

RAPID COASTAL ZONE ASSESSMENT SURVEY FOR SOUTH WEST ENGLAND - SOUTH DEVON COAST:

Results of Phase 1, Component 2 Desk-Based Assessment

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Rapid Coastal Zone Assessment Survey for South West England – South Devon Coast:

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List of Abbreviations

AMIE	Archives, Monuments, Information, England (computer system holding the NRHE)
AONB	Area of Outstanding Natural Beauty
BP	Before Present
CiTIZAN	Coastal and Intertidal Zone Archaeological Network
DAS	Devon Archaeological Society
DBA	Desk-Based Assessment
D&C	Dean and Chapter
DEFRA	Department for the Environment, Food and Rural Affairs
DCCHER	Devon County Council Historic Environment Record
DRO	Devon Record Office
EH	English Heritage
EUS	Extensive Urban Survey
GIS	Geographical Information System
HER	Historic Environment Record
HBSMR	Historic Buildings, Sites and Monuments Register
HLC	Historic Landscape Characterisation
HSC	Historic Seascape Characterisation
LAT	Lowest Astronomical Tide
LB	Listed Building
LCA	Landscape Character Assessment
LiDAR	Light Detection and Ranging
MHW	Mean High Water
MLW	Mean Low Water
MMO	Marine Management Organisation
MPS	Marine Policy Statement
NCA	National Character Area
NGR	National Grid Reference
NHLE	National Heritage List Entry
NHPP	National Heritage Protection Plan
NMP	National Mapping Programme
NPPF	National Planning Policy Framework
NRHE	National Record of the Historic Environment
OD	Ordnance Datum
OS	Ordnance Survey
PAS	Portable Antiquities Scheme
PSA	Policy Scenario Areas
PWDRO	Plymouth and West Devon Record Office
RCHME	Royal Commission on Historical Monument (England)
RCZAS	Rapid Coastal Zone Assessment Survey
RSL	Relative Sea Level
SCA	Seascape Character Assessment
SDADCAG	South Devon and Dorset Coastal Advisory Group
SM	Scheduled Monument
SMP	Shoreline Management Plan
SMR	Sites and Monuments Record
SWARF	South West Archaeological Research Framework
SWMAG	South West Maritime Archaeology Group
UKHO	United Kingdom Hydrographic Office
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WHS	World Heritage Site
WWI	World War One
WWII	World War Two

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The project was carried out using historic maps provided by Historic England and Devon County Council. The baseline data was provided by Devon County Council, Torbay Council, Historic England and the National Trust. The maps in this report are reproduced from Ordnance Survey (OS) maps with the permission of the OS on behalf of Her Majesty's Stationary Office © Crown Copyright and Landmark Information Group. Licence numbers: 100024900 (Historic England), 100019783 (Devon County Council) and 100022432 (Promap).

The views and recommendations expressed in this report are those of the author and are presented in good faith, on the basis of professional judgement and on information currently available.

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Summary

This report has been prepared between April 2015 and January 2016 by AC archaeology and represents the results of research carried out for the Phase 1, Component 2 Desk-Based Assessment for the South Devon Rapid Coastal Zone Assessment Survey (RCZAS). The survey follows on from a National Mapping programme of aerial photographs (Component 1) and covered 414.5 square kilometres of coast and estuary, from the edge of Plymouth Unitary Authority in the west to the county boundary with Dorset to the east.

The overarching aim of the survey was to provide an enhanced SMR/HER and National Record of the Historic Environment (NRHE) record for coastal heritage assets.....in order to permit an improved curatorial response to strategic coastal planning or management initiatives at a national and regional level.

A total of 2471 new records of heritage assets was created during the project, with an additional 1059 existing records enhanced. All monument records created or enhanced by the project will be available on the Devon and Torbay HERs and via Heritage Gateway. The information generated by the project has been used, together with existing HER data, to summarise all known archaeology within the intertidal zone and its immediate hinterland. An overview of coastal change along the South Devon Coast from the Late Upper Palaeolithic onwards has also been provided in order for all coastal assets to be placed within their wider historic landscape context. The HER data has also been used to assess the vulnerability of historic and archaeological sites along the South Devon coast based on models of future coastal change within the relevant part of the Durlston Head to Rame Head Shoreline Management Plan.

