



New Forest Rapid Coastal Zone Assessment: - Project Proposal



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i. Acknowledgements and Background

Maritime Archaeology Ltd (MAL) was commissioned by the New Forest National Park Authority (NFNPA) to produce a Project Design for a Rapid Coastal Zone Archaeological Assessment. The information forms the basis of this document for circulation in advance of key stakeholder meetings to discuss the proposed project.

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1. Project Background

This project has been formulated to address the need for enhanced understanding of the fragile and unique coastal archaeological resource of the New Forest National Park. Such information is urgently required to feed into management, interpretation and access schemes.

This document sets out the need for the project, presents the aims, objectives, methodology and outputs. The current and potential future audiences for the coastal heritage are considered and have been used to guide project outputs.

This document has been produced in line with English Heritage Management of Archaeological Projects II, in addition to the requirements for applications to the Heritage Lottery Fund.

1.1 Coastal Archaeology - Our Threatened Heritage

The currently known archaeological record and extensive historic record of the New Forest is just a small indicator of the extent and potential of the resource within the coastal zone. Discoveries of remains dating from prehistoric periods through to the Second World War are just a taster of the yet to be recorded evidence. These remains help to demonstrate the true legacy of human occupation and development of the area, however, there has been little archaeological work to fully appreciate the extent, character and importance of this resource.

The New Forest coast, where the land meets the sheltered waterway of the Solent, holds a wealth of information about human development, changes to environmental conditions and details of past sea level changes. After the formation of the Solent, maritime influences have shaped the coast, its inhabitants, settlements and industries. A number of prominent coastal trades and activities have continued across a number of periods, these include saltworking, shipbuilding, smuggling, iron working, fishing, and maritime trade. Ships and shipping are an important part of this legacy and the wrecks off the coast include many examples of local craft which were once intrinsically linked to the coastal industries and population. The varied environments of the New Forest coast, including open water, extensive mudflat and saltmarsh, offshore sandbanks and tidal estuaries, provide a rare chance to study human development and interaction with the marine environment.

The national importance of the coastal archaeology of the Solent has been recognised in English Heritage's 'England's Coastal Heritage'; this publication also highlights a lack of detailed knowledge of the resource. Despite this recognition of its importance the coastal archaeology of the New Forest, the heritage of the Nation, remains:

- **Understudied**

To date the archaeology of this coastal margin has usually been studied as single sites or under specific themes which has led to an uneven coverage of discovery of field remains and knowledge of areas or types of feature, settlement, industry etc.

FACT – *Archaeological evidence of saltworking exists*

...but many of these coastal sites and associated earthworks have never been surveyed or recorded.



Figure 1.1 – Earthwork remains of a dock associated with the Pennington saltworks, further evidence of salt production is contained in adjacent fields which stretch to the coast (HWTMA)

- **Not understood or interpreted**

Archaeological finds indicate traces of human activity which span from prehistoric times when sea level was lower, right through to evidence from the World Wars and beyond. Without gathering comprehensive data on the archaeological traces along the coast and interpreting this in relation to previous finds, coastal change and human uses of the area our understanding of the development of the coast and its place in history will not improve.

FACT – Prehistoric landscape evidence along the New Forest coast is some of the most extensive in the UK

The Solent valley used to look very different during prehistory. The Isle of Wight was then joined to the mainland and the area that is now underwater was prime territory for prehistoric peoples who would have exploited resources such as animals watering at the river, fish, fowl and a range of marine resources. Evidence of their life in this area was preserved by sediment that was deposited when sea level rose and drowned the Solent valley.



Figure 1.2 (left) The route of the Old Solent River before sea level rise

Figure 1.3 (right) Diver inspects Mesolithic occupation site now eroding from a submerged cliff situated at –12m opposite the New Forest coast off the North coast of Isle of Wight (HWTMA)

- **Inadequately represented in management and research frameworks**

Over the past 20 years there has been rapid development in the fields of coastal management and planning, and marine and coastal archaeological techniques and studies. These advances have thrown into sharp relief the paucity of knowledge of the coastal archaeology of the New Forest coastline. Without better baseline knowledge of the archaeology the long-term protection and conservation of sites will not be possible. This is particularly important when responding to development pressures which may threaten sites both on land and underwater, and the ability of authorities and curators to implement protocols such as the Joint Nautical Archaeology Policy Committee Code of Practice for Seabed Development.

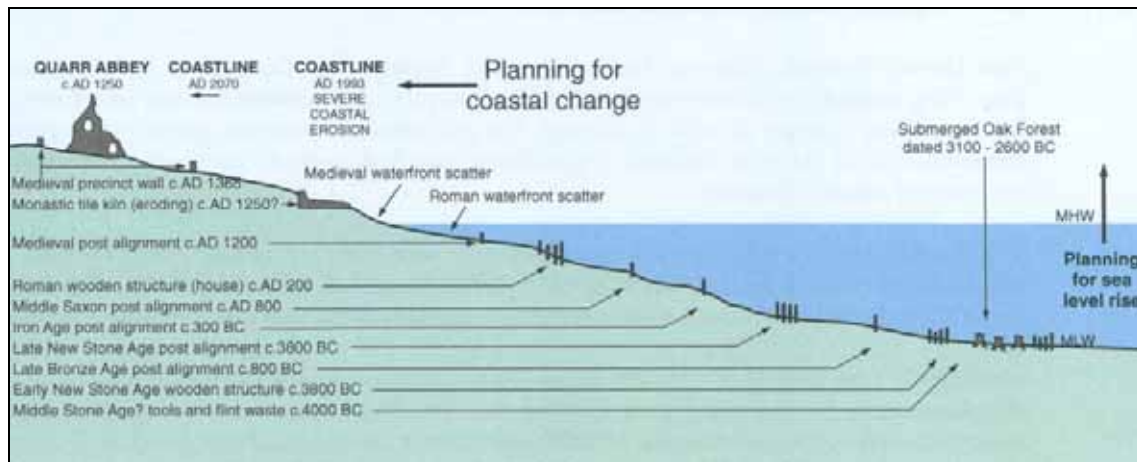


Figure 1.4 City and port development over a sediment archive in a riverine inlet (LIFE Project)

- **Eroding away without any records being created**

Climate change and associated sea level rise and coastal change are having a severe impact on archaeology. Sites on or adjacent to the coast which were once covered with layers of protective silts are now being revealed, damaged and in some cases destroyed. Due to this dynamic environment coastal sites are some are the most 'at risk' archaeological remains.

FACT – Irreplaceable archaeology is eroding away on a daily basis

Defra predicts that sea level will rise over the coming years by:

1990 – 2025 = 4mm per year

2025 – 2055 = 8.5mm per year

2055 – 2085 = 12mm per year

Combined with increased storm activity this will result in more and more archaeology along the New Forest Coast becoming vulnerable and then being washed away.



Figure 1.5 Wooden remains of trackways believed to date from the Bronze Age exposed and eroding from peat deposits on the Test opposite Southampton Docks (HWTMA)

- **Not interpreted for the public to enjoy**

The general public whether local residents or visitors to the coast, currently have little access to their heritage due to limited interpretation. This is related to the lack of comprehensive study and the sometimes difficult physical environment in which the resource is located. Opportunities to develop public interpretation avenues are urgently required to promote public interest and help to engender a sense of value for the heritage that will ultimately feed into the long-term conservation of the resource.

FACT – There is often as much archaeology under the water as there is on land

There are over 75 recorded shipwrecks on the Shingles Bank which lies just off the New Forest coast and marks the northern extreme of the hazardous entrance to the Western Solent. These include all types of vessels from naval ships, to ocean traders and local coastal craft. Shipwreck remains often lie preserved within the seabed and are an important part of the development of Britain as an island nation.

- **An education resource that is not utilised**

Archaeology attracts the interest of young and old. From the thrill of discovery, through recording and analysis to the piecing together of new facts about the human past there is something for all ages. The unique and varied archaeology of the New Forest coast provides a wealth of opportunities for education initiatives which at present are not being realised. This potential has been recognised by DCMS in 'The Historic Environment: A Force for the Future' which has as an objective 'to realise the full potential of the historic environment as a learning resource'.

FACT – Archaeology is an inspirational learning resource

Due to the nature of archaeological investigation it is relevant to a wide range of national curriculum subjects for schools. One recent 'maritime archaeology and aggregates beach workshop' took children to the coast to engage with this heritage.



Figure 1.6 Learning about coastal archaeology in a hands-on way through a beach workshop

1.2 Proposed Project Aims, Objectives and Phases

In order to address the current lack of understanding of the archaeological potential of the New Forest coastline, the current lack of available interpretation, display and information for the public and the need to inform appropriate responses to coastal management, a three phase project is proposed.

