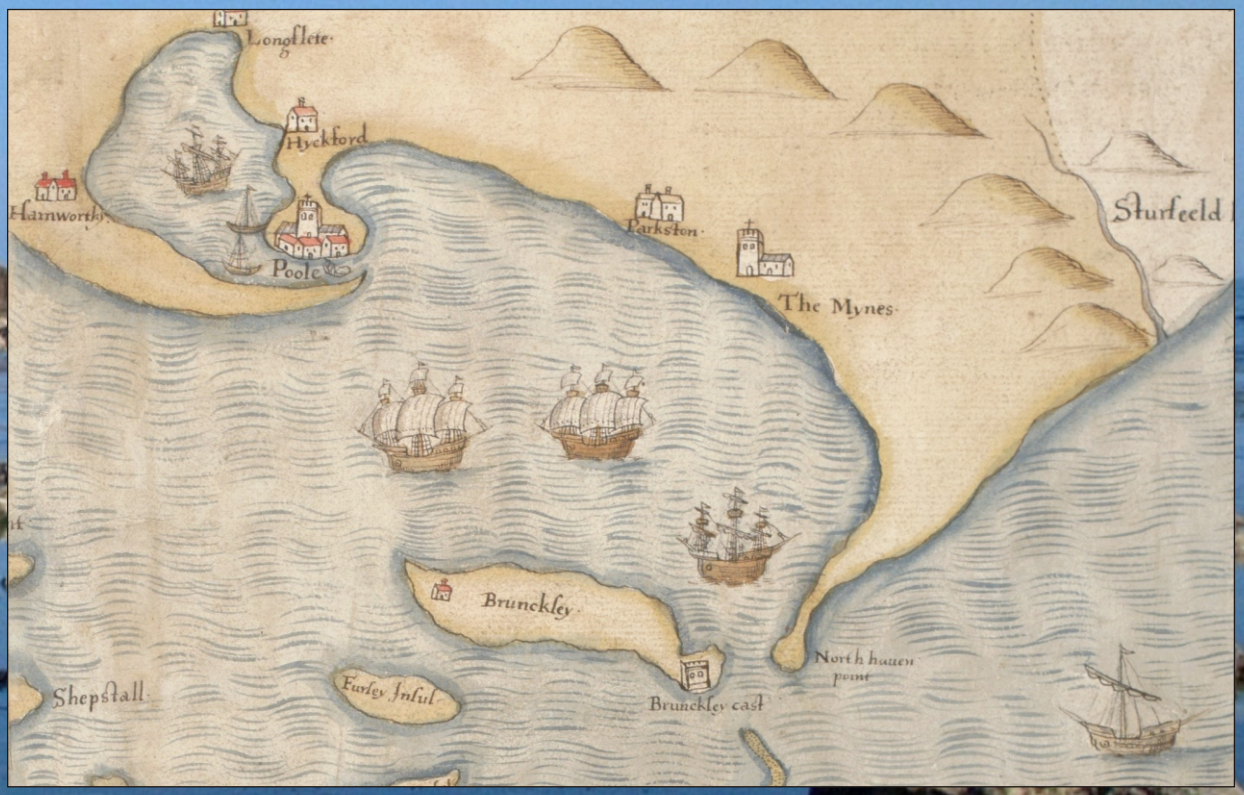
Wessex Archaeology

# Historic Environment of the Dorset Coast




**Rapid Coastal Zone Assessment Survey Phase I**
**Dorset Coast Historic Environment Research Framework**
**DRAFT**

**Ref: 51958.06**

**June 2004**

# DORSET COAST
# HISTORIC ENVIRONMENT RESEARCH FRAMEWORK

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**June 04**

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**Dorset County Council** **Dorset Coast Forum** **Wessex Archaeology**

# DORSET COAST
# HISTORIC ENVIRONMENT RESEARCH FRAMEWORK

## DRAFT

## Report Ref: 51958.06

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*Figures:*

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## 1. INTRODUCTION

### 1.1. BACKGROUND

1.1.1. This document has been prepared on the basis of a Project Design for the Dorset Phase I Rapid Coastal Zone Assessment Survey (Wessex Archaeology 2003). The project included a draft research framework for the marine and coastal historic environment of Dorset (**Figure 1**).

1.1.2. On a local scale, in 2003 the Poole Harbour Heritage Project Limited (PHHPL) has prepared a *List of potential projects and research agenda* ranging from the identification of peat deposits to the study of ancient waterfronts and beaches. However, there is currently no archaeological research framework that is directly applicable to the whole of the Dorset coast, not least because of the deficiencies in baseline data that the Phase I RCZAS addressed.

1.1.3. Dorset County Council (DCC) and the Dorset Coast Forum Archaeology Group (DCF-AG) have been consulted regarding research priorities in the course of developing the initial draft research framework.[1] Wider consultation will now be undertaken under the auspices of DCC and the DCF-AG.

### 1.2. RESEARCH FRAMEWORKS

1.2.1. The development of this Research Framework has taken into account four key considerations:

- The need to realise the potential of Dorset's coastal archaeology and history;
- The need to maximise the usefulness of the Historic Environment Record;
- The importance of managing the archaeological resource effectively;
- The desire to target academic endeavour to where it will have the greatest effect.

1.2.2. The publication of a research framework is seen as a vital tool for guiding, facilitating and integrating research by the range of individuals and groups that will actively contribute to a deeper and seamless understanding of Dorset's marine and coastal archaeology.

[1] In March 2004, the DCF Archaeology Group took over the responsibilities of the Archaeology Working Group.

1.2.3. The fundamental relationship of archaeological activity to its research base has been strongly endorsed (English Heritage 1997). The development of frameworks is advised to give researchers a yardstick against which to formulate ideas, collate their data, and measure results. Research Frameworks for maritime archaeology in particular remain poorly developed for the study of shipwrecks and maritime landscapes. As such, the inclusion of the maritime landscape in a regional research framework is seen as a high priority by English Heritage (2002: 23).

1.2.4. Many local authorities, including DCC, have recognised that by incorporating agreed research priorities in management and conservation plans, the credibility of the development control process in enhanced. English Heritage (1997) note that frameworks should:

- Provide an infrastructure and means of validating the decision making inherent within the planning process;
- Assist in the formulation of priorities for the distribution of resources (on a national scale);
- Couple curation and research.

1.2.5. English Heritage suggest that Research Frameworks should have three parts (Olivier 1996: 5, fig.1):

- *Resource Assessment* – a statement of the current state of knowledge and a description of the archaeological resource.
- *Research Agenda* – a list of the gaps in that knowledge, of work that could be done, and the potential for the resource to answer questions.
- *Research Strategy* – a statement setting out priorities and method.

This draft Research Framework seeks to begin to address all three elements within this document.

1.2.6. Phase I of Dorset's RCZAS has revealed a wide range of organisations and individuals with information holdings and their own research ambitions. For example, there are over 20 local history and archaeological societies, and 10 museums with complementary collection policies and research programmes. The survey has also revealed that a considerable amount of archaeological research is currently underway. As a consequence, it is the intention throughout this document to create a pragmatic framework that will guide and encourage collaboration but not proscribe.

1.2.7. It should also be noted that Research Frameworks in other regions are substantial documents that have taken several months, indeed years, to compile using panels of experts. Of necessity and as a consequence of the multiple tasks undertaken during Phase I, this document has much humbler aims. It might be best viewed as a starting point to begin discussion of the desirability of project to develop a more substantial document, and the format and content of that document.

## 2. RESOURCE ASSESSMENT

### 2.1. INTRODUCTION

2.1.1. The Phase I desk-based Rapid Coastal Zone Assessment Survey (Wessex Archaeology 2004) of the Dorset Coast has provided DCC with 4766 enhanced monument records for the coastal zone and inshore waters as follows:

| Monument Type | No. of Records |
|---|---|
| Building | 191 |
| Find Spot | 680 |
| Hedgerow | 1 |
| Landscape | 14 |
| Maritime | 1339 |
| Monument | 2487 |
| Place | 54 |
| **Total** | **4766** |

2.1.2. The monuments can be summarised by period as follows;

| Period | No. of monuments |
|---|---|
| Palaeolithic | 108 |
| Mesolithic | 60 |
| Neolithic | 46 |
| Bronze Age | 307 |
| Iron Age | 79 |
| Roman | 273 |
| Saxon | 37 |
| Medieval | 217 |
| Post-medieval | 2761 |
| Modern | 386 |
| Undated | 492 |
| **Total** | **4766** |

2.1.3. The recorded resource is biased for a variety of reasons (e.g. chance finds, areas of particular research interest by group and individuals over the years, etc). Planning Policy Guidance Notes 15 and 16 have increased the number of archaeological interventions and their geographical spread, but their bias is towards urban areas. Dorset's HER is both an index and a summary of these interventions.

