeology many have now recognised the need to protect and study the unique archaeological resource of the seabed and beaches.*

- ◆ The Solent Protection Society was formed so the waters and shoreline of the Solent would be preserved for the enjoyment of future generations.
- ◆ Solent Forum facilitates integrated planning and management of the Solent.
- ◆ Standing Conference on Problems Associated with the Coastline promotes research into coastal processes.
- ◆ Standing Conference on Oil and Gas responds to proposals for exploration or production.
- ◆ In 1995 a Code of Practice for Seabed Developers set out the way in which developers and archaeologists could work together.

# ARCHAEOLOGY ALIVE: PROJECTS AROUND THE SOLENT



The Hampshire & Wight Trust for Maritime Archaeology takes part in many projects which are slowly broadening our understanding of the Solent and its communities from prehistory to the present. In some the Trust participates to extend survey underwater, elsewhere it initiates programmes to train students and sport divers, sometimes it supports the research of individuals, or responds to discoveries made by people who live and work in the area.

## *From East to West:*

**Mixon Reef** samples were taken of the underwater rock to test theories that this was a quarry in Roman times.

**Langstone Harbour** has been mapped on a computerised Geographic Information System to show all historically and archaeologically recorded sites. Divers made swim searches and took augur samples to ensure the harbour bed was included. A circle of submerged timbers, perhaps some form of fishtrap or possibly a submerged hut, was surveyed and excavated.

**Portsmouth Harbour** with its many historical features has been similarly recorded using a Geographic Information System.

**Quarr Beach** Neolithic trackways have been traced under water by core sampling the seabed.

**East Solent Seabed** has been surveyed in swaths using seismic survey equipment. Divers have been checking anomalies for their archaeological potential.



**Itchen River** contains remains of many derelict vessels. Some have been recorded and selected vessels have been surveyed along with foreshore timbers dating from the Roman period.

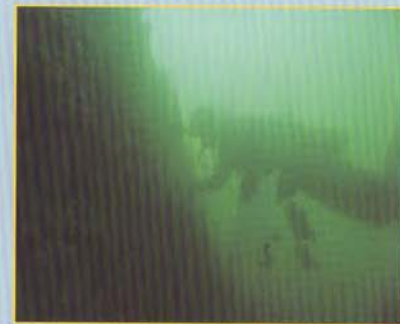
**Bucklers Hard** was an 18th-century shipbuilding settlement. It has been extensively surveyed and the massive wooden slipways revealed by a combination of land and underwater excavation.

**Lymington** marshes suffer erosion which revealed some stout timbers. Careful recording showed these to be an old warping pile used for manoeuvring sailing ships into the river.

**Bouldnor** underwater cliff and peat layers have been recorded and sampled for dating.

**SOLMAP** brought sport divers to record the Alum Bay Wreck, to test the feasibility of a trail for visiting divers on the Needles Wreck Site and to study features around Hurst Spit.

These projects have succeeded through a wide network of organisations including local and harbour authorities, universities, commercial survey companies, national heritage agencies, and special interest groups. The Hampshire & Wight Trust for Maritime Archaeology has drawn sponsorship and grants to support the exploration of the underwater heritage and provide a route for volunteers to work alongside full-time archaeologists.



# YOU AND UNDERWATER ARCHAEOLOGY

## Places to Visit

**Maritime Heritage Exhibition,** Fort Victoria, Yarmouth, Isle of Wight, explores the projects supported by the Hampshire & Wight Trust for Maritime Archaeology.

**Historic Dockyard Portsmouth** includes the Mary Rose ship hall and exhibition and finds from HM Ships Assurance, Pomone and Invincible.

**Chatham Historic Dockyard** displays material from the Invincible.

**Poole Waterfront Museum** has an exhibit on the Studland Bay Wreck Site.

**Southampton Maritime Museum** has some timbers from the Grace Dieu.

**The Hampshire & Wight Trust for Maritime Archaeology** conducts fieldwork and many of its projects rely on volunteers either for diving or foreshore work. In addition to an Annual Public Lecture, Trust officers give many talks at local venues and set up an exhibition stand at special events.

