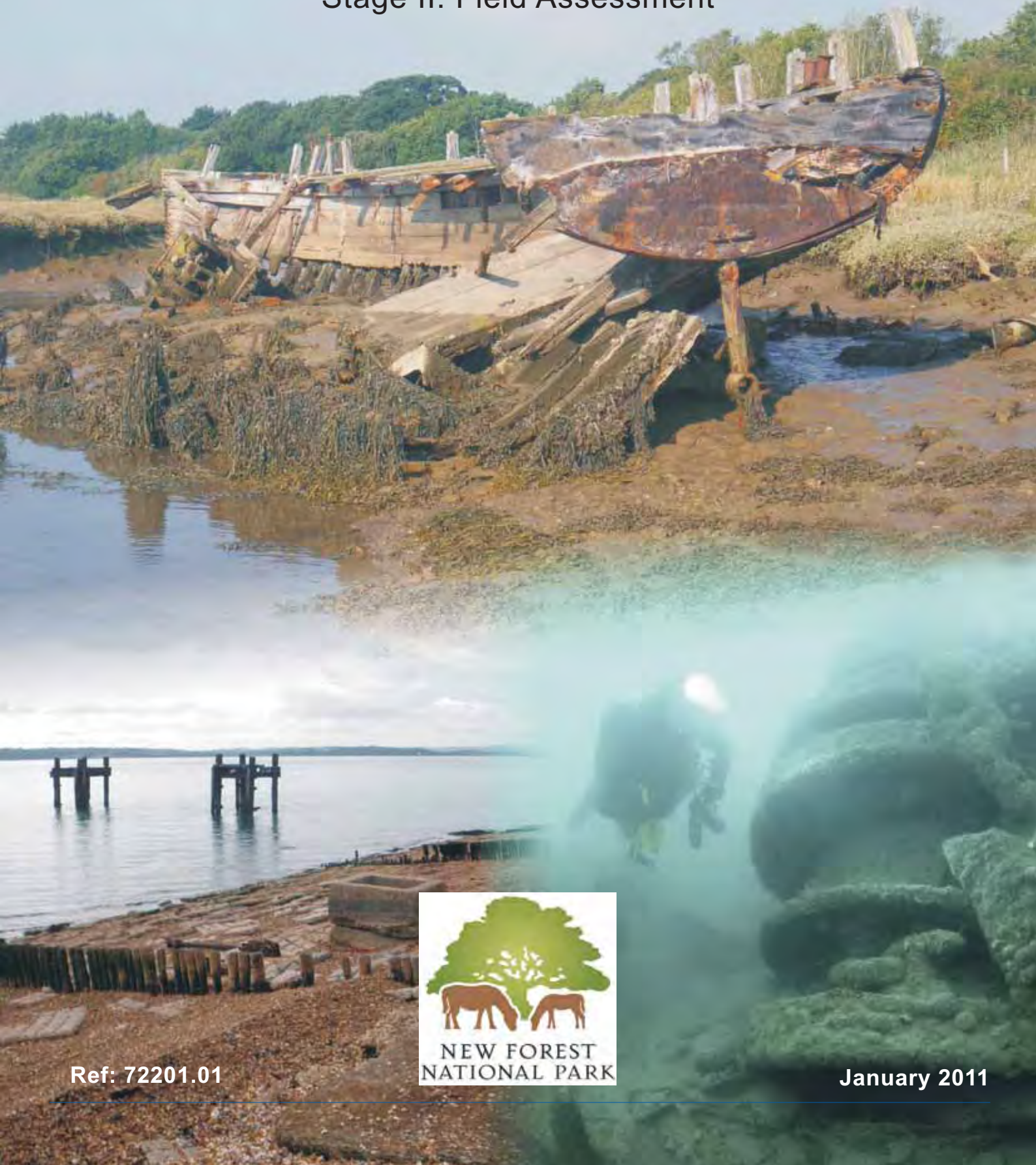




New Forest Rapid Coastal Zone Assessment Survey Stage II: Field Assessment





**NEW FOREST
RAPID COASTAL ZONE ASSESSMENT SURVEY
PHASE 2: FIELD ASSESSMENT**

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Summary

Wessex Archaeology was commissioned by the New Forest National Park Authority to undertake the Phase 2 Field Assessment component of a Rapid Coastal Zone Assessment (RCZA) of the New Forest. This project is part of a wider programme of RCZA being developed through English Heritage, and contributes to the developing national picture of the coastal historic environment. The Phase 2 project was preceded by a Phase 1 Desk Based Assessment (DBA) which collated a range of documentary sources in order to create a preliminary resource from which target areas and specific sites were identified for field survey. The results of both Phases will be amalgamated into a Phase 3 report, to be supplemented by outreach and dissemination.

The Study Area for the project measures approximately 381.66 km² in area, and encompasses the whole New Forest Coast - defined in the west by the county boundary between Hampshire and Dorset, and in the east by the boundary with Southampton City. It also encompasses a substantial marine zone, stretching six nautical miles from the low water mark of the New Forest coastline.

The Phase 2 field assessment sought to verify the data generated during the Phase 1 DBA with the objective of enhancing the existing HBSMR. A further objective was to supplement the existing record with new discoveries made during field surveys of the Coastal Stretches and the investigation of selected marine wrecks. In keeping with standard methodological practice (see Murphy, 2009), the areas investigated were predominantly close to the shore at the interface of sea and land. This also allowed greater coverage of target areas identified in the Phase 1 DBA.

In essence, Phase 2 sought to address the current knowledge gaps and 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. Both new and existing sites were assessed to determine their state and the need for management, as well as to test fieldwork methodologies for use in future work requirements.

Coastal field surveys were carried out on foot and by boat, whilst the marine surveys were carried out by dive teams. As part of the project remit, volunteers were asked to participate in all facets of the surveys from the identification of archaeological sites to the recording of those sites. Project teams were supervised continuously by staff from Wessex Archaeology and training was provided beforehand and throughout the surveys in order to maximise the potential for volunteer contribution and to enhance their experience. Phase 2 also involved a geophysical and archaeological evaluation of Creek Cottage, a post-medieval salt boiling house, which allowed volunteers the opportunity in a genuine excavation.

In summary, the field assessment identified 436 new sites within the New Forest Coastal Stretches, assessing each for their archaeological significance and environmental vulnerability. The assessment also updated 74 existing records. A further five existing sites and five new sites were investigated within the marine zone.

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Acknowledgements

Wessex Archaeology would like to acknowledge the assistance and co-operation of Mark James, Frank Green, and James Brown of the New Forest National Park Authority (NFNPA) during the course of this project. Their participation in numerous aspects of the field work was very much appreciated.

The report was prepared for Wessex Archaeology (WA) by Simon Davidson with assistance from Victoria Lambert, Daniel Pascoe, Stuart Churchley, and Thomas Burt. Illustrations were prepared by Karen Nichols and Kitty Brandon. The project was managed by Toby Gane. The field work was co-ordinated and undertaken by Simon Davidson and Victoria Lambert, with assistance from Thomas Burt and Patrick Dresch (both WA) and NFNPA archaeologists Karl Macrow and Tom Dommett. Marine fieldwork was directed by Mark James (NFNPA), Toby Gane and Daniel Pascoe (both WA) with technical assistance and dive support from Katie Card, Kevin Stratford, Stuart Churchley, Patrick Dresch (all WA).

The Geophysical survey report was prepared for Wessex Archaeology by Ben Urmston and the report was undertaken by Ben Urmston and Lucy Parker (WA).

The Creek Cottage evaluation report was prepared for Wessex Archaeology by Nicholas Cooke, with field operations directed by Steve Thomson.

Many thanks to those people who allowed access to their and assisted in the assessment. These include Jenny Brewis (Beaulieu Estate); Nicholas De Rothschild (Exbury Estate); Rosalie from the Cadland Estate; Brian Sparks (Association of British Ports); Simon Barker (Longdown Management Ltd); Mr. Jewel and Mr and Mrs Ohven (landowners); Nigel Burt, (Fawley Refinery); and Clive Chatters (Wildlife Trust).

Special thanks must go to the many volunteers who participated in both the marine and coastal surveys, and also the Creek Cottage evaluation. Our knowledge of both existing and new sites has been richly enhanced through their contributions.

NEW FOREST RAPID COASTAL ZONE ASSESSMENT SURVEY

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Table of Contents

1.	INTRODUCTION.....	10
	1.1.Document Parameters	10
	1.2.Project Background	10
	1.3.Project Aim	11
	1.4.Establishing Research Priorities	12
	1.5.Project Objectives.....	13
2.	METHODOLOGY.....	15
	2.1.Study Area	15
	2.2.Verification of Sites Identified During Phase 1	15
	2.3.Data Enhancement.....	17
	2.4.Coastal Fieldwork	19
	2.5.Marine Fieldwork.....	24
	2.6.Limitations & Constraints	26
3.	SURVEY RESULTS: COASTAL STRETCH A	29
	3.1.Introduction	29
	3.2.Results	32
	3.3.Summary.....	34
4.	SURVEY RESULTS: COASTAL STRETCH B	35
	4.1.Introduction	35
	4.2.Results	38
	4.3.Summary.....	43
5.	SURVEY RESULTS: COASTAL STRETCH C	44
	5.1.Introduction	44
	5.2.Results	47
	5.3.Summary.....	51
6.	SURVEY RESULTS: COASTAL STRETCH D	52
	6.1.Introduction	52
	6.2.Results	54
	6.3.Summary.....	59
7.	SURVEY RESULTS: COASTAL STRETCH E.....	60
	7.1.Introduction	60
	7.2.Results	63
	7.3.Summary.....	66
8.	MARINE STUDY AREA: RESULTS.....	66
	8.1.Introduction	66
	8.2.Project Background	67
	8.3.Aims & Objectives	67
	8.4.The Shipwrecks.....	68
	8.5.Geophysical Anomalies.....	71
9.	COASTAL & MARINE FIELDWORK ANALYSIS.....	75

9.1.Overview	75
9.2.Review.....	76
9.3.Incidents	77
10. CONCLUSIONS.....	78
REFERENCES.....	80
FIGURES	84
APPENDIX 1: GAZETTEER	85
APPENDIX 2: MARINE STUDY AREA SURVEY REPORT	218
APPENDIX 3: ARCHAEOLOGICAL EVALUATION OF CREEK COTTAGE.....	219

List of Figures

- Fig.1** New Forest Rapid Coastal Zone Assessment Study Areas
- Fig.2** Coastal Stretch A. Stage 2 Field Assessment finds
- Fig.3** Coastal Stretch B. Stage 2 Field Assessment finds
- Fig.4** Coastal Stretch C. Stage 2 Field Assessment finds
- Fig.5** Coastal Stretch D (west). Stage 2 Field Assessment finds
- Fig.6** Coastal Stretch D (east). Stage 2 Field Assessment finds
- Fig.7** Coastal Stretch E (south-west). Stage 2 Field Assessment finds
- Fig.8** Coastal Stretch E (north-west). Stage 2 Field Assessment finds
- Fig.9** Marine Study Area. Stage 2 Field Assessment finds
- Fig.10** British MK IV Tank Landing Craft MK IV 809: Ramp door
- Fig.11** British MK IV Tank Landing Craft MK IV 809: Hull plating and frames
- Fig.12** British MK IV Tank Landing Craft MK IV 809: Chain
- Fig.13** British MK IV Tank Landing Craft MK IV 809: Fixtures and fittings
- Fig.14** British MK IV Tank Landing Craft MK IV 809: Ferrous and non ferrous fittings
- Fig.15** British Landing Craft
- Fig.16** Anomaly 5: Thorness Bay Wreck:
- Fig.17** Thorness Bay Wreck: Framing timbers and planking
- Fig.18** Thorness Bay Wreck: Rudder pintle
- Fig.19** Thorness Bay Wreck: Pump flywheels
- Fig.20** Thorness Bay Wreck: Steering quadrant and mechanism

Fig.21 Thorness Bay Wreck: Windlass

Fig.22 Thorness Bay Wreck: Fastenings

Fig.23 Thorness Bay Wreck: Artefacts

Fig.24 Wreck locations and study areas

Fig.25 Wreck locations: outer/sea area

Fig.26 Wreck locations: inner/estuary area

Fig.27 *Margaret Smith*

Fig.28 *Serrana*

Fig.29 *Fenna*

Fig.30 *Fenna*

Fig.31 The excavation of a barrel from the *Fenna*

Fig.32 *Ceres*

Fig.33 *War Knight*

Fig.34 Areas surveyed during field assessment and areas not surveyed due to access constraints

List of Plates

Plate A1: WA1005. Remains of a former WWII concrete gun emplacement, on the foreshore at Barton Beach.

Plate A2: WA1007 and WA1008. WWII Tank Traps on the foreshore at Barton Beach.

Plate A3: WA1011 *In situ* remains of former WWII gun emplacement/observation post on the cliff edge coastal path near Hordle.

Plate A4: WA1012. Artefacts recovered from a small fissure adjacent to an observation post. Finds included the remains of a pair of 1940s binoculars.

Plate A5: WA1017. Probable remains of a WWII observation post, which have been undermined by a combination of freshwater erosion and marine incursion.

Plate B1: WA2002. Site of a large late medieval salt production site near Keyhaven Marsh, with a possible brine pond in the foreground. The site was permeated by linear drainage ditches and 24 wooden aligned wooden posts.

Plate B2: WA2004. Cropmark remnants of a large salt production site in Keyhaven Marsh.

Plate B3: WA2011. Large raised semi-circular mound, within known area of salt production, near Oxey Marsh. Possibly a sleeching mound, or could be the base of a wind-powered pump.

Plate B4: WA2025. Site of an old channel and possible dock, now overgrown, near Oxey Marsh.

Plate B5: WA2036 Possible wreck site, in the intertidal zone to the north of Hurst Castle.

Plate B6: WA2038. Possible wooden wreck, in the intertidal muds adjacent to the Ferry Terminal on the Lymington River.

Plate B7: WA2048. Red brick, mortar and concrete structure, probably defensive fortifications, adjacent to Hurst Castle.

Plate B8: WA2051. An array of wooden and concrete former sea defences, to the seaward of Hurst Castle.

Plate B9: WA2055. Buried metallic artefacts in the intertidal zone the north of the castle on Hurst Spit, possibly relating to the nearby ruin of a modern cottage (**WA1106**), or possibly connected to nautical activities.

Plate B10: WA2056. Wooden and metallic remains of large former jetty or landing pontoon, the north of the castle on Hurst Spit.

Plate B11: WA2057. Post-medieval/modern cast iron toilet cistern, possibly related to the adjacent derelict cottage to the north of the castle on Hurst Spit.

Plate B12: WA2059. Former coastguard hut, possibly reused as a store shed.

Plate B13: WA2064. Red brick culvert, with adjacent red-brick structure, to the west of the castle on Hurst Spit.

Plate B14: WA2074. Former marine fishing "pond" on the seafront to the east of Keyhaven, created by constructing an artificial mound hemmed in by wooden stakes (still visible).

Plate B15: WA2079. Modern wooden wreck, abandoned in an inlet off the Lymington River.

Plate B16: WA2089. Remains of a derelict cottage to the north of the castle on Hurst Spit, supposedly abandoned in the 1950s. Various detritus is still visible at the site.

Plate C1: WA3001. Lower Palaeolithic Acheulian hand axe found on the foreshore at Pitts Deep (photo taken by David and Marion Nesbitt).

Plate C2: WA3003. Remains of a saltworks site comprising a flat area of land surrounded by an earthwork bank at Lisle Court.

Plate C3: WA3033. Standing remains of an 18th/19th century brickworks site at Pitts Deep.

Plate C4: WA3033. Stack of pipes associated with the brickworks at Pitts Deep.

Plate C5: WA3034. Evidence of large chains along the foreshore at Pitts Deep thought to be associated with the former 19th century quay.

Plate C6: WA3051. One of two wooden vessels thought to be associated with the modern boat graveyard at Lisle Court.

Plate C7: WA3057. Possible remnants of a WWII gun emplacement known to have been

sited at this location.

Plate C8: WA3020. Bank earthwork forming part of the original medieval sea defences at Sowley Marsh.

Plate C9: WA3050. A hard visible at Pylewell, composed of two adjacent gravelly areas.

Plate C10: WA3015. A possible sarsen sandstone with one faced side, observed on the foreshore at Pylewell.

Plate C11: WA3026 and WA3049. Numerous wooden posts, some of which function as revetment, along with a discrete length of stone deposit, all observed at the eastern extent of the salt works north of Needs Orr.

Plate C12: WA3044. Four wooden posts possibly forming part of a crossing point across a water channel within a salt works site at Needs Orr.

Plate C13: WA3021. Two alignments of wooden posts forming a possible causeway across the mouth of Sowley Marsh.

Plate D1: Section 8.1.6. Evidence of coastal erosion at Stanswood Bay.

Plate D2: WA4003. A section of the late 13th century monastic wall around Beaulieu Abbey.

Plate D3: WA4007. Earthworks at Lower Exbury forming the roadway into the former village.

Plate D4: WA4080. A circular beehive kiln dating the early 20th century at Bailey's Hard.

Plate D5: WA4081. A rectangular area of upstanding concrete pillars associated with the 18th/19th century brickworks.

Plate D6: WA4087. Channels running perpendicular to the coastline within the bounds of a salt works site at Lower Exbury.

Plate D7: WA4077. Remains of the post-medieval landing stage at Buckler's Hard.

Plate D8: WA4083. Bridge across an inlet on the Beaulieu River.

Plate D9: WA4082. A section of the re-instated ornamental canal on the grounds of the National Motor Museum, Beaulieu.

Plate D10: WA4157 and WA4159. Two offshore WWII 'Dolphins' along with concrete hardening mats and bollards along the coast at Lepe.

Plate D11: WA4152. Remains of a WWII concrete structure, eroded from the top of the cliff at Lepe.

Plate D12: WA4143. Remnants of a wooden WWII landing craft on the bank of the Beaulieu River.

Plate D13: WA4129. Seven WWII concrete mooring blocks at Buckler's Hard.

Plate D14: WA4133. Former pillbox in Beaulieu.

Plate D15: WA4140. Metal wreck on the edge of a creek off the Beaulieu River.

Plate D16: WA4145. Metal and wooden hulk on the foreshore at Quay.

Plate D17: WA4109. A wooden structure, thought to be the remains of a wreck, positioned in the centre of a channel off the Beaulieu River.

Plate D18: WA4121. Unstratified piece of timber with large iron bolts, visible on the foreshore at Inchmery.

Plate D19: WA4123. Unstratified metal cylinder on the foreshore at Inchmery.

Plate D20: WA4061. Part of a sluice or crossing point between two areas of salt marsh, on the eastern shore of the Beaulieu River.

Plate E1: WA5002-5004. Lammas Wood: Banks and ditches near Cadland Creek.

Plate E2: WA5008. Langdown Saltern: Sluice and revetments.

Plate E3: WA5006. Langdown Saltern: Second phase of constructed revetments.

Plate E4: WA5007. Langdown brick culvert.

Plate E5: WA5045. Ashlett timber revetment.

Plate E6: WA5029. Calshot timber revetment.

Plate E7: WA5032. At Fawley a linear formation of sunken, roughly vertical timbers comprising four rows and covering an area of approximately 17m by 13m.

Plate E8: WA5034. Two lines of vertical posts bracing an internal rock structure, possibly a section of a landing stage at the southern end of Cadland Creek.

Plate E9: WA5033. Remains of a timber revetment or sluice at Cadland Creek, besides a large outflow pipe from the adjacent refinery. The structure contains approximately 20 sunken posts.

Plate E10: WA5038. The sea bank adjacent to the brickworks at Eling containing numerous fragments of brick clearly visible within layered stratigraphy.

Plate E11a-b: WA5037. The Hythe Quay Slipway with adjoining steel and timber structure.

Plate E12: WA5031. Three wooden beams protruding from underneath two phases of modern concrete, possibly part of Victoria Quay at Ashlett.

Plate E13: WA5064-5067. Four Beetles, looking up river at Dibden Bay.

Plate E14: WA5068. Looking north at a concrete landing platform at Dibden Bay.

Plate E15: WA5069-5098. Looking up river at the beetles laid up end to end as beech defences.

Plate E16: WA5107. Concrete slipway at Marchwood, possibly used for military purposes.

Plate E17: WA5105. A series of large vertical wooden posts along the beach at Marchwood.

Plate E18: WA5123. Wreck within the intertidal zone of Eling Great Marshes. Approximately 10m in length, with the possible bow facing west. The vessel may be constructed from wood (photograph by Roger King).

Plate E19: WA5099. Wooden hulk at Marchwood, looking south.

Plate E20: WA5051. Remains of a wooden barge located in the intertidal area at Ashlett. The vessel is between 10m and 15m long and is in a deteriorated state. There are remains of metal fittings on the interior and the wooden rudder is still intact.

NEW FOREST RAPID COASTAL ZONE ASSESSMENT SURVEY PHASE 2: FIELD ASSESSMENT

1. INTRODUCTION

1.1. DOCUMENT PARAMETERS

- 1.1.1. This document has been prepared in accordance with a project design submitted to New Forest National Park Authority (NFNPA), which in turn was in response to a tender brief (*New Forest Rapid Coastal Zone Assessment Phase 2 Project Design June 2010*) for a Phase 1 Rapid Coastal Zone Assessment (RCZA).
- 1.1.2. The Main Report provides an overview of the methodology and results of this RCZA Stage. Detailed results are presented chronologically in a gazetteer (**Appendix I**), which describes the results for each Coastal Stretch individually.
- 1.1.3. The main field survey results are presented in **Chapters 3 – 7** with the marine surveys summarised in **Chapter 8**, and a fuller account presented in Appendix 2. In the case of the coastal surveys, the results are presented geographically by Coastal Stretch, and discussed chronologically rather than thematically¹. The marine component of the Study Area comprises an overview of the shipwreck resource supplemented by specific case studies. A review of the project as a whole is presented in **Chapter 9**.
- 1.1.4. Further work carried out as part of the Phase 2 project included a geophysical survey and trial excavation of a salt boiling house near Lymington. The results of the Creek Cottage field evaluation, including geophysical survey and exploratory excavation, is presented in its entirety in **Appendix 3**.

1.2. PROJECT BACKGROUND

- 1.2.1. Wessex Archaeology was commissioned by the New Forest National Park Authority to undertake a Phase 2 Scoping Study for a New Forest RCZA. This project was informed by the Phase 1 DBA (Ref.72200.02) and is part of a wider programme of RCZA and as such contributes to the developing national picture of the coastal historic environment being developed through English Heritage.
- 1.2.2. The Study Area for the project measures approximately 381.66 km² in area, and encompasses the whole New Forest Coast - defined in the west by the county boundary between Hampshire and Dorset, and in the east by the administrative boundary with Southampton City.
- 1.2.3. Phase 1 data collation and review comprised: the collation and appraisal of historic environment data; and the acquisition of SMP and coastal change information.
- 1.2.4. Archaeological records were collated from the following sources:
 - National Monuments Record (NMR) data for the Study Area.

¹ The comprehensive archaeological interpretation of the Stage 2 results will be a central component of the updated Phase 3 report.

- County Sites and Monuments Record (Hampshire Archaeological and Historic Buildings Record (HAHBR)).
- The Isle of Wight Historic Environment Record (HER).
- New Forest National Park records and electronic versions of historic maps, including digitised early OS editions.
- Lists of Scheduled Ancient Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens, and Historic Battlefields.
- Wreck and obstruction data from the United Kingdom Hydrographic Office (UKHO) (via SeaZone tiles ordered for the project by NFNPA).
- Information on 'wreck' declared to the Receiver of Wreck.
- The Portable Antiquities Scheme database.

1.2.5. Modern and historic mapping, secondary sources and the results of other archaeological studies were also considered, and the results of SMP and coastal change, and aerial photographic studies were incorporated into the assessment. On the basis of the collated datasets the record for the Study Area was enhanced using Microsoft Excel and ArcMap. This included adding and amending Monument, Event and Source records consistent with MIDAS and drawing upon INSCRIPTION wordlists. Synthesis and Assessment was conducted as follows:

- Thematic Synthesis of Coastal Historic Environment
- Assessment of Enhanced Record
- Integration of AP Mapping Results
- Phase 2 Scoping

1.2.6. Data was presented as: an overview of past coastal change; a chronological overview of the coastal historic environment; and offshore archaeology. The latter category was split into submerged prehistoric landscapes, and wrecks and aircraft crash sites. Sites were assessed in terms of their vulnerability and suggestions for Phase 2 survey were presented.

1.2.7. Phase 2 sought to address the current knowledge gaps and 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.

1.2.8. Building on Phase 1, Phase 2 of the project was predominantly fieldwork based, and fulfilled the objectives specified in *A Brief for Rapid Coastal Zone Assessment (RCZA) Survey of South-East England* (Murphy 2009). It also adhered to the objectives laid down in the original New Forest National Park Authority (NFNPA) project brief (MAL 2007). The primary objectives of Phase 2 were to ground-truth and verify the identifications made in Phase 1, and build on and enhance the recording of those sites and features that may be present. These include sites not present within the data sets reviewed during Phase 1.

1.2.9. Phase 2 also involved some limited survey, sampling and assessment of sites to determine their state of preservation and the need for management, as well as to test fieldwork methodologies for use in future work requirements.

1.3. PROJECT AIM

1.3.1. The broad aim of this project is to enable the NFNPA, the New Forest District Council (NFDC) and Hampshire County Council (HCC) to provide improved curatorial responses to strategic coastal planning and management initiatives.

- 1.3.2. The aim of the Phase 2 project work was to build knowledge of the archaeological potential of the New Forest Coastline and its environs and to assist in informing appropriate responses to the coastal management of the area.

1.4. ESTABLISHING RESEARCH PRIORITIES

- 1.4.1. Existing frameworks were examined to identify relevant research priorities with regard to this project. The Centre for Maritime Archaeology at the University of Southampton is in the process of developing a research framework for the maritime, marine and coastal archaeology of England with the aim of providing a coherent overview of previous research which will enable long-term strategic planning, inform policy and provide a statement of agreed research priorities. The draft results were expected in March 2010 with the publication due in July 2010. However, the final drafts were submitted in August 2010 and the full publication is now due in Spring 2011. Consequently, the research agenda was not available for consideration in time for the planning of the Phase 2 fieldwork.
- 1.4.2. Numerous research priorities were set out in the South West Archaeological Research Framework (SWARF) (Somerset County Council, 2007) and the Solent-Thames Archaeological Research Framework (Oxford Archaeology/Buckinghamshire County Council). These both represent a comprehensive examination of the theoretical 'gaps' in our understanding and knowledge. With regard to Phase 2 fieldwork, general research aims set out by SWARF include:
- Research Aim 2: Encourage works of synthesis within and across periods, settlements, monuments and areas.
 - Research Aim 3: Address apparent "gaps" in our knowledge and assess whether they are meaningful or simply biases in current knowledge.
 - Research Aim 10: Address our lack of understanding of key transitional periods.
- 1.4.3. The coast is largely an understudied resource typified by uneven coverage of discovery and knowledge. The Phase 1 DBA revealed a number of 'gaps' in the knowledge of the archaeology of the New Forest which Phase 2 sought to address.
- 1.4.4. Much of the archaeological evidence for the salt-working industry along the coast has not been comprehensively surveyed or recorded despite its high importance as a New Forest industry believed to date back to the Bronze Age. Work carried out by WA on the Hampshire Salterns examined representations on historic maps, charts and aerial photographs (Wessex Archaeology 2002). Consequently, the remnants of the salt-working industry became a focus of the surveys. This culminated in the archaeological evaluation of Creek Cottage boiling house in July 2010 which comprised a full geophysical survey and two-week excavation.
- 1.4.5. The relative paucity of Neolithic remains within the Study Area is characteristic of Hampshire generally, which lacks the monumental structures found in Dorset, Wiltshire and Somerset. The field walks sought to identify coastal sites of this date.
- 1.4.6. The Phase 1 DBA identified a decline in the number of records within the coastal region during the Iron Age and attributed this to a lack of systematic fieldwork and reporting in particular areas. Field surveys therefore sought to identify new sites from this period, or to secure dating of known sites of unknown date, with a view to revealing a higher level of exploitation of this region than currently recorded.

- 1.4.7. Most Early Medieval records within the Study Area were typified by a lack of secure dating, and there is a general absence of fieldwork focusing on sites of this period. Targeted field surveys to identify new sites from this period, or to secure dating of known sites of unknown date, were undertaken with a view to revealing a higher level of exploitation of this region than currently recorded.
- 1.4.8. It was recognised in the project brief that education and outreach should form part of the rationale for planning fieldwork, and in particular, that the RCZA should enhance public understanding and enjoyment of the coastal heritage of the New Forest. This is in accordance with research aims identified by SWARF:
- Research Aim 1: Extend the use of proven methodologies for site location and interpretation, and encourage the development of new techniques.
 - Research Aim 4: Encourage wide involvement in archaeological research and present modern accounts of the past to the public.
- 1.4.9. Consequently, a major component of the Phase 2 methodology was the identification of perceived 'gaps' in the record, and the enhancement of the record through the contributions of the public.
- 1.4.10. Further research objectives were identified for the marine zone. These principally involved establishing the nature and extent of the wreck resource, although there is also scope to develop a monitoring program which could enhance current knowledge about site formation processes and thereby contribute to future management strategies.

1.5. PROJECT OBJECTIVES

- 1.5.1. The objectives of Phase 2 were as follows:
- 1.5.2. **O1** 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.
- 1.5.3. **O2** Provide data which is compatible with the needs of other coastal managers, parallel coastal surveys, industry, researchers, the public, schools and education groups.
- 1.5.4. **O3** 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.
- 1.5.5. **O4** 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
- 1.5.6. **O5** Provide a broad assessment of the likely archaeological potential and vulnerability of all stretches of the coast.
- 1.5.7. **O6** 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:

- The identification of areas or sites meriting further survey or evaluation
 - The identification of areas or sites requiring positive management action
 - The identification of significant historic assets meriting consideration for protection by means of statutory designation (listing or scheduling)
 - The identification of areas where heritage assets may be at high risk of damage or destruction
 - The establishment of future research priorities for the coast.
- 1.5.8. **O7** Engage members of the public, whether local residents or visitors, in the survey of their archaeological heritage both on land and underwater
- 1.5.9. **O8** Provide a conservation message through encouraging long-term monitoring of sites at particular risk by local groups.

These objectives will be extended to include additional outreach and education objectives in Phase 3.

- The fieldwork objectives and scope for Phase 2 were as follows:
 - Verify identifications made during the Phase 1 DBA.
 - Locate and characterise sites and features undetected by the Phase 1 DBA.
 - Determine the geomorphologic/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.
- 1.5.10. The additional NFNPA objectives and scope for Phase 2 were as follows:
- Provide volunteers the opportunity to participate in archaeological fieldwork alongside professional archaeologists; this will take place on all sites where feasible.
 - Provide training for volunteers to enable them to work effectively and safely on site.
 - Motivate and encourage the volunteers to develop and sustain a long term interest in archaeology and their local history

2. METHODOLOGY

2.1. STUDY AREA

2.1.1. The Study Area is approximately 381.66 km² in area and encompasses the whole New Forest Coast defined in the west by the county boundary between Hampshire and Dorset and in the east by the boundary with Southampton City (**Figure 1**). The Study Area parameters are broadly set out in **Table 2.1** (below):

Boundary	Definition
Western Boundary (coastal)	County boundary between Hampshire and Dorset (Chewton Bunny, nr. Highcliffe)
Western Boundary (marine)	Line trending south south-west across Christchurch Bay
Eastern Boundary (coastal)	Boundary of Southampton City (Redbridge, Totton)
Eastern Boundary (marine)	Western boundary of Southampton Approach Channel, cut north-south at Old Castle Point, East Cowes.
Landward Boundary	1.5km buffer from high water, including all land below +10m OD contour
Seaward Boundary	6 nautical mile limit, but excluding Isle of Wight above high water (MHWS).

Table 2.1 Study Area Parameters

2.1.2. The Study Area was divided into five stretches to facilitate data management and reporting:

- Coastal Stretch A: Chewton Bunny to Milford-on-Sea (approximately 8 km in length (HW)).
- Coastal Stretch B: Milford-on-Sea to Elmer's Court (approximately 10 km in length (HW)).
- Coastal Stretch C: Elmer's Court to Salternshill (approximately 9.5 km in length (HW)).
- Coastal Stretch D: Salternshill to Calshot Spit (approximately 10 km in length (HW)).
- Coastal Stretch E: Calshot Spit to Redbridge (approximately 18.5 km in length (HW)).

2.1.3. Each coastal stretch is discussed in detail in **Chapters 3 – 7** with the Marine Study Area discussed in **Chapter 8**.

2.1.4. The New Forest RCZA considered all archaeological periods from the Palaeolithic (700,000 BP) to 1945 AD. Coastal historic assets created after 1945 were included where NFNPA had highlighted their special interest.

2.2. VERIFICATION OF SITES IDENTIFIED DURING PHASE 1

2.2.1. Data Collation and Review (Phase 1) comprised two sub-stages:

- Collation and appraisal of historic environment data.
- Acquisition of SMP and coastal change information.

2.2.2. Archaeological records were collated from the following sources:

- National Monuments Record (NMR) data for the Study Area.
- County Sites and Monuments Record (Hampshire Archaeological and Historic Buildings Record (HAHBR)).
- The Isle of Wight Historic Environment Record (HER).
- New Forest National Park records and electronic versions of historic maps, including digitised early OS editions.
- Lists of Scheduled Ancient Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens, and Historic Battlefields.
- Wreck and obstruction data from the United Kingdom Hydrographic Office (UKHO) (via SeaZone tiles ordered for the project by NFNPA).
- Information on 'wreck' declared to the Receiver of Wreck.
- The Portable Antiquities Scheme database.

Modern and Historic Mapping

2.2.3. Modern and historic mapping was supplied by NFNPA and uploaded to the project GIS including:

- OS MasterMap
- First to fourth edition 6" OS mapping
- Digital Historic Tithe and Enclosure maps and charts held by the National Archive and County Record Office (subject to digitisation by Southampton University GeoData Unit).

2.2.4. Additional geo-referenced maps and charts held at WA from previous projects in the region were also added to the project GIS and holdings of historic charts and maps in the UKHO archive, the National and County Record Offices, the Southampton City Record Office, The New Forest Centre and other regional collections were reviewed to identify any further significant historic mapping. Items identified from the review were obtained, scanned, geo-referenced and added to the project GIS, as was modern topography and bathymetry derived from the Ordnance Survey and UKHO data.

Secondary Sources

2.2.5. Published books and articles relating to the history, archaeology, palaeo-geography and development of the New Forest and south coast were collated from WA's own library, university libraries and from record offices and local studies libraries in the region. Unpublished material from the WA library, the HER and other sources, such as clients and authors, was also consulted.

Other Sources of Archaeological and Historical Data

2.2.6. Relevant datasets from former projects in the Study Area and held at WA were consulted including:

- Hampshire Salterns project (2002).
- ALSF Artefacts from the Sea.
- ALSF England's Shipping.
- ALSF Air Crash Sites at Sea.
- Finds reported through the BMAPA/English Heritage Protocol.
- WA's mapping of sites protected under the Protection of Military Remains Act 1986.

- Mapped data from the EH peat database.
- 2.2.7. Data relating to military sites (including *Defence of Britain* and MPP defence-related studies) has already been incorporated into the NMR as part of the *Landscapes of War* project. It was anticipated that information about military sites would be obtained as part of the NMR data. Checks were made via *PastScape* and the *Defence of Britain* database maintained by the Archaeological Data Service. In addition relevant information from *Defence Areas - a national study of Second World War anti-invasion landscapes in England* (Foot 2005) was also incorporated.
- 2.2.8. Information relating to SSSIs cited for Quaternary geological / geomorphological features within the Study Area was obtained via MAGIC and Natural England's online resources.
- 2.2.9. As part of the National Mapping Programme (NMP), Cornwall Historic Environment Service (CHES) undertook an aerial photographic transcription and mapping element of the New Forest. The results of this NMP exercise were made available to WA in December 2009 for integration into the RCZA Phase 1 DBA.
- 2.2.10. Other potential sources of relevant data, including museums, record offices and local studies libraries, societies, organisations and individuals were approached for information about relevant holdings. Visits were made where appropriate to obtain copies of relevant information.

SMP and Coastal Change Information

- 2.2.11. Information on coastal threats, namely development pressures, present and future coastal erosion and flood risk was collated from a variety of sources. These included existing and forthcoming Shoreline Management Plans, and the Channel Coast Observatory's Solent Dynamic Coast Project and salt marsh mapping programme for Hampshire.
- 2.2.12. The updated North Solent Shoreline Management Plan 2 (SMP2) was made available for consultation in February 2010. WA was provided with GIS layers indicating policy and management units and coastal erosion lines for this project. Similar GIS layers pertaining to the Poole and Christchurch Bays Shoreline Management Plan 2 were also made available to WA. These layers were used to divide the coastline of the Study Area into 17 coastal stretches and to provide information on the character and degree of threat to each coastal stretch.

Integration of Aerial Photography Mapping Results

- 2.2.13. The results of the aerial photographic transcription and mapping of the New Forest, undertaken by CHES as part of the NMP, were made available to WA in December 2009. The data was provided in AutoCAD dxf format and was incorporated into the project GIS. On the basis of the dxf files and the results from the aerial photographs (AP) transcription the monument records created or amended by this project were updated to include a cross-reference to the corresponding unique identifiers.
- 2.2.14. Where the AP transcription resulted in the identification of a monument not recorded in the monument database, a new monument record was added and cross-referred to the AP transcription as its source.

2.3. DATA ENHANCEMENT

- 2.3.1. Phase 2 data enhancement and mapping comprises two sub-stages, namely:

- Record Enhancement
- Development of Overview of Past Coastal Change

Record Enhancement

- 2.3.2. On the basis of the datasets collated in Phase 1, including historic mapping, secondary and other sources, the record for the Study Area was enhanced using Microsoft Excel and ArcMap. This included adding and amending Monument, Event and Source records consistent with MIDAS and drawing upon INSCRIPTION wordlists. Recording practices were consistent with practices documented by the HER and NMR and, where conflict arose, followed Hants HAHBR.
- 2.3.3. The first stage of the data enhancement following the data collation was an intensive period of cross-referencing of sources. Duplicate records were consolidated into a single record. All records created, reviewed, added to or amended in the course of the RCZA were tagged to enable the preparation of summary information on the enhancement process and to facilitate review by NFNPA/NMR staff.
- 2.3.4. For maritime sites, the record enhancement focused upon Monuments that have known or reported vestiges on the shore or seabed. Monuments recorded in the NMR that are known only as reported losses (also known as Casualties) will not be added as individual records to the record enhanced by the project.
- 2.3.5. The enhanced information was entered into a database which contained information on the form and type of the historic environment resource, its status, period and a brief description. This enhanced data was then loaded into the GIS which enabled spatial queries of the database linked to themes such as period and type of monuments.

Development of Overview of Past Coastal Change

- 2.3.6. The overview of past coastal change from the Late Upper Palaeolithic to the present drew upon the enhanced record with respect to the distribution of sites/finds from key archaeological periods and from secondary sources collated in Phase 1, including the EH Intertidal and Coastal Peat Database. This encompassed both the post-Devensian inundation of the English Channel to its natural topographical limits in the Iron Age/Roman period, and subsequent human modification and reclamation of coastal land through to the present, including natural responses. Past erosion of cliff lines was also taken into account.
- 2.3.7. The overview also drew upon WA's extensive investigations of matters relating to sea-level change on the south coast through numerous projects in Southampton Water and many offshore locations from the palaeo-Solent round to Poole Harbour and Christchurch Bay. Specific use was made of WA's current work on the South Coast Marine Aggregates Regional Environmental Assessment and associated Regional Environmental Characterisation. Reference was also made to, among others, work led by Dix, Gupta, Long, Bates and Bates, and Mills and Corcoran in the Solent, palaeo-Arun, Hampshire coast and Eastern English Channel.
- 2.3.8. Mappable data from the above sources was incorporated within the project GIS including map layers relating to flood plains, flood zones, erosion and accretion zones along the coast. By comparing the datasets analysis on the archaeological potential and possible risk to coastal change could be assessed. It was also possible to use this information to assess future research priorities.

Assessment of Enhanced Record

- 2.3.9. The assessment of the enhanced record involved a series of further sub-stages, focusing on:
- Overall degree and nature of threat to coastal historic assets
 - Likely archaeological potential, importance and vulnerability
 - Areas and sites where historic assets may be at high risk of damage or destruction
 - Management priorities
 - Future research priorities
- 2.3.10. The enhanced record was reviewed in order to assess the overall degree and nature of threat to coastal historic assets, with regard to models of future coastal change, Shoreline Management Plans, and other coastal pressures. From this review a statement on overall threat was made for specific reference to the localities of possible prioritisation identified by local authority curators.
- 2.3.11. This element was achieved by reviewing the enhanced record through the project GIS in conjunction with mapped data relating to Policy Unit policies from SMP1 and SMP2 (where available), indicative erosion and flooding zones (based on advice from EA and local authorities in Phase 1), Topographical Difference Models from CCO.
- 2.3.12. The assessment took into account existing designations, statutory and non-statutory, national and local, whilst acknowledging that such designations do not comprehensively indicate archaeological importance. A narrative overview of the degree and nature of threat to coastal historic assets in the New Forest was prepared for each Coastal Stretch.
- 2.3.13. The archaeological potential for each Coastal Stretch was assessed on the basis of the enhanced record, the thematic synthesis and the overview of past coastal change. The intention is to indicate the degree to which as-yet unknown historic assets are present, including their likely character.
- 2.3.14. The assessment of vulnerability was based on the overview of degree and nature of threat, the enhanced record in respect of known assets, the assessment of potential and the assessment of importance. The assessment of vulnerability gauged the susceptibility of known and potential historic assets to the degree and nature of threats active on the relevant stretch of coastline.
- 2.3.15. This synthesis and assessment of data was consequently able to inform the identification of priority sites warranting fieldwork in Phase 2 of the RCZA. In addition, the assessment of the enhanced dataset identified gaps in the archaeological record for the Study Area and helped to identify key research questions for consideration with regard to Phase 2 and future work. Account was also taken of relevant research frameworks including:
- Solent Thames Research Framework (Oxford Archaeology)
 - South West Archaeological Research Framework (Somerset County Council)

2.4. COASTAL FIELDWORK

- 2.4.1. The coastal fieldwork methodology was largely based on Murphy's (2009) *A Brief for Rapid Coastal Zone Assessment Survey of South-East England*, and adopted the following objectives:

- To verify identifications made during the Phase 1 DBA;
- To locate and characterise sites and features undetected by the Phase 1 DBA;
- To determine the geomorphological/sedimentary context for the features;
- To make a preliminary assessment of whether features are actively eroding;
- To selectively sample features;
- To test fieldwork methodologies and assess the practicalities and logistics of future fieldwork;
- To facilitate volunteer participation and encourage wider appreciation of the New Forest's coastal heritage.

2.4.2. As outlined in **Section 1.3** the key aim of RCZA Phase 2 fieldwork was to identify and clarify the nature of the archaeological resource within the Study Area. Initial survey comprised walkover and swimover surveys to confirm the existence of known sites and to identify new ones. In many instances, ground truthing known sites allowed the verification and an assessment of the extent of remains, which provided valuable information to feed back into the enhanced dataset.

2.4.3. The coastal field surveys did not incorporate the entirety of the 1.5km buffer zone inland for several reasons. In the first instance, a large percentage of the terrestrial landscape within the Study Area is not vulnerable to the coastal and marine processes that impact upon the interface territories of land and sea, and therefore were not deemed priority sites for assessment. Secondly, much of the inland territory is privately owned and in many cases, has been developed, making an effective survey logistically more problematic. The decision to incorporate the area into the Phase 1 Desk Based Assessment was based on the potential scope for inference about sites located closer to the sea. Historic settlements in coastal locations have traditionally been associated with maritime industries and activities without necessarily hosting the activities. By gaining knowledge of the wider landscape, it is possible to infer on more localised activities.

2.4.4. The coastal fieldwork was directed by project officers from Wessex Archaeology. iPaq PCs with Pocket Systems Ltd GIS Software Version 2.0.6 linked to a Holux Bluetooth GPS Receiver M-1200, were used to record extant features on the ground. Two methods were utilised for marking monuments on the GIS. Features which could be accessed directly and where the GPS could be positioned over the site, were recorded as either points, lines, or polygons were marked as positions with a variable accuracy of approximately 1m – 4m. Features which could not be accessed directly (e.g. mid-river sites) were marked on by visually estimating the distance and approximating the location of feature with reference to other features already marked on the GIS.

2.4.5. Upon creating a new point in the GIS, a feature recording sheet was presented to the recorder. Points were recorded as a single location **Observation Point** on the GIS, and were given a new Monument UID (pre-fixed with Coastal Stretch). A short description was then entered into the box. In instances where a feature was in an elongated form (e.g. a road or a truncated path), the feature was recorded as an **Observation Line**. Similarly, where a feature was a large shape (e.g. an earthwork or fort), it was recorded as an **Observation Polygon**.

2.4.6. Where photographs were required, it was possible to enter the feature as a single point **Photo**. A corresponding number was recorded in order to subsequently match the feature and photo up. Whilst a large number of photos were taken, not every feature was recorded in this way. There were several reasons for this. Most commonly it was simply that the site or feature could not be adequately captured

from the surveyor's vantage point due to the site's proximity, poor lighting, the motion of the boat, or a lack of contrast with the surrounding landscape. Occasionally, technical problems such as failing batteries meant that photos could not be obtained. In such instances, a back-up camera was used to take low resolution pictures as a guide.

2.4.7. The walkover survey included broad coverage of a wide area, with the timescale for the broad transects shown in **Table 2.2** (below):

Coastal Stretch	Primary Environment	No of days	Limits of Survey
A	Gravel beach	3 days	<i>Beach area and cliffs only.</i>
B	Gravel beach, inter-tidal mud, coastal land	6 days	<i>Walkover limited to foreshore and intertidal areas</i>
C	Narrow groyned foreshore, inter-tidal mud, coastal land	6 days	<i>Walkover limited to foreshore & intertidal areas.</i>
D	Beaulieu River	2 days	<i>Walkover limited to foreshore & intertidal areas.</i>
D	Groyned foreshore, inter-tidal mud, coastal land	3 days	<i>Walkover limited to foreshore & intertidal areas.</i>
E	<i>Foreshore, inter-tidal mud, coastal land</i>	6 days	<i>Walkover limited to foreshore & intertidal areas.</i>

Table 2.2 Initial timescales for walkover surveys

2.4.8. Each day's data was subsequently downloaded into a central GIS, which currently contains all of the existing research from Stages 1 & 2 and is presented in ESRI GIS ArcView 9.

Volunteer Participation

2.4.9. In line with New Forest National Park Objectives (James, 2010: 6 (par.3.2.2)) and those set out in the original Project Proposal (MAL, 2007), the coastal fieldwork methodology also adopted the following the objectives:

- To provide volunteers with the opportunity to participate in archaeological fieldwork alongside professional archaeologists, on all feasible sites;
- To provide training for volunteers to enable them to work effectively and safely on the site;
- To motivate and encourage the volunteers to develop and sustain a long term interest in archaeology and their local history.

2.4.10. In the first instance, a volunteer database was established by the Education and Outreach Office of New Forest National Park Authority. Advertisements were placed in local facilities and through associated websites and forums seeking interested parties to help with the fieldwork component of Phase 2.

2.4.11. The initial response was good, and a list of 73 interested volunteers was passed to Wessex Archaeology² to create rosters for the coastal fieldwork. A separate roster

² It should be noted that the original NFNPA volunteer roster was considerably larger than this, but due to the *Data Protection Act 1998 (Amended 2006)*, only volunteers who consented to having their details passed to

was created for each volunteer participation day, and each day often involved different activities in different areas.

Preliminary Walkovers

- 2.4.12. Having already established the five distinct coastal Study Areas (A,B,C,D,E), preliminary walkovers of each area were carried out to establish points of access; the availability of toilet facilities; the proximity of emergency services; the logistics of parking; and the feasibility of field-walking in each stretch. Each walkover was allocated one day, and two volunteers were asked to participate alongside the project officer. Volunteers were only asked to participate if they felt they had good knowledge of local facilities, access, and heritage sites.

Training Days

- 2.4.13. Two training days were set up and conducted by the project officer, in order to provide the volunteers with the following:
- An introduction to the New Forest RCZA project
 - An overview of the Phase 2 fieldwork component
 - An introduction to Intertidal and Foreshore Archaeology
 - An overview of the archaeology of the New Forest Coastal Zone
 - A workshop on feature & artefact identification and assessment
 - A workshop on archaeological recording
- 2.4.14. The training days were held in Brockenhurst Village hall on Thursday 17th June 2010, and at Lyndhurst Community Centre on Saturday 19th June 2010. They were attended by a total of 40 volunteers over the two days, and the feedback was overwhelmingly positive.

Coastal Surveys

- 2.4.15. Volunteer rosters were created for each of the five Coastal Stretches (A,B,C,D,E), with a limit of 12 volunteers on each. Meeting points were established in advance and were based on the work carried out in the preliminary surveys. Participating volunteers were emailed an information pack between 7 – 10 days in advance of commencement of each Coastal Stretch.
- 2.4.16. The levels of participation on each Coastal Stretch varied from day to day. For example Coastal Stretch A had an average of three volunteers per day over the three days, whilst Coastal Stretch B had an average of seven volunteers per day over five days. Coastal Stretch C was the most popular with an average of ten volunteers per day, whilst Coastal Stretches D and E had an average of eight volunteers per day. This preferential bias was almost certainly due to the proximity of certain Coastal Stretches to larger population centres such as Lymington, and Southampton, where many of the volunteers were based.
- 2.4.17. The surveys took the form of transects, with volunteers spreading out to walk in parallel lines across the coastal zone. In some instances, it was not possible to maintain consistently straight lines due to factors such as topography, prohibition of access, incoming tides, proximity to cliff edges, or underfoot terrain (see **Figure 34**). Upon discovery of a site, the volunteer would signal the group and the designated recorder would walk over to the site and “mark” the position on the data recorder

Wessex Archaeology, could be utilised. It should also be acknowledged that more volunteers got involved after contacting Wessex directly, most commonly after personal invitations from friends and family.

and fill out a digital recording sheet. Where possible, photographs of each site were also taken, and tagged appropriately.

- 2.4.18. Feedback from participants in the fieldwalks suggested a major attraction was the opportunity to access areas of the New Forest coastal zone that would ordinarily be publicly accessible. This was particularly the case for areas of Coastal Stretches C and E which contain substantial area of privately owned land.
- 2.4.19. On each of the Coastal Surveys, volunteers were given the opportunity to be the designated recorder, allowing them to record features as and when they were identified. Basic training in the utilisation of the iPaq Pocket GIS was provided at the start of each survey, and most of the volunteers were able to use the device to a high standard throughout the day. Volunteers were fully briefed on the types of information they were being asked to record, and the project officer checked regularly to make sure that points were being recorded in the correct manner. Volunteers were asked to request help with their descriptions if they were at all unsure what it was they were trying to assess.
- 2.4.20. Volunteers were asked to incorporate their own experience and knowledge when identifying features and landscapes, and in many instances, this turned out to be very beneficial to the identification of features, and particularly with respect to chronological distinctions.
- 2.4.21. In order to monitor and identify sites which were already contained within the GIS, a second volunteer role was created, which involved the parallel utilisation of a second iPaq. This device was set up to provide rapid access to site attributes allowing quick cross-comparison of the location, nature, and extent of the identified feature. This role also allowed “known” pre-recorded sites to be surveyed and assessed, and their corresponding records updated accordingly.

Intertidal Boat Surveys

- 2.4.22. Due to the inaccessibility of certain parts of the New Forest coastline (see **Section 3.7**), a series of boat surveys were carried out in November 2010 to ensure greater coverage of the Study Area. Using the same technology and with the participation of volunteers, a number of new sites were added to the existing GIS. The surveys were carried out over three days, with a total of four volunteers participating per day. The crew also included two NFNPA archaeologists and two WA archaeologists³, making a total crew of eight on each survey⁴.
- 2.4.23. The surveys were carried out in an Avon Rigid Inflatable Boat (RIB) with a Yamaha 40HP engine.
- 2.4.24. The routes of the boat surveys were planned in advance, with berths booked at Lymington Yacht Club and Royal Southampton Yacht Club. The relevant Harbour Masters were notified about the proposed movements of the boat and crew 24 hours in advance and again on the days of each survey.
- 2.4.25. The choice of boat survey days was determined by tides and weather, with flooding low water sought for the intertidal marsh surveys, and ebbing low water sought for the surveys of Beaulieu River and Southampton Water. It was decided that low water would expose more sites whilst still facilitating access through the channels.

³ The WA archaeologists were qualified to RYA Level 2 Power Boat Handling.

⁴ The first boat survey (Monday 1st November 2010) had a total crew of seven, after a volunteer withdrew from the survey at short notice.

- 2.4.26. All fieldwork was supervised in accordance with current regulations laid down by the Institute for Archaeologists (IfA).

2.5. MARINE FIELDWORK

General

- 2.5.1. All fieldwork procedures and standards complied with the relevant guidance produced by the Institute for Archaeologists. Data was recorded in hard and digital copy form.

Diving

- 2.5.2. WA and NFNPA archaeologists operated as part of a four person HSE-compliant scuba team. All diving involving WA and NFNPA archaeologists complied with the HSE Diving at Work Regulations 1997 Scientific and Archaeological Diving Projects Approved Code of Practice.
- 2.5.3. Operating alongside the HSE divers, but not forming part of the core HSE team were volunteer divers. The volunteers dived according to the rules and regulations of their certifying organisations but under the supervision of the diving supervisor.
- 2.5.4. Diving operations were carried out from the MCA coded diving support vessel *Wight Spirit*, a starfish 34, 10.2m long and licensed to carry ten divers.

Geophysical Survey

- 2.5.5. A low resolution sidescan sonar was used to survey the seabed in search for anomalies in the Western Solent in areas chosen as having high archaeological potential. The sidescan sonar was also used on the known sites that were under investigation. Sidescan survey was carried out using a hull-mounted Humminbird sonar on board *Wight Spirit*. The data was interpreted on board *Wight Spirit* by Dave Wendes and WA and NFNPA archaeologists.

Diver Ground-Truthing

- 2.5.6. The methodology for investigating anomalies found during sidescan sonar surveys was to deploy pairs of divers to carry out circular searches to identify any possible archaeological material.
- 2.5.7. A shot was dropped as close to the position of the anomaly. The divers would then descend the shot line and attach a tether line linking them to the shot. The divers would then proceed to carry out circular searches until they identified the anomaly.

Diver Survey

- 2.5.8. Initial site assessments and recording were carried out and involved observational survey and sketch plans of the basic hull dimensions. These were supplemented by photographs, video and notes. The results of the inspection were recorded by the diver onto survey boards and with a digital camera. Following initial investigative dives specific features of archaeological interest were chosen for more detailed survey.
- 2.5.9. Selected features were recorded using archaeological survey methods to produce detailed drawings and plans. When necessary basic site plans were produced of sites using baseline offsets.

- 2.5.10. Photographic and video surveys were taken of key archaeological features to assist in the interpretation and recording.

Volunteer Training

- 2.5.11. At the beginning of each diving session volunteers were briefed on the dive plans, archaeological survey techniques, recording methodology and health and safety. The volunteers were then divided into pairs for diving and given a survey task to carry out underwater. The tasks varied from photographic recording, measured sketches, recording of dimensions of archaeological features and circular searches. A debrief followed at the end of each dive to discuss the tasks accomplished, the plan for the next dive and an opportunity for the volunteers to ask questions concerning techniques and methodologies. Through out the diving sessions the volunteers were rotated between tasks, to give each volunteer as much experience as possible.
- 2.5.12. To aid in the understanding and identification of a site dateable or diagnostic artefacts were recovered. All finds recovered were treated following the guide lines set out in 'First Aid for Underwater Finds' (Robinson 1998). Volunteers from the fieldwork were given the opportunity to take part in the recording and analysis of recovered material. By allowing volunteers to be involved in the recording, investigation and conservation of recovered material, it opened up further opportunities to develop a foundation for future learning and access work with both local interest groups and the New Forest National Park Authority.

Offshore Sites

- 2.5.13. One wreck identified as being of particular interest and warranting further survey was that of the Sunderland flying boat (**WA6011**). However, although this is a shallow wreck site it's location of Calshot Spit close to the lifeboat mooring and the presence of large numbers of nets and other snagged objects meant it was not appropriate for diving, particularly with volunteers, although it remains a valuable site for possible future work.
- 2.5.14. Three further wreck sites were identified as research priorities and were subsequently surveyed:
- *Fenna* (**WA6007; WA6008**)
 - *Margaret Smith* (**WA6009**)
 - *Serrana* (**WA6001 – WA6004**)
- 2.5.15. The site of the Dutch schooner *Fenna* (**WA6007;WA6008**) is predominantly an extant cargo stacked on the seabed. The surveys provided good information on late 19th century stowage arrangements, as well as providing more general information on localised site formation processes and site stability.
- 2.5.16. The remains of the *Margaret Smith* (**WA6009**) were surveyed, and considerable superstructure was shown to still exist. The survey established the nature and extent of the remains, and observed the seabed processes impacting upon the site's physical longevity. Although the site is a modern wreck (1973) and arguably not archaeologically significant, there is good scope for research into the wreck's site formation over time. This has the potential to inform on a wide range of future conservation management issues in the marine zone, especially with regard to metallic deterioration.

2.5.17. The survey of the *Serrana* (**WA6001 – WA6004**) showed the wreck to be broken up and dispersed although with some structure remaining, particularly at the stern section of the wreck. The survey established the nature and extent of the remains and observed the seabed processes impacting upon the site's physical longevity.

2.5.18. Seven further sites, were also identified as warranting survey work. These were:

- *Irex* (**MWX60847**)
- *War Night* (**MWX60475**)
- *Juno* (**MWX60785**)
- *Castle Crag* (**MWX60847**)
- *Reindeer* (**MWX61065**)
- *Spyros* (**MWX60860**)
- *HMS Albion* (**MWX60969**)

2.5.19. Of these sites, the *War Knight* was more comprehensively surveyed due to its historic interest and archaeological potential. This wreck, and the remaining wrecks, are discussed in more detail in **Chapter 10** and **Appendix 3**.

2.6. LIMITATIONS & CONSTRAINTS

Coastal Fieldwork Constraints

2.6.1. A variety of natural and cultural factors affected the coastal field walk surveys. Details of individual issues are discussed in **Chapters 5 – 9**, but an overview is presented below.

2.6.2. There were sporadic limitations on area coverage due to factors such as legal and logistical restrictions on access (see **Figure 34**). Sections of the New Forest coastline are privately owned and permission is required to access some of the foreshore and intertidal areas. In most cases, permissions were sought and granted in advance of the surveys, however, in some instances the landowner was not contactable (or chose not to respond) and the requisite permissions were not forthcoming. In such instances, the survey groups did not access the land.

2.6.3. During the initial preliminary surveys in May 2010, a number of areas were declared "out of bounds" by the landowners on account of their importance as a habitat and nesting ground for an array of rare birds. Such restrictions were lifted for the actual field surveys, which commenced in July, when the prospect of species disturbance was perceptibly lower.

2.6.4. Health & Safety was a continuing priority during the field walks. Preliminary walkovers were carried out to ascertain any potential threats to volunteer safety and certain areas were identified as logistically precarious. Risks assessed as significant, either prior to (or during) the field walks, meant that alternative routes would be sought. Areas identified as high risk were:

- muddy intertidal flats;
- narrow foreshores with incoming tides;
- high cliffs
- eroding cliffs
- river banks
- salt marshes

- 2.6.5. In areas where access was limited or restricted altogether, sites were recorded “by eye” on the iPAQ. This involved recording sites by estimating their scale and proximity to existing features identified on the GIS. Where feasible, inaccessible sites were also recorded by zoom lens photography, although these photographs did not contain a metric scale.
- 2.6.6. Linked in with the logistical constraints were various other factors such as weather, tides, and a lack of local facilities (e.g. car parking; toilets; refreshments).
- 2.6.7. Provision had to be made for poor or deteriorating weather, and also for strong sunshine, the latter of which had the potential to cause sun burn and dehydration. The weather occasionally had a detrimental impact on morale, but more pertinent was its impact on visibility which was significantly reduced on cloudy or drizzly days. For the most part, the weather had a negligible impact on the surveys.
- 2.6.8. It was not always possible to factor in the timing of low water into the survey schedule. This was due to limitations on the number of available survey days and also because of the prospect of inconveniencing the volunteers. In order to maximise volunteer interest and participation, and also to maintain health and safety protocols, it was decided that surveys should only be conducted within daylight hours (8am – 6pm). Consequently, some of the foreshore and intertidal areas were partially or completely submerged for long periods during the walkovers. A number of the temporarily submerged sites were subsequently recorded during the boat surveys.
- 2.6.9. The inflatable boat provided good access to many of the areas inaccessible on foot, such as the northern extent of the Beaulieu River and the Marchwood military façade⁵ on Southampton Water. However, getting close to sites on the foreshore in these areas was difficult due to the often shallow waters and the draft of the boat and engine.
- 2.6.10. A similar problem arose when attempting to survey the Keyhaven marshes by boat. The decision was taken to access the marshes via an array of channels at mid-low water in order to be able to identify sites on the seabed. However, the very shallow waters made it nearly impossible to negotiate the majority of the channels, and the centre of the marshes remained inaccessible. A compromise with intertidal surveying by boat was the choice between access and the visibility of sites. The decision to survey at low water was much more successful in the surveys of the Beaulieu River and Southampton Water, where the exposed banks yielded numerous sites not picked up during the field walks. Given that visual aids such as binoculars and zoom lenses are now widely available, the strategy of low water survey is arguably preferable. However, high water survey offers the prospect of achieving better proximity to sites, and by extension, greater accuracy of recording.
- 2.6.11. The Southampton Water boat survey had to be curtailed slightly prematurely due to a lack of proper docking facilities at Eling. Unable to alight at Eling (due to low water) and Marchwood marina (which was closed), the survey route had to be slightly altered to allow the crew to use the toilet facilities elsewhere. Although this meant the survey coverage was under pressure of time, the area was still covered as originally planned, and the level of recording was maintained.

⁵ If the Ministry of Defence (MoD) were willing to adhere, it would be of great benefit if a MoD archaeologist were permitted to survey and record the restricted areas around Marchwood on behalf of the New Forest National Park Authority.

- 2.6.12. A final limitation is acknowledged in the quality (and quantity) of recording. Volunteers were encouraged to participate in all aspects of the field recording, including data entry into the iPAQ system, and consequently, the standard of data varies between detailed description and vague estimation, with occasional errors in numbering and site interpretation. Common qualitative issues arose in delineating archaeological features and natural geology, and also separating modern detritus from historic artefacts.
- 2.6.13. It should be noted that most of the records are merely descriptions of what was observed *in situ*, and in many cases features with no apparent archaeological value were recorded. The strategy of allowing volunteers to select which features to record was part of the overall strategy of accentuating the potential archaeological importance of all cultural objects, with a view to encouraging future investigations into seemingly benign features. In an attempt to control the quality of the data entered into the HBSMR and this report, the records have been individually analysed to filter out modern detritus from genuine archaeological features.

Marine Fieldwork Constraints

- 2.6.14. During the fieldwork there were a number of constraints experienced which affected the level and standards of recording and time spent on the sites chosen for investigation, and these were as follows:
- There were time constraints due to the number of sites under investigation and the limited days of fieldwork;
 - Adverse weather conditions made some sites not accessible at times due to rough sea states;
 - Poor underwater visibility was frequently experienced during fieldwork which hampered the quality of photographic recording and detailed diver observations and recording.
 - Many of the sites were situated in areas which experienced strong tides and currents and therefore were only accessible during slack water. Recording of these sites could only take place during periods of slack water (approximately 30 – 45mins).
 - Although the volunteers were experienced divers they did not necessarily have any experiences in archaeological diving. Therefore a certain amount of time had to be spent on training and assisting volunteers in archaeological recording techniques.

3. SURVEY RESULTS: COASTAL STRETCH A

3.1. INTRODUCTION

Study Area

- 3.1.1. Coastal Stretch A runs from Chewton Bunny in the west to Milford-on-Sea in the east (**Figure 2**). It extends seaward to the low water mark and landward to a distance of 1.5 kilometres from the high water mark.
- 3.1.2. The division of coastal stretches has been based on the lines produced to indicate Policy Units specified in the second phase of Shoreline Management Plans (SMP2) for the Poole Christchurch area. These lines were provided to WA by Royal Haskoning.

Archaeological Potential

- 3.1.3. The archaeological potential of Coastal Stretch A was assessed through queries of the existing archaeology of the coastal stretch as recorded in the enhanced dataset as part of the Phase 1 DBA (see Wessex Archaeology, 2010). Existing archaeology was examined in the context of current research frameworks and the historical character of the New Forest in order to assess the importance of known sites. The assessment indicated that the potential for new archaeological finds was **low**. This was subsequently corroborated by the local volunteers who participated in the field assessment.
- 3.1.4. Major contributing factors in this assessment were the extensive sea defences constructed in the eastern extent of the coastal stretch, and the ongoing erosion of the cliffs in the western extent which has displaced and destroyed substantial sections of the former landscape. This has not only impacted directly on the archaeological resource, but has also diminished opportunities for new discoveries through development-led evaluations. Despite the apparent popularity of the area as a holiday destination, the rapidly receding cliff face is a disincentive to developers.
- 3.1.5. Traditionally, developed landscapes have revealed more archaeological finds than undisturbed landscapes. It is however, important to acknowledge that current settlement and land use patterns do not necessarily correspond to similar trends in the past. Areas with lower levels of modern development and settlement density could possibly have had a higher level of land use in the past and may contain as yet undiscovered archaeological remains. The re-use of strategically prominent or resource-rich locations often resulted in accumulations of archaeological deposits over time. More recently, the requirement to undertake pre-development archaeological surveys as a constituent of planning permission has increased the opportunities for such discoveries, meaning that archaeological records tend to show a quantitative bias towards developed areas.
- 3.1.6. There are nine Management Units within Coastal Stretch A, as defined by the SMP2 for the North Solent (see **Section 2.4**). The policy recommended for Units **CBY.A.1 – CBY.A.3** and **CBY.C.1** is Hold the Line, whereas the policy for Units **CBY.B.2 – CBY.B.4** and **CBY.A.4**, is Management Realignment. The policy for **CBY.B.1** is No Active Intervention. Consequently Unit **CBY.B.1** is at a higher risk of coastal erosion and as a result its archaeological record is under greater threat. Despite the comparatively low number of archaeological finds recorded in this area, this is a

particular concern considering a majority of the archaeological features recorded for this coastal stretch was found within this one Management Unit.

- 3.1.7. Existing designations, both statutory and non-statutory, were examined in order to inform the assessment of the archaeological potential of this coastal stretch. There are no Scheduled Ancient Monuments in this coastal stretch. There are a number of listed buildings in this coastal stretch, including one Grade I listed building, mainly concentrated in Milford-on-Sea. Although these designations can be considered to enhance the archaeological potential of the area and add to the historic urban character of Milford-on-Sea, the majority of these are currently occupied structures and are situated some distance from the current shoreline.
- 3.1.8. The archaeological potential of other modern structures in this coastal stretch was considered to be moderate. Although this coastal stretch was not a focal point for military activity, there were nonetheless several 20th century military sites along the shoreline. Whilst sites such as pillboxes and tank traps are by no means unique, the distribution of these sites in this coastal stretch is interesting in terms of the concentrations of sites at specific points, and the manner in which they form a small landscape of sites relevant to this theme.
- 3.1.9. The archaeological potential of older records in this coastal stretch was difficult to quantify, due to uncertainty regarding the dating and function of those sites. For example, the Bronze Age ring ditches identified as earthworks from aerial photographic interpretation could not be definitively dated. The same applied to the various medieval field systems and enclosures which in most cases have been attributed to both periods due to uncertainty regarding their date.
- 3.1.10. The majority of archaeological records which pre-date the post-medieval period described isolated findspots of artefacts rather than archaeological features, structures or monuments. Isolated findspots do not necessarily imply the existence of a further site or settlement for a given period, and if these are derived rather than *in situ* finds, then they do not necessarily indicate the presence of humans at a particular location at a particular time.
- 3.1.11. The archaeological potential of findspots of derived or uncertain provenance within Coastal Stretch A was considered to be low, and this assessment proved accurate. The occurrence of Palaeolithic findspots along this coastal stretch suggested other finds may be forthcoming, particularly in the vicinity of Barton Cliff and Hordle Cliff, however, this proved not to be the case.
- 3.1.12. The records in the dataset range from antiquarian accounts of finds to present day discoveries, and imply that this is an area where Palaeolithic artefacts have been consistently eroding out of the cliffs with other material *in situ* within as yet unexposed cliff strata. Again, such finds eluded the survey teams, but this was not unexpected. The Hampshire Field Club & Archaeological Society (HFCAS) has also reported few Quarternary finds in this area (see HFCAS, 2009).

Survey Objectives

- 3.1.13. The archaeological potential of this coastal stretch was considered to be low to moderate with regard to the records in the enhanced dataset (see Wessex Archaeology, 2010). The dataset was found to contain a comparatively low number of records when set in the context of the Study Area as a whole. Consequently, the survey targeted both stratified and unstratified finds on the surface of the collapsed cliffs and adjacent foreshore. A further survey objective was to search the eroding cliff face for stratigraphic evidence of settlement and land use.

- 3.1.14. Priority areas or sites meriting further survey or evaluation were identified in the Phase 1 DBA based upon the enhanced data and assessment of threat and vulnerability. These are listed in **Table 3.1** below.

Priority Area or Site	Fieldwork
Areas seaward of Naish Holiday Village and from Barton Cliff to Hordle Cliff.	'Fieldwalk' along the beach to identify the presence (or otherwise) of Palaeolithic artefacts and the strata that they derive from.

Table 3.1 Priority areas or sites identified by the Phase 1 DBA as requiring further investigation.