2.1.4. The recorded resource is supplemented by hundreds of reports and other sources. For example, the Proceedings of the Dorset Natural History and Archaeology Society have served as vehicle for the publication of local discoveries since 1876. The reports prepared by archaeologists for developers (so called 'grey literature') are

designed for a specific purpose, but do often include an element of interpretative reconstruction.

2.1.5. Material relating to history and archaeology of Dorset's Coast is held by a wide range organisations and individuals. Dorset's RCZAS Metadata Database (Wessex Archaeology 2004) is a quick access point to these resources. However, there is still likely to be more dispersed material.

# 3. RESEARCH AGENDA

## 3.1. INTRODUCTION

3.1.1. Taking Dorset's HER as the starting point, coastal heritage assets are clearly extremely diverse. In considering how to approach the archaeological resource, there are decisions to be made as to whether it should be assessed chronologically, thematically or by geographical sub-division. After consultation with the Steering Group for Phase I of Dorset's RCZAS, a thematic approach has been adopted.

3.1.2. In identifying themes to be followed within this document, guidance has been taken from similar studies undertaken by, for example, Williams and Brown (1999) and Nixon et.al (2002). This guidance has been supplemented by monument Class Definitions given in the RCHME *Thesaurus of Monument Types* (1998). The derived themes are necessarily broad:

- Prehistoric development of the Dorset Coast
- Inhabitation and Settlement
  - Settlement patterns and buildings
  - Infrastructure
  - Defence (civic and military)
  - Coastal Defences (seawalls and flood defences)
- Coastal Communities
  - Demography
  - Ideology and Religion
  - Recreation
- Economy
  - Agriculture and Fisheries
  - Production
  - Distribution and Consumption

3.1.3. Where applicable, themes can be split into three zones corresponding to the relevant INSCRIPTION wordlist for landuse i.e. CO1 marine; CO2 intertidal; and CO3 above high water. Here, for example, discussion of Dorset's military background could comprise underwater military remains such as sunken warships and hydrophone listening stations (CO1), military slipways and wharves (CO2) and finally defensive sites around Portland (CO3).

## 3.2. PREHISTORIC DEVELOPMENT OF THE DORSET COAST

3.2.1. For the Dorset Coast, evidence for occupation during the Palaeolithic is relatively well documented at a local level by Palmer (1967) and Orman (2001) and from a national perspective by Wymer (1999). As would be expected, there is a correlation between Palaeolithic finds and coastal exposures of Plateau Gravel that warrants further investigation in the context of continuing coastal erosion.

3.2.2. The historic maps and charts collected as part of Phase I RCZAS provide an accurate cartographic base dating from the mid-eighteenth century. These maps have been used to identify areas of quarrying and other forms of land-use that may have influenced patterns of discovery over the past 200 years, thereby allowing identification of areas where important deposits may have been exposed. For example, Lower Palaeolithic material has been recorded in areas of Jurassic Portland Stone that require re-interpretation and verification to establish their true nature.

3.2.3. Offshore, work has been undertaken to establish the age of Pleistocene marine deposits off Portland (Davies & Keen 1985) and the Late Pleistocene/Holocene evolution of the Upstream Section of the Solent River (Velegrakis *et al* 2000). Such investigations have yet to fully address the contribution that the geoarchaeology of the Dorset coast might make to the broader understanding of the Solent River, which has its headwaters in the Study Area.

3.2.4. The model of coastal change for Dorset, prepared as part of the RCZAS (see Wessex Archaeology 2004) is not sufficiently detailed to attempt firm conclusions about the possible extent of surviving palaeoenvironmental deposits and land surfaces. In particular, the model – derived as it is from bathymetric data – indicates extensive areas of former 'land' corresponding to sandbanks that are relatively recent in date. Although investigations have been undertaken to identify the sandbanks' morphology and internal structure (see Bastos *et al* 2003), work is required to determine whether the sandbanks conceal former land surfaces, or whether they have simply accreted at the same rate as sea-level rise.

3.2.5. Over almost the whole area, apart from Poole and Christchurch Bays, seabed sediments consist of a discontinuous cover of coarse lag deposits less than a metre thick (the thickness of seabed sediment increases in Poole Bay, fed by the discharge of Poole Harbour). These sediments consist mainly of local rock and mineral detritus and lie either upon solid strata or on older palaeovalley infill sediments, while significant areas of sediment-free rock coincide with outcrops of hard strata within the Jurassic and Lower Cretaceous (BGS, *Wight Sheet 50°N-02°W Seabed Sediments and Quaternary Geology* and *Portland Sheet 50°N-04°W Seabed Sediments*, 1:250 000 Series).

3.2.6. Despite the paucity of offshore Late Pleistocene and Quaternary deposits, the relationship of (East) Dorset's rivers to the Palaeo-Solent has been discussed by Velegrakis *et al*. This study discussed the evolution of the Late Pleistocene/Holocene Upstream Section of the Solent River where the Rivers Frome, Piddle/Trent, Stour and Avon flowed along an east-west trending watershed incised on Tertiary sediments and contained by a Chalk ridge (Velegrakis *et al* 2000: 97). The Chalk ridge may have been breached not later than 7000 to 75000 BP (Velegrakis *et al*

2000: 99) whereby disruption of the Solent River and formation of the Western Solent occurred. However, work is required to determine offshore palaeo-channels for Dorset's western rivers and their association with the developing English Channel.

3.2.7. It should be noted that the nature of HER is such that very little palaeo-environmental information is included. It is suggested that a database component addressing specifically environmental issues be addressed. This, in turn, may enable the development of a deposit model that could be expected to have a degree of predictive capability.

3.2.8. Evidence of Mesolithic, and to an extent Neolithic, activity appears to be concentrated around headlands that developed in the course of the most recent marine transgression (notably Portland/Fleet and Southbourne/Hengistbury). Submerged forests (and peat deposits) found in and offshore from the buried mouths of rivers mark pauses in transgression (Melville and Freshney 1982: 126) and deposits of peat are relatively common on Chesil Beach, particularly in the Abbotsbury / West Bexington section. Other peat deposits on Chesil Beach have been dated to 6100±120 BP, i.e. Late Mesolithic / Early Neolithic (Le Pard 2001). In addition, the 'stumps of fir trees on peat' were recorded adjacent to Bournemouth Pier in January 1871 (Ordnance Survey First Edition, Sheet 86). Such deposits can therefore provide useful sea-level index points (SLIPs) for associated sea-level rise.

3.2.9. Holocene sediment sequences have been identified and recorded at various locations in Poole Harbour (Long *et al* 1999 and Edwards 2001) and are used in the calculation of sea-level change for the central English Channel (Waller and Long 2003). The potential for the preservation of palaeo-environmental sequences in Dorset's coastal fringe environments and the influence of sea-level change on prehistoric inhabitation of rivers and coasts has yet to be fully realised.

3.2.10. The Holocene disruption of the Solent River and formation of the Western Solent, noted above, caused embayment inundation of Poole Bay and Christchurch Bay and formed Poole and Christchurch Harbour. Poole Harbour, Christchurch Harbour and the Fleet are key areas for the study of past environmental change and its relationship with human activity. Changes in relative sea level have influenced the deposition of floodplain material likely to overly Pleistocene deposits and contain a range of indicators of climatic change.

3.2.11. Despite such potential, Mid- to Late Holocene sediment sequences have only been identified and recorded in Poole Harbour (Edwards 2001 and Long *et al* 1999). Further work is therefore necessary to fully develop models, from the Early Holocene, for environmental change related to the evolution of Poole Harbour, Christchurch Harbour and the Fleet. Such a model should incorporate data related to any research arising from investigations associated with peat deposits found on Chesil Beach (noted above) that have offshore origins. Similarly, appropriate data derived from offshore geophysical and geotechnical investigations could allow for a reinterpretation of Holocene coastal change.

3.2.12. In addition, the model for coastal change for Dorset could be specifically refined for Poole and Christchurch Harbours based upon investigations associated with Holocene sediment sequences.

3.2.13. The establishment of firm regional chronologies is an urgent requirement. The questions for future research lie in understanding the transgression and regression sequence, the effect of oscillating relative sea levels and river levels on local plant, animal and human communities. Through interdisciplinary studies, geomorphological evidence could be used to predict the location of surviving sites.

3.2.14. New approaches to interpretation seek to reconstruct the ways in which human beings perceived and moved through their physical world (Barrett *et al* 2000). Much of this thinking has developed from methodologies attempting to assess 'ritual' landscapes such as those around Stonehenge and Avebury. There is scope to apply the concept to Dorset's maritime communities and their interactions with the sea and prominent coastal features.

**Framework Objective:**

- To increase our understanding of the physical evolution of the Dorset Coast during the Palaeolithic and the strategies employed by early homonid populations to cope with changes in climate and environment.