Research themes and priorities identified by the desk-based assessment have been recognised and discussed with reference to the South West Archaeological Research Framework (SWARF) and the Maritime Research Agenda for England. Specific sites and areas that would benefit from further work have been identified and will help to inform a programme of future (Phase 2) fieldwork.

1. INTRODUCTION

1.1 Circumstances and Reasons for the Project

AC archaeology was commissioned by English Heritage (now Historic England) to carry out a Rapid Coastal Zone Assessment Survey Phase One Desk-Based Assessment and National Mapping Programme (NMP) for South West England (South Coast Devon). These form part of a national programme designed to inform the Historic England response to Shoreline Management Planning (SMP) and the developing Defra 'Adaptation Strategy.' This report presents the results of the Phase 1 Component 2 Desk-Based Assessment Survey of all known archaeology within the intertidal zone and its immediate hinterland. It has been prepared in accordance with an approved Project Design for the work (Valentin *et al.* 2014).

1.2 Background to the Project

In 1993 English Heritage commissioned a review of coastal archaeology within England with the aim of developing an agenda for the future, which led to the publication in 1997 of *England's Coastal Heritage* (Fulford *et al.* 1997). One of the subsequent recommendations was for a comprehensive survey of the English coast to be undertaken in order to update and improve archaeological records. This led to the establishment of the Rapid Coastal Zone Assessment Survey programme in the 1990s by English Heritage. RCZAS have now been completed for much of the English coast, and the South West is one of the last areas to be completed. The South West RCZAS programme of works covers the coastline from the Devon/Somerset boundary in the north to the Dorset/Hampshire boundary in the south.

This report has been prepared between April 2015 and January 2016 and forms part of a suite of projects that constitute the South West England RCZAS. This Desk-Based Assessment (Component 2) of the RCZAS followed on directly from the Phase 1 Component 1 National Mapping Programme for the South Devon Coast, which was completed in August 2014 (Hegarty *et al.* 2014). Together, these will inform the Phase 2 Field Assessment, which is yet to be undertaken. The survey was funded via the Historic England National Heritage Protection Commissions Programme (NHPCP) and carried out by staff from AC archaeology.

1.3 The National Heritage Protection Plan

The National Heritage Protection Plan (NHPP) was first published in May 2011, and set out how Historic England will prioritise and deliver heritage protection during 2011-2015 (English Heritage 2012a, revised version). The core of the NHPP is the Action Plan, divided into eight themes called Measures, which are further sub-divided into a series of Topics and Activities that address specific areas of work and which have been identified as priorities for the Plan.

The South West Coast RCZAS project falls within Measure 3 – Understanding, Recognition and Identification of the Resource. The relevant Topics and Activities are:

- Activity 3A2 – Unknown Coastal Assets and Landscapes; and,
- Activity 3A4 – Identification of Terrestrial Assets via Non-Intrusive Survey.

The RCZAS is intended to provide heritage information which can be fed directly into Defra and the Environment Agency's Shoreline and Estuary Management Programme, at the levels of Plans, Strategies, and Schemes, thereby helping to ensure appropriate protection of or mitigation of damage to historical and archaeological assets (English Heritage 2006). For future planning at a national level, the results from the RCZAS will be considered in relation to the proposed Defra Coastal Erosion Risk Maps to determine the numbers, types and significance of historical and archaeological assets at risk, and over what time-scale. From this, a prioritised national programme of mitigation will be developed. The enhanced

NRHE and HER records will also provide Local Authority archaeologists with information relevant to mitigation consequent upon commercial and infrastructure developments.

1.4 Marine Planning

The RCZAS for the South Devon Coast is also intended to inform Marine Planning within the study area. Marine Planning covers all England's inshore and offshore waters, from mean high water to the outer limit of England's Exclusive Economic Zone, and therefore overlaps with terrestrial planning regimes in the inter-tidal zone. The Marine Management Organisation (MMO) was established following the Marine and Coastal Access Act of 2009, with the intention of delivering UK marine policy objectives for English waters through a series of statutory Marine Plans and other measures. The marine planning system contributes to the management of marine activities, and ensures a sustainable use of marine resources. Marine plans, covering both the inshore and offshore regions, will interpret and present policies within the Marine Policy Statement (MPS) at a sub-national level, allowing national policy to be applied on a local scale. In addition to the national frameworks, evidence from independent experts and stakeholders will also need to be considered by marine planners, and it is in this context that the RCZAS for South Devon will best help to inform marine planning.