Methodology

- 3.1.15. Initial survey within this coastal stretch took the form of a walkover survey to confirm the existence of known sites and to identify new ones. The data collated has been used to enhance and expand the HBSMR, and to provide baseline data for the assessment of both natural and anthropogenic impacts threatening each site. By extension, this assessment will inform future management strategies
- 3.1.16. Fieldwalking was undertaken in the vulnerable areas seaward of Naish Holiday Village and from Barton Cliff to Hordle Cliff with a view to identifying further Palaeolithic artefacts. Local volunteers were involved in this task which served to provide them with a deeper understanding and appreciation of the coastal and marine historic environment in their area.
- 3.1.17. Sites were identified and subsequently recorded using an iPaq Pocket GIS with a Holux GPS. When possible, sites were also photographed.
- 3.1.18. A preliminary walkover was carried out on **9th June 2010** with two volunteers. This provided insights into access and local facilities. The walkover began at the western extremity of Coastal Stretch A and covered the entirety of the foreshore along to Milford-on-Sea at the eastern extremity. The weather was very good, and no issues of access were encountered. Car parks and toilet facilities were present at both the starting point and finishing point with accessible facilities in between.
- 3.1.19. The main surveys were carried out over three days: **22nd – 24th June 2010**. A total of 6 volunteers participated over the three days, with some participating on more than one day. The survey team also included an archaeologist from New Forest National Park Authority.

Limitations & Constraints

- 3.1.20. There were no access problems encountered during the surveys. There is a public footpath along the cliff tops of Barton Beach, including Naish Holiday Village, and though areas of the Holiday Village were restricted⁶, these were not regarded as priority survey areas.
- 3.1.21. The cliff top along Barton Beach is rapidly eroding due to a combination of freshwater run-off undermining the strata, and the impact of the encroaching sea. The apparent instability of the cliff edge prevented closer inspection of the cliff face from the top. Consequently, observations of the cliff face section were carried out

⁶ Wessex Archaeology made several attempts to contact Naish Holiday Village in order to secure access to known sites within the main caravan site, but no responses were forthcoming. Subsequent requests for information about the rate of erosion and its subsidiary problems for the Village were also not answered. This did not unduly affect the survey coverage which focused on the beach area to the seaward side (see **Figure 34**).

from the foreshore. There are numerous warning signs at the foot the Barton cliffs pertaining to risks of subsidence, and these were duly heeded. In some cases this meant observational vantage points were set back between 50 – 100m (see **Figure 34**).

- 3.1.22. The foreshore of Barton Beach is predominantly coarse shingle. This made it difficult to distinguish potential cultural artefacts from natural stone. Consequently, most of the foreshore transects covered the slump of the eroded cliff. This was a combination of predominantly sand stone and sediment, which had been displaced backwards due to the loss of the lower strata to freshwater erosion. Unfortunately, this process almost certainly resulted in the burial of any eroding cultural material from the cliff top, rather than its deposition on the surface. Consequently, the number of finds from the Barton Beach foreshore was extremely low, with nearly all being modern sites.
- 3.1.23. Sea defences constructed along the coastal façade at Milford-on-Sea also meant that any existing archaeological sites in both the foreshore and intertidal zone were either buried under the defences and the replenished beach, or have been destroyed by the construction process.

3.2. RESULTS

- 3.2.1. A full inventory of documented sites from Coastal Stretch A is provided in Appendix A of the Phase 1 DBA (Wessex Archaeology, 2010). A total of 142 sites were identified by the DBA carried out as part of the Phase 1 project.
- 3.2.2. The majority of sites discovered during the Phase 2 surveys suggested modern origins, with a recurring military defence theme prevalent. Due to the disturbed nature of large sections of the foreshore and the presence of substantial and recently constructed coastal defences, the number of finds was limited to 17 (see **Table 3.2**).

Ranges of Chronological Periods	Records		
	Existing	New	Updated
Prehistoric (500,000BP – AD 409)	27	0	0
Medieval (AD 409 – 1539)	35	0	0
Post-Medieval (AD 1540-1899)	53	2	0
Modern (1900 - present)	56	12	3
Unknown	21	0	0
Total	142	14	3

Table 3.2 Chronological breakdown of sites recorded during surveys of Coastal Stretch A (see **Fig.2**).

- 3.2.3. Of these records, three are thought to correspond with finds identified during the Phase 1 DBA. These are **MWX58775 (WA1007 & WA1008)**, **MWX59164 (WA1001 & WA1009)** and **MWX60551 (WA1013)**. The finds are discussed in chronological order below.

Prehistoric - Medieval

- 3.2.4. Due to the diverse array of destructive coastal processes at work in Coastal Stretch A, particularly along Barton Beach, very few new archaeological finds were discovered. The HER contained records for only 27 finds for what were often

spuriously dated lithics discovered on the foreshore of Barton Beach and its surrounding hinterland. The Bronze Age is the earliest period in which features other than isolated findspots occur in the enhanced dataset, and these records relate to two ring ditches identified from aerial photographs to the north of Barton golf course (**MWX35163**), and to the north east of Milford-on-Sea (**MWX59181**). Despite existing issues over the dates of these two sites, their inland location and low vulnerability to marine incursion meant they were not assessed during the surveys.

- 3.2.5. Aside from these, the Bronze Age, Iron Age, and Romano-British period are represented by unstratified pottery, lithics, and occasional metalwork, predominantly the result of chance discovery. The prospect of similar finds being discovered during the survey was low, with the likelihood further reduced by the low turnout of volunteers. Walking transects were widely dispersed, and no new prehistoric artefacts were discovered.
- 3.2.6. HER records from the medieval period were considerably more abundant. A number of these sites were visited as part of the fieldwalk surveys, including the surviving 12th Century graveyard of what was referred to as All Saints Church near Hordle (**MWX11690**). The graveyard is situated well back from the receding coastline is not perceived to be in any immediate danger.
- 3.2.7. A number of sites recorded by the HER as having medieval origins, were assessed during the field walk surveys. These included Smugglers Cottage (**MWX11632**), the White Horse Inn (**MWX11893**), and Carrington Farm House (**MWX11894**) in Milford-on-Sea. All of these sites are currently in use. Many of the other sites of medieval origin, such as the watermill on Barnes Road, Milford-on-Sea (**MWX11629**), were on privately-owned land and thus were inaccessible.

Post-Medieval – Modern

- 3.2.8. The vast majority of new discoveries in Coastal Stretch A were modern (post-1899AD). The only potentially post-medieval sites recorded were two paths (**WA1001** and **WA1002**), which extended northwards from the cliff-top coastal path adjacent to Barton Beach. Of these, **WA1001** appears to be related to a series of WWII sites (**WA1007**, **WA1008**, and **WA1009**) and the orientation is suggestive that it may have been a pathway between a WWII gun emplacement/observation post (**WA1009**) and a pillbox (**WA1013**).
- 3.2.9. The second path (**WA1002**) was more problematic to date, though it was assigned a post-medieval date on account of its disparity with the surrounding features. Its orientation suggests a possible link with the former village of Hordle, though it may have been another WWII walkway between two stations that no longer exist. There is the further possibility that it may be little more than the accumulated abrasion of repeated animal movement over the pasture, or indeed the result of recent human activity. Of these possibilities, a post-medieval/modern track seems to be the most feasible.
- 3.2.10. **WA1007** & **WA1008** (**MWX58775**) are WWII concrete tank traps situated on the foreshore on Barton Beach (**Plate A2**). These sites were found to be eroding due to continuous wave action, and may have moved from their original location.
- 3.2.11. **WA1001** and **WA1009** (**MWX59164**) relate to a former WWII gun emplacement/observation point with an adjoining pathway on the cliff top near Hordle. The path has eroded significantly in the section that crosses the modern footpath, presumably due to continued public use, whilst the concrete base of the

former WWII station has begun to emerge from the eroding cliff face. At the current rate of erosion, the site will subside on to the foreshore within the next 50 – 100 years, whilst the path will continue to be lost to the retreating cliff edge.

- 3.2.12. **WA1013 (MWX60551)** is a south-facing WWII pillbox located on agricultural land set back from the cliff face near Hordle. The site is currently well protected by surrounding sediment and floral growth which have accumulated around the base to prevent human access. There is some evidence of damage to the outer south-facing wall which may have been the result of natural deterioration, though it may also have been due to anthropogenic disturbance. The site is visible to walkers from the footpath, but is situated in a fenced-off field and will require the permission of the landowner (Hampshire County Council) to access directly.
- 3.2.13. The remaining discoveries were almost certainly modern in construction, with the vast majority constructed as part of the WWII military defences. Cliff-top gun emplacements punctuated the coastline, and it is apparent that several have already succumbed to the regressing cliff face.
- 3.2.14. Sites such as **WA1005 (Plate A1)**, **WA1006**, **WA1009**, **WA1010**, **WA1011 (Plate A3)**, **WA1012 (Plate A4)**, **WA1016**, and **WA1017 (Plate A5)** showed enough homogeneity of shape and character to suggest that they were constructed over a short period of time as part of the coastal barricade against German incursion during WWII.
- 3.2.15. Each of these sites contained large rectilinear concrete bases with circular stone indents adorned with iron fittings, presumably for the attachment of a large artillery gun. The lack of apparent walls suggests the structures were temporary wooden shelters, although it is entirely feasible that the wall bricks were subsequently stripped from the site and re-used after the War.
- 3.2.16. Sites **WA1011** and **WA1012** illustrate this potential. **WA1010 (Plate A3)** is a typical concrete base for an artillery gun. A number of potentially associated finds were located in a small fissure (created by erosion) adjacent to the concrete base. These included the remains of a set of WWII-era binoculars, drilled wood components, and fishing weights (**WA1012; Plate A4**). These suggest at least some wooden component to this particular structure, with observation being at least a minor function.
- 3.2.17. The remaining modern sites were discovered along the cliff-top of Naish Holiday Village. Two large concrete bases (**WA1003** and **WA1004**) were identified as the abandoned foundations of two 1950s holiday chalets. The continual retreat of the cliff has resulted in the loss of several chalets, with more chalets currently under threat.

3.3. SUMMARY

- 3.3.1. Coastal Stretch A is characterised by a long shingle strand with sheer cliffs. The western section has suffered significantly from a combination of freshwater and marine erosion, and the cliffs are receding rapidly. Given the likelihood that a substantial proportion of earlier (and particularly prehistoric) archaeological remains were situated close to the interface between sea and land (i.e. the foreshore and intertidal zone), it is assumed that many of these sites and features have since been displaced or destroyed. Sporadic prehistoric finds, including worked lithics, have been discovered in the eroded deposits, however, such finds are extremely rare.

- 3.3.2. The majority of sites discovered during the Phase 2 surveys were modern in origin, with a recurring military defence theme prevalent. The Coastal Stretch overlooks the Solent waterway which was strategically important during WWII, and the fear of invasion from foreign forces is evident in the landscape.
- 3.3.3. All foreshore and intertidal archaeology from this coastal stretch should be regarded as highly vulnerable due to the continued erosion of the cliff.

4. SURVEY RESULTS: COASTAL STRETCH B

4.1. INTRODUCTION

Study Area

- 4.1.1. Coastal Stretch B runs from the edge of Milford-on-Sea in the west to Elmer's Court in the east (**Figure 3**). It extends seaward to the low water mark and landward to a distance of 1.5 kilometres from the high water mark.
- 4.1.2. The division of coastal stretches has been based on the lines produced in the second phase of Shoreline Management Plans (SMP2) to indicate Policy Units specifically for the North Solent area. These lines were provided to WA by the Channel Coastal Observatory.

Archaeological Potential

- 4.1.3. The archaeological potential of Coastal Stretch B was assessed through queries of the existing archaeology of the coastal stretch as recorded in the enhanced dataset as part of the Phase 1 DBA (see Wessex Archaeology, 2010). The dataset was examined in the context of current research frameworks and the historical character of the New Forest in order to assess the importance of known sites. The assessment indicated that the potential for new archaeological finds was **high**. This was subsequently corroborated by the local volunteers who participated in the field assessment.
- 4.1.4. Existing designations, both statutory and non-statutory, were examined in order to inform the assessment of the archaeological potential of this coastal stretch. There are two Scheduled Ancient Monuments in this coastal stretch; the Iron Age hillfort at Buckland Rings (**MWX61628**) and the Henrician castle at Hurst Spit (**WA2105**). In addition to these sites, there are 259 listed buildings in this area, mainly concentrated in Lymington. These comprise 12 buildings listed as Grade II* and 247 Grade II listed buildings. Although these designations can be considered to enhance the archaeological potential of the area and add to the historic urban character of Lymington, the majority of these are currently occupied structures and are situated some distance from the current shoreline.
- 4.1.5. The principal factor contributing to the high archaeological potential of this coastal stretch is the general time-depth of the archaeological record in this area. Archaeological sites have been recorded, *in situ*, in this area from every chronological period from the Neolithic onwards. The archaeological assets in this area can therefore be considered to form a linear record which adds considerably to our understanding of the heritage of the New Forest coast.
- 4.1.6. The archaeological records which pre-date the Neolithic period are limited to isolated findspots of artefacts rather than archaeological features, structures of monuments. Isolated findspots do not necessarily imply the existence of a further

site or settlement for a given period, and if these are derived rather than *in situ* finds, then they do not necessarily indicate the presence of humans at a particular location at a particular time.

- 4.1.7. Although the archaeological potential of findspots of derived or uncertain provenance can generally be considered to be low, artefacts of a certain type or chronological period can enhance the archaeological potential of an area. Such artefacts can be of archaeological importance, even if they are not found in context, if their rarity can be considered to be regionally or nationally significant.
- 4.1.8. In this respect, the occurrence of findspots of Palaeolithic and Mesolithic date along this coastal stretch can be considered to further enhance the archaeological potential of the area.
- 4.1.9. Several further factors contributed to the assessment. The presence of Hurst Castle, initially constructed as part of King Henry VIII's Device forts and subsequently re-worked to provide a defensive front against successive (and increasingly technologically proficient) enemies, suggests ongoing human activity in the eastern extent of the Study Area. Further along the coast, there are the extensive remnants of Hampshire's salt industry which stretch up to the town of Lymington, itself a hub of human activity from the medieval period onwards. With its natural harbour and inland access, the Lymington river and its estuary have the potential to accommodate the remains of a large variety of human endeavours.
- 4.1.10. The salt-working industry is one aspect of the heritage of this coastal stretch that contributes to its high level of archaeological potential. In this area there were many archaeological features, still extant, which are associated with a local industry which would have shaped the land-use and subsistence patterns of past communities in a significant way. This industry is of particular interest due to its time-depth, as this landscape has been exploited for this resource since at least the Romano-British period.
- 4.1.11. It is acknowledged that current settlement and land use patterns do not necessarily correspond to similar trends in the past. This can also be seen along this coastal stretch, particularly with regard to the medieval and post-medieval salt-working industry. Whilst much of the coastline between Keyhaven and Lymington is currently given over to agriculture and intertidal conservation areas, the coastal fringe was the site of a reasonably large scale industry in the past.
- 4.1.12. There are nine Management Units within Coastal Stretch B, as defined by the SMP2 for the North Solent (see **Section 2.4**). The policy recommended for Units **CBY.A.1 – CBY.A.3** and **CBY.C.1** is Hold the Line, whereas the policy for Units **CBY.B.2 – CBY.B.4** and **CBY.A.4**, is Management Realignment. The policy for **CBY.B.1** is No Active Intervention. Consequently Unit **CBY.B.1** is at a higher risk of coastal erosion and as a result its archaeological record is under greater threat. Despite the comparatively low number of archaeological finds recorded in this area, this is a particular concern considering a majority of the archaeological features recorded for this coastal stretch was found within this one Management Unit.

Survey Objectives

- 4.1.13. Priority areas or sites meriting further survey or evaluation were identified in the Phase 1 DBA based upon the enhanced data and assessment of threat and vulnerability. These are listed **Table 4.1** (below).

Priority Area or Site	Fieldwork
Intertidal areas off Keyhaven (MWX61695, MWX27698, MWX27699)	Field survey to record in detail intertidal features such as peat deposits, etc. Involved dGPS survey with use of an inflatable boat to secure access and exit from the seaward extents of the mudflats.
Unidentified wreck, Moses Dock near The Salterns at Oxey Marsh (MWX61305)	Photographic recording of the wreck.
Five wrecks, Lymington foreshore (MWX60680, MWX60787, MWX61143, MWX61144, MWX61184).	Photographic recording of the wrecks.

Table 4.1 Priority areas or sites identified by the Phase 1 DBA as requiring further investigation.

Methodology

- 4.1.14. Initial survey within this coastal stretch took the form of a walkover survey to confirm the existence of known sites and to identify new ones. The data collated has been used to enhance and expand the HBSMR, and to provide baseline data for the assessment of both natural and anthropogenic impacts threatening each site. By extension, this assessment will inform future management strategies.
- 4.1.15. Fieldwalking was undertaken along Hurst Spit; along the outer perimeter of the Keyhaven Marshes; throughout Oxey Marsh, and along the banks of the Lymington River. The latter terrestrial survey was complemented by a boat survey carried out on **November 2nd 2010**. Local volunteers were involved in each stage of the fieldwalk and boat surveys, which served to provide them with a deeper understanding and appreciation of the coastal and marine historic environment in their area.
- 4.1.16. Sites were identified and subsequently recorded using an iPaq Pocket GIS with a Holux GPS. When possible, sites were also photographed.
- 4.1.17. A preliminary walkover was carried out on **10th June 2010** with two volunteers. This provided insights into access and local facilities. The walkover began at the western extremity of Coastal Stretch B at Milford-on-Sea and covered the entirety of the foreshore, including Hurst Spit, Keyhaven Marshes, and the western and eastern banks of the Lymington River. The weather was very good, and no issues of access were encountered. Keyhaven Marsh proved difficult to investigate due to the intertidal muds, and the walkover stayed on the main coastal walking routes. Car parks and toilet facilities were present at both the starting point and finishing point with accessible facilities in between.
- 4.1.18. The main surveys were carried out over five days: **6th – 8th July** and **13th – 14th July 2010**. A total of 34 volunteers participated over the three days, with some participating on more than one day. The survey team also included an archaeologist from New Forest National Park Authority.

Limitations & Constraints

- 4.1.19. There were no issues with access permissions for the main field walk surveys. Much of the Coastal Stretch is served by a sea wall which houses a public walkway. Some of the more developed land around Lymington proved difficult to access (logistically) however, these areas were covered by the boat surveys.

4.1.20. The seaward extents of the Keyhaven Marshes were logistically problematic to negotiate. Deep intertidal muds prevented comprehensive coverage, and the flat topography made it difficult to identify archaeological features unless they were clearly proud of the surrounding landscape. Subsequent attempts to access the marshes by boat also proved ineffective, due to the requirement to access at low water in order to locate archaeological features. The shallow channels made it extremely difficult, not to mention dangerous, to access much of the intertidal zone in the boat. The compromise option of returning at high water was rejected as it was felt that archaeological sites would no longer be visible⁷.

4.2. RESULTS

- 4.2.1. A full inventory of documented sites from Coastal Stretch B is provided in Appendix B of the Phase 1 DBA (Wessex Archaeology, 2010). A total of 815 sites were identified by the DBA carried out as part of the Phase 1 project, though when duplications were taken into account, this number was calibrated to 729.
- 4.2.2. The majority of sites discovered during the Phase 2 surveys suggested post-medieval to modern origins, with a focus of association with Late Medieval salt production industry. Due to the natural shingle beach and the modern construction of a substantial sea wall, the number of foreshore finds was limited, however these combined to protect the broader coastal hinterland which housed a wealth of archaeological features (see **Table 4.2; Figure 3**).

Chronological period	Records		
	Existing	New	Updated
Prehistoric (500,000BP – 42AD)	24	0	0
Early Historic (AD 43 – 409)	11	0	0
Medieval (AD 410 – 1539)	46	34	2
Post-Medieval (1540 to 1899)	467	42	4
Modern (1900 to present)	102	16	1
Unknown	79	16	0
Total	729	108	7

Table 4.2 Chronological breakdown of sites recorded during surveys of Coastal Stretch B.

Prehistoric

- 4.2.3. The chronological queries of the enhanced dataset reveal that the database entries ascribed to the various prehistoric periods are dominated by isolated findspots, rather than coherent sites or monuments. In some cases, these findspots were described in terms of broader chronological periods such as 'Prehistoric' as there was not enough information in the record to classify them in more detail.

Neolithic

- 4.2.4. The Early Neolithic period is the earliest period for which there is positive evidence for human settlement in this coastal stretch. A hearth (**WA2630**) dating to this period was found during excavation of the ramparts of the Scheduled Ancient Monument at Buckland Rings. There are two further enclosures of possible Neolithic date within this coastal stretch. Both records describe single ditch rectilinear enclosures, one

⁷ One of the volunteers [Wendy Wiseman] surveyed the Keyhaven Marshes in 2007 as part of fieldwork for a Masters dissertation presented to the University of Southampton. This thesis was consulted for insights and data, though the results have not been included in this report. Where feasible, this data will be incorporated into the final Phase 3 report. Mrs Wiseman was an ever-present on the Coastal Stretch B surveys, and provided a wealth of valuable insights and advice.

situated north-east of Milford-on-Sea (**WA2222**) and the other located at Lower Pennington (**WA2224**). Each of these sites was assessed during the survey, and the broad interpretations of the records were shown to be accurate.

Bronze Age

- 4.2.5. A single Bronze Age ring ditch (**WA2271**), with a possible entrance represented by largely ploughed out cropmarks, is also recorded at Lower Pennington, however it was not possible to identify the site from the ground.
- 4.2.6. Records of isolated findspots from the Bronze Age also exist along this coastal stretch. A hoard of Bronze Age axes (**WA2668**) is described as having been found at Walhampton in 1779. In addition to this, a bowl of Late Bronze Age date (**WA2195**) was recovered from Lymington Marshes in 1977.
- 4.2.7. Two records of uncertain date may possibly date to the Bronze Age. These comprise a small mound of raised land on the coast at Hurst Spit (**WA2132**) and a group of sinuous ditches thought to be the remains of waterways at Keyhaven Marshes (**WA2252**). Neither of these features has been positively dated, although the Bronze Age is thought to be the earliest period from which they could potentially date. These features were identified from aerial photographs and very little information is included in the records. In fact, there is some uncertainty as to whether these are man-made or natural features. Attempts to survey the marshes were complicated by access problems, however it was suggested by volunteers familiar with the marshes that these ditches were almost certainly later constructions used to channel water to and from medieval and post-medieval salt production sites⁸.

Iron Age

- 4.2.8. Settlement and defensive activity are evident in this coastal stretch during the Iron Age. The hillfort at Buckland Rings (**MWX61628**) is probably the most well known Iron Age site along this stretch of coast. It is one of the two Scheduled Ancient Monuments within Coastal Stretch B. Further evidence for defended settlement exists at Ampress Camp (**WA2634**) and in the form of a single bank curvilinear enclosure at Warborne (**MWX61660**). The site of Ampress Camp was visited but was not accessible as it has been redeveloped and is now privately owned. The surrounding landscape suggests a former river channel close to the Camp, marked by a raised ridge (**WA2018**), although it was not possible to accurately date this. Adjacent features, such as two pollarded oaks (**WA2016** and **WA2017**) were almost certainly Late Medieval in origin, whilst an array of metal objects (**WA2039**) discovered within the ridge itself were almost certainly Post-medieval.
- 4.2.9. Whilst the settlement described above may date to the Romano-British period, the remaining records ascribed to this period within this coastal stretch are limited to isolated findspots. These comprise sherds of Romano-British pottery (**WA2362**) found during the late 19th century and a coin of Antoninus Pius (**WA2636**), both found in Lymington town centre, the findspot of a what are thought to be the remains of a necklace (**WA2635**) of possible Romano-British date recovered from Lymington River. Two carved stone heads (**WA2180**), also from this period, are thought to have been retrieved from Lower Farm, Pennington.
- 4.2.10. No sites which could be definitively dated to the Prehistoric period were discovered during the Phase 2 field assessment.

⁸ Although salt production may have taken place here during in the Bronze Age and Iron Age, these sites suggest a larger scale of production, which is more commonly associated with later sites.

Medieval - Post-Medieval

- 4.2.11. The only previously recorded evidence for the Early Medieval period in this Coastal Stretch consisted of a pottery findspot (**WA2633**) during building works in Captain's Row in Lymington, and two gully-like features (**WA2650**) excavated on Lymington High Street which were thought to pre-date the medieval material on the site.
- 4.2.12. Medieval records in the dataset reflected the development of settlements and associated infrastructure in this Coastal Stretch. In addition, several records of placenames occur in the dataset. Although placenames are not necessarily connected with any specific extant archaeological remains, they serve to emphasise the medieval origins of current settlements such as Keyhaven, Lymington, Pennington, Walhampton and Warborne.
- 4.2.13. The field assessment added a variety of new historic archaeological sites to the dataset. Although it was not possible to definitively date many of the sites, it was apparent that a number had their origins in the Late Medieval period. Of these, most were associated with the coastal production of salt which is thought to have peaked as an industry in the Lymington area during the 1700s. The industry went into decline in the early 19th century when rival salt producers from Cheshire developed cheaper terrestrial extraction technology and began mining salt from geological deposits. By the mid-19th century, the coastal evaporation methods which had dominated the New Forest industry, become economically unviable and logistically obsolete, and the industry had ceased completely by the 1860s.
- 4.2.14. The remnants of this industry are still in evidence along much of Coastal Stretch B, with the most common site type being large open coastal flats manipulated for use in salt evaporation. Although salt production methods varied from site to site, the basic principle of trapping tidal seawater and allowing the sun and wind to reduce it to a brine that could be boiled industrially, was the mainstay of almost all coastal production sites.
- 4.2.15. At Keyhaven marshes in the west of the Coastal Stretch B, linear crop marks still show the boundaries of salt evaporation sites (e.g. **WA2002 (Plate B1)**, **WA2004 (Plate B2)**, **WA2006**, **WA2007**, **WA2009**, **WA2010**, and **WA2013**), often adjacent to or near brine ponds. To the eastern extent of Keyhaven Marsh towards Oxey Marsh, a large raised enclosure (**WA2011 (Plate B3)**) is recorded as a being part of a "field drainage" system. Further assessment revealed this may indeed be a debris mound from a process known as sleeching⁹. The "enclosed" rectilinear shape of the mound also suggests a possible structural base, perhaps of a wind-powered pump or windmill. Fragments of red tile, brick and mortar were found to be eroding out of some sections of the mound, although this could be part of a debris mound rather than the *in situ* remains of a collapsed structure.
- 4.2.16. A former marine "fishing pond" (**WA2074 (Plate B14)**) was identified in the intertidal zone to the east of Keyhaven. This large artificial ridge appears to have been created by the insertion of a line of wooden stakes, presumably harbouring some sort of sediment trap, and possibly underpinned with boulders.
- 4.2.17. Further east along the coast lies Oxey marsh, which is widely accepted as the primary salt production site during the Hampshire industry's production peak. Perhaps unsurprisingly, more substantial structures remain *in situ* here, such as the Creek Cottage boiling and storage houses (**WA2001**; see **Appendix 2**). These buildings are a rare surviving example of a salt boiling house at the head of a man-

⁹ The process of drawing salt directly from the marsh sediment itself.

made channel and dock (**WA2025 (Plate B4)**). The channel was almost certainly built by hand to facilitate both the importation of coal for fuelling the boiling fires, and the export of salt. Both cargoes would have been transported by shallow draft barge.

- 4.2.18. The wider landscape contains a variety of sites associated with salt production, most pertinently, brine ponds (**WA2027**), a sluice gate (**WA2033**), possible clinker (or “sleeching”) mounds (**WA2023**), and an array of raised mounds (e.g. **WA2026**, **WA2029**, **WA2021**, and **WA2042**), linear ditches and ridges, often interspersed with vertical wooden stakes (e.g. **WA2026** and **WA2027**).
- 4.2.19. A number of other site types of possible medieval origin were also evident along the coastal façade to the north of Oxey Marsh and up the western bank of the Lymington River. These included two pollarded oak trees (**WA2016** and **WA2017**) adjacent to the Lymington River behind the modern town itself. These “worked” trees were also located next to a ridge and ditch which paralleled the course of the Lymington River towards Ampress Camp. The full extent of the ridge could not be surveyed due to dense thicket and woodland, but it was suggested by a volunteer that the ridge represented a former course of the Lymington River, or a manipulation of this particular stretch to cope with flooding.
- 4.2.20. Other sites of possible medieval origin include the remains of marine and riverine navigation. Jetties (e.g. **WA2037**), mooring posts (e.g. **WA2032** & **WA2068**), landing stages (e.g. **WA1097**), and channel markers (e.g. **WA1086**, **WA1087** & **WA2071**) tend to manifest as wooden stakes in the intertidal muds though their actual purpose was often indiscernible. Similarly, accurately dating such unstratified finds by observation alone is difficult and, by extension, unreliable¹⁰.
- 4.2.21. Of particular interest were a number of sites around the area of Hurst Spit and Hurst Castle. The original castle compound was completed in 1544 as part of Henry VIII’s defensive frontier, but has undergone subsequent modifications. The Spit itself has also seen numerous other structures built in the intervening period, including a series of lighthouses and towers. The most recent lighthouse, which is still in use, was constructed in 1867.
- 4.2.22. Hurst Spit has continuously altered form and extent over the centuries, with the result that older archaeology may have been buried beneath the shingle bank. One record alleges that the Spit shifted 40 yards after a storm in the 19th Century (Green, pers.com.). To the north of the Spit there is a sheltered bay which forms the southern extent of the Keyhaven marshes. This area yielded the most in terms of archaeological remains, although most of the new discoveries made are almost certainly Late Medieval and Post-Medieval in date.
- 4.2.23. Hurst Castle was refortified in the early 19th Century under the orders of newly appointed Secretary of War Henry John Temple (3rd Viscount ‘Lord’ Palmerston), and the stronghold survived 12 years of Napoleonic hostilities. It is also well documented that the Castle was re-fortified and modernised during the 1870s, when the eastern and western wings were constructed. Various remnants of this time are still evident in the landscape, either as *in situ* structures (e.g. **WA2054**), or as

¹⁰ It has been assumed that visible timber piles or stakes existing in a tidal salt-water environment must have a relatively modern origin, due to wood’s propensity to deteriorate under the impacts of physical and biological processes (see for example Wheeler, 2002; Ward *et al*, 1999). However, older timbers may have survived if they were buried anaerobically in the intertidal sediments, and may only have been exposed recently. With this in mind, a broader dating range was adopted for this type of feature.

derived material re-used as sea defences (e.g. **WA2048 (Plate B7)**, **WA2049**, and **WA2051 (Plate 1068)**).

- 4.2.24. A single shard of internal glazed pottery (**WA2003**) was discovered on the northern most point of the Spit, and although suggests Late Medieval activity in the vicinity, it may be contamination brought in during the coastal engineering process.
- 4.2.25. Other features were identified which could be the extant wooden remains of wrecks (e.g. **WA2036 (Plate B5)** and **WA2063**), with the remains of two extant jetties (**WA2056** and **WA2065**) nearby. A further jetty (**WA2035**) identified from two eroding parallel lines of wooden stakes may also be from this period.
- 4.2.26. Hurst Castle underwent a further upgrade during WWII as the British sought to protect the Solent naval corridor. Three artillery platforms (**WA2052**) mark the sites of gun emplacements which have their origins in the 1870s modernisation, but were used during WWII. Similarly, a number of red brick structures, one of which resembles a buried culvert (**WA2064 (Plate B13)**), are evident around the main castle structure.
- 4.2.27. A number of sites and artefacts were discovered at the northern extent of Hurst Spit, which may have their origins in the Post-Medieval period, but which appear modern in appearance. The red brick and mortar remains of a dilapidated cottage (**WA2089 (Plate B16)**), which according to one of the volunteers was abandoned during the 1950s, lie on the Spit's northern façade, and are surrounded by an array of detritus. This includes a cast iron toilet cistern (**WA2057 (Plate B11)**) which was discovered close by.
- 4.2.28. This area of the Spit also houses a former Coastguard station (**WA2059 (Plate B12)**), almost certainly of modern (c.1960s) construction but now abandoned. Despite the modern appearance of the hut, it is feasible that an earlier lifeboat station existed in this location, and the current site is a redevelopment of an earlier structure.
- 4.2.29. An area to the rear of Hurst Castle was identified by one of the volunteers as a former boat yard (**WA2066**).

Modern

- 4.2.30. The majority of modern sites discovered during the field walks were located in or around the town of Lymington and the Lymington River. Of particular interest was the site of an old pig farm (**WA2094**), located to the north of the town, adjacent to the Lymington River. The remnants consisted of corrugated iron slats and timber frames, with assorted metallic detritus, such as fence posts and gates. One of the volunteers suggested this farm was abandoned in the 1980s.
- 4.2.31. To the north of Hurst Spit towards Keyhaven Marshes, a modern small rowing boat wreck (**WA2090**) was found in the bank of the channel leading up to Creek Cottage (**WA2001**). The boat is definitely a modern construction, and appears to have been recently abandoned.
- 4.2.32. In the area of Oxey Marsh, a series of four aligned vertical metal posts (**WA2097**) were discovered. Although the purpose of the posts is unknown, their condition suggests a modern origin. Other modern finds included artefacts re-constituted as garden ornamentation such a flower beds constructed out of boat hulls (**WA2092**, **WA2093**, and **WA2104**) and the re-use of boat anchors (**WA2075**, **WA2078** and **WA2096**).

- 4.2.33. The banks of the Lymington River also housed several wrecks, some of which may be pre-1900 in origin, but most of which are almost certainly modern. These wrecks ranged in type and extent from larger hulks such as **WA2075**, to smaller domestic vessels such as **WA2077 (Plate B15)**. Due to the location of the wrecks and a lack of proper access, it was not possible to ascertain whether any of these wrecks represented the sites identified as “priority sites” in the Phase 1 DBA (see also **Section 6.1.14**). However, all wrecks were photographed as part of the survey, and have been incorporated into the dataset.

Unknown

- 4.2.34. Problems with accurate dating are discussed elsewhere in the report, but four sites in Coastal Stretch B (**WA2099 – WA2102**) were deemed un-datable by virtue of their environmental context and preservation status. Each of these features was a timber stake or post located in an area where the preservation conditions appeared to be high (e.g. high levels of sediment or a terrestrial setting). It was felt that a period of origin could not be confidently asserted.
- 4.2.35. Several sites within Coastal Stretch B could only be categorised within very broad potential date ranges, partly due to low dating confidence, and partly due to subsequent re-development and continued use of the feature or site. The Lymington River and its surrounds contained the highest density of such sites, with a metal artefacts (**WA2040**) discovered eroding out of a linear ridge and ditch (**WA2018**). Despite the older date period ascribed to the ridge, the metal work appears to be of modern construction, although this could not be conclusively ascertained by observation alone.
- 4.2.36. Other features included a line of curving timber posts (**WA2045**) on the edge of a coastal lagoon known as Hawker’s Lake, near Keyhaven Marshes. These were thought to be part of an old revetment or channel obstruction, though information garnered subsequently by a volunteer suggested a much later construction date (c.1970s). Further investigation is required to establish a definitive date period. Similar clusters of wooden stakes (**WA2043** and **WA2044**) were evident in Keyhaven Lake, and were interpreted as the remains of former jetties.
- 4.2.37. A wreck (**WA2038**) was discovered in the intertidal zone adjacent to the modern Isle of Wight ferry terminal (**Plate B6**). Due to its location, it was not possible to access this site directly, but further investigation could reveal this site to be Late Medieval. It is of wooden construction, and from what could be seen, it has the appearance of a moderately large barge, suggesting a later (Post-Medieval – modern) origin.

4.3. SUMMARY

- 4.3.1. Coastal Stretch B is characterised by three distinct environments. The first is the shingle spit of Hurst Spit, which was found to contain predominantly post-medieval and modern finds, along with contaminants brought in as part of re-management works conducted in 1997. The Spit protects a series of intertidal salt marshes, including Keyhaven and Pennington. Similar marshes, including Oxey Marsh, are evident further along the coastline, though these are now enclosed by a sea wall. The marshes are largely undeveloped with the result that substantial remnants of the salt industry are still visible, and in some cases, extant. The third environment is the Lymington River and Estuary, which remains intertidal within the extents of the Study Area. The finds in this environment range in type from salt production sites to maritime features such as dock and port facilities.

- 4.3.2. The majority of sites discovered during the Phase 2 surveys were post medieval - modern in origin, with the prevalent theme being the post-medieval production of salt. Sporadic prehistoric finds, including worked lithics, have been discovered in Coastal Stretch B, however, such finds are extremely rare. Despite the fact that the Coastal Stretch overlooks the Solent waterway which was strategically important during WWII, there is little evidence beyond Hurst Spit of military installations.
- 4.3.3. Given the likelihood that a substantial proportion of earlier (and particularly Prehistoric) archaeological remains were situated close to the interface between sea and land (i.e. the foreshore and intertidal zone), it is assumed that many of these sites and features have since been displaced or destroyed by the construction of the sea defences which stretch from Keyhaven to the Lymington Estuary. There is however, further potential for both prehistoric and historic archaeology to have survived in the intertidal sediments and adjacent hinterland.
- 4.3.4. Of the sites encountered, most are vulnerable to marine incursion and will degrade over time as a result of the physical impacts of tidal movement and wave impacts. However, the extensive sediments may preserve some of the intertidal archaeological remains for longer periods provided there is no significant change in the geomorphological regime.

5. SURVEY RESULTS: COASTAL STRETCH C

5.1. INTRODUCTION

Study Area

- 5.1.1. Coastal Stretch C runs from Elmer's Court in the west to Salternshill in the east (**Figure 4**). It extends seaward to the low water mark and landward to a distance of 1.5 kilometres from the high water mark.
- 5.1.2. The division of coastal stretches has been based on the lines produced in the second phase of Shoreline Management Plans (SMP2) to indicate Policy Units specifically for the North Solent area. These lines were provided to WA by the Channel Coastal Observatory.

Archaeological Potential

- 5.1.3. The archaeological potential of this coastal stretch can be considered to be **moderate** with regard to the records already recorded in the enhanced dataset from Phase I (see Wessex Archaeology, 2010). The dataset was found to contain a relatively low number of records for this coastal stretch when viewed in comparison with some of the other stretches being assessed.
- 5.1.4. The comparatively low population densities and levels of development along the coastline of Coastal Stretch C have resulted in a lower number of archaeological finds observed during the walkover survey. Traditionally, developed landscapes have revealed more archaeological finds due to the necessity for pre-development archaeological survey. Archaeological discoveries from less developed areas are mainly through specific investigation, be it fieldwork or research, or even by chance.
- 5.1.5. It should be noted that current settlement and land use patterns do not necessarily correspond to similar trends in the past. Areas with lower levels of modern development and settlement density could possibly have had a higher level of land

use in the past and may contain as yet undiscovered archaeological remains. Potentially these finds may be found in a better state of preservation.

- 5.1.6. Potential preservation of timber remains, including vessels, jetties, sluices, or even post alignments would be increased further if they are found to be preserved within the salt marsh areas that produce anaerobic conditions. Fortunately there are several areas along this stretch that would promote the greater preservation of such timber features.
- 5.1.7. The majority of Coastal Stretch C has been suffering from coastal erosion giving it diminished development potential. Erosion will also have damaged the quality of the preservation of many of the features along the coast (dependent on their material and location) and in some cases would have removed them entirely from the archaeological record.
- 5.1.8. There are three Management Units within Coastal Stretch C, as defined by the SMP2 for the North Solent. The policy recommended for Units **5C19** and **5C18** is Hold the Line, whereas the policy for **5C20** is No Active Intervention. Consequently Unit **5C20** is at a higher risk of coastal erosion and as a result its archaeological record is under greater threat. This is a particular concern considering a majority of the archaeological features recorded for this coastal stretch was found within this one Management Unit. It is also interesting to note that no finds were recorded in Management Unit **5C19**, between Colgrims and Park Farm. This could be due to the intense modern sea defences, in the form of zigzag groynes, which have been constructed here potentially burying, damaging or destroying any archaeological features.
- 5.1.9. Existing designations, both statutory and non-statutory, were examined during Phase I in order to inform the assessment of the archaeological potential of this coastal stretch. There are two Scheduled Monuments in this coastal stretch at St. Leonard's Grange; a medieval chapel and barn. In addition to these sites, there are 19 listed buildings in this area, comprising two Grade I, one Grade II* and 16 Grade II listed buildings. Due to the rapid nature of the walkover survey, concentrating in particular on the coastline and foreshore, none of the Scheduled Monuments or listed buildings were encountered.

Survey Objectives

- 5.1.10. Priority areas or sites meriting further survey or evaluation were identified in the Phase 1 DBA based upon the enhanced data and assessment of threat and vulnerability. These are listed in **Table 5.1** below.

Priority Area or Site	Fieldwork
Intertidal zone at Gins (MWX61776, MWX61903, MWX61902, MWX61777)	Photographic survey of linear structure and landing stages within the mouth of the Beaulieu River.
Sites at Needs Ore Point (MWX61865, MWX61738, MWX61737, MWX61861, MWX61862)	Photographic survey of a range of features at Needs Ore Point, including linear structures, a sluice and buildings.

Table 5.1 Priority areas or sites identified by the Phase 1 DBA as requiring further investigation

Methodology

- 5.1.11. Initial survey within this coastal stretch took the form of a walkover survey to confirm the existence of known sites and to identify new ones. The data collated will be used to enhance and expand the HBSMR, and to provide baseline data for the assessment of both natural and anthropogenic impacts threatening each site. By extension, this assessment will inform future management strategies.
- 5.1.12. A preliminary walkover was carried out on **11th June 2010** with two volunteers. This provided insights into access and local facilities. The walkover began at the western extremity of Coastal Stretch C and covered the entirety of the foreshore along to Salternshill, north of Gins, at the eastern extremity. The weather was good, and no issues of access were encountered. Car parks and toilet facilities were present at both the starting point and finishing point with accessible facilities in between.
- 5.1.13. The main surveys were carried out over four days, on the **17th and 18th of July** and the **23rd and 24th of August 2010**. A total of 17 local volunteers joined the survey, with some participating on more than one day. These volunteers were involved in the task of surveying, which served to provide them with a deeper understanding and appreciation of the coastal and marine historic environment in their area. The survey team also included two archaeologists from the New Forest National Park Authority along with an archaeologist from English Heritage.
- 5.1.14. Sites were identified and subsequently digitally photographed and recorded using an iPaq Pocket GIS with a Holux GPS that involved taking the position of the feature, giving it an individual record number, and writing a brief description including the photograph numbers. All of these processes were undertaken by the volunteer survey team using appropriate archaeological practices.

Limitations & Constraints

- 5.1.15. The foreshore of this coastal stretch consisted predominantly of shingle beaches, which made it difficult to distinguish potential cultural artefacts from natural stone. Modern groynes constructed between Colgrims and Warren Beach meant that any potential existing archaeological sites could be either buried under the replenished beach or have been damaged or destroyed by the construction process.
- 5.1.16. No access problems were encountered between the western extent of the coastal stretch and the border of the Beaulieu Estate, and the survey was undertaken along the coastline. The remainder of the area was successfully surveyed due to the access permission granted by the Beaulieu Estate.
- 5.1.17. Occasionally the foreshore could not be accessed, for instance due to high tides or unsafe terrain, however other routes were often utilised where possible. Along the Beaulieu River at Needs Orr, the survey was undertaken from the large bank

extending around the adjacent salt works, providing a good vista of the inland and intertidal landscapes.

- 5.1.18. Any private properties encountered meant either walking along the foreshore beyond their boundaries, if considered safe to do so, or finding an alternative route inland detouring around the properties. This occasionally meant prolonging the survey and potentially missing areas of the foreshore.

5.2. RESULTS

- 5.2.1. A full inventory of documented sites from Coastal Stretch C is provided in Appendix C of the Phase 1 DBA (Wessex Archaeology, 2010). A total of 215 sites were identified by the DBA carried out as part of the Phase 1 project.

- 5.2.2. The table below illustrates the number of new/existing records observed during the walkover survey corresponding to the phases of chronological periods specified. Due to the rapid nature of the walkover survey, the function of features could not often be ascertained along with an accurate indication of its date. As a result these features were recorded as being from a range of periods. This ensures that neither the date of a feature is assumed nor that its archaeological significance is discredited.

- 5.2.3. The descriptions of the features below are in chronological order. However, where the date of a feature is deemed to cross several periods, it will be discussed within the Unknown section.

Chronological Periods	Records		
	Existing	New	Updated
Prehistoric – Early Historic (650,000BC –AD 410)	35	1	0
Medieval (AD 410 - 1539)	51	9	6
Post-Medieval (AD 1540 - 1899)	78	20	3
Modern (AD 1800-present)	33	10	5
Unknown	18	21	0
Non-Archaeological	0	1	0
Total	215	62	14

Table 5.2 Chronological breakdown of Stage Finds in Coastal Stretch C (**Fig.4**)

- 5.2.4. The results of the chronological queries for this stretch are depicted in **Table 5.2**.

Lower Palaeolithic

- 5.2.5. Prior to the walkover survey, two members of the volunteer survey team recovered a Lower Palaeolithic Acheulian handaxe (**WA3001 Plate C1**) on the foreshore at Pitts Deep. The position of the findspot was relocated and recorded during the walkover survey. However the handaxe is believed not to have been found in a primary context, having been deposited from offshore with the tides.

Medieval - Post-Medieval

- 5.2.6. The principal industry within this area was salt production and several of these medieval and post-medieval salt works sites were identified along Coastal Stretch C. The remains of the salt working site at Lisle Court (**WA3003; Plate C2**) comprised a flat internal area surrounded by banking on the landward sides and with timber posts in the centre; although the function of these posts were unclear.

- 5.2.7. Another salt works site was identified to the east at Pylewell (**WA3004** and **WA3005**). The western extent of this site was under a considerable amount of water, whilst the eastern extent was bounded by two large banks running perpendicular to the shoreline with a series of smaller banks and ditches contained within. This may illustrate different phasing or techniques of the Pylewell salt works. Also thought to be associated with the salt works was a brick walled feature along the foreshore (**WA1135**), up to three courses deep in places. One of the bricks was identified as dating to the 16th or 17th century.
- 5.2.8. The remains of a large salt works site were visible on the western edge of the Beaulieu River at Needs Orr (**WA3002**; **MWX61861**). These features included the delineating earthworks within the bounds of the salt works area, along with the large earthwork around the extent of the site preventing unwanted flooding from the adjacent river. Another similar salt works site was observed north of Gins (**WA3007** (**MWX21977**) and **WA3008** (**MWX61893**)), with internal earthwork delineations and a large banked earthwork surrounding the site.
- 5.2.9. Other industrial features were also visible along Coastal Stretch C. Remains of the late 18th or early 19th century brickworks (**WA3033**; **MWX55134**; **Plates C3 and C4**) were recorded at Pitts Deep, comprising several upstanding structures including the kilns; all of which are in varying conditions. There was also a large cut depression thought to be the clay extraction pit. Furthermore a stack of short lengths of clay land drain pipes are still evident on the site.
- 5.2.10. On the foreshore beside the brickworks, and presumably associated, are the remains of a 19th century quay (**WA3034**; **MWX55136**; **Plate C5**). This site comprises a shingle hard extending across the foreshore with several thick chains lying across the site along with numerous alignments of eroded wooden posts. Although the function of these subsidiary features cannot be accurately ascertained, they do imply the former importance of this area, which was once a hive of activity.
- 5.2.11. To the east of the Pitts Deep brickworks, close to the location of a former Coastguard Station, exists the remains of the former land boundary (**WA3038**) between Poor Law Unions and Rural Districts, as visible on historic OS mapping. The boundary extends as an earthwork up to the foreshore where it becomes an alignment of eroded wooden posts extending further into the water.
- 5.2.12. A circular stone lined feature (**WA3037**) with a natural deposit in the centre was also recorded on the site of the former Coastguard Station (none of which is still extant). The feature is thought to be associated with the station despite its function being unclear and having not been seen in context with the buildings of the Coastguard Station. Five small circular depressions (**WA3062**) were visible just to the north of the Coastguard Station and were initially thought to be of an archaeological nature. However historic OS mapping has since shown the area to be a dense woodland area and consequently these features are believed to be the locations of former trees (tree throws or bowls).
- 5.2.13. Numerous fragments of coal (**WA3035**) together with a pipe stem and bowl (**WA3036**) were also recorded along the foreshore and in the sea-bank at the former Pitts Deep Coastguard Station. They are thought to be either associated with this former dwelling or the ironworks at Sowley. Due to their position within the tidal range of the shoreline and due to coastal erosion, they are unlikely to remain *in situ*.
- 5.2.14. The remains of a post-medieval bath house (**WA3031**; **MWX55132**) along with two lengths of a brick constructed ha-ha (**WA3032**) were identified close to the

foreshore. Both are within the grounds of Pylewell House next to a park landscape and therefore are associated.

- 5.2.15. Medieval sea defences (**WA3010**) were observed at Sowley Marsh in the form of a large banked earthwork extending over 70m along the shoreline. The earthwork presumably helped to protect the iron works area at Sowley (**MWX22744**). Modern coastal defence features were later constructed here in order to provide greater protection to the area (**WA3056**; **MWX57667**).

Modern

- 5.2.16. Several features with a modern origin were identified along Coastal Stretch C ranging from possible military structures, sea defences and remnants of jetties. Their position along the foreshore highlights the enduring importance of this coastline from a marine perspective, despite there being a decline in the coastal industries (salt and brick works sites) that once relied heavily on the coast for transporting goods.
- 5.2.17. Two wooden vessels were observed from the shoreline, which are thought to be the remains of a modern ship graveyard (**WA3051**; **Plate C6**), providing protection to the salt marsh area from coastal erosion.
- 5.2.18. Numerous pairs of eroded wooden posts were visible extending for almost 60m into the Beaulieu River and are thought to be the remains of a modern jetty (**WA3060**; **MWX1185**). Several of these features were identified over the course of the walkover survey, some of which were visible on historic OS mapping.
- 5.2.19. There were several concrete features observed along this foreshore stretch that are thought to be modern in date, and could have a military origin. These included three large pieces of concrete (**WA3052**) positioned in no coherent manner, sited directly behind the beach at Tanners Lane. On the site of a former WWII military base at Sowley Marsh was the possible remnants of part of a gun emplacement (**WA3057**; **Plate C7**), and several structural pieces of concrete (**WA3058**) were recorded at Warren Beach, presumed to be associated with the military site that had occupied this area. Similar concrete pieces were identified at Needs Orr and are thought to be either associated with the buildings that once stood at the site or have a likewise military origin.
- 5.2.20. An unstratified assortment of metal debris (**WA3053**) was observed along the foreshore between Tanners Lane and Pitts Deep, comprising sections of pipes and metal sheeting. It is unclear where the debris has originated from. It is almost certainly too modern to be associated with the ironworks at Sowley, but it is unlikely to have come from a metal shipwreck offshore.
- 5.2.21. Three sections of modern sea defence (**WA3056**; **MWX57667**) were identified across the mouth of Sowley Marsh. They comprised curved pieces of concrete lying flush to each other and provide further protection to the earlier sea defences that are present in the area, in the form of a large earthwork (**WA3020**; **Plate C8**).

Unknown

- 5.2.22. Many features recorded along Coastal Stretch C have been placed within this section due to their ambiguous nature. It is feasible they could date to anywhere between the medieval and modern periods. Further investigation, where possible, may provide a more accurate date, possibly enhancing the local and regional archaeological resource.

- 5.2.23. A gravel hard with timber and metal structural fragments throughout was recorded on the shore in front of the former Customs House at Pitts Deep (**WA3019**). The various types of materials found may indicate the possible development and repair of the hard. A piece of post-medieval green glazed ware found on the site may indicate that the hard could date from the medieval period onwards. The Customs House may have been prompted due to smuggling in the area, using the Brandy Hole (thought to be the hard observed during the walkover survey) to deposit goods ashore¹¹.
- 5.2.24. Another hard (**WA3050; Plate C9**) comprising two adjacent gravelly areas was observed on the foreshore in front of Pylewell House and is presumably associated with the house. This feature is first visible on historic OS mapping from 1909 giving a possible post-medieval construction date.
- 5.2.25. A possible sarsen sandstone, faced on one side, was recorded in the intertidal zone at Pylewell (**WA3015; Plate C10**). The origin and date of this unstratified feature was impossible to ascertain, and due to its position in the tidal zone on the foreshore, this feature may suffer from the effects of erosion and displacement.
- 5.2.26. Several metal ships nails were observed along the foreshore at Pitts Deep (**WA3010**) and were thought to be associated with the ironworks at Sowley and not necessarily from a metal shipwreck offshore. Post-medieval and modern pottery shards (**WA3041**) were also recorded along the foreshore here. Due to their position in the tidal area of the foreshore, the likelihood of both the pottery and nails further movement and re-deposition is high.
- 5.2.27. Four clusters of Bembridge limestone (**WA3049; Plate C11**) was recorded at the eastern extent of the salt works at Needs Orr. Although their function was unclear, it is possible that the stone was either associated with the salt works (**MWX61861**) or is perhaps discarded ballast from the vessels that transported the salt.
- 5.2.28. Several earthwork features were also recorded during the walkover that could not be accurately dated. A shallow bank and ditch feature extending for over 28m was recorded at Gravelly Marsh (**WA3023**). It may be similar to other drainage features in the area (**MWX61856**). Another bank at Sowley Marsh (**WA3042**) extending for over 80m is thought to be a boundary at the south-western extent of the ironworks site, as it is in the same orientation as other earthworks in the vicinity.
- 5.2.29. Many eroded wooden posts were recorded during the walkover survey. Although difficult to accurately identify their function, many of the single or clusters of posts may be channel markers or mooring posts possibly associated with onshore industries such as salt works (**WA3011 – WA3013, WA3022, WA3026, WA3028, and WA3029**).
- 5.2.30. Other alignments of posts may form shoreline revetments, again occasionally associated with shoreline industries (**WA3014, WA3016, WA3017, and WA3018**). More regular alignments of pairs of posts extending into the water may be the remnants of jetties and bridges (**WA3043 – WA3045 (Plate C12), WA3047, and WA3048**). Whereas other single and aligned posts still remain unidentified (**WA3024, WA3025, WA3027, WA3030, and WA3046**).
- 5.2.31. One cluster of eroded wooden posts (**WA3021; Plate C13**) extending from the eastern shoreline of Sowley Marsh may suggest a former causeway. The feature

¹¹ The *Smugglers' Britain* website records locations along the coast that were frequently used by smugglers. URL: http://www.smuggling.co.uk/gazetteer_s_12.html. Date Accessed: 20/12/2010.

comprises two lengths of posts with a distance of 10m between the alignments; making a large structure.

- 5.2.32. An unstratified piece of wood (**WA3061**), possibly oak, was recorded on the foreshore east of Tanners Lane. It measured approximately 0.4m by a maximum of 0.15m and may have been worked. Although its function is unknown it may have originated from a maritime context. Due to its position this object will almost certainly have been washed out on the next high tide, and highlights the importance of thorough recording of features under threat.

5.3. SUMMARY

- 5.3.1. Coastal Stretch C is characterised by two distinct environments. The first is thin strip of foreshore and marsh, with extensive intertidal flats stretching into the Solent. This section of the coastal stretch has endured successive sea defences, predominantly in the form of groynes, some of which are still evident. It is clear that some of the land is reclaimed, and there are remnants from this process visible on the foreshore to the west of Tanner's Lane. To the east, a more recent program of groyne defences protects the remainder of the Beaulieu Estate's coastal lands. This coastal stretch remains largely undeveloped and undisturbed due to private ownership and a lack of public access. Sharing similar characteristics with the eastern extents of Coastal Stretch B, the Solent foreshore of the Coastal Stretch C exhibits signs of salt production, though these are considerably less conspicuous.
- 5.3.2. The second environment is that of the western bank of the Beaulieu River and Estuary. Though not as prominent as the Lymington River, it nevertheless shares many characteristics, being a navigable waterway flanked by flat reclaimed pasture. The finds in this environment range in type from salt production sites to maritime features such as dock and port facilities. Of these, the Royal Southampton Yacht Club, based at Ginn's Lane shows evidence of refurbishment from a much older dock, with remnant slipways and channel markers visible in the vicinity.
- 5.3.3. Again, sections of both banks of the Beaulieu River appear to have been utilised for salt production, especially at the mouth of the estuary near Needs Orr. Other marshes at Gravelly, Sowley and Pylewell suggest similar historic uses for the landscape, although more recent uses are apparent in the form of small scale military installations, such as the gun emplacements found near Sowley.
- 5.3.4. The majority of sites discovered during the Phase 2 surveys were post medieval - modern in origin, with the prevalent theme being the post-medieval production of salt. However, many of the sites could not be conclusively identified or dated. The coastal stretch does have potential for further finds, and the Beaulieu River and its hinterland could yield a considerable amount of archaeology dating over a much broader timeframe. Of the sites encountered, most appear well protected by their environment, though the intertidal sites are vulnerable to marine incursion and will degrade over time as a result of the physical impacts of tidal movement and wave impacts. However, the extensive sediments may preserve some of the intertidal archaeological remains for longer periods provided there is no significant change in the geomorphological regime.

6. SURVEY RESULTS: COASTAL STRETCH D

6.1. INTRODUCTION

Study Area

- 6.1.1. Coastal Stretch D runs from Salternshill in the west to Calshot Spit in the east (**Figures 5 - 6**). It extends seaward to the low water mark and landward to a distance of 1.5 kilometres from the high water mark. This is the longest coastal stretch in the survey incorporating the Beaulieu River.
- 6.1.2. The division of coastal stretches has been based on the lines produced in the second phase of Shoreline Management Plans (SMP2) to indicate Policy Units specified for the North Solent area. These lines were provided to WA by the Channel Coastal Observatory.

Archaeological Potential

- 6.1.3. The archaeological potential of this coastal stretch can be considered to be **high** with regard to the features already recorded in the enhanced dataset from Phase 1 (see Wessex Archaeology, 2010). The dataset was found to contain a relatively high number of records for this coastal stretch when viewed in comparison with the other four stretches, and this corresponded with the results gained from the walkover and boat surveys for the area.
- 6.1.4. The high number of records encountered along this stretch is interesting since this area is not particularly densely populated. Higher levels of modern settlement density and human activity can generally result in an increased number of records of archaeological monuments and finds, as the landscape is more heavily utilised and archaeological finds are more likely to be discovered.
- 6.1.5. There is little threat from development pressures along this stretch and the majority of the land in this area is undeveloped privately owned land given over to agriculture, country parks and conservation areas. The owners of the three large estates within this coastal stretch (Beaulieu, Cadland and Exbury) were willing for the survey to cover their properties and even made suggestions for areas of particular archaeological interest.
- 6.1.6. Coastal Stretch D covers two very different marine landscapes; the coastline between Lower Exbury and Calshot, and the riverbank of the River Beaulieu. Stretches along the coastline were observed as suffering from coastal erosion, in particular Stanswood Bay where trees have fallen from the crumbling cliff edge above, and now lie scattered along the beach (**see Plate D1**). Erosion may damage the quality of the preservation of the archaeological resource (dependent on their material and location) and in some cases will have removed them entirely from the archaeological record.
- 6.1.7. There are three Management Units within Coastal Stretch D, as defined by the SMP2 for the North Solent; **5C17**, **5C16** and **5C15**. The policy recommended No Active Intervention for all of these areas. Consequently the riverbank and coastline in these areas is at a higher risk of coastal erosion, and as a result their archaeological resource is under greater threat.
- 6.1.8. This is of particular concern since the most new and enhanced records are from Coastal Stretch D. However, despite the high frequency of finds found elsewhere

along this stretch, it is interesting to note that no new records were made within Management Unit **5C15**, extending east from Calshot along to the spit. This is also the case along the narrow beach at Stanswood Bay and could be due to the intense modern sea defences, in the form of groynes, which have been installed at these locations. Groynes encourage the build up of shingle on the beach, potentially burying or dislodging the archaeological resource, and constructing these defences may damage or destroy any existing archaeological features.

- 6.1.9. Existing designations, both statutory and non-statutory, were examined during Phase I in order to inform the assessment of the archaeological potential of this coastal stretch. There are five Scheduled Ancient Monuments in this coastal stretch including Beaulieu Abbey, the abbey's well house at Monk's Well, Calshot Castle and two monuments centred around four bowl barrows near Otterwood Farm. In addition to these sites, there are 101 listed buildings in this area, comprising four Grade I, 14 Grade II*, and 63 Grade II listed buildings. Due to the rapid nature of the walkover survey, concentrating in particular on the coastline and foreshore, none of the listed buildings or Scheduled Monuments were recorded as part of the survey (only general shots of Calshot Castle were taken).

Survey Objectives

- 6.1.10. Priority areas or sites meriting further survey or evaluation were identified in the Phase 1 DBA based upon the enhanced data and assessment of threat and vulnerability. These are listed in **Table 6.1** below.

Priority Area or Site	Fieldwork
Calshot Spit unidentified foreshore archaeology (MWX62258)	Photographic survey of linear features close to the low water mark.
Stone Point unidentified foreshore archaeology (MWX61731)	Photographic survey of linear features on the foreshore.
Riverbanks between Beaulieu and Buckler's Hard	Photographic survey of sites along the Beaulieu River. Involved dGPS survey with use of an inflatable boat to secure access and exit from the seaward extents of the mudflats.

Table 6.1 Priority areas or sites identified by the Phase 1 DBA as requiring further investigation

Methodology

- 6.1.11. Initial survey within this coastal stretch took the form of a walkover survey to confirm the existence of known sites and to identify new ones. The data collated will be used to enhance and expand the HBSMR, and to provide baseline data for the assessment of both natural and anthropogenic impacts threatening each site. By extension, this assessment will inform future management strategies and inform the Phase 3 report.
- 6.1.12. A preliminary walkover was carried out on **14th June 2010**. This provided insights into access and local facilities. The walkover began at the western extremity of Coastal Stretch D and covered the entirety of the foreshore along Lepe Country Park, incorporating aspects of the Exbury and Cadland Estates, along to the eastern extremity of the Coastal Stretch at Calshot Spit. The weather was good, and no issues of access were encountered. Car parks and toilet facilities were present at both the starting point and finishing point with accessible facilities in between.

- 6.1.13. The main surveys were carried out over four days, on the **1st and 2nd September** and the **8th and 9th September 2010**. A total of 13 volunteers joined the survey with some participating on more than one day. For those volunteers returning to the walkover survey, this enhanced their knowledge and skills previously acquired from earlier coastal stretch surveys and generated a stronger core team relationship. For newcomers it served to provide them with a deeper understanding and appreciation of the coastal and marine historic environment in their area. The survey team also included an archaeologist from the New Forest National Park Authority.
- 6.1.14. Sites were identified and subsequently digitally photographed and recorded using an iPaq Pocket GIS with a Holux GPS that entailed taking the position of the feature, giving it an individual record number, and writing a brief description including the photograph numbers. All of these processes were undertaken by the volunteer survey team using appropriate archaeological practices.
- 6.1.15. Due to the rapid nature of the project, only the coastal foreshore and intertidal areas were investigated, together with much of the land in close proximity to both banks of the River Beaulieu.

Limitations & Constraints

- 6.1.16. A majority of the land in this coastal stretch is privately owned by the Beaulieu, Exbury and Cadland Estates. Access permissions were gained from these land owners prior to the commencement of the survey. Unfortunately some of the other privately owned land along stretches of the Beaulieu River could not be surveyed and meant finding alternative routes inland detouring around the properties, hindering the progress of the walkover (see **Figure 34**). As a result these areas were the focus of the intertidal boat survey.
- 6.1.17. Since footpaths or trackways were fairly uncommon through some of the areas (particularly north of Beaulieu), much of the survey was undertaken along the intertidal foreshore areas; but only when considered safe to do so, and often hindered progress.
- 6.1.18. A footpath was used between Buckler's Hard and Beaulieu, which meant faster and easier progress, but often meant reaching the foreshore from the path was impossible due to fencing. Areas of the foreshore not reached during the survey were included in the intertidal boat survey.
- 6.1.19. The remainder of the survey area was shingle beaches, which in the most part caused no limitations to the investigation. However, the eroding cliffs present along some of the beach between Inchmery and Calshot posed some threat since the beach was particularly narrow at these points. Modern groynes were apparent at these locations in order to protect the cliff face. However, the impact upon any potential existing archaeological sites could be that they are either buried under the replenished beach or have been damaged or destroyed by the construction process.

6.2. RESULTS

- 6.2.1. A full inventory of documented sites from Coastal Stretch D is provided in Appendix D of the Phase 1 DBA (Wessex Archaeology, 2010). A total of 780 sites were identified by the DBA carried out as part of the Phase 1 project.
- 6.2.2. The table below illustrates the number of new/existing records observed during the walkover survey corresponding to the phases of chronological periods specified. Due to the rapid nature of the walkover survey, the function of features could not

often be ascertained along with an accurate indication of its date. As a result these features were recorded as being from a range of periods, ensuring neither the date of a feature is assumed nor the features archaeological significance discredited.

- 6.2.3. The descriptions of the features below are in chronological order (see **Table 6.2**). However, where the date of a feature is deemed to cross several periods, it will be discussed within the Unknown section.

Chronological Periods	Records		
	Existing	New	Updated
Prehistoric – Early Historic (500,000BP – AD 409)	154	2	2
Medieval (AD 410-1539)	197	7	6
Post-Medieval (AD 1500-1899)	276	51	13
Modern (AD 1900-present)	112	40	17
Unknown	41	67	0
Total	780	167	38

Table 6.2 Chronological breakdown of sites discovered during field walks (**Figs 5 & 6**).

Prehistoric

- 6.2.4. According to HER data three Bronze Age barrows are present within a field at Buckler's Hard (**MWX62340 - MWX62342**), however only one raised earthwork (**WA4001**) was observed from a path during the walkover survey. Due to access constraints it was impossible to reach the earthwork, and therefore difficult to ascertain which of the three barrows the feature identified was.
- 6.2.5. Iron Age earthworks associated with a promontory fort were recorded at Lower Exbury (**WA4002**). The bank is believed to extend from the River Beaulieu just west of Lower Exbury House (although this was largely unclear due to tree coverage) and curve around the promontory towards the salt marsh, where a possible entrance was recorded.

Medieval

- 6.2.6. The only definite medieval feature recorded along Coastal Stretch C was the remains of three sections of the monastic wall (**WA4003; Plate D2**) within the National Motor Museum at Beaulieu. The sections are the remains of the original precinct wall of Beaulieu Abbey. Their position beside the Beaulieu millpond and within the bounds of the estate indicates that these features face little threat of damage.
- 6.2.7. Two banks were observed at Lower Exbury truncating the earlier Iron Age earthworks. These banks (**WA4007; Plate D3**) are positioned on either side of a latterly constructed track way that curves around the slope of the hill for over 100m towards the location of a former medieval village (which was not investigated during the survey). A flat area of land just to the south of the track way may represent the remains of an area of ridge and furrow (**WA4008**).

Post-Medieval

- 6.2.8. Two phases of a post-medieval brickworks site (**WA4080 (Plate D4)** and **WA4081 (Plate D5)**) were recorded along the River Beaulieu at Bailey's Hard. The earlier phase, dating to the late 18th century, comprised a badly deteriorated rectangular structure with ten flues evident on the internal faces of two of the walls. This kiln

was conserved in the 1980s and appears to be in good condition helped by the modern metal fastenings encompassing the kiln that give further structural support. This later phase comprises a circular beehive kiln with numerous flues around the exterior, together with several supporting buttresses, and a detached rectangular chimney. Other features observed within the brickworks include two areas of concrete pillar alignments; possibly supports for raised structures (as seen on historic OS mapping).

- 6.2.9. A large post-medieval salt works site (**WA4087; Plate 1274**) was observed at Lower Exbury that consisted of regularly spaced channels extending out from the coastline, with other occasional channels extending perpendicular to these, surrounded on the seaward extent by a large sea wall bank. Within the bounds of the salt works site are other associated features. The remains of a sluice (**WA4085**) are visible at the south-eastern extent of the site comprising several upright wooden posts and a post-lined channel for directing water into the salt works. Remnants of another sluice (**WA4090**) at the eastern extent of the salt works site were recorded during the survey comprising numerous upright posts and stakes on either side of a channel. This sluice is visible on historic OS mapping, whereas the western example was originally recorded from aerial photographs and is presumably of a later date. Three other discrete features comprising eroded wooden posts are visible within the salt works area (**WA4086, WA4088, WA4089**), but their function could not be ascertained.
- 6.2.10. The remains of the post-medieval landing stage (**WA4077; Plate D7**) at Buckler's Hard was recorded at low water and comprised numerous eroded wooden posts forming the majority of the landing stage with sections of revetment on either side.
- 6.2.11. Two rows of eroded timber posts observed extending across a fairly wide mouth of an inlet on the Beaulieu River, at Spearbed Copse, was identified as the remnants of a post-medieval bridge (**WA4083; Plate D8**). A bridging feature is first visible at this location on historic OS mapping from 1898.
- 6.2.12. A former ornamental canal (**WA4082**) is currently being re-instated in the grounds of the National Motor Museum, Beaulieu that would have originally been constructed for the Montagu family who lived in Beaulieu Palace House. The scale of the canal, extending for over 300m, indicates the wealth of the Montagu family and their desire for an impressive garden landscape.
- 6.2.13. A similarly affluent structural feature is the circular stone-built dovecote (**WA4093**) located at the south-western extent of the 19th century Lepe House, overlooking the Solent. Modern steps ascending to the top of the structure suggest it is in good condition and still in use today, albeit in a different capacity.
- 6.2.14. Several boundaries were observed along the coastal stretch, often defining the border between areas of different land use or land owner and were visible as either a banked earthwork (**WA4078** and **WA4084**) or as an alignment of posts extending into the intertidal zone (**WA4092**). Furthermore, banked earthworks that functioned as flood defences were also visible. One example, visible on historic OS mapping (**WA4079**), was a division between the marshy intertidal area and a footpath through a copse.
- 6.2.15. A series of post-medieval groyne alignments, comprising heavily eroded wooden posts extending into the Solent, were recorded at Stansore Point (**WA4094**). These groynes are a measure to alleviate coastal erosion and extended for over 300m along the beach.