1.2.1 Broad aims and objectives

The project has been developed to fulfil the following aims and objectives which are based on archaeological objectives promoted by English Heritage for Rapid Coastal Zone Assessments and further dissemination, education and outreach needs identified by the New Forest National Park Authority. The project will:

- Provide enhanced archaeological records for coastal heritage assets, which will enable improved curatorial responses to strategic coastal planning and management initiatives at a local and regional level and will provide a factual basis for responses to applications, schemes or developments.
- Provide data which is compatible with the needs of other coastal managers, parallel coastal surveys, industry, researchers, the public, schools and education groups.
- Develop an overview of coastal change from the Late Upper Palaeolithic onwards, which will provide a framework for human occupation and associated remains. This data is relevant for management and research, but also importantly for public interpretation and display.
- Provide an assessment of the degree and nature of threat to coastal historic assets which has regard to the models of future coastal change presented in Defra's *Futurecoast* study (2002), and relevant Shoreline Management Plans produced by New Forest District Council.
- Provide a broad assessment of the likely archaeological potential and vulnerability of all stretches of the coast
- Provide a sound basis for developing management and research priorities in respect of sites and areas of archaeological potential with different levels of importance and under different levels of threat, based on:
 - a. The identification of areas or sites meriting further survey or evaluation

- b. The identification of areas or sites requiring positive management action
- c. The identification of significant historic assets meriting consideration for protection by means of statutory designation (listing or scheduling)
- d. The identification of areas where heritage assets may be at high risk of damage or destruction
- e. The establishment of future research priorities for the coast
- Increase public awareness and understanding of the coastal archaeology and heritage of the New Forest coastline through a range of education initiatives
- Engage members of the public, whether local residents or visitors, in the survey of their archaeological heritage both on land and underwater
- Provide a conservation message through encouraging long-term monitoring of sites at particular risk by local groups
- Provide an outreach programme that will reach all community members from schools through to older ages
- Develop teaching resources for schools which promote the inclusion of coastal archaeology within national curriculum targets
- Develop and deliver a suite of dissemination and outreach materials to reach a broad public audience that will act as a long-term, sustainable legacy of the project

To deliver these aims and objectives the project has been split into three phases.

1.2.2 Phase one

Data Assessment

The desk-based assessment is required as a precursor to the larger field survey element of the project. The DBA will:

- Identify sites for fieldwork validation using a range of sources
- Identify other areas of priority for field survey
- Provide a reliable map/ chart base for survey
- Establish framework and health and safety requirements for the inclusion of volunteers with fieldwork
- Assess research, publications and other sources of data relevant for interpretation (phase three)

Education and outreach

- Initiate an outreach programme of talks to community groups
- Develop project webpages which will present up to date project information and results
- Contact and build a network of volunteers and interested organisations
- Initiate consultation with venues suitable for long-term dissemination materials

1.2.3 Phase two

Fieldwork

The field survey will bring together professional archaeologists and volunteers to undertake recording. This will fulfil criteria established for RCZAs in addition to expanding this to the marine zone. Allied to this a programme of education and outreach initiatives will be delivered. Phase Two will:

- Verify the features identified through the DBA, both new and previously recorded, ensure through site visits and inspections that their description is accurate, noted/ sketched/ photographed, their management context (e.g. eroding, marsh, built over etc...describe) is identified, and that the threats and issues they face are described.
- Locate and characterise sites and features undetected by the DBA

- 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

Education and outreach

- Involve volunteers in a hands-on way with their heritage both in the inter-tidal zone and underwater
- Establish a group of volunteers to encourage long-term involvement in coastal archaeology
- Provide a series of talks and lectures for groups and societies and develop sustainable ways of ensuring long-term availability of talks through packs and training
- Deliver an innovative themed series of public events and activities (or contribute to established local events)
- Provide workshops for schools in the coastal zone
- Draft concepts and formats for dissemination materials and liaise with venues and outlets

1.2.4 Phase three

Interpretation and assessment for dissemination

This phase will draw on results and undertake research to enable sites to be placed within their archaeological, management and research context. Key to this phase is the interpretation of sites and production of illustration and visual material for use in the development of dissemination materials.

- Synthesise archaeological and documentary data utilising the results of the field survey phase, setting it within a regional or wider context, for the purposes of SMR/HER and NMR enhancement
- Provide an assessment of the vulnerability of historic and archaeological sites by reference to models of future coastal change provided by *Futurecoast* and/or Shoreline Management Plans
- Provide an overview of coastal change from the Late Upper Palaeolithic onwards
- Identify particular research topics to which future work in the study area can be directed to best effect

Education and outreach

- Continue talks, events, activities and schools workshops programme
- Deliver education pack for schools
- Develop and install interpretative materials for public dissemination

1.2.5 Study area

Viewing the New Forest coastline today it is possible to see a range of environments influenced by the tidal cycle. Due to the tidal ranges and relatively shallow nature of many of the submerged near shore zone and significant offshore sandbanks there is a large 'inter-tidal' area which is exposed to varying degrees at low tide. The changing sea levels, geomorphology of the area and intrinsic links of wrecked vessels with coastal ports and trades dictated the need to include the submerged area offshore in addition to low lying areas which stretch inland that have been influenced by the marine environment in order to provide a true 'coastal landscape' perspective.

To capture the full coastal landscape the project study area (figure 1.7) was defined in the west by the county boundary between Hampshire and Dorset and in the east by the boundary with Southampton City. The landward extent of the study area has been defined using a 1.5 kilometre buffer from the present coastline, this was further

interrogated to ensure that it encompassed all land lying below the + 10 metre contour. This definition was used to ensure that all areas influenced by rivers and their tributaries are included in addition to providing a measure of caution due to predicted sea level rises and the potential effects on archaeology. In the offshore zone the -10 metre contour was utilised to guide the extent of the study area. The presence of shallow offshore banks, particularly in the west of the area, required the extension of the boundary to the south which resulted in some areas deeper than - 10 metres being included.

This extensive study area will be used for the interrogation of datasets during Phase One. During Phase Two the areas targeted for field survey are likely to be more concentrated close to the inter tidal and near shore zones. However, during Phase Three, research to enable the full interpretation of the project results will include data and publications from outside the immediate study area.

