The establishment of ports has influenced the maritime-dominated development of the area. These centres are primarily for trade, although many are also in proximity to substantial marine resources such as fishing grounds and aggregate deposits. Portsmouth Harbour has been the 'home' of the navy for many centuries, recognising the need for the defence of the English Channel and beyond.

The infrastructure to support maritime trade, transport, defence and industries is diverse. This means that the maritime 'influence' can often reach considerable distances in land, whether through direct transport via tidal rivers and waterways or indirectly through the supply of goods or services.

Shipwrecks: For many centuries ships represented the pinnacle of technology within society. They provided the means to transport goods and people locally, nationally and internationally, and to defend the country and other territories. In the Solent area we have a wealth of watercraft remains, some are abandoned on the foreshore, while others are the result of more dramatic wrecking events. Remains dating from the early Saxon period (figure 1.11) through to the Second World War (figure 1.12) are represented in the region.

Figure 1.11 – Langstone logboat

Figure 1.12 – 2nd world war wreck – the Borgny

Seven wrecks are Designated Protected Wreck Sites, which have been recognised as being of national importance. These include the Grace Dieu (1439) (figure 1.13), Mary Rose (1545), Yarmouth Roads Wreck (16th Century), Hazardous (1706), Invincible (1758), Needles (including the Assurance (1753) and Pomone (1811) (figure 1.14) and A1 (1911). Six of these seven sites represent the remains of ships built for warfare and defence, with only the Yarmouth Roads wreck believed to be a trading vessel of Spanish origin.

Figure 1.13 – Grace Dieu

Figure 1.14 – Needles wreck site

These seven sites represent a minute fraction of the thousands of ships recorded as having been lost within the Solent Seascapes area. Each site has a unique story to tell, to contribute to the knowledge of our maritime past.

Coastal Archaeology: The productive nature of the coast and its resources has ensured that a legacy of archaeological remains from inter-tidal industries can now be found around our shores. Some industries such as salt making and shell fisheries date back to prehistoric times with evidence from the Iron Age and Roman period being relatively common. Many other industries such as pottery, brick and tile making utilise natural clay deposits situated in the coastal zone, they then benefit from being able to export their goods by water.

Shipbuilding has been a prominent local industry, again linked to the strong maritime character of the region. Although we have evidence that Roman trading craft were plying the Solent waters we are yet to find a shipbuilding site, however, later in the Medieval, Post Medieval and Modern periods there is substantial evidence of such sites (figure 1.16).

Figure 1.15 Post Medieval oyster beds in Chichester Harbour

Figure 1.16 Bucklers Hard shipbuilding site

In summary there are very few areas of the Solent coastline that have not been impacted by coastal industries and activities, many areas which now appear to be quite backwaters were once bustling with activity (figure 1.17).

Figure 1.17 Dock Copse

Natural Environment

In addition to the cultural heritage the natural heritage of the Solent is also very significant with a large number of marine and inter-tidal environments being recognised through local, national and international designations, such as:

- Ramsar and Special Areas of Conservation (SAC) designated areas
- Special Protection Area (SPA)
- Solent European Marine Sites (SEMS)
- Heritage Coast
- New Forest National Park

Solent Sites of Specific Interest (SSSI)

Additionally mudflats, sandflats, shingle spits and beaches support a varied and rich plethora of waterfowl and other marine resources such as shellfish.