**Specific areas of research might include:**

- Establishing a firm regional chronology tied into national chronological frameworks;
- Carrying out baseline surveys for the Pleistocene focusing on reconstructing geomorphology, climate, hydrology, and vegetation and faunal development;
- Developing effective prospection and assessment techniques for Palaeolithic deposits (e.g. by improving predictive digital terrain models);
- Reviewing reconstructions with specific regard to cognitive issues, such as the role that the sea and landscape features may have played in human activity and settlement;
- Understanding environmental change (especially climate change) with respect to human settlement to provide a continuum for research into future climate change;
- Correlating terrestrial and offshore Late Pleistocene and Quaternary deposits to define the relationship of Dorset's rivers to the Palaeo-Solent and central English Channel.

## 3.3. INHABITATION AND SETTLEMENT

*Settlement Patterns and Buildings*

3.3.1. The emphasis of this theme is intended to lie with domestic settlement and its association of ritual and agricultural landscapes. Dorset's HER contains evidence for settlement across all the periods. However, the relationship between sites of earlier settlement and the coast is less well understood. Upper Palaeolithic and Mesolithic sites located at the present coast were originally situated relatively inland, for

example the Mesolithic workfloor recorded in the Fleet area (Palmer 1963). Neolithic and Bronze Age sites demonstrate a degree of zonal continuity indicative of relative permanency of agricultural and ritual sites. Multi-period settlements at Bestwall and Hengistbury offer unique opportunities to study settlement within developing embayments and harbours.

3.3.2.. For the Iron Age and Romano-British periods, settlement can be linked to the coastal zone and the rise in significance of Poole and Christchurch Harbours. Research is therefore required to identify the evolution of settlement and other land-use patterns in conjunction with sea-level rise and the accessibility of coastal resources and maritime exploitation.

3.3.3. An accurate chronology of roads and river crossings, including their prehistoric antecedents, would help to foster a clearer understanding of the relationship between settlements and their development.

3.3.4. With the exceptions of Wareham and Bridport, the understanding of settlement during the Saxon period is sparse - not least because only 36 HER records relating to Saxon activity exist within the immediate coastal zone. What impact the migration of 'Germanic people' from the continent may have had on Dorset's coast unclear.

3.3.5. The Domesday Book provides a basis for understanding the organisational and administrative structure of the landscape immediately following the Norman Conquest. Settlements such as Lyme Regis, recorded in Domesday as Lym/Lime, lie in contrast to the deserted villages of Radipole and Stanton St. Gabriel, which, among others, serve to illustrate discontinuity of occupation. The role of large-scale earthworks, such as those at Bindon Hill, to settlement patterns and function could also be addressed within this theme.

3.3.6.. As with Saxon settlement, archaeological study might be integrated with the documentary record of the early medieval period to determine the extent to which settlements, and patterns of land-use, continued into the Post-medieval period. The Dorset coast features several large estates (Weld, Encombe, etc), whose histories contain clues to settlement patterns and landscape division.

3.3.7. Settlements along the Dorset Coast have also suffered from disastrous fires. For example, Weymouth in 1665 where 37 houses were destroyed around St Mary Street. Wareham was also devastated by fire in 1762, and has a long history of being raided and besieged. The impact of these types of disasters on these settlement plans that we see today is another potential area for research.

3.3.8. Water supply and drainage provision may be known at site-specific levels, but it would appear that overall understanding of the system and its role in settlement development is poor. Early references to attempts to try to improve water supplies for the growing townships include piping supplies for fresh water from two springs on Southdown Common to Weymouth/Melcombe in 1593. The existing sources being from wells which are described as somewhat brackish. The study of varying water table levels may also help explain why different types of water management were used.

3.3.9. The Dorset Coast has a wealth of historic buildings ranging from castles and large country houses to modest domestic dwellings and structures such as bridges and milestones. The structures themselves, in conjunction with Conservation Areas, are important aspects of tourism and education. Research might address how the wider historic built environment has responded to various influences in terms of architectural form and settlement evolution (Williams and Brown 1999). For example, were different areas of towns subject to different levels of planning. The modern seaside town of Bournemouth (held by tradition to have started as a seaside resort after Lewis Tregonwell built himself a house in 1810 on the edge of the heathland valley) was the deliberate creation of local landowners who initiated development where otherwise there might have been none. The concept for an exclusive watering hole was developed through a partnership between landlords and the local 'Improvement Commissioners'. Business premises were restricted to Commercial Road to the north of the villa estates, and working class accommodation was entirely absent. Historic landscape characterisation has significant potential for revealing phases of settlement development

3.3.10. There is a wealth of data to be tapped in the form of the range of house types, on the division of space in different types of housing, and on the development of associated garden and yard spaces. The links to maritime trade could be explored in the character of buildings and their layout. Early writers refer to Melcombe as having the ideal layout for merchants affording a market place and convenient streets and also yards for their wares. The old town of Poole features several grand houses once belonging to successful merchants in styles (e.g. Dutch, Mediterranean) which reflect overseas trading links. Ample cellars and exterior hoists to storage spaces in roofs are other features of building which have both domestic and commercial functions.

**Framework Objective:**

- To increase understanding of the evolution of coastal settlement and land-use patterns including data from intertidal and inundated areas.

**Specific areas of research might include:**

- Exploring why the Saxon period is so poorly represented in the HER, in conjunction with comparative modelling with other UK regions;
- Assessing the evidence of standing structures for understanding coastal urban growth;
- Researching the potential for a refinement of the categorising of settlement types through historic landscape characterisation;
- Identify the factors influencing changes in settlement patterns, from single events such as fires to long term trends such as economic decline;
- Identifying the relationships between the development of towns, nucleated settlements and agricultural settlements;
- Studying the procurement and supply of building materials (the management of woodlands, quarries and other resources) and labour;

- Refining our understanding of the range of domestic building types, their function and the clues they contain for cultural and ideological associations;
- Expanding our knowledge of public buildings – their locations, construction and disuse dates, purpose and character as symbols of status;
- Considering the impact of private and public enterprise (government initiatives, army and naval authorities, etc) in urban and infrastructure development;
- Establishing an overall understanding of water supply and drainage, and its effect on settlement patterns;
- Using placename research and predictive models to work back from surviving documentary evidence to help characterise early settlement.

*Infrastructure*

3.3.11. Even a cursory examination of the historic maps of Dorset reveals extensive coastal infrastructure comprising causeways, small harbours and landing stages (**Figure 2**). This indicates a particularly close relationship between terrestrial and maritime activity. Activity may have been comparatively short-lived. For example, at Kimmeridge, Sir William Clavel made a harbour for the exporting of alum and to service a glass works. The pier was destroyed in gales in 1745. However, some of these relationships have older roots and appear to have played a significant role in the overall structuring of the landscape, evident in the organisation of parish boundaries.

3.3.12. The histories of the larger ports such Poole and Weymouth are closely interconnected and similar in the problems they have faced in keeping channels clear and catering for ever larger ships. Features such as ballast quays come into existence to regulate where ships dumped their ballast before loading with cargo in an attempt to prevent channels being impacted. The study of the differing phases of port development linked to changing ship technology is another important area of research.

3.3.13. Inland navigation is evidenced by a series of ferries. 'Wick Ferry' is recorded in Christchurch Harbour and two are marked within the Fleet on the Second Edition OS map. Ferry Bridge and Ferrybridge Cottages at Smallmouth may mark the site of a former ferry connecting Wyke Regis and Chesil/Portland. In 1897, it was reported in *A Historical and Descriptive Guide to the Ancient Town of Wareham* that a logboat had been found near the South Causeway, between Wareham and Stoborough, adjacent to the River Frome. The South Causeway reputedly follows the line of an ancient ferry and lies over 2km from the modern coastline. In 1538, John Leland wrote of the Weymouth/Melcombe 'the trajectus (crossing) is by boat and rope, bent over the haven, so that in the ferry-boat they use no oars'. It is known that this particular ferry was replaced by a wooden bridge towards the end of the 16$^{th}$ century, however the history, infrastructure and operation of these ferries require further investigation.

3.3.14. The importance of inland navigation can be seen in sites such as the Saxon burh of Bridport that lay at the confluence of the Rivers Brit and Mangerton as well as Wareham that lies between the Frome and Piddle/Trent. From 1664, navigation of the Avon was formalised by the River Avon Navigation Act. The Avon Navigation

extended from Salisbury to Christchurch and was in use from 1684 to 1715. Original features included turf-sided flash locks and timber bridges, although most were replaced with brick-built pound locks and bridges due to destruction by heavy flooding in *c.* 1700. Few features survive today as locks were converted into mill weirs and navigation channels adapted into water meadows.