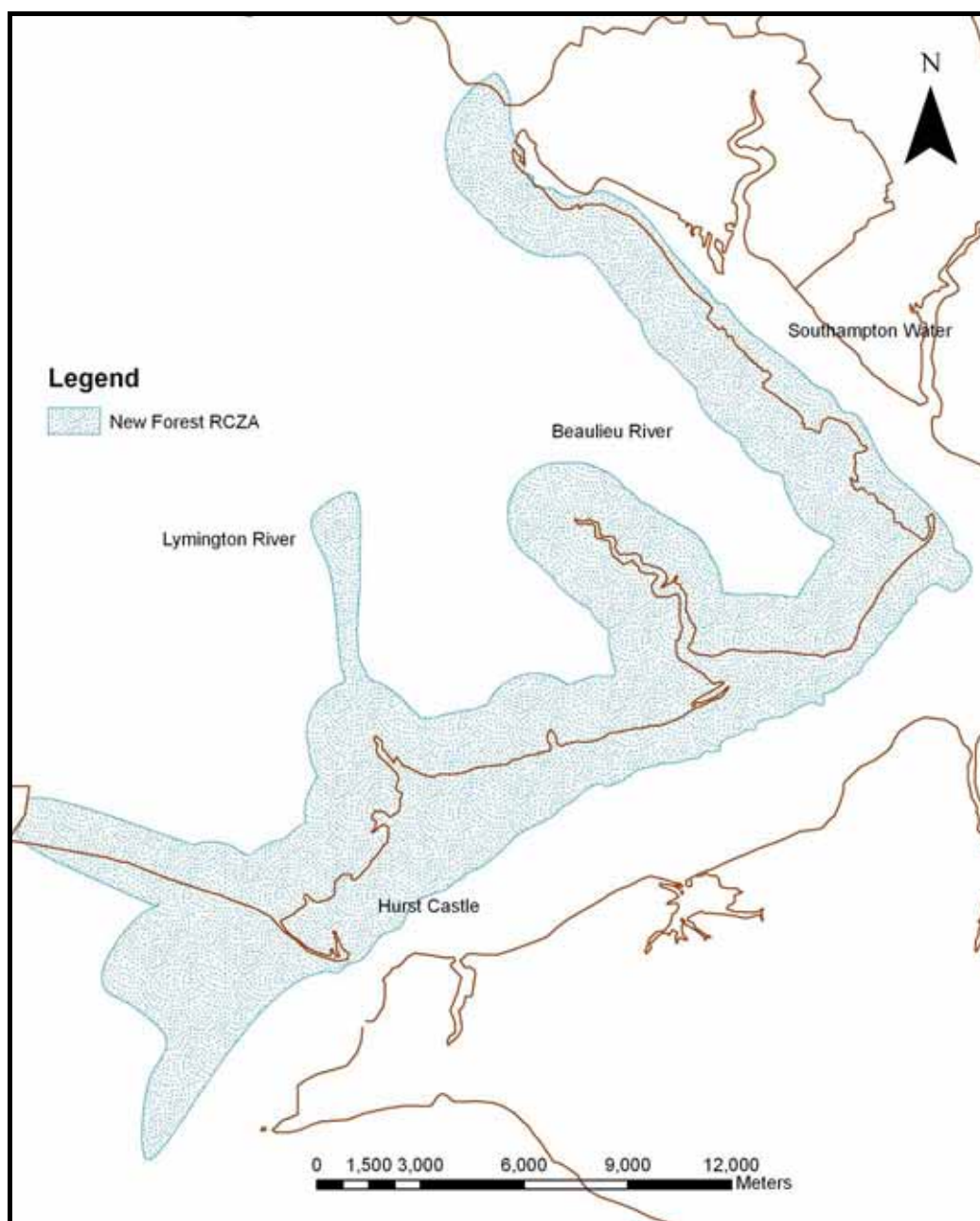


Figure 1.7 – Image showing project study area

1.3 Project Benefits

The project will contribute substantially to a range of social and environmental areas in addition to providing an economic benefit.

1.3.1 Social

The key social benefits of the project are related to the wide range of opportunities for involvement within the project and long-term dissemination work.

Many of the Rapid Coastal Zone Assessment projects which have been undertaken to date have focused on management and academic aims, this project will be the first to incorporate education, outreach and long-term dissemination initiatives into the core project aims.

The project will contribute to the Government agenda as articulated in DCMS '*The Historic Environment: A Force for the Future*'. Two of the principle objectives of this document are:

- 'To realise the full potential of the historic environment as a learning resource'; and
- 'To make the historic environment accessible to everyone and ensure that it is seen as something with which the whole of society can identify and engage'

This will be achieved through:

Making coastal archaeology accessible: it is often difficult to interpret and present archaeological remains which now only exist as traces on the surface of the inter-tidal zone or earthworks that have become covered in grass. The known and potential archaeological resource of the New Forest coastline will be brought to life through this project to enable broad public access.

Volunteering: There are a large number of people interested in heritage and willing to become actively involved through the donation of their time. There are currently only a limited number of opportunities available for involvement in heritage; this project will provide a focus on coastal archaeology, through which volunteers will see the tangible results of their input of time. Not only will this benefit the heritage, it will also contribute to government agendas on developing opportunities for volunteering.

Raising conservation awareness: Building a long-term conservation ethic will help ensure the future of coastal archaeological sites. Through involvement, education and outreach the historic environment will be made more accessible and through understanding, will promote its value.

Enthusing children: Development of a programme of school workshops, education resources and events and activities will provide immediate 'hands-on' appreciation in the field, this will be reinforced through the education materials which will embed coastal archaeology within curriculum areas.

Continuing education: A talks programme for community groups and societies will ensure the project reaches audiences that are otherwise unable to engage with coastal heritage. This will be enhanced through innovative promotional events and activities which combine a fun learning experience with a conservation message.

Enhancing the experience of visitors to the New Forest coast: While the New Forest coast is currently enjoyed by many hundreds of thousands of visitors each year there are very few opportunities for them to learn about coastal archaeology. Although some visitors are drawn by the prominent heritage assets, such as Hurst and Calshot castles and Bucklers Hard, there are possibly other opportunities for the wider promotion of the archaeology of the coast line.

1.3.2 Environmental

The New Forest coastal zone contains a legacy of historic assets including a complex array of fragile and irreplaceable archaeological remains, historic buildings

and structures, and entire landscapes. These remains are vulnerable to a wide range of threats, including anthropogenic pressures, such as those associated with commercial development and shoreline management, as well as natural processes of coastal change. It is now generally accepted that coastal physical processes are being forced by changes in annual rainfall distribution and wave direction, relative sea-level rise and an increase in storm incidence, all associated with wider climate change.

Contributing to archaeology and heritage priorities: In 1997 English Heritage and the RCHME published a joint policy statement on the management of coastal archaeological remains and a nationally-based assessment of English coastal archaeology (Fulford *et al* 1997). These documents were followed by more specific guidance on responding to the impacts of shoreline management (EH 2003). The assessment highlighted the poor quality of archaeological records relating to the coast and the policy statement recommended that: “The record of coastal archaeology held nationally and locally should continue to be actively developed and enhanced in order to permit effective management of the resource and to facilitate understanding of England’s development as a maritime nation”.

Whilst the advantages of thematic surveys on the coast were acknowledged by the assessment, it was also noted that the quality of the available record of coastal remains was such that in many areas any such detailed studies would need to be preceded by rapid baseline surveys allowing a broad assessment of the range of historic assets available at the coast, their significance and their vulnerability.

The proposed New Forest Rapid Coastal Zone Archaeological Assessment has the potential to provide detailed information required by coastal managers. This project would be very timely considering the proposals for reform of the heritage protection system and the development of marine spatial planning and management through the Marine Bill. Involving the public in the collection of data on the coastal historic environment and dissemination of the results to a broad public audience would help to provide understanding of the importance of the resource and the need to ensure its preservation through the changes to protection and management and the part that each person can play in ensuring a future for their heritage.

Contributing to research to aid understanding: A brief review of current knowledge (See appendix 8.1) has highlighted areas of research where there are significant questions over the coast and related human development. Through the proposed rapid coastal zone assessment a substantial contribution towards answering many of these queries could be achieved.

The establishment of archaeological research frameworks is a process which has been developed for terrestrial archaeology over the past 10 years. Such frameworks aim to provide reviews of current knowledge and set questions for future research. For the New Forest area the ‘Solent-Thames Research Framework’ is currently being developed. Proposed work on the New Forest Coastal resource would work to feed into the regional framework, and it would also establish a more detailed research framework for the New Forest coastal area. This situation of a ‘nested’ set of research frameworks would be a highly positive contribution to future study.

The proposed study area for the New Forest rapid coastal zone assessment (see section 1.2.5) has the potential to be one of the first such frameworks to truly combine the marine, coastal and near shore zones.

Contributing to Coastal Management: Defra’s programme of shoreline and estuary management contributes to this development. A Shoreline Management Plan (SMP),

for example, provides “a large-scale assessment of the risks associated with coastal processes and presents a policy framework to reduce these risks to people and the developed, historic and natural environment in a sustainable manner” (Defra 2001; 2005).

The process of Shoreline and Estuary Management Plan Development is consultative, drawing on information provided by, and balancing the needs of, sectoral interests. Effective participation by the heritage sector depends, first, on identifying coastal historic assets, evaluating their significance and potential, and assessing which may be at risk from coastal change. Data collection, interpretation and synthesis for Rapid Coastal Zone Assessment Surveys contribute to this process.

1.4 Integration with Existing Projects

This Rapid Coastal Zone Assessment (RCAZ) and dissemination project has the potential to feed information into various proposed or on-going projects or surveys. The projects outlined are relevant either through a common use of data being recovered or studied and/ or the geographical location of the projects.

Archaeology:

A long-term lack of funding available for coastal and marine archaeology has led to a situation where one of the most ‘at-risk’ zones for archaeology is one of the least well understood and studied. To help address this situation English Heritage has been promoting RCAZs for areas of the coastline which are under threat. For example the Dorset coast RCZA (Wessex Archaeology 2004) was completed in 2004; the proposed New Forest project will begin at the county border with Dorset and would extend this coverage.

Additionally Hampshire County Council Archaeology Section are keen to improve data on coastal archaeology to help respond to a range of planning and management challenges. The completion of work during the New Forest project would provide substantial contribution towards this goal, which would otherwise be difficult due to lack of available funding sources.

Coastal management:

The North Solent Shoreline Management Plan is one of the first of the Round Two SMP revisions to be undertaken. This project is ongoing and is researching coastal processes, defences and long term plans for the coastline. This is intrinsically linked to archaeology and heritage as not only will heritage assets be adversely affected by shoreline change, there is also untapped information within the archaeological record to inform on past shoreline change which can help future predictions. The New Forest RCZA project would contribute to this process by improving the baseline data on archaeological sites and heritage assets along the coast, without this work the historic resource may be overlooked in terms of coastal defence measures, making them more vulnerable to damage and loss.