The MMO is currently preparing draft marine plans for England's South inshore and offshore areas, and will set out how the MPS will be implemented within this area. The South Inshore Marine Plan Area includes a coastline stretching from Folkestone in Kent, to the River Dart in Devon. Marine planning officially started in this area in April 2013, although work had begun in late 2012 (Hyder Consulting (UK) Limited 2014).

1.5 Aims and Objectives

The overarching aim of the South West RCZAS project is to:

- Provide an enhanced SMR/HER and National Record of the Historic Environment (NRHE) record for coastal heritage assets, to a nationally agreed common minimum data standard, in order to permit an improved curatorial response to strategic coastal planning or management initiatives at a national and regional level.

More specific Aims of the Component 2 Desk-Based Assessment are to:

- Synthesise readily available archaeological and documentary data (including cartographic and photographic sources), setting it within a regional or wider context, for enhancement of the HERs and NRHE record;
- Provide an assessment of the vulnerability of historic and archaeological sites by reference to models of future coastal change in SMPs; and,
- Provide an overview of coastal change from the Late Upper Palaeolithic onwards.

In order to achieve these Aims, the following Objectives for the South West RCZAS have been identified:

- The collection of record data for dissemination to the relevant HERs and the NRHE;
- To produce an updated project Geographic Information System (GIS) with revised HER/NRHE information; and,
- To disseminate the project outcomes through the production of a Phase 1 Component 2 Desk-Based Assessment report, incorporating the results of readily available archaeological and historical sources.

1.6 Methodology

The Phase 1 desk-based assessment follows on directly from the Phase 1 Component 1 National Mapping Programme for the South Devon Coast, which was completed in August

2014 (Hegarty *et al.* 2014). The desk-based assessment was undertaken in accordance with a project design (Valentin *et al.* 2014) based upon a project brief (English Heritage 2012b), and submitted to and approved by Historic England prior to commencement of the project. A Project Liaison Group met during the course of the project.

Data Gathering and Collation

The following data sources have been consulted:

- Historic Environment Records held by Devon County Council, Torbay Council and the National Trust;
- The National Record of the Historic Environment (NRHE);
- National Heritage List for England (NHLE) data;
- Historic maps held by the Devon Heritage Centre, the Plymouth and West Devon Record Office, and the Exeter Cathedral Archive;
- Digitised Tithe Map provided by Devon County Council;
- Digitised First and Second Edition Ordnance Survey maps provided by Historic England and Devon County Council;
- Ordnance Survey Master Map provided by Devon County Council;
- Aerial Photographic transcriptions generated by the Devon RCZAS NMP component;
- Field Name evidence from Tithe Apportionments;
- Early Admiralty Charts held at the UK Hydrographic Office, Taunton;
- The Shoreline Management Plan (SMP) for Durlston Head to Rame Head;
- The Portable Antiquities Scheme database; and,
- Other relevant documentary sources.

The baseline mapping for the project consisted of a digital Tithe Mosaic, digital First and Second Edition 25 inch Ordnance Survey maps, and the Ordnance Survey Master Map, all of which were obtained from Devon County Council, under licence. All existing Historic Environment Records that fell within the study area were also supplied in shapefile format by Devon County Council. National Record of the Historic Environment (NRHE) and National Heritage List for England (NHLE) data was supplied by English Heritage, and HER records were also supplied by the National Trust HBSMR. Torbay HER data dating to 2010 was analysed as part of the project. Relevant data from tithe apportionments for all parishes falling within the study area was collated as part of the initial research phase, and any field names of potential archaeological interest were highlighted for further work. The existing HER data was analysed, and where additional information relating to the monuments was identified from the historic maps, it was recorded along within the monument ID within an excel spreadsheet. Similarly, any features considered to have an archaeological or historical value for which there was not an existing HER record were recorded within the spreadsheet. This information was loaded into Geographical Information Systems software to allow the data to be cross-referenced.

All data generated by the project was recorded into the Devon Historic Environment Record, using GIS software ArcGIS (from ESRI) and the HER software HBSMR (from exeGesIS). All of the records relating to sites within Torbay will be renumbered when accessioned to the Torbay HER at the end of the RCZAS project.