3.3.15. For Poole, the provision of Passage Boats facilitated the movement of goods and people across the harbour. In March 1759, a Passage Boat returning from Poole Market to Ower became stranded in mud off Furzey Island. Thirteen of the nineteen on board died trying to reach the Island. Additionally, a survey of Studland in 1724 recorded a house, garden and passage boat at South Haven Point facilitating passage between Sandbanks and Studland. An exploration of the links between these local passage boats and regular services going further afield is another area of research that would improve understanding of the overall network. For example, in 1770 customs records note two large hoys sailing to Portsmouth every Monday returning on Saturday.

3.3.16. A collection of stone anchors recovered from the vicinity of Middle Poole Patch and Chapman's Pool (Markey 1991) may be a direct reflection of early anchorages with goods and people being transhipped to the shore. Navigation was undoubtedly aided by the light traditionally said to have been shown from the late twelfth-century Romanesque chapel on the cliff at St Aldhelm's head. Fire-beacons along Dorset's coastline, recorded on a map of 1539 (Beaton 2001), serve to illustrate a navigational infrastructure that foreshadows the construction of lighthouses two centuries later.

3.3.17. Lighthouses marked on an early-nineteenth century Tithe Map of Portland and an 1844 Trinity House day-mark on the Bill (later replaced by a 60ft high beacon) indicate attempts to improve coastal navigation. Similarly, improvements in cartography facilitated the charting of known underwater hazards, such as the Shambles Bank charted in 1779 (UKHO ref. 318a), thereby making coastal navigation safer.

3.3.18. The first railway in Dorset, the Wiltshire, Somerset and Weymouth Railway, opened in the 1850s and revolutionised the relationship between industry and transport. Throughout the remainder of the nineteenth century, main and branch lines were planned and constructed across the county creating a new transport infrastructure linking domestic and commercial movement. However, the Beeching Report of 1963 led to the rationalisation of the railways, resulting in the closure of many hundreds of miles of line across Britain (Buchanan 1972: 322). The effect of this within Dorset saw the closure of, among others, the Lyme Regis Branch Line in 1965 and the dismantling of the Easton and Church Hope Line. Archaeologically, earthworks now mark former railway lines and the remains of associated infrastructure may be discerned in the landscape.

3.3.19. A link between terrestrial and maritime transport infrastructure can be seen in the Breakwater Railway, constructed in 1878. This line joined the Portland Branch of the Portland and Weymouth Line and served the movement of goods to the Portland Breakwater. The application of steam power at sea brought major technological changes to ship construction and transport capabilities. Portland Harbour was developed from 1872 but was sufficient to allow Brunel's *Great Eastern* to repair there in 1859 (Dunkley 2002).

**Framework Objective:**

- To examine the roles that sea-borne transport, inland waterways, road and rail transport have played in creating a coherent network for trade and communication.

**Specific areas of research might include:**

- Identify and recording evidence for inland navigation and extending research to include the influence of coastal pilotage and early navigation aids in the marine zone;
- Developing an understanding of the role maritime activity played in relation to settlement development and land use;
- Identifying pre-Roman road patterns and their links to local river and coastal transport;
- Exploring the development of ports in correlation with developments in ship technology and ship servicing;
- Identifying and researching examples of Dorset's particular forms of vernacular watercraft, such as the 'lerritt' and their function in trade and communication;
- Making the most of the opportunities to investigate wreck sites, coastal pilotage and the circumstances of loss to develop our understanding of how particular incidents have served as catalysts for navigational improvements and the development of rescue services.

*Defence*

3.3.20. In the Roman period, the fort at Hamworthy may have dominated the military landscape, facilitating the establishment of the area as the foremost settlement of the time. However, the coast of Dorset has a long history of being invaded and attacked after the end of Roman rule provoking a wide range of civic and military responses (**Figure 3**). For example, in AD 833 AD, Viking raiders landed at Charmouth in 35 ships and were met in battle by King Egbert. In AD 1377, the Bishop of Salisbury granted the people of Weymouth permission to build their own chapel. Previously they had been obliged to go to Wyke Regis and the townsfolk argued that they risked the destruction of their town every Sunday (i.e. the town had been already been raided by a group of Normans, Genoese, Bretons, Picardies and Spaniards on a Sunday).

3.3.21. The infamous activities of Dorset's buccaneers sometime prompted retaliatory attacks. In 1406, the King of France fitted out an expedition to attack Poole, the home port of Harry Page, who had brought back 120 prize vessels from the coast of Brittany. Wareham's medieval town walls can be viewed in the light of civic defence, though in general terms, prior to the sixteenth century, there is no obvious military system.

3.3.22. The post-medieval and modern military defences of Dorset are predominantly sited to face the threat of attack from the English Channel (be it sea or airborne). The

Schedule of the Dorset Beacons (Russell 1959) inventoried medieval beacon sites that may have been fired to warn of the Spanish Armada, later to be reoccupied as late eighteenth century Admiralty Signal Stations, as at Thorncombe.

3.3.23. Individual sites ranging from the former Brownsea Castle gun-fort (constructed 1545-47) to elements of the Radio Direction Finding station at the former RAF Worth Matravers illustrate the development of a unified defensive strategy. Inland, the fortifications associated with the Dorchester and Poole Harbour Stop Lines constructed during World War II enable trends in the history of defensive technology and strategy to be identified.

3.3.24. In general terms, the front-line defence of Britain has rested with her Navy causing the English Channel itself to be a battleground. In 1588, a general engagement between the English and Spanish Fleets was fought off Portland Bill and several of the biggest Spanish warships were rendered ineffective. In 1653, Sir Robert Blake scored a resounding success against the Dutch fleet off Portland. Portland itself offered a natural anchorage for sailing warships but acquired greater strategic significance in the mid-nineteenth century when the French naval base at Cherbourg was extended. In 1872, the first of the breakwaters was constructed and the remaining two were completed in 1894. The improved shelter afforded by the breakwaters made Portland harbour an increasingly popular anchorage, particularly for the Channel Fleet. At the outbreak of war in 1914, the Reserve Fleet and Grand Fleet assembled at Portland before sailing for their war stations but any hopes of using Portland as a harbour were dashed following the fall of France in 1940, which brought the Luftwaffe to within 20 minutes flight.

3.3.25. Excluding wartime merchant casualties, there are 23 modern wartime Naval casualties lying in Dorset's inshore waters, including the remains of two U-boats. More recently, HMS *Hood*, a Royal Sovereign class battleship lying adjacent to Portland Harbour, has attracted archaeological interest (DCF 2004). There are 151 documented military aircraft lost off Dorset and the remains of eight Valentine Tanks are recorded in Poole Bay. The bridging of Dorset's underwater military remains with terrestrial sites can be seen in a possible component of the Pipe-line Under the Ocean (PLUTO) identified at Hengistbury and embarkation slips in Portland for 'Force O', the US echelon that attacked Omaha beach in the 1944 Normandy landings.

3.3.26. Pre-twentieth century underwater naval remains are noted in the records held by the NMR of documented losses off Dorset, but without precise locations. The *Piedmont* for example, was a British troop ship *en route,* from the Isle of Wight to the West Indies carrying soldiers and was wrecked in 1795 off Fleet. An assessment and correlation of the known and documented military shipping resource with seabed anomalies is therefore required.

3.3.27. The Defence of Britain Project, undertaken between April 1995 and December 2001 under the auspices of the Council for British Archaeology, addressed only the Twentieth century militarised landscape. Although individual sites are well known and several are managed heritage attractions, there is potential for further work. A basic survey of defence sites might be undertaken as a component of research into historic defences that could relate to the development of 'military' technology since the Iron Age. Isolated findspots offshore such as shell cases recovered from Lulworth

Bank (indicating a 1950s naval gunnery range) and the remains of a prototype of Barnes Wallis' famous bouncing bomb, offer such opportunities.

3.3.28. It has been noted that naval activity, including purely marine sites, has hitherto been neglected from assessments of Dorset's military heritage. While evidence for such activity is biased towards the First and Second World Wars, a synthesis of documentary sources and archaeological remains for earlier periods is required, including naval activity during times of peace.

**Framework Objective:**

- To refine our understanding of the chronology and function of landward and seaward defensive structures from earliest times.

**Specific areas of research might include:**

- Gaining a better understanding of the political and economic factors that prompted populations to organise and build defences.
- Identifying the offensive and defensive role of naval sites, wrecks and infrastructure within Dorset's coastal waters and their wider military association with the English Channel.
- Examining how technological advances in weapons and military tactics have contributed to the development of sites.

*Sea Walls and Flood Defences*

3.3.29. These features form a distinct barrier between the land and sea with historic defences often surviving as relict earthworks or cropmarks inside the current sea wall. Such defences appear to be mostly linked to pastoral agriculture by enclosing, and therefore reclaiming, coastal marshlands. An historic example comprises an attempt to drain the Fleet in the 1630s to reclaim 'three thousand and one hundred acres' (Le Pard 2002: 35).