HCC have set up a number of area working groups to assess the effects of coastal change on their properties and management implications. One of the groups is focused on Lepe to Calshot, which will also be investigated as part of the RCZA. Project results will have the potential to feed into future management decisions through providing the vital baseline information on sites which are at threat now and may become under threat in the future.

Public access:

A recent project being developed by the Solent Forum 'Around the Solent' had aimed to foster stewardship of the Solent region by encouraging people to care for their environment through greater awareness and understanding of the value of their surroundings focused on heritage assets. After an initial project planning grant this proposal has not been continued further. A large number of partner organisations had been involved in providing summaries of projects they wanted to undertake to promote the special qualities of the Solent within the broader project banner, this acted to raise the profile of the potential for coastal heritage assets of the region. Specific projects from the original Around the Solent funding bid are now being progressed and funding is being sought. There may be links with the New Forest RCZA project providing interpretive information and data,

1.5 Option Appraisal

This appraisal explores the impact for the archaeological resource and management issues of not undertaking the project through to full completion as set out in this proposal. The variety of options of delivery of the project are then considered. Detail of the potential and outputs from the development of education and access is considered in section 2.

1.5.1 Archaeology and management options

Option One - do nothing: allowing the current situation with little knowledge of the coastal archaeological resource and continued, if not increased pressure from coastal change and development would mean the unquantified loss of the evidence of human occupation and utilisation of the New Forest coast. It could be argued that this would be ignoring responsibilities to investigate and preserve heritage assets, whether *in-situ* or by record, for the benefit of the public, researchers and educators.

Option Two - respond to chance discoveries and/ or rescue situations: it would be possible to follow a policy of responding to immediate situations for individual sites when they are at threat. However, this means that decisions on the levels of recording, or amount of effort to defend individual sites are being taken without the information to place each site within the context of the whole of the New Forest coast. Without knowing facts, such as whether a certain type of site is the only one in existence or one of five along the coast, or whether it is the best preserved of a certain type, it is difficult to make informed management choices or develop fiscal expenditure on heritage protection. In terms of input into broader coastal management, shoreline planning and responding to developments this option would mean the situation is broadly unchanged from the current regime in which the potential of the resource can be highlighted but not fully quantified.

Option Three – undertake RCZA project: the research framework and management report outputs from the project will make a substantial contribution to the understanding of the extent, character and significance of the archaeological resource. It will also assess levels of threat from human and natural agency to areas of the coast; when this is combined with increased knowledge of heritage, it will allow for long-term planning to best manage the resource.

1.5.2 Project delivery options

Option One - fully contracted out: this would involve the NFNP authority developing and issuing a project brief against which organisations would be asked to tender to deliver the project. This is the least resource intensive option for the NFNP requiring staff to oversee the progress of project delivery in addition to contributions for project steering.

Option Two – in partnership: this could involve the NFNP contracting out elements of the project while delivering other elements itself. The most likely scenario would be the contracting out of the archaeological aspects of the project (desk based, fieldwork, analysis and reporting) with NFNP potentially coordinating parts of the education, outreach and long-term dissemination aspects. This may require specialist input from educators experienced with the marine environment and in particular marine heritage. This option would involve the development of a brief for the tendering of the archaeological work, the delivery of which would require overseeing, in addition to the contributions to project steering. Due to the proposed extent of the educational aspect of the project the brief for this will need to be appropriately informed and recognise the different skills areas needed.

2. Method statement - Archaeology

The methods required for the archaeological aspects each of the three project phases are presented below. Due to the differing nature of the tasks involved the method statement for the Education and Outreach components of the project have been presented as Section 4. While it is possible to plan phase one in detail, inevitably it is only possible to provide outline details for phase two and three. The outputs for each phase will include the detailed planning for subsequent work required.

2.1 Phase One – Desk Based Survey

In line with English Heritage guidance on undertaking Rapid Coastal Zone Assessments Phase One is a desk based data gathering stage which is required to target sites, features and areas of potential for inclusion within the phase two field investigations. It will also be used to establish contact with a range of local groups and organisations outside the key stakeholders involved in with the preparation of this project design, to establish an increasing network of volunteers and to promote the project through education and outreach initiatives.

2.1.1 Synthesis of available archaeological and documentary data

The data sources will be reviewed to produce the project database of sites, features and high potential areas to be investigated during phase two. Further details of data sources identified and/ or assessed in relation to this project have been included as Appendix 8.4.

Working across the terrestrial and marine environments inevitably means dealing with data recorded to different datums. As the majority of work will be in the inter-tidal zone it is suggested that the OSGB 36 datum is used for horizontal and vertical positioning. Where data from the marine zone, recorded using WGS 84 datum is used this will be transformed using the geodetic calculator 'Grid InQuest' provided by the Ordnance Survey. Where possible the conversion of data between coordinate systems will be minimised.

Databases: There are a number of databases which hold information on the historic environment of the coastal zone. For the New Forest this includes Hampshire County AHBR, the National Monuments Record (terrestrial and marine sections) and the United Kingdom Hydrographic Office (UKHO).

Data from within the study area will be requested, all records will be cross-referenced to ensure duplication is eliminated, where multiple entries do exist they will be interrogated for maximum information. All records will be compiled into a project dataset – all original source reference numbers will be maintained with each record for ease of re-integration of data.

Maps and Charts: Review of historic maps and charts of the coastal area
All accessible historic maps and charts in the UKHO, Hampshire Record Office, relevant libraries and estate archives will be identified and listed within the project database. The level of analysis of historic map and chart data will include:

- Visual inspection of digital or paper versions of maps and charts
- Assessment of accuracy and version (a number of charts are often copies of previous surveys)
- Location of any coastal features, sites or anomalies of archaeological potential, or which may have left evidence in the coastal zone
- Assessment for evidence of coastline change
- Copies of most useful maps to be acquired in particular historic maps held by the NFNPA for use during aerial photographic analysis

Aerial photographs: Review of collections held by NMR, HCC and Channel Coastal Observatory (CCO) and through the NFNPA to review access and usability of the Luftwaffe wartime images.

These sets of aerial photographs have been selected to provide a broad range of flights and dates of acquisition.

The English Heritage National Mapping Programme team have provided a copy of their manual for the interpretation and recording of aerial photographs. This will be used as the baseline method and standard for the project. The NMP team advised that those undertaking the interpretation should attend a training course prior to the work to ensure familiarity with current standards, so that these standards can be monitored and met throughout the duration of the project.

Methods used will be based on manual methods of transcription:

- Plot flight line on OS paper map
- Locate site or feature of interest
- Transcribe grid coordinate for feature/s
- Compile detailed notes on the approximate size and nature of features
- Copies of AP's will be acquired for sites/ features of particular interest

Where the aerial photographs are in digital format and have been georeferenced – such as those held by the CCO the method of transcription will be digital.

Satellite imagery: Review of on-line satellite imagery.

The growth in use of on-line aerial image resources is leading to the identification of a number of archaeological sites of interest. The sites 'Google Earth' and 'Local Live' will be viewed. These are georeferenced images of varying resolution.

Lidar data: A number of Lidar datasets are available for the New Forest coastline, it is currently unknown whether the resolution of these datasets are of sufficient quality to aid archaeological investigation. During Phase one these datasets known to the NFNPA will be assessed and those at an appropriate high resolution and produced at the optimum season will be used to aid identification of targets within the study area, or if lower resolution used to inform Phase three work.

Marine geophysical survey: Review of data held by HWTMA, Southampton University and the CCO. Each dataset will be viewed and assessed to help identify sites and features of potential archaeological interest in the marine area of the coastal zone. This data is all in digital format and is georeferenced.

Geology and borehole information: Review of BGS mapping and available borehole information, including any relevant information held by the Local Planning or Building Control Authority. This phase of the project will assess the available data to determine its potential to inform on the nature and scale of deposits relating to

prehistoric landscapes, sea-level change and geomorphological evolution. Recommendations for investigation and analysis of key information during phase three of the project will be put forward.

2.1.2 Production of project database

Construction of project database will be undertaken in liaison with New Forest National Park (NFNP) to standards agreed with HCC AHBR/HER and to conform to NMP procedures and to be compatible with the requirements of the NMR and the County HER, through close liaison and by ensuring that staff involved in the production of the data base have had appropriate training and have a proven track record to meet the NMP and County AHBR/HER requirements. The database will be linked to a GIS to enable recording of point or area based data and assimilation of available digital datasets. Data will be MIDAS compliant, and the database will use the standard word-lists included in INSCRIPTION.