Preparation of the Project Report

Tabular and spatial data from the Devon HER and Torbay HER was loaded into Geographical Information Systems software as layers and was queried to produce maps providing information on the spatial distribution of known archaeological areas by period (see Section 7). This data was also compared to the predicted areas of coastal erosion as detailed within the Durlston Head to Rame Head SMP (see Section 9).

1.7 Structure of the Report

This report contains 13 sections and six appendices. Section 1 provides an introduction to the project and details the aims and objectives and methodology used. Section 2 provides an overview of the study area, including a description of the area, its geology, and relevant historic environment projects that have been previously undertaken within the study area. Details of designations relevant to the historic environment and natural environment of the study area are provided within Section 3. Details relating to coastal and marine management operating within the study area have been provided within Section 4. An assessment of historic sources is undertaken within Section 5 and an overview of previous research within the study area is provided within Section 6. Section 7 provides an assessment of results and highlights areas of greatest potential within the study area. An overview of coastal change from the Late Upper Palaeolithic to the present is provided within Section 8, and an assessment of threats to the coastal historic environment is discussed within Section 9. Section 10 discusses the research priorities and themes relevant to the study area and identifies those sites and areas that would benefit from further work. Conclusions are drawn together within Section 11 and details relating to the project archive are provided within Section 12. Section 13 consists of a list of sources consulted. Appendix 1 provides a list of Scheduled Monuments within the study area, Appendix 2 a list of Grade I and II* Listed Buildings, Appendix 3 a list of Registered Parks and Gardens, and Appendix 4 a list of Protected Wrecks within the study area. Appendix 5 provides a catalogue of estate maps relevant to the study area, and Appendix 6 provides a catalogue of relevant admiralty charts.

2. PROJECT AREA

2.1 Introduction

The study area for the Phase 1 RCZAS DBA extends from the parish of Uplyme on the Devon/Dorset border to the parish of Wembury, on the eastern edge of Plymouth. The project covered a total area of 414.5 square kilometres of coastal and estuarine zone (**Fig. 1**). This included:

- The South Devon coast RCZAS Component 1 (NMP) minimum area of 381 square kilometres, comprising a coastal and estuarine strip along the South Devon coast between Andurn Point at Plymouth Sound to the Devon border with Dorset, south of Lyme Regis; and,
- Two additional areas totalling 33.5 square kilometres were also covered in order to be consistent with the Component 1 NMP project area, and so join the RCZAS NMP project area to that of the East and Mid Devon River Catchments NMP project (Historic England Project Number 6634).