Modern

- 6.2.16. A majority of the modern features recorded along Coastal Stretch D date to the Second World War (WWII). Military features from this time are particularly prevalent on the coastline near Lepe. Along the shingle beach at Stansore Point, just east of Lepe, are the remains of concrete slipways, anchoring points, bollards, winching gear bases, trigger release gear sites, hardening mats, and large construction platforms associated with the building and launching of Mulberry Harbour caissons (**WA4152-WA4156 (Plate D11)**, **WA4159-WA4161 (Plate D10)**, and **WA4163**). Two large 'Dolphins' (**WA1344; Plate D10**), part of a military pierhead, are visible around 20m offshore, and other onshore features include a circular base for a water tower (**WA4162**) and an area of hard standings that reveal the original positions of military structures (**WA4158**).
- 6.2.17. Another military site thought to be for the construction of Mulberry Harbours is at Clobb Copse, where a former oyster pond has been converted into a boat yard and construction area (**WA4127**). This feature could not be reached on land during the survey, but was recorded during the intertidal boat survey.
- 6.2.18. A WWII wooden landing craft (**WA4143; Plate D12**) was also recorded abandoned on the salt marsh on the eastern bank of the River Beaulieu, near Exbury. The vessel is now in two sections, but would have measured around 9m in length. It appears to be constructed of plywood and engine parts are still visible within it.
- 6.2.19. At Buckler's Hard the remains of a WWII slipway (**WA4128**) comprising two metal rails with partially buried concrete sleepers in between is apparent leading down to the shore where seven partially submerged large concrete mooring blocks (**WA4129; Plate D13**) are still visible.
- 6.2.20. Two pillboxes were observed in Beaulieu (**WA4132** and **WA4133 (Plate D14)**), both with small rectangular loopholes. One of the structures appears to have been disguised as a house with a gabled roof and has since been converted into a habitable building. Furthermore, a length of modern sea defence (**WA4146**) at Quay appears to contain some dismantled structural elements from a pillbox.
- 6.2.21. Another brick-built military structure was identified as a small cordite store (**WA4142**), located just south of Gilbury Hard.
- 6.2.22. Within a creek off the River Beaulieu lie the remains of two types of floating jetties or pontoons; two sections of a wooden platform attached to canisters (**WA1324**) and four metal floating structures, two of which are attached by metal framework (**WA4138**). It is unclear if these features have a military origin and their purpose for being in the creek.
- 6.2.23. Four vessels were located within this coastal stretch, that are modern in date, but not necessarily of a military nature. The partially submerged wreck of *Minca 35* (**WA4130**) was observed in the Beaulieu River beside Keeping Marsh. The wreck was visible as several upstanding eroded timber frames. The remains of two metal vessels were encountered during the survey and located within a creek off the Beaulieu River (**WA4136** and **WA4140 (Plate D15)**). A much larger wreck was recorded at Lower Exbury (**WA4145; Plate D16**) constructed of metal and timber, and measured around 18m in length. This vessel is likely to have been used for the transportation of small cargo on a regional scale.
- 6.2.24. Maritime features recorded along this stretch include a wooden clinker-built vessel (**WA4106**) positioned alongside two other vessels (including **WA4136**). These

vessels are thought not to be associated. A large chain visible on its interior was possibly used to sink it. This vessel most likely dates to the 20th century

- 6.2.25. Other features of a marine nature include a complex wooden structure identified as a possible cradle or jetty (**WA4131**) and situated at the edge of an inlet on the Beaulieu River at Keeping. This feature was only partially submerged at high tide. Another slipway (**WA4141**) was recorded comprising two lengths of extremely worn wood with a metal winch evident at the top. This feature was located at Gilbury Hard.
- 6.2.26. Two concrete hard standings were observed along the foreshore at Stanswood Bay; one of which provided access to the water and had a metal winch installed (**WA4166**), whilst according to historic OS mapping, the other feature appeared to be part of a former roadway (**WA4167**). Both these features have been significantly affected by coastal erosion.
- 6.2.27. Finally, several alignments of eroded wooden posts were recorded during the walkover survey of this coastal stretch. These are thought to be land boundaries and are confirmed by their appearance on historic OS mapping (**WA4134** and **WA4135**).

Unknown

- 6.2.28. Many features recorded along Coastal Stretch C have been placed within this section due to their ambiguous nature. It is feasible they could date to anywhere between the medieval and modern periods. Further investigation, where possible, may provide a more accurate date, possibly enhancing the local and regional archaeological resource.
- 6.2.29. A wooden structure (**WA4109; Plate D17**) was recorded lying in the centre of a channel off the River Beaulieu and was considered to be another wreck, particularly since an HER record for a wreck exists close to this location.
- 6.2.30. Three unstratified findspots were recorded along the beach between Lepe and Inchmery. These included a large piece of timber (**WA4121; Plate D18**) that may have originated from a jetty or even a vessel, a heavy metal cylinder (**WA4123; Plate D19**) that may also have originated from a vessel, and finally a rectangular stone (**WA4125**) that appears to have been deliberately faced. Since these objects were discovered in the intertidal zone it is possible that they could be moved and re-deposited with the tides.
- 6.2.31. The intertidal boat survey also highlighted other maritime features including three possible anchors situated in the intertidal marsh area and presumably lost from vessels (**WA4050, WA4066, and WA4072**), and a slipway at Oxleys Copse (**WA4044**).
- 6.2.32. Many eroded wooden posts were recorded during the walkover survey. Although difficult to accurately identify their function and age, many of the single or clusters of posts may be more modern channel markers (particularly apparent along the navigable channel of the River Beaulieu) or mooring posts (**WA4010 - WA4034, WA4041, WA4045 - WA4049, WA4051-WA4053, WA4057 - WA4060, WA4062 - WA4065, WA4069 - WA4071, WA4074 - WA4076, and WA4119**). Whereas other single and aligned posts still remain unidentified (**WA4103, WA4107, and WA4118**).
- 6.2.33. Other alignments of wooden posts appear to form shoreline revetment structures protecting the coastline and seen in particular amongst the salt marsh areas (**WA4040, WA4054, WA4067, WA4068, WA4096, WA4108, WA4110 - WA4111**,

WA4115, and **WA4124**). A stone revetment (**WA4039**) was recorded extending around the eastern section of the millpond at Beaulieu situated within the confines of the National Motor Museum. The revetment is composed of Bembridge stone, possibly re-used from the monastic wall nearby.

- 6.2.34. More regular alignments of pairs of wooden posts extending into the water appear to be the remnants of jetties and bridges or crossing points (**WA4036**, **WA4038**, **WA4042**, **WA4055**, **WA4056**, **WA4073**, **WA4097**, **WA4100 – WA4102**, **WA4104**, **WA4113**, and **WA4117**). Single alignments of posts extending through the foreshore area are often land boundaries (**WA4095**, **WA4098**, **WA4116**, **WA4120**, and **WA4122**), which can generally be substantiated from historic OS mapping.
- 6.2.35. Furthermore, some clusters of wooden posts positioned particularly within salt marsh channels have been identified as possible sluices, and are associated with the directing of water into the salt works (**WA4061 (Plate D20)**, **WA4105**, **WA4114**, **WA4119**, and **WA4144**). These features may also have functioned as crossing points too.

6.3. SUMMARY

- 6.3.1. Coastal Stretch D is characterised by three distinct marine environments. The first is that of the eastern bank (and both banks north of Ginns) of the Beaulieu River and Estuary. The dominant historic feature on the Beaulieu River is Buckler's Hard, a former ship construction yard renowned for the construction of HMS *Agamemnon*. This 64-gun Third Rate ship of the line, was launched in 1781 (and latterly captained by Lord Nelson), demonstrating the importance of Buckler's Hard to the region. The river itself contained a broad diversity of finds ranging from wrecks and jetties, to WWII slipways and mooring blocks. Again, there are similarities with the Lymington River, being the eastern flank of a navigable waterway. The landscape is again characterised by flat reclaimed pasture suggesting salt production.
- 6.3.2. The second environment is the coastal façade between Lower Exbury and Calshot, a large component of which is now encompassed by Lepe Country Park. The landscape here is characterised by a narrow foreshore and shingle beach, and shows evidence of modernisation. There were few finds along this area due to the extensive construction of coastal defences.
- 6.3.3. The third environment is Calshot Spit which houses Calshot Castle. Like Hurst Castle, the original structure was conceived and built as part of Henry VIII's device forts, which formed a defensive line of forts along the English coastline. Subsequently re-fortified in the 1700s and extended again in 1895, the castle stands as a reminder of the military strategy to guard the entrances to the south coast's waterways. All of the finds discovered on Calshot Spit were contained within Coastal Stretch E (see **Section 9**) which divided the Spit into north and south sections.
- 6.3.4. The majority of sites discovered during the Phase 2 surveys were post medieval - modern in origin, with the prevalent theme being the post-medieval production of salt and bricks. A large saltern was evident at Lower Exbury whilst Bailey's Hard on the Beaulieu River was the site of a former brickworks. Modern sites were characterised by WWII structures along the coast near Lepe. Concrete slipways, anchoring points, winching gear, and the remains of the construction platforms used to build the Mulberry Harbours all suggest an industrious period during WWII, whilst a WWII landing craft and slipway on the banks of the Beaulieu River suggest the operation was much more widespread than the coastal frontier.

- 6.3.5. Of the sites encountered, most are vulnerable to marine incursion and will degrade over time as a result of the physical impacts of tidal movement and wave impacts. The Beaulieu River are offered marginally more protection than those on the exposed Solent shore, however further research is required to determine the exact nature and extent of the erosive processes in each of the three environments.

7. SURVEY RESULTS: COASTAL STRETCH E

7.1. INTRODUCTION

Study Area

- 7.1.1. Encompassing 19.5km from Calshot Spit in the southeast to Redbridge in the northwest and extending seaward to the low water mark and landward 1.5km from the high water mark, Coastal Stretch E provided the most diverse and heavily human impacted landscape of the entire survey (**Figures 7 – 8**).
- 7.1.2. The division of coastal stretches has been based on the lines produced in the second phase of Shoreline Management Plans (SMP2) to indicate Policy Units specified for the North Solent area. These lines were provided to WA by the Channel Coastal Observatory.
- 7.1.3. The walkover and boat surveys explored the open wetland marshes of Langdown and Calshot, including the creeks at Cadland, Ashlett and Ower in the south, the muddy upper reaches of Eling Great Marshes and Bury Marshes, hugging the narrow shingle beaches of Marchwood's military areas, through the residential developments around Hythe, and skirting the heavily industrialised areas of Fawley.
- 7.1.4. As a result, the character of the new monuments and finds encountered during the surveys represent the varied cultural landscapes, comprising a range and scale of maritime, industrial and military remains.

Archaeological Potential

- 7.1.5. The archaeological potential of this coastal stretch was considered to be **moderate to high** due to the features already recorded in the enhanced dataset from Phase 1 (see Wessex Archaeology, 2010). The dataset was found to contain a relatively high number of records for this coastal stretch when viewed in comparison with the other four stretches. The comparatively high population densities and levels of development in the coastal stretch have resulted in high numbers of archaeological finds, a scenario common in culturally developed landscapes.
- 7.1.6. Existing designations, both statutory and non-statutory, were examined in order to inform the assessment of the archaeological potential of this coastal stretch. There are no Scheduled Ancient Monuments in this coastal stretch. However, there are 68 listed buildings in this coastal stretch, including one Grade I, four Grade II* and 63 Grade II listed buildings; none of which were recorded as part of the survey.
- 7.1.7. Coastal Stretch E has been visibly transformed throughout the 19th and 20th century, with substantial areas of land reclamation and industrial development, especially in along the western shores of Southampton Water. The area is now synonymous with modern structures in the form of oil refineries and the Ministry of Defence installation at Marchwood. These areas consist of managed foreshores along the military facades of Marchwood Military Port and Hythe Quay and Marina, where

archaeological finds are evidently deposited from a more recent chronology on the edge of reclaimed and managed land.

- 7.1.8. Due to the heavy and sustained use of Southampton Water an industrial waterway for large container ships, ferries, and naval vessels, development pressure can be considered to be the most significant threat to archaeological features within this area. The waterway is subject to regular engineering and dredging works to maintain the deep channels for shipping with a resultant array of physical and environmental impacts on the coastal heritage.
- 7.1.9. Archaeological material within the intertidal and foreshore zones is more vulnerable to natural processes than inland archaeological features, due to their exposure to more destructive marine impacts and alterations to their local environment. From an anthropogenic perspective, many of the foreshore and intertidal sites may actually have benefited from low levels of public intrusion. The commercial and military zones along the foreshore are privately owned and perhaps more pertinently, not aesthetically attractive to leisure walkers and sight-seers. Some of the areas which were thought to have been industrially disturbed, actually provided a large amount of archaeological material, which was discovered during the walkover survey.
- 7.1.10. The marshes to the north and south of the three creeks of Cadland, Ashlett and Ower provided little in the way of safe navigable routes in which to explore in the seaward direction, hampering the discovery of archaeological remains.

Survey Objectives

- 7.1.11. Priority areas or sites meriting further survey or evaluation were identified in the Phase 1 DBA based upon the enhanced data and assessment of threat and vulnerability. These are listed in **Table 7.1** below.

Priority Area or Site	Proposed Fieldwork
Wooden wreck within intertidal area off Calshot Spit (MWX62200)	Detailed recording of the wreck. Suggested method involves hand drawn plans and sections backed up by photographs, dGPS positioning and possibly total station survey. Suggested timescale is 1-3 days (depending on the available working window).

Table 7.1 Priority areas or sites identified by the Phase 1 DBA as requiring further investigation

Methodology

- 7.1.12. Initial survey within this coastal stretch took the form of a walkover survey to confirm the existence of known sites and to identify new ones. The data collated will be used to enhance and expand the HBSMR, and to provide baseline data for the assessment of both natural and anthropogenic impacts threatening each site. By extension, this assessment will inform future management strategies.
- 7.1.13. A preliminary walkover was carried out on **15th June 2010** along with two volunteers. This provided insights into access and local facilities, and allowed an assessment of potential health and safety issues. The walkover began at the western extremity of Calshot Spit and proceeded northwards. Several sections of the coastline were inaccessible on foot due to private landownership and military usage of the foreshore, whilst parking was also problematic. Of particular note were the developed foreshores at Fawley and Marchwood, the former of which has been become a restricted access oil refinery, and the latter, a Ministry of Defence base.

Although access was not permitted to the Fawley refinery on the preliminary walkover surveys, it was subsequently granted to volunteers for the main surveys. Marchwood had to be surveyed at a distance by boat. On the whole, the weather was good.

- 7.1.14. The main surveys were carried out over four days, on **14th and 15th August** and the **22nd and 23rd of September 2010**. A total of 10 volunteers joined the survey with some participating on more than one day. For those volunteers returning to the walkover survey, this enhanced their knowledge and skills previously acquired from earlier coastal stretch surveys and generated a stronger core team relationship. For newcomers it served to provide them with a deeper understanding and appreciation of the coastal and marine historic environment in their area. The survey team also included one archaeologist from the New Forest National Park Authority along with an archaeologist from English Heritage.
- 7.1.15. Sites were identified and subsequently digitally photographed and recorded using an iPaq Pocket GIS with a Holux GPS that entailed taking the position of the feature, giving it an individual record number, writing a brief description including the photograph numbers. All of these processes were undertaken by the volunteers using appropriate archaeological practices.

Limitations & Constraints

- 7.1.16. A majority of the land in this coastal stretch is privately owned by Fawley Oil Refinery, ABP Ports and Marchwood Military Port. Access permissions were sought from these land owners prior to the commencement of the survey. Only Marchwood Military Port refused access to their land, which prevented an on-land survey. However, this was overcome by incorporating the foreshore area into the intertidal boat survey. The walkover survey between Marchwood Military Port and the northern extent of Hythe Marina took one day in total. Many of the features were accessible along the shoreline, most of which had a military function.
- 7.1.17. Footpaths were used as often as possible (particularly between Ashlett and Calshot, and Marchwood and Hythe) and frequently allowed access for further survey onto the salt marshes and intertidal zone, which were prevalent within this coastal stretch. However, due to the unpredictable nature of the intertidal area and the limited access through the salt marshes, it was occasionally considered unsafe to investigate this area and often meant the seaward extent of these areas was not reached.
- 7.1.18. Due to the issue of security, a guide accompanied the survey team within Fawley Oil Refinery. The benefit of being allowed within this highly restricted area and surveying the industrial foreshore and historic woodland areas, where access is not commonly permitted, far outweighed the occasional prevention of access onto some of the foreshore salt marsh areas.
- 7.1.19. The remainder of the coastal stretch was through urban areas (Hythe, Marchwood and Eling) which hindered access to the foreshore due to private land developments and properties along with high sea walls and sea defences.
- 7.1.20. A huge amount of land has been reclaimed along this stretch of Southampton Water. This has potentially damaged or destroyed the existing pre-reclamation archaeological resource, and even if still surviving, this resource will not have been visible during the walkover survey.

7.2. RESULTS

7.2.1. A full inventory of documented sites from Coastal Stretch E is provided in Appendix E of the Phase 1 DBA (Wessex Archaeology, 2010). A total of 427 sites were identified by the DBA carried out as part of the Phase 1 project.

7.2.2. The table below illustrates the number of new/existing records observed during the walkover survey corresponding to the phases of chronological periods specified.

Ranges of Chronological Periods	Records		
	Existing	New	Updated
Prehistoric – Early Historic (500,000BP – AD 409)	22	0	0
Medieval (AD 410 -1539)	68	10	0
Post-Medieval (AD 1540-present)	215	21	2
Modern (AD 1900-present)	84	85	5
Unknown	38	18	0
Total	427	134	7

Table 7.2 Chronological breakdown of sites discovered during field walks (**Figs 7 & 8**).

7.2.3. When compared to other coastal stretches of the survey this stretch gathered the second largest number of new archaeological sites, and demonstrated a definite lean toward modern archaeological material.

7.2.4. No features were identified that dated prior to the medieval period (possibly due to the large amount of reclaimed land sealing or having destroyed such deposits during their development). The remaining results of the chronological ranges for this stretch are depicted in Figure E.2.

Medieval

7.2.5. The natural historic woodland of Lammas Wood is a possible site for medieval land adaption. Situated up river of Fawley Oil Refinery north of Cadland Creek, the sequence of linear banks and ditches (**WA5002 – WA5004; Plate E1**) all possibly connected to the Cadland Estate were recorded, and are also visible on historic OS mapping.

7.2.6. An area also of potential medieval activity, typifying the adaption of the muddy intertidal marsh environment for much of the stretch during this period, is that of Langdown, 1km southeast of Hythe. A small saltern connected to Sylvan Villa is illustrated on historic OS mapping from 1870 onwards and covers an area close to the shoreline of approximately 90m by 32m.

7.2.7. The preserved remains of the saltern were observed during the walkover survey as a network of drainage and channelling constructions. The structures included vertical timber posted revetments, with horizontal planking bracing the internal marsh bank extending on both sides of narrow channels to and from the shore (**WA5006**). Nearby are the remains of a one metre wide drainage tunnel, with tidily constructed brickwork in excellent condition (**WA5007**) that was possibly used to drain water from the saltern.

7.2.8. The timber revetments continued northeast, toward an excellently preserved 3m wide sluice (**WA1362; Plate E2**) (some 50m away from **WA5006 (Plate E3)** and **WA5007 (Plate E4)**), comprising a sequence of numerous upstanding and

horizontal timber posts bridging between two banks of a carefully revetted channel. A definite second phase of revetment construction was also visible, further east, with tightly spaced neatly adjoining sawn timber posts.

Post-Medieval

- 7.2.9. Similar land management techniques identified at Langdown were also recorded at a number of other sites along the foreshore of this particular coastal stretch.
- 7.2.10. The wetland salt marshes to the very south of Coastal Stretch E, located at Ashlett and Calshot, illustrate a larger network of salt production on the banks of Southampton Water. To the south of Ashlett Creek, timber revetments (**WA5045; Plate E5**), documented in historic OS mapping from 1870, line the high water mark and are of comparable construction to those at Calshot Spit (**WA5029; Plate E6**). The revetments extend along the shoreline at approximately 100m intervals and, when interpreted with the scale of interior salt production, represent a fundamental structure to the success of such an industry.
- 7.2.11. An additional site for salt production was also observed on the foreshore east of Fawley (**WA5032; Plate E7**). A linear formation of sunken, roughly vertical timbers comprising four rows and covering an area of approximately 17m by 13m was situated on the documented position of a Quay in historic OS mapping. It is possible this was a landing point for small working vessels transporting salt. However, intriguingly it has similarities to that of the sluice recorded at Langdown (see **WA5008** above).
- 7.2.12. The remains of a timber revetment or sluice at Cadland Creek is also worth noting as it may also have performed similar functions of landing platforms (**WA5034; Plate E8**) and channelling of creek flows in the management of intertidal waters (**WA5033; Plate E9**). This may provide a potential area for further research, especially due to the close proximity and possible association to Cadland Creek Quay documented on historic OS mapping from 1870.
- 7.2.13. The foreshore bank to the north of the coastal stretch at Eling contained numerous fragments of brick, layered within the recent stratigraphy and illustrating a possible dump of unwanted bricks through quality control at the local brickworks. In the vicinity of these deposits, located directly on the beach, a formation of posts, metal rods and rounded brick deposits suggest the area may have been used as a platform or possible jetty associated with the brick works and gravel pit extractions inland (**WA5038; Plate E10**). Further out within Southampton Water, within Eling Channel, posts were observed during the boat survey that corresponds to historic OS mapping as possible channel markers.
- 7.2.14. Hythe Quay slipway (**WA5037; Plates E11a - b**) is possibly the largest example of a maritime feature recorded during the walkover survey, and comprises a mass of concrete along with some timber remains evident. A timber and steel structure is also visible attached to the southern quay and was possibly a mooring jetty.
- 7.2.15. Three timbers (**WA5031; Plate E12**) extruding from the concrete of Ashlett's modern quay may also be of research interest, and possibly the remnants of Ashlett's Victoria Quay also documented on historic OS mapping.

Modern

- 7.2.16. Features of archaeological interest from this period dominate Coastal Stretch E, with the long narrow mud, sand and shingle beach between Marchwood Port and Hythe

providing predominately the greatest World War II (WWII) military remains found anywhere during the survey.

- 7.2.17. South of Marchwood Military Port at Dibden Bay are the remains of WWII floating harbours and pontoons. They include 34 'Beetles' currently situated end to end in two different sections. Beetles were originally utilised at 80 foot intervals, extending out to sea, with iron bridges connecting them. The two sections of beetles are located in close proximity; the first to the north consists of four Beetles (**WA5064 - WA5067; Plate E13**), landward side of a concrete barge (**WA5068; Plate E14**), also thought to be associated with the military landscape, and some 50m to the south are positioned the other thirty Beetles (**WA5069 – WA5098; Plate E15**).
- 7.2.18. The 'Beetles' are in varied states of deterioration but were possibly deposited along the beach at the end of the war, to help protect the shoreline from erosion. The approximate dimensions of a Beetle are 12.2m long, with a beam/width of 4.2m and a draught/depth of 1.4m.
- 7.2.19. The bridges connecting the 'Beetles' that were attached to landing wharves were known as 'Whales'. A possible example of a 'Whale' is positioned 170m from the shoreline within Southampton Water (**WA5102**). From Channel Coastal Observatory (CCO) data (SU4110SW) the wreckage appears to be 27.5m long, 4m wide at the centre and narrowing at each end to 2m wide.
- 7.2.20. Some 30m to the southeast was the remains of a metal wreck that could possibly be a hopper barge (**WA5101**). From the shoreline there appeared to be a small rudder head visible above the waterline indicating the vessel pointing up river. However it is still possible this wreck could be a WWII landing wharf as visible from CCO data (SU4110SW), with dimensions approximately 40m in length, with a beam of 7m at midships and a curved bow and stern.
- 7.2.21. Other finds along this stretch of the foreshore indicating military activity including a concrete slipway (**WA5107; Plate E16**), possibly for loading vehicles on to transport vessels. Furthermore, extending along the length of the beach for over 280m is a sequence of possible WWII mooring posts separated at 25m intervals (**WA5105; Plate E17**). Frequent large metal debris was visible having been deposited on the beach (**WA5106**) along with other heavy weighted deposits of varying material, possibly functioning as modern erosion defences (**WA5103, WA5109, WA5110, and WA5115**).
- 7.2.22. Other possible WWII military remains are located to the north of Hythe slipway and include the remains of an iron slipway (**WA5037**).
- 7.2.23. Fifteen wrecks/hulks were discovered during the walkover and boat survey Coastal Stretch E all representing varying sizes and functional aspects that include small pleasure boats, large wooden hulks and multifunction metal and concrete wrecks (**WA5048, WA5051, WA5100, WA5101, WA5116, WA5118, WA5121, WA5123 - WA5128 (Plate E18), WA5130, WA5132**). Predominately these remains are positioned in the upper reaches of Southampton Water, north of Hythe, with Eling Great Marshes providing the rest place for seven vessels alone (**WA5123 – WA5128, WA5130**). Eling Creek, however, proved less abundant in archaeological features (maritime or otherwise).
- 7.2.24. Those of possible research potential include a wooden vessel in the intertidal waters of the Eling Great Marshes (**WA5123**), a large flush planked wooden vessel

(WA5099; Plate E19) in Dibden Bay and a wooden barge-like vessel in the tidal mud of Ashlett creek **(WA5051; Plate E20)**.

- 7.2.25. In the eastern vicinity of Bury Copse and Bury Marsh are the remains of a 20th century brick and timber slipway **(WA5117)**, indicating the use of the area for small scale access to and from Southampton Water from Bury Farm. Outlying timber posts identified during the boat survey, possibly used as wooden revetment **(WA5020 – WA5023)**.
- 7.2.26. The industrial nature of this particular coastal stretch and its continual expansion, with limited public access, has surprisingly produced areas of relatively untouched coastline. This is best illustrated in the derelict remains of a tram track and pier at Fawley Oil Refinery **(WA5053)** and unknown metal debris deposited on the beaches of both Calshot **(WA5047)** and Fawley **(WA5049 – WA5050)**.

7.3. SUMMARY

- 7.3.1. Despite the concrete façades of Marchwood and the narrow beaches with limited access at the Fawley Oil Refinery that seem to exemplify a landscape of reclamation, there are very well preserved examples of land and intertidal adaptation from the medieval period onwards within Coastal Stretch E.
- 7.3.2. The calmer upper waters of Eling offer a good preservation environment for maritime archaeological remains of varying types and function. This area provided evidence of historic maritime transport and navigation, with small quays and associated channels, potentially used to access the adjacent salterns and brickworks to the north and south respectively.
- 7.3.3. Additionally the sluice, revetment and culvert, situated at Langdown, provide an excellent illustration of the techniques used in water drainage management in the post-medieval period. Such a find, positioned in a salt marsh, with no form of protection from encroaching tides is certainly worthy of further research and investigation.
- 7.3.4. The various WWII features present to the south of Marchwood would also benefit from further investigation. These iconic military features are still relatively intact and could further enhance our understanding of the communities that were involved in the construction of the Mulberry Harbours which played a pivotal role during Operation Overlord.

8. MARINE STUDY AREA: RESULTS

8.1. INTRODUCTION

- 8.1.1. The Chapter provides the results of fieldwork conducted in the marine zone of the Study Area. It was conducted in eight sessions spread over a total of nineteen days between May and October 2010. A key component of the project was the participation of volunteer divers, who assisted in the surveys.
- 8.1.2. The project sought to enhance knowledge of the marine archaeological resource, and an emphasis was placed on the identification and recording of shipwrecks. This was due to several reasons. In the first instance, shipwreck diving is a popular activity amongst the local recreational diving community and it was felt that offering an opportunity to participate in underwater archaeological investigation would be

encourage volunteers to get involved. Secondly, it was expected that the shipwrecks identified as targets for the project, would result in a positive volunteer experience, on account of their extant remains being visually recognisable and comparatively easy to work around. Finally, it was hoped that the shipwreck surveys would provide further insights into the wider cultural landscape and enhance the work being carried out in the intertidal and foreshore surveys.

- 8.1.3. The fieldwork involved a series of dives to both known wreck sites and geophysical anomalies identified from sidescan sonar surveys carried out during the summer of 2010. Areas of the seabed were surveyed in areas with the potential for sunken archaeological material. Unidentified seabed features, anomalies and wrecks recorded by the United Kingdom Hydrographic Office (UKHO) were also considered for potential diver ground-truthing.
- 8.1.4. Diving operations were carried out from the dive support vessel *Wight Spirit*, skippered by Mr Dave Wendes. A low resolution, hull mounted Humminbird side scan sonar was used on board the *Wight Spirit* to identify anomalies on the seabed. Divers were deployed to ground-truth and identify those anomalies worthy of further investigation. In addition to the diving fieldwork and geophysical investigations, a preliminary DBA was undertaken in order to assist with the interpretation of the wrecks.

8.2. PROJECT BACKGROUND

- 8.2.1. The extent of the Marine Study Area follows the low water contour along the New Forest coastal façade which stretches out to six nautical miles offshore (**see Figure 9**).
- 8.2.2. A number of known sites were identified in the Phase 1 DBA and the Phase 2 Project Design as priorities for investigation. These sites became the focus of the fieldwork investigations. As well as carrying out further work on known sites, the project aimed to search for and record new sites within the New Forest Coastal Zone.
- 8.2.3. Before fieldwork operations began the NFNPA deployed wreck marker buoys on four of the priority sites chosen for investigation to form an underwater heritage trail. The underwater heritage trail formed an integral part of the educational goals of the project with the aim of raising awareness of the New Forest's underwater heritage.

8.3. AIMS & OBJECTIVES

- 8.3.1. The overall objectives of the diving fieldwork:
- To identify new sites of archaeological and historical significance that merit survey and evaluation;
 - To investigate existing sites to determine whether they merit further survey and evaluation;
 - To identify whether the sites investigated require positive management action;
 - To identify whether the sites investigated merit consideration for protection by means of statutory designation;
 - To identify sites that may be at risk of damage or destruction;
 - Allow avocational divers, amateur archaeologists and students of the discipline an opportunity to be involved and engaged in their underwater cultural heritage and as a result gain experience in recognising these sites.

8.3.2. Specific fieldwork objectives:

- Conduct underwater investigations of sites in the New Forest coastal zone;
- To train avocational divers, amateur archaeologists and students of the discipline in underwater survey techniques;
- Make a record of sites underwater through underwater survey techniques;
- Make a record of sites underwater through video and still photography.

8.3.3. In total, five shipwrecks were investigated along with five geophysical anomalies. The full results of the Marine Study Area surveys are presented in detail in **Appendix 2**. The following sections give a brief overview of the findings and how they relate to the wider landscape.

8.4. THE SHIPWRECKS

8.4.1. The Solent has a long history as a major shipping route, due to its proximity to the historic ports of Southampton and Portsmouth, and Yarmouth on the Isle of Wight. On a larger scale, it flanks the southern coast of central England and has traditionally been viewed as strategically important in both a military sense and an economic sense. Historically, a vast amount of shipping has traversed this narrow body of water, and continues to do so today. Statistically, this makes the likelihood of wrecks on the Solent seabed extremely high.

8.4.2. It is assumed that shipwrecks make up the majority of the archaeological resource on the Solent's seabed, and many of the ships lost here will have had tangible associations with the historic towns, villages, and communities of the New Forest. Similarly, many of the maritime industries explored and recorded during the fieldwalk surveys will have used vessels to export their produce, not just locally, but across the Channel and beyond. A number of wrecks were discovered in the intertidal zones and river banks of the various coastal stretches, many of which will have traversed the Solent waters at some stage in their working lives.

8.4.3. Five known shipwrecks were investigated as part of the Phase 2 field assessment, and an overview of each is presented below.

Target Site 1: Margaret Smith

8.4.4. The *Margaret Smith* was a motor dredger/sand carrier built in 1943 by J Harker Ltd, Knottingly. On the 28th June 1978 the vessel had been dredging in the Solent and her hull was full with gravel. She lost power just outside Cowes. While drifting towards Gurnard Ledge she took on an unmanageable amount of water. The ship's crew were rescued and the sinking vessel was towed to an Admiralty mooring in Yarmouth Roads. The following day the vessel sank in 15m of water (Wendes 2006:288-289).

8.4.5. The wreck of is located in the Yarmouth Roads (see **Figs.24 – 26**). The exact position is **50°42.96'N, 001°28.15'W**. The wreck lies across the tide, standing 6m intact on her starboard side at a depth of 15m. It measures from bow to stern 42.98 metres. The wreck rises 6m from the seabed. The superstructure of the wreck is substantially intact lying across the tide on her starboard side on a fairly flat gravel seabed. Little can be said about the construction of the vessel apart from it was constructed of steel plates welded together and supported internally by metal frames and bulkheads.

- 8.4.6. The *Margaret Smith* is a relatively intact wreck of a mid to late 20th century motor dredger (see **Fig. 27**). The site does not appear to be under any immediate threat from either human interference or the physical environment around it other than the natural chemical processes of the ferrous structure degrading in salt water. There is nothing to suggest this wreck is rare or has any special archaeological importance. However, it has some representative value, being typical of a mid to late 20th century vessel used in an industry of some significance to the UK. These types of vessels were and still are a common sight in the Solent either carrying out dredging activities or in transit carrying holds full of gravel.

Target Site 2: SS Serrana

- 8.4.7. The *Serrana* was an ocean going tramp steamer built in 1905 by the Company John Readhead, South Shields. The ship was dual powered by sail and a triple expansion engine driving a single screw. She was fitted out with deck guns during the First World War. It was carrying a cargo of 500 tons of coal, a general cargo of 300 tons and 112 bags of mail from London to Barbados when, on the 22nd January 1918, it was torpedoed approximately 10 miles south of St Catherine's lighthouse on the Isle of Wight by the German U – Boat, *UB-35* (Wendes 2006:144).
- 8.4.8. The wreck of the *Serrana* is in two main pieces. The bow is located on Bridge reef, just west of the Needles. The exact position is **50°39.87' N, 001° 36.16' W**. The stern is located 400 meters north west of the Needles (see **Figs.24 – 26**). The exact location is 50° 39.87' N, 001° 35.82' W. For this Stage of the project fieldwork has taken place on the stern section which lies at a depth of 20m.
- 8.4.9. The stern section of the *Serrana* is situated on a sandy and shingle seabed with a rocky reef along the portside of the wreck. The wreck lies approximately 500 metres north from Bridge Reef and the Needles, orientated north-west/south-east with the stern to the north-west.
- 8.4.10. Surviving hull structure, machinery, fittings and propulsion system recorded on site are typical of the first quarter of the 20th century (see **Fig.28**). The presence of deck guns within the wreckage are evidence of the fitting out and armament of merchant vessels post 1915. Tramp ships were extremely basic in design, sturdily built and designed to carry maximum loads at minimum costs.
- 8.4.11. The *Serrana* was a casualty of Germany's military strategy to continually disrupt Britain's import supply line during WWI. As such it forms a significant component of the military landscape of the New Forest, which became a frontier zone.

Target Site 3: Fenna

- 8.4.12. The *Fenna* was a Dutch two-masted schooner built in 1863 at Hoogezand Holland. The vessel was carrying a cargo of building materials including barrels of nails, cases of sheet glass and railway lines/iron bars, weighing 230 tons, and was travelling from Amsterdam to Messina and Trieste in Italy (Wendes 2006:24). Whilst sailing down the English Channel during the 11th March 1881, the *Fenna* ran into heavy gales and began to take on water. The ship gained so much water that it became unmanageable to sail and the decision was made by Master and crew to abandon ship. The *Fenna* sank some time later out of sight of its crew.
- 8.4.13. The wreck of the *Fenna* is approximately two miles NW of the Needles, with the exact position: **50° 38.44' N, 001° 40.47' W** (see **Figs.24 – 26**). The wreck lies at a depth of 24m, on an even keel orientated north east/south west. The site is 30m long and 15m wide and the most prominent features on the seabed are the

remnants of the ship's cargo. The *Fenna* appeared to be carrying an assortment of building materials including barrels of nails, crates of sheet glass, railway tracks or iron bars and other material (not yet identified) in large concreted boxes.

- 8.4.14. Little can be surmised about the general hull construction from the extant remains, as very few structural components have survived above the floor timbers (see **Figs. 29 – 30**). The top part of the vessel has long since disintegrated, although areas of the lower hull have survived. However, the majority of the surviving components are either obscured by the ship's cargo or buried beneath the gravel seabed. Timbers are mainly exposed forward of the tracks with the exception of the remains of deck beams, which are sandwiched between the rails and crates of glass. Due to the burial of the lower hull and the overlying cargo, excavation and recovery would be necessary to allow more detailed recording of the structural remains.
- 8.4.15. The remains of the *Fenna* and its cargo do not appear to be vulnerable to localised threats, although the physical environment and occasional diver interference will be having a minor impact. The majority of the structural elements have degraded leaving behind an almost complete assemblage of cargo. Much of the cargo has survived intact and may provide valuable information about late 19th century stowage arrangements and types of cargoes carried by wooden merchant sailing ships.

Target Site 4: SS Ceres

- 8.4.16. The *SS Ceres* was a small steam barge of 38 tons, driven by a single iron screw. The vessel was constructed at Kirkintilloch in 1875, and measured 65' (20.4m) long by 13'7'' (4.1m) wide. On the 23rd November 1898 the vessel was being skippered by Captain H. Doe and was loading gravel from the shingle bank at Hurst Castle. During a strong south westerly storm the *SS Ceres* was blown aground and wrecked on the north east end of the Shingles, a series of banks of sand and gravel deposited on the northwest side of the Needles channel (Wendes 2006:49).
- 8.4.17. The site of the *SS Ceres* is in shallow water on the north east end of the shingle bank close to Hurst Spit (see **Figs.24 – 26**). The exact location of the wreck is **50° 41.89' N, 001° 33.99' W**. The wreck is located in a very dynamic environment experiencing strong tides and an extremely mobile seabed. Divers observed differences in sediment depth and wreck exposure between their two dives on the site. The remains are partially buried, broken up and scattered over a distance of 50m. The wreck is aligned north west/south east at a depth of 5-6m.
- 8.4.18. There was very little evidence of the vessels fixtures, fittings or machinery, and there were no visible remains of the vessels propulsion or steering. No anchors or deck machinery such as winches or windlasses were observed on site. The wreck appears to be aligned but broken into several different sections. From the structure visible it can be said the vessel was constructed of iron/steel plating strengthened and stiffened by internal iron/steel frames. The vessel had at least one deck constructed partially from wooden deck planking (see **Fig.32**).
- 8.4.19. The *SS Ceres* is representative of a small working steam ship of the last quarter of the 19th century. The vessel's role would not have been dissimilar to that of the later *Margaret Smith* (see above) that sank in 1978, and represents an early class of vessel that has developed and remained active in the Solent from the late 19th Century up until the present day.

Target Site 5: SS War Knight

- 8.4.20. The *War Knight* was an armed merchantman built in 1917 at Union Iron Works, Alameda, USA. The ship was powered by a one gear steam turbine driving a single screw (Wendes 2006:183). The ship sank on the 24th March 1918 after colliding with the tanker *O. B. Jennings* when both came under attack from German U-boats.
- 8.4.21. At the time of sinking the ship was carrying a cargo of 999 tons of fuel oil and a general cargo including food stuffs, bails of rubber and drums of chemicals. There is no evidence of the cargo left on the wreck, much of it was reported to wash up on the shore and salvage operations after the war disposed of what remained.
- 8.4.22. The wreck of the *War Knight* is located in Watcombe Bay on the southwest side of the Isle of Wight (see **Figs.24 – 26**). Its exact position is **50° 39.96' N, 001° 31.12' W**. The wreck lies at a depth of 13m orientated SSE/NNW. The wreck is well broken up, but over a hundred meters long. The most prominent features are the chain locker and anchor winches at the bow and the ships three boilers and steam turbine engine amidships. The chain locker rises 3m from the seabed and is approximately 4m². Much of the chain can be seen piled up inside. Forward of the chain locker are the huge ship's winches, remains of the hawsepipes with chain, and bitts all of which have collapsed from the bow. In between the chain locker and the boilers the structure is very flat, much of it has collapsed inwards and outwards and lies in sheets on the seabed (see **Fig. 33**).
- 8.4.23. The *War Knight* was constructed in the later years of the First World War for trans-Atlantic and ocean going voyages. Due to the threat from German U-boats the *War Knight* was fitted out with deck guns for protection. The threat from U-boat attacks could also explain why the vessel was fitted with a higher performance steam turbine engine rather than the more conventional triple expansion engine. The greater speed of the vessel would make it a harder target to engage but it would also allow the vessel to out run a German U-boat, should it come into contact with the enemy. Steam turbines were not as fuel efficient and as a result did not suit all merchant ships (Griffiths 1997). During peace time efficiency out weighed the benefits of speed but war has a tendency to change conventional practices. It would appear the design and construction of the *War Knight* was possibly influenced by the circumstances of war.

8.5. GEOPHYSICAL ANOMALIES

- 8.5.1. Marine geophysical anomalies are objects, shapes, or magnetic fluctuations that do not appear to be natural in origin. They are commonly identified by remote sensing apparatus such as sidescan sonar which relies on sonar reflections to create a three-dimensional image of the seabed, and magnetometry which detects fluctuations in the earth's magnetic field, commonly caused by the presence of metals. Anomalies can be very subtle and almost indiscernible from the surrounding landscape, or be substantial structures with an identifiable form. In order to distinguish the archaeological from the natural, divers visit the site to investigate it. This procedure is commonly known as "ground-truthing."
- 8.5.2. A number of geophysical anomalies were identified from the sidescan sonar surveys carried out during the 2010 field assessment, and five of these were ground-truthed. A detailed account of the findings is presented in **Appendix 3**, but a brief overview is presented below.

Geophysical Anomaly 1

- 8.5.3. Located by the side scan sonar and diver ground-truthed on the **17th May 2010**. The target was located a mile east of Yarmouth just outside the Yarmouth Roads protected wreck (see **Figs.24 – 26**). Exact location of the anomaly was **50° 42.566' N, 001° 29.780' W**.
- 8.5.4. The anomaly was located by the divers carrying out a circular search. The divers described an object rectangular in shape 1.5m long by 1m wide and 0.75m high. It had 1 m of chain attached with links approximately 150mm by 30mm thick. From the description of the anomaly it would appear to be an object associated with a redundant mooring block. To the south of the anomaly is a mooring area for boats. This object is most probably associated with the boat moorings.

Geophysical Anomaly 2

- 8.5.5. Located by sidescan sonar and diver ground-truthed on the **3rd June 2010**. The target was found half a mile offshore in Colewell Bay off the Isle Wight (see **Figs.24 – 26**). The exact location of the anomaly was **50° 41.720' N, 001° 32.890' W**.
- 8.5.6. The anomaly was located by the divers carrying out a circular search. The divers discovered the anomaly was an upturned fibre glass powerboat approximately 6m long. This was obviously a modern wreck and therefore of no archaeological interest to the project. It does, however, demonstrate a wide range of losses in the Solent.

Geophysical Anomaly 3

- 8.5.7. Located by sidescan sonar and diver ground-truthed on the **3rd June 2010**. The target was also found in Colewell well bay off the Isle of Wight (see **Figs.24 – 26**). The exact location of the anomaly was **50° 41.360'N, 001° 36.940' W**.
- 8.5.8. The anomaly was located by the divers carrying out a circular search and was found to be natural. The divers described an exposed coal seam outcrop approximately 0.30 – 0.40m above seabed level.

Geophysical Anomaly 4

- 8.5.9. The anomaly was located by sidescan sonar and diver ground-truthed on **22nd July 2010**. The site is located one mile north west of the Needles in the mouth of the Western Solent (see **Figs.24 – 26**). The exact position of the site is **50° 39.735' N, 001° 36.469' W**.
- 8.5.10. The anomaly turned out to be a shipwreck, measuring 30m long by 10m wide with a scattering of smaller debris surrounding the site. The wreckage is very broken up and flattened except at the south end of the site where a large square metal structure rises 3.3m from the seabed and is 4m wide (see **Figs.10 – 14**). It is this structure that resembles the ramp door of a landing craft and first led the project team to believe this was the remains of a Landing Craft.
- 8.5.11. During the course of research to identify the Landing Craft, WA consulted the Shipwreck Index of the British Isles: Volume 2 (Larn and Larn 1997) and the UKHO. Both sources recorded the loss of LCT 809, a British MK IV Tank Landing Craft close to the Needles Rocks. Although both sources confirm the loss of the MK IV LCT 809 in the Western Solent contemporary accounts from operations records and an eye witness account recall that the MK IV LCT 809 was in fact lost on the Beaches of Normandy on the 6th June 1944. Therefore, although this wreck is thought to be the remains of a Tank Landing Craft (LCT) its exact identity remains uncorroborated.

Geophysical Anomaly 5

- 8.5.12. The site is situated 1 mile north west of Thorness Bay, Isle of Wight between Cowes and Yarmouth (see **Figs.24 – 26**). The exact position of the site is **50° 44.886' N, 001° 21.370' W**.
- 8.5.13. The site was investigated by the diving team on the **15th September 2010**, and the divers identified the remains of a wooden vessel consisting of a coherent ship's structure, copper alloy fastenings and multiple ferrous fixtures and fittings including a windlass, a pump flywheel and anchor. Further dives on the site between the **15th -17th September** revealed that the site offered an almost complete assemblage of a mid to late 19th century merchant sailing vessel and therefore was a site of some significance.
- 8.5.14. The wreck lies across the tide on an even keel with the bow pointing south on a slightly undulating clay seabed with a layer of silts and shell on top. The exposed area of wreck is c. 30m long and c. 10m wide. The starboard side of the wreck appears to have a greater covering of sediment exposing less structure. However, possible deck beams and deck planking have been observed partially covered or flush with the seabed suggesting the preservation of a section of collapsed deck. On the port side of the wreck was a section of exposed hull structure upstanding by up to 0.8m consisting of framing, inner and outer planking (**Fig.17**). The frames were composite consisting of two timbers side-by-side and fastened together by cuprous rivets. Rivets are bolts/pins flattened at both ends. The frames were curving up from the seabed forming the sides of the ship.
- 8.5.15. There are numerous copper alloy metal fastenings of various sizes and types strewn all over the site (**Fig. 22**), some lying loose and some protruding from sections of timber. Close examination of the fastenings revealed they were made of a copper alloy, possibly Muntz metal. However unless properly analysed it can not be said for certain that they are made of Muntz metal. Muntz metal (yellow metal) is a cheaper alloy of copper and zinc. It was patented in 1832 and became a popular alternative from the 1850's (Stone 1993). The copper alloy fastenings are a good indication this vessel was probably constructed post 1850.
- 8.5.16. The archaeological evidence gathered during the 2010 fieldwork indicates that the site is the remains of a wooden merchant sailing ship. Judging by the extent of the site and the preserved hull timbers, the vessel was at least c. 27m long and had a breadth of 7-8m. The width of the keelson and the approximate length suggests this is a fairly sizeable vessel in the region of c. 150 tons. The ship was carvel built probably from oak and fastened with cuprous fastenings. The composite framing, cuprous fastenings and bronze rudder pintle all suggest this was a well constructed and robust sailing vessel fit for ocean voyages.
- 8.5.17. The extent of the survival of the hull structure, ships fixtures and fittings, and even small finds indicates an extremely rich and well preserved assemblage (see **Figs. 16 – 23**), and further investigation is strongly recommended.

Summary

- 8.5.18. The five wrecks investigated were all modern in origin and are broadly typical of the Solent's shipwreck resource from this period. Although not representative of the archaeological resource as a whole, these wrecks provide an indication of the Solent's continued usage as a trading passage from the late 19th Century onwards.

- 8.5.19. In terms of their contribution to other fields of nautical research, the wrecks have as yet provided only limited insight into construction techniques and shipboard life, but further research could substantially expand the knowledge base. By virtue of their location, these sites form part of the New Forest's historic landscape and may yet enhance our understanding of late 19th Century industry and commerce in the region. They may also shed new light on the German and British naval strategies of the First World War.
- 8.5.20. The geophysical anomaly investigations identified a further two shipwrecks of unknown date and origin, and a modern wreck. Preliminary investigations into the unknown sites suggest a possible WWII Tank Landing Craft (TLC) and a candidate for the wreck of the *Neath* which was lost off the Isle of Wight in the early 1900s. Further research is required to establish the identity of the vessels and to determine their archaeological value.
- 8.5.21. The marine component of the RCZA provided volunteers with the opportunity to investigate and record shipwrecks *in situ* and in doing so, it has contributed to local awareness of the shipwreck resource and its need for management. The project showed that the knowledge and enthusiasm of local recreational divers can significantly enhance archaeological quantification projects and contribute to numerous objectives therein.

9. COASTAL & MARINE FIELDWORK ANALYSIS

9.1. OVERVIEW

9.1.1. The table below (**Table 9.1**) summarises the number of new and updated monuments recorded during the Phase 2 Field Assessment.

Coastal Stretch	Phase 1 Results	New Monument Records Created	Existing Monument Records Updated	Total
A	142	14	3	159
B	729	101	7	837
C	215	47	14	276
D	780	142	38	960
E	427	127	7	561
Marine	333	6	5	344
Total	2626	437	74	3137

Table 9.1 Summary of records created and updated by coastal and marine field surveys

- 9.1.2. From **Coastal Stretch A**, the foreshore and coastal cliff walk from the western extremity of Barton Beach along to Milford-on-Sea at the eastern extent, can be considered well covered. The eroding areas to the seaward extent of Naish Holiday Village would require comprehensive and systematic coverage to locate discoveries within the eroded deposits. Such finds would be almost certainly be arbitrary and unstratified, although there is the potential for archaeological deposits to have survived in a disturbed form. Volunteers claimed to have discovered items such as shark's teeth and flints on the foreshore in this section of the Study Area, but could not recall the positions of the finds, and were unable to elaborate on whether these finds were archaeological.
- 9.1.3. The remainder of Coastal Stretch A, which included the landward extent of the 2km buffer zone, was not surveyed due to time constraints.
- 9.1.4. Coverage of the foreshore of **Coastal Stretch B** was very good, due largely to the walkway on the coastal sea wall that stretches from Keyhaven up to Lymington. Unfortunately the intertidal component of the Keyhaven Marsh proved inaccessible, both on foot and in a boat. In these sections, features were recorded by remote observation with an estimated location marked on the GIS. Much of the Marsh has been surveyed by a local enthusiast who compiled her research as part of a Masters project at the University of Southampton. This research will be consulted as part of the Phase 3 synthesis.
- 9.1.5. The boat survey allowed access to the north bank of the Lymington River that had proved difficult to access on foot, and also the outer spit that guards the entrance to

the River in the south. Again, the coastal hinterland was not given proper coverage due to the time constraints, though a cross-section of sites in the Lymington area were selected for visual inspection to gain insight into their present conservation status. These included historic farmhouses, public houses, and churches.

- 9.1.6. Coverage in the **Coastal Stretch C** was predominantly very good, with few access issues encountered. Again, the foci of the surveys were predominantly the foreshore and intertidal zones, with the landward extents of each area subject only to minimal observational inspections. High tides prevented some foreshore access at the seaward extents of the Beaulieu estuary, with minimal detouring required. The field walk surveys were supplemented by the boat surveys which covered the entirety of the Beaulieu River banks, reaching the northernmost extent of the Study Area.
- 9.1.7. **Coastal Stretch D** was also well covered, although access to some areas of privately owned land was restricted. Where the coastal façade was not accessible, detours were taken to gain vantage points so that features could be recorded remotely. Again the focus of the survey was the foreshore and intertidal areas, with the coastal hinterland subject only to minimal visual inspections.
- 9.1.8. The coverage of **Coastal Stretch E** was predominantly good, due to the kind permission of ABP Ports and Fawley Oil Refinery. Access to the Marchwood military port was restricted, however, the foreshore section of this area was surveyed remotely from the boat. Due to the continued urban and industrial development of the western bank of Southampton Water, sections of the foreshore at Hythe, Marchwood, and Eling were not accessible during the surveys.

9.2. REVIEW

- 9.2.1. Based on the experience gained from the completion of the Phase 2 Field Assessment, it is possible to make some preliminary comments on some of the objectives, methods, and deliverables of the project.
- 9.2.2. The Phase 2 fieldwork updated 74 existing monument records and recorded 437 new monuments. Given that the Phase 1 DBA collated a total of 2626 records, the number of sites updated may seem small when compared with the number of new sites recorded (437). This was the result of modifications to the survey strategy when it became apparent that, in addition to recording “new” sites, an assessment of all of the monuments listed in the Phase 1 DBA was completely unfeasible in the available time. The survey strategy was therefore modified to preferentially identify and record new sites rather than locate and assess existing sites, however this presented a further issue in terms of discerning whether the site encountered was an already existing site. Positional accuracy on the survey hardware varied between 1m and 10m at times, meaning that sites in close proximity were sometimes indistinguishable on the ground. Where time allowed, existing sites were recorded as new sites with a view to redressing any crossovers in the Phase 2 Report.
- 9.2.3. The Coastal Study Areas contained several divergent environments, each subject to a different set of survey constraints. The time allotted to each section in the project design did not allow for comprehensive coverage of the inland zones, which stretched approximately 2km inland from the low water mark, and consequently, focus was turned to the coastal façade, rivers, and marine channels which puncture the coastline. Given the remit of the project, which placed a significant emphasis on assessing threats and identifying archaeology at risk, it was felt that a larger

proportion of the vulnerable (or actively eroding) archaeological resource would be located in these regions. The field surveys identified numerous sites which had recently been impacted by natural or cultural processes, and the number of sites on the coastal front requiring active intervention was deemed considerably higher than inland sites.

- 9.2.4. The surveys positively enhanced the existing dataset in a number of ways, but principally in terms of position, description, and current condition. Unfortunately, with the exception of the Creek Cottage evaluation, no comprehensive recording or sampling was undertaken. This was in part due to time constraints, but also due to the nature of the sites. Several wrecks situated within the intertidal zone and the banks of the Lymington and Beaulieu Rivers would benefit from further detailed survey, and their current environmental context demands that such work be carried out with some urgency. Such work would enhance our knowledge of the site itself, but also improve our understanding of the wider landscape.
- 9.2.5. The field surveys recorded eight features on the foreshore and in the intertidal zone whose date and purpose remain unknown. A significant number of other finds within the Coastal Stretches were assigned very broad date ranges (e.g. medieval to modern). Many of these features were recorded remotely by observation, and frequently manifested as wooden stakes protruding from coastal sediments. Many of these appeared arbitrarily positioned from a ground perspective, but closer analysis of the GIS may reveal deliberate patterns and it is hoped that such an analysis will be incorporated into the Phase 3 Report.
- 9.2.6. The work undertaken for the New Forest RCZA has expanded and updated the existing monument dataset. The finalised dataset will become a valuable resource for future assessments, development planning, leisure and tourism initiatives, and more pertinently, the New Forest National Park Authority's own coastal heritage management strategy.
- 9.2.7. Further to this, the Phase 2 field assessment allowed volunteers to participate in the surveys, thereby encouraging both interest and interaction with the New Forest's coastal archaeological resource. This particular aspect of the project proved very successful, with increasing numbers of volunteers joining the surveys as the project progressed, and the feedback has been overwhelmingly positive. The importance of this aspect of the project should not be underestimated and it is hoped that further opportunities for volunteer participation will be forthcoming.

9.3. INCIDENTS

- 9.3.1. There were minor and occasional problems with the survey technology. The Bluetooth technology linking the iPAQ Pocket GIS with the Holux GPS had a habit of losing connection, with the only solution being to re-boot the system. Thankfully, this did not result in the loss of data due to the permanent "Auto-save" feature in the software.
- 9.3.2. On the **19th August 2010**, the Project Officer Victoria Lambert was bitten by a venomous insect and the survey had to be curtailed. This did not result in a loss of coverage as the survey resumed from the termination point the following day.
- 9.3.3. No further incidents were recorded during the coastal field surveys.
- 9.3.4. There were approximately five instances during the boat surveys (**1st – 3rd November 2010**) when either the boat or its propeller hit the bottom sediments.

Such is the nature of shallow water surveys that such collisions are inevitable, however, in order to prevent further collisions, “watchers” were stationed at the bow and stern of the boat to look out for the shallowing of waters. A verbal warning of shallow water meant the engine was immediately shut down and lifted out of the water. The watchers promptly took control of the boat with oars, guiding it off the bottom and back in to deeper waters. This technique meant it was possible to access shallow waters in safety, and it drastically reduced incidents of grounding.

- 9.3.5. On the final day of the boat surveys (**3rd November 2010**), the boat engine suffered a minor malfunction in the northern section of Southampton Water. Thankfully no other vessels were in the vicinity at the time. The boat was subsequently anchored to prevent drift, and the volunteers were asked to have lunch whilst the Project Officer telephoned for advice. The issue was a minor fault with a fuel cable and was resolved immediately.
- 9.3.6. Later on the final boat survey day, it became necessary to curtail the survey due to a combination of volunteer discomfort and poor weather. Travelling south down Southampton Water, it was necessary to disembark and recover the boat at Hythe Marina. The Project Officer radioed Hythe ahead of the planned docking, and they were very helpful, allowing the crew to disembark and use their facilities free of charge. The boat was subsequently recovered around the corner at the public slipway.
- 9.3.7. During the Marine Surveys, there was only one incident of note. During an exploratory dive on the *Fenna* wreck, one of the volunteer divers was subject to an uncontrolled rapid ascent from a depth of 24m. As a precaution, it was assumed the diver was suffering from decompression sickness and the coastguard was contacted to transport the diver to a hyperbaric chamber in Poole. Whilst awaiting the emergency helicopter, the diver was given oxygen in the boat. Thankfully, the diver suffered no ill effects from the episode, but the survey had to be curtailed early meaning that half a day was lost. This meant the planned dive on a geophysical anomaly had to be put back to the following day.

10. CONCLUSIONS

- 10.1.1. The Phase 2 Field Assessment has updated 74 existing monument records and recorded 437 new monuments. A wide range of monuments and sites were recorded, including WWII defence installations, medieval salt production sites, and remnants of a maritime transport infrastructure stretching along the marine façade of the New Forest, along the banks of major rivers, and along the western bank of Southampton Water. Furthermore, a number of submarine sites have been investigated and photographed, allowing further assertions to be made about the New Forest coastal landscape.
- 10.1.2. The surveys incorporated a number of environments, and showed the effectiveness of iPAQ Pocket GIS as a recording tool, and the potential for rapid assessments to enhance archaeological records in the future.
- 10.1.3. The surveys were hugely enhanced by the participation of volunteers who brought the full gamut of their local experiences to the project. Volunteer participation allowed for a greater understanding of the historic landscape through first-hand experience of change, as well as through private research carried out for academic or leisure purposes.

- 10.1.4. The date range of the new discoveries was disappointingly limited, with most sites having modern origins. However, much of the landscape has been characterised by a combination of substantial modern development in sheltered stable areas (such as Southampton Water) and a complete lack of development in areas prone to erosion (such as Barton and Hordle) leading to a biased picture of land use through time.
- 10.1.5. It is perhaps not surprising that the most prominent historic landscape features exist in the relatively unscathed salt marshes of Keyhaven and Oxey which housed a substantial salt production industry from the Late Medieval period until the mid 19th Century. The fact that the production of salt in the area may actually date back to the Bronze Age, is indicative that the positions of these features within the landscape have not changed much in the intervening centuries.
- 10.1.6. Re-use of the land, and more pertinently, the reclamation of land, are also characteristics of the New Forest coastline. Such processes often obscure or destroy older archaeology, leading to apparent biases in the land use interpretation. Similarly, the substantial coastal engineering programs which saw the construction of sea walls and a system of groynes, have resulted in a comparatively “new” coastal frontier, which obscures previous landscapes and destroys material evidence of past activities.
- 10.1.7. Finally, the last historic phase of New Forest coastline’s evolution sees it become a military frontier zone, festooned with an impressive array of defensive structures, and military constructions sites which represented not only Britain’s fear of invasion during WWII, but also its desire to fight back. The numerous observation posts, gun emplacements, and tank traps crumbling out of the cliffs of Barton represent a nation in fear of invasion. However, the surviving remnants of the caissons used to construct the innovative Mulberry Harbours which allowed the Allied Forces to land in France, remain an iconic monument to Britain’s resilience and invention.
- 10.1.8. In summary, the Phase 2 Field Assessment has met the aims and objectives of the project design, and made substantial advances towards the completion of the New Forest RCZA. The foreshores and intertidal zones of all five of the Coastal Stretches were surveyed, with a gazetteer of the sites presented in **Appendix 1**. A further report will synthesise the results from the Phase 1 and Phase 2 reports, providing greater interpretation, and incorporating a wider learning and outreach component.