3.3.30. An examination of the margins of Christchurch Harbour on the First Edition OS Map indicates numerous areas 'liable to flood.' By the Second Edition, the risk of inundation of several of these areas appears to have been reduced by the construction of flood defences. Such structures have an economic importance in the protection of grazing marsh while aerial photography has allowed for the identification of drainage ditches within the harbour littoral. In addition, extensive reclamation, particularly at Studland, can be identified from a comparison between Treswell's Map of 1580 and Woodward's Map of 1775.

3.3.31. Accounts for the years 1242-1243 for manor of Wyke appear to include the earliest known reference to land reclamation for the Dorset coast. A priest, Anslem, is paying an annual rent of 4d for a piece of land reclaimed from the sea at Weymouth. Reclamation of the shore and marshes at Weymouth has continued spasmodically right up to the present day with the town records including references to 'landfill' or

town refuse being used to reclaim land around jetties to increase wharfage in the 16th century.

3.3.32. However, a systematic study of reclamation and seawall construction in relation to former coastlines and sea-level change appears not to have been undertaken for the whole of the coast and therefore remains an area of potential research. Such research might address the history of reclamation drawing on historic cartography, air photographs and documentary sources.

**Framework Objective:**

- To develop an understanding of sea walls and flood defence in terms of reclamation, management and exploitation of marginal coastland.

**Specific areas of research might include:**

- Establishing a chronology for the development of sea defences, and the influence of different forms of land ownership;
- Developing a better understanding of both defence construction and methods of water control.

## 3.4. COASTAL COMMUNITIES

*Demography*

3.4.1. Dorset's HER contains reference to some 20 sites of inhumations and cemeteries offering evidence which might permit population–based research into demographic questions, including pathology, disease, ageing and sexing.

3.4.2. Assessing responses to chronic and acute diseases could also be linked to settlement studies and the maritime context. For example, the monk, William of Malmesbury, describes the arrival of the bubonic plague (Black Death) in the year 1348, about the time of the Translation of St Thomas (July 7) into the port of Melcombe from Europe. The disease decimated England's populations and has been attributed as the cause for contemporary settlement contraction.

3.4.3. Further outbreaks of plague in Weymouth include 1604, 1607, 1624 and 1625 (precautions included the decision to forbid the landing of cargo from a coastal barque from London where the plaque was rife). Weymouth suffered again in 1691, when 200-300 English prisoners were landed from France 'sick in ye flux' (typhoid). Burials for the following year quadrupled (Boddy, 1983). As a consequence and of particular maritime interest are the isolation hospitals for sailors and passengers from ships suspected of carrying infectious diseases, such as the facility noted at the Baiter, Poole, on the First Edition OS mapping.

3.4.4. Other important topics that might be explored through this theme are regional identity, ethnicity, social structure and status. There are areas of the Dorset coast

such as Isles of Purbeck and Portland where, even today, inhabitants recognise their own particular cultural identity ('island' status). In maritime communities, the role of women is often more highly developed in response to men being often away for long periods of time at sea. Artefacts and buildings studied in geographical groupings may also reveal cultural and ethnic zones within settlements. Artefact studies, which explain assemblages in terms of literacy, leisure pursuits, fashion and ethnicity rather than purely providing a catalogue, also have much to offer.

**Framework objective:**

- To increase our understanding of Dorset coastal population; its size, character and composition, and changes over time.

**Specific areas of research might include;**

- Developing our understanding of the role of men, women, children, nobility and servants in the social and economic organisation of urban and rural life;
- Increasing our understanding of life expectancy (including the study of health, diet and disease);
- Exploring the influence of migratory population in rural, urban and maritime (e.g. seafarers) contexts;
- Developing methodologies to trace the lives of individuals in the archaeological record;
- Identify and characterise the signature of ethnic groups in the archaeological record.

*Ideology and Religion*

3.4.5. Dorset's coastal HER contains examples of the components of early ritual landscapes. The spectacular upland locations of barrow cemeteries at Nine Barrow Down, Purbeck and above Chaldon Herring ('five Marys') make theses sites prime candidates for cognitive landscape studies that could be combined with reconstructions of the contemporary coastline. The local name for the later complex is possibly an example of the continuity of ritual association into the Christian period.

3.4.6. The importance of the church as an influence in settlement development is undeniable with church buildings acting as community foci. Dorset's HER contains references to some 60 places of worship ranging from religious houses to parish churches and chapels. Several are dedicated to St Nicholas, the patron saint of mariners (e.g. Weymouth, Studland). Few dedicated religious structures from earliest times are known, the exceptions appear to be the Roman temples at Jordan Hill and Manor Farm, Poole.

3.4.7. Large ecclesiastical institutions are noted at Abbotsbury, Christchurch, Wareham, and Bridport, and the influence on settlement, landscape management and society is another large topic requiring more research. A less well known aspect may be the part played by the coastal ports in medieval pilgrimage to the shrine of St James the Apostle in Santiago de Compostella. Licences to carry pilgrims were granted to Weymouth shipowners in 1413 and 1428.

3.4.8. The main source of information in Dorset's HER for religious buildings are the descriptions associated with statutory listing. Hence, parish churches appear to be an understudied resource, with regard to their structural development and trends in church building. An assessment of the order and rate of appearance of churches might also provide information about religious administration. The sources of timber and building stone, and techniques and styles of carpentry and stonemasonry may merit more detailed investigation.

3.4.9. It cannot be denied that evolution of religious ideology has had an enormous impact on the places of worship, treatment of the dead, art and iconography. Also maritime communities invariably also demonstrate religious superstitions associated with the sea. For example, votive offerings in the form of ship model.

3.4.10. The depictions of ships that appear on tombstones provide opportunities to study ship iconography. Tombstones also offer opportunities to gather information about the maritime occupations of the local community, and shipwreck incidents. Wyke Regis Churchyard contains graves of shipwrecked mariners from Deadman's Bay, including soldiers drowned in the wrecking of Admiral Christian's fleet in November 1795. It is interesting to note that 208 other bodies from the same disaster were buried on Chesil beach where they were found.

3.4.11. 'Parish' is still the basic unit of local administration, and over the centuries has become indivisibly linked to provisions to cope with social deprivation, the poor, the sick, and needy (e.g. workhouse, almhouses, etc). Dorset's coastal HER includes references to two leper hospitals (e.g. Hospital of St Mary and the Holy Spirit, dating to 1336, at Lyme Regis); six complexes of almhouses (the oldest being St George's Almhouse dating to 1400); and the Red House Museum which began its life as the parish workhouse.

3.4.12. Indeed, the concept of ideology could also be expanded in a variety of ways to include social and economic movements (e.g. workers housing, model farms) and their expression through artefacts and in the built heritage.

**Framework Objectives:**

- To improve our understanding of religious sites and buildings - their chronology, use and social and economic significance;
- To improve our understanding of the social ideologies which have found expression in the artefacts and the man-made environment.

**Specific areas of research might include:**

- Examining changing burial practices from earliest times;
- Examining the role and diversity of religion in society, and how it has changed over time;
- Establishing how the material expression of religious belief has changed over time and the catalysts from those changes;
- Identifying the extent to which religious minorities and non-conformists have a distinct material culture and how their beliefs are expressed through artefacts and architecture.

*Recreation*

3.4.13. Tourism is the Dorset coast predominant industry today, but it is a comparatively recent phenomenon growing out of the Georgian vogue for seabathing and taking the waters for their health. Spas are noted at Radipole, and at Nottington as early as the 1720s. Whilst the first foreshore licences for bathing machines were taken out in 1748 at Weymouth. Royal patronage quickly established Weymouth's reputation, and led to the rapid development of the urban environment with the buildings commonly associated with Georgian leisure pursuits, such as Assembly Rooms. Bathing facilities are also noted elsewhere on early estate maps (e.g. Poole).

3.4.14. The monuments currently listed within Dorset's coastal HER under the 'recreational' category of the MIDAS thesaurus feature a large number of hunting and shooting opportunities making the most of wildfowl attracted the coastal marshes, including a duck decoy at Abbotsbury and a shooting stance at Shipmoor Point.

3.4.15. Several boathouses are also recorded on early maps, demonstrating the increasing importance of sailing as a leisure pursuit in the 18$^{th}$ and 19$^{th}$ centuries. Documentary evidence corroborates this increasing importance. For example, Kelly's directory of 1859 lists Thomas and James M Wanhill, as ship owners and yacht builders at Poole, and the Herald newspaper for the contemporary period notes yachting seasons where Poole vessels have been extremely successful. Shipping losses include the yacht *Blind Cricket* lost off Poole in 1889.

3.4.16. Dorset's coastal urban centres contained a great many historic inns and alehouses. Documentary sources bear witness to their strict licensing and how 'no carding, dicing, tabling or any other unlawful games' were allowed. The taking of tabacco was also banned (Boddy, 1983). Despite this 'negative' evidence for pastimes, the HER does include clay pipe finds and a chessman from the wreck of the *Halsewell*. It is possible that a more systematic review of local finds collections may identify more archaeological objects associated with leisure pursuits.