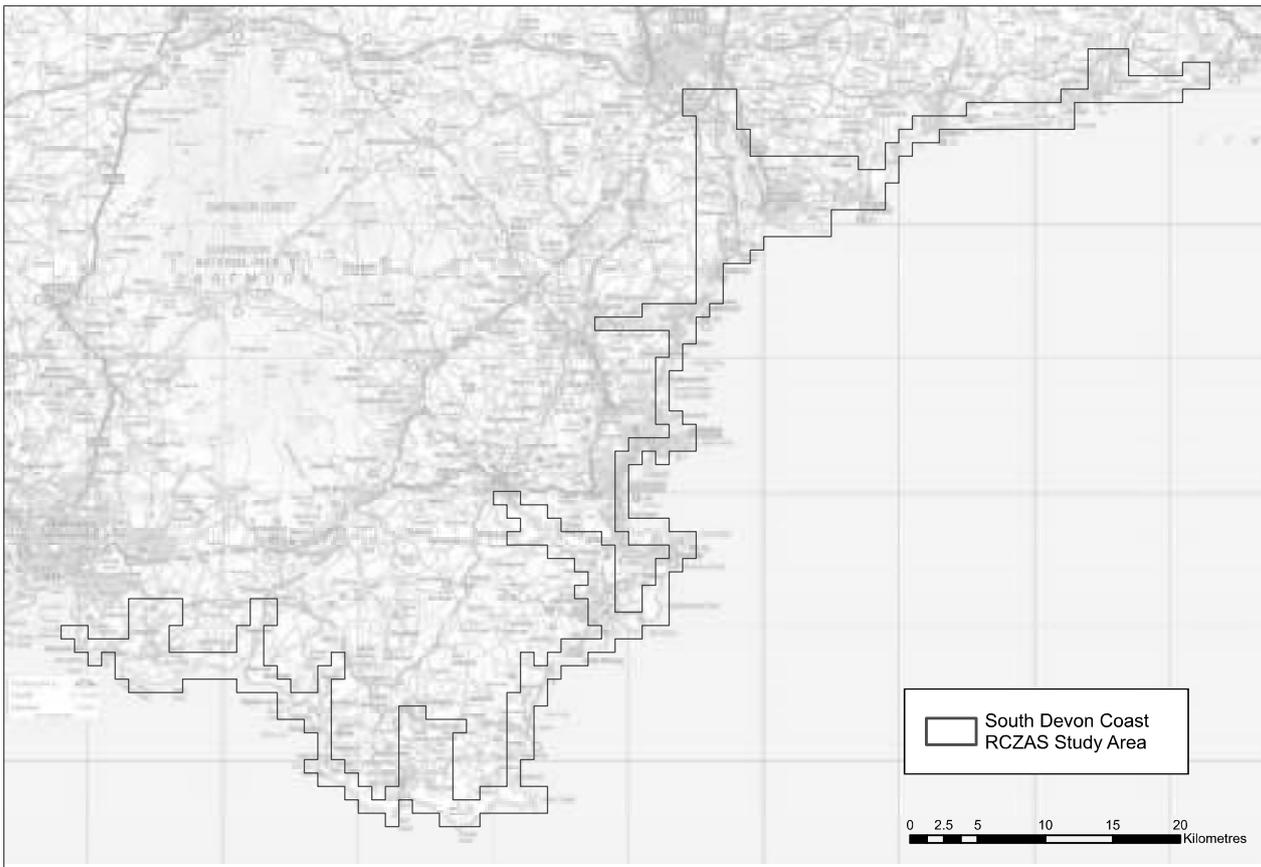
The study area comprised both the open coast and its tidal estuaries, including the intertidal zone to lowest astronomical tide, the coastal strand and the immediate coastal hinterland. This was generally taken to be all 1km National Grid Squares contiguous with, or overlapping, the coast and estuary shorelines. Offshore records of historic assets in the NRHE and HERs have also been included within the assessment.

Policy units that fall within the study area are fully defined in the SMP for Durlston Head to Rame Head (Halcrow Group 2011). This SMP is divided into 17 Policy Scenario Areas (PSAs), of which 10 are relevant to the South Devon RCZAS: PSA5 Thorncombe Beacon to Beer Head; PSA6 Beer Head to Otterton Ledge; PSA7 Otterton Ledge to Straight Point; PSA8 Straight Point to Holcombe; PSA9 Holcombe to Hope's Nose; PSA10 Hope's Nose to Berry Head (Tor Bay); PSA11 Berry Head to Blackstone Point; PSA12 Blackstone Point to Start Point; PSA13 Start Point to Bolt Head; PSA14 Bolt Head to Wembury Point.

2.2 Geology

The geology of the South Devon coast (**Fig. 2**) is described below with reference to the relevant Policy Scenario Areas (PSAs) contained within the Durlston Head to Rame Head Shoreline Management Plan. The coastline ranges across several geological periods, with the oldest rocks dating to the Devonian Period (354-417 million years ago) located within the far west of the study area in South Hams and the younger Triassic (205.7 - 248.2 million years ago) and Jurassic (142 - 205 million years ago) rocks located at the eastern end of the study area within East Devon; an area where there are also outcrops of chalk dating to the more recent Cretaceous Period (65-142 million years ago). The following paragraphs provide a more detailed overview of the geology based on data from the British Geological Survey (BGS 2015), and relating to each of the PSAs within the study area.