For information contact:

### Hampshire & Wight Trust for Maritime Archaeology

Room W1/95  
Southampton Oceanography Centre  
Empress Dock  
Southampton  
SO14 3ZH

Tel: 023 8059 3290

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web site: <http://www.soc.soton.ac.uk/HWTMA>



If you find an object or feature of interest on the seabed or beach your discovery could unlock a new episode in the story beneath the Solent. You can report your find to a local Sites and Monuments Record at one of the addresses opposite.

If you recover anything from the wreck of a vessel, whether on the seabed, floating in the sea, or on the beach it must be reported to the Receiver of Wreck.

To learn more about the underwater archaeology of Protected Historic Wrecks in the Solent area visit the exhibitions listed on this page.

To find out about underwater archaeology worldwide, or if you wish to train in underwater archaeological techniques contact the Nautical Archaeology Society.



## Sites & Monuments Records

### Dorset

Sites & Monuments Record Officer  
Environment Services  
Dorset County Council  
County Hall  
Dorchester  
DT1 1XJ  
Tel. 01305 251 000

### Hampshire

Sites & Monuments Record Officer  
Environment Group  
County Planning Department  
Hampshire County Council  
The Castle  
Winchester  
SO23 8UE  
Tel. 01962 846736

### Isle of Wight

Archaeological Officer  
61 Clatterford Road  
Carisbrooke  
Newport  
Isle of Wight  
PO30 1NZ  
Tel. 01983 529963

### Portsmouth

Assistant Local History Officer (Archaeology)  
Portsmouth City Museum and Records Office  
Museum Road  
Portsmouth  
PO1 2LJ  
Tel. 023 9287 5276

### Southampton

Cultural Services (Conservation Unit)  
Southampton City Council  
Civic Centre Road  
Southampton SO14 7LP  
Tel. 023 8083 3192

### West Sussex

County Archaeological Officer  
Planning Department  
County Hall  
Tower Street  
Chichester  
West Sussex PO19 1RQ  
Tel. 01243 756858

### Receiver of Wreck

The Coastguard Agency  
Spring Place  
105 Commercial Road  
Southampton SO15 1EG  
Tel. 023 8032 9474

### Nautical Archaeology Society

c/o Fort Cumberland  
Fort Cumberland Road  
Eastney, Portsmouth  
PO4 9LD  
Tel. 023 9281 8419  
<http://www.nasportsmouth.org.uk>

### National Monuments Record

Kemble Drive  
Swindon SN2 2GZ  
Tel. 01793 414700

## Archaeological Periods

Palaeolithic (before 10,000 BC). The period of earliest flint tool making but little other evidence of human occupation.

Mesolithic (10,000-3500 BC). A period with a lifestyle based on hunting and gathering using temporary and seasonal campsites.

Neolithic (3500 - 2000 BC). A period with a lifestyle based on agriculture, often with forest clearance then cultivation followed by desertion of exhausted land.

Bronze Age (2000 - 700 BC). A period with copper alloy tools and mixed farming. Early period is characterised by Beaker pottery and building of round burial mounds or barrows.

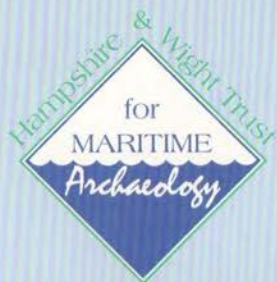
Iron Age (700 BC - AD43). Iron-working introduced to farming communities living in settlements which are sometimes enclosed by huge ditches and banks. Hill forts built as tribal kingdoms develop.

Roman (AD 43 - 410). A period of military occupation brings a more urban lifestyle after contact developed through trade in the 1st century BC.

## THE STORY BENEATH

the  
**Solent**





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The Crown Estate is a major  
landowner in the Solent with significant  
commercial interests in the area.

We are funding this project as part  
of our commitment to stewardship.

We are keenly aware of the significance  
of marine archaeology and we  
are delighted to support this  
important work.

[www.crownestates.co.uk](http://www.crownestates.co.uk)