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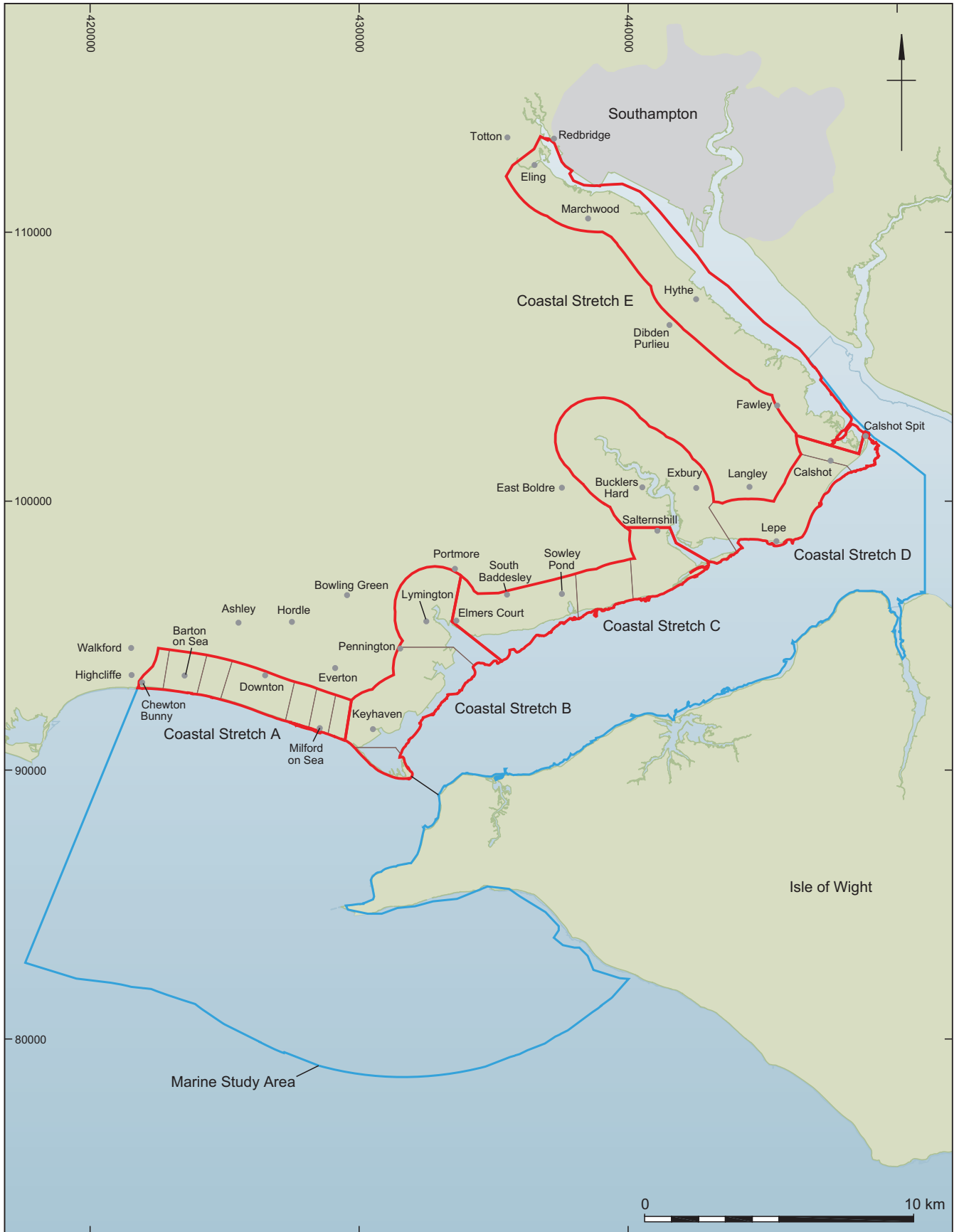
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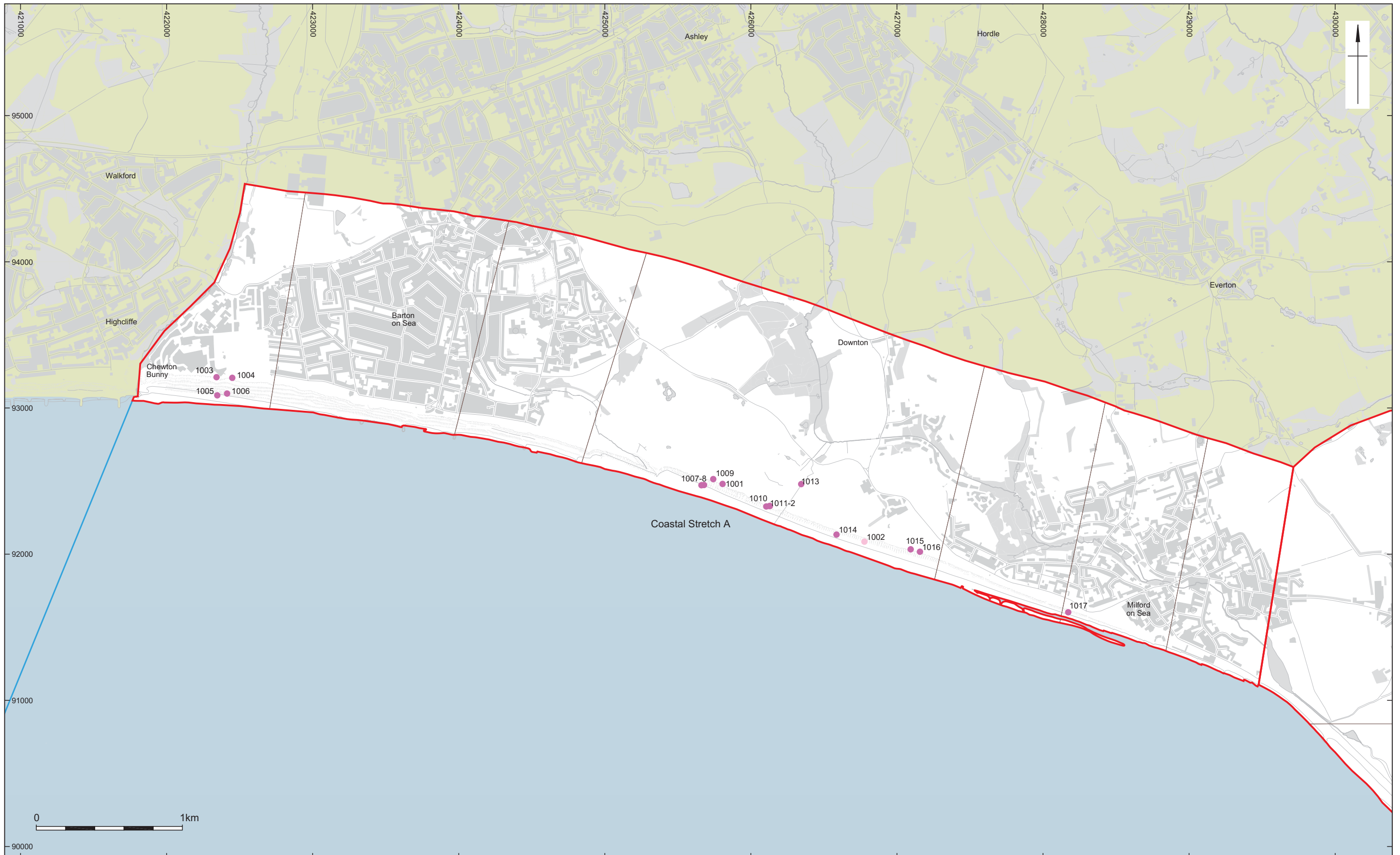


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New Forest Rapid Coastal Zone Assessment Study Areas

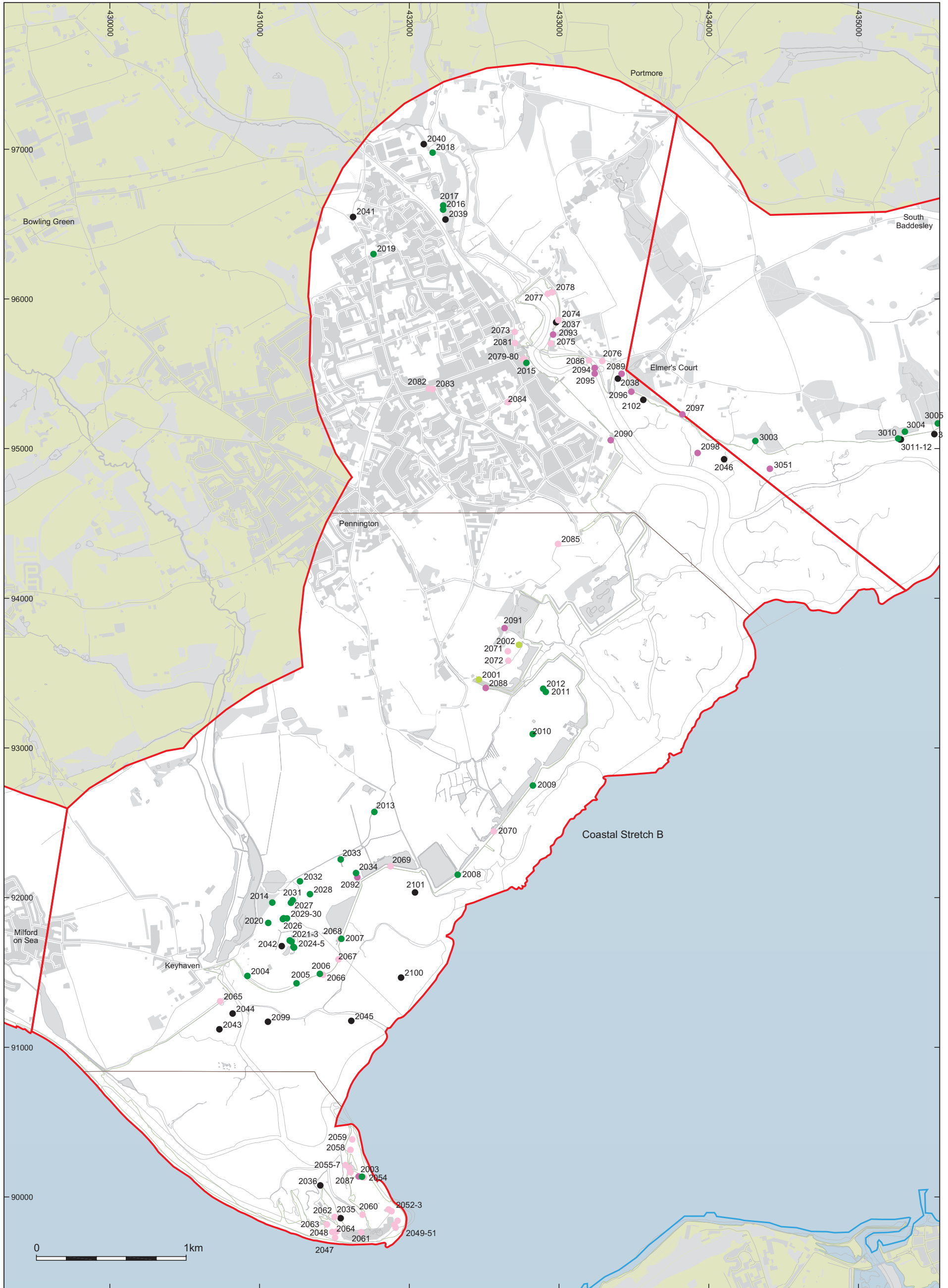
Figure 1



	Coastal Stretch	Post-medieval - modern	Projection OSGB Contains Ordnance Survey data © Crown Copyright and database right 2010 Digital data reproduced from Ordnance Survey data © Crown Copyright (2010) All rights reserved. Reference Number: 100020449. This material is for client report only © Wessex Archaeology. No unauthorised reproduction.	Date: 21/12/10	Revision Number: 0
	Marine Study Area	Modern		Scale: 1:25,000	Illustrator: KJB
	Policy Unit from Shoreline Management Plan			Path: W:\Projects\72201\Drawing Office\Report Figs\Phase2	

Coastal Stretch A. Stage 2 Field Assessment finds

Figure 2



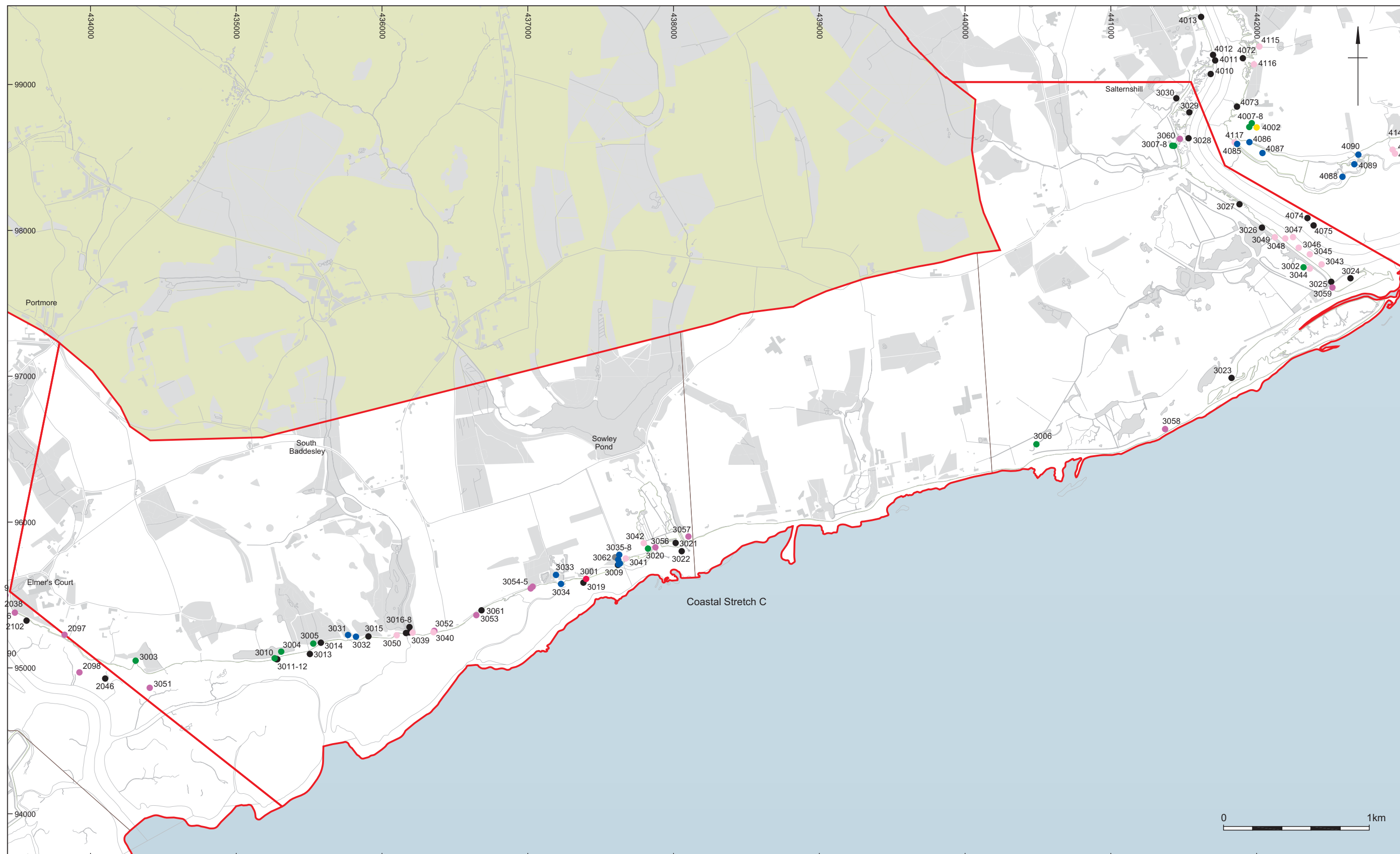
- Marine Study Area
- Coastal Stretch
- Policy Unit from Shoreline Management Plan
- Medieval
- Medieval - post-medieval
- Post-medieval - modern
- Modern
- Unknown

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Coastal Stretch B. Stage 2 Field Assessment finds

Figure 3





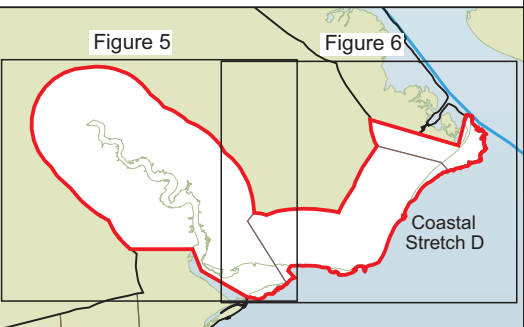
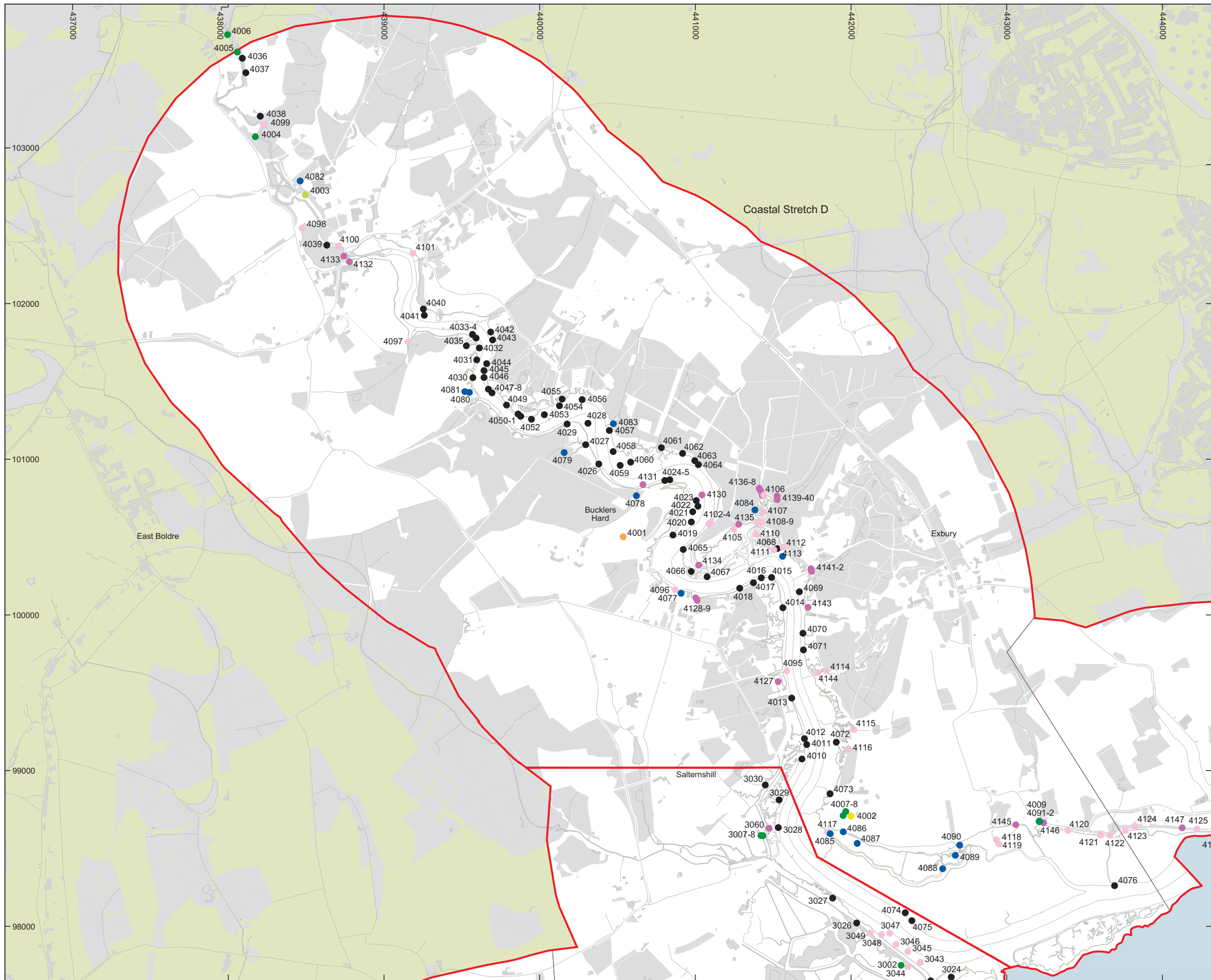
	Marine Study Area	Lower Palaeolithic	Post-medieval	Unknown
	Coastal Stretch	Iron Age	Post-medieval - modern	Non-archaeological
	Policy Unit from Shoreline Management Plan	Medieval - post-medieval	Modern	

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Coastal Stretch C. Stage 2 Field Assessment finds

Figure 4



- ▭ Marine Study Area
- ▭ Coastal Stretch
- Policy Unit from Shoreline Management Plan
- Bronze Age
- Iron Age
- Medieval
- Medieval - post-medieval
- Post-medieval
- Post-medieval - modern
- Modern
- Unknown



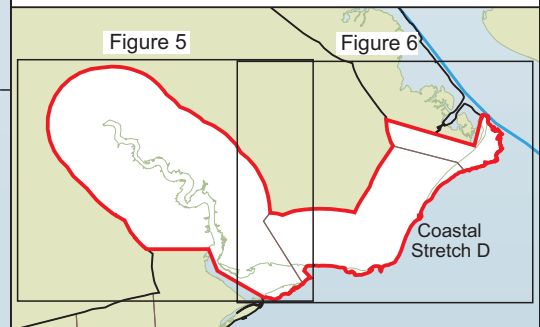
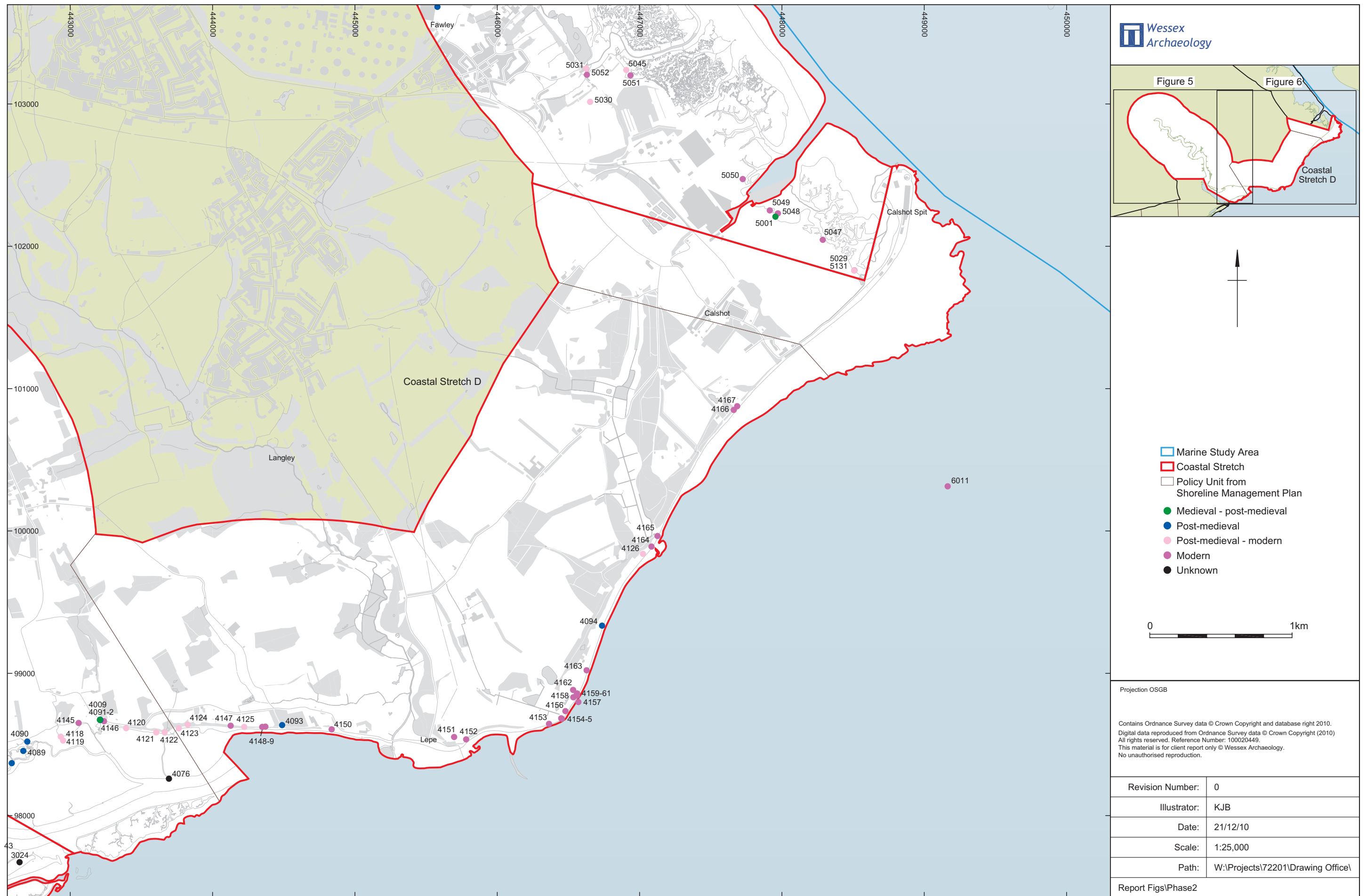
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Coastal Stretch D (west). Stage 2 Field Assessment finds

Figure 5



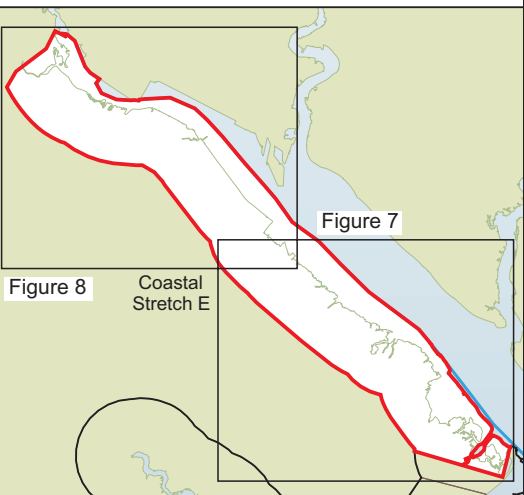
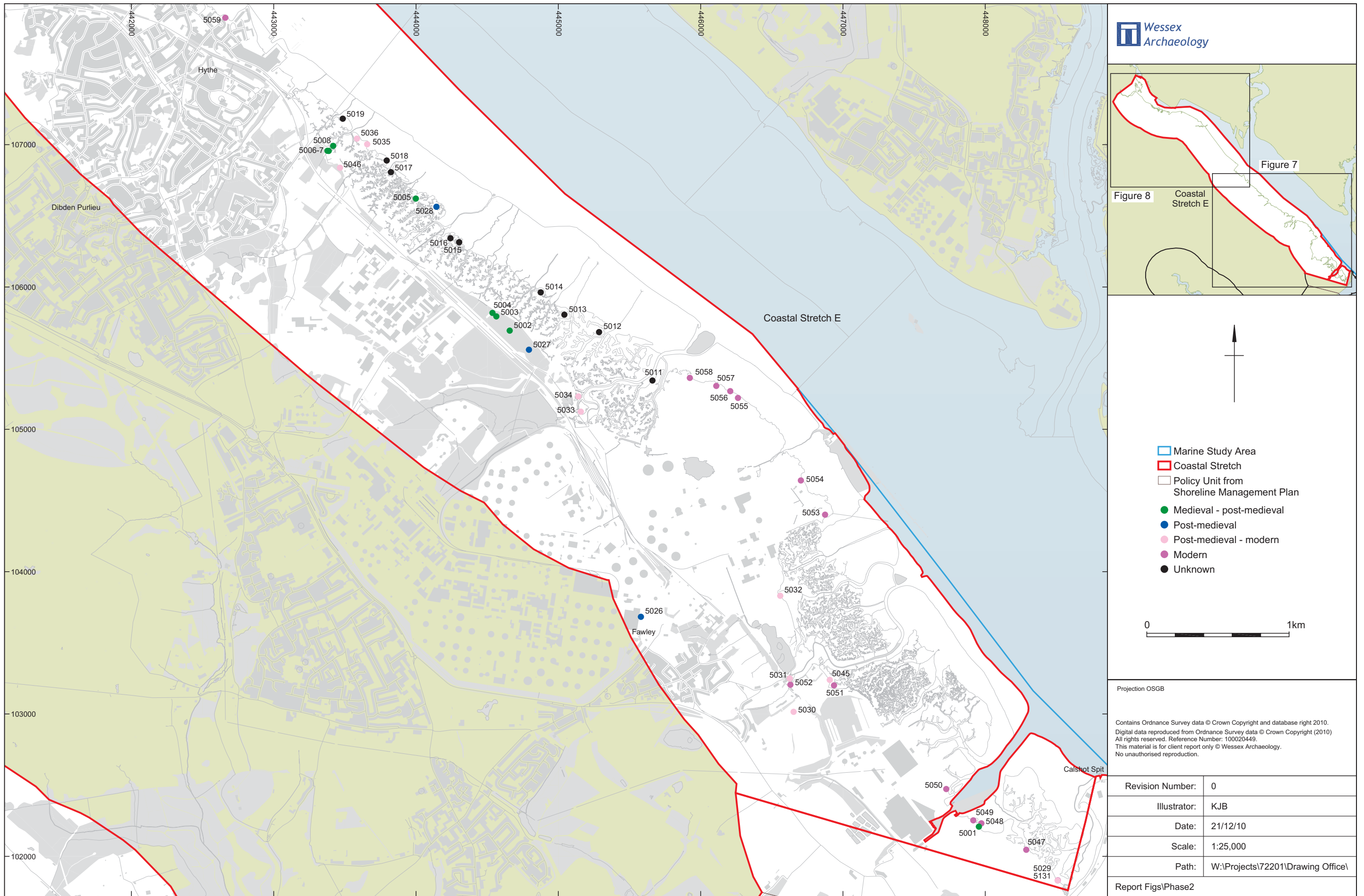
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Coastal Stretch D (east). Stage 2 Field Assessment finds

Figure 6



- ▭ Marine Study Area
- ▭ Coastal Stretch
- Policy Unit from Shoreline Management Plan
- Medieval - post-medieval
- Post-medieval
- Post-medieval - modern
- Modern
- Unknown



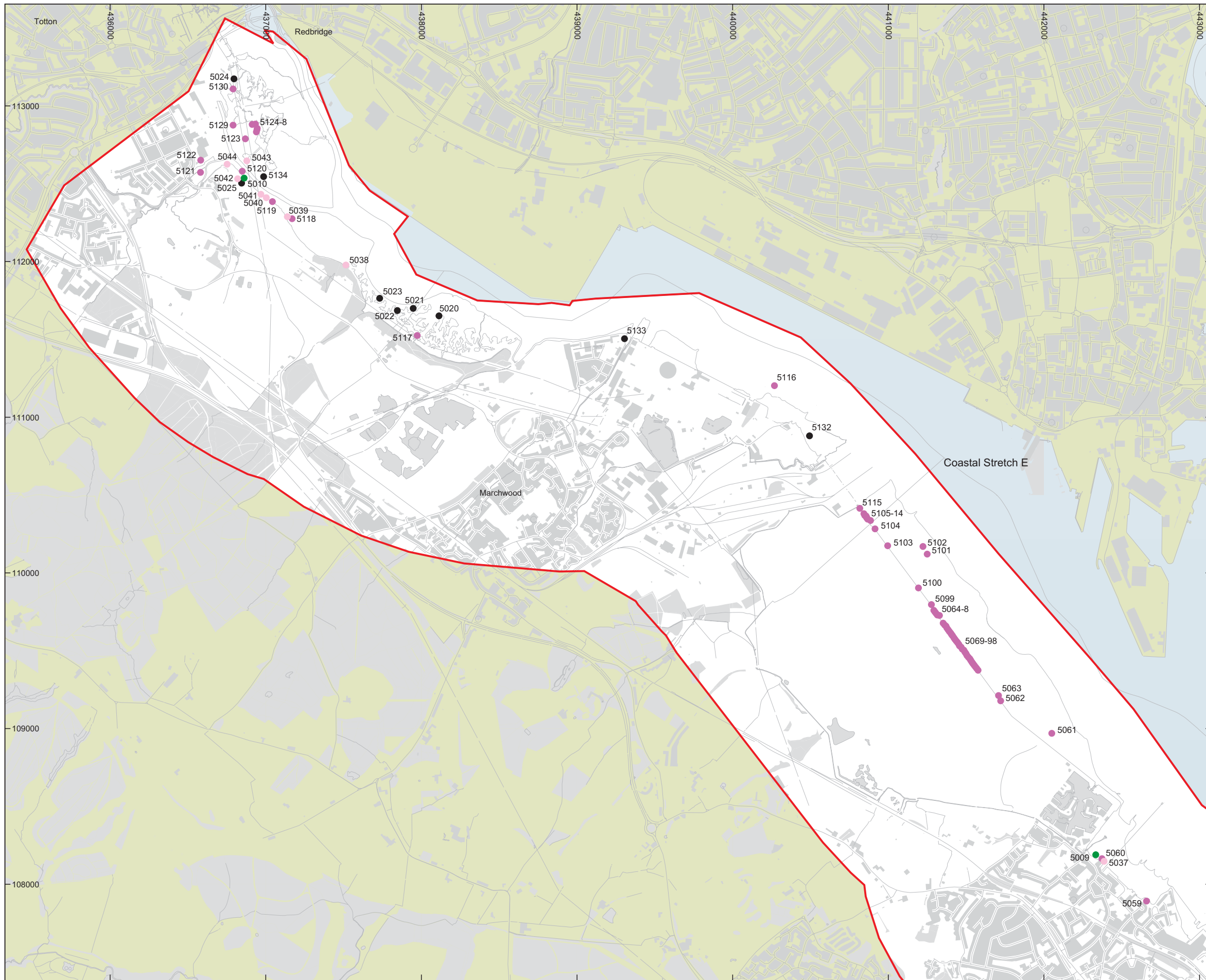
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Coastal Stretch E (south-west). Stage 2 Field Assessment finds

Figure 7



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Figure 8 Coastal Stretch E

Figure 7

North arrow

0 1km

- Marine Study Area
- Coastal Stretch
- Policy Unit from Shoreline Management Plan
- Medieval - post-medieval
- Post-medieval - modern
- Modern
- Unknown

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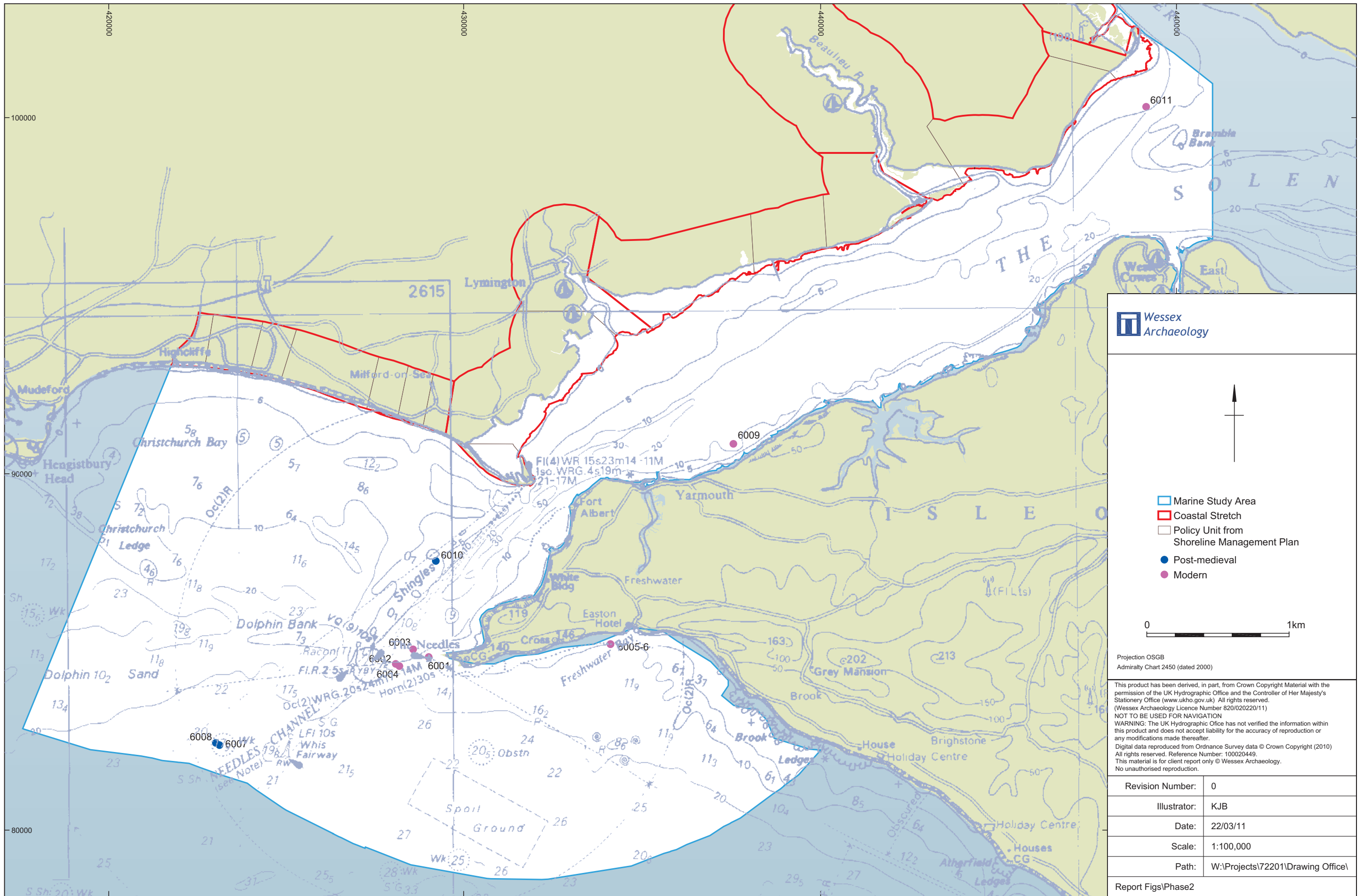
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Coastal Stretch E (north-west). Stage 2 Field Assessment finds

Figure 8



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0 1km

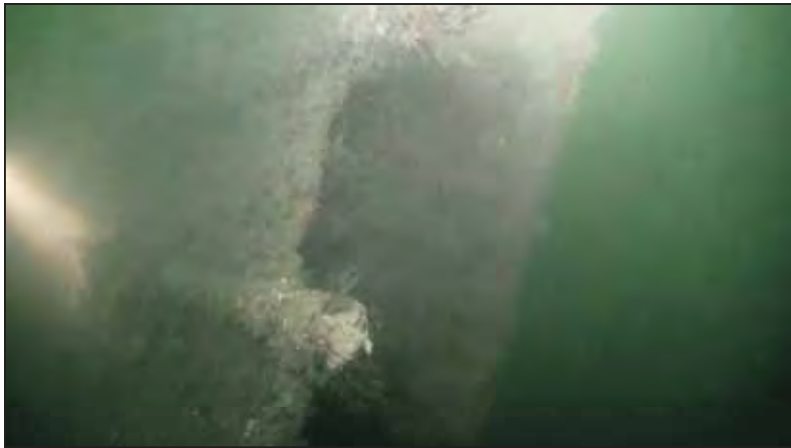
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Marine Study Area. Stage 2 Field Assessment finds

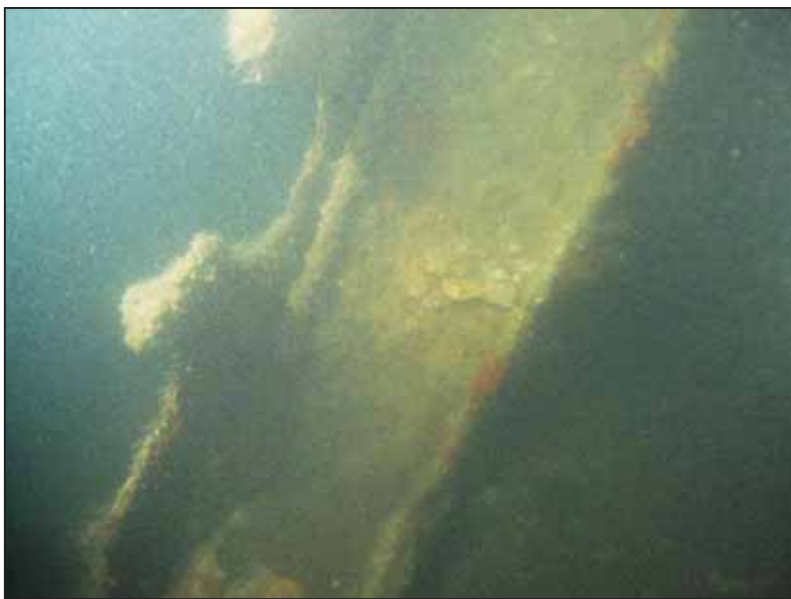
Figure 9



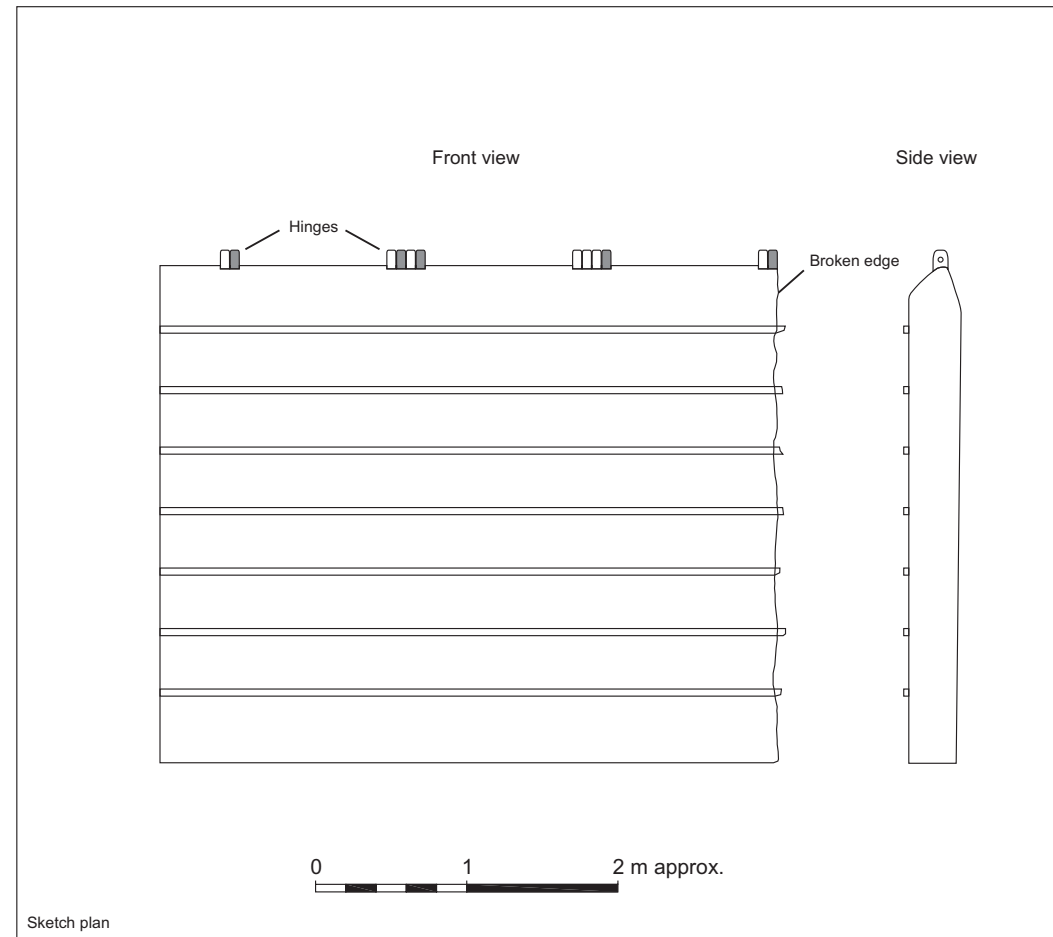
A: Ramp door and internal frame



B: Ramp door and internal frame



C: Ramp door and internal frame



D: Ramp door hinges



E: Ramp door hinging station



F: Horizontal treads on ramp door




A: Hull frame




B: Hull frame



C: Structure at stern

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LTC: Chain


Figure 12



B: Bitt 1



B: Bitt 2

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A: Ferrous pipe



B: Ferrous pipe



C: Non ferrous fitting with four flanges


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A: British Landing Crafts (LCT) at Gold Beach during Operation Neptune



B: British Landing Craft (Mark IV LCT)

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A: Steering Mechanism



B: Deadeye Shroud



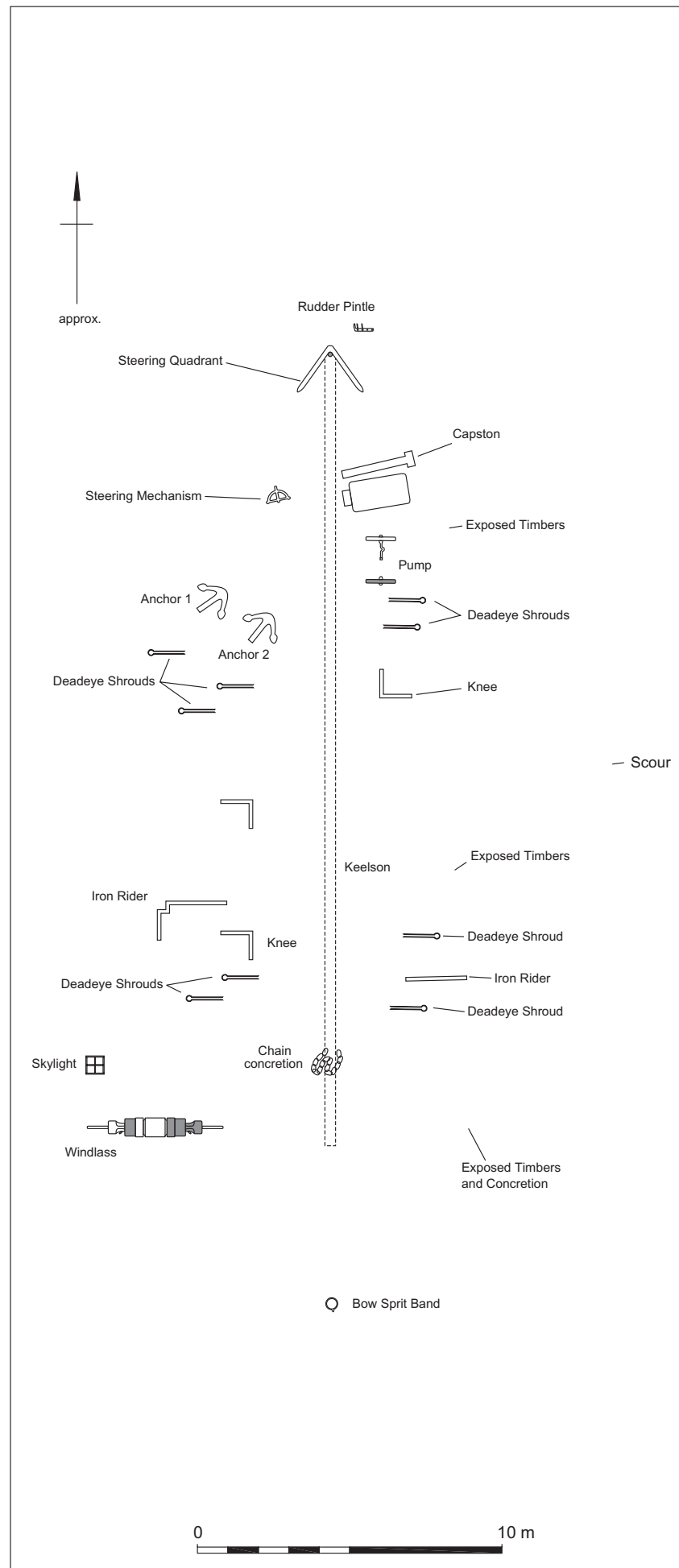
C: Iron Rider



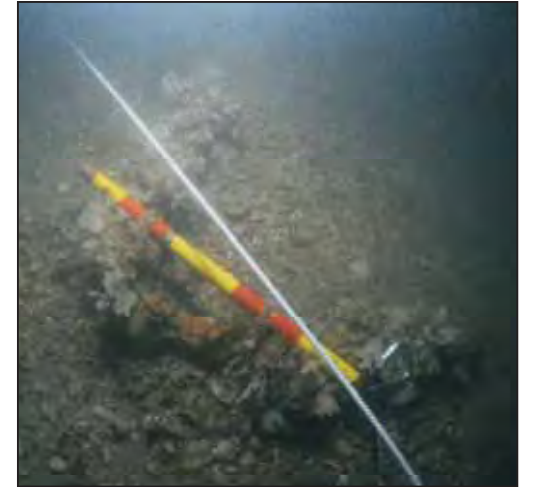
D: Iron Rider



E: Skylight



G: Rudder Pintle



H: Knee



I: Knee



J: Planning exposed timbers




K: Barrel



F: Bow Sprit Band

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Thorness Bay Wreck: Framing timbers and planking

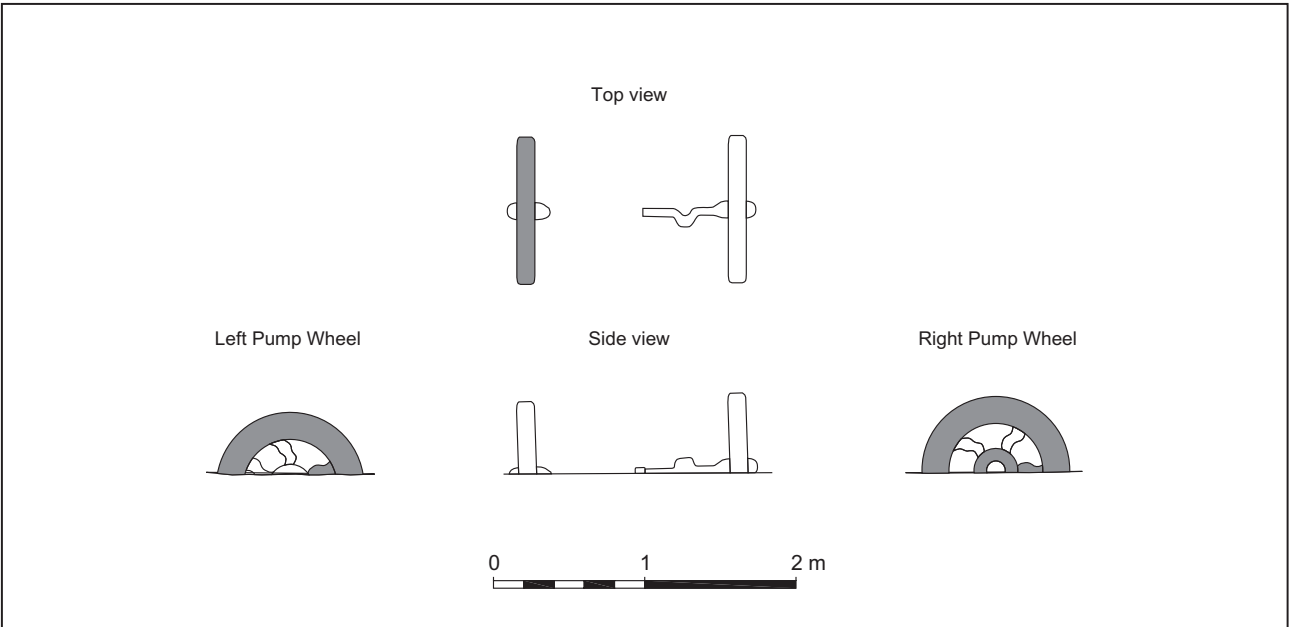
Figure 17




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Thorness Bay Wreck: Rudder pintle

Figure 18



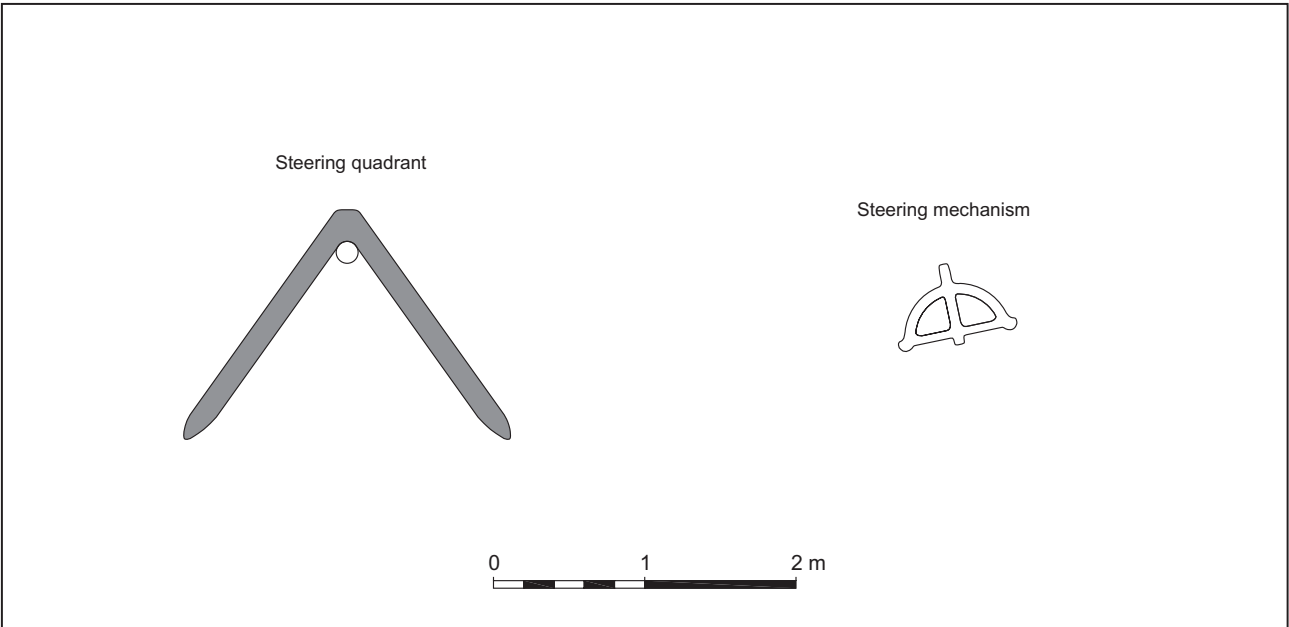
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Thorness Bay Wreck: Pump flywheels

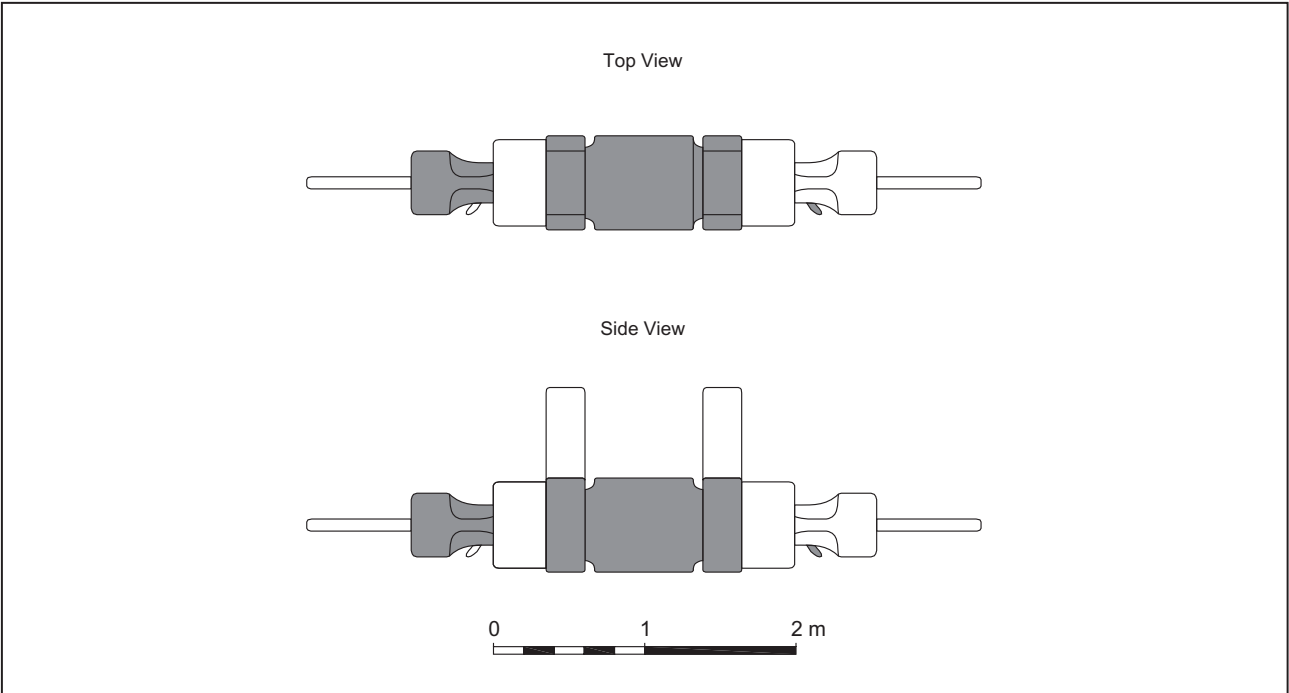
Figure 19




Steering mechanism




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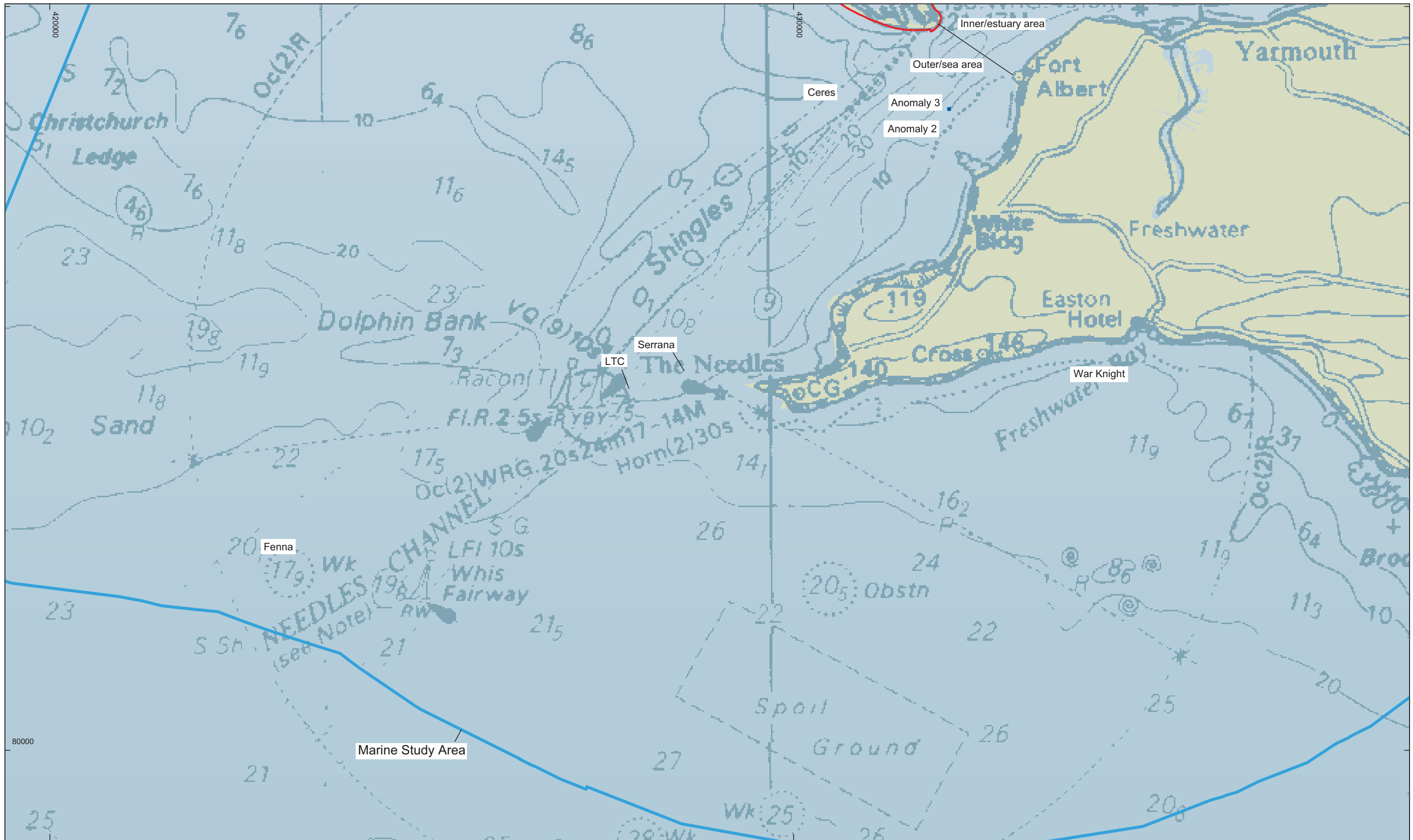
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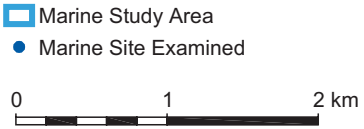
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Wreck locations and study areas

Figure 24



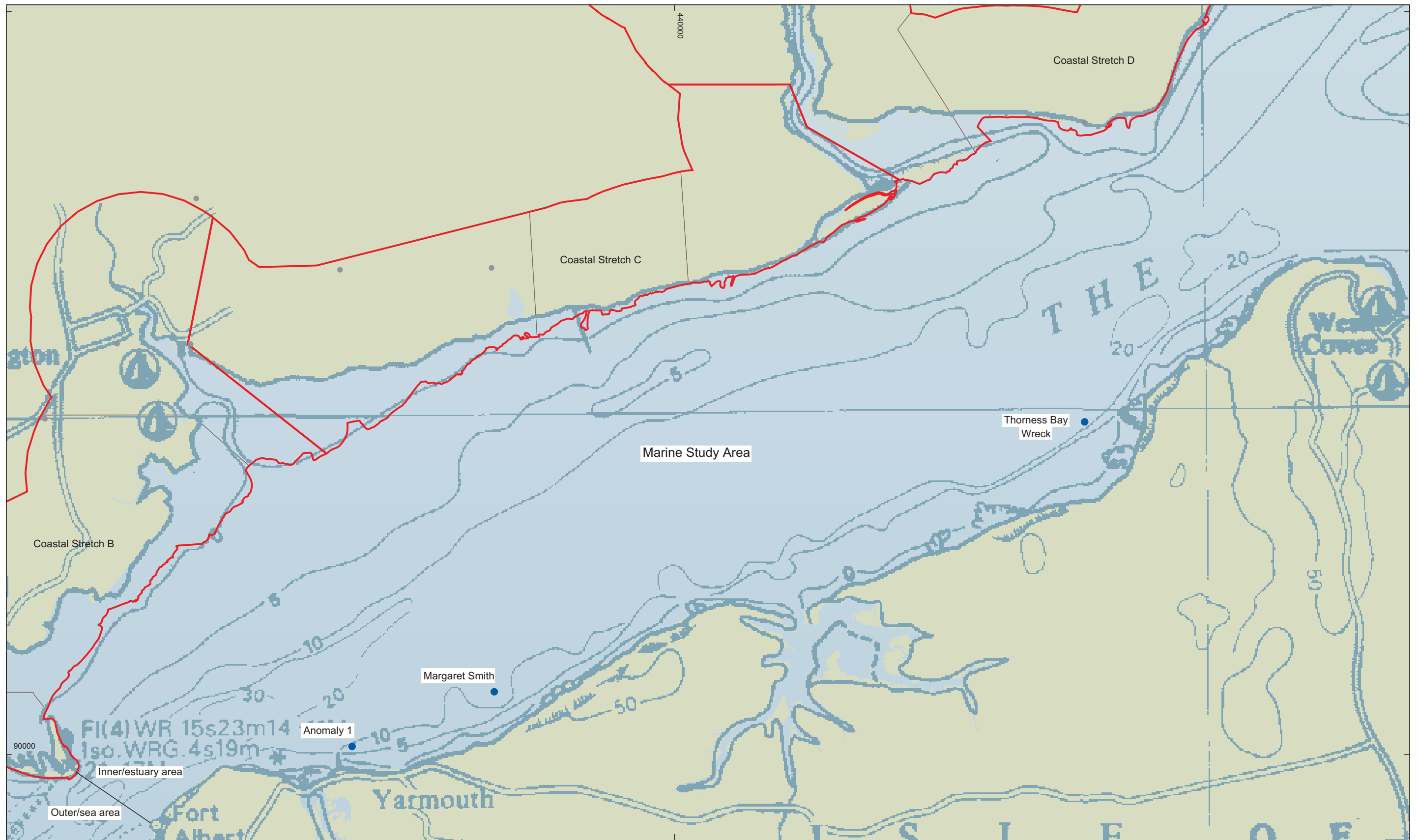
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Wreck locations: outer/sea area

Figure 25



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- Marine Study Area
- Marine Site Examined



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Wreck locations: inner/estuary area

Figure 26




A: *Margaret Smith* sinking

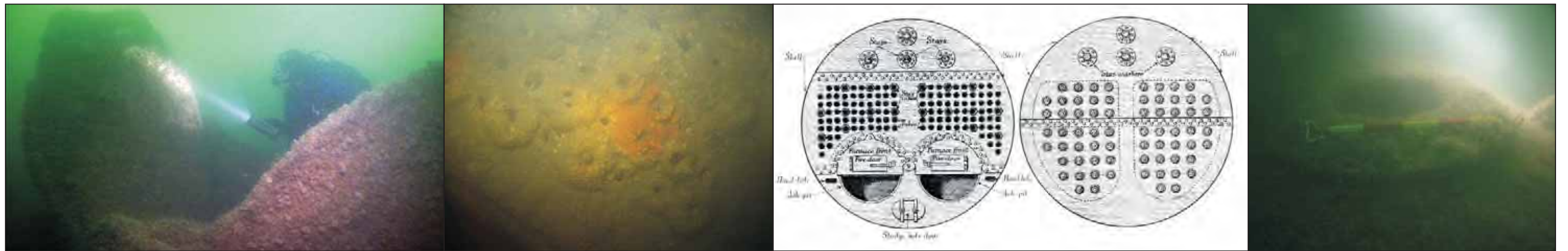


B: Diver on the *Margaret Smith*



C: Sidescan sonar image of the *Margaret Smith*

Location WGS84 UTM z30N 608070, 5619361 	Plate A: Reproduced with the permission of the controller of Her Majesty's Stationery Office. © Crown copyright/ MOD. This material is for client report only © Wessex Archaeology. No unauthorised reproduction.			
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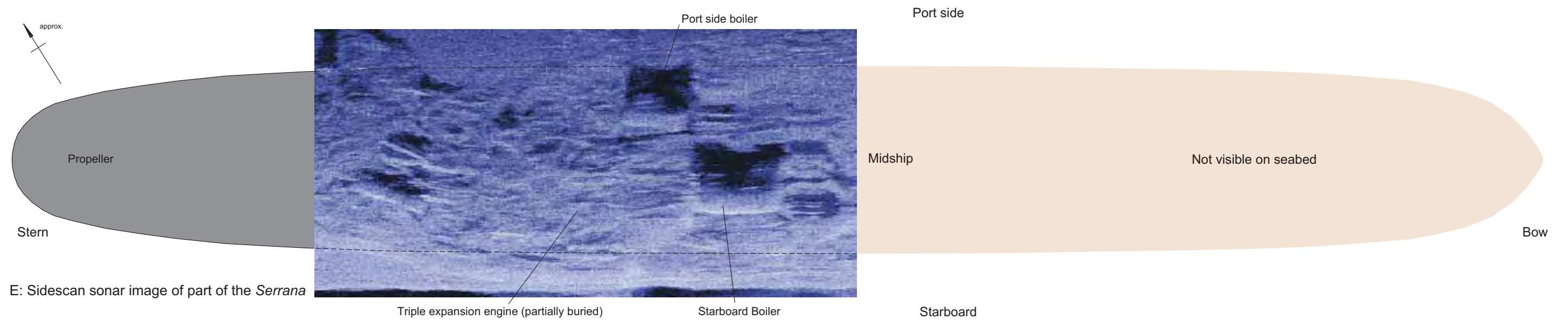


A: Propeller of the *Serrana*

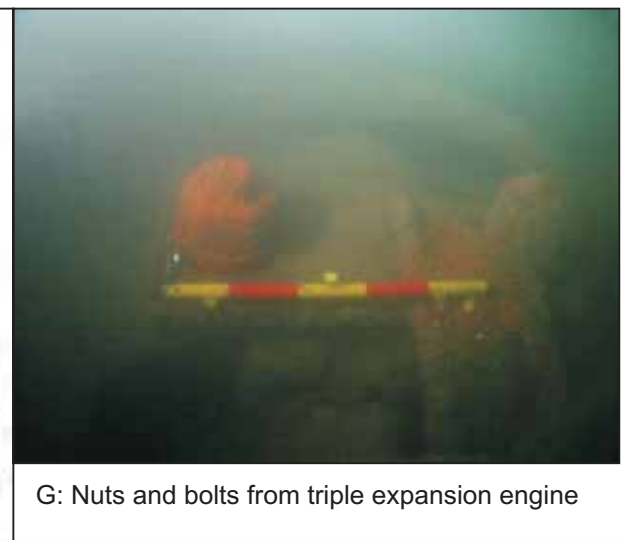
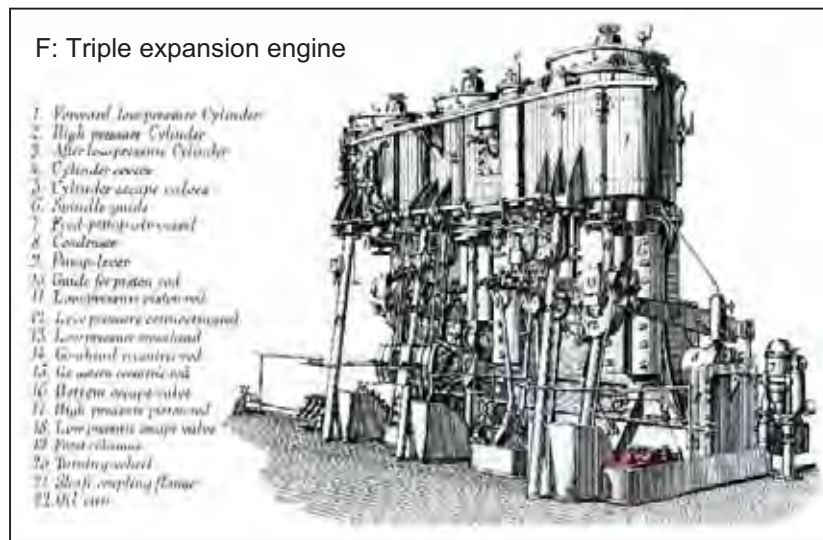
B: Fire tubes from scotch boiler

C: Scotch boiler

D: Opening for steam drum on top of scotch boiler



E: Sidescan sonar image of part of the *Serrana*



G: Nuts and bolts from triple expansion engine



H: Opening for steam drum on top of donkey boiler

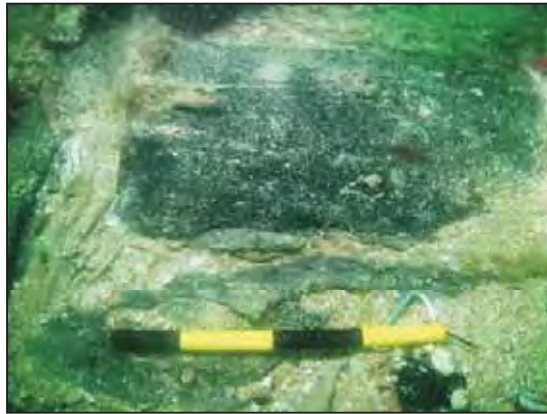
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599154, 5613456



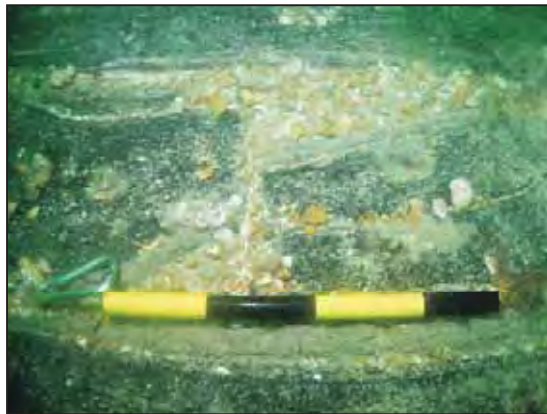
C and F: From Paasch's Illustrated Marine Dictionary by Captain H Paasch

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B: Floor timbers



C: Floor timbers



D: Floor timbers



M: Rail tracks/iron bars



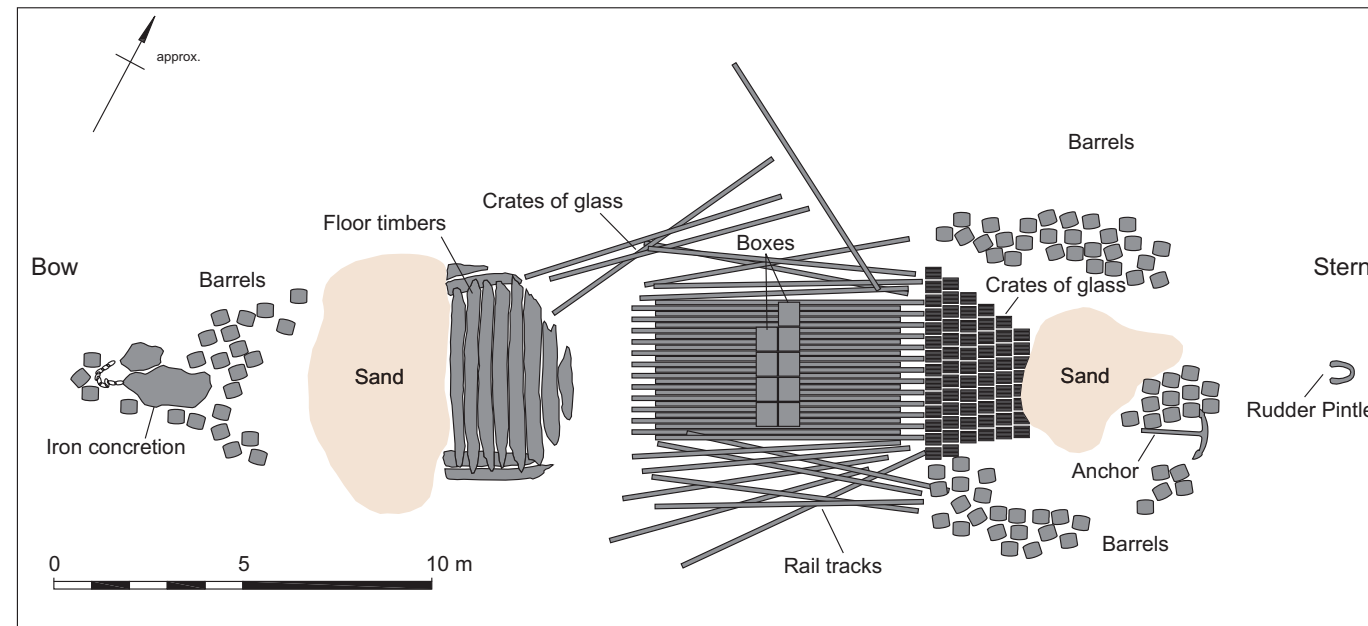
L: Rail tracks/iron bars



K: Barrels



J: Pintle



A: Sketch plan of *Fenna*



I: Anchor



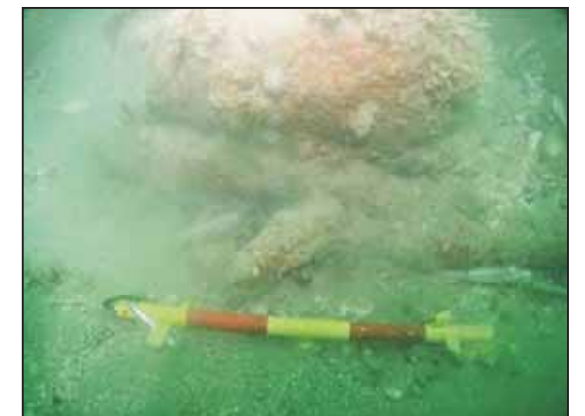
E: Box on top of rail tracks/iron bars



F: Crates of glass



G: Crates of glass



H: Anchor end of shank and concreted rope

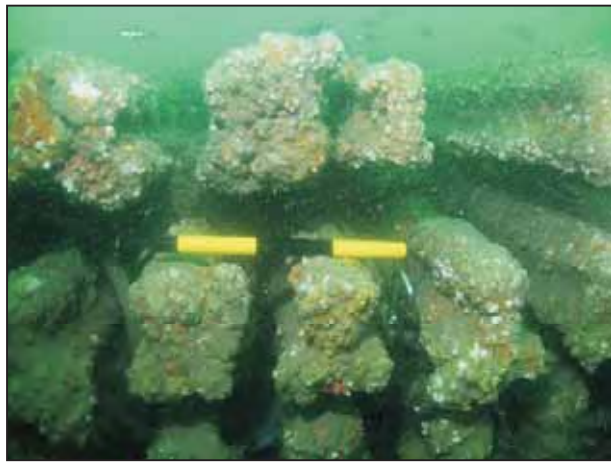
Location WGS84 UTM z30N
593725, 5610705



A: Derived from a HWTMA sketch plan, incorporating new results from WA and NFNDA fieldwork.