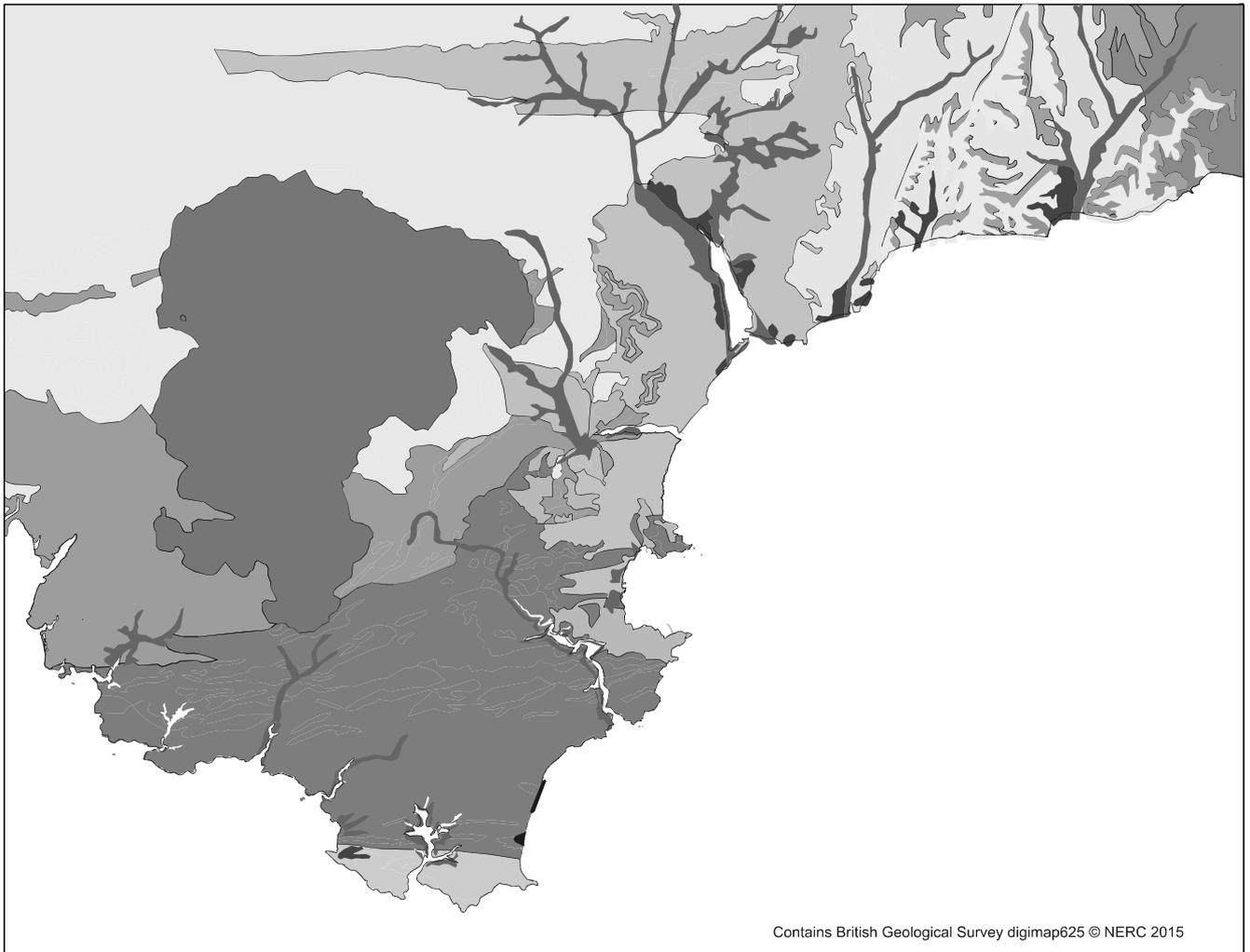
The geology within the far eastern edge of the study area (PSA5-7) is characterised by mudstone, siltstone, limestone and sandstone of the Jurassic and Triassic Periods. To the west of this lies a mixture of mudstone, interbedded sandstone and conglomerate of the Triassic period and Greensand of the Cretaceous Period, with noticeable outcrops of chalk on the headlands between Axmouth and Lyme Regis and Sidmouth and Seaton. This almost continuous sequence of Triassic, Jurassic and Cretaceous rock formations spanning the Mesozoic Era from East Devon into Dorset was inscribed onto the World Heritage List in 2001 and represents England's only natural World Heritage Site.



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Fig. 1: Location of the South Devon Coast RCZAS Study Area





Contains British Geological Survey digimap625 © NERC 2015

Superficial Geology

- Alluvium
- River Terrace Deposits
- Raised Marine Deposits
- Clay with Flints
- Landslip

Bedrock Geology

- Tertiary Clay, Silt, Sand and Gravel
- Cretaceous Chalk
- Upper Greensand and Gault
- Lower Jurassic Mudstones and Limestones

- Triassic Pebble Beds
- Permian Breccias, Sandstones and Volcanics
- Carboniferous Sandstones, Shales and volcanics
- Upper Devonian Sandstones, Shales and Volcanics
- Lower Devonian Sandstones, Shales and Volcanics
- Lower Devonian Schists
- Devonian Limestones
- Dartmoor Granite