The initial data gathering exercise will result in basic site data, the fields required for this data are likely to include:

- Unique ID number
- Position
- Site Type
- Period
- Condition
- Description
- References
- Any existing HER/ NMR/ UKHO reference no's and SM numbers

2.1.3 Assessment of sites

When the basic data has been formatted further assessment will be required to help determine the level of survey and investigation required for sites already recorded within historic environment databases.

Prior to the full assessment some sites within the database will be discounted if they are known to be unsuitable for survey. These sites would include:

- Sites which are known to have been destroyed
- Buried/ sub-surface remains
- Isolated single find spots (although where clusters of these exist areas will be highlighted as of 'high potential' for investigation during walk/swim over survey)

The database will have fields to record this assessment, they are likely to include:

- Extent of current records
- State of survival
- Fragility/vulnerability (based on a index from low to high)
- Archaeological potential

The levels of priority for recording as based on (3.1.4.2 below) and fragility index will then take place.

2.1.4 Development of detailed programme & policies for field survey phase

On completion of the project database the detailed programme for field survey will be developed.

2.1.4.1 Definition of coastal and marine study areas for fieldwork

Terrestrial – The area to be investigated during fieldwork will cover both the open coast and the tidal estuarine coast and will encompass both the intertidal zone and the immediate coastal hinterland. The primary focus will be on the intertidal area

where historic assets are most likely to be under threat and/ or where HER and NMR records are most in need of enhancement and review.

Marine – This project differs from other Rapid Coastal Zone Assessment surveys with the inclusion of the near-shore marine zone. However, the fact that this resource and associated deposits are inextricably linked to those in the inter-tidal and marine zone is particularly evident along the New Forest coast. A full ‘swim-over’ search of the marine area is not a practical option, and is unlikely to be required. Instead efforts will focus on specific sites identified from the geophysical survey and areas of high archaeological potential. The focus will be close to the coast where the archaeological resource is a ‘continuum’ from the terrestrial and inter-tidal.

2.1.4.2 Prioritisation of survey areas

- Highest priority to be given to those locations that are both at risk from planned development within those locations already identified at greatest risk from natural erosion.
- Areas most at risk from current and planned coastal developments and coastal defence works at Lymington Harbour and areas previously subject of major schemes and likely to be subject of future proposed development as at Dibden Bay.
- Minor private development schemes within the tidal reaches of the Lymington, Beaulieu and other rivers.
- Areas of greatest erosion currently identified from non-archaeological surveys (prioritised from data on previously recorded/reported sites and features).
- The coast will be subdivided into character blocks/areas based on :-
 - Previously recorded or reported sites or features
 - Features located by aerial photographic sources
 - Peat shelves and ‘submerged forests’, or other organic deposits
 - Palaeochannels
 - Estuarine foreshores
 - Areas of known rapid erosion

2.1.4.3 Permissions and access

Permissions for access for survey from individual landowners will need to be acquired at this stage to enable the full planning of Phase Two fieldwork. Once these are established a programme can be developed around other constraints.

A request for landownership information from the Crown Estate has established divisions of ownership throughout the study area (Figure 1.7). This provides information to target efforts to gain permissions for fieldwork. Land bordering the Solent is has fewer owners that that bordering Southampton Water. Additional research will be required to establish current landowners bordering Southampton Water as this land may have changed hands several times from the date the Crown Estate has record the land as sold.

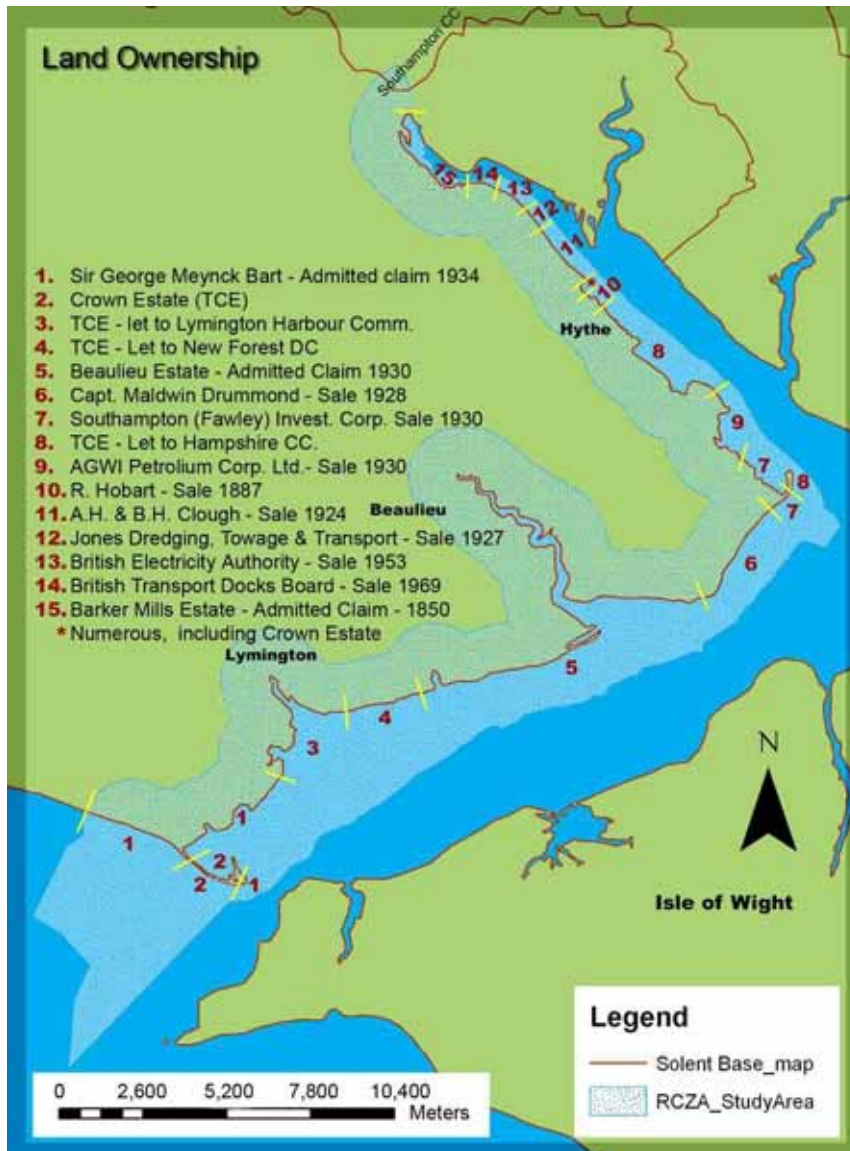


Figure 2.1: Information on land sales and ownership from the Crown Estate Fieldwork in the intertidal zone will take account of:

- Private ownership
- Nature designations and seasonality
- Agricultural practices
- Exposure during tidal cycle and light conditions

Fieldwork in the marine zone will take account of:

- Marine nature designations
- Marine practices, such as fishing and dredging
- Tidal conditions
- Weather conditions

2.1.4.4 Develop survey methods and recording for fieldwork phase

Survey methods and recording for both the intertidal and marine work will be based on the principle of a proforma approach, that is complementary to the project database and is agreed with the NFNP and HCC. To aid volunteers assisting with survey a 'Recording Guide' will be developed. This process has been recently utilised during a project undertaken by Chichester Harbour Conservancy (Archaeology South East, 2006), their recording guide could be usefully developed for the New Forest coast.

Survey and recording will:

- Enhance the HER by locating known recorded features and sites to update their records, and to record and map new features identified. Copies of the existing records for sites will be taken into the field to allow them to be directly updated.
- Where possible in the inter-tidal zone undertake a continuous walkover survey, although this may be constrained by issues of ownership or physical access.
- Locate and record all accessible features identified during Phase 1 to provide a comprehensive record of known archaeology within the study area. In the marine zone a more targeted approach to sites, features and areas of high potential will be followed. Walkover or dive transects will be planned in advance to target specific sites and features.
- Ensure a record is generated for each site, feature or deposit. These records will include:
 - Unique identifier
 - DGPS fixed position (Horizontal fixes will be provided as a 12 figure NGR, vertical fixes will be recorded using the DGPS unit)
 - Feature description
 - Photo reference
 - Assessment of site condition, stability and/ or vulnerability to erosion
 - Association with other features
- Where necessary undertake higher levels of recording through planning, either manually or using the DGPS. Levels of recording for individual sites will be agreed with NFDC during this phase of the project to ensure that detailed recording is balanced with gaining broader coverage of the study area.
- Undertake limited cleaning or augering around sites where necessary to characterise sites or place them in context. Excavation does not form part of this RCZAS.