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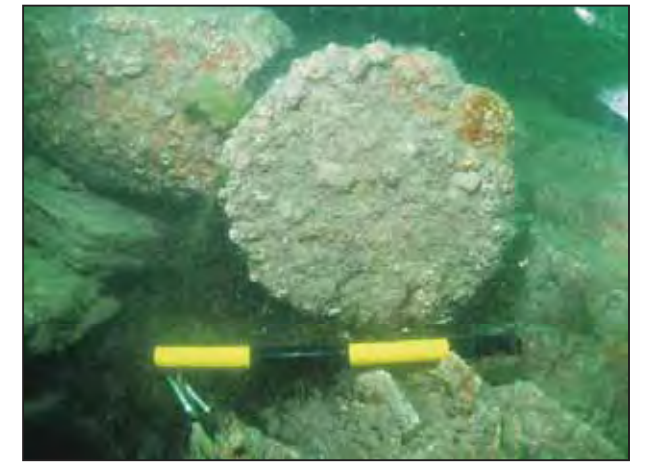
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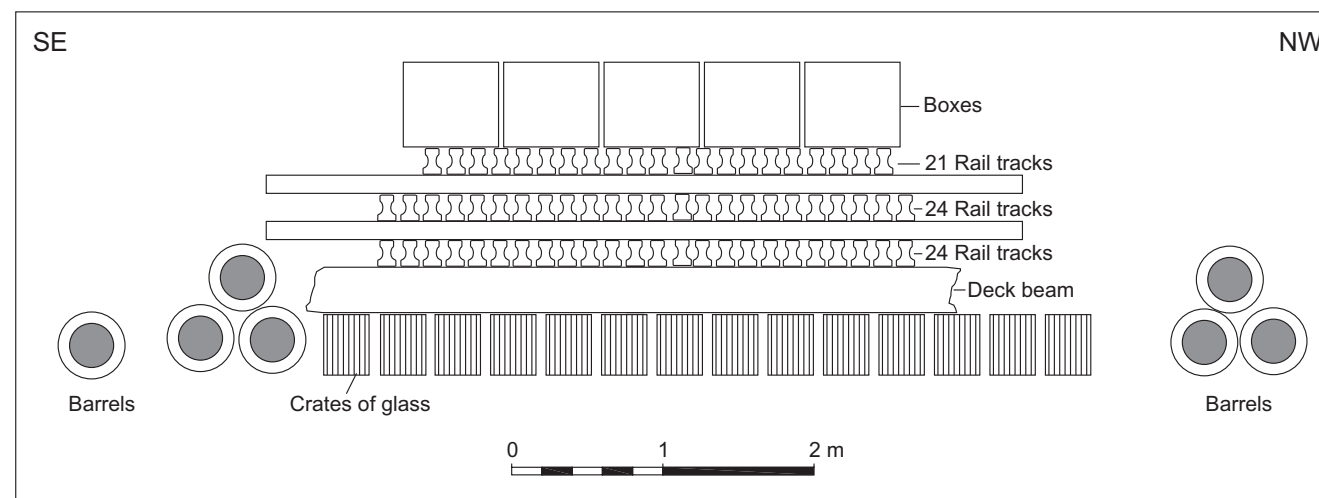
A: Rail tracks/iron bars



B: Boxes on top of rail tracks/iron bars



C: Barrels



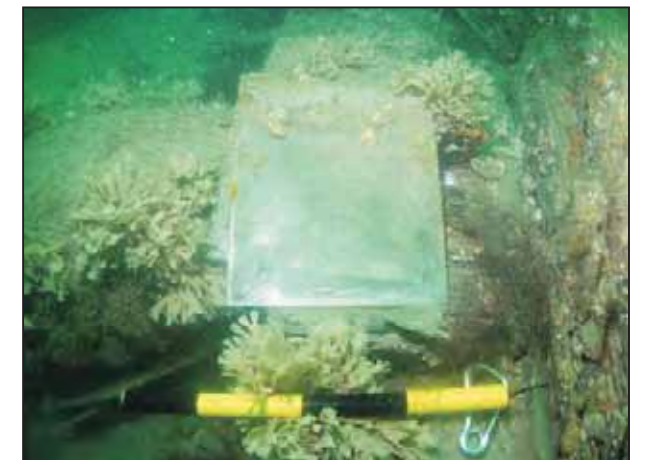
D: Sketch profile of *Fenna* viewed from the stern



E: Crates of glass



F: Crates of glass



G: Glass sheet

Location WGS84 UTM z30N
593725, 5610705



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A: Barrel recovery from seabed

B: Barrel pre-excitation

C: Volunteers recording barrel

D: Volunteer excavating the barrel

E: Withys revealed



F: Conservationist excavating the barrel



G: Staves revealed



H: Removal of withys and staves



I: Withys



J: Barrel lid/end



K: Barrel contents revealed



L: Iron nails

Location WGS84 UTM z30N
593725, 5610705



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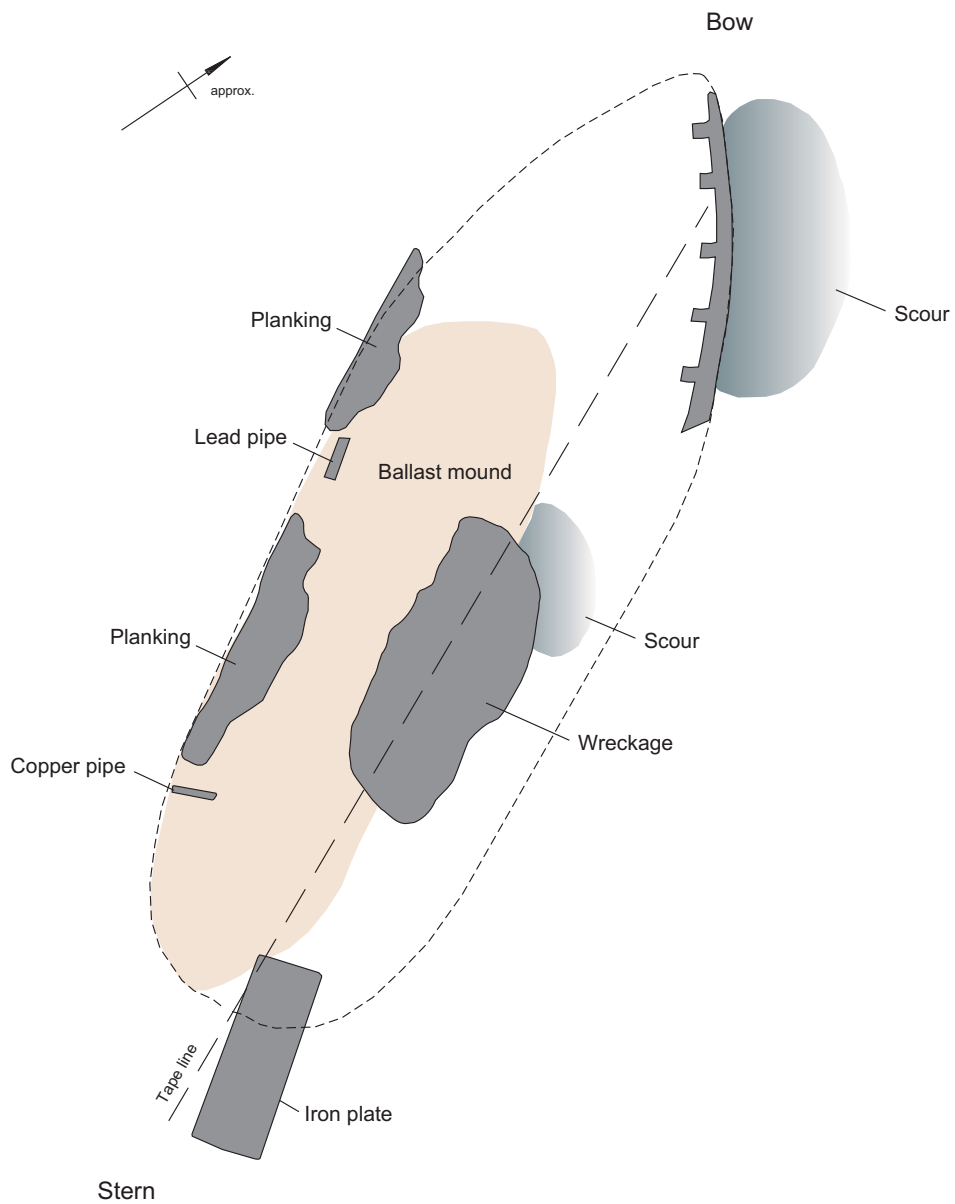
Date: 24/11/10

Revision Number: 0

Scale: approx 1:50

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Diver sketch plan

Location WGS84 UTM z30N
601237, 5617241

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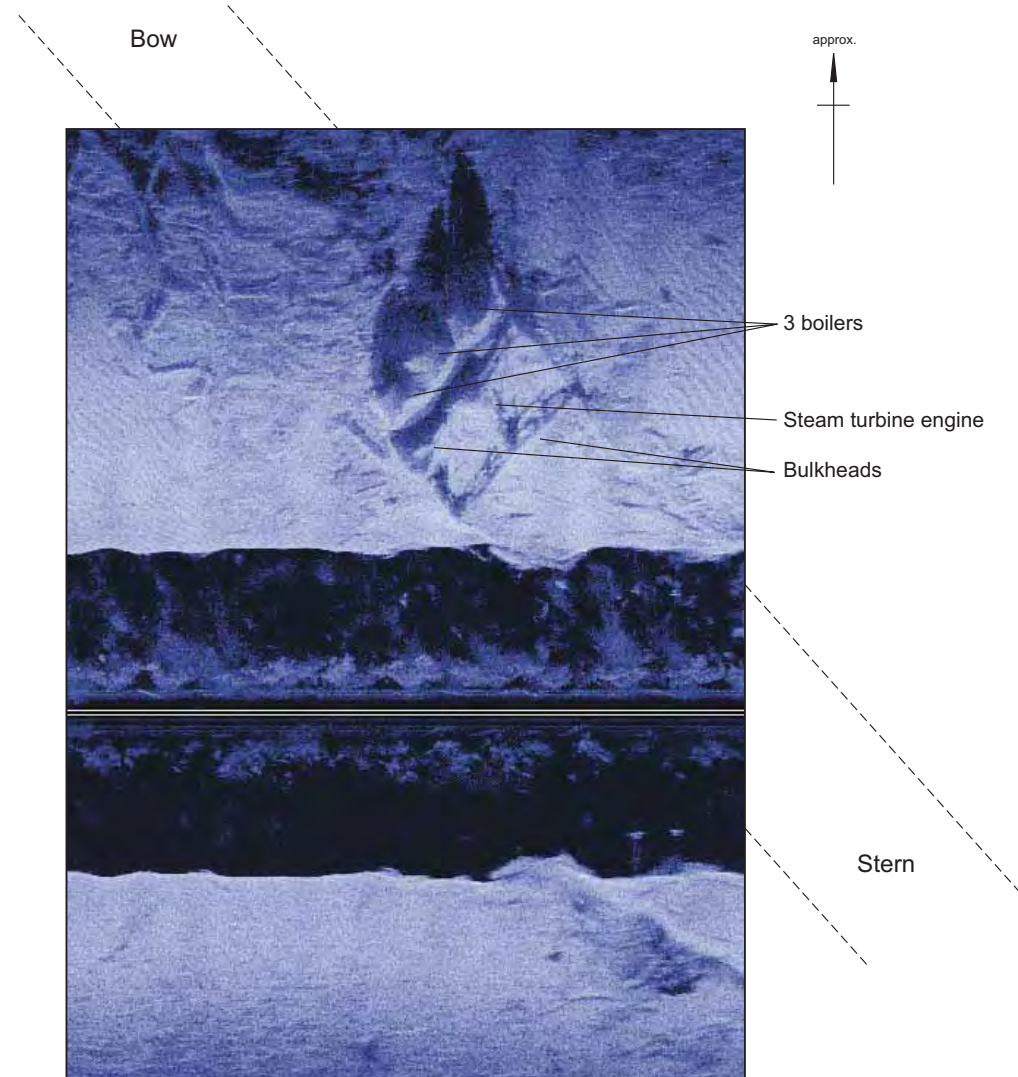
A: War Knight on fire



C: Diver and winch



D: Diver and winch with chain locker in background



B: Sidescan sonar of War Knight



G: Bitts in foreground



F: Bitt and hawse pipe



E: Bitt and hawse pipe

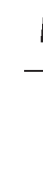
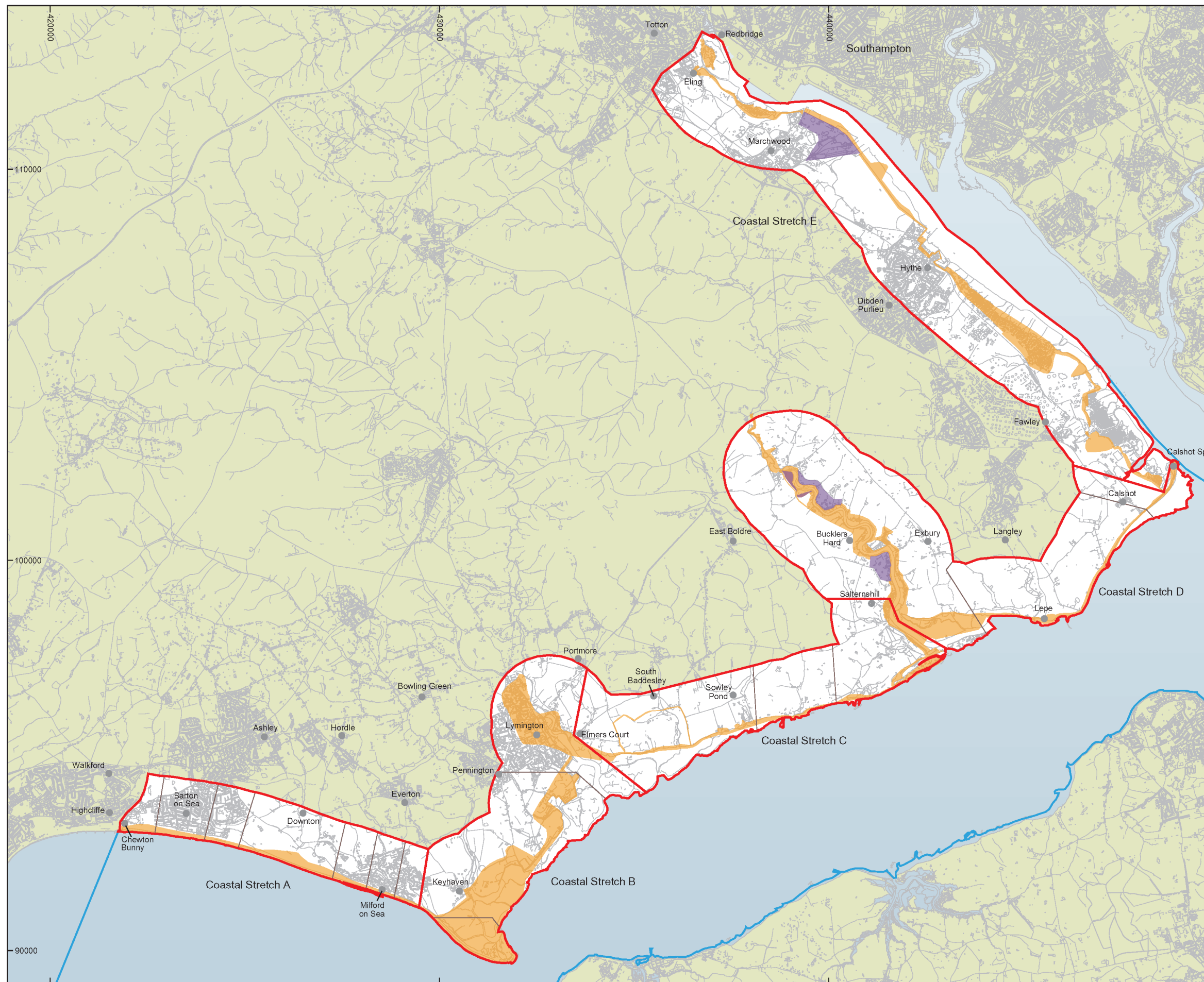
Location WGS84 UTM z30N
604687, 5613731



Plate A: courtesy of the National Maritime Museum
Plates C-G: © Mike Pitts

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- Coastal Stretch
- Marine Study Area
- Policy Unit from Shoreline Management Plan
- Area surveyed
- Area not surveyed due to access constraints



Projection OSGB

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Areas surveyed during field assessment and areas not surveyed due to access constraints



Plate A1: **WA1005**. Remains of a former WWII concrete gun emplacement, on the foreshore at Barton Beach



Plate A2: **WA1007** and **WA1008**. WWII Tank Traps on the foreshore at Barton Beach



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Plate A3: **WA1011**. *In situ* remains of former WWII gun emplacement/observation post on the cliff edge coastal path near Hordle



Plate A4: **WA1012**. Artefacts recovered from a small fissure adjacent to an observation post. Finds included the remains of a pair of 1940s binoculars

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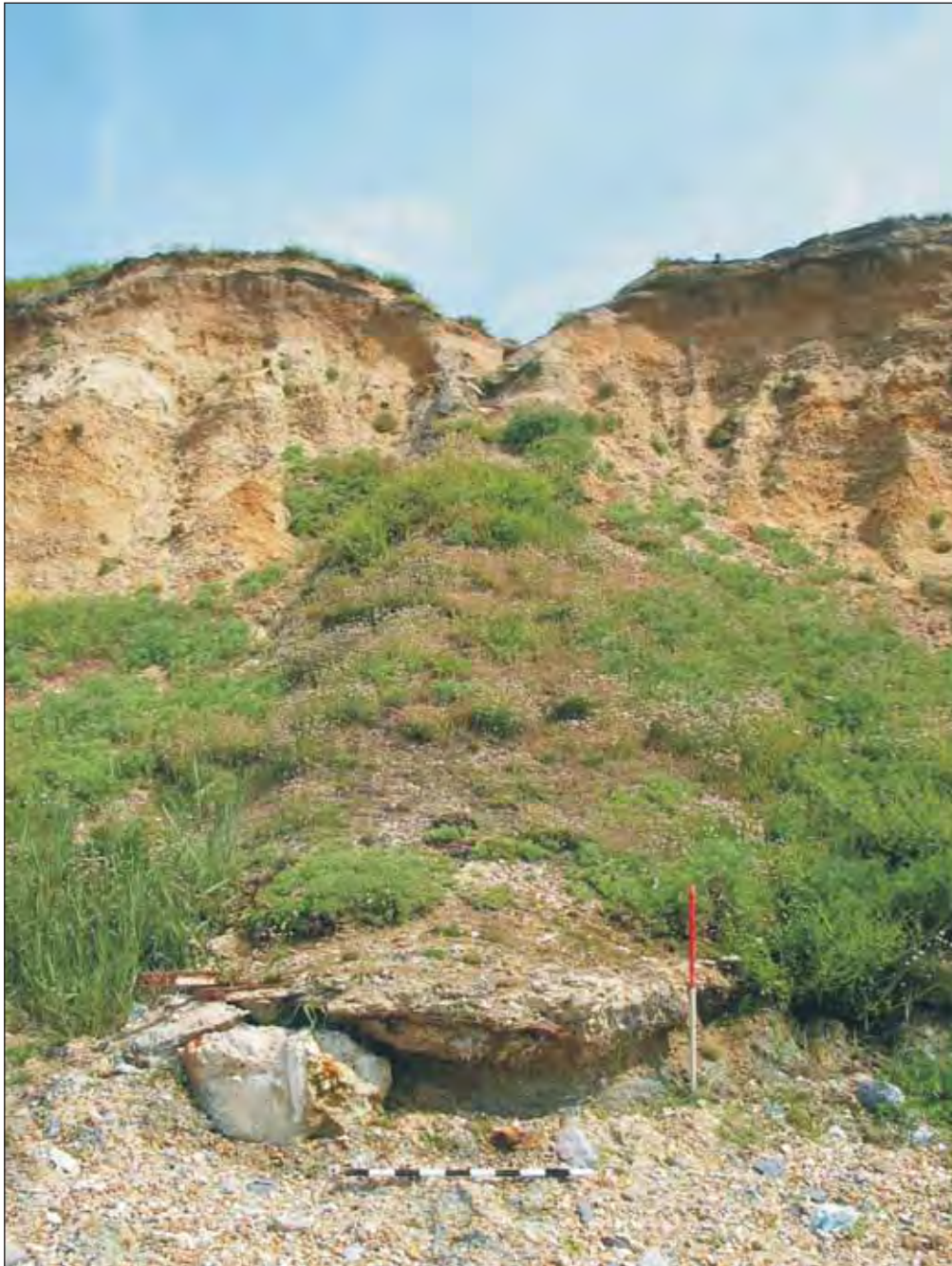


Plate A5: **WA1017**. Probable remains of a WWII observation post, which have been undermined by a combination of freshwater erosion and marine incursion


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Plate B1: **WA2002**. Site of a large late medieval salt production site near Keyhaven Marsh, with a possible brine pond in the foreground. The site was permeated by linear drainage ditches and 24 wooden aligned wooden posts



Plate B2: **WA2004**. Cropmark remnants of a large salt production site in Keyhaven Marsh


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Plate B3: **WA2011**. Large raised semi-circular mound, within known area of salt production, near Oxey Marsh. Possibly a sleeching mound, or could be the base of a wind-powered pump



Plate B4: **WA2025**. Site of an old channel and possible dock, now overgrown, near Oxey Marsh


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Plate B5: **WA2036**. Possible wreck site, in the intertidal zone to the north of Hurst Castle



Plate B6: **WA2038**. Possible wooden wreck, in the intertidal muds adjacent to the Ferry Terminal on the Lymington River


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Plate B7: **WA2048**. Red brick, mortar and concrete structure, probably defensive fortifications, adjacent to Hurst Castle



Plate B8: **WA2051**. An array of wooden and concrete former sea defences, to the seaward of Hurst Castle


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Plate B9: **WA2055**. Buried metallic artefacts in the intertidal zone the north of the castle on Hurst Spit, possibly relating to the nearby ruin of a modern cottage (WA1106), or possibly connected to nautical activities



Plate B10: **WA2056**. Wooden and metallic remains of large former jetty or landing pontoon, the north of the castle on Hurst Spit


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Plate B11: **WA2057**. Post-medieval/modern cast iron toilet cistern, possibly related to the adjacent derelict cottage to the north of the castle on Hurst Spit



Plate B12: **WA2059**. Former coastguard hut, possibly reused as a store shed


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Plate B13: **WA2064**. Red brick culvert, with adjacent red-brick structure, to the west of the castle on Hurst Spit



Plate B14: **WA2074**. Former marine fishing “pond” on the seafront to the east of Keyhaven, created by constructing an artificial mound hemmed in by wooden stakes (still visible)



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Plate B15: **WA2079**. Modern wooden wreck, abandoned in an inlet off the Lymington River



Plate B16: **WA2089**. Remains of a derelict cottage to the north of the castle on Hurst Spit, supposedly abandoned in the 1950s. Various detritus is still visible at the site

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Scale 1:1

Plate C1: **WA3001**. Lower Palaeolithic Acheulian hand axe found on the foreshore at Pitts Deep (photo taken by David and Marion Nesbitt)



Plate C2: **WA3003**. Remains of a saltworks site comprising a flat area of land surrounded by an earthwork bank at Lisle Court


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Plate C3: **WA3033**. Standing remains of an 18th/19th century brickworks site at Pitts Deep



Plate C4: **WA3033**. Stack of pipes associated with the brickworks at Pitts Deep


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Plate C5: **WA3034**. Evidence of large chains along the foreshore at Pitts Deep thought to be associated with the former 19th century quay



Plate C6: **WA3051**. One of two wooden vessels thought to be associated with the modern boat graveyard at Lisle Court


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Plate C7: **WA3057**. Possible remnants of a WWII gun emplacement known to have been sited at this location



Plate C8: **WA3020**. Bank earthwork forming part of the original medieval sea defences at Sowley Marsh


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Plate C9: **WA3050**. A hard visible at Pylewell, composed of two adjacent gravelly areas



Plate C10: **WA3015**. A possible sarsen sandstone with one faced side, observed on the foreshore at Pylewell


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Plate C11: **WA3026 & WA3049**. Numerous wooden posts, some of which function as revetment, along with a discrete length of stone deposit, all observed at the eastern extent of the salt works north of Needs Orr



Plate C12: **WA3044**. Four wooden posts possibly forming part of a crossing point across a water channel within a salt works site at Needs Orr


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Plate C13: **WA3021**. Two alignments of wooden posts forming a possible causeway across the mouth of Sowley Marsh


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Plate D1: **Section 8.1.6.** Evidence of coastal erosion at Stanswood Bay



Plate D2: **WA4003.** A section of the late 13th century monastic wall around Beaulieu Abbey


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Plate D3: **WA4007**. Earthworks at Lower Exbury forming the roadway into the former village



Plate D4: **WA4080**. A circular beehive kiln dating the early 20th century at Bailey's Hard


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Plate D5: **WA4081**. A rectangular area of upstanding concrete pillars associated with the 18th/19th century brickworks



Plate D6: **WA4087**. Channels running perpendicular to the coastline within the bounds of a salt works site at Lower Exbury


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Plate D7: **WA4077**. Remains of the post-medieval landing stage at Buckler's Hard



Plate D8: **WA4083**. Bridge across an inlet on the Beaulieu River


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Plate D9: **WA4082**. A section of the re-instated ornamental canal on the grounds of the National Motor Museum, Beaulieu



Plate D10: **WA4157 & WA4159**. Two offshore WWII 'Dolphins' along with concrete hardening mats and bollards along the coast at Lepe


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Plate D11: **WA4152**. Remains of a WWII concrete structure, eroded from the top of the cliff at Lepe



Plate D12: **WA4143**. Remnants of a wooden WWII landing craft on the bank of the Beaulieu River


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Plate D13: **WA4129**. Seven WWII concrete mooring blocks at Buckler's Hard



Plate D14: **WA4133**. Former pillbox in Beaulieu


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Plate D15: **WA4140**. Metal wreck on the edge of a creek off the Beaulieu River



Plate D16: **WA4145**. Metal and wooden hulk on the foreshore at Quay


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Plate D17: **WA4109**. A wooden structure, thought to be the remains of a wreck, positioned in the centre of a channel off the Beaulieu River



Plate D18: **WA4121**. Unstratified piece of timber with large iron bolts, visible on the foreshore at Inchmery


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Plate D19: **WA4123**. Unstratified metal cylinder on the foreshore at Inchmery



Plate D20: **WA4061**. Part of a sluice or crossing point between two areas of salt marsh, on the eastern shore of the Beaulieu River


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Plate E1: **WA5002-5004**. Lammas Wood: Banks and ditches near Cadland Creek



Plate E2: **WA5008**. Langdown Saltern: Sluice and revetments


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Plate E3: **WA5006**. Langdown Saltern: Second phase of constructed revetments



Plate E4: **WA5007**. Langdown brick culvert


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Plate E5: **WA5045**. Ashlett timber revetment



Plate E6: **WA5029**. Calshot timber revetment


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Plate E7: **WA5032**. At Fawley a linear formation of sunken, roughly vertical timbers comprising four rows and covering an area of approximately 17m by 13m



Plate E8: **WA5034**. Two lines of vertical posts bracing an internal rock structure, possibly a section of a landing stage at the southern end of Cadland Creek


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Plate E9: **WA5033**. Remains of a timber revetment or sluice at Cadland Creek, besides a large outflow pipe from the adjacent refinery. The structure contains approximately 20 sunken posts



Plate E10: **WA5038**. The sea bank adjacent to the brickworks at Eling containing numerous fragments of brick clearly visible within layered stratigraphy


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Plate E11a-b: **WA5037**. The Hythe Quay Slipway with adjoining steel and timber structure



Plate E12: **WA5031**. Three wooden beams protruding from underneath two phases of modern concrete, possibly part of Victoria Quay at Ashlett



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Plate E13: **WA5064-5067**. Four Beetles, looking up river at Dibden Bay



Plate E14: **WA5068**. Looking north at a concrete landing platform at Dibden Bay

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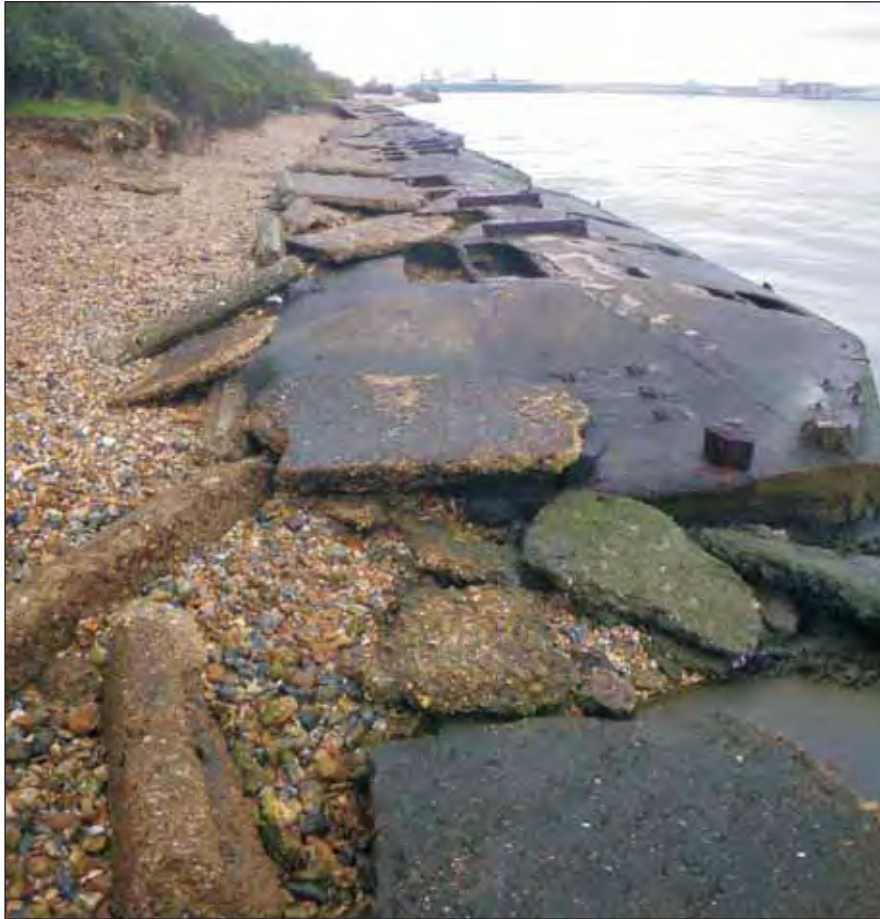


Plate E15: **WA5069-5098**. Looking up river at the beetles laid up end to end as beech defences



Plate E16: **WA5107**. Concrete slipway at Marchwood, possibly used for military purposes


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Plate E17: **WA5105**. A series of large vertical wooden posts along the beach at Marchwood



Plate E18: **WA5123**. Wreck within the intertidal zone of Eling Great Marshes. Approximately 10m in length, with the possible bow facing west. The vessel may be constructed from wood (photograph by Roger King)



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Plate E19: **WA5099**. Wooden hulk at Marchwood, looking south



Plate E20: **WA5051**. Remains of a wooden barge located in the intertidal area at Ashlett. The vessel is between 10m and 15m long and is in a deteriorated state. There are remains of metal fittings on the interior and the wooden rudder is still intact

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APPENDIX 1: GAZETTEER

Notes on the Gazetteer format

In order to ensure the site numbers from Phases 1 and 2 consistent with the synthesis in Phase 3, the Phase 2 gazetteer sites have been ordered geographically by Coastal Stretch, and within that by broad chronological bracket. In order to do this it was necessary to create a sequence of **WA** (Wessex Archaeology) numbers. These correspond to the Phase 3 gazetteer to ensure consistency between reports. The **MonUID** refers to the number generated for the site when archived in the HBSMR. All Phase 2 sites were archived which generated the number provided in the MonUID column, however, some of the sites already existed within HBSMR. To distinguish between these, the MWX number has been prefixed with **n-** denoting “new” record or **a-** denoting amended (or updated) record. The Source References/Accession Date column lists the date the record was created or amended.

Coastal Stretch A

WA No.	MonUID	Coastal Stretch	Area	Name/Description	Period	Source References/Accession Date	Vulnerability	Significance	Easting (BNG)	Northing (BNG)
WA1001	nMWX63074	A	Hordle	Probable WW2 path.	Modern	MON (13/12/2010)	High	Medium	425807	92480
WA1002	nMWX63066	A	Hordle	Site of former path extending out from the current coastal footpath and back across the field towards Hordle. Vulnerable to erosion from walkers and agricultural activity/pasture grazing in the field.	Post-Medieval - Modern	LINE (13/12/2010)	High	Medium	426777	92085
WA1003	nMWX63067	A	Naish	Concrete chalet base. Probably constructed in the 1950s as part of the Naish Holiday Village complex. Presumably abandoned due to increasing proximity to eroding cliff edge.	Modern	MON (13/12/2010)	High	Low	422342	93210

WA1004	nMWX63068	A	Naish	Concrete chalet base. Probably constructed in the 1950s as part of the Naish Holiday Village complex. Presumably abandoned due to increasing proximity to eroding cliff edge.	Modern	MON (13/12/2010)	High	Low	422450	93206
WA1005	nMWX63069	A	Barton Beach	Possible WWII gun emplacement base. Rough, flat concrete structure, which appears to have collapsed from top of the eroding cliff. Partially buried in sand, but is subject to marine growth and tidal erosion.	Modern	MON (13/12/2010)	High	Low	422347	93086
WA1006	nMWX63070	A	Barton Beach	WWII gun emplacement base. Rough concrete with iron fittings, the site has collapsed from top of the eroding cliff and is now subject to tidal erosion.	Modern	MON (13/12/2010)	High	Low	422414	93098
WA1007	nMWX63075	A	Barton Beach	WWII tank trap. Probable tank obstacle constructed of concrete and slag, designed to prevent tanks and other military vehicles landing on foreshore.	Modern	MON (13/12/2010)	High	Low	425662	92471
WA1008	nMWX63086	A	Barton Beach	WWII tank trap. Probable tank obstacle constructed of concrete and slag, designed to prevent tanks and other military vehicles landing on foreshore.	Modern	MON (13/12/2010)	High	Low	425680	92473

WA1009	nMWX63089	A	Hordle	Probable WWII gun emplacement/observation point. A rough concrete base on the brink of collapse from the eroding cliff edge. Further remains have already collapsed, and adjacent red brick remains protrude from the cliff face.	Modern	MON (13/12/2010)	High	Low	425743	92513
WA1010	nMWX63093	A	Barton Beach	WWII Gun Emplacement Base. Rough concrete with iron fittings, the site has collapsed from top of the eroding cliff and is now subject to tidal erosion.	Modern	MON (13/12/2010)	High	Low	426106	92326
WA1011	nMWX63095	A	Hordle	WWII Gun Emplacement Base. Rough concrete with evidence of former gun fittings. The site is on the coastal path adjacent to the cliff edge, and consequently is subject to continual abrasion from human activity, and will eventually succumb to cliff subsidence.	Modern	MON (13/12/2010)	High	Low	426127	92329
WA1012	nMWX63098	A	Hordle	Site of possible wooden structure and various finds. Most likely a WWII observation post. Finds discovered in adjacent fissure included a pair of binoculars, drilled mortar, worked timber, modern (1940s) pottery.	Modern	MON (13/12/2010)	High	Low	426130	92329

WA1013	aMWX60551	A	Hordle	WW2 Pillbox. Remains of WWII concrete pill box set back from seafront, and partially set into hillside on land currently used for pasture. Entrance has been blocked by an accumulation of earth and floral growth.	Modern	MON (13/12/2010)	Medium	Medium	426345	92479
WA1014	nMWX63104	A	Barton Beach	Remains of metallic railing along foreshore. Elongated iron and concretion suggesting possible metal hand rail/fencing originally set in concrete bollards and situated along cliff top edge. It seems likely that erosion caused the structure to collapse.	Modern	MON (13/12/2010)	High	Low	426586	92134
WA1015	nMWX63106	A	Hordle	Possible Pillbox, disturbed concrete blocks, concrete protruding from cliff edge.	Modern	MON (13/12/2010)	High	Low	427094	92033
WA1016	nMWX63107	A	Hordle	WWII Gun Emplacement Base. Rough concrete with evidence of former gun fittings. The site is on the coastal path adjacent to the cliff edge, and consequently is subject to continual abrasion from human activity, and will eventually succumb to cliff subsidence.	Modern	MON (13/12/2010)	High	Low	427158	92016

WA1017	nMWX63108	A	Barton Beach	Site of a collapsed WWII observation post/ later structure. Concrete base reinforced with iron girders lies strewn at the bottom of the cliff, with some remnants of the structure still <i>in situ</i> at the cliff top.	Modern	MON (13/12/2010)	High	Low	428173	91602
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Coastal Stretch B

WA No.	MonUID	Coastal Stretch	Area	Name/Description	Period	Source Reference s/ Accession Date	Vulnerability	Significance	Easting (BNG)	Northing (BNG)
WA2001	aMWX57208	B	Lower Pennington	Creek Cottage Salt Boiling House & Storage House. Former salt boiling house, served by a specially cut channel from the sea.	Medieval	MON (17/12/2010)	Medium	High	432464	93457
WA2002	aMWX61672	B	Pennington	Large salt production site, incorporating former salt pan, linear drainage ditches, and 24 wooden posts in three alignments.	Medieval	MON (17/12/2010)	Medium	High	432732	93689
WA2003	nMWX63109	B	Hurst Spit	Pottery shard with internal glaze, suggesting late medieval origin.	Medieval - Post-Medieval	MON (17/12/2010)	Recovered find	Medium	431683	90135
WA2004	nMWX63110	B	Keyhaven	Crop mark remnants of former salt pan site.	Medieval - Post-Medieval	MON (17/12/2010)	Medium	Medium	430918	91477

WA2005	nMWX63111	B	Keyhaven	Raised mound, probably related to adjacent salt working site.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	431246	91427
WA2006	nMWX63112	B	Keyhaven	Linear ridges and ditches associated with salt production sites. Overgrown with grass and gorse, and fenced off.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	431401	91490
WA2007	nMWX63117	B	Keyhaven	Linear ridges and ditches associated with salt production sites. Overgrown with grass and gorse, and fenced off.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	431545	91725
WA2008	nMWX63119	B	Keyhaven	Possible remains of fish trap. Single line of wooden posts with a continuation of stones to the seaward extent. Heavily covered in kelp, but positionally consistent with a fish trap.	Medieval - Post-Medieval	MON (17/12/2010)	High	High	432322	92153
WA2009	nMWX63126	B	Keyhaven	Linear ridges and ditches, probably related to adjacent salt production site.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	432824	92749
WA2010	nMWX63129	B	Keyhaven	Linear ridge/embankment, probably related to adjacent salt production site.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	432823	93093
WA2011	nMWX63131	B	Keyhaven	Large raised semi-circular mound, within known area of salt production. Possible remnants of windmill pumping site, or could	Medieval - Post-Medieval	MON (17/12/2010)	Medium	High	432911	93374

				be detritus from sleeching process. Tile, red brick and mortar eroding out of feature.						
WA2012	nMWX63133	B	Keyhaven	Linear ridge, with red brick and tile eroding out of section. Probably related to salt production.	Medieval - Post-Medieval	MON (17/12/2010)	Medium	Medium	432893	93396
WA2013	nMWX63139	B	Keyhaven	Large linear ridge associated with local salt production.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Low	431765	92572
WA2014	nMWX63140	B	Keyhaven	Linear ridges and ditches associated with salt production sites. Overgrown with grass and gorse, and fenced off.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Low	431084	91967
WA2015	nMWX63141	B	Lymington	Site of old cottages.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	432781	95573
WA2016	nMWX63142	B	Lymington	Pollarded oak tree. Pruned trees with dense thicket, possibly used for timber.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Low	432224	96597
WA2017	nMWX63143	B	Lymington	Pollarded oak tree. Pruned trees with dense thicket, possibly used for timber.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Low	432225	96624
WA2018	nMWX63144	B	Lymington	End of perceptible linear bank running parallel with Lymington River. Possibly an attempt to channel flood water, or possibly an old bank in its own right.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	432155	96977

WA2019	aMWX12059	B	Lymington	Site of old house in Lymington.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Low	431760	96300
WA2020	nMWX63145	B	Oxey	Raised oblong mound within the Keyhaven saltern network.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	431057	91831
WA2021	MWX63146	B	Oxey	Rectilinear mound. Purpose, nature, and full extent unknown.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	431201	91714
WA2022	nMWX63147	B	Oxey	Possible brine pond, associated with salt production.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	431201	91713
WA2023	nMWX63148	B	Oxey	Possible clinker mound. Formed by waste from industrial processes, and possibly salt production.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	431213	91706
WA2024	nMWX63149	B	Oxey	Raised circular mound. Purpose, nature, and full extent unknown.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Low	431229	91666
WA2025	nMWX63150	B	Oxey	Old channel and dock. Cut channel and former dock, now infilled and overgrown. Adjacent to salt production site and thus it is assumed this facilitated barge transport into and out of the site itself.	Medieval - Post-Medieval	MON (17/12/2010)	Medium	Medium	431225	91671
WA2026	nMWX63151	B	Oxey	Linear ridge/embankment, probably related to adjacent salt production site.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	431154	91857
WA2027	nMWX63152	B	Oxey	Linear ridge/embankment, probably related to adjacent salt production site.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Medium	431209	91965

WA2028	nMWX63153	B	Oxey	Wooden post, adjacent to salt production site.	Medieval - Post-Medieval	MON (17/12/2010)	Medium	Low	431335	92023
WA2029	nMWX63154	B	Oxey	Raised circular mound. Purpose, nature, and full extent unknown.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Low	431182	91861
WA2030	nMWX63155	B	Oxey	Raised crescent mound. Purpose, nature, and full extent unknown.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Low	431159	91862
WA2031	nMWX63156	B	Oxey	Raised mound, adjacent to salt production site. Red brick, tile, mortar and assorted detritus eroding from sections.	Medieval - Post-Medieval	MON (17/12/2010)	Medium	Medium	431220	91982
WA2032	nMWX63157	B	Oxey	Wooden post, adjacent to, and probably associated with, salt production site.	Medieval - Post-Medieval	MON (17/12/2010)	Medium	Low	431269	92109
WA2033	nMWX63158	B	Oxey	Site of former sluice gate for flooding salt pan.	Medieval - Post-Medieval	MON (17/12/2010)	Medium	Low	431541	92255
WA2034	nMWX63159	B	Oxey	Possible ridge tile from former structure. Adjacent to, and probably associated with, salt production site.	Medieval - Post-Medieval	MON (17/12/2010)	Low	Low	431643	92164
WA2035	nMWX63130	B	Hurst Spit	Jetty. Two parallel lines of wooden posts protruding from intertidal zone, suggesting former jetty.	Unknown	MON (17/12/2010)	High	Medium	431540	89858
WA2036	nMWX63161	B	Hurst Spit	Unknown maritime feature, possibly a wreck.	Unknown	MON (17/12/2010)	High	Medium	431405	90077
WA2037	nMWX63162	B	Lymington	Remains of jetty/pontoon. A line of eroded wooden posts stretching from shore into Lymington River.	Unknown	MON (17/12/2010)	High	Low	432980	95844

WA2038	nMWX63163	B	Lymington	Possible wooden wreck remains, buried in intertidal flat of Lymington River adjacent to Ferry Terminal.	Unknown	MON (17/12/2010)	High	Medium	433392	95467
WA2039	nMWX63164	B	Lymington	Metal artefacts. Unidentified metal artefacts discovered in a mound/ridge adjacent to Lymington River.	Unknown	MON (17/12/2010)	Medium	Medium	432240	96531
WA2040	nMWX63165	B	Lymington	Metalwork on edge of steep bank.	Unknown	MON (17/12/2010)	Low	Low	432095	97034
WA2041	nMWX63166	B	Lymington	Unidentified raised mound.	Unknown	MON (17/12/2010)	Low	Medium	431623	96548
WA2042	nMWX63167	B	Oxey	Raised circular mound. Purpose, nature, and full extent unknown.	Unknown	MON (17/12/2010)	Low	Medium	431147	91676
WA2043	nMWX63168	B	Keyhaven Lake	Cluster of wooden posts, possibly the remains of a jetty.	Unknown	MON (17/12/2010)	High	Medium	430731	91120
WA2044	nMWX63169	B	Keyhaven Lake	Series of wooden posts, possibly the remains of a jetty.	Unknown	MON (17/12/2010)	High	Medium	430819	91225
WA2045	nMWX63170	B	Hawker's Lake	A line of curving timber posts, orientated N-S, located east of Keyhaven Marshes on the southern bank of Hawker's Lake. The posts are regularly and closely spaced and are of universal height and width and sunk into the mud, crudely converted into posts. Their flat tops imply sawn timbers.	Unknown	MON (17/12/2010)	High	High	431612	91177

				Possibly a revetment, channel obstruction, or fish trap.						
WA2046	nMWX63171	B	Lisle Court	A short row of six aligned wooden posts. Possible revetment or boundary.	Unknown	MON (17/12/2010)	High	High	434101	94929
WA2047	nMWX63172	B	Hurst Spit	Red brick structure with concrete/mortar bases. Remains of modern (1940s) fortification of red brick and rough concrete base, partially buried in shingle bank and broken up by the sea.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431484	89766
WA2048	nMWX63173	B	Hurst Spit	Red brick and mortar/concrete structure. Probable WWII fortification (suggested by thickness of the walls) which has been destroyed by sea action.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431503	89728
WA2049	nMWX63176	B	Hurst Spit	Disarticulated red brick structure with concrete foundations. Probable WWII fortification, though perhaps with re-used brick from earlier phases of Napoleonic fortifications of Hurst Castle (adjacent). Possibly used as sea defences or anti landing obstacles.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431908	89795

WA2050	nMWX63177	B	Hurst Spit	Unidentified ferrous artefact with minor concretions. Modern metal artefact on shingle spit, possibly washed-up flotsam, or discarded debris from Hurst Castle.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431900	89813
WA2051	nMWX63178	B	Hurst Spit	Concrete breakwaters with remains of wooden sea defences. The wooden defences formed a zig-zag shape designed to protect and hold sediment and shingle. They appear to have been reinforced with concrete and brick debris.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431920	89841
WA2052	nMWX63179	B	Hurst Spit	Three artillery platforms. Possibly built during the 1870s construction of the castle "wings" or perhaps added during WWII to galvanise protection for the Solent naval corridor.	Post-Medieval - Modern	MON (17/12/2010)	Medium	Low	431881	89905
WA2053	nMWX63180	B	Hurst Spit	Disarticulated granite blocks and former loading platform. Former dock, possibly constructed to facilitate access to the free standing lighthouse constructed in 1867.	Post-Medieval - Modern	MON (17/12/2010)	Medium	Low	431861	89917
WA2054	nMWX63181	B	Hurst Spit	Remains of red brick structure. Possibly <i>in situ</i> alignment of red bricks, perhaps part of a house or boundary wall.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	431696	90131

				Possibly detritus from adjacent constructions.						
WA2055	nMWX63182	B	Hurst Spit	Metallic objects, possibly base for pole/post. Series of seemingly unconnected ferrous bases for upright pole or marker.	Post-Medieval - Modern	MON (17/12/2010)	High	Medium	431606	90165
WA2056	nMWX63183	B	Hurst Spit	Remains of jetty. Base remnants of jetty/pier/landing stage with two large metallic supports at the seaward end, and two lines of eroded wooden posts marking the main extent of the structure.	Post-Medieval - Modern	MON (17/12/2010)	High	Medium	431596	90194
WA2057	nMWX63184	B	Hurst Spit	Cast iron toilet cistern. Unstratified, though possibly related to WA1106.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431573	90213
WA2058	nMWX63185	B	Hurst Spit	Section of concrete mooring pontoon. Possibly part of a former landing stage or ramp. Modern concrete with iron bar supports.	Post-Medieval - Modern	MON (17/12/2010)	Medium	Low	431606	90315
WA2059	nMWX63186	B	Hurst Spit	Former coastguard watch house of modern origin, but now abandoned. Structure was secured from outside, and had been reinforced with modern sheet metal to the rear.	Post-Medieval - Modern	MON (17/12/2010)	Medium	Medium	431618	90384

WA2060	nMWX63188	B	Hurst Spit	Modern concrete detritus, possibly related to WA1075.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	431686	89881
WA2061	nMWX63187	B	Hurst Spit	Ridge and ditch. Former ditch associated with Hurst Castle. Red brick, tile, and mortar eroding out of sides.	Post-Medieval - Modern	MON (17/12/2010)	Low	Medium	431678	89764
WA2062	nMWX63174	B	Hurst Spit	Red brick, tile, cut stone, detritus, following the shoreline around the western shore of the castle "pond". Possibly an artificial sea defence that has eroded away.	Post-Medieval - Modern	MON (17/12/2010)	Medium	Low	431500	89867
WA2063	nMWX63189	B	Hurst Spit	Unknown maritime feature, possibly a wreck. Covered in fishing nets.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431449	89816
WA2064	nMWX63175	B	Hurst Spit	Former red brick hut adjacent to a former culvert. Collapsed red brick structure with rough concrete base and curved red brick structure buried in the ground.	Post-Medieval - Modern	MON (17/12/2010)	Medium	Medium	431513	89769
WA2065	nMWX63193	B	Hurst Spit	Old jetty/landing stage. Parallel lines of wooden posts entering the sea from the intertidal zone of the castle "pond".	Post-Medieval - Modern	MON (17/12/2010)	Medium	Low	430736	91307
WA2066	nMWX63197	B	Keyhaven	Wooden post. Probably a former mooring point.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431423	91484
WA2067	nMWX63198	B	Keyhaven	Two wooden posts. Possible channel markers or former mooring points.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431526	91587

WA2068	nMWX63199	B	Keyhaven	Series of seemingly unrelated wooden posts. Possible channel markers or former mooring points.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431537	91724
WA2069	nMWX63200	B	Keyhaven	Series of seemingly unrelated wooden posts. Possible channel markers or former mooring points.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	431873	92209
WA2070	nMWX63203	B	Keyhaven	Metallic and wooden linear structure, probably former sea defences. Lines of posts running parallel with shore (and modern sea wall) with an accumulation of sediment to the east, suggesting a deliberate attempt to groyne the beach.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	432563	92443
WA2071	nMWX63205	B	Keyhaven	Hexagonal brick feature. Possibly WWII observation post. Only the base remains, and there is sever bioturbation at the site with a tree now fully grown out of the centre.	Post-Medieval - Modern	MON (17/12/2010)	High	Medium	432657	93646
WA2072	nMWX63206	B	Keyhaven	Raised mound with wooden stakes. Artificially created bank designed to enclose a "pond" for fishing.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	432660	93583
WA2073	nMWX63207	B	Lymington	Restored display anchor at Lymington Railway Station.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	432703	95780
WA2074	nMWX63208	B	Lymington	Modern wheel.	Post-Medieval	MON (17/12/2010)	Low	Low	432994	95858

					- Modern	0)				
WA2075	nMWX63209	B	Lymington	Two modern wrecks, abandoned on banks of Lymington River. Large wooden structures, probably fishing boats, densely covered in kelp. One wreck only has its prow and starboard side remaining.	Post-Medieval - Modern	MON (17/12/2010)	High	Medium	432944	95702
WA2076	nMWX63210	B	Lymington	Display anchor.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	433288	95585
WA2077	nMWX63211	B	Lymington	Modern wooden wreck. Probable fishing vessel, abandoned in inlet off Lymington River. Modern rowing boat is balanced on the stern section.	Post-Medieval - Modern	MON (17/12/2010)	High	Medium	432924	96034
WA2078	nMWX63212	B	Lymington	Former river defences/inlet markers with adjacent landing stage. Wooden posts and timber planks forming a revetment around the inlet, presumably to protect from wave lapping.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	432955	96044
WA2079	nMWX63213	B	Lymington	Public House, The Ship Inn. Allegedly established in 1850, the building was also the former customs house.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	432772	95593
WA2080	aMWX12084	B	Lymington	The House on the Quay. Built in 1675.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	432759	95597

WA2081	nMWX63214	B	Lymington	Remnants of former wall.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	432705	95706
WA2082	aMWX12003	B	Lymington	Quadrill Court. Restored 1911.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	432129	95400
WA2083	aMWX1437	B	Lymington	Monmouth House, Lymington. Former Office of the Clerk of the Justices. Grade II* listed.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	432156	95397
WA2084	aMWX11753	B	Lymington	East Grove House. Grade II* listed building.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	432660	95310
WA2085	nMWX63215	B	Lymington	Monument dedicated to John Spencer of Wednesbury, on Normandy Lane, presumably of the Iron Works Production Company.	Post-Medieval - Modern	MON (17/12/2010)	Low	Low	432992	94363
WA2086	nMWX63216	B	Lymington River	Large timbers and several posts, possible remnants of a landing stage documented on historic OS mapping from 1909 to 1939.	Post-Medieval - Modern	MON (17/12/2010)	High	Low	433199	95589
WA2087	nMWX63217	B	Hurst Spit	Remains of dilapidated cottage. Ruined remains of cottage apparently abandoned in the 1950s. Mostly red brick and mortar, with some domestic debris and appliance components amongst the rubble.	Modern	MON (17/12/2010)	Medium	Low	431660	90137
WA2088	nMWX63218	B	Keyhaven	Small, modern boat wreck.	Modern	MON (17/12/2010)	Medium	Low	432509	93401

WA2089	nMWX63219	B	Lymington	Modern wooden rowing boat wreck, buried in intertidal flat of Lymington River adjacent to Ferry Terminal.	Modern	MON (17/12/2010)	High	Low	433417	95500
WA2090	aMWX55984	B	Lymington	Munificent Gift street lamp, Lymington. Dated 1832.	Modern	MON (17/12/2010)	Low	Low	433344	95056
WA2091	nMWX63220	B	Lymington	Display anchor.	Modern	MON (17/12/2010)	Low	Low	432635	93801
WA2092	nMWX63224	B	Oxey	Series of four modern metal posts in an alignment of 6m.	Modern	MON (17/12/2010)	Low	Low	431652	92135
WA2093	nMWX63226	B	Walhampton	A concrete plinth of around 1m x 1m x 1m, of unknown function.	Modern	MON (17/12/2010)	High	Low	432959	95762
WA2094	nMWX63227	B	Lymington River	A large square stone lying on the eastern edge of Lymington River, a possible mooring point.	Modern	MON (17/12/2010)	High	Low	433237	95539
WA2095	nMWX63228	B	Lymington River	A square brick building set on a concrete plinth, measuring around 1.5m by 1.5m by 3m tall. Possible WWII observation point.	Modern	MON (17/12/2010)	Medium	Low	433237	95501
WA2096	nMWX63230	B	Elmers Court	Single timber post, possibly a modern marker post.	Modern	MON (17/12/2010)	High	Low	433482	95380
WA2097	nMWX63240	B	Lisle Court	Jetty extending from shoreline.	Modern	MON (17/12/2010)	High	Low	433823	95229
WA2098	nMWX63241	B	Lisle Court	Single timber post, possibly a modern marker post.	Modern	MON (17/12/2010)	High	Low	433925	94971

WA2099	nMWX63243	B	Keyhaven Lake	Timber post within Keyhaven Marsh, of unknown function or period.	Unknown	MON (17/12/2010)	High	Medium	431055	91171
WA2100	nMWX63244	B	Hawker's Lake	A pair of timber posts, possible marker posts.	Unknown	MON (17/12/2010)	High	Medium	431944	91466
WA2101	nMWX63246	B	Keyhaven Marshes	A single timber post, possible marker posts.	Unknown	MON (17/12/2010)	High	Medium	432037	92034
WA2102	nMWX63248	B	Elmers Court	A single timber post, possible marker posts.	Unknown	MON (17/12/2010)	High	Medium	433562	95325

Coastal Stretch C

WA No.	MonUID	Coastal Stretch	Area	Name/Description	Period	Source References/ Accession Date	Vulnerability	Significance	Easting (BNG)	Northing (BNG)
WA3001	nMWX62857	C	Pitts Deep	Lower Palaeolithic Acheulian hand axe found on the foreshore at Pitts Deep by David and Marion Nesbitt on the 8th May 2010. The hand axe measures 105mm by 70mm and weighs 238g. The find spot was re-located by the Nesbitts and surveyed during the walkover survey.	Lower Palaeolithic	MON (06/12/2010)	Recovered find	-	437401	95612
WA3002	aMWX61861	C	Needs Orr	Earthworks within the salt works site were observed along with the large bank present around the extent of the	Medieval - Post-Medieval	MON (06/12/2010)	Medium	Medium	442322	97748

				salt works site, preventing the unwanted flooding of the area.						
WA3003	aMWX61442	C	Lisle Court	Site of saltern, composed of flat central area surrounded by bank on landward sides. Wooden posts are present in the centre of the site.	Medieval - Post-Medieval	MON (06/12/2010)	Medium	Medium	434310	95051
WA3004	aMWX57664	C	Pylewell	Site of saltern, visible as a large rectangular flat area surrounded on the southern, eastern and northern sides by a hedgerow/bank, the western extent is covered with water.	Medieval - Post-Medieval	MON (06/12/2010)	Medium	Medium	435309	95113
WA3005	nMWX62844	C	Pylewell	Two parallel banks enclosing an area of ridge and furrow located close to the foreshore of Pylewell Lake. The banks and ridge and furrow are all oriented NW-SE. The two external banks are around 1.30m in height and 2m in width, whilst the banks of the ridge and furrow are 2m wide and the ditches are 1.5m wide. Thought to be associated with the saltern (MWX57393/MWX57664) in which located.	Medieval - Post-Medieval	MON (06/12/2010)	Medium	Medium	435529	95168
WA3006	aMWX57681	C	Sowley Marsh	Approximate location of a bank, visible from the	Medieval - Post-	MON (06/12/2010)	Medium	Medium	440490	96535

				beach, extending at least 20m, orientated NE-SW and is thought to be associated with the saltern.	Medieval					
WA3007	aMWX21977	C	Gins	Earthworks evident within a salt works site, including delineations within the salt works and a large bank present around the extent of the site to prevent unwanted flooding.	Medieval - Post-Medieval	MON (06/12/2010)	Medium	Medium	441422	98582
WA3008	aMWX61893	C	Gins	A large bank on the eastern extent of the salt works site thought to prevent the unwanted flooding of the site (MWX21977). The bank was approximately 3m wide and has been flattened on top and the slope into the adjacent salt works is steep.	Medieval - Post-Medieval	MON (06/12/2010)	Medium	Medium	441434	98581
WA3009	nMWX62861	C	Pitts Deep	Several metal ships nails were recorded along the foreshore at Pitts Deep. They may be associated with the ironworks at Sowley Pond (MWX22744).	Unknown	MON (06/12/2010)	High	Medium	437619	95707
WA3010	nMWX62840	C	Pylewell	Location of a brick faced wall/bank, up to three courses in places, situated within the southern extent of a saltern (MWX57393/MWX57664). One of the bricks was	Medieval - Post-Medieval	LINE (06/12/2010)	Medium	Low	435264	95067

				identified as being 16/17th century in date, and a cramped stone was identified at the western end measuring 0.5m by 0.18m.						
WA3011	nMWX62841	C	Pylewell	An eroded circular wooden post in the intertidal zone of Pylewell Lake, measuring approximately 0.18m in diameter by 0.45m high. Possible channel marker or mooring post for vessels, associated with the adjacent saltern site (MWX57393/MWX57664).	Unknown	MON (06/12/2010)	Medium	Low	435277	95061
WA3012	nMWX62842	C	Pylewell	Two heavily eroded circular wooden posts located in the intertidal zone of Pylewell Lake, with approximate diameters of 0.1m. The posts are situated 0.3m apart and less than 6m from a similar post. This monument is a possible channel marker or mooring post for vessels, associated with the adjacent saltern site (MWX57393/MWX57664).	Unknown	MON (06/12/2010)	Medium	Low	435282	95061
WA3013	nMWX62843	C	Pylewell	Approximately 10 eroded circular wooden posts located close together in the intertidal	Unknown	MON (06/12/2010)	Medium	Medium	435506	95097

				zone of Pylewell Lake. Thought to be possible channel markers or mooring posts for vessels, associated with the adjacent saltern site (MWX57393/MWX57664).						
WA3014	nMWX62845	C	Pylewell	A curving length of heavily eroded wooden posts/stakes located on the beach. Measuring over 3m in length, the majority of the feature is perpendicular to the shoreline whilst the curve is apparent at the western end and extends gradually north towards the shore. The posts reach no higher than 0.2m and have an average diameter of 0.1-0.15m.	Unknown	MON (06/12/2010)	Medium	Low	435581	95174
WA3015	nMWX62847	C	Pylewell	A square stone (possibly sarsen sandstone) situated in the intertidal zone in front of Pylewell House, with no obvious sign of its origin. Measures approximately 0.55m x 0.4m x 0.35m and has one faced side with a square indent (0.25m x 0.2m).	Unknown	MON (06/12/2010)	High	Medium	435907	95217
WA3016	nMWX62849	C	Pylewell Lake	A length of 16 heavily eroded wooden posts/stakes along the foreshore just west of	Unknown	MON (06/12/2010)	High	Medium	436165	95240

				Plummers Water inlet. The alignment measures around 2m and the stakes are between 0.1m and 0.25m tall. They are situated in front of modern sea defences made up of pieces of concrete and large timber posts. Possible early form of sea defence.						
WA3017	nMWX62850	C	Pylewell Lake	Early bank revetment visible on the western edge of Plummers Water, extending for approximately 25m north from the footbridge. The revetment is composed of eroded wooden stakes inserted closely to one another on the bank of the inlet. Example of early revetment to prevent the erosion of the bank.	Unknown	MON (06/12/2010)	Medium	Medium	436189	95281
WA3018	nMWX62851	C	Pylewell Lake	A line of 11 heavily eroded wooden posts/stakes orientated E-W along the foreshore east of Plummers Water. The posts extend for approximately 1.5m, are fairly evenly distributed along the line, and are around 0.1m in height.	Unknown	LINE (06/12/2010)	Medium	Medium	436187	95245

WA3019	nMWX62860	C	Pitts Deep	A gravel hard is visible on the shore in front of the Customs House at Pitts Deep, measuring just over 33m long by a maximum of 17.5m wide. The hard is composed of mainly gravel sediment along with timber and concrete inclusions, presumably indicating its structural development. A piece of post-medieval green-glazed ware was discovered on the hard.	Unknown	POLYGON (06/12/2010)	High	High	437382	95586
WA3020	nMWX62900	C	Sowley Marsh	An ENE-WSW bank was identified at Sowley Marsh, measuring over 70m long and approximately 2m wide and 1m high. It is likely that the earthwork formed part of the medieval sea defences that are apparent in the area (MWX55137).	Medieval - Post- Medieval	LINE (06/12/2010)	High	High	437825	95819
WA3021	nMWX62901	C	Sowley Marsh	Two lengths of eroded wooden posts that may be structural components of a possible causeway across the mouth of Sowley Marsh. Around 13 wooden posts are visible approximately 0.25m of which is visible above the ground. The posts run in a E-W	Unknown	MON (06/12/2010)	High	High	438015	95858

				direction and there is a distance of 10m between the landward and seaward lines.						
WA3022	nMWX62902	C	Sowley Marsh	A line of heavily eroded circular wooden posts running across the foreshore and into the water at Sowley Marsh. Nine posts were identified and recorded on the foreshore with approximate diameters of between 0.2m and 0.35m. The exact nature of the feature is unknown, but may be some sort of breakwater or channel markers.	Unknown	MON (06/12/2010)	High	Medium	438057	95801
WA3023	nMWX62959	C	Gravelly Marsh	A bank extending W then curving N with a ditch on the western side, located on the southern extent of Gravelly Marsh. The bank extends for 28m and is approximately 1m wide. Possible field boundary or enclosure.	Unknown	MON (06/12/2010)	Low	Low	441829	96990
WA3024	nMWX62961	C	Needs Orr	Wooden posts within the marsh. Function unknown.	Unknown	MON (06/12/2010)	Medium	Low	442644	97673
WA3025	nMWX62965	C	Needs Orr	Wooden posts within a channel from the Beaulieu River. Function unknown.	Unknown	MON (06/12/2010)	Medium	Low	442512	97649

WA3026	nMWX62910	C	Needs Orr	Numerous eroded wooden posts (approximately 50) within the eastern extent of the salt works, north of Needs Ore. Some of the timber posts were present along the bank of the salt works, possibly acting as revetment to protect the bank. The remaining posts do not present a coherent feature and their function is unknown. Some of the posts may be associated with the linear stone features (MWX62909) since they appear amongst the stones.	Unknown	MON (06/12/2010)	Medium	Medium	442037	98020
WA3027	nMWX62967	C	Needs Orr	Wooden posts visible along the sea wall. Function unknown.	Unknown	MON (06/12/2010)	Medium	Low	441883	98180
WA3028	nMWX62968	C	Gins	Series of wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (06/12/2010)	High	Low	441534	98633
WA3029	nMWX62969	C	Gins	Series of wooden posts along edge of the intertidal marsh and the navigable channel, and beneath a modern jetty. Probable channel marker.	Unknown	MON (06/12/2010)	High	Low	441539	98811

WA3030	nMWX62912	C	Gins	Two linear rows of heavily eroded wooden posts extending towards each other at diagonal angles from the shore of a water channel. The rows do not converge, but it is unclear whether they once did. Each row contains around 20 posts with an average diameter of 0.15m. The nature of these stakes is unknown, but may be associated to an earlier course of the river channel, or even a form of fish trap.	Unknown	MON (06/12/2010)	Medium	High	441450	98907
WA3031	aMWX55132	C	Pylewell	Location of a former bath house associated with Pylewell House, although no remains of the structure are apparent. A stream is evident to the west and is likely to be the necessary water supply.	Post-Medieval	MON (06/12/2010)	Medium	Medium	435767	95227
WA3032	nMWX62846	C	Pylewell	The remains of two lengths of a ha ha associated with Pylewell House. The feature is located at the shoreline and is composed of several courses of red brick. Also, possible flood defence due to its proximity to the high water line.	Post-Medieval	LINE (06/12/2010)	Medium	Medium	435822	95216

WA3033	aMWX55134	C	Pitts Deep	19th century brickworks comprised of several structures in varying conditions, which include the kilns and other associated buildings, together with the area thought to be the clay pit. Just to the east of the main site is a stack of short lengths of pipe, presumably some of the residual products from the brickworks.	Post-Medieval	MON (06/12/2010)	Medium	High	437194	95639
WA3034	aMWX55136	C	Pitts Deep	19th century quay with no obvious structural evidence apart from numerous eroded wooden posts that may have been associated to the original structure or are channel markers. Numerous thick chains are also present on the shoreline, one of which is around 17m long. The quay is likely to be associated with the brickworks (MWX55134) just to the north.	Post-Medieval	MON (06/12/2010)	Medium	High	437228	95577
WA3035	nMWX62862	C	Pitts Deep	Frequent fragments of coal were observed within the face of the sea bank east of Pitts Deep. They may be associated with either the adjacent Coastguard Station (that is no longer visible) or the ironworks at Sowley	Post-Medieval	LINE (06/12/2010)	High	Low	437623	95712

				Pond (MWX22744).						
WA3036	nMWX62890	C	Pitts Deep	Location of a pipe stem and bowl on the foreshore east of Pitts Deep, and may be associated with the adjacent Coastguard Station (that is no longer visible).	Post-Medieval	MON (06/12/2010)	Recovered find	Low	437633	95717
WA3037	nMWX62894	C	Pitts Deep	A stone lined circular feature measuring approximately 1.5m in diameter. One course of stones are visible lining the feature and the centre appears naturally filled. It is likely to be associated with one of the buildings of the Coastguard Station, visible on OS historic mapping.	Post-Medieval	MON (06/12/2010)	Low	Medium	437621	95743
WA3038	nMWX62972	C	Pitts Deep	A Poor Law Union and Rural Districts boundary was visible as a wide bank and corresponding ditch onshore and as eroded timber posts in two rows within the intertidal zone, orientated NW-SE.	Post-Medieval	LINE (06/12/2010)	High	Medium	437628	95777
WA3039	nMWX62852	C	Pylewell Lake	Short linear feature comprising 3 bricks (2 red and 1 yellow) one course thick, running E-W for approximately 0.5m along the	Post-Medieval - Modern	MON (06/12/2010)	Medium	Low	436210	95243

				foreshore. The bricks appear not to be <i>in situ</i> .						
WA3040	nMWX62853	C	Tanners Lane	A deliberate area of deposition containing partially buried bricks, slate and drain fragments situated on the foreshore. The fragments cover an area of around 2m x 1m.	Post-Medieval - Modern	MON (06/12/2010)	Medium	Low	436354	95246
WA3041	nMWX62897	C	Pitts Deep	Numerous shards of post-medieval and modern pottery were apparent along the foreshore east of Pitts Deep.	Post-Medieval - Modern	MON (06/12/2010)	High	Medium	437672	95752
WA3042	nMWX62899	C	Sowley Marsh	A NW-SE bank measuring almost 80m by 1.5m, functioning as a field boundary is located on the SW extent of Sowley Ironworks and is likely to be associated.	Post-Medieval - Modern	MON (06/12/2010)	Medium	Medium	437796	95857
WA3043	nMWX62906	C	Needs Orr	Three circular eroded wooden posts were observed within the intertidal zone just north of Needs Ore. The posts appear to be related due to their proximity and similar sizes, but are not in any clear arrangement that might provide an idea of the function (possibly structural elements of a jetty or mooring point).	Post-Medieval - Modern	MON (06/12/2010)	Medium	Low	442446	97768

WA3044	nMWX62907	C	Needs Orr	Four wooden posts situated in pairs across a water channel within the extent of the salt works (MWX61861) at Needs Ore. Possibly remnants of a bridge/footbridge across the small waterway, whose depth was controlled by the sluice at the south of the site (MWX61737). It may be associated with the timber posts in the intertidal zone beyond the saltern, where boats may have moored (MWX62906).	Post-Medieval - Modern	MON (06/12/2010)	Medium	Low	442365	97739
WA3045	nMWX62974	C	Needs Orr	Approximately ten circular eroded wooden posts within the intertidal zone just north of Needs Ore. The posts appear to be in two irregular rows, possibly the structural elements of a jetty.	Post-Medieval - Modern	MON (06/12/2010)	Medium	Low	442365	97837
WA3046	nMWX62978	C	Needs Orr	Around four circular eroded wooden posts within the intertidal zone just north of Needs Ore. The function of these posts is unclear due to their irregular layout.	Post-Medieval - Modern	MON (06/12/2010)	Medium	Low	442289	97882
WA3047	nMWX62984	C	Needs Orr	Three aligned eroded wooden posts visible in the intertidal area north of Needs Orr. Possibly part of a jetty structure.	Post-Medieval - Modern	MON (06/12/2010)	Medium	Low	442250	97955

WA3048	nMWX62986	C	Needs Orr	Three aligned eroded wooden posts visible in the intertidal area north of Needs Orr. Possibly part of a jetty structure.	Post-Medieval - Modern	MON (06/12/2010)	Medium	Low	442197	97946
WA3049	nMWX62909	C	Needs Orr	Three discrete lengths of stone and another oval area of Bembridge limestone was visible on the eastern extent of the salt works (MWX61861) north of Needs Ore. The function of these stones is unclear, but may be associated with the salt works or perhaps be discarded ballast.	Post-Medieval - Modern	MON (06/12/2010)	Medium	Medium	442125	97955
WA3050	nMWX62848	C	Pylewell	A hard visible on the foreshore in front of Pylewell House, composed of two adjacent gravel areas. The areas measure approximately 30m by 4m, although may have been affected by erosion.	Post-Medieval - Modern	LINE/POLY (06/12/2010)	High	Medium	436102	95225
WA3051	aMWX58146	C	Lisle Court	Two wooden vessels were observed from the shore lying approximately 30m apart and appear to be in good condition. They are likely to be part of the modern boat graveyard located here.	Modern	MON (06/12/2010)	Medium	Low	434407	94865
WA3052	nMWX62854	C	Tanners Lane	Three large pieces of concrete (one slab and two pieces) likely to be	Modern	MON (06/12/2010)	Medium	Low	436359	95256

				20th century in date (possibly military in origin). No coherent arrangement. The feature measures 1.25m x 0.5m, and is situated on the coastline just west of Tanners Lane.						
WA3053	nMWX62855	C	Tanners Lane	Occasional frequency of metal debris, including sections of pipes and fragments of metal sheeting, observed along the intertidal zone between Tanners Lane and Pitts Deep. The objects were not <i>in situ</i> .	Modern	MON (06/12/2010)	Medium	Low	436647	95363
WA3054	nMWX62858	C	Tanners Lane	An arrangement of four eroded wooden posts positioned in a square measuring approximately 7.5m by 4m, with a hollow circular metal tube in the centre (diameter of 0.17m, height of 0.2m from the mud). The feature is situated in the foreshore east of Tanners Lane however the function is unknown.	Modern	MON (06/12/2010)	High	Medium	437021	95546
WA3055	nMWX62859	C	Tanners Lane	An unstratified broken white ceramic mug, located on foreshore. The mug does not have any pattern, but a date is visible on the base as 1943 along with the company name, Nelson	Modern	MON (06/12/2010)	High	Low	437034	95558