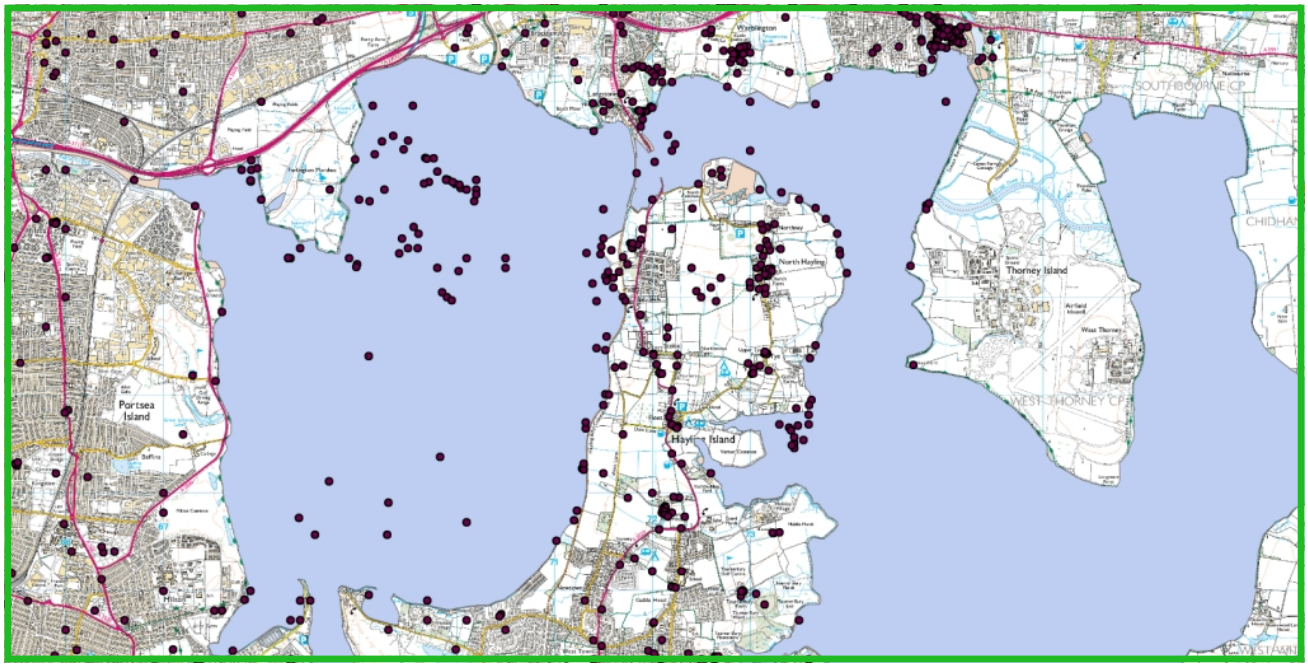

Figure 1.18 – Image showing nature designation in relation to known archaeological sites

Modern Activity and Industry

A wide variety and diversity of marine-related industries have developed within the Solent and Sea Wight area. Some of the most prominent examples are ports, marine aggregates extraction (see Fact Box), oil installations, commercial fishing, capital and maintenance dredging operations

and shipping trade. Modern industries that are served by coastal traffic, such as the harbour at Cowes, have affected the physical appearance of the coastal and marine zone (Figure 1.19). Marina development has affected many of our tidal estuaries and harbours, two prominent rivers for yachting activity are the Lymington and Hamble Rivers. The Solent area also has facilities for both the commercial and recreational fishing industry. It has the largest native oyster fishery in the UK, various designated shellfish waters, bass nurseries and commercial fisheries. The high volumes of marine-related activity is distinctive to the Solent region and contributes substantially to the historic and modern character of the region.

Figure 1.19 – The harbour at Cowes

FACT BOX - Marine Aggregates and the Solent

A prominent marine industry in the Solent region is aggregate dredging (figure 1.20). On a national scale marine aggregates contribute:

- 21% of the sand and gravel needs of England and Wales

33% of the South East's sand and gravel

And in the Solent (figure 1.21):

- Landings of marine aggregates in the Solent average 1.5 million tonnes per annum.

Consumption of marine dredged aggregates on the Isle of Wight is around 115,000 tonnes per annum

Figure 1.20 – Aggregates dredger at work (BMAPA)

Figure 1.21 – Distribution of Aggregates Dredging Areas in the Solent

Aggregates dredging has the potential to adversely impact the marine historic environment as it is an intrusive activity. However, a productive relationship between the aggregates industry and heritage agencies ensures best-practice is followed and promoted to minimise impacts on heritage.

Pressures on the Marine Historic Environment

The cultural, economic and leisure features of the Solent and their close interplay with the natural environment make it an attractive place for people to live. However, this all combines to make a marine and coastal landscape that is facing a number of human and natural pressures, including erosion, climate change, development, extraction and recreation. All these pressures require sympathetic management to ensure a balance between development and conservation of the historic environment is achieved.

2. How Seascapes can help

Seascapes is not about stopping change or development of the marine historic landscape, it is about informing the management of change in a way that takes account of historic development and its traits which are distinctive to any particular area.

Seascapes is an opportunity to move towards an area based perspective through taking another look at marine data. Most of our current knowledge of the marine historic environment is based on 'point data' such as specific points where a shipwreck lies, or a bronze age sword was recovered, and doesn't take into account how different points might be related to each other, or have over time combined to make a wider area of the seascape significant as it displays the same traits or traces that give is distinctive 'character'. Neither does such point data generally convey the typical historical development of an area, given their focus on the special, atypical or rare.