3.4.17. Notable listed buildings associated with leisure are one of the earliest Odeon Cinemas at Weymouth, and the Boscombe Hippodrome Theatre which was built in 1893-95 as part of a development including the Boscombe Arcade and Salisbury Hotel. However, there is great potential to add to the sum knowledge of monuments related to recreation and leisure from both documentary and archaeological resources. For example, local inns regularly appear in Weymouth's Court Minutes -

'The Ship Aground' appears in 1724, after its landlord, Thomas Stuckley, was killed in a drunken brawl. There are also documentary references to the keeping of bawdy houses commonly associated with sailors' leisure. Although many such buildings are likely to have become innocuous domestic or commercial premises, clues to their previous functions may still be present in their footprint, internal space divisions, and retained fixtures and fittings.

3.4.18. Historic parks and gardens can be defined as open spaces that have been laid out, planted and maintained mainly in order to please the eye and for various forms of leisure and recreation. Dorset has a Register of Historic Parks and Gardens listing those that are believe to have the most importance, but there is great potential for further research. The designed landscapes currently included within Dorset's coastal HER include Compton Acres and Lulworth Park. Gun Island on the Fleet and its associated abandoned embankments are also believed to be the remains of garden landscaping.

**Framework Objective:**

- To increase our understanding of the history of leisure and tourism, and establish how archaeological investigation can make a contribution.

**Specific areas of research might include:**

- Investigating the role of leisure and recreation in daily life - both within households and through the availability of service facilities;
- Reviewing archaeological data to establish whether leisure activities are suggested but have hitherto not been highlighted;
- Increasing understanding of leisure activities and their material culture;
- Exploring how recreation has effected settlement development and the design of open spaces.
- Increasing our understanding of designed landscapes, parks and gardens, including vernacular gardens and patterns of allotment provision.

## 3.5. ECONOMY

*Agriculture and Fisheries*

3.5.1. Exploitation of the land in terms of yield rather than settlement can be traced through the development of agriculture. There is overwhelming evidence for agricultural practices such as Bronze Age 'Celtic Field' systems or medieval Strip Fields within coastal areas, although for earlier periods it is difficult to distinguish 'agriculture' and 'settlement'. Prehistoric or Romano-British settlements or farmsteads are recorded along Dorset's coast, such as the Scheduled farmstead at Kingston Down. It should also be noted that there is a danger of assuming settlement evidence in the countryside must mean agriculture, when it might equally represent woodland industry centres.

3.5.2. Linear earthworks, such as those on Wareham Common, have been attributed to the control of livestock movement. The management of wild fauna (including fowl and fish) though deer parks, chases, warrens and fisheries has also left its mark in the archaeological record along Dorset's coast. The landscape gardens of Lulworth Park created in 1601 contained a deer park. A pillow down or rabbit warren is noted at Thorncombe Down.

3.5.3. The growth and importance of market gardens to rapidly expanding population centres also needs to be explored. At present they appear not represented within the HER. A survey of documentary sources may help to elucidate where they were located, their organisation, layout and range of produce. Their role in providing fresh provisions and victuals for shipping also needs to be explored.

3.5.4. For later periods, evidence for a localised littoral fishing industry is beginning to present itself. A medieval Salmon fishery and twelfth century weir in the River Frome associated with Wareham Priory is first mentioned in AD 1160. The fishery is well documented until the Fisheries Act of 1861 deprived the owner of the monopoly of salmon fishing there. In 1950, a substantial stone structure was discovered on a former riverbed at Wareham, identified as a twelfth century weir. Further, the post-medieval Steamer Point Fishpond, Bournemouth, was a stone-built pond for keeping sea fish on the beach. While the pond may have been associated with Highcliffe Castle, the simplest method of capturing and retaining fish on the foreshore comprises the construction of wooden fishtraps. Only two are recorded for Dorset: at Stanton St Gabriel and Studland.

3.5.5. Historical evidence for Dorset's offshore fishing industry appears in the Domesday Book where fishermen are noted as being part of the very small community of 'Brige' near Wyke Regis, close to Chesil Beach. In 1399, Melcombe is noted as having 40 fishing boats, and fishing craft are depicted on Treswell's Map of 1586. The activities of individual fishermen are occasionally documented. In June 1708, a French ship chased a Weymouth mackerel boat into Portland Roads and claimed a ransom of £10 in 'drapery and hatts' from the owner. Swyre church contains a 17$^{th}$ century memorial to James Napier, a fishmonger, who supplied catches to two abbeys.

3.5.6. In a way similar to merchant 'quarters' within Dorset's coastal towns, the layout and planning of 'fishertowns' has the ability to elucidate shoreside support for Dorset's offshore fishing industries. Environmental remains are another important source of evidence for the species and quantities of fish being exploited. Dorset's coastal waters contain important spawning grounds and nurseries. Today's fisheries are primarily for crab and lobster; fin-fish such as bass, cod, pollack and flat fish such as plaice and sole; and shell fish such as scallops, whelks, and oysters. A review of both historical and archaeological evidence would be extremely helpful in understanding the importance of this industry.

3.5.7. Although consideration might be given to address 'Agricultural Practice' as a specific theme within the Research Framework, there is potential overlap with the Economy theme, particularly for later periods as agricultural practices became more industrialised. For example, hemp was grown around Bridport and used in the manufacture of naval anchor cables. King John is noted as ordering cables from Bridport and an Act of Parliament of Henry VII shows that the trade was well

established. As a consequence, understanding the economy in the countryside may be essential to understanding the economies of towns.

**Framework Objectives:**

- To develop an understanding of agricultural practice, animal husbandry and diversification from earliest times;
- To develop an understanding of fisheries and their role in the subsistence farming and the local economy.

**Specific areas of research might include:**

- Elucidating the nature of the Mesolithic to Neolithic transition in the context of wider national debates regarding early horticultural experimentation;
- Undertaking historic landscape characterisation to quantify how much survives of early field systems and land divisions;
- Characterising woodland industry 'signatures' as distinct from the evidence for agriculture;
- Characterising the balance between pastoral and arable economies, and influence of breeding programmes (e.g. rabbit warrens) and wildlife management (e.g. deer parks);
- Investigating the relationship between town and country in the production and supply of food;
- Exploring the influence of farming on the location of hards and landing places linked to the water-bourne transportation of agricultural surplices to more distant markets;
- Exploring the role of fisheries; their location, management, and role in local food production.

*Production*

3.5.8. There is likely to be a complex independence between various industries making the most of raw materials and bi-products (**Figure 4**). However, having established the archaeological 'signature' of individual 'crafts', neighbourhoods or craft quarters are often distinguishable in the built and archaeological record. A good example of this are broad pavements of Bridport which were once drying tables for the thousands of miles of rope demanded of the town by the Royal Navy (Wheatley 2000: 113).

3.5.9. Although the lack of data from now-submerged areas precludes meaningful comment on intertidal exploitation in prehistory, evidence for Iron Age and Romano-British salt production on low-lying ground in Dorset is well documented (Farrar 1975). In Purbeck specifically, it seems as if salt working took place as part of a wider pattern of activity extending to the production of shale ornaments (Sunter and Woodward 1987: 44-124).

3.5.10. Evidence of salt production sites of the Iron Age, Romano-British and medieval periods is widespread across the region. For example, the Domesday Book mentions a salt pan granted by Athelstan in 934 near Weymouth. The same site is possibly mentioned again in 1665 as being in the marsh surrounding Radipole Lake. No concise texts have been published since Farrar (1975) and Keene (1988). A holistic approach to the salt industry in Dorset is therefore required detailing the development of the industry and addressing evidence from recent discoveries.

3.5.11. Dorset's coastal alum and copperas mines and works evidently made use of pyrites mined from Eocene surface deposits or collected from littoral deposits washed out by marine erosion, and processed locally. Infrastructure associated with the copperas industry in Kent has been identified and recorded on the foreshore at Whitstable (Allen *et al* 2001) thereby providing parallels for the identification of similar structures in Dorset. Alum and copperas mines and intertidal works on Brownsea Island are recorded from 1586 and the seventeenth century (Papworth 1992), while additional works are known in Kimmeridge. Allen *et al* (2001) suggests that the copperas industry was one of the first major inorganic chemical industries to be established in England. Further research has shown that the copperas industry played a previously unexpected role in the industrialisation of the national economy from the late-sixteenth to the late-eighteenth centuries (Allen *et al* 2001). A comprehensive history of Dorset's alum and copperas industry has yet to be compiled. The principal use of copperas was as a textile dye mordant and saddening agent and the industry is therefore closely linked with Dorset's woollen industry.