2.1.4.5 Develop health and safety guidelines

The intertidal zone and marine zones can be hazardous environments but with careful advance planning hazards can be minimised. General Health and Safety considerations for the Inter-tidal zone is obtainable from English Heritage. Many of these considerations also apply to the marine zone, however, a set of additional points, specifically relating to diving will have to be formulated.

A Health and Safety Statement for the project will be produced, this will outline the risk assessment procedure and will be agreed with NFNP and any project funders as part of phase one. An example of a particularly comprehensive inter-tidal risk assessment has been produced for the Norfolk coast RCZA by Norfolk Archaeological Unit, this should be used to develop an appropriate example for the New Forest area. The diving project plan should be developed in line with HSE guidelines and the HSE diving executive should be contacted to agree plan prior to diving.

Phase One will identify any specific training required by the project team, particularly those overseeing volunteers involved in fieldwork.

2.1.4.6 Develop artefact and sample recovery policy

The results of the data collection and assessment will provide a broad overview of the types of sites and find that have been encountered along the New Forest coast line to date. These results will be used to help develop a policy for the collection of artefacts and samples during survey.

As a rule collection will be minimised. A reasoned policy of artefact retention will be developed based on criteria such as fragility, significance, rarity, or difficulty of identification on site. This will be agreed with NFNP, HCC Archaeology and Hampshire Museums Service. Organic or waterlogged artefacts should be dealt with following Brunning (1996) and English Heritage (undated).

A detailed protocol for taking soil, sediment or wood samples should be developed in consultation with the EH Regional Advisor for Archaeological Science, Hampshire County Council and New Forest National Park Authority archaeologists and will be defined in the Project Design for Phase Two and will be informed by available Regional Research Strategies.

2.2 Phase Two – Field Survey

The detailed plans for phase two field survey will be included in the project design produced after phase one. The following sections provide the outline for information to be included within the project design and further details of planned outreach and education initiatives.

2.2.1 Preparatory and administrative requirements

2.2.1.1 Staff and volunteer training & liaison

All project staff should be appropriately trained for the inter-tidal and/ or marine environments and have experience of leading volunteer teams.

Terrestrial Team and Training: Training for volunteers will be provided. This is likely to include a half day session in the classroom providing information, instruction and briefing followed by half a day in the field putting teaching into practice.

It is recommended that team size in the inter-tidal environment is limited to two members of staff with a maximum of six volunteers. One of the project staff must be a trained first aider.

Marine Team and Training: It is recommended that a single vessel capable of carrying up to 10 divers is utilized for the project. This would provide room to accommodate a HSE diving team alongside a volunteer diving team.

Training of volunteer divers will be undertaken where required, however, it is expected that most volunteers will have experience of archaeological techniques. Detailed plans for diving operations and logistics will be developed as part of the Phase One Health and Safety Plan. All volunteer divers should be appropriately qualified and experience for the conditions to be encountered. A system of disclaimers should be established prior to diving. Further considerations for Health & Safety in relation to diving operations to be included per English Heritage Guidance.

The Project Officer will be responsible for the coordination of all volunteers for both inter-tidal and marine survey.

2.2.1.2 Logistics and equipment

The inter-tidal and marine environments require appropriate equipment for undertaking archaeological survey. A table detailing the types of equipment required has been included in Section 6.3.2.

This equipment must be available to those undertaking the field survey, this may require the purchase or hiring of items.

The use of a paper-based recording system whilst undertaking field survey will preclude any requirement for computer usage in the field. The paper archive to be deposited with the NMR.

2.2.2 Field survey details

Field survey methods will be developed as part of the project design for phase two. They will fulfil the requirements of archaeological curators and coastal managers in addition to gathering images and/ or material for public dissemination and that will enhance understanding of the archaeological process.

2.2.2.1 Verification of known features identified through desk based assessment

This will include the field survey of previously recorded sites and those identified during the desk based assessment. The detailed methodology will be developed as part of Phase One.

All recorded information collected in the desk-based assessment will be reviewed in the field. The recording sheets will include space for teams to:

- Check whether the feature still exists
- Check whether it has been properly identified
- Make an assessment of the current state of preservation and relative stability within the current environment
- Determine whether only a simple record is required or if the feature requires more intensive site investigation and recording

At this stage the use of a boat to access areas of low accessibility has not been proposed. This can have an effect on the recording of wrecks, hulks and wooden structures located in areas of unstable sediment and/ or unstable salt-marsh edge sections which prove inaccessible on foot. This decision has been made due to the health and safety implications and due to the possibility of using diver survey at high water to examine areas only exposed at extreme low water. Remote survey on land will include the use of binoculars to gather as much data as possible. Survey records will detail any areas where field work could not be undertaken for any reasons of impracticality, inaccessibility or insufficient resources.

2.2.2.2 Location and characterisation of potential sites and features undetected by the desk-based assessment

Where possible a continuous walk over survey of the inter-tidal zone will be undertaken. In areas where the desk based assessment identified areas of high archaeological potential staff and volunteers will be briefed on the type of sites and or finds that may be located.

Detailed on-site recording will follow the same principles outlined in section 2.1 which will provide parity of results between previously recorded sites and those which are newly located.

2.2.2.3 Investigation of marine sites identified from desk-based assessment

The methodology for marine survey will, where possible be identical to that used for the inter-tidal zone. Diving investigation is likely to involve the spot-checking of sites identified from historic environment databases and geophysical survey. Additional survey of palaeochannels and potential palaeoenvironmental deposits will also be undertaken, this may involve drift-dive swim over survey and recording to track the extent of deposits. Areas identified as of high potential will also be subject to diver survey.

2.2.2.4 Selective sampling of features

The targeted sampling strategy of sites and features will be based on:

- Level of threat from development
- Level of threat from erosion
- Level of archaeological importance of the area and class of site

- Quality of representation of the area within the HER records

This will be undertaken in line with the sample recovery policy developed as part of Phase One of the project.

Any artefacts recovered from below the high water mark that are believed to be or could be wrecks must be reported to the Receiver of Wreck within 30 days of recovery. It is the responsibility of the Project Officer to ensure reporting.

2.2.2.5 Contingency for sites at immediate risk

Time and financial contingencies should be included for fuller recording of a limited number of small but significant sites in imminent danger of destruction from erosion. Where large or complex sites of significance are found to be eroding rapidly archaeological curators should be informed immediately. Further recording of such features would be undertaken a separate projects rather than diverting staff and resources from the rapid coastal zone assessment.

2.3 Phase Three – Interpretation, Assessment and Dissemination

This phase of the project will bring together information and data gathered during Phase One and Phase Two to undertake interpretation in relation to research priorities and on-going coastal management. The project outputs will be used to develop a range of dissemination materials for local residents, visitors and those accessing information remotely.

2.3.1 Interpretation & assessment

2.3.1.1 Desk based research

Based on the finds of phase two further desk based research will be undertaken to provide:

- An overview of coastal change, including the potential for buried landscapes, and the potential for plotting earlier coastlines from the Late Upper Palaeolithic
- Understanding of coastal erosion processes and their effects
- An assessment of vulnerability of historic and archaeological sites

This is required to maximise the project outputs through reporting and dissemination.

2.3.1.2 Interpretation of sites in context

Comparison of the field survey results with further desk based research will allow the coastal archaeological sites of the New Forest to be interpreted in context. This will include providing a report for each site including a statement of potential. This document will identify sites which may warrant additional recording in the form of:

- Measured sections and measured sketch plans
- Sediment/ soil samples for rapid appraisal by environmental archaeologist/s; and/ or
- Archaeological excavation

This interpretation will include an assessment of the regional (and, if appropriate, national) significance of sites recorded. It will indicate areas meriting further survey, assessment, recording and monitoring; and will identify sites, structures or buildings potentially meriting protective legislation.

Using the results of this phase in addition to information on coastal change a series of illustrations will be commissioned to reconstruct a range of site types encountered during the survey. These will be used extensively in the popular dissemination initiatives.

2.3.1.3 Interpretation of sites in relation to management issues

Coastal change will be assessed through the analysis of aerial photographs (to the standards required by the NMP) and cartographic sources in addition to any other available coastal studies. This will be coupled with the synthesis of any palaeoenvironmental work and studies of sea level change.