				Ware.						
WA3056	aMWX57667	C	Sowley Marsh	Three lengths of modern early twentieth century sea defences situated across the mouth of Sowley Marsh, measuring 35m, 28m and 24m respectively from west to east. The sea defence is composed of curved pieces of concrete lying side by side.	Modern	LINE (06/12/2010)	High	Low	437876	95828
WA3057	aMWX62554	C	Sowley Marsh	A component of this WWII military complex, comprising a 1m by 1m square of concrete with three internal squares of bricks, two on the eastern corners and one in the centre of the western side, each of which are surrounded by further concrete. This feature may form part of the central gun emplacements.	Modern	MON (06/12/2010)	Low	Low	438103	95902
WA3058	aMWX61734	C	Warren Beach	Evidence of partially buried concrete. There was not a substantial amount and it was impossible to identify the features, but presumably the concrete is from the WWII military site that occupied this area.	Modern	MON (06/12/2010)	Medium	Medium	441373	96639
WA3059	aMWX61862	C	Needs Orr	Several structural pieces of concrete were	Modern	MON (06/12/2010)	Low	Low	442521	97609

				recorded close to the site of some buildings and are believed to be associated. Predominantly in a partially buried state and located 12m to the SW of the buildings.						
WA3060	aMWX61902	C	Gins	Numerous pairs of eroded wooden posts are visible for a length of almost 60m running through the intertidal zone and into the River Beaulieu. Probable modern jetty (perhaps for Gins Farm).	Modern	MON (06/12/2010)	Medium	Low	441474	98629
WA3061	nMWX62856	C	Tanners Lane	An unstratified piece of wood, possibly oak, on the foreshore east of Tanners Lane. It measures approximately 0.4m by a maximum of 0.15m, and a curving indent on the piece suggests that it may have been worked; although its function is unknown it may have originated from a maritime context. One side of the piece is smooth and appears rounded whereas the opposite site is uneven although these could have been caused by post-depositional damage and wear.	Unknown	MON (06/12/2010)	High	High	436683	95396

WA3062	nMWX62893	C	Pitts Deep	Five circular cut features were observed east of Pitts Deep, measuring around 2m in diameter and 0.4m deep and occasionally had a low bank surrounding the hollow. They could be confused for archaeological features, but are likely to be tree throws.	Non-Archaeological	MON (06/12/2010)	Low	Low	437600	95760
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Coastal Stretch D

WA No.	MonUID	Coastal Stretch	Area	Name/Description	Period	Source References/ Accession Date	Vulnerability	Significance	Easting (BNG)	Northing (BNG)
WA4001	aMWX62341	D	Keeping	A raised circular earthwork thought to be the remains of a barrow.	Bronze Age	MON (13/12/2010)	Low	High	440537	100501
WA4002	aMWX21974	D	Lower Exbury	Earthworks associated with the Iron Age promontory fort at Lower Exbury. The bank is thought to extend from the River Beaulieu just west of Lower Exbury House and curves around the promontory towards the salt marsh; over 300m. A gap in the earthwork (possible entrance) was seen in the section leading down to the salt	Iron Age	MON (13/12/2010)	Low	High	442001	98707

				marsh.						
WA4003	aMWX61996	D	Beaulieu	The remains of three sections of the late 13th century monastic wall within the grounds of the Beaulieu National Motor Museum. The wall is around 3m high in places and still in fairly good condition.	Medieval	MON (13/12/2010)	Low	Medium	438496	102697
WA4004	nMWX62999	D	North of Beaulieu	A bank orientated NE-SW, approximately 1m wide and 0.5m high, with no apparent corresponding ditch. The feature is visible as a tree lined boundary on historic OS mapping in a marshy area on the western edge of the River Beaulieu.	Medieval - Post-Medieval	MON (13/12/2010)	Low	Low	438175	103071
WA4005	nMWX63000	D	Hartford Bridge	A short alignment of around 13 eroded wooden stakes extending into the river for around 1m. Possibly the remains of an earlier crossing	Medieval - Post-Medieval	MON (13/12/2010)	Low	Low	438058	103615

				point replaced by another footbridge as seen on modern OS mapping.						
WA4006	MWX63002	D	Hartford Bridge	An artificial inlet cut into the natural riverbank with three regular edges around 4m long and 2m wide. Possibly associated with a slight linear depression in the adjacent field.	Medieval - Post-Medieval	MON (13/12/2010)	Low	Low	437996	103727
WA4007	aMWX41029	D	Lower Exbury	Earthworks visible on either side of the medieval/post-medieval track way, curving around the slope of the hill towards the location of a former village. The banks extend for over 100m.	Medieval - Post-Medieval	MON (13/12/2010)	Low	High	441967	98736
WA4008	aMWX41030	D	Lower Exbury	Location of ridge and furrow visible as unpronounced earthworks on a flat area of land.	Medieval - Post-Medieval	MON (13/12/2010)	Low	High	441950	98710
WA4009	nMWX63014	D	Quay	A piece of moulded stone with a groove on the face (possibly the letter Y). Measuring 0.33m by 0.3m by 0.15m. The stone was located in a drain and may have originated from a church nearby.	Medieval - Post-Medieval	MON (13/12/2010)	High	High	443209	98673

WA4010	nMWX63017	D	Gins	Series of wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	441685	99073
WA4011	nMWX63019	D	Gins	Series of wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	441716	99166
WA4012	nMWX63021	D	Gins	Series of wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	441701	99205
WA4013	nMWX63022	D	Clobb Copse	Series of wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	441620	99465
WA4014	nMWX63023	D	Clobb Copse	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	441563	100045
WA4015	nMWX63024	D	Bucklers Hard	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	441490	100240
WA4016	nMWX63025	D	Bucklers Hard	Wooden post along edge of the intertidal marsh and the	Unknown	MON (13/12/2010)	High	Low	441425	100238

				navigable channel. Probable channel marker.						
WA4017	nMWX63026	D	Bucklers Hard	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	441374	100206
WA4018	nMWX63027	D	Bucklers Hard	Series of small wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	High	Low	441286	100171
WA4019	nMWX63029	D	Keeping	Series of wooden posts across a channel leading inland, possibly functioning as channel markers.	Unknown	MON (13/12/2010)	High	Low	440857	100512
WA4020	nMWX63031	D	Keeping	Series of small wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	High	Low	440975	100596
WA4021	nMWX63034	D	Keeping	Two small wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	High	Low	440984	100662
WA4022	nMWX63035	D	Keeping	Wooden post along edge of the intertidal marsh and the navigable channel.	Unknown	MON (13/12/2010)	High	Low	441017	100697

				Probable channel marker.						
WA4023	nMWX63036	D	Keeping	A tall wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	441007	100733
WA4024	nMWX63038	D	Keeping	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	440837	100867
WA4025	nMWX63040	D	Keeping	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	440805	100863
WA4026	nMWX63041	D	Keeping	Two wooden stakes along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	440381	100969
WA4027	nMWX63043	D	Keeping	A single wooden post within the intertidal marsh. Function unknown, but possible mooring post or marker post.	Unknown	MON (13/12/2010)	High	Low	440296	101093
WA4028	nMWX63045	D	Keeping	Two small posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	High	Low	440311	101230

WA4029	nMWX63049	D	Keeping	Two posts along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	440177	101225
WA4030	nMWX63050	D	Bailey's Hard	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	439572	101523
WA4031	nMWX63052	D	Bailey's Hard	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	439597	101638
WA4032	nMWX63055	D	Bailey's Hard	Two wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	High	Low	439614	101714
WA4033	nMWX63053	D	Bailey's Hard	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	439592	101778
WA4034	nMWX63057	D	Bailey's Hard	Two wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	High	Low	439569	101801
WA4035	nMWX63094	D	East of Seville's Copse	A possible artificial inlet or berth for small vessels measuring around 30m in length.	Unknown	MON (13/12/2010)	Low	Low	439530	101728

				It is visible on OS historic mapping, but the origin of the feature is unknown.						
WA4036	nMWX63096	D	Hartford Bridge	The remains of a wooden footbridge across a narrow stream no more than 1.5m wide, comprising a single plank across supported by upstanding eroded wooden posts. This crossing has been replaced by another more modern footbridge.	Unknown	MON (13/12/2010)	Low	Low	438091	103575
WA4037	nMWX63097	D	Hartford Bridge	A row of coppiced trees displaying woodland management. The alignment of trees are visible as a N-S field boundary on historic OS mapping and extend for at least 100m.	Unknown	MON (13/12/2010)	Low	Low	438113	103482
WA4038	nMWX63099	D	Harford Copse	An alignment of six eroded wooden posts orientated N-S parallel to the river bank. Possible shoreline revetment or part of a jetty.	Unknown	MON (13/12/2010)	Low	Low	438206	103202

WA4039	nMWX63100	D	Beaulieu	Protective stone revetment along the edge of Beaulieu mill pond, identified as Bembridge stone and thought to have been taken from the monastic wall. The revetment is four courses high in some places. It is generally in good condition, however occasionally fragments of the stonework have come away from the wall and are lying on the pond's foreshore.	Unknown	MON (13/12/2010)	Low	Low	438634	102374
WA4040	nMWX63101	D	Carpenters Dock	Series of posts close to the riverbank, possible revetment.	Unknown	MON (13/12/2010)	Medium	Low	439253	101964
WA4041	nMWX63058	D	Carpenters Dock	Series of posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	Medium	Low	439260	101924
WA4042	nMWX63102	D	Oxleys Copse	Remnants of a probable jetty.	Unknown	MON (13/12/2010)	Medium	Low	439686	101816
WA4043	nMWX63103	D	Oxleys Copse	Drainage system apparent on eastern side of Beaulieu River.	Unknown	MON (13/12/2010)	Medium	Low	439699	101765
WA4044	nMWX63105	D	Oxleys Copse	Remains of a slipway into the River.	Unknown	MON (13/12/2010)	Medium	Low	439660	101613
WA4045	nMWX63076	D	Oxleys Copse	Wooden post along edge of the intertidal marsh and the navigable channel.	Unknown	MON (13/12/2010)	Medium	Low	439643	101569

				Probable channel marker.						
WA4046	nMWX63061	D	Oxleys Copse	Series of wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	Medium	Low	439643	101524
WA4047	nMWX63062	D	Oxleys Copse	Series of wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	Medium	Low	439671	101449
WA4048	nMWX63077	D	Oxleys Copse	A wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	439695	101426
WA4049	nMWX63078	D	Oxleys Copse	A wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	439788	101347
WA4050	nMWX63114	D	Oxleys Copse	An anchor visible in the intertidal marsh area.	Unknown	MON (13/12/2010)	Medium	Low	439862	101290
WA4051	nMWX63063	D	Oxleys Copse	Three wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	439879	101275
WA4052	nMWX63079	D	Oxleys Copse	A wooden post along edge of the intertidal marsh and the	Unknown	MON (13/12/2010)	Medium	Low	439948	101256

				navigable channel. Probable channel marker.						
WA4053	nMWX63065	D	Oxleys Copse	Short wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	Medium	Low	440031	101286
WA4054	nMWX63115	D	Spearbed Copse	Series of wooden posts along edge of the shoreline. Possible protective revetment.	Unknown	MON (13/12/2010)	Medium	Low	440128	101343
WA4055	nMWX63118	D	Spearbed Copse	Series of wooden posts visible in pairs. Possibly remnants of a former jetty.	Unknown	MON (13/12/2010)	Medium	Low	440145	101385
WA4056	nMWX63120	D	Spearbed Copse	Series of wooden posts besides a modern jetty. Possibly remnants of an earlier structure.	Unknown	MON (13/12/2010)	Medium	Low	440274	101383
WA4057	nMWX63071	D	Spearbed Copse	Two wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	Medium	Low	440449	101184
WA4058	nMWX63080	D	Spearbed Copse	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	440473	101048
WA4059	nMWX63081	D	Spearbed Copse	Wooden post along edge of the intertidal marsh and the navigable channel.	Unknown	MON (13/12/2010)	Medium	Low	440518	100960

				Probable channel marker.						
WA4060	nMWX63121	D	Spearbed Copse	Wooden post within the intertidal marsh area. Possible mooring bollard or marker post.	Unknown	MON (13/12/2010)	Medium	Low	440585	100981
WA4061	nMWX63122	D	Beaulieu River (near Sims Wood)	Two rows of numerous upright eroded wooden posts along with longitudinally placed timbers evident within and in between each row of uprights. This coherent structure is visible extending between two areas of dry passable salt marsh within the intertidal zone of the eastern shore of the Beaulieu River, and is either the remains of a former crossing point or part of a sluice.	Unknown	MON (13/12/2010)	Medium	Medium	440783	101073
WA4062	nMWX63082	D	Beaulieu River (near Sims Wood)	Wooden post within the intertidal marsh area. Possible mooring bollard or marker post.	Unknown	MON (13/12/2010)	Medium	Low	440919	101036
WA4063	nMWX63083	D	Spearbed Copse	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	440997	100990

WA4064	nMWX63084	D	Spearbed Copse	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	441020	100964
WA4065	nMWX63072	D	Beaulieu River (near Steerleys Copse)	Two wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel markers.	Unknown	MON (13/12/2010)	Medium	Low	440923	100420
WA4066	nMWX63123	D	Beaulieu River	An anchor visible in the intertidal marsh area.	Unknown	MON (13/12/2010)	Medium	Low	440974	100278
WA4067	nMWX63125	D	Beaulieu River	Series of wooden posts along edge of the sea wall, possibly functioning as protective revetment.	Unknown	MON (13/12/2010)	Medium	Low	441076	100244
WA4068	nMWX63127	D	Beaulieu River	A line of eroded wooden posts extend along the bank of the seawall, functioning as protective revetment.	Unknown	MON (13/12/2010)	Medium	Low	441527	100425
WA4069	nMWX63085	D	Beaulieu River (near Exbury)	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	441669	100148
WA4070	nMWX63088	D	Beaulieu River (near Exbury)	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	441692	99882

WA4071	nMWX63090	D	Beaulieu River (near Exbury)	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	441695	99774
WA4072	nMWX63124	D	Oxleys Copse	An anchor and chain were visible in the intertidal marsh area close to the sea wall.	Unknown	MON (13/12/2010)	Medium	Low	441906	99182
WA4073	nMWX63128	D	Lower Exbury	Series of wooden posts visible in pairs. Possibly remnants of a former jetty.	Unknown	MON (13/12/2010)	Medium	Low	441866	98850
WA4074	nMWX63091	D	Lower Exbury	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	442349	98086
WA4075	nMWX63092	D	Lower Exbury	Wooden post along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	442392	98035
WA4076	nMWX63073	D	Inchmery	Wooden posts along edge of the intertidal marsh and the navigable channel. Probable channel marker.	Unknown	MON (13/12/2010)	Medium	Low	443694	98260
WA4077	aMWX61779	D	Bucklers Hard	The remnants of the landing stage visible at low tide as numerous eroded wooden posts along with wooden revetment on either	Post-Medieval	MON (13/12/2010)	High	High	440909	100138

				side of the landing stage.						
WA4078	nMWX63130	D	Keeping	Boundary between Burnt Oak Copse and Keeping Marsh. Bank and ditch visible on OS historic and modern mapping, running N-S.	Post-Medieval	MON (13/12/2010)	Low	Low	440622	100765
WA4079	nMWX63132	D	Keeping Copse	A bank with ditch on the seaward side, orientated NW-SE recorded for over 50m. The bank is around 1.5m wide and the ditch is 1m wide and approximately 0.3m deep. The feature is visible on historic OS mapping, and is thought to be a line of flood defence from the marshy intertidal land on the eastern side, and possibly a dry footpath through the copse.	Post-Medieval	MON (13/12/2010)	Low	Low	440158	101042

<p>WA4080</p>	<p>aMWX12108</p>	<p>D</p>	<p>Bailey's Hard</p>	<p>Two separate kilns from different phases associated with the 18-19th century brickworks. A circular beehive kiln with supporting buttresses and a detached brick chimney, all in excellent condition, is visible to the NE of the site. The entrance to the brick built kiln faces west and there are 10 flues evident around the extent of the kiln. To the NE of this is an earlier kiln, the remains of which are rectangular in plan with 10 flues evident within the walls of the structure.</p>	<p>Post-Medieval</p>	<p>MON (13/12/2010)</p>	<p>Low</p>	<p>High</p>	<p>439550</p>	<p>101429</p>
<p>WA4081</p>	<p>aMWX33805</p>	<p>D</p>	<p>Bailey's Hard</p>	<p>Bailey's Hard 18-19th century brickworks including two phasing of kilns, brickyard cottage, 2 rectangular areas comprising concrete pillars, and a partially buried rectangular foundation for a structure. One area of pillars is comprised of two rows of 12 pillars (one of which has fallen over) extending for 40m with a width</p>	<p>Post-Medieval</p>	<p>MON (13/12/2010)</p>	<p>Low</p>	<p>High</p>	<p>439520</p>	<p>101434</p>

				of 3.1m. The other area contains 12 pillars and is overgrown with foliage.						
WA4082	nMWX63134	D	Beaulieu	Former ornamental canal around 4m wide, now in the process of being reinstated within the grounds of the Beaulieu National Motor Museum. The canal extends for over 200m and a dam is visible at the western extent.	Post-Medieval	MON (13/12/2010)	Low	Low	438462	102787
WA4083	nMWX63135	D	Spearbed Copse	Two rows of numerous eroded wooden posts extending across an inlet of the Beaulieu River. OS historic mapping shows a bridge at this location and therefore these posts are believed to be the remnants of this structure.	Post-Medieval	MON (13/12/2010)	Medium	Medium	440474	101227
WA4084	nMWX63136	D	Beaulieu River	Narrow bank running NE-SW, approximately 1m wide and 0.3m high. Field boundary as seen on historic OS	Post-Medieval	MON (13/12/2010)	Low	Low	441383	100673

				mapping.						
WA4085	nMWX63313	D	Lower Exbury	Remains of a sluice associated with the adjacent saltern (MWX21981). Visible as numerous upright wooden posts (some of which have fallen down) with a post-lined channel in the centre for directing the water through and into the salt works.	Post-Medieval	MON (13/12/2010)	Medium	Medium	441867	98594
WA4086	nMWX63111	D	Lower Exbury	Four heavily eroded wooden posts visible in the salt marsh area and thought to be associated with the saltern in which they are situated (MWX21981). The function of the posts is unclear.	Post-Medieval	MON (13/12/2010)	Medium	Low	441951	98606
WA4087	aMWX61851	D	Lower Exbury	Regularly spaced channels were visible throughout the salt marsh, which are the remnants of the area's former use as a saltern. The channels are mainly orientated NE-SW, however there are occasional channels orientated perpendicular to the main ones.	Post-Medieval	MON (13/12/2010)	Medium	Low	442041	98532

WA4088	nMWX63310	D	Lower Exbury	At least six eroded wooden posts visible in one of the channels associated with the saltern.	Post-Medieval	MON (13/12/2010)	Medium	Low	442589	98369
WA4089	nMWX63307	D	Lower Exbury	Three large timbers (two rough outs and one plank) are visible within a channel of the saltern. The timbers are lying together in a horizontal position displaying no coherent structural form. A short length of chain is also present across one of the timbers, although may not be associated. This feature's function is unknown, but thought to be associated with the saltern site.	Post-Medieval	MON (13/12/2010)	Medium	Low	442671	98455
WA4090	nMWX63306	D	Lower Exbury	Numerous tall upright posts and stakes are visible on either side of a channel, and are part of a sluice associated with the seawall and the saltern within.	Post-Medieval	MON (13/12/2010)	Medium	Medium	442698	98520
WA4091	nMWX63137	D	Quay	Stone lined arched culvert, around 0.75m across.	Post-Medieval	MON (13/12/2010)	High	Medium	443211	98674

WA4092	nMWX63138	D	Quay	A regular alignment of around 10 eroded wooden stakes is apparent on the western edge of a small watercourse. The feature appears to be along the boundary between the salt marsh to the east and the quay to the west.	Post-Medieval	MON (13/12/2010)	High	Medium	443211	98672
WA4093	nMWX63190	D	Lepe	Circular dovecote made of stone, located in the SW corner of Lepe House. Modern steps to the top of the structure imply that the dovecote is still be in use.	Post-Medieval	MON (13/12/2010)	Low	Medium	444489	98636
WA4094	aMWX61725	D	Stansore Point	Remains of eroded wooden posts forming a line of groyne, extending into the water for around 5m. Several of these groyne are visible along the beach.	Post-Medieval	MON (13/12/2010)	High	Low	446737	99335
WA4095	nMWX63191	D	Clobb Copse	Series of regularly spaced wooden posts extending into the river. Possible boundary extending offshore.	Post-Medieval - Modern	MON (13/12/2010)	High	Low	441588	99640

WA4096	nMWX62916	D	Bucklers Hard	Alignment of up to 18 heavily eroded wooden posts located in the intertidal zone and running parallel to the shoreline at Bucklers Hard. The feature is situated just west of the post-medieval landing stage (MWX61779) and may be associated. Very little of the posts remain, reaching a maximum height of around 50mm. Each post measures around 0.20m in diameter. Possible early form of sea defence, due to its orientation along the coastline.	Post-Medieval - Modern	LINE (13/12/2010)	High	Medium	440871	100161
WA4097	nMWX63192	D	Jarvis's Copse	Six eroded substantial wooden posts are visible in an inlet of the River Beaulieu, thought to be the remains of a bridge. Historic mapping shows a crossing point in this area.	Post-Medieval - Modern	MON (13/12/2010)	Low	Low	439156	101753
WA4098	nMWX63194	D	Beaulieu	A row of around 25 eroded wooden posts running E-W across the western extent of Beaulieu mill pond. Possibly a boundary	Post-Medieval - Modern	MON (13/12/2010)	Low	Low	438473	102484

				fence.						
WA4099	nMWX63195	D	Harford Copse	A disarticulated piece of mortared together brickwork located on the eastern bank of the River Beaulieu. Measuring 0.4m by 0.3m by 0.35m, the origin of this piece is unknown.	Post-Medieval - Modern	MON (13/12/2010)	Low	Low	438234	103145
WA4100	nMWX63196	D	Beaulieu	Series of heavily eroded wooden posts (7) and stakes (14) at the shoreline of Beaulieu mill pond beside Palace House, extending from the revetment and running into the water. These features are presumably associated with a slipway that is visible on OS historic mapping at this location.	Post-Medieval - Modern	MON (13/12/2010)	Low	Low	438708	102369
WA4101	aMWX62033	D	Beaulieu	Two rows of eroded wooden posts extending into the River Beaulieu and thought to be the structural remains of a former jetty/landing stage. At least 12 posts were visible during the survey.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	439186	102322

WA4102	MWX63201	D	Beaulieu River (near Steerleys Copse)	Two rows of eroded wooden posts (12 x 2) extending from the shore into the Beaulieu River. Remains of a jetty/landing stage, perhaps replaced by one just to the north.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	441099	100594
WA4103	MWX63202	D	Beaulieu River (near Steerleys Copse)	Series of eroded wooden posts running diagonally from the shoreline of the River Beaulieu towards another feature of posts. A road leading to the shoreline on OS historic mapping implies this stretch of the river to be frequently used, thus several features are apparent within this stretch alone.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	441093	100584
WA4104	MWX63204	D	Beaulieu River (near Steerleys Copse)	Series of eroded wooden posts clustered together on the shore of the Beaulieu River and associated with other timber features in the vicinity. OS historic mapping shows a landing stage close to this position and it is possible that this feature is the remnants of such a structure.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	441088	100584

WA4105	MWX63223	D	Beaulieu River	Series of eroded wooden posts, fairly incoherent arrangement, but extending across an inlet within the salt marsh. Remains of a sluice, as shown on historic OS mapping.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Medium	441248	100549
WA4106	MWX63225	D	Beaulieu River	Wooden clinker built vessel, between 6 and 7m long. A heavy chain was apparent inside the vessel; possibly used to sink it.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Medium	441441	100769
WA4107	MWX63232	D	Beaulieu River	General alignment of seven(?) eroded wooden posts extending for around 15m and orientated N-S in the intertidal zone of a creek off the Beaulieu River.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Medium	441438	100659
WA4108	MWX63234	D	Beaulieu River	Alignment of nine short eroded wooden stakes positioned at the edge of the salt marsh along the bank for around 7m. Possibly functioned as revetment.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	441427	100597
WA4109	aMWX62033	D	Beaulieu River	A wooden structure thought to be the remains of a wreck, positioned in the centre of the channel.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Medium	441400	100590

WA4110	MWX63237	D	Beaulieu River	Alignment of five regularly spaced eroded wooden posts, positioned beside the seawall. Function is unknown, but possibly revetment.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	441387	100517
WA4111	MWX63238	D	Beaulieu River	A break in the seawall is visible with an alignment of regularly spaced posts extending from the edges of each section, although it is unknown whether, like the seawall, they extended the entire way across the saltmarsh.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Medium	441505	100418
WA4112	MWX63242	D	Beaulieu River	Several tall slightly eroded posts are visible in an area of the salt marsh thought to be either channel markers or a boundary line.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	441565	100433
WA4113	MWX63245	D	Gilbury Hard	Two rows of evenly spaced eroded wooden posts, extending through the intertidal zone and into the River Beaulieu. Remnants of jetty labelled as Gilbury Hard in historic OS mapping.	Post-Medieval	MON (13/12/2010)	Medium	Low	441561	100375

WA4114	MWX63249	D	Beaulieu River (Salterns Copse)	Wood and brick remnants are visible within St Marys Spring, thought to be either a sluice or crossing point. A roadway is visible on historic OS mapping at this location, so this feature may be related to this.	Post-Medieval - Modern	MON (13/12/2010)	Low	Low	441842	99641
WA4115	MWX63250	D	Beaulieu River (near Aldermoor)	Row of four heavily eroded posts present along the bank of a small channel, presumably as protective revetment.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	442020	99262
WA4116	MWX63305	D	Beaulieu River (Lower Exbury)	Alignment of wooden posts extending into the intertidal zone of the salt marsh, probably the extension of a land boundary present on land, visible on historic OS mapping.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	441982	99139
WA4117	MWX63303	D	Lower Exbury	Two rows of eroded wooden posts running from the shore and through the intertidal zone for around 30m. Remnants of a former jetty/landing stage.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	441850	98604
WA4118	MWX63301	D	Lower Exbury	Four heavily eroded wooden stakes are visible at the edge of a channel within the salt marsh. The stakes are around	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	442934	98555

				0.2m high and their function is unknown.						
WA4119	MWX63300	D	Lower Exbury	Numerous large upright posts are visible in a channel within the salt marsh area. The posts may be the remains of a former crossing point or sluice within the salt marsh, although there is no evidence of this on historic OS mapping.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Medium	442950	98528
WA4120	MWX63299	D	Inchmery	A regular alignment of eroded wooden posts extending through the foreshore to the edge of the salt marsh. The nine posts are the extension of a land boundary or groyne visible on historic OS mapping.	Post-Medieval - Modern	LINE (13/12/2010)	Medium	Low	443393	98614
WA4121	MWX63298	D	Inchmery	Unstratified large timber around 2.5m in length and 0.35m wide. The object comprises two original surfaces with damage and degradation apparent throughout the length. Three large iron bolts are visible in close proximity to one another. Fixed to their	Post-Medieval - Modern	MON (13/12/2010)	High	Medium	443605	98585

				ends are large square roves/washers. Possibly from a jetty structure, but could have also been part of a vessel.						
WA4122	MWx63297	D	Inchmery	A regular alignment of 16 eroded wooden posts visible extending through the foreshore and into the salt marsh. Appears to be a boundary line or groynes.	Post-Medieval - Modern	MON (13/12/2010)	High	Low	443664	98586
WA4123	MWX63296	D	Inchmery	An unstratified metal cylinder object located on the foreshore. The object has an attachment on its outer edge and is badly rusted. The origin of this object is unknown.	Post-Medieval - Modern	MON (13/12/2010)	High	Low	443763	98614
WA4124	MWX63295	D	Inchmery	A row of eight upright eroded wooden planks, situated almost flush to one another are visible in front of a large bank. Both features are running parallel to the shoreline and are above the high water mark. The wooden planks may have been revetment to protect the bank from	Post-Medieval - Modern	MON (13/12/2010)	Medium	Low	443826	98639

				coastal erosion.						
WA4125	MWX63294	D	Lepe	An unstratified rectangular stone measuring approximately 0.35m by 0.2m by 0.1m, located on the foreshore. Appears to be squared off and faced, although its function is unknown.	Post-Medieval - Modern	MON (13/12/2010)	High	Low	444223	98623
WA4126	MWX63292	D	Cadland Beach	Metal winch affixed to a concrete base positioned on Cadland Beach with winching cable still intact.	Post-Medieval - Modern	MON (13/12/2010)	Low	Low	447024	99839
WA4127	aMWX61824	D	Clobb Copse	Location of the former WWII Mulberry Harbour construction site at Clobb Copse.	Modern	MON (13/12/2010)	Low	Medium	441533	99570
WA4128	MWX62914	D	Bucklers Hard	A WWII slipway extending NW-SE down the slope into the River Beaulieu. The slipway comprises two parallel metal rails, approximately 3m apart with partially buried concrete sleepers in between. Metal chains are also	Modern	MON (13/12/2010)	Low	Low	441012	100092

				still visible on the slipway.						
WA4129	MWX62915	D	Bucklers Hard	Seven WWII mooring blocks (6 cylindrical and 1 square) with chain attachments in the centre on the top visible on the shore and in the water. They are around 1.5m in diameter/width and were presumably discarded after the war.	Modern	MON (13/12/2010)	Low	Low	441003	100109
WA4130	aMWX61199	D	Beaulieu River (near Keeping Marsh)	The wreck site of Minca 35. The tops of several timber frames are visible from the foreshore of the River Beaulieu.	Modern	MON (13/12/2010)	Medium	Low	441043	100770
WA4131	nMWX63291	D	Keeping	A complex wooden structure in the intertidal zone, entirely exposed at low tide and only partially submerged at high tide. Possibly a jetty, landing stage or cradle.	Modern	MON (13/12/2010)	High	Low	440664	100837
WA4132	nMWX63290	D	Beaulieu	Square squat pillbox with rectangular loopholes built of brick. Exterior is in good condition.	Modern	MON (13/12/2010)	Low	Low	438779	102267

WA4133	nMWX63289	D	Beaulieu	Pillbox later converted into a working building in Beaulieu, located beside the millpond. Appears to have been constructed to look like a two-storey building with a gabled roof. Rectangular loopholes were visible on two of the walls.	Modern	MON (13/12/2010)	Low	Low	438743	102304
WA4134	nMWX63288	D	Beaulieu River	Single row of wooden posts extending NE-SW into the salt marsh for approximately 30m. Possible boundary markers as shown on historic OS mapping.	Modern	MON (13/12/2010)	Medium	Low	441022	100319
WA4135	nMWX63287	D	Beaulieu River	Single row of wooden posts extending NW-SE into the salt marsh for approximately 30m. Possible extension of boundary line as shown on historic OS mapping.	Modern	MON (13/12/2010)	Medium	Low	441279	100581
WA4136	nMWX63286	D	Beaulieu River	Remains of a metal vessel, measuring around 9m long and with the engine still apparent inside.	Modern	MON (13/12/2010)	Medium	Medium	441431	100766
WA4137	nMWX63284	D	Beaulieu River	Remains of a floating jetty within a creek off the Beaulieu River. Two sections of wooden platforms are	Modern	MON (13/12/2010)	Medium	Medium	441420	100797

				attached to canisters to maintain buoyancy. The platforms measure around 5m by 2m.						
WA4138	nMWX63283	D	Beaulieu River	Four metal pontoons; two of which are attached by a metal frame. Possibly military in nature. Located in a creek off the Beaulieu River and measuring around 3m by 2m.	Modern	MON (13/12/2010)	Medium	Medium	441411	100812
WA4139	nMWX63282	D	Beaulieu River	Extremely rusty metal framework just beside the creek off the Beaulieu River. The visible portion of the feature measures around 2.5m by 2m, but the original function of the object is unknown.	Modern	MON (13/12/2010)	Low	Low	441526	100763
WA4140	nMWX63281	D	Beaulieu River	Metal wreck on the edge of a creek off the Beaulieu River, measuring approximately 10m long.	Modern	MON (13/12/2010)	Medium	Medium	441527	100739
WA4141	nMWX63280	D	Gilbury Hard	A wooden slipway is evident extending towards the River Beaulieu for around 6m, with a metal winch at the top. The slipway comprises two lengths of very worn wood around	Modern	MON (13/12/2010)	Medium	Low	441743	100296

				2m apart.						
WA4142	nMWX63279	D	Beaulieu River (south of Gilbury Hard)	Small red brick military building (2.2m by 2m) for the purpose of storing cordite during WWII.	Modern	MON (13/12/2010)	Low	Low	441747	100279
WA4143	aMWX61212	D	Beaulieu River (near Exbury)	Wooden (plywood) landing craft abandoned on the salt marsh after WWII. It is split into two sections but would have measured around 9m (30ft) in length. Engine parts are still apparent within the vessel.	Modern	MON (13/12/2010)	Low	High	441724	100048
WA4144	nMWX63278	D	Beaulieu River (Salterns Copse)	Numerous eroded wooden posts visible in a narrow inlet between two dry sections of salt marsh, thought to be either a crossing point or a sluice.	Post-Medieval - Modern	MON (13/12/2010)	Medium	Medium	441786	99629

<p>WA4145</p>	<p>aMWX60793</p>	<p>D</p>	<p>Lower Exbury</p>	<p>Remains of a wooden and metal hull on the foreshore at Quay, lying E-W (stern-bow) and measuring 18m in length. The vessel has an iron sheathed lower transom stern, with a possible attachment for a propeller. A metal winch is visible on the interior, toward the bow. The vessel has flush outer planking, and the timber assemblage is predominately fastened by iron nails and bolts. At the bow and stern single floor and side frames are present, but towards the midship they are double frames attached with iron cross bolts. Iron knees are also present. The upright starboard side is intact up to around three planks below the gunwale. Timbers appear to have been stripped for possible re-use.</p>	<p>Modern</p>	<p>MON (13/12/2010)</p>	<p>Medium</p>	<p>Medium</p>	<p>443059</p>	<p>98651</p>
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WA4146	nMWX63277	D	Quay	A line of modern sea defence comprising large sections of concrete irregularly arranged, protecting the road to the north. Sections of concrete thought to be from a dismantled pillbox are also visible throughout the sea defence.	Modern	MON (13/12/2010)	Medium	Low	443238	98663
WA4147	nMWX63276	D	Inchmery	Small sections of unstratified WWII beach hardening mats visible on the foreshore.	Modern	MON (13/12/2010)	High	Low	444128	98632
WA4148	nMWX63265	D	Lepe	Modern sea defence located at the eastern end of a line of modern groynes. The feature appears to be a pile and scatterings of broken slabs of concrete, covering an area of 5m by 5m.	Modern	MON (13/12/2010)	High	Low	444349	98623
WA4149	nMWX63264	D	Lepe	Two unstratified sections of mortared brick in the foreshore, measuring 1m by 0.45m and 1m by 0.2m. Presumably WWII in origin.	Modern	MON (13/12/2010)	High	Low	444372	98625
WA4150	nMWX63274	D	Lepe	Remains of a red brick wall facing the water and built directly in front of the sea bank. Possibly associated with the	Modern	MON (13/12/2010)	Low	Low	444837	98606

				WWII embarkation hard at this site.						
WA4151	nMWX63273	D	Lepe	Linear earthworks are visible that are thought to be part of the WWII battery situated on the cliff top.	Modern	MON (13/12/2010)	Low	Low	445698	98553
WA4152	nMWX63272	D	Lepe	Concrete feature that appears to have been eroded off the cliff top, leaving only part of a concrete floor. Likely to be associated with the WWII battery located here.	Modern	MON (13/12/2010)	Medium	Low	445782	98536
WA4153	aMWX61731	D	Stone Point	Square concrete and steel platform (4m by 4m) associated with the WWII landing point.	Modern	LINE (13/12/2010)	Medium	Medium	446364	98645
WA4154	aMWX61729	D	Stone Point	Disarticulated concrete slipway with steel strips, associated with the WWII landing point in the area.	Modern	MON (13/12/2010)	Medium	Low	446455	98681
WA4155	aMWX61731	D	Stone Point	Area of concrete with iron shuttering on the seaward side, associated with the WWII landing area.	Modern	MON (13/12/2010)	Medium	Low	446450	98684
WA4156	aMWX61731	D	Stone Point	A length of concrete with a metal edge on the seaward side is visible running along	Modern	MON (13/12/2010)	Low	Low	446479	98734

				the shoreline for approximately 13m. The western extent of the feature was buried beneath the shingle.						
WA4157	aMWX61728	D	Stansore Point	Two WWII standing 'dolphins' are visible off the coast with concrete remains of a pier and hardening mats along the shore. They are associated with Mulberry Harbour construction site located here and were part of pier head used to load vessels.	Modern	MON (13/12/2010)	Medium	Medium	446570	98798
WA4158	nMWX63269	D	Stansore Point	Large rectangular concrete hard standings are visible on grassland adjacent to the shore. Part of the WWII military site recorded in this area.	Modern	MON (13/12/2010)	Low	Low	446535	98832
WA4159	nMWX63271	D	Stansore Point	Two large metal bollards associated with the WWII embarkation jetty.	Modern	MON (13/12/2010)	Medium	Low	446558	98849
WA4160	aMWX61727	D	Stansore Point	Area of WWII military activity associated with the embarkation jetty. Two rectangular concrete hard standings (2.2m by 1m), each with two heavily rusted metal attachments on top, are situated leading	Modern	MON (13/12/2010)	Medium	Medium	446562	98844

				towards the shoreline. A pipe is visible to their west extending from a square concrete structure (1m by 1m by 1m) towards the shoreline. Sections of unstratified concrete beach hardening mats are visible throughout this area.						
WA4161	nMWX63270	D	Stansore Point	A concrete slipway is visible extending into the water for around 10m. The slipway is 2.5m wide and is likely to be associated with the WWII embarkation jetty situated in this area.	Modern	MON (13/12/2010)	High	Low	446562	98859
WA4162	nMWX63268	D	Stansore Point	A circular, brick constructed base for a water tower, approximately 6m in diameter and 1.5m high. Part of the WWII military site associated with the mulberry harbour constructions.	Modern	MON (13/12/2010)	Low	Low	446534	98883
WA4163	aMWX61726	D	Stansore Point	The remains of the WWII slipways, anchoring positions, winching gear bases, trigger release gear sites and construction platforms associated with the building and	Modern	MON (13/12/2010)	High	Medium	446628	99022

				launching of the caissons. The features are all constructed using brick, concrete and metal, and cover an area of around 400m by 20m.						
WA4164	nMWX63263	D	Cadland Beach	Heavily rusted and broken metal structure with a circular hole on one side. Unknown function, but possibly of a military nature.	Modern	MON (13/12/2010)	Low	Low	447084	99891
WA4165	nMWX63261	D	Cadland Beach	Metal and concrete structure, partially buried under the shingle. The structure has a metal framework with a thin covering of concrete on the top, and measures 1m by 0.4m by 0.4m. Unknown function, but possibly of a military nature.	Modern	MON (13/12/2010)	Low	Low	447126	99965
WA4166	nMWX63260	D	Stanswood Bay	A concrete hard standing providing access to the water, with a metal winch at its landward extent. Part of a boat house and landing stage visible on historic OS mapping.	Modern	MON (13/12/2010)	Low	Low	447662	100851

WA4167	nMWX63257	D	Stanswood Bay	Concrete hard standing suffering damage from coastal erosion. Part of a road way and possible structure visible between the boat house to the west and Eaglehurst.	Modern	MON (13/12/2010)	High	Low	447686	100877
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Coastal Stretch E

WA No.	MonUID	Coastal Stretch	Area	Name/Description	Period	Source References/ Accession Date	Vulnerability	Significance	Easting (BNG)	Northing (BNG)
WA5001	nMWX62927	E	Fawley	Two oak planks situated on the southern bank of Ower Lake, southeast of Fawley Power Station. One appears to be split in two, with an approximate length of 0.5m and a width of 0.35m. The second is partially buried under sediment. The function of these timbers is unknown.	Medieval - Post-Medieval	MON (14/12/2010)	High	Medium	447955	102208
WA5002	nMWX62904	E	Cadland Creek	Series of banks and ditches situated in woodland north of Cadland Creek possibly the remains of several track-ways throughout wood associated with the original Cadland House that was built	Medieval - Post-Medieval	MON (14/12/2010)	Low	Medium	444658	105693

				here. The earthworks are visible on OS historic mapping and may have been used to reach the foreshore.						
WA5003	nMWX62898	E	Cadland Creek	A square depression located within a area of copse. Measuring approximately 0.4m in depth and around 3.5m in width. The function of the depression is unknown, but it is certainly man made.	Medieval - Post-Medieval	MON (14/12/2010)	Low	Low	444564	105793
WA5004	nMWX62896	E	Cadland Creek	Banking and ditches of the northern boundary of Lammas Wood, visible in OS historic mapping from 1870. The banking extends from the coast with a modern gate at the end.	Medieval - Post-Medieval	LINE (14/12/2010)	Low	Low	444537	105818
WA5005	nMWX62944	E	Langdown	Find spot of a shard of pottery, found on the foreshore, and interpreted as slipware from the 17th century or early 18th century.	Medieval - Post-Medieval	MON (14/12/2010)	Recovered find	High	443998	106621
WA5006	nMWX62892	E	Langdown	A small section of timber revetment, constructed of slender sunken posts with bracing planking at the embankment for a narrow channel about 1m wide. It is possibly part of a wider network	Medieval - Post-Medieval	MON (14/12/2010)	Medium	High	443386	106956

				of drainage channels, revetments, weirs and sluice's for a small scale saltern industry on the shoreline of the Sylvan Villa estate.						
WA5007	nMWX62891	E	Langdown	A well constructed metre wide drainage tunnel, with neat brickwork that approximately extends for 10m, bridging an area for saltern industry with a shoreline footpath. It is possibly part of a wider network of drainage channels, revetments, weirs and sluice for a small scale saltern industry on the shoreline of the Sylvan Villa estate.	Medieval - Post-Medieval	MON (14/12/2010)	Medium	High	443377	106957

<p>WA5008</p>	<p>nMWX62889</p>	<p>E</p>	<p>Langdown</p>	<p>Numerous eroded wooden posts in a coherent structure across a channel, functioning as a sluice. There are a large quantity of timbers used as sunken posts, staves and inner planking for both the revetment around the banking, and within the sluice structure. Some appear to be sawn and some cut with other tools such as axes. There is also an out lying section of revetment that is constructed differently, with closely spaced sunken posts, neatly sawn, and inner planking (only slightly visible), possibly illustrating a different function or differing phase (possibly extension). The sluice, approximately 3m wide, may have contained three lines of drainage gates, with the timber structures possibly part of a much wider network of drainage systems for a small saltern industry that covered an area close to the shoreline of 90m by 32m and possibly connected to</p>	<p>Medieval - Post-Medieval</p>	<p>MON (14/12/2010)</p>	<p>Medium</p>	<p>High</p>	<p>443417</p>	<p>106991</p>
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				the Sylvan Villa.						
WA5009	nMWX62884	E	Hythe	An alignment of eroded wooden posts along the foreshore at Hythe. The linear stretch of sunken timber posts is around 60m in length and runs adjacent to the shoreline. There are horizontal elements present, and what appears to be the upper edges of plank like timbers on the seaward side of the posts. Possible revetment of landing stage.	Medieval - Post-Medieval	LINE (14/12/2010)	High	High	442333	108189
WA5010	nMWX62874	E	Eling	Find spot of burnt flint and a piece of broken	Medieval - Post-	MON (14/12/2010)	Medium	Medium	436861	112536

				clay pipe.	Medieval					
WA5011	nMWX63008	E	Fawley	Row of stakes on the southern bank of Cadland Creek.	Unknown	MON (15/12/2010)	High	Low	445661	105343
WA5012	nMWX63009	E	Cadland Creek	Wooden posts, possibly part of a timber revetment or sluice, in the intertidal mud north of Cadland Creek.	Unknown	MON (15/12/2010)	High	High	445286	105683
WA5013	nMWX63010	E	Cadland Creek	Wooden stakes, possibly part of a timber revetment or sluice, in the intertidal mud north of Cadland Creek.	Unknown	MON (15/12/2010)	High	High	445042	105805
WA5014	nMWX63011	E	Cadland Creek	Wooden posts, possibly part of a timber revetment or sluice, in the intertidal mud north of Cadland Creek.	Unknown	MON (15/12/2010)	High	High	444876	105962
WA5015	nMWX63012	E	Langdown	Wooden post, possibly part of a timber revetment or sluice, north of Cadland Creek.	Unknown	MON (15/12/2010)	High	High	444303	106314
WA5016	nMWX63013	E	Langdown	Wooden post, possibly part of a timber revetment or sluice, north of Cadland Creek.	Unknown	MON (15/12/2010)	High	High	444242	106342
WA5017	nMWX63013	E	Langdown	Wooden post, possibly part of a timber revetment or sluice, at Langdown.	Unknown	MON (15/12/2010)	High	High	443823	106807
WA5018	nMWX63016	E	Langdown	Wooden post, possibly part of a timber revetment or sluice, at Langdown.	Unknown	MON (15/12/2010)	High	High	443794	106888
WA5019	nMWX63018	E	Langdown	Wooden post, possibly part of a timber	Unknown	MON (15/12/2010)	High	High	443485	107182

				revetment or sluice at Langdown.						
WA5020	nMWX63020	E	Bury Marsh	Wooden post, possibly revetment on the foreshore of Bury Farm.	Unknown	MON (15/12/2010)	High	Medium	438113	111651
WA5021	nMWX63028	E	Bury Marsh	Wooden posts, possibly revetment on the foreshore of Bury Farm.	Unknown	MON (15/12/2010)	High	Medium	437947	111699
WA5022	nMWX63030	E	Bury Marsh	Possible revetment, consisting of a series of stakes, on the foreshore of Bury Farm.	Unknown	MON (15/12/2010)	High	Medium	437846	111685
WA5023	nMWX63032	E	Bury Marsh	Line of wooden posts, possibly revetment on the foreshore of Bury Farm.	Unknown	MON (15/12/2010)	High	Medium	437732	111763
WA5024	nMWX62863	E	Eling	An unstratified pipe stem and spoon were found on the salt marsh at Eling. The teaspoon is 12.5cm in length, and the fragment of pipe stem is exactly 40mm in length with an external diameter of 8mm, with the original end intact. The internal suction hole is 2mm in diameter.	Unknown	MON (14/12/2010)	Recovered find	Low	436796	113173
WA5025	nMWX62875	E	Eling	A sequence of linear ridges is visible within the cut lawn of a recreational field. They are visible on Google Earth, appearing as a sequence of nine straight lines and extend for over 100m in places. Possible cultivation furrows.	Unknown	MON (14/12/2010)	Low	Medium	436845	112503

WA5026	nMWX62919	E	Fawley	A cast Iron display cannon at Fawley Oil Refinery, believed to be from the 16 th or 17 th century, but the origin is unknown. It is approximately 1.80m in length. No dolphins are apparent, but it does have a bulbous muzzle. It was recovered during Esso dredging of the Nab Shoal.	Post-Medieval	MON (14/12/2010)	Low	Medium	445580	103683
WA5027	nMWX62905	E	Cadland Creek	A length of disused iron railings and a gate deposited on the woodland floor at southern edge of Lammas Wood, as the probable boundary for the original Cadland House that was built here. They are also associated with the raised track/road ways that ran through the wood.	Post-Medieval	MON (15/12/2010)	Low	Medium	444793	105559
WA5028	nMWX62945	E	Langdown	Shard of pottery, 20cm by 8cm, found on the foreshore, and interpreted as English stoneware, probably from Nottinghamshire, with distinctive roulette decoration from the 18th century.	Post-Medieval	MON (14/12/2010)	Recovered find	High	444143	106563

WA5029	nMWX62929	E	Calshot	Wooden revetment situated at the western foot of Calshot Spit. Constructed of a series of closely spaced timber posts, around 0.3m apart, sunken into the sediment at an angle, most appear to be rough out, with axe cut ends. The structure may have provided protection from encroaching tides. Some modern posts are also visible, possibly repair/strengthening of the revetment.	Post-Medieval - Modern	LINE (14/12/2010)	Medium	Low	448508	101830
WA5030	aMWX62285	E	Ashlett	Possible remnants of cultivation earthworks or the result of post-medieval drainage visible in three discrete areas. The banks are all orientated NW-SE and are around 1m wide and 5m long.	Post-Medieval - Modern	MON (14/12/2010)	Low	Low	446653	103015
WA5031	nMWX62921	E	Ashlett	Three wooden beams protruding from underneath two phases of modern concrete, possibly part of Victoria Quay at Ashlett, visible on historic OS mapping.	Post-Medieval - Modern	MON (14/12/2010)	Low	High	446626	103249

WA5032	nMWX62920	E	Fawley	A linear formation of sunken, roughly vertical timbers, possibly part of a small 19th century quay and sluice for salt making, visible on historic OS mapping. The area the feature covers is roughly 17m by 13m, with four rows of some 14 timbers, all of which appear to have sawn ends and converted into round timber.	Post-Medieval - Modern	MON (14/12/2010)	High	High	446559	103830
WA5033	nMWX62911	E	Fawley	Remains of a timber revetment or sluice at Cadland Creek, besides a large outflow pipe from the adjacent refinery. The structure contains approximately 20 sunken posts and a traverse plank is slightly visible, all of which appear to be quarter sawn in conversion and clearly stopped at the end with a saw. It may well form part of a structure that directed the course of the creek, for the purpose of a landing stage (see MWX62908) to the north, or possibly linked to a sluice recorded in OS historic mapping, possibly for the	Post-Medieval - Modern	MON (14/12/2010)	High	Medium	445158	105124

				purposes of Cadland Quay.						
WA5034	nMWX62908	E	Cadland Creek	Two lines of vertical posts bracing an internal rock structure, possibly a section of a landing stage at the southern end of Cadland Creek, as visible on historic mapping.	Post-Medieval - Modern	MON (14/12/2010)	High	Medium	445140	105231
WA5035	nMWX63033	E	Langdown	Unknown metal object, at Langdown.	Post-Medieval - Modern	MON (15/12/2010)	High	High	443656	107003
WA5036	nMWX63037	E	Langdown	Unknown metal object at Langdown.	Post-Medieval - Modern	MON (15/12/2010)	High	High	443584	107042

<p>WA5037</p>	<p>nMWX62886</p>	<p>E</p>	<p>Hythe</p>	<p>Steel and timber structure, possibly a jetty or mooring post and slipway, at Hythe Quay. The Hythe Quay Slipway is approximately 75m in length. The concrete section attached to the quay is about 16.5m in length and 6.8m wide. The timber remains that stretch out to sea are only partially evident over the next 35m, with more substantial remains, of traverse slabs of concrete, for the last 21.6m, where it also widens to some 9m. In this area on the southern side, two large vertical posts are positioned, and may be original mooring posts. Attached to the southern side of the Hythe Quay, the mooring jetty is constructed of large timber uprights, approximately 3.5m high, and a platform of iron frames and beams, 3m by 8m, with timber planking covering in only a small area, the structure is no longer functional and is unsafe to walk on.</p>	<p>Post-Medieval - Modern</p>	<p>MON (14/12/2010)</p>	<p>High</p>	<p>Medium</p>	<p>442386</p>	<p>108147</p>
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<p>WA5038</p>	<p>aMWX25758</p>	<p>E</p>	<p>Eling</p>	<p>The sea bank adjacent to the brickworks contained numerous fragments of brick clearly visible within layered stratigraphy. There was also debris of fragmentary bricks along the beach. Much of the brick was rubble and predominately manufactured by machine, extruded from presses, in order to save weight. There are also a number of queen closer brick fragments, also indicating post war date and were possibly dumped or discarded. There are also a number of broken fragmentary pieces within the beach, rounded by years of tidal flow. Four wooden posts were also observed along with metal fixing rods. The remains of the southerly most post is larger and looks to be cut in a block fashion. The formation of posts, metal rods and brick debitage suggest this area may have been used as a platform or jetty associated with the brickworks.</p>	<p>Post-Medieval - Modern</p>	<p>MON (14/12/2010)</p>	<p>High</p>	<p>High</p>	<p>437515</p>	<p>111977</p>
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WA5039	nMWX63039	E	Eling	Line of posts south of Eling, possible a jetty.	Post-Medieval - Modern	MON (15/12/2010)	High	Medium	437139	112288
WA5040	nMWX63042	E	Eling	Wooden posts along the foreshore, possibly channel markers.	Post-Medieval - Modern	MON (15/12/2010)	High	Medium	437004	112410
WA5041	nMWX63044	E	Eling	Line of wooden posts along the foreshore, possibly channel markers.	Post-Medieval - Modern	MON (15/12/2010)	High	Medium	436969	112432
WA5042	nMWX62873	E	Eling	Two wooden posts visible buried beneath the shingle on the beach. The two posts are thought to be associated, but their function is unknown.	Post-Medieval - Modern	MON (14/12/2010)	High	Low	436820	112531
WA5043	nMWX63046	E	Eling	Wooden posts along the foreshore, possibly channel markers.	Post-Medieval - Modern	MON (15/12/2010)	High	Medium	436878	112646
WA5044	nMWX63047	E	Eling	Wooden posts along the foreshore, possibly channel markers.	Post-Medieval - Modern	MON (15/12/2010)	High	Medium	436752	112625
WA5045	nMWX62923	E	Ashlett	Wooden bank revetment extending for approximately 80m, consisting of a line of crudely converted timber posts along the bank east of Ashlett. The timbers are sunk into the mud at angle toward the bank of around 70°. Many are in a deteriorated state and appear to be roughly cut at the end. They may have been used as protective revetment to	Post-Medieval - Modern	LINE (14/12/2010)	High	Medium	446907	103239

				prevent flooding of the salt-works inshore.						
WA5046	nMWX62895	E	Langdown	An earthwork bank visible along the foreshore that encloses a boundary of a copse, also visible on historic OS mapping from 1870 onwards.	Post-Medieval - Modern	LINE (14/12/2010)	Low	Low	443465	106838
WA5047	nMWX62928	E	Calshot	Various pieces of metal debris situated on the bank of an inlet, southeast of Ower Creek mouth, and southeast of Fawley Power Station.	Modern	MON (14/12/2010)	High	Low	448288	102046
WA5048	nMWX62926	E	Fawley	Small wooden dingy, situated on the southern bank of Ower Lake. Much of the vessel is intact with approximate dimensions of 2.5m in length with a beam of 1.2m (the bow is slightly buried). Possibly used for transiting too and from the shore to a larger yacht.	Modern	MON (14/12/2010)	High	Low	447972	102231
WA5049	nMWX62925	E	Fawley	A piece of twisted metal debris with cord attached, on the northern bank of Ower	Modern	MON (14/12/2010)	High	Low	447915	102252

				Lake. Function is unknown.						
WA5050	nMWX62924	E	Fawley	General debris on the foreshore at Fawley, comprising metal, plastic, rope and pottery. Origin of the debris is unknown.	Modern	MON (14/12/2010)	High	Low	447725	102473
WA5051	aMWX61192	E	Ashlett	Remains of a wooden barge located in the intertidal area at Ashlett. The vessel is between 10m and 15m long and is in a deteriorated state. There are remains of metal fittings on the interior and the wooden rudder is still intact.	Modern	MON (14/12/2010)	High	Medium	446937	103201
WA5052	nMWX62922	E	Ashlett	Hollow log drainage pipe, beside a modern drainage outward flow pipe at Ashlett Quay landing stage. Protruding from the bank for around 0.5m, with a diameter of 0.3m and a hollow diameter of around 0.25m. In relatively good condition and possibly oak.	Modern	MON (14/12/2010)	High	Low	446630	103205

WA5053	nMWX62918	E	Fawley	Tram tracks leading from the mainline track system through Fawley Oil Refinery to a disused pier south of the tanker terminals. The tracks are 0.6m apart. Much of the track has been removed and the pier appears to be in a relatively dilapidated condition. It may have been used to transport goods from the sea directly to the Oil Refinery, as recorded on OS historic mapping.	Modern	LINE (14/12/2010)	Low	Low	446874	104400
WA5054	nMWX62917	E	Fawley	A corrugated metal revetment situated on the intertidal shoreline directly between the two oil refinery shipping terminals. Approximately 8m long and protruding from the sand around 0.5m, the iron seems to be relatively stable. May have a military origin or was used by the Oil Refinery to aid land reclamation.	Modern	LINE (14/12/2010)	Low	Low	446704	104641
WA5055	nMWX63048	E	Fawley	Debris of material along the beach including glass, pottery and bone.	Modern	LINE (13/12/2010)	Medium	Low	446262	105221

WA5056	nMWX62913	E	Fawley	Metal and wooden structure with two associated large pipes on foreshore. The pipes are possibly outward flowing, and could be removing water from inland either from agricultural or industrial land, such as the oil refinery. If they are temporary WWII fixtures they may have a connection to the network of drainage ditches visible in military aerial photographs (see MWX62204).	Modern	MON (14/12/2010)	Medium	Low	446208	105268
WA5057	nMWX62946	E	Fawley	Three pottery shards found on the foreshore south of Cadland Creek. The pottery shards have been interpreted as pieces of 19th or early 20th century refined white wares. One shard has the Frank Cooper marmalade company brand, which was founded in 1874, and still survives today. Another shard is a straight sided jar typical of the later 19th or early 20th century. The third is associated with The Royal Mail Steam Packet Company, which was founded in 1839,	Modern	MON (14/12/2010)	Recovered find	Low	446109	105305

				and lasted until 1982.						
WA5058	nMWX62913	E	Fawley	Two large metal pipes together with a timber structure are apparent to the south east of Cadland Creek. The two pipes appear to be made of iron and are heavily corroded. They are approximately 1m apart, extend 3m into the water and are about 0.7m in diameter. The timber structure inland of the pipes is constructed of ten vertical posts, with one visible traverse plank. Possibly built as a revetment for the raised shoreline bank.	Modern	MON (14/12/2010)	Medium	Low	445924	105361
WA5059	nMWX62887	E	Hythe	Three sided sloped concrete slipway, 35m by 57m. It is not visible through any OS historic mapping, and may be associated to the formation of the Hovercraft Development Company in 1960 at The	Modern	MON (14/12/2010)	High	Low	442659	107891

				Grove, on St John's Street.						
WA5060	nMWX62885	E	Hythe	The remains of what appears to be an iron track-way that runs adjacent to the quay wall. It was at one time fixed into the cement of the quay, and positioned timber posts with traverse sleepers, but the iron rails have since corroded and been heavily damaged, and the timber has deteriorated. The rails are of I-shape in cross-section. A pair of wheels, still attached to the straight axle, was also discovered beside the rails. The wheel axle has a width of 1.5m, with no internal groove and is slightly corroded.	Modern	MON (14/12/2010)	High	Medium	442373	108164
WA5061	nMWX62883	E	Hythe	Unstratified position of masonry brickwork and concrete remains, discovered on the intertidal beach north of Hythe Marina. Approximately 1m across, and 0.5m high, it is predominantly constructed of queen's	Modern	MON (14/12/2010)	High	Low	442051	108969

				brickwork. Its origin may be associated to WWII coastal structures.						
WA5062	nMWX62882	E	Hythe	A large worked timber lying on the beach at Hythe. It is possibly oak, approximately 4m in length, 0.3m in width and has a thickness of 0.3m. It is in a reasonable condition with some internal cracks and edges rounded by motion and wave action. On the underside four mortise's approximately 0.3m wide have been cut, for crossbeams or planks, with a central fasten holes for large bolts. At the northern end these bolts are still <i>in situ</i> , with a rove/washer. The opposite side has much more extended mortises for an unknown function. This timber is possibly connected to the pier/jetty to the north.	Modern	MON (14/12/2010)	High	High	441722	109178
WA5063	nMWX62881	E	Hythe	Remnants of a pier that is visible on 1965-70 OS mapping. A large wooden post is visible to the north, and the	Modern	MON (14/12/2010)	Medium	Low	441709	109212

				remains of another one to south; thought to be possibly associated.						
WA5064	nMWX62951	E	Marchwood	Northern extent of Beetle 1. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441293	109759
WA5065	nMWX62952	E	Marchwood	Northern extent of Beetle 2. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port.	Modern	MON (15/12/2010)	High	High	441300	109749

				There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5066	MWX62953	E	Marchwood	Northern extent of Beetle 3. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441307	109740

<p>WA5067</p>	<p>nMWX62954</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 4. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441315</p>	<p>109729</p>
<p>WA5068</p>	<p>nMWX62949</p>	<p>E</p>	<p>Marchwood</p>	<p>Lying parallel to the shingle bank on the foreshore of Dibden Bay is a WWII landing stage. A structural frame of concrete and iron, the floating platform is hollow, with a length of around 25.5m and a beam of 7.6m. Externally there are a number of bollard, cleats and mooring points. It possibly performed within many other platforms to form a Mulberry Harbour.</p>	<p>Modern</p>	<p>LINE (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441329</p>	<p>109726</p>

WA5069	MWX62955	E	Marchwood	Northern extent of Beetle 5. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441353	109677
WA5070	nMWX62956	E	Marchwood	Northern extent of Beetle 6. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast	Modern	MON (15/12/2010)	High	High	441362	109665

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5071	nMWX62957	E	Marchwood	Northern extent of Beetle 7. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441371	109657

<p>WA5072</p>	<p>nMWX62958</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 8. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441376</p>	<p>109646</p>
<p>WA5073</p>	<p>nMWX62960</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 9. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441384</p>	<p>109635</p>

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5074	nMWX62962	E	Marchwood	Northern extent of Beetle 10. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441392	109624

WA5075	nMWX62963	E	Marchwood	Northern extent of Beetle 11. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441401	109613
WA5076	nMWX62966	E	Marchwood	Northern extent of Beetle 12. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast	Modern	MON (15/12/2010)	High	High	441407	109604

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5077	nMWX62970	E	Marchwood	Northern extent of Beetle 13. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441413	109596

WA5078	nMWX62979	E	Marchwood	Northern extent of Beetle 14. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441422	109582
WA5079	nMWX62980	E	Marchwood	Northern extent of Beetle 15. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast	Modern	MON (15/12/2010)	High	High	441429	109572

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5080	nMWX62982	E	Marchwood	Northern extent of Beetle 16. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441437	109561

<p>WA5081</p>	<p>nMWX62985</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 17. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441445</p>	<p>109552</p>
<p>WA5082</p>	<p>nMWX62987</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 18. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441453</p>	<p>109540</p>

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5083	nMWX62988	E	Marchwood	Northern extent of Beetle 19. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441458	109531

WA5084	nMWX62989	E	Marchwood	Northern extent of Beetle 20. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441468	109522
WA5085	nMWX62990	E	Marchwood	Northern extent of Beetle 21. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast	Modern	MON (15/12/2010)	High	High	441476	109510

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5086	nMWX62991	E	Marchwood	Northern extent of Beetle 22. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441485	109503

<p>WA5087</p>	<p>nMWX62993</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 23. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441492</p>	<p>109491</p>
<p>WA5088</p>	<p>nMWX62994</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 24. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441499</p>	<p>109481</p>

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5089	nMWX62995	E	Marchwood	Northern extent of Beetle 25. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441506	109469

<p>WA5090</p>	<p>nMWX62996</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 26. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441515</p>	<p>109458</p>
<p>WA5091</p>	<p>nMWX62997</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 27. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441524</p>	<p>109448</p>

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5092	nMWX62998	E	Marchwood	Northern extent of Beetle 28. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441530	109438

<p>WA5093</p>	<p>nMWX63001</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 29. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441537</p>	<p>109426</p>
<p>WA5094</p>	<p>nMWX63003</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 30. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441544</p>	<p>109416</p>

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5095	nMWX63004	E	Marchwood	Northern extent of Beetle 31. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441552	109406

<p>WA5096</p>	<p>nMWX63005</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 32. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441560</p>	<p>109396</p>
<p>WA5097</p>	<p>nMWX63006</p>	<p>E</p>	<p>Marchwood</p>	<p>Northern extent of Beetle 33. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441568</p>	<p>109386</p>

				from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.						
WA5098	nMWX63007	E	Marchwood	Northern extent of Beetle 34. Originally functioned as a floating pontoon on which roadways (whales) were laid across extending into deeper water to temporary pier heads (spuds). Thought to have been constructed at what is now Marchwood Military Port. There are 34 beetles present along the shoreline at Dibden Bay, deliberately deposited there to protect the coast from further erosion. The approximate dimension of a Beetle is 12.2m long, 4.2m wide and a draught of 1.4m.	Modern	MON (15/12/2010)	High	High	441577	109374

<p>WA5099</p>	<p>nMWX62948</p>	<p>E</p>	<p>Marchwood</p>	<p>Wooden hulk, heavily heeled over on its keel to starboard, with the bow orientated up river on the foreshore of Dibden Bay. The approximate dimensions of the vessel are 24m long, a beam of 7.5m. Much of the vessel is intact, especially along the portside and at the port bow with the gunwale still evident. The vessel's hull is constructed in a flush planking (carvel) tradition that are fastened to internal traverse frames with iron nails (probably with a 16mm shank). The vessel appears to be tethered to shore with an iron cord.</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>Medium</p>	<p>441277</p>	<p>109796</p>
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<p>WA5100</p>	<p>nMWX62947</p>	<p>E</p>	<p>Marchwood</p>	<p>Wreck of a landing platform or barge type vessel, approximately 23.4m in length, with a beam 7.5m, deposited at Dibden Bay. The vessel appears to be orientated bow first down the river with the starboard side entrenched and stuck into the bank. Much of the internal structure is vacant, illustrating the vessel's functional nature for transporting raw materials, or as a basic structural floatation device. The portside up to the gunwale remains intact, with a number of rope hoops in place along the upper edge. It also appears to be riveted together, rather than welded, possibly suggesting a date of construction earlier in the 20th century. Possibly associated with the Floating Harbour site.</p>	<p>Modern</p>	<p>MON (15/12/2010)</p>	<p>High</p>	<p>High</p>	<p>441194</p>	<p>109903</p>
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WA5101	nMWX62879	E	Southampton Water	A metal wreck in Southampton Water, near Dibden Bay. It is possibly a hopper barge, approximately 40m in length and 7m in width at midships, with curved bow and stern, and six compartments in the hold (3m by 5m). There appears to be a small rudder head visible above the waterline indicating the orientation of the vessel as pointing up river, bow first.	Modern	MON (15/12/2010)	High	High	441250	110120
WA5102	nMWX62880	E	Southampton Water	A metal structure within Southampton Water. Thought to be the remains of a WWII bridge/roadway placed on the floating pontoons (beetles) that are visible on the foreshore at Dibden Bay. Possibly a 'Whale'.	Modern	MON (15/12/2010)	High	High	441223	110169
WA5103	nMWX62943	E	Marchwood	Collection of enormous cylindrical concrete and metal structures found on the foreshore south of Marchwood Port. Possibly either used as beach defences during WWII or are associated with the Mulberry Harbour components that were constructed here.	Modern	MON (15/12/2010)	High	Medium	440996	110174

WA5104	nMWX62932	E	Marchwood	Two windows (loopholes) originally from pillbox structures, observed on the foreshore. Possibly identifying the site of a demolished pillbox, or it is likely that demolished structures were reused as modern flood defence features.	Modern	MON (15/12/2010)	High	Medium	440915	110283
WA5105	nMWX62933	E	Marchwood	A series of two vertical wooden posts, approximately 3-4m high and separated by a space of 3m, with traverse planks fastened to them and with a metal supporting structure. They run parallel to the line the beach for some 280m at regular intervals of around 25m. Some are in a better condition than others. Their ultimate function is unclear, however they may well have been constructed during WWII as a platform area in association with the Mulberry Harbour prior to the invasion of Europe.	Modern	MON (15/12/2010)	High	High	440862	110353
WA5106	nMWX62937	E	Marchwood	Large pieces of metal debris, in two parallel deposits 2m apart and 4.5m long. They appear to be from a much larger	Modern	MON (15/12/2010)	High	Medium	440886	110336

				structure, and have what appear to be cross foot holds (as a ladder).						
WA5107	nMWX62931	E	Marchwood	Concrete slipway providing access onto the beach. It is in good condition at the top but deteriorates toward the sea. Probably WWII in date and is associated with the Floating Harbour site along this stretch of the beach.	Modern	MON (15/12/2010)	High	Low	440868	110345
WA5108	nMWX62936	E	Marchwood	Unstratified piece of timber with copper rivets, discovered on the foreshore south of Marchwood Port. Possibly part of a small working vessel, the timber is approximately 1.8m in length and 0.2m in width, with copper tacks evenly and alternately spaced, on both the upper and lower edge, inserted from the same direction. Another attached timber of a similar width is fastened 1/3 along the length. The grain is wavy and appears not to be oak.	Modern	MON (15/12/2010)	High	High	440861	110356

WA5109	nMWX62939	E	Marchwood	A large concrete and metal anchoring feature discovered on the foreshore south of Marchwood Port. The entire concrete object is approximately 1.3m in diameter. The large 1m D-shaped iron hoop is imbedded into the concrete, on to which iron cord is fastened. Thought to be associated with the WWII Floating Harbour site.	Modern	MON (15/12/2010)	High	Medium	440860	110359
WA5110	nMWX62938	E	Marchwood	One of four iron plates with rivets and holes. It is roughly 5m in length, and 0.4m wide, and has an unknown function although is likely to be associated with the WWII Floating Harbour.	Modern	MON (15/12/2010)	High	Medium	440858	110359
WA5111	nMWX62934	E	Marchwood	An unstratified square metal framed object filled with concrete, and a central hole. Its function is unknown, but is likely to be associated with the WWII Floating Harbour.	Modern	MON (15/12/2010)	High	Medium	440857	110365
WA5112	nMWX62935	E	Marchwood	Metal bollard, associated with the WWII Floating Harbour Site.	Modern	MON (15/12/2010)	High	Low	440850	110369

WA5113	nMWX62940	E	Marchwood	One metre wide metal and concrete slab with removable circle feature discovered on the foreshore south of Marchwood Port. This feature is part of the structure of the beetles, seen <i>in situ</i> further along the coastline. It may be an access lid to the interior of the beetle, or for attaching the bridge structures (whales) to. It may have been deposited amongst rubble for beach defence.	Modern	MON (15/12/2010)	High	Medium	440849	110369
WA5114	nMWX62941	E	Marchwood	Metal chain with turnbuckles discovered on the foreshore south of Marchwood Port. Its function is unknown, but is thought to be associated with the Floating Harbour site.	Modern	MON (15/12/2010)	High	Medium	440843	110380
WA5115	nMWX62942	E	Marchwood	Possible anti-tank cube; dragon's tooth, just over 2 metres in length. It may have been reused as modern coastal defence feature since other concrete sea defence features are present in the vicinity.	Modern	MON (15/12/2010)	High	Low	440817	110414

WA5116	nMWX63051	E	Cracknore Hard	Large concrete barge being reused for mooring at the Cracknore Jetty, north of Marchwood. Possibly associated with the WWII Floating Harbour site to the south.	Modern	MON (15/12/2010)	High	Low	440269	111202
WA5117	nMWX62877	E	Bury Marsh	Possible slipway with wooden posts alongside. Situated near Bury Farm, at Bury Marshes, are three wooden posts, situated close to the remains of a brick and gravel built slip (possibly temporally built for WWII). The bricks are similar to those found in MWX25758, machine manufactured, extruded from presses. They may be connected to the gravel pits inland.	Modern	MON (14/12/2010)	High	Low	437974	111524
WA5118	nMWX63054	E	Eling	Wreck of a rowing boat south of Eling.	Modern	MON (15/12/2010)	High	Low	437169	112275
WA5119	nMWX62876	E	Eling	A concrete slipway approximately 2.5m in width, extending out 20.45m in a north east direction. Possibly built around the time of WWII.	Modern	MON (14/12/2010)	High	Low	437043	112384
WA5120	nMWX62872	E	Eling	A linear feature, including three stones. Function unknown, but may be associated with a slipway/landing place.	Modern	LINE (14/12/2010)	High	Low	436849	112580

WA5121	nMWX62871	E	Eling	Hulk lying on mud bank, possibly a sailing vessel situated at Eling Quay. Approximately 8-10m in length, it is possibly made of wood, and has a metal railing on the bow and the remains of a rudder at the stern.	Modern	MON (14/12/2010)	High	Low	436581	112572
WA5122	nMWX62870	E	Eling	A small section of railway track that would have functioned in conjunction with Eling Quay, connecting to the main line. It was first evident from historic mapping from 1911, and may have been constructed some time prior to that.	Modern	LINE (14/12/2010)	Low	Low	436582	112651
WA5123	aMWX62038	E	Eling	Wreck within the intertidal zone of the Eling foreshore. Approximately 10m in length, with the possible bow facing west. The vessel may be constructed from wood. Internal frames are visible on the low tide water line. They are visibly slender and are spaced regularly around every 0.3m. Hull outer planking is also visible, and it could be suggested that it extends up over the line of the bilge.	Modern	MON (14/12/2010)	High	Low	436869	112788

WA5124	nMWX62865	E	Eling	A possible wreck located in the intertidal zone on the foreshore at Eling at the eastern inner harbour. Badly deteriorated structural elements are visible, but cannot be identified.	Modern	MON (14/12/2010)	High	Low	436940	112832
WA5125	nMXW62869	E	Eling	A small wooden boat approximately 7m or 8m in length and relatively intact. The boat has a cabin situated at the bow and there is some damage to the midship area. There is also an iron frame attached to the transom rail.	Modern	MON (14/12/2010)	High	Low	436944	112847
WA5126	nMWX62868	E	Eling	The wreck of a boat located in the intertidal zone on the foreshore at Eling. The boat appears to have a outer case of metal surrounding the inner structure of timber.	Modern	MON (14/12/2010)	High	Low	436945	112855
WA5127	nMWX62867	E	Eling	The remains of a lightly constructed boat approximately 10m in length situated on eastern bank of the inner harbour/inlet at Eling. Lying bow first on the bank, there is predominately more of the stern remaining. The stem, stern post (with iron structure surround) and possible capstan are also visible. It is	Modern	MON (14/12/2010)	High	Low	436934	112883

				possible the vessel may have been a local pilot cutter.						
WA5128	nMWX62866	E	Eling	The remains of an estuarine water craft from around midship to bow. Traverse framing and gunnel intact with lower longitudinal outer hull planking on both sides possibly still attached. Poor condition.	Modern	MON (14/12/2010)	High	Low	436913	112880
WA5129	aMWX62037	E	Eling	Numerous timber posts and associated small square structure on stilts are thought to be part of a timber pond (221m long and 40m wide) previously recorded in this area of Eling Great Marsh. It is considered likely to be of early modern date. The numerous posts are regularly aligned and positioned at regular intervals (about 5m apart), which constitute two parallel alignments of posts running north to south, approximately 25m between them. There is also one linear post alignment connecting these two lines (from west to east), with seven posts in total.	Modern	MON (14/12/2010)	High	Low	436790	112876

				The small square structure on stilts within the formation of posts may be used for storing timber. The structure looked to be covered in corrugated sheets of iron.						
WA5130	MWX62864	E	Eling	Remains of a modern hulk on the fringe between the intertidal mud and bank at Eling. The vessel is extremely fragmentary with an approximate length of 4-5m and a beam of 1.5m. It may have been stripped and abandoned.	Modern	MON (14/12/2010)	High	Low	436790	113108
WA5131	MWX62930	E	Calshot	Three closely spaced modern pipes situated at the western foot of Calshot Spit possibly associated to adjacent salterns, inland toward Calshot and probably used as outflow pipes. The dimensions were approximately 0.6m in diameter, with a flange toward the exit hole. They are heavily corroded in places.	Modern	MON (14/12/2010)	Medium	Low	448509	101831
WA5132	aMWX61244	E	Cracknore Hard	Possible wreck visible over the high water mark, of unknown dimensions or function.	Unknown	MON (15/12/2010)	High	High	440494	110880

WA5133	nMWX62878	E	Marchwood	A small anchor set in concrete at Marchwood Yacht Club slipway entrance. No indication of its origin.	Unknown	MON (14/12/2010)	Low	Medium	439305	111504
WA5134	nMWX63059	E	Eling	Metal object with loop, possibly an anchor.	Unknown	MON (15/12/2010)	High	High	436986	112545

Marine Zone

WA6001	aMWX28121	Marine	Maritime	<i>Serrana</i>	Modern	Sites & Monuments Record (28121); Hydrographic Office (UKHO-WO-19051); Hydrographic Office (UKHO-WO-19061)			429000	84850
WA6002	aMWX60472	Marine	Maritime	<i>Serrana</i>	Modern	National Monuments Record (805282); Hydrographic Office (UKHO-WO-19051); Isle of Wight SMR number (MIW10663)			428073	84657
WA6003	aMWX60974	Marine	Maritime	<i>Serrana</i> (Stern Part)	Modern	Seazone (637000001090887); Hydrographic Office (UKHO-WO-19061)			428562	85066
WA6004	aMWX60976	Marine	Maritime	<i>Serrana</i> (Box Section)	Modern	Seazone (637000001090877); Hydrographic Office (UKHO-WO-19051)			428176	84595
WA6005	aMWX60475	Marine	Maritime	<i>War Knight</i>	Modern	National Monuments Record (805357); Isle of Wight SMR number (MIW10778); Hydrographic Office (UKHO-WO-19062)			434110	85210
WA6006	aMWX60961	Marine	Maritime	War Knight	Modern	Seazone (637000001090888);			434109	85214

						Hydrographic Office (UKHO-WO-19062)			
WA6007	aMWX61002	Marine	Maritime	<i>Fenna</i> (probably)	Post-Medieval	Seazone (637000001091262); Hydrographic Office (UKHO-WO-19436)		423119	82374
WA6008	aMWX60477	Marine	Maritime	Unknown wreck (possibly <i>Fenna</i>)	Post-Medieval	National Monuments Record (832528); Isle of Wight SMR number (MIW10655); Hydrographic Office (UKHO-WO-19436)		423017	82436
WA6009	aMWX60983	Marine	Maritime	<i>Margaret Smith</i>	Modern	Seazone (637000001091188); Hydrographic Office (UKHO-WO-19362)		437564	90841
WA6010		Marine	Maritime	<i>SS Ceres</i>	Post-Medieval	National Monuments Record (1243773)		429200	87550
WA6011	aMWX61051	Marine	Maritime	Sunderland Flying Boat ML883	Modern	WWII Sunderland Flying Boat. Resting upside down on seabed. Believed to be ML883, and MkIIIa built in 1942. Sank at its moorings in 1944.		449165	100314

APPENDIX 2

MARINE ZONE SURVEY REPORT

1.1. INTRODUCTION

- 1.1.1. This report provides the results of fieldwork conducted in the marine zone of the Study Area. It was conducted in eight sessions spread over a total of nineteen days between May and October 2010. A key component of the project was the participation of volunteer divers, who assisted in the surveys.
- 1.1.2. Diving operations were carried out from the dive support vessel *Wight Spirit*, skippered by Mr Dave Wendes.
- 1.1.3. As well as carrying out investigations of known sites, the project aimed to identify new sites of archaeological potential in the New Forest Coastal Zone. This was performed by surveying the seabed in areas with potential of sunken archaeological material. Unidentified seabed features, anomalies and wrecks recorded by the United Kingdom Hydrographic Office (UKHO) were also considered for potential diver ground-truthing.
- 1.1.4. A low resolution, hull mounted Humminbird side scan sonar was used on board the *Wight Spirit* to identify anomalies on the seabed. Divers were deployed to ground-truth and identify those anomalies worthy of further investigation.
- 1.1.5. In addition to the diving fieldwork and geophysical investigations, a limited DBA was undertaken in order to assist with the interpretation of the wrecks.