3.5.12. The well-documented, and therefore predominantly post-medieval, industrial sites of the Dorset coast comprise mainly lime kilns as well as stone quarries, clay- and chalk pits (many of which are recorded as 'Old Quarry' on historic mapping). Quarry sites, and associated infrastructure, remain obvious features in the landscape and have been discussed recently by Stainer (2000), although this theme should also address the development of sites and identify those areas where quarrying occurred in earlier periods. Of particular interest is the correlation of (former) quarries with the chance discovery of archaeological remains from the Late Pleistocene. Such correlation might facilitate the refinement of hitherto poorly recorded findspots.

3.5.13. Sites, buildings, structures and features associated with the construction, maintenance and supply of maritime craft can be discerned at only a few sites along the Dorset Coast. The 'Building Slips' marked on a pre-1823 map of Bridport indicate the potential for the size of vessels built there (the 64-gun ship *Agamemnon* for example, was launched from the slips at Buckler's Hard in 1781). At Poole, the Foundry site revealed a possible medieval jetty and a timber store for a medieval boatyard containing sixty-two ship timbers. In the absence of slipways, the nineteenth century *Shipwright's Arms* Public House in Hamworthy may be the only evidence of later boat building at Poole.

3.5.14. The Second Edition OS Map marks timber yards along the Back Water Channel, but no actual 'shipyards' are recorded. Despite this, boatbuilders in Poole, and Christchurch, are known for Coast Defence and Landing Craft were made there during World War II. Elkins Boatyard at Christchurch manufactured some 220 vessels for the Royal Navy (Hodges n.d.)

3.5.15. For commercial enterprises, entries in Pigots Directories and Kellys Directories can indicate the diversity of (Post-medieval) business within coastal areas. Those listed in Pigots Directory 1837 and directly relating to maritime trades in Poole include 2 block and pumpmakers; 4 coopers; 1 line, twine, fishing net and seiner maker; 3 marines stores; 2 sailcloth makers; 2 ship and anchor smiths; and 2 boat builders. There is great potential to use these types of documentary sources in support of archaeological survey. However, further research is required to record businesses from earlier periods, their associated premises, and coastal links.

3.5.16. Similarly, evidence of Dorset's oil industry is not particularly well documented and requires further investigation. In the nineteenth century, oil was extracted for a time from the shale beds at Kimmeridge – evidenced by a single 'grasshopper' pump recorded there (Buchanan 1972: 168). Twentieth century exploration and production at the Wytch Farm Oil Field, Arne, may have earlier origins.

**Framework Objectives:**

- Gain a better understanding of the sources of raw materials in coastal zone and the complex interdependence between industries maximising their use;
- To explore the nature and importance of deep-sea and inshore fisheries to the local economy.

**Specific areas of research might include:**

- Identifying and recording the physical development of distinct littoral industries, such as salt-making, and their associated infrastructure;
- The correlation of (former) quarries with the chance discovery of archaeological remains from the Late Pleistocene;
- Exploring the history of Dorset's alum and copperas industry and its links with Dorset's woollen industry;
- Reviewing the built environment and archaeological record for evidence of distinctive 'trade' quarters.

*Distribution and Consumption*

3.5.17. Dorset has a number of major Iron Age and Romano-British industrial sites on its coast that appear to have been providing access to extensive inland zones and occasional offshore finds have provided direct evidence of maritime trade. This theme might therefore address the evidence for the development of trade routes, ports and their hinterlands in the Iron Age, and at apparent continuities and changes in the Romano-British period. The record of Roman transport is limited to evidence of the road network, elements of which survive as Scheduled earthworks. Evidence relating to waterfront developments may also help to identify a settlement's changing fortunes as a place of import and export beyond the Romano-British period.

3.5.18. A substantial proportion of evidence for Dorset's commerce lies in the marine environment. Shipwrecks associated with the ports, harbours and anchorages of the Dorset Coast provide the opportunity to study trade and other maritime contacts.

3.5.19. The documented losses off Dorset range from an unidentified wreck of 1280 to extensive mid- to late nineteenth century shipping losses. Where known, cargoes are recorded within the HER thus allowing for the examination of trade and commerce. In August 2000, a party of divers from Newbury SAC discovered an elephant tusk while diving on a reef off West Bay. Other tusks have been recovered from Chesil Beach which may be associated with an interesting period in the trade of Lyme Regis, for in 1833 it was noted that 'a lucrative trade was carried on with Guinea, from which were imported the usual commodities of elephants teeth…' (DCF Marine Archaeological Database).

3.5.20. Patterns are often discernible when archaeological evidence is used conjunction with surviving port and customs records. Poole and Weymouth were once both staple ports with Royal charters allowing them to take part in the wine trade. The merchants of Poole and Weymouth also were amongst the first to commercially exploit the Newfoundland cod trade. By the 17th century, there was a well-established trade triangle. From Poole, cargoes to Newfoundland included salt, bread, flour and other foodstuffs, wool, and hardware. Fish, fish oil, and the products of the seal fisheries were taken to the West Indies, Spain and Portugal. The return to home port cargoes being sugar, rum, and coffee from the West Indies, and wine and fruit from Spain and Portugal (MacDonald, 1993). The HER includes references to documentary such as the *Four Friends* which ran ashore on Chesil Beach carrying sugar in 1768 and the *Mary Harriot* which sank in Swanage Bay in 1769 again with a cargo of sugar.

3.5.21. Particular industries, such as the Portland stone and clay extraction, have well-documented distribution by sea. Poole became the main source of supply of clay for pipemaking to London. Between Christmas 1632 and Christmas 1633, 457 tons of clay was shipped to London, 60 years later 2214 tons went to London. Poole was also shipping the finished products 482 gross, two hogshead and chests went to Portsmouth, Cowes and Newcastle (Macdonald, 1993). Pottery production diversified and increased in the 19th century with establishment of new businesses, such as Architectural Pottery in 1861.

3.5.22. Inigo Jones made Portland stone popular for large, high status building. Large quantities were shipped to London for the building of the banqueting hall of Whitehall. With 18th century Acts of Parliament enabled towns, such as Southampton, to effect improvements, trade in Purbeck paving stone also flourished through maritime transport.

3.5.23. There are also the 'hidden' distribution networks of the black market and smuggling. Although found outside the study area, the collections of Dorchester Museum contain the remains of a cache, including an ancient anchor and chain as well as axes and hammers (probably from a fishing smack). However, such activity is predominantly biased to Post-medieval periods.

3.5.24. Artefacts that can be securely provenanced and dated have a special role to play in understanding patterns of distribution and consumption. The wide array of imported wares that appear in varying quantities on sites may help to identify chronological changes in the patterns of consumption among different groups and individual households.

3.5.25. In the medieval times, the formalisation of markets through Royal charters (e.g. such as Weymouth, granted by Henry III in 1248) gives more opportunities to study the rise of consumerism. Street names and historical documents provide a wealth of opportunities in the post medieval period to explore the changing nature of high streets and shops. Archaeological clues may still be visible today in the structure of the urban environment and architectural record.

3.5.26. Artefact studies which explain assemblages in terms of literacy, leisure pursuits, fashion and ethnicity rather than purely providing a catalogue have much to offer in helping to understand individual as well as collective expressions of identity. Identifying ethnic traits from collections of material culture from the Dorset coastal region early may prove extremely difficult, particularly for early periods.

**Framework Objective:**

- To increase our understanding of the relationship between production and transport, and supply and demand through time.

**Specific areas of research might include:**

- Artefact studies that consider continental links and the structure of markets for goods through the utilisation of maritime transport;
- Examining the evidence for Dorset's ports and harbours as centres for commerce, trade and transhipment, and how this has changed over time;
- Undertaking research into the nature of cargoes and their movements in relation to local and more distant networks.

# 4. RESEARCH STRATEGY

## 4.1. SELECTING PRIORITIES FOR RESEARCH

4.1.1. The current funding for archaeological research projects is unlikely to address all the themes and topics suggested within the above draft agenda. A way of deciding priorities needs to be determined with a view to also providing value for money in relation to the threats to the resource. Teams undertaking similar exercises in other coastal areas have defined criteria to help with prioritisation (ed. Brown and Glazebrook, 2000);

- The extent to which the project will record data that would be otherwise be damaged or destroyed (and which cannot be preserved in situ by more cost effective means);
- The extent to which the project addresses research questions outlined in the agenda
- The extent to which the project utilises local knowledge and supports local expertise to further regionally specific research aims;

- The extent to which the project benefits the wider public;

- Cost effectiveness.

4.1.2. During peer review and consultation, it may be decided to adopt the above and/or generate alternate/additional criteria. The final draft of this document should aim to set short, medium and longer-term priorities in a clear and transparent way.

## 4.2. MAXIMISING CO-OPERATION

4.2.1. As previously stated, one of the aims of this Research Framework is provide an opportunity for guiding, and potentially integrating, large numbers research programmes and projects. As a consequence, the themes and topics should not be viewed as prescriptive but as a means to help develop and evolve new priorities. Discoveries and ongoing research are as likely to answer as many old questions as pose new ones.