Cartographic analysis will be combined with a synthesis of previous geomorphological and palaeoenvironmental studies (including DEFRA FutureCoast project) to allow a better understanding of coastal change. Borehole data is being assessed as part of phase one of this project, where important cores and deposits have been identified they will be mapped on to the survey area. Recommendations will be made about locations where it is considered that commissioning future borehole data would be beneficial for understanding coastal change.

An assessment of the evidence for coastal change from the Palaeolithic to the present day will be undertaken with those periods for which reasonable data is already available, being presented as a series of digital maps summarising the position of the coast for each chronological period. The RCZA report will focus on the current coastline for the assessment of threats to the archaeological resource, utilising data (from Natural England and The Environment Agency) for coastal change to place this within its coastal context.

This work will broadly classify the archaeological potential of the coast and will consider the implications in terms of shoreline management, coastal plans and strategies.

2.3.1.4 Interpretation of sites in relation to research priorities

The archaeology of the inter-tidal and marine zones has long been overlooked in comparison to terrestrial remains. However, recent work in various areas of the country is beginning to highlight the importance and potential of this resource. As a consequence of 'lagging behind' terrestrial archaeology the research priorities and frameworks for the coastal zone are not well developed.

The results of the Phase One and Two will enable interpretation of the coastal archaeological resource in relation to both regional research frameworks (Hampshire & Isle of Wight sections of the Solent-Thames framework are in draft format) and results of other RCZAs. This, in conjunction with the additional desk based research will enable the production of research priorities specifically for the coastal archaeology of the New Forest.

2.3.2 Development of management outputs

Research and interpretation will enable the production of three levels of report:

- Site data presentation and interpretation
- Management report
- Research agenda

All reports will contain a non-technical summary to be utilised for dissemination.

2.3.3 Archive delivery

Although it is not possible to quantify the exact size and nature of the project archive at this stage, the following types of data will require deposition:

- Digital and other format Datasets to NFNP, HCC and NMR per NMP
- Paper records to NMR and copies to Hampshire Record Office
- Video and photographic records to Wessex Film and Sound Archive
- Artefacts to Hampshire Museums service (to be available for loan to New Forest Centre)
- Digital records including digital images to ADS and New Forest Centre

Draft ideas and text will be produced towards the end of Phase Two for circulation to venues and organisations who are willing to be involved in the long term dissemination of the results of the project. Responses will be used for the detail design of materials during phase three.

3. Project Outputs

3.1 Phase One Outputs

- Enhancement of the HER and NMR through data transfer to the HER and NMR to meet their standards and requirements.
- *Data Assessment Report*: in line with established standards for RCZAs this will summarise the principal results of survey, sub-divided in terms of coastal Policy (Management) Units, as defined in the relevant Shoreline and Estuary Management Plans. It will include a preliminary assessment of the regional (and, where appropriate, national) significance of sites recorded, and their vulnerability to erosion. It will indicate areas meriting further survey, and recording; and will identify sites, structures or buildings potentially meriting protective legislation. The report should also attempt to broadly classify the archaeological potential of the coast; should consider the implications of the survey in terms of the relevant Shoreline Management Plans or Strategy documents; and should include an executive summary suitable for circulation to non-archaeological coastal managers and planners.
- *Detailed project design for phase two fieldwork*: This will be produced to MAP2 standard and will plan fieldwork to make maximum use of tidal cycles and physical access. Included in this document will be policies for artefact and sample recovery.
- *Recording Manual (suitable for volunteers as based on current industry standards)*: An accessible guide to the recording of sites and features using a proforma system. To be available in hard copy and electronically, to meet field survey standards of the Institute of Field Archaeologists.
- *Health and Safety Plan*: This will incorporate all H&S requirements for work in the inter-tidal and marine zones.
- *Project Website*: to be hosted within the New Forest National Park website and contain details of the project phases and work undertaken to date.
- Talks to interest groups and organisations
- Database of volunteers interested in involvement during phase two
- Database of contact with schools and education providers
- Agreement in principle with venues for hosting long-term interpretation materials
- Planned programme of events and activities

3.2 Phase Two Outputs

- *Data for enhancement of HER records*: this will be in the form of paper records and digital data in a format agreed with NFNP and HCC. The data will include information on the Cell, Sub-cell and Policy Management Units as defined in the relevant Shoreline Management Plans.
- *Report*: this will contain a detailed account of the methods used and constraints experience. It will summarise the principal results of survey, sub-divided in terms of coastal Policy (Management) Units. It will include an assessment of the archaeological potential of samples taken and artefacts

collected, and the value of their further analysis. Report will be produced in line with standards set down by the Institute of Field Archaeologists.

- *Updated Project Website:* the information will be substantially increased with the on-going results of Phase Two survey.
- Talks to interested groups and organisations
- Drafted and trial education pack
- Programme of events and activities
- Draft concepts and formats for long-term dissemination of project results

3.3 Phase Three Outputs

The outputs from this phase form the long-term legacy of the project in terms of enhanced archaeological knowledge, coastal management, interpretation and access.

- *Site data presentation and interpretation:* this will involve analysis and research to put the results from field survey into its local, regional and national context.
- *Management report:* this will place the project field results and interpretation in terms of planning for the future management of the individual sites and stretches of the coast. It will enhance responses to planning related issues and reactions to coastal change.
- *Research agenda:* this will summarise the archaeological potential of the New Forest coast line and present principle questions and queries for future research and investigation.
- *Education pack for schools:* available as both hard copy and electronically via the internet the pack will be distributed widely around the New Forest and beyond. Establishing children's interest and knowledge of coastal archaeology early will help foster an enhanced conservation throughout life.
- *Updated project webpages:* these pages will make project results easily accessible locally, nationally and internationally.
- *Popular leaflets:* available through a range of New Forest venues the leaflets will provide information for visitors on coastal archaeology and signpost sites and attractions.
- *Permanent and temporary displays and interpretation exhibits:* increased interpretive information at a range of locations will provide greatly enhanced access to coastal archaeology.

4. Resources and programming

4.1. Project Team, Steering and Monitoring

4.1.1 Project team

Although the exact composition of the project team will depend on how the project is delivered (see Option Appraisal Section 1.5). The following guidance for team composition and roles is presented. Those undertaking the project will require experience in maritime and coastal archaeology in addition to experience of involving volunteers in archaeological projects.

Suggested project team members are:

- Project Manager (PM) – With responsibility for project delivery within time scale, liaison with project funders and steering group members and management of staff undertaking project tasks. This is likely to be a part-time role. Key skills for this role are: track record of management of maritime and coastal archaeological projects, established report writing skills, excellent communication.

- Project Officer (PO) – With responsibility of the delivery of archaeological aspects of the project in addition to volunteer liaison. This will be a full time role. Will undertake desk based assessment of resources, organise and lead fieldwork, draft reports and provide assistance with outreach. Key skills for this role are: demonstrable ability with GIS and databasing, experience of undertaking maritime and coastal archaeological projects (including appropriate diving projects), familiarity with all aspects of health and safety relating to marine and coastal zone, ability to effectively communicate with and manage volunteers and established report writing skills.
- Field Assistant (FA) – Responsible for supporting the Project Officer during the fieldwork phases of the project, likely to be a full time role during the main fieldwork phase. Key skills for this role are: experience of working in the marine and coastal archaeological field, use of field recording equipment, ability to assist volunteer teams.
- Education & Outreach Officer (EOO) – With responsibility for the management, organisation and delivery of education and outreach aspects of the project. This is likely to be a part time role focused on phases two and three of the project. Will involve liaison with a wide range of volunteer and community groups, schools and visitor attractions. Will include delivering talks, activities and events. Overseeing promotion of the project through a range of media. The design and production of long-term interpretation outcomes from project results. Key skills required will include: proven experience of managing and delivering a broad range of education and outreach initiatives (preferably including the coastal and marine environments), excellent communication and liaison skills, and knowledge of production of effective interpretation materials.

4.1.2 Project steering group

The following members are suggested for inclusion within a project steering group:

- New Forest National Park Archaeologist
- New Forest National Park Education Forum representative
- English Heritage
- Hampshire County Council Historic Environment Group
- New Forest District Council
- Hampshire & Wight Trust for Maritime Archaeology
- Local history/ archaeology group representative/s

4.1.3 Monitoring of standards & project success

Monitoring of standards will be undertaken by the NFNPAs archaeologist as advised by English Heritage RCZA team, the NMP team, the County Archaeologist and other members of the project steering group as and when considered appropriate by the NFNPA. The monitoring points will be agreed in advance and will generally conform to those outlined by English Heritage guidance.