Project Background

- 1.1.6. The extent of the Marine Study Area follows the low water contour along the New Forest coastal façade which stretches out to six nautical miles offshore (**see Figure 1**).
- 1.1.7. A number of known sites were identified in the Phase 1 DBA and the Phase 2 Project Design as priorities for investigation. These sites became the focus of the fieldwork investigations. As well as carrying out further work on known sites, the project aimed to search for and record new sites within the New Forest Coastal Zone.
- 1.1.8. Before fieldwork operations began the NFNPA deployed wreck marker buoys on four of the priority sites chosen for investigation to form an underwater heritage trail. The underwater heritage trail formed an integral part of the educational goals of the project with the aim of raising awareness of the New Forest's underwater heritage.

Aims & Objectives

- 1.1.9. The overall objectives of the diving fieldwork:
 - To identify new sites of archaeological and historical significance that merit survey and evaluation;
 - To investigate existing sites to determine whether they merit further survey and evaluation;
 - To identify whether the sites investigated require positive management action;

- To identify whether the sites investigated merit consideration for protection by means of statutory designation;
- To identify sites that may be at risk of damage or destruction;
- Allow avocational divers, amateur archaeologists and students of the discipline an opportunity to be involved and engaged in their underwater cultural heritage and as a result gain experience in recognising these sites.

1.1.10. Specific fieldwork objectives:

- Conduct underwater investigations of sites in the New Forest coastal zone;
- To train avocational divers, amateur archaeologists and students of the discipline in underwater survey techniques;
- Make a record of sites underwater through underwater survey techniques;
- Make a record of sites underwater through video and still photography.

1.1.11. **N.B.** All the Figures referenced in this report refer to the Figures contained in the Main Report and should be sourced there.

1.2. TARGET SITE 1: *MARGARET SMITH*

Location

1.2.1. The wreck of the Margaret Smith is located in the Yarmouth Roads. The exact position is **50°42.96'N, 001°28.15'W** (see **Figs 24 - 26**). The wreck lies across the tide, standing 6m intact on her starboard side at a depth of 15m.

Geology & Ecology

1.2.2. No formal topographic survey of the seabed was undertaken by the project team; therefore the following comments are made on the basis of general diver observations. The seabed around the site is relatively flat consisting of gravel and shells.

1.2.3. There was an abundance of marine life on the wreck site. Numerous fish species could be recognised, among others pouting (*Trisopterus luscus*), sea bass (*Dicentrarchus labrax*) and tompot blenny (*Parablennius gattoo rugine*). In addition a variety of crustaceae such as edible crab (*Cancer pagurus*), and common lobster (*Homarus gammarus*) were observed. All of these species are commonly found in the Solent

Vessel History

1.2.4. The Margaret Smith was a motor dredger/sand carrier built in 1943 by J Harker Ltd, Knottingly. On the 28th June 1978 the vessel had been dredging in the Solent and her hull was full with gravel. She lost power just outside Cowes. While drifting towards Gurnard Ledge she took on an unmanageable amount of water. The ship's crew were rescued and the sinking vessel was towed to an Admiralty mooring in Yarmouth Roads. The following day the vessel sank in 15m of water (Wendes 2006:288-289).

Survey History & Previous Work

1.2.5. The site of the *Margaret Smith* is a well known local dive site as listed in South Coast Shipwrecks (Wendes 2006) and Dive Wight and Hampshire (Pritchard and McDonald 2001). There is not known to have been any archaeological investigation of the site previous to WA and NFNPA involvement.

Fieldwork

- 1.2.6. WA and NFNPA conducted fieldwork on the *Margaret Smith* on the 17th May and 31st August 2010. A total of five dives were undertaken, with a total bottom time of 396 minutes. Diving concentrated on identifying the site, the extent and layout of the site. Specific attention was given to the vessels deck machinery, fixtures and fittings. The main objective of the dives were to record selected features through digital photography.
- 1.2.7. Diving investigations during the 17th May and 31st August 2010 on the *Margaret Smith* were characterised by generally poor diving conditions. The wreck is situated in an area of strong tides and the visibility on site was no more than 1m. Worthwhile underwater investigations were restricted to times of slack water during neap tides. However, poor visibility on site limited the quality of photographic recording. Only basic recording and general descriptions from diver observation were achieved due to the conditions.
- 1.2.8. A basic side scan survey of the site was undertaken to assist with the understanding of the site.

Extent of Survival

- 1.2.9. The wreck itself measures from bow to stern 42.98 metres. The wreck rises 6m from the seabed. The superstructure of the wreck is substantially intact lying across the tide on her starboard side on a fairly flat gravel seabed (**see Figure 27**).
- 1.2.10. In general the hull structure is in relatively good condition. The hull is complete around the wreck and only the ship's non ferrous fixtures and fittings appear to be missing. The vessel had an open cargo hold containing dredged material of gravels. As the wreck lies on her starboard side the gravel has poured out resting partially on the seabed adjacent to the wreck.

Construction & Use

- 1.2.11. Little can be said about the construction of the vessel apart from it was constructed of steel plates welded together and supported internally by metal frames and bulkheads.
- 1.2.12. The *Margaret Smith* was a local dredger. At the time of the sinking the vessel's hold was full of gravel that had been recently dredged. As the wreck lies on its starboard side the cargo of dredged gravel has spilled out onto the seabed and been dispersed. The hold of the vessel is now almost completely empty.
- 1.2.13. There were no small finds or other artefacts found or recovered from the wreck. Most, if not all the non ferrous fixtures and fittings have been removed from the site previously. Although, artefacts associated with the ships fixtures and fittings and personal possessions of the crew may survive inside the wreck. Due to the dangers of entrapment and poor visibility it was not deemed safe to enter the wreck.

Interpretation

- 1.2.14. The *Margaret Smith* is a relatively intact wreck of a mid to late 20th century motor dredger. The site does not appear to be under any immediate threat from either human interference or the physical environment around it other than the natural chemical processes of the ferrous structure degrading in salt

water. There is nothing to suggest this wreck is rare or has any special archaeological importance. However, it has some representative value, being typical of a mid to late 20th century vessel used in an industry of some significance to the UK. These types of vessels were and still are a common sight in the Solent either carrying out dredging activities or in transit carrying holds full of gravel.

1.3. TARGET SITE 2: SS *SERRANA*

Location

- 1.3.1. The wreck of the *Serrana* is in two main parts. The bow is located on Bridge reef, just west of the Needles. The exact position is 50°39.87' north, 001° 36.16' west. The stern is located 400 meters north west of the Needles. The exact location is **50° 39.87' N, 001° 35.82' W** (see **Figs 24 - 26**) For this Stage of the project fieldwork has taken place on the stern section which lies at a depth of 20m.

Geology & Ecology

- 1.3.2. The stern section of the *Serrana* is situated on a sandy and shingle seabed with a rocky reef along the portside of the wreck. The wreck lies approximately 500 metres north from Bridge Reef and the Needles, orientated north-west/south-east with the stern to the north-west.
- 1.3.3. There was an abundance of marine life on the wreck site. Numerous fish species could be recognised, among others pouting (*Trisopterus luscus*), sea bass (*Dicentrarchus labrax*), conger eel (*Conger conger*) and tompot blenny (*Parablennius gattorugine*). In addition a variety of crustaceae such as edible crab (*Cancer pagurus*), and common lobster (*Homarus gammarus*) were observed. All these species are commonly found in the Solent.

Vessel History

- 1.3.4. The *Serrana* was an ocean going tramp steamer built in 1905 by the Company John Readhead, South Shields. Tramp ships had no fixed itinerary or cargo and would go from port to port picking up work as they went. The ship was dual powered by sail and a triple expansion engine driving a single screw. She was fitted out with deck guns during the First World War.
- 1.3.5. The *Serrana* was carrying a cargo of 500 tons of coal, a general cargo of 300 tons and 112 bags of mail from London to Barbados (Wendes 2006:144). On the 22nd January 1918 while on her journey up the English Channel she was torpedoed approximately 10 miles south of St Catherine's lighthouse on the Isle of Wight by the German U – Boat, UB – 35.
- 1.3.6. The *Serrana* did not sink immediately and as a result many of her crew were able to take to the life boats after a distress signal was launched. The *Serrana* was later towed by a number of ships which came to her rescue. However, on reaching Bridge Reef the tide took control and she became grounded on the reef. While on the reef the *Serrana* broke her back resulting in the stern section floating clear on the rising tide and sinking in 20 metres of water (ADM137/1474).

Survey History & Previous Work

- 1.3.7. This is a well known dive site which is listed in both South Coast Shipwrecks (Wendes 2006) and Dive Wight and Hampshire (Pritchard and MacDonald

2001). Despite its popularity with local divers WA and the NFNPA were not aware of any archaeological investigations prior to fieldwork during the summer of 2010.

Fieldwork

- 1.3.8. WA and the NFNPA conducted fieldwork on the *Serrana* on the 18th May, 1st – 2nd July and the 8th September 2010. A total of eight dives were undertaken, with a total bottom time of 739 minutes. Diving concentrated on identifying the extent and layout of the site and recording the most significant archaeological features to have survived on the site.
- 1.3.9. Diving investigations on site during the 18th May, 1st – 2nd July and the 8th September 2010 were all characterised by generally poor diving conditions. Visibility on site during a high water slack ranged from 1.5m to 0.5m with a torch. Visibility was even worse during low water slack tides. The wreck is located in the entrance to the Western Solent where the tides are extremely strong. Worthwhile underwater recording is restricted to times of slack water during neap tides. Poor visibility was experienced during all dives on site. This affected the survey of archaeological features and limited the ability to make a high quality photographic record of the site. A basic sidescan survey was carried out to assist with the understanding of the sites layout.

Extent of Survival

- 1.3.10. The site measures 60 by 20m at its widest point. From the iron propeller at the stern to the end of the engine room amidships the wreck forms a line on the seabed, but the bow is missing due to the stern breaking away on Bridge Reef during the wrecking process.
- 1.3.11. The wreck is lying halfway on its starboard side on a fairly flat gravel seabed with rocky outcrops. It is orientated north west/south east with the stern in the north west and the engine and boiler rooms around amidships in the south east. The bow section of the wreck lies broken up on Bridge Reef to the south.
- 1.3.12. Dispersal after the war has flattened much of the hull structure but not all. Much of the ships fittings and machinery is still evident and recognisable. As the layout of the wreck is clearly interpretable, the following descriptions refer to port, starboard, stern and amidships.
- 1.3.13. In general the hull structure has been flattened and distorted by post war dispersal activities. Almost all of the upper structure has been dispersed or collapsed. The sides of the vessel have collapsed inwards on the portside covering what would have been the stern holds.
- 1.3.14. The most prominent area of the site is the remains of the engine room. Here the huge triple expansion engine lies over on its side to starboard and partially buried. Forward of the engine are two large scotch boilers and one donkey boiler. The donkey boiler has broken open at one end spilling its fire tubes. The starboard side boiler has fallen forward out of its cradle and therefore appears in front of the portside boiler instead of side by side (**see Figure 28**).
- 1.3.15. Working back towards the stern but on the portside, half way between the prop and the engine room is a 7.5 inch howitzer gun which survives intact and upright on its mounting on the edge of the portside. The barrel of the gun

is pointing forward. Parallel with the gun but outside between the wreck and the reef is a mast with cross trees lying on the seabed.

- 1.3.16. At the stern the iron propeller and rudder is largely exposed. The stern gun of the *Serrana*, a 4.5 inch gun, lies over on its side partially covered by collapsed hull. The barrel of the gun is not visible but the gun mounting is.

Construction & Use

- 1.3.17. Much of the ships hull still survives but it has been flattened and distorted through dispersal activities. Despite this it is clearly evident the vessel was built from riveted steel plates. Where visible, frames are I-beam in shape.
- 1.3.18. At the stern of the wreck, the main cast iron propeller is still attached to the propeller shaft (**See Figure 28, Plate A**). The propeller shaft is exposed for 3-4m before it disappears beneath the wreckage of the collapsed hull structure. The shaft itself has an approximate diameter of 0.50m.
- 1.3.19. The remains of the engine room are the most preserved part of the vessel. The two main scotch boilers stand upright with a slight list to starboard. The boiler shells are constructed from riveted steel. The stay nuts and fire tubes are clearly visible. Both scotch boilers have an opening at the top which is most probably marking the position of the steam drum/dome. The drum itself has gone exposing an opening to the top of the boiler. The opening has an approximate diameter of 0.45m. Surrounding the opening is a steel or iron collar riveted to the top of the boiler. This was presumably what connected the steam drum to the boiler. The three furnaces and ash pits were clearly evident at the bottom of the scotch boilers. The donkey boiler forward of the scotch boilers has broken open spilling many of the fire tubes onto the seabed and wreckage below (**see Figure 28, Plate H**).
- 1.3.20. The three cylinder triple expansion engine is situated just aft of the main scotch boilers. It has fallen on its side towards the starboard side and is partially buried.
- 1.3.21. The *Serrana* sank with a cargo comprising of 500 tons of coal, 300 tons of general cargo and 112 bags of mail. There was no evidence of the cargo of coal on the seabed or within the wreck. This would suggest the cargo of coal is likely to be still contained within the holds and obscured by the collapsed structure. No coal has ever been found on Bridge Reef within the bow of the wreck. The only evidence of any cargo was the broken fragments of crockery amongst the portside wreckage.

Interpretation

- 1.3.22. Surviving hull structure, machinery, fittings and propulsion system recorded on site are typical of the first quarter of the 20th century. The presence of deck guns within the wreckage are evidence of the fitting out and armament of merchant vessels post 1915. During the early years of the First World War U-boats orders and tactics were to surface and if needed use their deck gun rather than use up valuable torpedoes. To counter act this merchant vessels were fitted out with a means to defend themselves against such attacks. However, U-boats easily counter acted this by simply not surfacing and instead attacked by use of torpedo without warning. A fate which beheld the *Serrana* on the 22nd January 1918.

- 1.3.23. The *Serrana* is not an extraordinary ship, but it is representative of an early 20th century ocean going merchant steamship design and representative of a prominent class of ship, the tramp ship. The tramp ship was an important ship type relating to the merchant shipping economy and was fairly ubiquitous from the late 19th century up to the middle of the 20th century importing and exporting goods internationally.
- 1.3.24. Tramp ships were extremely basic in design, sturdily built and designed to carry maximum loads at minimum costs. The *Serrana* and other ship's like her followed no set itinerary and they carried a great array of bulk and general cargoes on an as available basis.
- 1.3.25. The role of the *Serrana* and other ships like her were important during the WWI in transporting raw materials to supply the allied factories, food stuffs, and munitions to arm the troops on the front. It also maintained the delivery of exported materials for economic stability and Britain's survival relied on this sea trade remaining operative. The wreck of the *Serrana* represents the evidence of attempts to try and sever Britain's supply links with the rest of the world.

1.4. TARGET SITE 3: FENNA

Location

- 1.4.1. The wreck of the *Fenna* is approximately two miles NW of the Needles. The exact position is **50° 38.44'N, 001° 40.47'W** (see **Figs 24 - 26**). The wreck lies at a depth of 24m.

Geology & Ecology

- 1.4.2. No formal topographic survey of the seabed was undertaken by WA and NFNPA, therefore the following comments are made on the basis of general diver observations. The seabed around the wreck is flat consisting of sand, gravel and shell.
- 1.4.3. A great variety of fish species were identified on site including pouting (*Tisopterus lucus*), Pollack (*Pollachius pollachius*) and conger eel (*Conger conger*). In addition divers observed a variety of crustacea such as edible crab (*Cancer pagurus*) and lobster (*Homarus gammarus*). All these species are commonly found in the English Channel and are typical for wrecks in environmental settings similar to that of the *Fenna* (Aquarium Project 2005; MarLIN 2005).

Vessel History

- 1.4.4. The *Fenna* was a Dutch two masted schooner built in 1863 at Hoogezand Holland. The ship was carrying a cargo, weighing 230 tons, of building materials including barrels of nails, cases of sheet glass and railway lines/iron bars. The ship was travelling from Amsterdam destined for Messina and Trieste in Italy (Wendes 2006:24).
- 1.4.5. While sailing down the English Channel during the 11th March 1881 the ship experienced heavy gales and began to take on water. The ship gained so much water that she became unmanageable to sail. The decision was made by Master and crew to take to the life boats and abandon ship. The *Fenna* later sank unseen from her crew. A few days after the ship sank the Captain of the steamer *Ventnor* reported passing a sunken vessel with one mast

rising out of the sea approximately two miles north west of the Needles (The Bournemouth Visitor's Directory 1881).

Survey History & Previous Work

- 1.4.6. The Hampshire and Wight Trust for Maritime Archaeology (HWTMA) are currently undertaking a report on the *Fenna* as part of their Solent Marine Heritage Assets project. HWTMA underwater investigations produced a sketch plan of the site illustrating the general layout of the site and remains of the ship's cargo. No formal report of the site has been published although a copy of the site plan has been published in South Coast Shipwrecks (Wendes 2006:24).

Fieldwork

- 1.4.7. WA and NFNPA conducted fieldwork on the wreck of the *Fenna* on the 19th May, 4th June, 30th June and the 21st July 2010. A total of 11 dives were undertaken, with a total bottom time of 982 minutes. Diving investigations set out to build and expand on the work previously carried out on the site by HWTMA and gain a better understanding of the vessel and cargo.
- 1.4.8. Survey work concentrated on a detailed investigation of the vessel's cargo, not only to identify the goods it was transporting but the method of packing and storage on board the vessel. Further investigations looked to identify the remains of the vessels structure and ferrous fixtures and fittings that were scattered around the site.
- 1.4.9. Diving on site was characterised by generally good to moderate diving conditions. Visibility ranged from 4m – 5m on a high water slack during neap tides to 1m during a low water slack. On a good neap tide diving on site was productive and began approximately 20 minutes before slack water and continues 20 minutes after slack water.

Extent of Survival

- 1.4.10. The wreck is lying on an even keel orientated north east/south west. The site is 30m long and 15m wide. The most prominent features on the seabed are the ship's cargo. The ship appeared to be carrying an assortment of building materials including barrels of nails, crates of sheet glass, railway tracks or iron bars and other material not yet identified in large concreted boxes. At the centre of the site the cargo of railway tracks/iron bars rises up 2.5m from the seabed, some of the railway tracks have spilled onto the seabed on both the port and starboard side. On top of the rails are two rows of concreted boxes.
- 1.4.11. Below the rails the remains of the ships deck beams can be seen. The deck beams and the rails above are resting on some of the cargo of crates of sheet glass. The crates of glass continue aft of the rails. The vast majority of this is intact and remains neatly packed together.
- 1.4.12. Forward of the rails and towards the bow the lower part of the vessel's hull is exposed. Concreted barrels are scattered on both the port and starboard side. Aft of the rails crates of sheet glass and concreted barrels lie stacked and piled up continuing towards the stern of the vessel. On the starboard side towards the stern an anchor lies partially buried by sand and the cargo of barrels. 2m aft of the anchor the remains of a ferrous rudder pintle was lying on the surface of the seabed (**see Figure 29, Plate J**).

Construction

- 1.4.13. Little can be said about the general hull construction, as very few structural remains have survived above the floor timbers. The top part of the vessel has long since degraded and disappeared.
- 1.4.14. Survival has occurred in areas of the lower hull but the majority of this is either obscured by the ships cargo or buried beneath the gravel seabed. Timbers are mainly exposed forward of the tracks with the exception of the remains of deck beams sandwiched between the rails and crates of glass. Due to the burial of the lower hull and the overlying cargo, excavation and recovery would be necessary to allow more detailed recording of the structural remains.
- 1.4.15. Directly forward of the railway tracks partly exposed hull timbers mark the position of the lower hull. These timbers appear to be the remains of ceiling planking with the floor timbers below. The ceiling planks are fastened by a combination of trenails and iron bolts.
- 1.4.16. There are many concretions scattered all round the site that are with no doubt associated with the ship's fittings. Many of these are unrecognisable in their concreted state. Recognisable fittings are the anchor, pintle and a possible mast fitting.
- 1.4.17. In the stern area on the portside of the vessel a ships anchor lies partially buried in the sand and concealed by barrels (**see Figure 29, Plate I**). The length of the anchor shank is 1.6m and the width is 0.10m. The crown, arms and one fluke is visible the other is obscured by a concreted barrel. The size of the fluke is 0.30m by 0.17m. The remains of the anchor cable are found at the top of the shank. It appears to be rope rather than chain. The high concentration of iron in both the surrounding barrels and the anchor, have helped form a thick layer or concretion around the rope. The cable continues from the top of the shank 2m along the seabed where it disappears into the sand.
- 1.4.18. The anchor does not appear large enough to be the main anchor of the ship. Instead it is more likely to be a kedge anchor used for light work such as manoeuvring the ship in harbours. The location of the anchor in the stern would also be more consistent with a kedge. The main anchors or the 'bowers' were hung from the bows.
- 1.4.19. The partial remains of an iron rudder pintle were found lying loose on the seabed 2m aft of the anchor (**Fig.29, Plate I**). In close proximity to the pintle the remains of another iron fitting was discovered.

Cargo

- 1.4.20. There are several types of cargo found on the site associated with building materials. The cargo can be divided into the following categories:
- Railway tracks
 - Barrels
 - Crates of glass
 - Boxes

- 1.4.21. The remains of the railway tracks/iron bars on the site are heavily concreted but it was still possible to record rough dimensions. The tracks are 7.10m long; a cross section reveals they were c. 0.07m – 0.09m wide at the top with a possible convex surface and 0.10m – 0.12m wide at the bottom with a flat surface. The depth of the track was c. 0.14m -0.17m. The convex surface could represent the surface for the wheel of an engine or carriage. The flat side of the track could represent the surface that would be seated within the chairs. They have been stowed in three main layers with one and sometimes two rails chocked across the ends separating from the layer above (**see Figure 29, Plate A**). The two lower layers consist of 24 rails; the top layer consists of 21 rails. Some rails can be found sloping down onto the seabed where they have fallen from the top of the stack (**see Figure 29, Plate A**).
- 1.4.22. All the barrels on the site are heavily concreted, due to their iron contents, and appear to be the same size, approximately 0.50m long by 0.34m wide. They are found in the bow and stern of the wreck on the port and starboard sides. Aft of the crates of the glass some barrels have been stowed towards the centreline see (**see Figure 29, Plate K**).
- 1.4.23. The project team decided to recover a barrel from the site for detailed recording and excavation in a controlled and stable environment at the finds and conservation facilities at Wessex Archaeology. The purpose of recovery was to gain more detailed evidence of the dimensions of the barrel; construction and design and what was being stored in the barrels.
- 1.4.24. After recovery the barrel was recorded by volunteers of the project under the supervision of WA's conservator. This enabled the volunteers to gain hands on experience in the recording and examining of recovered wreck material and to understand post excavation processes (**see Figure 31**).
- 1.4.25. There was a significant cargo of glass found on the site (**see Figure 30, Plate D, E and F**). The glass was packed in wooden crates approximately 0.40m by 0.30m. The crates of glass were stowed at the bottom of the ship. The rail tracks/iron bars have collapsed down resting on top of much of the glass. The crates of glass extend aft towards the stern of the rail tracks/iron bars three or four rows. There is one row extending forward of the rail tracks/iron bars.
- 1.4.26. There are two rows of rectangular boxes situated on top of the tracks/iron bars (**see Figure 29, Plate E**). They lie across the middle of the stack of tracks/iron bars running from port to starboard. The boxes are 1.27m long 0.56m wide and .50m deep. The contents of the boxes are unknown due to the heavy concretion encapsulating them.

Interpretation

- 1.4.27. The remains of the *Fenna* and its cargo do not appear to be under any immediate threat from either the physical environment or diver interference. The majority of the structural elements have gone leaving behind an almost complete assemblage of cargo. Although most structural elements are missing the cargo has survived predominantly intact and in a robust state. The survival of this cargo provides valuable information for late 19th century stowage arrangements and types of cargoes carried by wooden merchant sailing ships.
- 1.4.28. The heaviest cargo of rail tracks/iron bars were stowed amidships on the deck. One assumes they were stored on deck rather than below because of

the ease of loading and unloading. However, to have such a heavy load high up on the vessel seems unusual. This could possibly have made it unstable while under sail and could be one of the factors leading to the vessels sinking.

- 1.4.29. Most of the cargo found on the site is material associated with the building or construction industry. If the vessel was carrying rail tracks the other cargoes of glass and iron nails could be associated with material destined for the construction of a railway station. However this is only an assumption which can only be proved or disproved through further desk based research.

1.5. TARGET SITE 4: SS CERES

Location

- 1.5.1. The site of the SS *Ceres* is in shallow water on the north east end of the shingle bank close to Hurst Spit. The exact location of the wreck is **50° 41.89'N, 001° 33.99'W** (see **Figs 24 - 26**).

Geology & Ecology

- 1.5.2. No formal topographic survey of the seabed was undertaken by WA and NFNPA, therefore the following comments are made on the basis of general diver observations.
- 1.5.3. The wreck is situated on a shingle bank. The seabed in this area is extremely mobile and the depth of shingle on the site appears to change with each tide. Where structure is above the constant movement of the shingle, heavy marine growth covers the iron wreckage. At seabed level clean surfaces can be found on the wreck due the abrasive action of the shifting sediment.
- 1.5.4. There was an abundance of marine life on the wreck site. Numerous fish species could be recognised, among others pouting (*Trisopterus luscus*), sea bass (*Dicentrarchus labrax*), and tompot blenny (*Parablennius gattorugine*). In addition a variety of crustaceae such as edible crab (*Cancer pagurus*), and common lobster (*Homarus gammarus*) were observed. All these species are commonly found in the Solent.

Vessel History

- 1.5.5. The *Ceres* was a small steam barge of 38 tons. The vessel was constructed at Kirkintilloch in 1875. The *Ceres* was 65' (20.4m) long by 13'7" (4.1m) wide and driven by a single iron screw.
- 1.5.6. On the 23rd November 1898 the *Ceres*, skippered by Captain H. Doe was loading gravel from the shingle bank at Hurst Castle. During a strong south westerly storm the *Ceres* was blown aground and wrecked on the north east end of the notorious Shingles. The Shingles is a series of banks of sand and gravel deposited on the NW side of the Needles channel (Wendes 2006:49).

Survey History & Previous Work

- 1.5.7. There have been no known previous archaeological investigations of the wreck and it is rarely dived due to its hazardous location on the shingles. Archaeological investigations began on the site in May 2010.

Fieldwork

- 1.5.8. WA and the NFNPA conducted fieldwork on the *Ceres* on the 7th September 2010. A total of 6 dives were undertaken, with a total bottom time of 293 minutes. Diving concentrated on identifying the extent and layout of the site and recording the most significant archaeological features to have survived on the site.
- 1.5.9. Diving investigations on site during the 7th September 2010 were characterised by variable diving conditions ranging from good to poor. Visibility ranged from 2-3m on the high water slack to 0.5m during the low water slack. The wreck is located on the shingles bank in shallow water. When the tide turned the water current picked up very quickly. Worthwhile underwater investigations were restricted to slack water.

Extent of Survival

- 1.5.10. The wreck is located in a very dynamic environment experiencing strong tides and an extremely mobile seabed. Divers observed differences in sediment depth and wreck exposure between their two dives on the site. This is a site that appears to constantly change with each turn of the tide.
- 1.5.11. The remains of the *Ceres* is partially buried, broken up and scattered over a distance of 50m. The wreck is aligned north west/south east at a depth of 5-6m (**see Figure 32**).
- 1.5.12. A wreck marker buoy is attached to a section of hull structure at the south east end of the site. At the south east end of the site is a rectangular section of metal hull structure approximately 7m by 2m lying flat on the seabed. The structure is very corroded and thick with marine growth. It was not possible to identify how the hull structure was constructed as it was too corroded. The section of hull was flat on top with the remains of framing structure on the seabed side.
- 1.5.13. Travelling northwest approximately 20m were the remains of further hull structure consisting of hull plating, metal framing and possible wooden deck planking. This structure does not have a great deal of marine growth suggesting it experiences regular deposition by the surrounding seabed.
- 1.5.14. Approximately 50m northwest in an area presumed to be the bow was a section of intact metal framing, which appeared to consist of square frames, cant frames and upper wale. This appeared to indicate the shape and construction of the starboard bow of the vessel.
- 1.5.15. There was a distinct mound of gravel in the centre of the wreckage rising 1-2m above the general seabed level.

Construction & Use

- 1.5.16. Little can be said about the general hull construction as much of the structure was either, buried, badly corroded or covered in marine growth. The vessel appears to be built from iron/ steel plates. If this is the remains of the *Ceres* it was most probably built from riveted plates due to its age of construction. However, no rivets were visible due to the corrosion and marine growth on the visible hull structure. Substantial framing was visible on sections of hull structure in the **SE** and **NW** areas of the site. The hull plating was supported and stiffened by internal frames I-beam in shape.

- 1.5.17. In the SE to E area of the wreck site wooden planking was observed attached to the remains of hull structure. This would appear to be the remains of deck planking. If this is the remains of the *Ceres* then it was constructed from steel/iron hull plating. Therefore the wooden planking found on the site is mostly likely to be associated with the deck of the vessel and not the hull.
- 1.5.18. There was very little evidence of the vessels fixtures, fittings or machinery. There were no visible remains of the vessels propulsion or steering. No anchors or deck machinery such as winches or windlasses were observed on site.
- 1.5.19. A piece of copper piping was observed protruding from the seabed approximately 5m north of the rectangular section of hull at the SE end of the site. This was a small gauge piece of pipe work approximately 0.03m in diameter.
- 1.5.20. Between two sections of hull structure along what is assumed to be the portside of the wreck was a tubular section of lead with an approximate diameter of 0.12 - 0.15m lying along the axis of the wreck.
- 1.5.21. On the day of the *Ceres* sinking, the ship was known to be carrying a cargo of gravel. The mound in the centre of the wreck site could be associated with this cargo. However the seabed around the site also consists of gravel which is highly mobile and thus could have built up over the remains of the wreckage.

Interpretation

- 1.5.22. The wreck appears to be aligned but broken into several different sections. From the structure visible it can be said the vessel was constructed of iron/steel plating strengthened and stiffened by internal iron/steel frames. The vessel had at least one deck constructed partially from wooden deck planking. The broken up nature and burial of much of the wreckage has posed problems in interpreting and making a positive identification of the wreck site.
- 1.5.23. If this is the site of the *Ceres* then it is representative of a small working steam ship of the last quarter of the 19th century. The vessels role would not have been dissimilar to that of the much later *Margaret Smith* that sank in 1978. The *Ceres* represents an early class of vessel that has developed and remained active in the Solent from the late 19th Century up until the present

1.6. TARGET SITE 5: SS WAR KNIGHT

Location

- 1.6.1. The wreck of the *War Knight* is located in Watcombe Bay on the southwest side of the Isle of Wight. Its exact position is **50° 39.96'N, 001° 31.12'W** (see **Figs 24 - 26**).

Geology & Ecology

- 1.6.2. The bow to amidships sections, lie very much on a sandy and gravel seabed with outcrops of rock. The stern section appears to be lying within rocky chalk gullies.

- 1.6.3. There was an abundance of marine life on the wreck site. Numerous fish species could be recognised, among others pouting (*Trisopterus luscus*), sea bass (*Dicentrarchus labrax*), conger eel (*Conger conger*) and tompot blenny (*Parablennius gattorugine*). In addition a variety of crustaceae such as edible crab (*Cancer pagurus*), and common lobster (*Homarus gammarus*) were observed. All these species are commonly found in the Solent.

Vessel History

- 1.6.4. The *War Knight* was an armed merchantman built in 1917 at Union Iron Works, Alameda, USA. The ship was powered by a one gear steam turbine driving a single screw (Wendes 2006:183).
- 1.6.5. The ship sank on the 24th March 1918 after a series of calamities. The *War Knight* was part of a sixteen ship merchant convoy escorted by seven destroyers. At midnight on the 24th March the convoy was approaching the Isle Wight where the German U-boat UB-59 was lying in wait. UB-59 attacked the convoy shortly after midnight creating confusion amongst the merchant ships. Orders were given for the merchant convoy to alter course, however this did not reach all the ships. The result was a collision involving the *War Knight* and a tanker *O B Jennings*. In the collision the *War Knight* ruptured the tanks on board the *O B Jennings* which caused her cargo of naphtha to pour down the decks of the *War Knight*. Within seconds the naphtha ignited killing all crew that were on deck.
- 1.6.6. Out of 47 crew onboard, only seven survived. Once the fire had died down the vessel was taken under tow the next morning by a Portsmouth tug. However, despite being warned, the tug towed the *War Knight* into a minefield. Two mines exploded beneath the hull of the *War Knight* and a third beneath the towing line. The *War Knight* was eventually beached in Watacombe bay and sunk by gunfire to extinguish the fires (TNA: ADM 137/1482:55-59).

Survey History & Previous Work

- 1.6.7. No known survey or investigative work has taken place on the *War Knight* since its discovery.

Fieldwork

- 1.6.8. WA and NFNPA conducted fieldwork on the wreck of the *War Knight* on the 3rd and 30th June 2010. A total of 6 dives were undertaken, with a total bottom time of 338 minutes.
- 1.6.9. Diving concentrated on identifying the extent and layout of the site and identifying the most significant archaeological features to have survived on the site. No detailed recording or measured survey was carried out.
- 1.6.10. Diving investigations on site during the 4th and 30th June 2010 were characterised by generally poor diving conditions. Visibility on site ranged from 1.5m to 0.5m with a torch. This very much hampered the survey of archaeological features and limited the ability to make a good photographic record of the site. A geophysical survey of the site was undertaken which identified key features of interest. The photographs used in this section of the report were taken by underwater photographer Mike Pitts at a time of good visibility on site before the start of the project.

Extent of Survival

- 1.6.11. The wreck lies at a depth of 13m orientated SSE/NNW. The wreck is well broken up, but over a hundred meters long. The most prominent features are the chain locker and anchor winches at the bow and the ships three boilers and steam turbine engine amidships. The chain locker rises 3m from the seabed and is approximately 4m². Much of the chain can be seen piled up inside. Forward of the chain locker are the huge ship's winches, remains of the hawsepipes with chain, and bitts all of which have collapsed from the bow (**see Figure 33**). In between the chain locker and the boilers the structure is very flat, much of it has collapsed inwards and outwards and lies in sheets on the seabed.
- 1.6.12. Amidships is dominated by the boiler and engine room (**see Figure 33**). The ships three large boilers stand upright side by side. Aft of the boilers is the steam turbine engine followed by the propeller shaft. The engine and beginning of the propeller shaft are sandwiched between two bulk heads. The stern of the vessel was not examined during the dives on site but it is reported to be substantially broken up and flat.

Construction & Use

- 1.6.13. Much of the ships hull is broken up and flattened. Despite this it is clearly evident the vessel was built from riveted steel plates. Where visible, frames are I-beam in shape.
- 1.6.14. The ships anchor winches are intact lying up at an angle of 70° from the seabed. The winches are c. 5m long with a diameter of c. 2m. There is chain present wrapped around the winches. The links are c. 0.25m long and 0.05m thick.
- 1.6.15. The remains of the *War Knight's* hawse pipes are found forward of the chain locker. One of the hawse pipes rises at an angle of 60° from the seabed with the remains of the chain inside (**see Figure 33, Plate D**). Forward of the hawse pipes are the remains of the bitts that would have been located on the port and starboard side of the bow deck.
- 1.6.16. The remains of the boiler and engine room are reasonably well preserved. The ships three large boilers are situated side by side in very good condition. The boiler shells are constructed from riveted steel. The stay nuts and fire tubes are clearly visible. The boilers have an approximate diameter of ca. 3m. The furnaces and ash pits were clearly evident at the bottom of the boilers. Aft of the boilers is the steam turbine engine and propeller shaft between two bulkheads.
- 1.6.17. At the time of sinking the ship was carrying a cargo of 999 tons of fuel oil and a general cargo including food stuffs, bails of rubber and drums of chemicals. There is no evidence of the cargo left on the wreck, much of it was reported to wash up on the shore and salvage operations after the war disposed of what remained.

Interpretation

- 1.6.18. The wreck of the *War Knight* would at first appear to be the remains of a typical type of merchant steamship of the first quarter of the 20th Century commonly found in UK waters. However this is not the case, the *War Knight* unlike the vast majority of merchant steamships was equipped with a steam

turbine engine. Steam turbine engines were normally associated with naval vessels or passenger liners where speed was a priority.

- 1.6.19. The *War Knight* was constructed in the later years of the First World War for trans-Atlantic and ocean going voyages. Due to the threat from German U-boats the *War Knight* was fitted out with deck guns for protection. The threat from U-boat attacks could also explain why the vessel was fitted with a higher performance steam turbine engine rather than the more conventional triple expansion engine. The greater speed of the vessel would make it a harder target to engage but it would also allow the vessel to out run a German U-boat, should it come into contact with the enemy. Steam turbines were not as fuel efficient and as a result did not suit all merchant ships (Griffiths 1997). During peace time efficiency out weighed the benefits of speed but war has a tendency to change conventional practices. It would appear the design and construction of the *War Knight* was possibly influenced by the circumstances of war.
- 1.6.20. The National Monuments Record has 978 records of merchant ships which sunk between the periods of 1914–1938. From the 978 records, 387 were propulsion specific and from the 387 only 13 records were vessels propelled by a steam turbine engine but 344 were vessels propelled by a triple expansion engine. The number of known wrecks of merchant vessels equipped with a steam turbine engine is particularly rare in the archaeological record. The wreck of the *War Knight* is therefore potentially extremely significant.

1.7. GEOPHYSICAL ANOMALIES 1 - 3

Location

- 1.7.1. Located by the side scan sonar and diver ground-truthed on the 17th May 2010. The target was located a mile east of Yarmouth just outside the Yarmouth Roads protected wreck. Exact location of the anomaly was 50° 42.566'N, 001° 29.780'W (see **Figs 24 - 26**). This position was obtained from the dive support vessel's hull mounted Humminbird sidescan sonar and onboard GPS. The position is accurate to within +/- 10m.

Geology & Ecology

- 1.7.2. The divers described the seabed as consisting of clay with a layer of gravel and shell.

Description

- 1.7.3. The anomaly was located by the divers carrying out a circular search. The divers described an object rectangular in shape 1.5m long by 1m wide and 0.75m high. It had 1 m of chain attached with links approximately 150mm by 30mm thick.
- 1.7.4. From the description of the anomaly it would appear to be an object associated with a redundant mooring block. To the south of the anomaly is a mooring area for boats. This object is most probably associated with the boat moorings.

Geophysical Anomaly 2

Location

- 1.7.5. Located by sidescan sonar and diver ground-truthed on the 3rd June 2010. The target was found half a mile offshore in Colewell Bay off the Isle Wight. The exact location of the anomaly was **50° 41.720'N, 001° 32.890'W** (see **Figs 24 - 26**). This position was obtained from the dive support vessel's hull mounted Humminbird sidescan sonar and onboard GPS. The position is accurate to within +/- 10m

Seabed

- 1.7.6. The divers described the seabed as consisting of clay with a layer of gravel and shell.

Description

- 1.7.7. The anomaly was located by the divers carrying out a circular search. The divers discovered the anomaly was an upturned fibre glass powerboat approximately 6m long. This was obviously a modern wreck and therefore of no archaeological interest to the project. It does, however, demonstrate a wide range of losses in the Solent.

Geophysical Anomaly 3

Location

- 1.7.8. Located by sidescan sonar and diver ground-truthed on the 3rd June 2010. The target was also found in Colewell well bay off the Isle of Wight. The exact location of the anomaly was **50° 41.360'N, 001° 36.940'W** (see **Figs 24 - 26**). This position was obtained from the dive support vessel's hull mounted Humminbird sidescan sonar and onboard GPS. The position is accurate to within +/- 10m.

Seabed

- 1.7.9. The divers described the seabed as consisting of clay with a layer of gravel and shell.

Description

- 1.7.10. The anomaly was located by the divers carrying out a circular search and was found to be natural. The divers described an exposed coal seam outcrop approximately 0.30 – 0.40m above seabed level.

1.8. GEOPHYSICAL ANOMALY 4

Location

- 1.8.1. The anomaly was located by sidescan sonar and diver ground-truthed on investigated 22nd July 2010. The site is located 1mile north west of the Needles in the mouth of the Western Solent. The exact position of the site is **50° 39.735'N, 001° 36.469'W** (see **Figs 24 - 26**). This position was obtained from the dive support vessel's hull mounted Humminbird sidescan sonar and onboard GPS. The position is accurate to within +/- 10m.

Geology & Ecology

- 1.8.2. The site lies on a relatively flat, stony and gravel seabed with a scattering of boulders and clay inclusions. The site is situated besides Bridge Reef, a rock face that runs from Needles west towards Old Harry Rocks

- 1.8.3. The seabed around the site was found to consist of coarse sediments of small rocks, gravel with a scattering of boulders varying in size from 0.20m² to 1m² and patchy inclusions of exposed clay.
- 1.8.4. There was an abundance of marine life on the wreck site. Numerous fish species could be recognised, among others pouting (*Trisopterus luscus*), sea bass (*Dicentrarchus labrax*), conger eel (*Conger conger*) and tompot blenny (*Parablennius gattorugine*). In addition a variety of crustaceae such as edible crab (*Cancer pagurus*), and common lobster (*Homarus gammarus*) were observed. All these species are commonly found in the Solent.

Description

- 1.8.5. The first dive resulted in the identification of the collapsed remains of a metal wreck. Initial observations by volunteer divers described the site as consisting of flattened metal plates, with inclusions of I-beams and a large upstanding metal double-skinned feature at the south end of the site.
- 1.8.6. No engines, propellers or steering gear were observed on the initial dive. With none of these features evident, first thoughts of identification of the wreck suggest the possible remains of a barge.
- 1.8.7. A second dive on the site took place during the following day on the 23rd July. Diver observations following this described the large upstanding feature as a ramp door with vertical skids on one side and horizontal treads on the other. Just aft of the ramp feature amongst the main wreckage, a pile of chain was observed. The extent of the site was recorded at 30m by 10m.
- 1.8.8. The evidence gathered from the first two dives suggested this could be the remains of a landing craft. The size of the site and specifically the size of the ramp suggested this could be a Tank Landing Craft (LCT) rather than an infantry or personnel Landing Craft (LCA). As the remains of a possible Landing Craft it represented a wreck of the Second World War and therefore of great archaeological significance. Both WA and NFNPA archaeologists deemed it worthy of further diving and desk based investigations.

Vessel History

- 1.8.9. Although this is believed to be the remains of a Tank Landing Craft (LCT) its exact identity is still unsure. The UKHO had recorded the remains of LCT 809 at 50°39.725' N by 001°36.433' W, which is in close proximity to the Landing Craft found by the project team.
- 1.8.10. Desk based research has since discovered that there were two LCT 809's. One was an American built Mark VI Tank Landing Craft that survived the war and was sold off to a New York company after the war in 1947 (Pers comms R. Fox). The other was a British Mark IV which was destroyed at Gold Beach during the Normandy landings of Operation Neptune the marine operations of Operation Overlord (Pers comms A. Chapman). With this information it seems unlikely that the LCT discovered during the project is the remains of either LCT 809.

Survey History & Previous Work

- 1.8.11. There have been no previous archaeological investigations of the site and thus no data relating to previous archaeological work exists. However the

UKHO does hold records of the site regarding survey details, the sites dispersal and salvage post the wrecking.

- 1.8.12. After the sinking, the site was first surveyed on the 29th October 1945. The UKHO had recorded the site to have a minimum clearance of 24ft (7.3m) and an average of depth 54FT (16.5m), 6.5C (1204.6m), which is assumed to be cables from the Needles Light
- 1.8.13. On the 15th May 1945 dispersal took place on the site. The UKHO recorded a minimum clearance of after dispersal of 43ft (13.1m).
- 1.8.14. In the spring of 1969 salvage of the site took place by a Mr Richards of the salvage Company of Cumbra Wales. On completion of the salvage work on the 15th May 1969 the UKHO recorded the site to be well broken up and scattered.
- 1.8.15. The UKHO have recorded regular surveys of the site up to 2002 when survey of the site appears to have stopped

Fieldwork

- 1.8.16. WA and NFNPA conducted fieldwork on 23rd July and the 31st August 2010. A total of six dives were undertaken, with a total bottom time of 514 minutes.
- 1.8.17. Diving concentrated on identifying the site, the extent and layout of the site. Specific attention was given to the most intact feature identified as the ramp door.
- 1.8.18. Diving investigations on site were characterised by variable diving conditions ranging from good to poor. Visibility ranged from 2m on a high water slack during neaps to 0.5m during a low water slack. The wreck is located in an area of strong tidal currents. Worthwhile underwater investigations were restricted to times of slack water during neap tides.

Extent of Survival

- 1.8.19. The main wreckage of the site is 30m long by 10m wide with a scattering of smaller debris surrounding the site. The wreckage is very broken up and flattened except at the south end of the site where a large square metal structure rises 3.3m from the seabed and is 4m wide. It is this structure that resembles the ramp door of a landing craft and first led the project team to believe this was the remains of a Landing Craft.
- 1.8.20. The ramp door is upside down and leaning away from the main wreckage. Assuming the ramp door represents the bow of the vessel the wreckage continues 29m north towards the stern.
- 1.8.21. Direction of the ramp, lying on the gravel seabed are the remains of the vessel's fixtures and fittings. Aft of the ramp the wreckage consists of steel plate and partial remains of steel frames. Much of this has been flattened and rises no more than a metre from the seabed.
- 1.8.22. On the east side of the site there is a coherent section of hull approximately 2.5-3m in length but no more than 1m above bed level that consists of frames and the skin of the hull.

- 1.8.23. There is a scattering of ferrous tubular and pipe like features all over the site and an occasional non ferrous fitting. Electrical wire covered by a lead outer skin lies tangled amongst some of the wreckage.
- 1.8.24. At the north end of the site is a partially buried section of hull with a circular hole in the centre. Most of the hull plating amongst the wreckage is flat with the framing structure on the seabed side. There is no evidence of the vessels propulsion or steering amongst the wreckage or outside the wreckage.

Construction & Use

- 1.8.25. The vessel is constructed from a double skin of welded steel plate stiffened and strengthened by steel frames. The frames where visible had a breadth of 0.30m. The construction of the vessel can be seen most clearly from the ramp which is the most coherent part of the vessel that survives (**see Figure 10**).
- 1.8.26. The ramp is situated at the south end of the site. It is predominantly intact but not complete. The remains of the ramp rise up from the seabed 3.3m at an angle of 60° leaning away from the main wreckage. The westward edge of the ramp was missing revealing the profile of one of the internal frames. The remains of the ramp was 4.10m wide with a breadth of 0.32 at seabed level increasing to breadth of 0.35m approximately 0.5m from the top. The top edge curves in on both sides producing a narrowed curved edge (**see Figure 10, Plate D**).
- 1.8.27. The ramp was doubled skinned constructed from plates of steel separated by steel frames. On the north side of the ramp there were horizontal treads welded to the steel plate. On the south side of the ramp there were vertical skids welded to the steel plate. The vertical skids were separated by regular intervals of 0.4m. The south side of the ramp was curved whereas the north side was flat. There were corroded and missing areas of steel plating on both sides of the ramp.
- 1.8.28. There were four pairs of hinging stations located at regular intervals at the top of the ramp. Two of the hinging stations are located close to the corners and consist of two hinging brackets. There were a further two hinging stations consisting of four hinging brackets located between the two end stations. The hinging stations were welded to the ramp. A circular hole was located in the centre of all the hinging brackets to accommodate a locking pin (**see Figure 10**).
- 1.8.29. On the eastern side of the ramp there was a further bracket approximately 0.50m from the top of the ramp. It had the remains of one chain link attached. The bracket was welded to the side of the ramp. The side of the ramp was missing from the westward edge exposing the internal frame. There were circular holes spaced at regular intervals along the length of the frame.
- 1.8.30. As the hinging stations are located at the top of the ramp this would suggest that the ramp door is in fact upside down. The door would have been hinged at the bottom allowing the door to open down and outwards.
- 1.8.31. The hull plating of the vessel lies flattened across the length and width of the site. It has an approximate thickness of 0.01m. The plates appear to be welded as there are no rivets present on any of the structure.

- 1.8.32. On the east side of the site approximately 5m aft of the ramp there was a section of the hull approximately 2.5m – 3m long consisting of steel frames sandwiched between the remains of hull plating. The frames were 0.30m wide and regularly spaced. The frames appeared to be welded to the hull plating and had an I-shaped cross section.
- 1.8.33. At the stern of the site there was a section of hull plating approximately 3m long by 2m wide with a circular opening with a diameter of 0.30m. The section of hull was not flat but box like in section.
- 1.8.34. Located on the seabed 3m aft of the west side of the ramp door was a pile of heavily concreted chain. There was in the region of a 1m² pile of chain. The chain was too concreted to make accurate dimensions of the individual chain links (**see Figure 12**).
- 1.8.35. The location of the chain near the west side of the ramp door would suggest a possible association with the operating mechanics of the ramp.
- 1.8.36. To the west of and 2m forward of the ramp situated on the seafloor were broken remains of two bits. One bitt was lying on its side and the other was upright. They were approximately 0.5m high with a diameter of 0.3m (**see Figure 13**).
- 1.8.37. Lying scattered around the wreckage were the remains of broken ferrous pipe work of various lengths and diameters (**see Figure 14, Plate A and B**). Entangled amongst the wreckage electrical cable with what appeared to be leaded sheathing.
- 1.8.38. A four flanged non ferrous fixture was located on the sea floor on the east side of the site and 25m north of the ramp. The flanges had an approximate external diameter of 0.25m and an approximate internal diameter of 0.10m (**see Figure 14, Plate C**).

Interpretation

- 1.8.39. Post war dispersal in 1946 by the MOD and salvage work carried out in 1969 by a Mr Richards salvage company of Cumbra Wales have posed problems in interpreting the wreck itself. Much of the vessels original structure is flattened and distorted and in many cases unrecognisable.
- 1.8.40. The destruction of the vessel during the dispersal and salvage activities poses a problem, not only for the interpretation of the wreck but also for the interpretation of the wrecking event.
- 1.8.41. The ramp door is the most intact and recognisable feature to have survived on the seabed. It not only provides the most reliable evidence of the vessels construction and design but also sheds light on the wrecking event.
- 1.8.42. The location and situation of the ramp door would suggest the Landing Craft capsized before reaching the seabed during the sinking. Although one can not rule out the possibility that dispersal and salvage activities did not cause this. The depth at which the ramp had penetrated the seabed would suggest the force behind the momentum of the vessel sinking enabled the ramp to pierce the seabed to such a depth.

- 1.8.43. The upside down remains of other Tank Landing craft such as LCT (A) 2428 near Selsey Bill suggest these type of vessels were prone to overturning during sinking.
- 1.8.44. There was no evidence of the vessel's propulsion on the site. This could also suggest the vessel turned upside down and the engines are now concealed beneath the remains of the bottom of the hull structure. However, there is also the distinct possibility that the engines were salvaged in 1969 by the Cumbra Wales salvage company.
- 1.8.45. There was little in the way of small finds, fixtures and fittings and specifically a lack of non ferrous material. Again much of this could lay hidden beneath the hull structure but it is also likely that this material was either damaged out of recognition during dispersal activities or removed during the salvage of the site.
- 1.8.46. During the course of research to identify the Landing Craft, WA consulted the Shipwreck Index of the British Isles: Volume 2 (Larn and Larn 1997) and the UKHO.
- 1.8.47. Both sources recorded the loss of LCT 809, a British MK IV Tank Landing Craft close to the Needles Rocks. Although both sources confirm the loss of the MK IV LCT 809 in the Western Solent contemporary accounts from operations records and an eye witness account recall that the MK IV LCT 809 was in fact lost on the Beaches of Normandy on the 6th June 1944.
- 1.8.48. Unless MK IV LCT 809 was salvaged and repaired, which appears unlikely due to the amount of damaged sustained by explosives, then the remains North West of the Needles is in fact a different LCT all together. However, until the remains on the seabed are identified it can not totally be ruled out as being LCT 809.
- 1.8.49. The size of the ramp door that remains on the seabed is consistent with that of a British Mk IV. It is too large to be from a US MK VI LCT. Therefore it looks unlikely the remains of the Landing Craft are of a US LCT.
- 1.8.50. The diving operations undertaken by WA and NFNPA and post fieldwork research have not confirmed the positive identification of the sunken Landing Craft in the Western Solent. Further research and diving will be necessary to secure a positive identification of the site.

1.9. GEOPHYSICAL ANOMALY 5

Location

- 1.9.1. The site was brought to the attention of WA and NFNPA by Dave Wendes during diving fieldwork as part of the New Forest RCZA. The site was recorded by the UKHO as foul ground with the possibility of being the wreck of a schooner known as the Neath. With this information both WA and NFNPA archaeologists deemed the site worthy of investigation.
- 1.9.2. The site is situated 1 mile north west of Thorness Bay on the Isle of Wight between Cowes and Yarmouth. The exact position of the site is **50° 44.886'N, 001° 21.370'W** (see **Figs 24 - 26**).

Geology & Ecology

- 1.9.3. The seabed around the site was found to consist of layers of fine silts and slipper limpet shells over clay with patches of organic inclusions which appeared recently exposed on the portside of the wreck. There appears to be a shallow scour on the port side of the site exposing patchy layers of organic material which could possibly be peat. The starboard side of the site appears level with no scour.
- 1.9.4. Despite the poor visibility there was an obvious abundance of marine life on the wreck site. Much of the exposed structure was covered in thick layers of marine growth including hornwrack (*Flustra foliacea*). As well as a profusion of life growing on the wreck structure there were also numerous fish species to be recognized such as ballan wrasse (*Labrus bergylta*), cuckoo wrasse (*Labrus mixtus*) and tompot blenny (*Parablennius gattorugine*). In addition a variety of crustaceae such as edible crab (*Cancer pagurus*), and common lobster (*Homarus gammarus*) were observed. Slipper limpets (*Crepidula fornicata*) had colonized the site and their shells covered the surrounding seabed.

Description

- 1.9.5. The site was investigated by the diving team on the 15th September 2010. The initial dive by the team identified the remains of a wooden vessel consisting of coherent ships structure, cuprous fastenings and multiple ferrous fixtures and fittings including a windlass, a pump flywheel and anchor.
- 1.9.6. Following subsequent dives on the site between the 15th -17th September it was clear the site offered an almost complete assemblage of a mid to late 19th century merchant sailing vessel and therefore was a site of some significance.
- 1.9.7. With this information EH commissioned WA to carryout an undesignated site assessment and the NFNPA granted two extra days diving on site to carryout a more thorough investigation.

Vessel History

- 1.9.8. Although the site is recorded by the UKHO and Larn's Shipwreck index of the British Isles volume II as the *Neath* there is no record in the Lloyds Register of a vessel known as the *Neath* sinking in this area of the Solent. Both fieldwork and research has yet to positively identify the site and therefore the vessel history is unknown.

Survey History & Previous Work

- 1.9.9. As far as WA are aware there have been no previous archaeological investigations of the site. The only existing site data comes from the UKHO and a reference in Larn's shipwreck index volume II.
- 1.9.10. The UKHO have recorded the site as foul ground with the possibility of being the remains of a schooner known as the *Neath*. It has been allocated a record number 58197 by the UKHO.
- 1.9.11. It was first recorded by the UKHO in 1914. The exact date of the sinking appears to be unknown as just the record of the year of 1914 was logged. It was last surveyed in 2007 in which sidescan and swath images were produced of the site. However the images are rather crude and lack detail.

Fieldwork

- 1.9.12. WA and NFNPA conducted fieldwork between the period of the 15th – 17th September and the 18th and 19th October 2010. The site lies at a depth of 21m. A total of eighteen dives were undertaken, with a total bottom time of 2011 minutes.
- 1.9.13. Diving firstly concentrated on identifying the extent and layout of the site. Once this had been accomplished specific attention was given to the survey of the more prominent archaeological features such as port side structure and many of the ships large fixtures and fittings.
- 1.9.14. Diving investigations on the site during 15th – 17th September and the 18th and 19th October 2010 were generally characterised by poor diving conditions. During a high water slack during neaps visibility ranged from 1.5m to 0.5m with a torch and zero without a torch. At a low water neap visibility was even poorer. Despite poor visibility, diving could begin on site 1 hour before and after slack water on a good neap tide allowing a total of 3 hours on site per tide. Diving was more favourable and productive with a degree of tide still running. As the wreck lies across the tide any silt that gets stirred up drifts away rather than along the site. Therefore pairs of divers can work at either end of the site at the same time.

Extent of Survival

- 1.9.15. The wreck lies across the tide on an even keel with the bow pointing south on a slightly undulating clay seabed with a layer of silts and shell on top. The exposed area of wreck is c. 30m long and c. 10m wide. As the layout of the wreck was clearly interpretable, the following descriptions refer to bow, stern, amidships, port and starboard (**see Figure 16**).
- 1.9.16. The keelson is intermittently exposed forming the centre line of the wreck. A bronze rudder pintle attached to the buried remains of the rudder marks the stern end of the site. The bow end was identified by the ships windlass lying upright on the seabed 3.6m to the starboard side of the keelson.
- 1.9.17. In between the bow and the stern are many features associated with the ships fixtures and fittings. Many of these features are 1m-2m either side of or on top of the centre line of the wreck. From the stern to amidships this includes the vessels rudder, steering quadrant, two anchors, possible capstan/cargo winch and the ships pump.
- 1.9.18. On the portside around amidships significant elements of the wreck are exposed revealing a section of coherent structure consisting of frames, inner and outer planking with evidence of cuprous fastenings.
- 1.9.19. Further towards the bow but still on the portside the wreck becomes more confused with a combination of structure and large ferrous concretions upstanding from the seabed.
- 1.9.20. It would appear that both the upstanding structure and concretions on the portside have deflected the flow of the tidal current over this part of site causing a distinct scour along the portside.
- 1.9.21. The starboard side of the wreck appears to be more buried and flat. Elements of the ships structure appear to be flush with the seabed. There is no obvious

scouring like there is on the portside. Structure which was partially exposed consisted of possible deck planking and deck beams.

- 1.9.22. There is a general scattering of artefacts and concretions all over the site including elements of the ship's rigging and possible cargo. On both the port and starboard side of the wreck were the remains of concreted shrouds with circular iron strapping which would have moulded around a deadeye. The wooden deadeyes have gone leaving behind the metal shrouds and strapping. There are many glass bottles, some still corked, strewn over the stern and amidships area. A complete wooden barrel was observed exposed and the remains of staves from other barrels amidships.
- 1.9.23. The site is also littered with modern commercial fishing gear and small boat anchors. The fishing gear is predominantly lobster pots and rope which have snagged on the upstanding structure and fixtures on the port side.

Construction

- 1.9.24. Much of the lower part of the vessel's hull survives buried within the seabed except for the keelson which is exposed in sections running down the centre of the site. Scouring on the portside of the wreck has exposed coherent ships structure consisting of frames, inner and outer planking.
- 1.9.25. The starboard side of the wreck appears to have a greater covering of sediment exposing less structure. However, possible deck beams and deck planking have been observed partially covered or flush with the seabed suggesting the preservation of a section of collapsed deck.
- 1.9.26. As well as the coherent areas of ships structure the site also had a more sporadic jumble of timbers most probably associated with the collapse of the upper structure of the ship. Many of these timbers were found close to or protruding beneath the large ferrous deck machinery and fittings such as the pump, anchors and winches.
- 1.9.27. Due to the level of burial, excavation would be necessary to allow more detailed recording of the structural remains.
- 1.9.28. The keelson marks the position of the centre line of the wreck. It lies exactly north to south with the bow end to the south. The keelson where visible was 0.35m sided. The keelson was predominantly flush with the seabed so it was not possible to gain the moulded measurement.
- 1.9.29. The keelson was intermittently exposed along the length of the wreck. The points at which the keelson should meet with stem and stern post were buried. To gain an approximate length of the keelson and therefore an approximate length of the vessel a tape was positioned from a point at the bow end where the keelson was first exposed back to a point at the stern along the centre line of the wreck and in line with the rudder pintle. The zero of the tape was on the keelson at the bow of the wreck.
- 1.9.30. The length measured from the most forward part of the keelson to the rudder pintle was 27m. The keelson was predominantly exposed from point 0 to 13m on the tape. However there was no evidence of a mast step suggesting that area of the keelson was buried. From 13m on the tape back to the pintle the keelson was buried and obscured by the seabed and the ships large fixtures and fittings.