4.2.2. One of the premises of this Research Framework is to make the most of the Dorset's HER. There is now a large body of new data that has the potential to drive a research programme. Many of the themes include both research subjects and the development of techniques of investigation. The potential for collaboration and partnership between different individuals and institutions is clear, as many of the research themes cut across chronological periods and specialisms – archaeology, history, environmental science and hydrography.

4.2.3. Publicising programmes of research is also important, so that researchers avoid duplication of effort but also have the opportunity to focus their work more effectively. The work of the Archaeology Group of the Dorset Coast Forum in encouraging dialogue and links with related disciplines and agencies is vital.

4.2.4. Recognition needs to be given to the need to collate the very great amount of work being done by archaeological and historical societies and private individuals. Phase I of Dorset's RCZAS has identified numerous examples of research taking place outside universities and professional units.

4.2.5. The gulf between amateur and professional archaeology is sometimes exacerbated by the focus of the contractual fieldwork. However, along the Dorset coast as elsewhere in the country, there is scope for strongly collaborative projects building bridges between developer and research funding and between commercial and so-called amateur archaeology.

4.2.6. Phase I of Dorset's RCZAS has identified 6 universities/colleges of further education with archaeological research interests in the Dorset coast. There are opportunities at both undergraduate and post-graduate level for students to make direct research contributions.

4.2.7. The Events section of Dorset's HER notes 23 independent archaeological contractors and consultants who have undertaken fieldwork at various scales along the Dorset Coast. Developers have funded most of the work, with English Heritage being another major contributor. There may be a significant number of publications in

preparation, and a 'research audit' would be extremely beneficial in spite of the nature of contractual agreements in a highly competitive industry.

4.2.8. Similarly, an audit of curatorial/collections research in Dorset's museums/local history libraries/archives may also be beneficial.

4.2.9. 'Celebrating the Dorset Coast' is a Priority addressed with the Dorset Coast Strategy (DCF 1999). The priority seeks to develop awareness and enjoyment of the coast that must include Dorset's coastal heritage assets. Here, heritage trails and interpretative publications might be employed alongside a programme related to general education and informed tourism. Dissemination may take various forms including traditional publication, internet and web site access, exhibition posters, conference proceedings, and abstracts. The very fact of publication can be a spur to further research – sites can be incorporated into the research programmes of other organisations. Dorset's coastal history and archaeology has potential to inform national studies in a variety of ways. Specific themes relating to coastal archaeology should continue to be included in the successful programme of 'Dorset Archaeology Days'.

4.2.10.. Maritime related archaeology, however, remains largely inaccessible to the general population. The richness of Dorset as a centre for the diving community is reflected in the large number of artefacts reported to the Receiver of Wreck during the 2001 MCA Wreck Amnesty (MCA 2001). Additionally, displays of wreck material at the Dorset County Museum, Weymouth Museum and Portland Museum combined with the popularity of the WreckMap series of investigations run by the Nautical Archaeology Society, provides Dorset with a demonstrable public interest in the underwater heritage. Such interest must be sustained by liaison with Dorset's Fishing and Maritime Industries as well as recreational users.

4.2.11. As can be seen, Dorset's HER has benefited enormously from an intensive period of enhancement. The challenge now is to keep the information up-to-date and encourage the flow of information to DCF and DCC's archaeology section. In many instances, strong links already exist with local societies to promote the reporting, and monitoring, of material and/or sites.

4.2.12. The links might be strengthened further to development of a series of small projects, such as Parish histories, that might be give a focus for closer collaboration. Similarly consideration might be given to developing a volunteer/'Friends of Dorset HER' group to undertake focused research on particular aspects of Dorset's Coastal Heritage. For example, such enhancement could include individual testimonials recorded and digitally linked to HER records. The implementation of a 'Shorewatch' initiative to involve local groups in monitoring sites might also be explored.

4.2.13. The development of a 'community archaeologist post' linked to the Jurassic Coast's World Heritage Site Status or a Charitable Trust to take forward the aspirations of this Research Framework are other possibilities that might be explored.

4.2.14. In a presentation at a recent seminar (Fragile Archives of History- Wetlands, Archaeology and Past Landscapes, Wetland Archaeology, 8 May 2004, London Wetlands Centre), Adrian Oliver, Head of Archaeology Strategy, expressed English Heritage's desire to develop 'Beacon' projects. In this context, a Beacon project might be taken as those that can be held up as exemplars of excellence and joint

working between different agencies. In many ways, the work of DCF could be perceived as having put the building blocks of such an initiative in place. A fruitful consultation on this draft document would mean another step taken towards this goal.

## 4.3. MANAGEMENT MECHANISMS

4.3.1. An area that is currently missing from the Research Agenda is 'Management of the Resource'. Topics under this heading might include the following:

- Co-ordination;
- Partnership;
- Integration;
- Communication and Dissemination;
- Developing science-based methodologies for investigation and conservation;
- Project development and funding;
- Increasing the accessibility of the HER.

4.3.2. The organisation of future co-ordination is a priority for the implementation of this Research Framework, with DCC and the DCF-AG likely to be taking leading roles. The mechanism by which this Research Framework is finalised from its draft form and by which it will periodically reviewed and updated also needs to be put in place as a priority.

## 4.4. FIELD ASSESSMENT

4.4.1. The quality of the available record of coastal remains in many areas is such that rapid baseline surveys would be extremely beneficial to the stretches identified in the main Phase 1 report (Wessex Archaeology, 2004).

4.4.2. Dorset's coast offers a range of challenging environments for field survey. Areas above high water (Zone CO3) include urban and rural areas inland, on cliff edges and within MoD ranges (as well as the Islands of Poole Harbour); intertidal areas (Zone CO2) comprise sites that lie between Mean Low Water and Mean High Water and includes the mudflats of Poole and Christchurch Harbours; Marine areas (Zone CO1) encompasses all areas below Mean Low Water. Within these defines three zones, Field Assessment is considered an essential second phase of the Dorset Coast Historic Environment Survey. Priority tasks include the following;

- Verify identifications made during a desk-based assessment;
- Locate and characterise sites and features undetected by Phase I (i.e. desk-based assessment);

- Determine the geomorphological/sedimentary context for features;
- Assess whether features are actively eroding;
- Selectively sample features;
- Test fieldwork methodologies and assess the practicalities and logistics of future fieldwork.

4.4.3. Phase II would therefore deliver an enhanced set of HER records to DCC, and the NMR, to facilitate the further development and implementation of this Research Framework.

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Lyme
Bridport
Cogden
Fleet
Weymouth
Osmington
Lulworth
Kimmeridge
Holton
Poole
Wareham
Arne
Studland
Handfast
Swanage
Langton Matravers
Bournemouth
Avon
Christchurch
Hengistbury
Lyme Bay
Poole Bay
Portland Harbour
West Portland
East Portland
Weymouth Bay
Survey Area

CO1
CO2
CO3



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Survey Area and Stretch Boundaries

Figure 1

Survey Area

Wessex Archaeology

- Middle Iron Age
- Roman
- Saxon
- Medieval
- Post-medieval
- Modern
- Undated

- CO1
- CO2
- CO3



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Maritime Infrasructure: Ports, Harbours, Inland Navigations and related Shipping Losses

Figure 2

Survey Area

Wessex Archaeology

Neolithic
Bronze Age
Iron Age
Roman
Saxon
Early Medieval
Medieval
Post-medieval
Modern

CO1
CO2
CO3



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Defence (Civic and Military): Wartime Shipping Losses

Figure 3

Survey Area

Wessex Archaeology

Mesolithic
Bronze Age
Iron Age
Prehistoric
Roman
Saxon
Medieval
Post-medieval
Modern
Unknown
CO1
CO2
CO3



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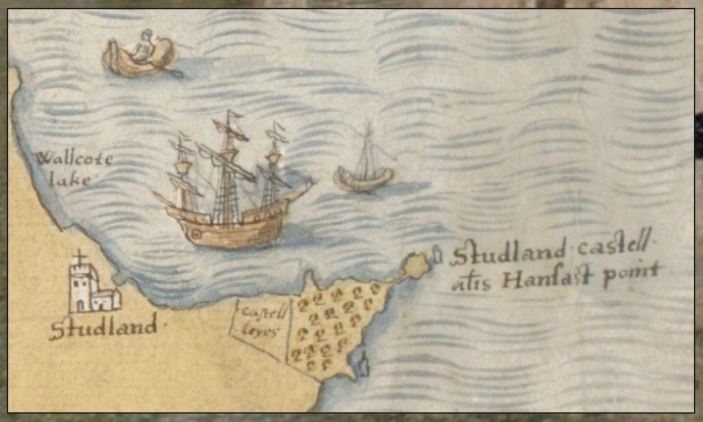
Economy: Production, Distribution and Consumption

Figure 4

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