All work will be undertaken in line with the standards of the Institute of Field Archaeologists (the professional body for archaeologists).

Procedures established through a number of English Heritage funded Rapid Coastal Zone Assessments and guidance from the National Mapping Programme will also be adhered to.

A range of methods for measuring project success will be used, they will include:

- Number of talks provided and approximate audience numbers
- Number of children attending foreshore workshops

- Number of volunteers involved with fieldwork
- Number of visits to project webpages
- Quality through audience feedback
- Number of new sites located as a percentage of those previously known

5. References

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6. Appendices

6.1 Knowledge Gaps and Research Questions for Coastal Archaeology

The table below presents some key queries and gaps in knowledge related to the coastal archaeology of the New Forest.

Period	Key archaeological questions
Lower, Middle and Early Upper Palaeolithic	<p>Where is the coastline at different periods of human occupation?</p> <p>What are the drainage patterns of the water courses into the 'Old Solent' river?</p> <p>Where are gravel terraces with potential to hold derived evidence of human occupation?</p> <p>Where was the point of breaching located prior to severance of the Isle of Wight from the mainland?</p> <p>Where were the most attractive locations for occupation and how do these relate to fisherman's finds from offshore?</p> <p>How has geomorphological evolution influenced surviving sites and sediment archives in the coastal zone?</p>
Late Upper Palaeolithic/ Early Mesolithic	<p>How was the landscape being affected in this period of relatively rapid sea-level rise?</p> <p>Are <i>in-situ</i> Mesolithic sites exposed in the intertidal zone?</p> <p>Can <i>in-situ</i> sites be located in the marine zone, particularly in light of the recoveries by fishermen in this area and sites opposite on the north west coast of the Isle of Wight?</p>
Later Mesolithic and Neolithic (c.10,000 – 4,000BC)	<p>Are <i>in-situ</i> sites present in the study area and how are they being effected by coastal processes?</p> <p>Are the Mesolithic flint scatters discovered along the coastal margins of other areas of Hampshire present along the New Forest coast & can any inter-site patterning be determined?</p> <p>Were Mesolithic people utilising the wealth of resources provided by the Solent River and what traces has this left?</p>
Neolithic and Bronze Age (c.4,000BC – c.700BC)	<p>Is the lack of Neolithic and Bronze Age evidence from the New Forest coastal zone due to a lack of investigation?</p> <p>Bronze Age material has been recovered from the inter-tidal zones of Southampton, Portsmouth, Chichester and Langstone Harbours, is similar evidence to be found in the New Forest?</p> <p>It has been speculated that a foci of early Bronze Age settlement should be sought along the Beaulieu and Lymington Rivers has this left an archaeological trace?</p> <p>Can evidence demonstrating use of the coastal plain and/ or ritual activity associated with water be found along the New Forest coast?</p>
Iron Age (c. 700 BC – c. 42 AD) and Roman (c. 42 AD – c. 410 AD)	<p>The New Forest borders the 'Magnus Portus', how were the Romans using the coast here?</p> <p>Salt was highly prized by the Romans, what evidence survives of this industry at this period?</p> <p>Does evidence from the coastal zone and hinterland demonstrate links with ports, trade and transhipment?</p> <p>Was Roman New Forest ware being exported by sea and where from?</p>
Saxon (c. 410 AD – c. 1066 AD)	<p>How was the New Forest involved in the increasing volume of maritime trade and shipping and can this be seen in coastal archaeological evidence?</p> <p>Timber and salt were important coastal industries in this period, do physical traces of them survive?</p>
Medieval (c. 1066 AD – c. 1550 AD)	<p>Did the establishment of the New Forest as a Royal Forest affect the coastal use of the area and can this be seen in the archaeological record?</p> <p>Lying adjacent to Southampton, the south coasts principle port, how did this affect coastal settlement and industry and their archaeology?</p>

	<p>Did the growth of Lymington as a port have an effect on adjacent coastal areas?</p> <p>Salt working was a large and important coastal industry in this period – how is this reflected in the remaining physical evidence?</p> <p>Growth in shipping required new ships and repair facilities, what was the New Forest's contribution to this and what physical traces remain?</p> <p>Are there any recorded shipwreck from this period and do they reflect local coastal trade?</p>
Post Medieval & modern (c. 1,550 AD – c. present AD)	<p>Gravel extraction: developed as an industry during this period, are there traces of this in the coastal archaeology?</p> <p>Shipbuilding: how did the shift from wooden shipbuilding to iron construction affect the New Forest and can this be seen in the archaeology?</p> <p>Iron working: Sowley was a centre of iron production, are there remaining physical traces?</p> <p>Salt: how is the expansion of saltworking until the late 17thC and subsequent decline reflected in the coastal archaeological record?</p> <p>Shellfishing: an important local industry throughout the period, can archaeological traces be found?</p> <p>Wharfing: how has the decline in coastal shipping trade and growth in yachting affected the archaeology of wharfing and associated structures?</p> <p>Ships & boats: do hulked vessels survive on the foreshore and what can they tell us about the development of ship technology?</p> <p>Defence: Calshot and Hurst Castles are prominent examples of coastal defence, what other physical remains survive along the New Forest coast?</p> <p>Warfare: what remains from the First and Second World Wars remain on the coast?</p>

6.2 Data sources for project

Data Provider	Dataset Reviewed	Type of Dataset	Notes
		Databases	
EH	Defence of Britain	Database/documentary	Reference – little in area
EH/Wessex	Englands Shipping	Database/documentary	Reference – provides contextual info
SCOPAC	Sediment mobility model	Database	Shifting sediments can highlight threats to archaeological material
NMR	Scheduled Monuments, Events, NLO's, Maritime archaeology database	Database	Informs Archaeological potential
Hants AHBR	Archaeological interventions, monuments, and other features	Database	
UKHO	Wrecks	Database	
		Maps & Charts	
UKHO	Admiralty charts	Hard copy	Detail on sites, anomalies, offshore feature and coastal change
Hants Record	Wide range of maps	Hard Copy – includes OS, tithe	Site details, coastal

Office		etc.	features and change
HER	Historic Mackenzie and Sherringham Charts	Digital mapping	Inform on coastal change and development
HER	Saltern deposits	Digitised data	Historic coastal industry
Ordnance Survey (NFNPA)/EH	Relevant OS Tiles	Digital Historic mapping	Coastal Change
DEFRA	Futurecoast	Sediment Stability model	
DEFRA	Shoreline Management Plans	Documentary/ mapbased	Guide for area divisions
Natural England	Ramsar/ SAC/ SPA	Digital mapping	Context for management issues
CEFAS	Bivalve mollusc harvesting	Digital mapping	Context for management issues
Natural England	Coastal Sand Dunes	Digital mapping	Context for management issues
		Aerial Survey	
Channel Coastal Observatory	Lidar	Digital dataset, collected by Environment Agency. Resolution = 2m some available higher res TBC	Useful for coastal context, not high enough res for arch
CCO	Aerial photographs	Ortho-rectified: 2001-2005 Photogrammetric: 2003-2006 Non-rectified: 2003	Extensive modern coverage of coast
NMR	NMR Aerial Photographs	Hard copy Photographic images	Extensive and historic coverage of the area
Cambridge University	Cambridge University Aerial Photographs	Hard copy Photographic images	Assessed, but expensive when coverage of NMR available
HCC	Hampshire County Council Aerial Photographs	Hard copy/ scanned Photographic images	Local more specific coverage of the New Forest area
		Geology/ Boreholes	
BGS	Borehole sample data	Digital positioning and written description of sample	Informs on seabed and intertidal sediments
English Heritage	Peat deposit database	Database of peat records and associated dates	Informs on palaeoenvironmental deposits
		Marine Geophysical Survey	
HWTMA	Swath bathymetric survey	Covers NF coast, peats and palaeochannels	Informs on single sites and broader context
Uni of Southampton	Range of geophysical surveys	Side scan sonar data – from EN Side scan sonar – multiple surveys Seismic data – multiple surveys Bathymetry – ABP datasets	Informs on single sites and broader context
CCO	Bathymetry	Digital marine mapping	Informs Sea level and depth contours
		Documentary collections	
Beaulieu Estate Archives	Range of material	Includes maps and estate data	
Exbury Estate Archives	Range of material	Requires assessment	
Manor of	Range of material	Requires assessment	

Cadland Archives			
New Forest Museum library and archive	Various	Primarily documentary	
Hampshire Field Club Library	Various documentary and publication	Hosted at the Hartley Library, University of Southampton	
Pylewell estate	Currently unknown	Requires assessment	
Sowley Estate	Currently unknown	Requires assessment	