- 1.9.31. Between 10m – 13m along the tape the keelson was flat and level suggesting the wreck was lying on an even keel. However, forward of this between 10m - 5m the keelson began to slope towards the portside suggesting it had broken and twisted. At the very bow the keelson appeared level once more.
- 1.9.32. At the very end of the keelson at the bow an iron band was fastened along the centre of the keelson with what appeared to be iron bolts. This was lying flat along the top of the keelson and continued into the seabed. This could be associated with the securing of the stem.
- 1.9.33. On the port side of the wreck was a section of exposed hull structure upstanding by up to 0.8m consisting of framing, inner and outer planking. The frames were composite consisting of two timbers side-by-side and fastened together by cuprous rivets. Rivets are bolts/pins flattened at both ends. The frames were curving up from the seabed forming the sides of the ship (**see Figure 17**).
- 1.9.34. The frames which were exposed were 0.22m sided and moulded 0.19m. Two frames butted together to make a double frame measured 0.44m with a spacing of 0.10m between the next frame. The timber and space or 'room and space' was 0.54m, this is the distance from the foreside of the composite frame to the foreside of the next composite frame and therefore includes the space between frames.
- 1.9.35. The section of exposed hull was 3.24m in length consisting of six framing stations. The section of hull was positioned in relation to a baseline that ran along the centre line of the wreck. The inner side of the exposed hull structure was between 3.8m and 3.63m from the baseline and between 10.3m and 13.54m along the baseline. The zero point of the baseline was at the bow of the wreck. This measurement was taken from the bottom of the frames flush with the seabed, to the base line flush with the top of the keelson. The distance between the edge of the frames and the Keelson indicates the beam of the vessel was probably somewhere between 7-8m.
- 1.9.36. There was one partially exposed strake of inner planking running the length of the exposed structure. The top edge of the plank was between 0.05m – 0.10m above seabed level. There was no inner planking surviving on the frames above this plank but there is potential for further survival of planking buried beneath heading back towards the keelson forming the ceiling planking. The width of the plank was unobtainable due to its partial burial but the thickness was measured as 0.06m.
- 1.9.37. On the outside of the frames were the remains of three strakes of outer planking butting edge to edge. The strakes were in poor condition only surviving across two framing stations. The planks were 0.25m wide; exposure has reduced the thickness of the planks to 0.03m (**see Figure 17**).
- 1.9.38. Deck beams and planking were observed on the starboard side of the wreck between the bow and amidships. The diver described the timber as predominantly buried with small areas of exposure flush with the surrounding seabed. Where exposed and with some clearing of surface sediment the diver recorded the width of the timbers. The planking lying across the heavier beams were 0.30m wide, the thickness of the planking was not recorded. The timbers below the planking also had a width of 0.30m but the depth of the timber was not recorded due to its burial.

- 1.9.39. A window or skylight ca. 0.60m² was discovered outside the main wreckage on the starboard side approximately 5m from the centre line of the wreck. The window was situated partially exposed on the surface of the seabed. It consisted of a square frame, probably hardwood. The window was divided into four quarters by wooden internal frames. Two panes of glass survived in situ (**see Figure 17, Plate E**).
- 1.9.40. The site is littered with numerous iron knees, either hanging, standing or both. The knees that were observed were lying loose on the seabed rather than attached to ships timbers. The knees are bars of iron bent to a right angle. The knees that were measured were 0.94m by 1.05m and 0.10m – 0.12m wide (**see Figure 17, Plate H and I**).
- 1.9.41. Numerous iron knee riders were observed on the site. One of which was forward of the section of exposed framing on the portside. This rider protruded from the seabed curving up taking the form of the side of the hull. It protruded approximately 2m curving 1m from seabed level. The rider appeared to be fixed firmly beneath the seabed suggesting it was still fastened to the structure lying beneath. The width of the iron knee rider was 0.10m. – 0.12m (**see Figure 17, Plate C and D**).
- 1.9.42. There are numerous copper alloy metal fastenings of various sizes and types strewn all over the site, some lying loose and some protruding from sections of timber. Close examination of the fastenings revealed they were made of a copper alloy, possibly Muntz metal. However unless properly analysed it can not be said for certain that they are made of Muntz metal. Muntz metal (yellow metal) is a cheaper alloy of copper and zinc. It was patented in 1832 and became a popular alternative from the 1850's (Stone 1993). The copper alloy fastenings are a good indication this vessel was probably constructed post 1850.
- 1.9.43. There appears to be at least two types of cuprous fastenings, drift bolts and rivets. The drift bolt being pointed at one end and flattened at the other. The rivets are flattened at both ends. In each case a cuprous washer is included at the end of the fastenings.
- 1.9.44. The majority of fastenings that have been observed appear to be associated with the framing. The framing rivets and drift bolts have a diameter of 0.015m. The heads of the pins have been flattened to a diameter of 0.02m and the washer around the head has a diameter 0.025m.
- 1.9.45. Smaller fastenings have been recorded with a diameter of 0.01m with the head flattened to 0.015m.
- 1.9.46. The heads of the fastenings observed on the top surface of the keelson had a diameter including the washer of 0.04m. These could be keel bolts or bolts used to fasten a stemson or stem knee to the keelson.
- 1.9.47. There were numerous remains of concreted shrouds and circular strapping that would have been moulded around a wooden deadeye (**see Figure 22**). The deadeye had gone leaving an empty space with a diameter of approximately 0.2m. It appears the rigging going round the deadeye was wire rather than rope because the shroud was concreted. The remains of the shrouds on site were on average 1m long

1.9.48. A single rigging block was recovered from the portside of the wreck consisting of the partial remains of the shell, sheave and rope. The shell of the block was 0.30m long by 0.09m wide. Inside the block was a sheave most probably made of lignum vitae or another hard wood. The diameter of the sheave is 0.18m and it has a thickness of 0.023m. In the middle of the sheave is a brass assembly of moving parts. The inner part of this assembly rotates on six brass bearings. Going round the outside of the block is a length of rope. The rope forms an eye round the block and splices back into itself. What is unusual about the rope is that it was heavily concreted as if it was the oxidised remains of wire rope. It is in fact a combination of hemp rope and wire. The core of the rope is made from three stranded hemp rope with wire twisting with the lay around the outside. A thin bandage of canvas has then been rapped around it. Where the rope has been spliced back on itself, it not only has a bandage of canvas but it is strapped or sheathed with a thin gauge of rope to reinforce the binding

Fixtures & Fittings

- 1.9.49. A large iron windlass was found upright on the seabed 3.6m away on the starboard side on a bearing of 280° from the forward most part of the keelson. The length of the windlass was 4.2m measured from each warping end. The actual warping ends appear to have fallen off leaving just the axles in which they would have turned. The windlass was mounted on two bits that rose 1.25m from the seabed. Each bitt was 0.20m wide. There were two cable lifters located inside the warping ends. This would have rotated to lift the anchor cable (**see Figure 21**). The design and solid construction from iron would put this type of windlass in the date range of the late 19th Century to early 20th Century.
- 1.9.50. At the stern of the site was a partially buried bronze rudder pintle (**see Figure 18**). It was lying on its side with one half buried and obscured by the remains of the rudder. The length of the exposed pintle arm was 0.60m by 0.09m wide. It was fitted with four copper alloy pins retaining the remains of the wooden rudder. The remains of the wooden rudder could be traced back into the seabed. There is potential for the other pintles to be present buried beneath the sediment.
- 1.9.51. In line with the centre line of the wreck, 26m along the baseline towards the stern an iron steering quadrant was observed. The remains of the quadrant were V-shaped with the V pointing in the direction of the stern. On the inside of the point of the V was an iron pin in which the quadrant would have pivoted in a semi circular arc. The arms of the quadrant were 1.83m long and 0.10m wide. The space between the arms at its maximum span was 2.13m (**see Figure 20**). The quadrant was common on vessels from the 1880's onwards (Stone 1993).
- 1.9.52. A ferrous object was located on the portside 21.20m along the baseline. It is not certain but it could be a fixture related to the steering mechanics (**see Figure 20**).
- 1.9.53. Two anchors were located in the stern of the wreck. They were both partially buried with one fluke upstanding. Much of the shanks or shafts were buried. It was not possible to determine whether there was an anchor ring or stock due to the burial. Only one anchor was recorded in detail. It was located 17.30m along the baseline on the starboard side of the wreck. The size of the fluke was 0.22m by 0.21m. The thickness of the shank was 0.17m. The exposed

section of the shank was 0.88m long. The inside measurement of the arm between the top of the fluke to shank was 0.72m.

- 1.9.54. The location of the anchors at the stern and their size would suggest they are not the ship's main anchors or 'bowers', but instead they maybe kedge or stream anchors.
- 1.9.55. The two flywheels and crank from the ship's pump were located in their upright position 18.50m along the baseline. The flywheels are half buried and the crank is flush with the level of the seabed. The diameter of the flywheel wheels were 0.98m. The distance between the flywheels was 1.25m. The flywheels are heavily concreted giving the average thickness of the wheel 0.10m (**see Figure 21**). There is the potential for the cylinders and suction tubes of the pump to survive beneath. The flywheel type of pump becomes in use from 1840 onwards (Campbell 1974:87).
- 1.9.56. A Fresnel lens of a navigation light was recovered from the stern of the wreck. There was no remains of the lantern in which it may have been held. This could suggest it was carried on board as a spare lens. It is not a 360° lens which means it was most probably either, a bow, stern or masthead light, which were flat backed directional lights (**see Figure 23**).
- 1.9.57. A possible capstan or cargo winch was lying on its side located 20m along the baseline just off to the starboard side. The capstan was 1.90m long with a diameter of 1m. Directly behind the capstan was a long cylindrical object with a square plinth. The length of this object was 2.40m long. The cylindrical part had a diameter of 0.25m. The square plinth at the base of the cylindrical tube was not measured precisely but is c. 0.40m².
- 1.9.58. A small deck fitting was found on the portside of the wreck just inside but aft of the exposed frames. It consists of a brass cap with a draining tap which screwed into a brass tube which went through a timber structure, possibly the deck. Between the cap and the timber is a rubber washer. The rubber washer gives the wreck a date of wrecking post 1852.
- 1.9.59. A section of rubber hose 0.48m long with a diameter of 0.04m was located partially buried with the stern wreckage. If this is contemporary with the wreck then it gives a terminus post quem 1852 for the wrecking of the vessel.

Cargo

- 1.9.60. The exact cargo of the vessel is still yet to be identified. There were numerous glass bottles of various shapes and sizes and some were still corked. As yet it has not been determined whether the bottles are associated with the ship's cargo or provisions from the galley.
- 1.9.61. The types of bottles found on site have been moulded from both clear and dark coloured glass. One of the bottles was a Rose's Lime Cordial clear stained bottle with emblem. Rose's Lime Cordial was patented in 1867. These bottles appear to be consistent with a date range between the late 19th Century and early 20th Century.
- 1.9.62. One complete wooden barrel was observed exposed on the seabed (**see Figure 21, Plate K**). It was not recorded in detail at the time and has not been located since it was first seen. The partial remains of one barrel stave which may or may not be associated with the complete barrel was found and

recovered. From the remains of the stave it is possible to make out the concreted remains and staining of two iron hoops at one end of the stave. This identifies the barrels were held together by iron strapping rather than wooden withies. Unfortunately it is not known what was being carried and stored in the barrels.

- 1.9.63. A lead sounding weight (weighing 11lbs/5kg) was recovered from the area of the bow of the wreck lying loose on the surface of the seabed. It is 0.27m long by 0.05m tapering to a width of 0.03m at the top where there is a hole to attach a line (**see Figure 23**).

Interpretation

- 1.9.64. The archaeological evidence gathered during the 2010 fieldwork indicates that the site is the remains of a wooden merchant sailing ship. Judging by the extent of the site and the preserved hull timbers, the vessel was at least c. 27m long and had a breadth of 7-8m.
- 1.9.65. The width of the keelson and the approximate length suggests this is a fairly sizeable vessel in the region of c. 150 tons. The ship was carvel built probably from oak and fastened with cuprous fastenings. The composite framing, cuprous fastenings and bronze rudder pintle all suggest this was a well constructed and robust sailing vessel fit for ocean voyages.
- 1.9.66. There was no evidence of any engines on the site and the numerous rigging elements suggest the only propulsion system was sail. The length of the site suggests the vessel had at least two masts and possibly three. The presence of a large iron windlass, an iron steering quadrant and the type of pump with iron flywheels suggests a probable date of the late 19th century.
- 1.9.67. The extent of the survival of the hull structure, ships fixtures and fittings, and even small finds indicates an extremely rich and well preserved assemblage.

1.10. SUMMARY

- 1.10.1. The five wrecks investigated were all modern in origin and are broadly typical of the Solent's shipwreck resource from this period. Although not representative of the archaeological resource as a whole, these wrecks provide in indication of the Solent's continued usage as a trading passage from the late 19th Century onwards.
- 1.10.2. In terms of their contribution to other fields of nautical research, the wrecks have as yet provided only limited insight into construction techniques and shipboard life, but further research could substantially expand the knowledge base. By virtue of their location, these sites form part of the New Forest's historic landscape and may yet enhance our understanding of late 19th Century industry and commerce in the region. They may also shed new light on the German and British naval strategies of the First World War.
- 1.10.3. The geophysical anomaly investigations identified a further two shipwrecks of unknown date and origin, and a modern wreck. Preliminary investigations into the unknown sites suggest a possible WWII Tank Landing Craft (LCT) and a candidate for the wreck of the *Neath* which was lost off the Isle of Wight in the early 1900s. Further research is required to establish the identity of the vessels and to determine their archaeological value.

- 1.10.4. The marine component of the RCZA provided volunteers with the opportunity to investigate and record shipwrecks *in situ* and in doing so, it has contributed to local awareness of the shipwreck resource and its need for management. The project showed that the knowledge and enthusiasm of local recreational divers can significantly enhance archaeological quantification projects and contribute to numerous objectives therein.

APPENDIX 3

NEW FOREST RAPID COASTAL ZONE ASSESSMENT CREEK COTTAGE, LOWER WOODSIDE, LYMINGTON

Archaeological Evaluation

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NEW FOREST RAPID COASTAL ZONE ASSESSMENT CREEK COTTAGE, LOWER WOODSIDE, LYMINGTON

Archaeological Evaluation

Contents

Summary	iii
Acknowledgements.....	iv
1 INTRODUCTION	1
1.1 Project Background	1
1.2 Scope of Document.....	1
1.3 Site Location, Topography and Geology	1
2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	2
3 METHOD STATEMENT	3
3.1 Service Location	3
3.2 Evaluation Methodology	4
3.3 Health and Safety	5
4 RESULTS	5
4.1 Introduction.....	5
4.2 Trench 1	5
4.3 Trench 2	6
4.4 Trench 3	7
4.5 Trench 4	7
5 FINDS	8
5.1 Introduction.....	8
5.2 Pottery	8
5.3 Ceramic and Stone Building Material	9
5.4 Glass	9
5.5 Metalwork	9
5.6 Other Finds.....	10
5.7 Recommendations.....	10
6 ENVIRONMENTAL EVIDENCE	11
7 DISCUSSION AND RECOMMENDATIONS	11
8 THE ARCHIVE	12
9 COPYRIGHT	13
10 REFERENCES	13
11 APPENDIX 1. TRENCH SUMMARIES.....	14

- Figure 1** Site Location Plan
Figure 2 Detailed plans of Trenches 1 and 2
Figure 3 Detailed plans of Trenches 3 and 4.
Plate 1. Trench 1 from the south east
Plate 2. Trench 2 from the west
Plate 3. Trench 3 from the north west
Plate 4. Trench 4 from the north
Front cover. Trench 1 under excavation
Back cover. Salterns close to the site

NEW FOREST RAPID COASTAL ZONE ASSESSMENT CREEK COTTAGE, LOWER WOODSIDE, LYMINGTON

Archaeological Evaluation

Summary

Wessex Archaeology was commissioned by the New Forest National Park Authority (the Client), to undertake an archaeological evaluation in advance of development on land at Creek Cottage, Pennington, Hampshire (**Figure 1**), centred on NGR 432445, 093475 (hereafter 'the Site').

The field evaluation was required as the result of a condition placed on a planning application (planning refs: 94337 South Building Internal alterations etc; 94329 Change of use to B1) to New Forest National Park Authority (NFNPA) for the redevelopment of the existing building for new uses.

In this area sea salt production had developed into a thriving industry by the post medieval period with the largest salterns based between Lymington and Milford. Salt factories or salterns collected sea water in shallow pits and by wind and sunlight evaporated some of the water to increase the salinity and producing brine. Using wind pumps the brine was pumped into header tanks where it was fed into the pans within the boiler house. The larger of the two industrial buildings on the site is the remaining part of a once much longer building, thought to be a salt boiling house dating to the 18th century.

The evaluation was undertaken between 19th July and 30th July 2010 as part of the Festival of British Archaeology, and as such, was undertaken as a collaboration between staff from Wessex Archaeology and local volunteers.

A total of 4 small hand dug trenches were excavated. These identified deposits and features associated with the construction, use and subsequent partial demolition of the 18th and 19th century salt boiling house. Some evidence for activity on the site prior to the construction of the boiling house was recovered, including two undated features and two sherds of medieval pottery. Traces of significant modern landscaping, including deposits and features associated with the construction of a model railway on the site in the late 20th century were also recorded.

Following discussion with Frank Green of the New Forest National Park Authority, it is recommended that the results of this evaluation be published along with the results of recent works at Normandy Dock as a short note in an appropriate local journal.

NEW FOREST RAPID COASTAL ZONE ASSESSMENT CREEK COTTAGE, LOWER WOODSIDE, LYMINGTON

Archaeological Evaluation

Acknowledgements

This project was commissioned by New Forest National Park Authority (NFNPA) and Wessex Archaeology is grateful to NFNPA archaeologists James Brown and Mark James in this regard. Wessex Archaeology would also like to thank the advice and assistance provided by Frank Green, Archaeologist for the New Forest National Park Authority who monitored the project on behalf of the local planning authority. Thanks are also due to David and Lisa Hill, owners of Creek Cottage, for allowing access to the site and their help and patience throughout the project. The project also benefitted from discussions on site with Joanna Close-Brooks, Jude James and Wendy Wiseman.

The evaluation was undertaken as part of the Festival of British Archaeology by staff of Wessex Archaeology and by local volunteers. The project was directed in the field by Steve Thompson, assisted by Helen MacIntyre (both of Wessex Archaeology). The volunteers who worked on the project were Alan Bollom, Emily Brewer, Steve Bush, Shireen Caals, Alexa Carter, Barrie Compton, Adam Ferries, Richard Fox, Joe Fussell, Diane Hogarty, Barry Kerley, Roger King, Laura Leavesley, Bob Lord, Zoe Miles, Peter Murphy, Charlotte Newnham, Avril Poppett, Mil Reid, Julie Simpson, Clare Walsh, Nora Waygood, Wendy Wiseman and Gus Woolley, along with Tom Dommett, Karl Macrow and James Brown of the New Forest National Park Authority.

The report was researched and compiled by Nicholas Cooke and the drawings prepared by Liz James. The project was managed for Wessex Archaeology by Toby Gane.

NEW FOREST RAPID COASTAL ZONE ASSESSMENT CREEK COTTAGE, LOWER WOODSIDE, LYMINGTON

Archaeological Evaluation

1 INTRODUCTION

1.1 Project Background

- 1.1.1 Wessex Archaeology was commissioned by the New Forest National Park Authority (the Client), to undertake an archaeological evaluation in advance of development on land at Creek Cottage, Pennington, Hampshire (**Figure 1**), centred on NGR 432445, 093475 (hereafter 'the Site').
- 1.1.2 The field evaluation was required as the result of a condition placed on a planning application (planning refs: 94337 South Building Internal alterations etc; 94329 Change of use to B1) to New Forest National Park Authority (NFNPA) for the redevelopment of the existing building for new uses.
- 1.1.3 The Planning Archaeologist at NFNPA has advised that an archaeological evaluation is required to discharge the archaeological condition prior to development taking place. Given the difficulties accessing the site, it has been agreed four trenches, positioned over the footprint of the former buildings, and around the existing buildings, will be sufficient to assess the archaeological potential.
- 1.1.4 A project design was prepared for the archaeological evaluation (Wessex Archaeology 2010) outlining the proposed methodology to be used for the archaeological evaluation and the reporting of the final results.

1.2 Scope of Document

- 1.2.1 This document provides an assessment of the results of the evaluation trenching, detailing the stratigraphic sequences encountered, the finds recovered and the environmental samples taken. An assessment is made of the significance of the results of this work, together with recommendations for further work. In format and content it conforms with current best practice and to the guidance outlined in *Management of Archaeological Projects* (English Heritage 1991) and the Institute for Archaeologists' *Standards and Guidance for Archaeological Field Evaluation* (as amended 2008).

1.3 Site Location, Topography and Geology

- 1.3.1 Creek Cottages lie approximately 1km to the south east of Pennington in the Parish of Lyminster and Pennington, on the south west Hampshire coast. The site itself is located within the southern half of the parish, immediately east of Lower Woodside Road and at the western end of the water course known as Moses Dock. Two existing buildings, one of which is the surviving part of a former salt boiling house, and the other is believed to be a c. late 18th century ancillary structure, are due to be developed for new uses.

- 1.3.2 Lower Pennington lies within the coastal zone of the north-west Solent shore, extending just north-west of the tidal marshes, previously salterns, which have mostly now been reclaimed as grazing land. The area of saline, brackish and saltwater lagoons, salt marsh, reed beds and grassland to the south and east of Creek Cottage is still discernable as former salt workings and is now part of the Hurst Castle and Lymington River Estuary SSSI.
- 1.3.3 Creek Cottage itself lies just within the New Forest National Park on its southern limit, and on the edge of the belt of brackish and freshwater marsh on reclaimed tidal silt, that makes up the SSSI.
- 1.3.4 The bedrock geology to the north-west of the site is Solent group clay, silt and sand, and to the south-east of the site it is Bracklesham and Barton groups (undifferentiated) clay, silt and sand (BGS Website). The superficial geology of the site is Alluvium and sand and gravel deposits of uncertain origin at a mean elevation of c. 2m above Ordnance Datum (aOD).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 2.1.1 A brief search for archaeological and historical sites within a 1km radius ('the Study Area') of the site via the Hampshire Sites and Monuments Record website (<http://historicenvironment.hants.gov.uk/ahbsearch.aspx>) indicates the presence of a number of sites, predominantly of a late medieval and post medieval date.
- 2.1.2 Although evidence of prehistoric activity is relatively scarce in the study area, sites and finds are known from a variety of locations in the vicinity including a Lower Palaeolithic hand axe. No known finds of the Upper Palaeolithic and Mesolithic have been found, although Neolithic and Bronze Age peat formations are known in the Lymington area. A polished stone axe from the parish attests to the Neolithic activity in the area.
- 2.1.3 A Bronze age settlement has been identified at nearby Buckland Rings and it has been suggested that much of the settlement during this period may have been coastal.
- 2.1.4 During the Iron Age there is evidence for increasing population, further clearance of woodland and cultivation of land as agricultural systems became established. Storage pits, field systems, ditches and artefacts including pottery and metalwork are indicative of 'Permanent' settlement sites. The presence of defended settlements (hillforts), enclosures and ditches suggest that demarcation of territory was important at this time. Only one IA coin is known from the area. However, evidence from other coastal sites suggests that the Iron Age environment was little different from that of today where rough grazing, salt production and access to coastal transport routes may have taken place.
- 2.1.5 There is some direct evidence for Roman settlement in the vicinity, in the form of excavated features near Pennington House 1km to the west. In addition, the only other evidence is the discovery of a Roman necklace in the Lymington River during nineteenth century dredging activities and two carved stone heads of (possible) Celtic design, perhaps dating from the Romano-British period that may have come from Lower Farm Pennington.

- 2.1.6 There is no known evidence of Saxon activity in the vicinity.
- 2.1.7 The medieval period saw extensive expansion of industry, most notably the salt production industry, particularly between Keyhaven and Lymington. Documents indicate salt production stretching from Hurst Spit (Hordle), Keyhaven, Pennington, to Oxey and Lymington, and aerial photographs support this widespread distribution. Indeed it appears likely that by the fourteenth century the whole of the coastline, from the Lymington River to Hurst Spit was in use.
- 2.1.8 The current standing buildings on the site, one of which is thought to be part of the only salt boiling house remaining, are believed to be 18th century, although they could potentially be earlier.
- 2.1.9 In this area sea salt production had developed into a thriving industry by the post medieval period with the largest salterns based between Lymington and Milford. Salt factories or salterns collected sea water in shallow pits and by wind and sunlight evaporated some of the water to increase the salinity and producing brine. Using wind pumps the brine was pumped into header tanks where it was fed into the pans within the boiler house. The remaining water content was evaporated using large fires, later fuelled by coal. The salt was then stored on site and transferred via small harbours associated with the Salterns to barges for distribution. These barges in later years would also bring in the coal. The buildings at Creek Cottage are the last remaining buildings that can be associated with the salt industry in this area. (Momber, G. *et al* 1994)
- 2.1.10 The larger of the two industrial buildings on the site is the remaining part of a once much longer building, thought to be a salt boiling house dating to the 18th century. The surviving extent of the building is characterised by an inner aisled timber frame, surrounded on all sides by brick walls. The roof is covered with plain red tiles and is gabled to the east and half hipped to the west.
- 2.1.11 The complex of buildings on the site is shown on the 1845 tithe map. In addition to Creek cottage itself, three further buildings are shown. By far the largest of these is the boiling house, shown as considerably larger than it is today, with two ancillary buildings to the south east, the southernmost of which still survives. The same buildings appear on the 1867 Ordnance Survey map for the area, with only minor differences. Other features shown on the Ordnance Survey Map include what appear to be a rectangular evaporation pan, a circular mound labelled 'Pumping Mill' and two additional rectangular structures, one of which may be a storage cistern or header tank. The whole complex is shown as raised above the land to the east, which is low lying.

3 METHOD STATEMENT

3.1 Service Location

- 3.1.1 All evaluation trenches were scanned before and during excavation with a Cable Avoidance Tool (CAT) in order to verify the absence of any live underground services.

3.2 Evaluation Methodology

- 3.2.1 The evaluation was carried out in accordance with the methodology agreed laid out in the project design and with the standards laid down by the Institute for Archaeologists in *Standards and Guidance for Archaeological Field Evaluation* (as amended 2008)
- 3.2.2 A total of 4 hand excavated trial trenches (3m x 1.5m) were dug (**Figure 1**) within close proximity to the two buildings. There were partially targeted on the results of an earlier geophysical survey (Wessex Archaeology 2010a). A resistance survey undertaken as part of this geophysical survey identified a number of high resistance anomalies in the vicinity of these buildings, possibly representing the buried remains of earlier structures.
- 3.2.3 The trenches were laid out using a GPS/TST and related to the Ordnance Survey grid. The trial trenches were excavated by hand using hand tools and under constant supervision by Wessex Archaeology. Excavation proceeded to a depth at which the uppermost archaeological features, or the top of natural deposits, were exposed, whichever was the higher.
- 3.2.4 Once the level of archaeological deposits was exposed by hand excavation, cleaning of the trench base was undertaken by hand where necessary. Appropriate sampling of all archaeological features identified in the evaluation trench was carried out by hand. Sufficient excavation of archaeological features and deposits in each trench was undertaken to resolve the principal aims of the evaluation. Where trenches were dug below a depth of 1.2m, they were stepped for Health and Safety reasons.
- 3.2.5 In some places, relatively complex stratigraphic sequences were identified, and every effort was made to establish the depth and complexity of this stratification. With the agreement of the planning archaeologist, small extensions were made to both trenches 1 and 4.
- 3.2.6 All features and deposits were recorded using Wessex Archaeology's standard methods and *pro forma* recording system, with all features and deposits being assigned a unique number. A full graphic record was also maintained. Plans and sections of all features were drawn at a scale of 1:20 and 1:10, where appropriate. All drawings were made in pencil on permanent drafting film.
- 3.2.7 A full photographic record was maintained during the evaluation using digital cameras equipped with an image sensor of not less than 10 megapixels. The photographic record comprises both working shots and record shots of deposits and features recorded during the evaluation. Digital images taken are subject to managed quality control and curation processes which will embed appropriate metadata within the image and ensure long term accessibility of the image set.
- 3.2.8 The spot height of all principal features and levels was calculated in metres relative to Ordnance Datum, correct to two decimal places. Plans, sections and elevations were annotated with spot heights as appropriate.
- 3.2.9 The location of features was accurately surveyed by GPS and tied into the OS National Grid.

- 3.2.10 Wessex Archaeology follows the guidelines set out in the document *Selection, Retention and Dispersal of Archaeological Collections; Guidelines for use in England, Wales and Northern Ireland* (Society of Museum Archaeologists (SMA) 1993) with regard to the retention of artefacts and samples. This allows for the discard of selected artefact categories and sample products which are not considered to warrant further analysis.
- 3.2.11 Once fully recorded, the trenches were backfilled with arisings to the satisfaction of the client. No other reinstatement works were undertaken.

3.3 Health and Safety

- 3.3.1 All work was carried out in accordance with the Health and Safety at Work etc. Act 1974 and the Management of Health and Safety regulations 1992 and all other relevant Health and Safety legislation and regulations and codes of practice in force at the time (SCAUM 1996).
- 3.3.2 Prior to the commencement of the fieldwork a site-specific Risk Assessment was produced. All site staff involved in works signed and complied with this document.

4 RESULTS

4.1 Introduction

- 4.1.1 The evaluation was undertaken between 19th July and 30th July 2010 as part of the Festival of British Archaeology, and as such, was undertaken as a collaboration between staff from Wessex Archaeology and local volunteers.
- 4.1.2 A total of 4 small hand dug trenches were excavated. These identified evidence for significant modern landscaping, including deposits and features associated with the construction of a model railway on the site in the late 20th century and deposits and features associated with the construction, use and subsequent partial demolition of the boiling house. Some evidence for activity on the site prior to the construction of the boiling house was also recovered. Detailed trench summaries for all four trenches can be found in **Appendix 1**

4.2 Trench 1

- 4.2.1 Trench 1 was a hand dug trench dug close to the south western corner of the surviving boiling house building (**Figures 1 and 2**). Earlier photographs of this building indicate a small lean-to brick built structure abutting this gable end wall, thought likely to have been used as a coal store (see Lloyd, 1967, Plate VIIa). The trench was rectangular in plan measured some 3.4m by 1.9m.
- 4.2.2 The upper deposits encountered within this trench comprised a series of modern layers (101, 103 and 105) immediately below which lay the remains of the lean to structure. Some of the deposits and features associated with this structure are also clearly modern in date (layers 106, 110 and 116). The latest features in this trench (113, 114, 117, 126 and 127) are also modern. The latter is the steep sided cut for a short stretch of brick wall (102) which clearly formed the south eastern wall of the lean-to coal shed.

- 4.2.3 The remaining two walls of the coal shed (108 and 120) clearly belong to an earlier phase of construction, and appear to form part of the same structure. This coal shed measured some 2.3m by 1.5m internally. The alignment of wall 120 corresponds closely with the north western wall of the surviving boiling house structure. In the light of this, it seems probable that walls 108 and 120 represent the original extent of this earlier building. Although neither wall appears to have substantial foundations, the timber framing would have taken much of the weight of the substantial roof structure, and the external walls of the building need not have been substantial weight bearing structures.
- 4.2.4 A small number of deposits and features appear to have been directly related to the use of the boiling house. These include layer 107, which comprises a sequence of dumps of ashy material, likely to be related to the use of the boiling house and a possible posthole (124, not shown on plan). This posthole contained a single fill (125) containing quantities of broken CBM and slate. A sample was taken from layer 107.
- 4.2.5 A deep sequence of deposits predating the construction of the boiling house was also excavated. The uppermost of these deposits, 104, appears to be a man made deposit, comprising dumps of material used to level the ground. This was in general a very fine well sorted deposit, almost ashy in places, and may have derived from earlier episodes of salt making. This sealed a considerable depth of very fine well sorted dark silts (recorded as 111 and 121) which are likely to represent alluvial silts building up in estuarine conditions. Whilst it is possible that these derive from earlier salterns, there is little positive evidence for this. Clay pipe fragments recovered from 111 indicate a post-medieval date for the formation of this deposit. Layers 111 and 121 sealed a natural alluvial clay layer, 123, encountered some 1.22m below the modern ground level. Two sherds of medieval pottery were recovered from this trench – one from layer 122 (identical to 104) and the second from layer 121. Both of these have a potential date range from the 11th to 13th centuries, and their presence within the lower deposits in the trench suggest medieval activity within the vicinity. The rest of the finds assemblage from the trench dates to the post-medieval and modern periods.

4.3 Trench 2

- 4.3.1 Trench 2 lay to the south east of the boiling house. This hand dug trench was some 2.90m long and 1.40m wide, and was excavated to a maximum depth of 0.73m below modern ground level. Although a considerable depth of deposits was encountered, the majority relate to modern activity on the site. Removal of the modern topsoil (201) revealed a series of modern features - a rough brick wall (202) and two dumps of gravel (204 and 206) - all laid as part of the construction of a model railway on the site in the mid 20th century. These were cut into the modern subsoil (recorded variously as 203, 205 and 207). This sealed a layer of compact gravelling (208), probably the remains of a yard surface, which was lain on top of a thick deposit of dumped material (209).
- 4.3.2 A stoneware ink bottle recovered from the layer of gravel (209) suggests a late 19th century date for its use, whilst finds recovered from layer 209 include quantities of brick and tile, along with a number of Iron objects. The ashy nature of much of this deposit suggests that it probably derives from

the boiling house. The lowest deposits excavated within the trench - layer 211 (an isolated dump of ashy waste) and 210 (a thick accumulation of material) are also likely to be contemporary with the use of the boiling house. Finds from both are consistent with an 18th or 19th century date.

4.4 Trench 3

4.4.1 Trench 3 was located to the north east of the extant boiling house, and was targeted on the presumed line of the south eastern wall of the earlier, larger, boiling house, which geophysical survey suggests extends further to the north east. No traces of this wall were identified within the trench. The trench itself measured some 3.10m by 1.50m and was excavated to a maximum depth of 0.82m.

4.4.2 Removal of modern topsoil (301) revealed a number of modern deposits and features, some of which also relate to the construction of a model railway on the site (302, 303 and 304). These were laid directly onto a modern garden soil (305).

4.4.3 Some deposits and features relating to the use of the boiling house were identified. In particular a shallow construction cut (307) containing a dump of brick and stone rubble (308) and a concreted layer of sand (309). This rubble may have been laid to provide a firm foundation for something structural within the boiling house, perhaps a boiling tank or similar. Foundation 307 was cut through an earlier deposit (306), probably a land surface pre-dating the construction of the boiling house. Finds from this layer suggest a post medieval date. Samples were taken from fills 312 and 314 were to try and establish the nature of this activity.

4.4.4 Removal of layer 306 across half of the trench revealed two earlier features – posthole 310 and ditch 313 cut through an alluvial deposit (315). The earliest of these, ditch 313, was dug on an east-west alignment and contained a single fill (314) a naturally accumulated erosion deposit. This fill was cut by posthole 310, which contained two distinct fills (311 and 312). Unfortunately the only anthropogenic material recovered from the fills of either feature was small quantities of broken bricks within the fills of the posthole, which suggest a late medieval or post medieval date. However, the identification and excavation of these features has established that there was activity on the site prior to the construction of the boiling house.

4.5 Trench 4

4.5.1 Trench 4 was targeted on the north eastern extent of one of the anomalies recorded in the geophysical survey of the site, and interpreted as possibly representing the earlier extents of the boiling house. It lay some 13m to the north east of the current gable end of the building. Initially measuring some 2.9m by 1.5m, the northern corner of this trench was extended by some 0.5m in each direction.

4.5.2 The modern topsoil and turf (401) sealed a series of modern deposits and features (402, 405 and 407) including another feature associated with the modern model railway (404, not shown in plan). The latter sealed a layer of compacted rubble, probably derived from the demolition of the boiling house (variously recorded as layer 406, 411 and 413).

- 4.5.3 A shallow irregular feature cut through the top of this demolition layer (407) is likely to represent modern root disturbance or a tree throw.
- 4.5.4 Further evidence for the boiling house was recorded at the northern end of the trench and in the trench extension. Here, traces of the north eastern wall of the boiling house (414) were identified. Only a short stretch of this wall, aligned north west to south east, survived. It had been heavily truncated by a robber trench (419), probably dug at the time of the demolition of the building. Traces of a mortar surface (416) either a floor or bedding for a floor associated with the boiling house was recode. This lay on compact levelling layers of crushed CBM and mortar (415 and 417), which in turn lay on a bed of reddish pink sand (418) only partially exposed within the trench.
- 4.5.5 A dump of material excavated to the north of wall 414 (layer 420) contained quantities of clinker or slag material, thought likely to be derived from the salt boiling furnaces. Samples were taken from this layer and from layer 417.

5 FINDS

5.1 Introduction

- 5.1.1 The evaluation produced a small quantity of finds. This comprises a group of domestic refuse (animal bone, pottery, glass, clay pipe, metalwork, marine shell), concentrated in Trench 2, in which the datable finds are almost exclusively of modern date (19th/20th century), together with structural material (ceramic and stone building material, ironwork), found across the Site, which has a wider date range, including medieval and post-medieval/modern material.
- 5.1.2 All finds have been quantified by material type within each context, and the results are presented in **Table 1**.

5.2 Pottery

- 5.2.1 Apart from two medieval sherds, the pottery assemblage is all of post-medieval/modern date.

Medieval

- 5.2.2 The two medieval sherds are both coarsewares. One sherd from context 121 is in a sandy/flint-tempered ware; comparable wares have been identified at other sites in the New Forest, including Lymington (Powell 2009, 23); these wares are likely to be of relatively local manufacture, as they do not occur in south Wiltshire, or in Southampton. The second sherd, from context 122, is in a sandy ware with surface scratchmarking, probably a Southampton type (Brown 2002, 9, fabric SMK). Both sherds fall within a potential date range of 11th to early 13th century.

Post-medieval/Modern

- 5.2.3 Potentially the earliest sherds amongst the later group comprise the coarse earthenwares. These include two types; predominant here are the pale-firing Verwood-type earthenwares from east Dorset (21 sherds), which have a date range from at least the mid 17th century through to 1952, with little typological change within this period. There are also three sherds of

redwares of uncertain source (one is from a modern flowerpot, but the other two sherds could be earlier).

- 5.2.4 All other wares are of 19th or 20th century date. These include refined whitewares and redwares, late white-slipped redware, stoneware, oriental porcelain and bone china. Overall, the post-medieval/modern assemblage includes the expected domestic range of kitchenwares (coarse earthenwares, white-slipped redware), containers for food and other household goods (stonewares), and tablewares (refined wares, porcelain, bone china).
- 5.2.5 Of interest is the presence (in context 208) of a complete stoneware ink bottle, with pouring spout, stamped with the (bottle) manufacturer's mark: Lovatt & Lovatt, of the Langley Mill pottery in Nottinghamshire. The Langley Mill factory was founded in 1865 by James Calvert, whose son William entered into partnership with Albert Lovatt in 1883; Albert and his brother John Lovatt took over the pottery in 1895, and the business continued as Lovatt & Lovatt until 1930. This particular stamp dates from 1895 - c.1913. The pottery produced a range of art wares, but utilitarian containers such as the ink bottle formed a significant part of the output (Giblin and Giblin 2002, 7, 17, 50, 77).

5.3 Ceramic and Stone Building Material

- 5.3.1 This category includes fragments of ceramic brick, roof tile and wall tile. Brick fragments are largely in markedly coarse, poorly wedged fabrics, with prominent inclusions; several examples have vitrified surfaces. Fragments are small, but where discernible, these appear to derive from unfrosted bricks. Fabric and form suggest that these bricks belong to the earlier post-medieval period, between the 16th and 18th centuries, although in the absence of more complete examples dating is difficult.
- 5.3.2 Roof tile fragments are mainly from flat (peg) tiles; examples in slightly coarser fabrics, more crudely fashioned, are of medieval date (one or two have a few glaze spots, and nail holes are either square or round); these are more numerous than the post-medieval examples. One medieval fragment could come from a curved ridge tile (context 113).
- 5.3.3 A few fragments of modern glazed wall tiles were found; fragments from what may be a single blue and white transfer-printed tile came from contexts 208, 209 and 210, and fragments of other tiles came from contexts 201 and 301.
- 5.3.4 Stone building material comprises two roofing tiles, one of limestone (context 208) and one of slate (context 103). Neither is closely datable.

5.4 Glass

- 5.4.1 This consists largely of vessel glass, with one fragment of window glass (context 211). Two fragments of green glass from context 103, including a narrow base with a solid kick, are from a bottle(s) of 17th or 18th century date. All other vessel glass is 19th or 20th century in date, and includes a small, complete perfume bottle with a metal stopper (context 208).

5.5 Metalwork

5.5.1 The copper alloy comprises a buckle, a button, a washer with rivet *in situ*, and a small fitting, perhaps a drawer pull. All are modern.

5.5.2 The iron includes four nails, a piece of wire, and some miscellaneous sheet fragments of uncertain origin. These objects are not datable but are almost certainly post-medieval/modern.

5.6 Other Finds

5.6.1 Other finds comprise small quantities of animal bone (standard domestic refuse), clay tobacco pipe (all plain stems); ironworking slag; and oyster shell.

5.6.2 Of interest is a complete small wooden sleeper, with iron bolts still *in situ* at either end, almost certainly belonging to the modern model railway.

5.7 Recommendations

5.7.1 Given the quantity of finds recovered, their range, date and provenance, no further analysis is warranted, and retention for long-term curation is not considered to be necessary; much if not all of this assemblage could be discarded. However, consultation should be made with the recipient museum, and with the landowners and/or any other interested parties, before any discard takes place.

Table 1: All finds by context (number / weight in grammes)

Context	Animal Bone	CBM	Glass	Pottery	Metal	Other finds
103	34/14	5/874	2/70	17/276	3 Fe	1 stone
104		3/678				
105		1/266		1/5		
106				2/5		
107		5/250				
110		2/18	1/5	1/11		
111	3/26	2/125		2/26		2 clay pipe; 1 shell
113		1/89				
121	1/15			1/12		
122				1/6		
201		3/95	2/91	1/21		
203				6/20		
207	4/70	5/325		8/121	1 Cu	1 slag
208		6/80	2/41	10/741	1 Cu	1 stone
209		5/621	2/52	17/220		
210	15/202	2/189	5/185	38/494	27 Fe	
211	3/7	8/1019	3/14	15/196	1 Cu	
301		5/131		1/2		1 clay pipe; 1 wood
302		5/201				
305		6/93	1/4	1/3	1 Fe	1 stone
308		5/3578				
401					1 Cu	
402		5/357		4/20	1 Fe	1 clay pipe

405	1/1	2/75		1/18		
406		13/869				
408						4 shell
411		3/211				
413		1/52				1 shell
TOTALS	61/335	93/10,196	18/462	127/2197	32 Fe; 4 Cu	

6 ENVIRONMENTAL EVIDENCE

6.1.1 Seven environmental samples were taken during the course of the evaluation, predominantly from deposits thought likely to be associated with the use of the Boiling House. These samples were retained by Frank Green of the New Forest National Park Authority for processing and assessment, and will be reported on separately (Green, pers comm.).

7 DISCUSSION AND RECOMMENDATIONS

7.1.1 The evaluation exercise undertaken at Creek Cottage identified evidence for extensive modern landscaping as well as the extent of the original 18th century boiling house on the site, and the deposits associated with its construction, use and demolition. It also established that there was earlier activity on the site with the excavation of two late medieval or post-medieval features in Trench 4 which stratigraphically clearly pre-date the boiling house. Medieval pottery recovered from early in the sequence of deposits in trench 1 also hints at earlier activity in the vicinity.

7.1.2 The earliest deposits on the site are alluvial in origin, and probably represent deposits laid down when the area largely comprised intertidal mudflats. Although it is possible that these formed within shallow pans such as those used for the extraction of brine from the medieval period onwards, there is no positive evidence to support this. The two sherds of medieval pottery from Trench 1 hint at some medieval activity in the vicinity, but there is no indication what this activity may have involved.

7.1.3 The footpath which runs along the north western side of the site and which joins Lower Woodside to Maiden and Normandy lane is an old trackway and lies on a slightly raised causeway. This causeway probably acted as a dyke separating dry land from the wetlands, and may have been built as part of a phase of land reclamation. Traces of similar dykes and numerous salterns are known from the vicinity of the Site, in particularly to the east in and around Moses Dock and Oxey Marsh.

7.1.4 Structural remains likely to be the remains of the original boiling house, now much altered and reduced were identified in trenches 1 and 4. In trench 1, walls 108 and 120, later incorporated within the lean-to coal store, probably mark the south western extent of the original structure. Wall 414 in Trench 4 almost certainly marks its north eastern extent. If indeed this is the case, the original building may have been some 24m long and 10m wide, some three times its current length. Traces of a mortar surface within Trench 4 also provide evidence for an internal floor surface. Perhaps surprisingly, no evidence for the south eastern wall was identified in Trench 3, although

foundation 307 may well have supported an internal structure. A posthole excavated in trench 1 may also belong to an internal structure.

- 7.1.5 Further evidence for the use of the site for salt making was recovered from all of the trenches excavated, predominantly in the form of dumps of fine ashy material, although a dump of slag or clinker was also identified in Trench 1.
- 7.1.6 The remaining deposits and features are all modern in date, and range from wall 102, forming the south eastern wall of the lean-to coal house, to several cuts or gravel 'embankments' forming part of the model railway built on the site.
- 7.1.7 The proposed works on the extant boiling house are largely confined to the vicinity of trench 1, and it is understood that they are likely to involve construction on a concrete 'raft'. In this case, they are unlikely to significantly impact on the remains of the earlier boiling house, and further mitigation work is unlikely to be required.
- 7.1.8 The Boiling house and its associated outbuilding are, however, important survivals of the salt making industry which dominated the local landscape in the 18th and 19th centuries. In this context, the results of this evaluation, in conjunction with the processing and analysis of the environmental samples, have the potential to add important new information to our understanding of the site. Following discussion with Frank Green of the New Forest National Park Authority, it is recommended that the results of this evaluation be published along with the results of recent works at Normandy Dock as a short note in an appropriate local journal.

8 THE ARCHIVE

- 8.1.1 The site archive will be prepared for long-term storage in accordance with the documents Guidelines for the preparation of excavation archives for long term storage (Walker 1990), Standards in the Museum Care of Archaeological Collections (Museums and Galleries Commission 1992) and Selection, Retention and Dispersal of Archaeological Collections; Guidelines for use in England, Wales and Northern Ireland (Society of Museum Archaeologists 1993).
- 8.1.2 The project archive is currently held at the offices of Wessex Archaeology at Old Sarum, Salisbury, Wiltshire under the Project Code 72210. In due course the archive will be deposited with the Hampshire County Museum service.
- 8.1.3 All records will be copied to microfilm. This will comply with the requirements presented in the document *Microfilming for Archaeological Archives* (RCHM). Wessex Archaeology will contact the National Monuments Record to check their requirements. The microfilm and one diazo duplicate will be submitted to the recipient museum, and one diazo duplicate submitted to the National Monument Record, Swindon.

9 COPYRIGHT

- 9.1.1 This report may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferrable by Wessex Archaeology. You are reminded that you remain bound by the conditions of the *Copyright, Designs and Patents Act 1988* with regard to multiple copying and electronic dissemination of the report.

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11 APPENDIX 1. TRENCH SUMMARIES

Trial Trench No.	1	NGR	NE	443442.8, 093475.4		SW	432442.5, 093474.6	
Length (m)	3m		Width (m)	1.5m		Height Above Ordnance Datum (m) (At Ground Level)	NE 1.79m SW 1.70m	
Max. Depth (m) (Below Ground Level)	1.34m							
Context No.	Soil Description							Depth (m) (B.G.L)
101	Modern gravel pathway adjacent to buildings.							0 – 0.06m
102	Brick built wall aligned north east to south west. Part of wall of coal store. Comprises two courses of red brick laid in an irregular bond in a matrix of a light grey/whitish mortar matrix. Part of the same structure as 108 and 120.							0.06 – 0.21m
103	Garden soil accumulated to the south of 102. A dark grey brown silty loam containing occasional fragments of brick, tile and mortar.							0.06 – 0.11m
104	A clean dark grey brown silty loam. Probably build up of deposits, ashy in appearance.							0.11 – 0.53m
105	Mixed levelling layer below 101. a dark grey brown silty loam. A v mixed deposit – post 1960's levelling							0.06 – 0.11m
106	Layer of broken roofing slates sealed by 103. .							0.11 - 0.12m
107	Layer comprising repeated dumps of ash-rich material forming levelling and make up deposits within the interior of the coal store. V light grey (almost white) fine silt. Possibly a deposit of ashy material from the boiling house. Sample No 1							0.18 – 0.25m
108	Brick built wall aligned north west to south east. Part of wall of coal store. Only a single course of irregularly laid bricks survives, laid in a pale yellow mortar. Same as 120.							0.06 – 0.18m
109	Dark grey brown loam below layer 106. probable levelling/make up layer. Possibly the same as 104.							0.12 – 0.50m
110	Compact clay layer cut by 114. A mixed yellow/green brown clay with brick and tile inclusions. Probably a rough floor surface for the coal store or earlier boiling house.							0.06 – 0.22m
111	Dark greyish brown/black silt to the north of 102. Cut by 112. Dark grey brown silty loam containing fragments of CBM. Sealed by 104. Sample No 2							0.53 – 0.86m
112	Cut of shallow oval feature with concave sides and a concave base. Cut through 111. Contains a single fill – 113							0.12 – 0.20m.
113	Fill of 112. Sealed by 107. a light yellowish grey silty clay containing common small fragments of fired clay.							0.12 – 0.20m
114	Construction cut for 102. Linear cut with steep sides and a flat base. Contains 102 and backfilled with 115.							0.06 – 0.21m
115	Fill of 114mid brown silty loam.							0.06 – 0.21m
116	Layer sealed by 103. A mid grey silty clay, probably representing a gradually accumulated deposit above the coal store.							0.12 – 0.19m
117	Cut of robber trench of wall 120. Linear cut with steep sides and a flat base. Cuts 104.							0.11 – 0.21m
118	Fill of 117. light yellow silty clay containing common mortar inclusions. Modern cut.							0.11 – 0.21
119	Same as 104.							
120	Brick built wall, the return of 108, aligned north east to south west. Comprises a single course of headers laid in a light yellow mortar. Return of wall 108. Poss. originally northern wall of boiling house.							0.06 – 0.18m

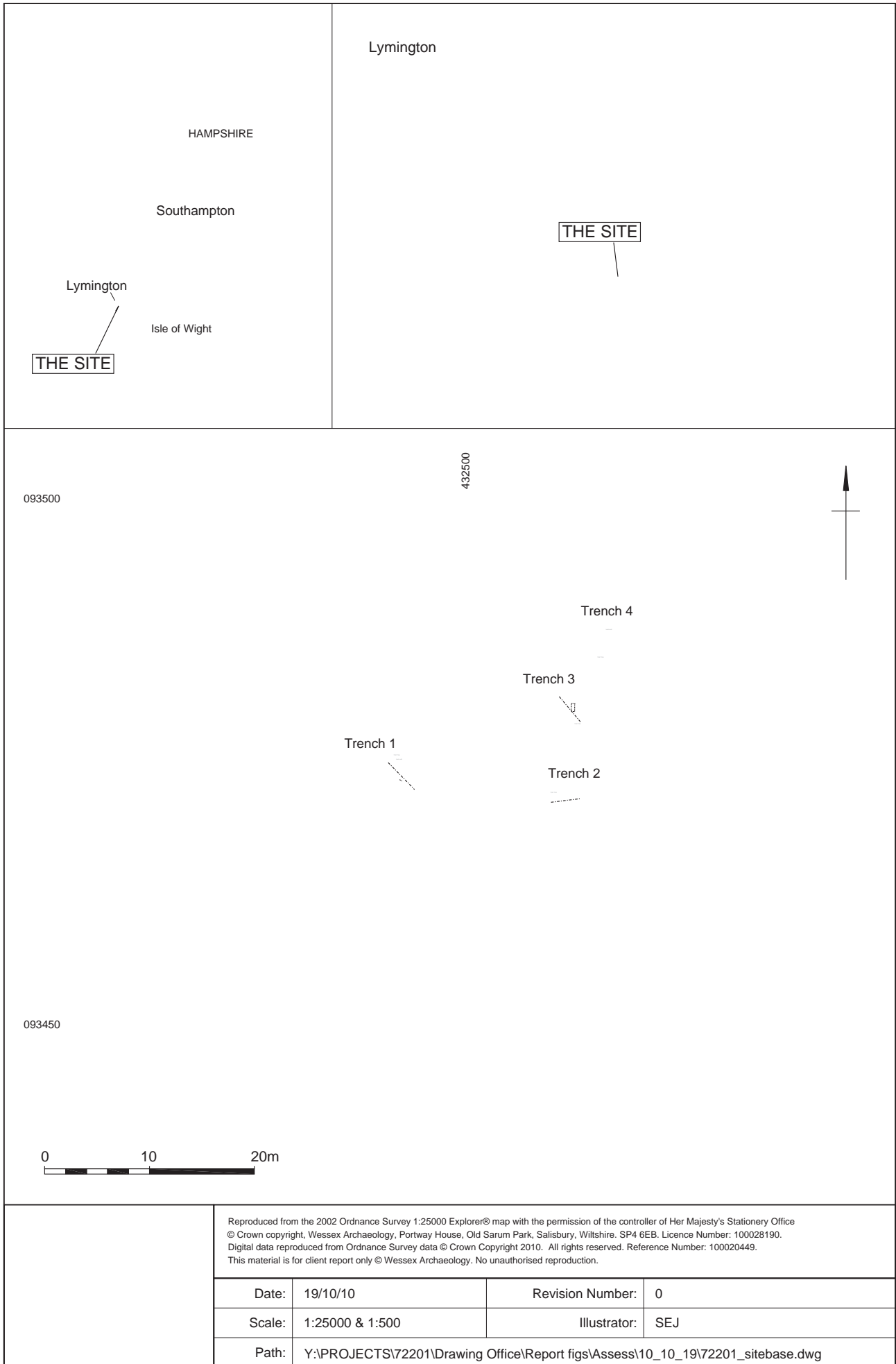
121	Very dark silty loam. Same as 111. Assigned to lower levels of 111 excavated in stepped sondage.	0.86 – 1.22m
122	Dark brown/black layer below 106. Same as 104, to the south of 102.	/
123	Natural clay. Light grey/blue clay below 121. Sample No 4	1.22m+
124	Cut of poss post hole associated with the boiling house. Sub circular posthole with steep sides and a concave base.	0.11 – 0.22m
125	Fill of posthole 124. Mid grey brown silt clay containing fragments of brick and slate.	0.11 – 0.22m
126	Modern intrusion into 116. cuts 103 and 106. Modern service trench.	0.06 – 0.26m
127	Group of 3 cuts through 110. filled with 128. 3 identical postholes – circular with steep, straight sides and a concave base. Poss associated with the salt boiling process.	0.06 – 0.24m
128	Fill of 127. dark brown/black silt	0.06 – 0.24m
129	Fill of 126, including a modern ceramic drain.	

Trial Trench No.		2	NGR	NE	432460.5, 093472.1		SW	432457.9, 093470.3	
Length (m)	Width (m)		Height Above Ordnance Datum (m) (At Ground Level)				Max. Depth (m) (Below Ground Level)		
2.90m	1.40m		NE	1.54m	SW	1.62m	0.73m		
Context No.	Soil Description							Depth (m) (B.G.L)	
201	Modern topsoil. Rough turf on area of rough ground on top of a compact mid grey silt clay containing common small sub rounded flint inclusions							0 – 0.06m	
202	Brick built wall – crudely built. Rough line of brocks revealed below 201, sat on 203. v insubstantial. Probably associated with the model railway constructed in the 1960's.							0.06 – 0.18m	
203	Mid – dark greyish brown silt loam containing common flint gravels, fragments of brick, tile, slate and glass. Same as 205 and 207.							0.06 – 0.35m	
204	Band of gravel associated with model railway. A mid brown silty loam containing abundant small flint gravels. A deliberate deposition of gravel to create part of a model railway embankment. Associated with 206.							0.06 - 0.12m	
205	Same as 203 and 207.							/	
206	Band of gravel associated with the railway. Mid grey brown silty loam containing abundant small flints. Associated with 204.							0.06 – 0.13m	
207	Same as 203 and 205.							/	
208	Gravelled surface/metalling situated outside the two buildings. A dark grey brown silt loam containing common flint gravels.							0.35 – 0.41m	
209	Dark grey silty loam containing brick and tile, also fe objects. Ashy layer in north end of trench, probably waste material from boiling house. Probably originally dumped, before later being compacted and used as a surface. .							0.35 – 0.48m	
210	Mid orange brown sandy loam containing common pea grit. Other inclusions comprise fragments of slate and iron objects. Probably represents dumped waste from the boiling house.							0.48m+	
211	Isolated dump of ash rich material – a dark brown silty clay containing occ small flints, fragments of CBM and charcoal. Probably derived from the boiling house.							0.46 – 0.50m	

Trial Trench No.	3	NGR	NE	432459.2, 093481.6		SW	432460.0, 093478.20	
Length (m)	Width (m)		Height Above Ordnance Datum (m) (At Ground Level)				Max. Depth (m) (Below Ground Level)	
3.10m	1.50m		NE	1.56m	SW	1.51m	0.82m	
Context No.	Soil Description							Depth (m) (B.G.L)
301	Modern topsoil and turf. A mid to dark grey brown silty loam.							0 – 0.08m
302	Gravel rich layer below 301							0.08 – 0.16m
303	Spread of modern rubble – predominantly concrete and brick rubble – apparently used to create a raised platform for the model railway.							0.16 – 0.32m
304	A compact clay bedding layer on which 303 sits. A light yellow clay. Contains occ charcoal and chalk fragments.							0.32 – 0.42m
305	Probable garden soil below 304, predating the model railway. A dark blackish brown silt loam with occ small sub-rounded flints and charcoal flecks.							0.16 – 0.46m
306	A dark grey brown silty loam, containing rare gravels and CBM fragments. Probably pre-dates the boiling house. Seals earlier features.							0.46 – 0.56m
307	Cut of possible construction platform for the boiling house. Filled with rubble 308 and sand 309.							0.46 – 0.57m
308	Fill of 307. Dump of brick and mortar rubble, some stone. A lens of clack and greenish grey clay occurs throughout, with occ charcoal frags. Prob assoc with the construction of the boiling house.							0.46 – 0.57m
309	Concreted layer of yellow/orange sand. Fill of 307.							0.51 – 0.57m
310	Possible post hole. Unclear function, but probably pre-dates the boiler house.							0.57 – 0.82m
311	Lower fill of 310. Pale grey ashy fill with pockets of dark brown clay lower down. Occ charcoal flecks throughout							0.57 – 0.69m
312	Upper fill of 310. light grey ashy deposit. Containing occ fragments of brick. Sample No 3							0.69 – 0.82m
313	Cut of ditch, aligned roughly east west, with steep straight sides and a flat base. This cuts the earliest exposed deposit within the trench. Almost certainly predates the boiling house.							0.57 – 0.77m
314	Fill of ditch, Mid brown silty loam containing v rare small gravels. Slowly accumulated fill. Sample No 5							0.57 – 0.77m
315	Mid greyish brown silty clay. Cut by 313. Alluvial deposit.							0.57m+

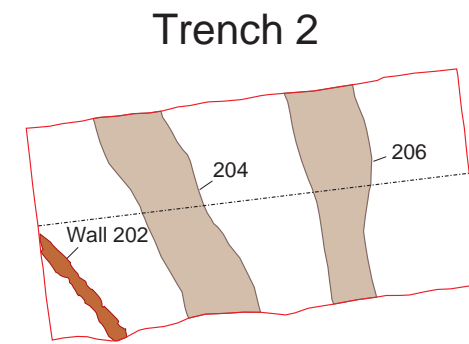
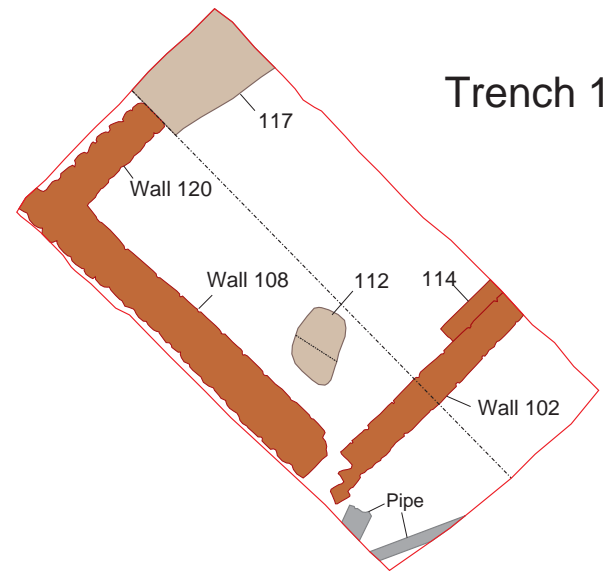
Trial Trench No.	4	NGR	NE	432464.2, 093487.3		SW	432462.3, 093484.7	
Length (m)	Width (m)		Height Above Ordnance Datum (m) (At Ground Level)				Max. Depth (m) (Below Ground Level)	
3.4m	2m		NE	1.60m	SW	1.62m	0.78m	
Context No.	Soil Description							Depth (m) (B.G.L)
401	Current topsoil and turf. A dark grey brown silty loam containing common small rounded to sub angular flints.							0 – 0.19m
402	Modern layer, cut by 403. A compact dark yellowish brown silty loam containing fragments of CBM. Probably associated with the construction of the modern model railway.							0.19 – 0.31m
403	Modern gully. Linear, with steep concave sides and a flat base. Dug as a 'cutting' for the modern model railway							0.19 – 0.28m
404	Fill of 403. A very dark brown (almost black) loose silty loam.							0.19 –

	Almost certainly a modern deposit associated with the dismantling of the model railway	0.28m
405	Dark grey brown silty loam containing common modern CBM and iron objects (including a door hinge).	0.31 – 0.51m
406	Rubble layer. The remains of demolition of boiling house. Seals 416, and fills 419. A mixed and mottled light grey and red silt loam containing common to abundant fragments of CBM, fired clay, ash and mortar.	0.51 – 0.69m
407	Cut into 406. possibly a natural feature – tree throw? Irregular in plan with irregular sides and a flattish base	0.51 – 0.64m
408	Fill of 407. a very dark grey brown silty loam containing occ small flints.	0.51 – 0.61m
409	Lower fill of 407, below 408. Mid to light reddish brown silty loam. Disturbed or re-deposited natural.	0.61 – 0.64
410	Void	
411	Same as 406	/
412	Void	
413	Same as 406	/
414	Brick built wall, probably the end wall of the boiling house. Made from unfrogged bricks set in a very light grey/white compact mortar. Laid in alternating courses of headers and stretchers. Aligned NW-SE.	0.69m+
415	Bedding layer for 414. Layer of v light grey/white lime mortar containing common CBM fragments (mostly brick, some tile)	0.52 – 0.58m
416	Possible remains of flooring – mortared surface. Mid grey compact lime mortar. Seals 415, cut by 419	0.51 – 0.52m
417	Possible levelling layer. A mid yellow – green sandy mortar containing occ flints. A compact mixed rubble deposit. Sample No 7.	0.58 – 0.63m
418	Occupation layer, predating wall 414. A light red, pinkish, silty sand containing common small mortar fragments and broken brick. Layer only partially exposed.	0.63 +
419	Cut of robber trench for removal of 414. irregular in plan, with vertical sides. Cut through floor 416, filled with 406.	0.51 – 0.69m
420	Clinker rich layer. Dark grey/black deposit, probably comprising a dump of waste from the salt boiling furnaces. Sample No 6	0.60 – 0.72m



Site location plan

Figure 1



- Archaeological feature
- Brick wall
- Modern services



Plate 1: Trench 1 from the south-east

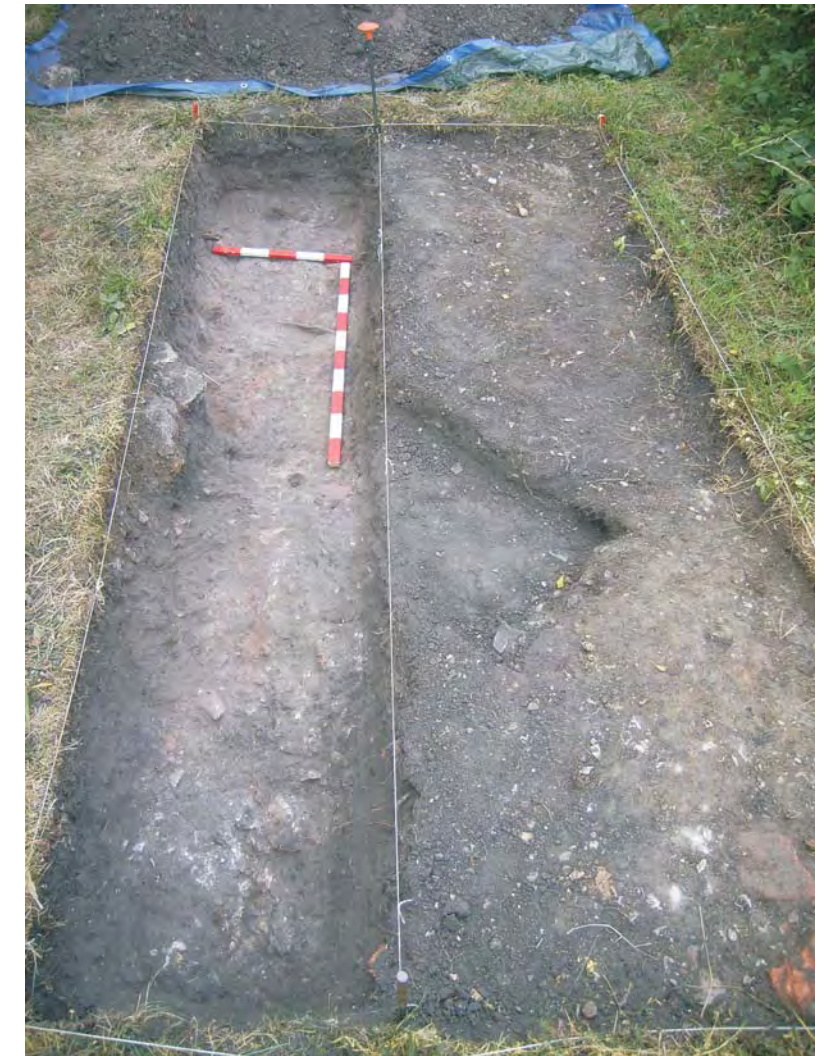


Plate 2: Trench 2 from the west

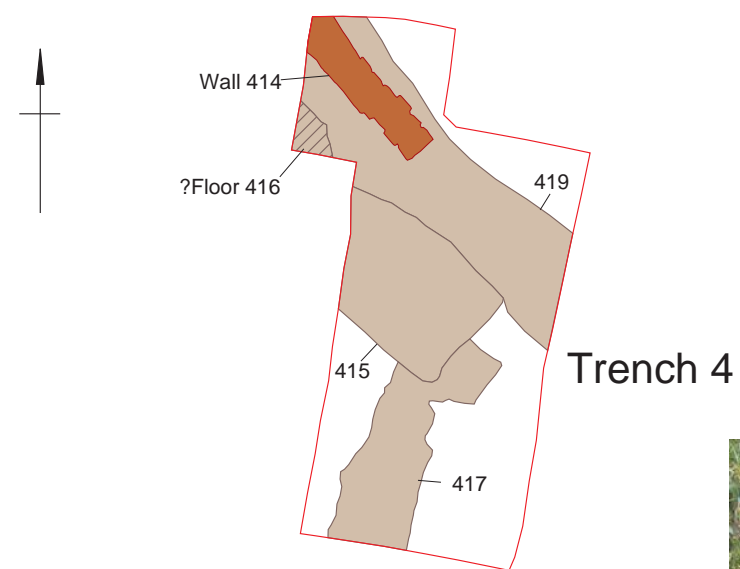


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Date:	19/10/10	Revision Number:	0
Scale:	Plans @ 1:50	Illustrator:	SEJ
Path:	Y:\PROJECTS\72201\Drawing Office\Report figs\Assess\10_10_19\72201_sitebase.dwg		



Plate 3: Trench 3 from the north-west

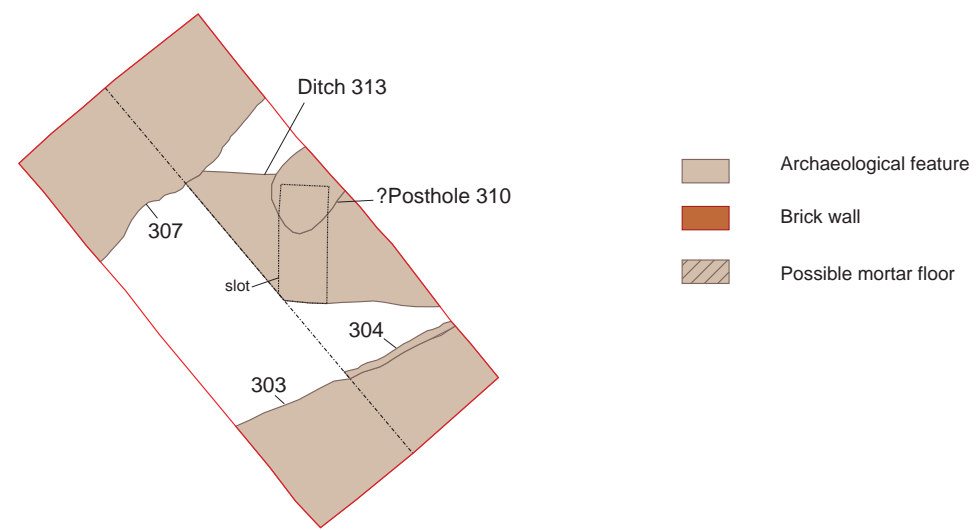


Trench 4



Plate 4: Trench 4 from the north

Trench 3



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