Case Study - From Points to Polygons

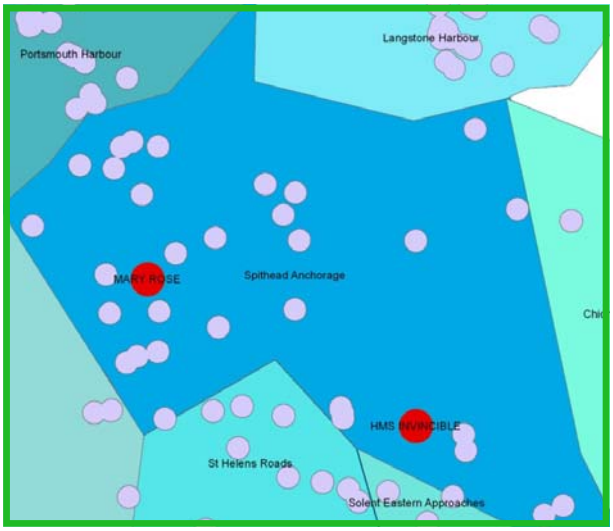

Figure 2.1 – The protected wreck site of the Invincible and surrounding wreck sites within the 'Spithead Anchorage' Seascape area

Seascapes is about taking another look at what we know about marine cultural heritage in order to make the most of the data. Current Historic Environment Records are often based on what is known as 'point data', these points record individual sites, finds or work locations. Looking in depth at a point can reveal lots about, for example, an individual shipwreck. Through Seascapes we move away from looking at just individual 'points' to looking at areas or 'polygons' which take in a whole range of data which includes points, but also a lot of other information about the nature and activities below the current seabed, the seabed surface and water column and the water surface.

For example, it is possible to look at the protected wreck site of the *Invincible* in the Eastern Solent as an important case study as it is one of only 58 designated historic wreck sites in the whole of the UK. But through Seascapes we can see that the *Invincible* is only one of a large number of known shipwrecks that lie in an area which has been a

navigational hazard for many centuries, this is also adjacent to the modern shipping channel that witnesses a high density of marine traffic. These features are all within the 'Spithead Anchorage' Seascapes polygon. This example highlights how the survey of frequently-used shipping channels over the past three hundred years has lead to the charting of such a high number of shipwrecks. It is the regularity and coverage of the marine surveys undertaken that has developed our knowledge of shipwreck sites; areas not as frequently surveyed may contain just as many shipwreck sites, but they just haven't been discovered yet.

Seascapes can also help promote a seam-less approach to the historic environment whether it happens to be on land or at sea. This is one resource, it should not be considered as 'separate' or 'different' as it is covered by water. Seascapes is an important tool which can be used in a range of marine management situations, it can help facilitate an integrated approach to spatial planning (see case study), provide context to inform curatorial decisions and highlight research or data gathering priorities for the future. Such seam-less management is becoming increasingly focused on due to the development of broader management frameworks for integrated coastal zone management (ICZM) and Marine Spatial Planning. Having area-based data can ensure the historic environment is given full consideration alongside other environmental and commercial concerns.

Case Study - Marine Aggregate Dredging Activity

There are many human and natural activities and processes that can have an effect on the marine historic environment. To ensure that important elements of our national heritage are considered and safeguarded there are a variety of management approaches that are used.

When a dredging company would like to extract aggregates from the seabed a licence is required. To get a license a process of Environmental Impact Assessment is required, which includes and assessment of marine cultural heritage. At the moment this process looks at all available data, which is usually in 'point' format to assess both the known and potential archaeological remains within a proposed dredging area. While Seascapes does not change the requirement to undertake this assessment, it does add a new perspective to data gathered for and individual license area by providing a broader view of the character of the historic 'seascape', the typical historical development of the area concerned, and the range of feature-survival that might be expected as a result. This helps make more informed decisions on which areas around our coast should be used for dredging activity.

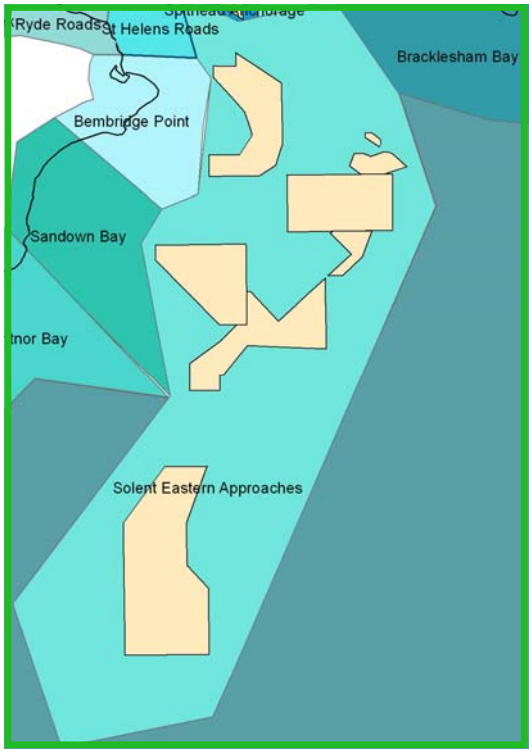

Figure 2.2 – Figure showing dredging area outline within Seascapes polygon