TITLE
Fig. 2: Surface Geology Map of the Study Area



The geology on either side of the Exe Estuary (PSA8) comprises sandstone and subordinate breccia of the Permian Period, with sequences of interbedded sandstone and conglomerate, mudstone, siltstone and sandstone of the Permian Period to the east of the estuary. Superficial deposits of clay-with-flints occur on the chalk, with river terrace deposits and localised alluvium recorded throughout this area. Saltmarsh deposits are recorded on the Otter and Axe Estuaries. The area between the west bank of the Exe Estuary and Maidencombe (PSA8-9) is characterised by sandstone and breccia of the Oddicombe, Heavitree and Alphington, Dawlish and Exeter Groups, which were formed during the Permian Period. The western end of the Teign Estuary comprises mudstone of the Carboniferous and Devonian Periods. Localised superficial deposits of alluvium and head dating to the Quaternary Period are recorded throughout this area, with concentrations of tidal flat deposits, river terrace deposits either side of the Teign Estuary and beach and tidal flat deposits at the mouth of the estuary. River terrace deposits are also recorded on the coast at Dawlish. Superficial layers of blown sand and beach and tidal flat deposits are also recorded at the mouth of the Exe Estuary, with tidal flat deposits, alluvium, and river terrace deposits recorded on either side.

The headland to the east of Torquay (PSA9-10) comprises a combination of mudstone, siltstone, sandstone and limestone of the Meadfoot, Norden, and Torquay Limestone groups dating to the Devonian Period, with a small igneous intrusion on the eastern edge dating from the Devonian to Carboniferous Periods. Between Torquay and Paignton (PSA 10) is an area of breccia of the Torbay Breccia Formation, and mudstone, siltstone and sandstone of the Meadfoot Group. To the south of Paignton the geology becomes more varied with patches of tuff of the Ashprington Volcanic Formation, igneous intrusions, and areas of Limestone of the Goodrington Member and Brixham Limestone Formation, all of which date to the Devonian Period. The headland at Brixham (PSA11) is composed of limestone, mudstone and calcareous mudstone, dating to the Devonian Period. Localised superficial deposits of alluvium and head dating to the Quaternary Period are recorded throughout this area, with marine and coastal zone deposits and supratidal deposits recorded at Broadsands, Paignton and Torquay. The geology on either side of the Dart Estuary comprises mudstone, siltstone and sandstone of the Dartmouth Group, with mudstone, siltstone, limestone and sandstone of the Bovisand Formation to the north of this. The northern part of the Dart Estuary is dominated by areas of basaltic tuff and lava of the Ashprington Volcanic Formation, with smaller areas of tuff, lava, mudstone, siltstone, sandstone and limestone to the south, all of which date to the Devonian Period.

The area to the west of the Dart Estuary (PSA12) is largely characterised by mudstone, siltstone and sandstone of the Dartmouth Group, with small outcrops of igneous intrusions. There is a large band of slate, siltstone and sandstone of the Meadfoot group between Slapton Sands and Bantham to the west (PSA12-14), with Start Mica Schist to the south, interspersed with areas of Start Horneblende Schists of the Devonian Period. Slate, siltstone and sandstone of the Dartmouth Group sit on either side of the mouth of the Avon Estuary and extend to Wembury to the west (PSA14-15), with bands of sandstone, siltstone and mudstone of the Staddon Formation and slate, siltstone and sandstone of the Meadfoot Group to the north. Localised superficial deposits of alluvium and head dating to the Quaternary Period are also present throughout this part of the study area, with superficial deposits of blown sand and marine beach deposits also present at Bantham and Bigbury Bay. Localised marine beach deposits are also recorded at Hope Cove and on the western bank of the Salcombe Estuary, with storm beach deposits recorded at Slapton Sands and supratidal deposits recorded at Blackpool Sands.

2.3 Historic Environment Projects Relevant to the Study Area

A number of large-scale projects have been undertaken in Devon within recent years which have helped to inform the South Devon RCZAS DBA. These projects are discussed below in further detail.

Research Frameworks

Research frameworks relevant to the South Devon RCZAS include *The South West Archaeological Research Framework* (Webster 2008), and *People and the Sea: A Maritime Archaeological Research Agenda for England* (Ransley *et al.* 2010). The South West Archaeological Research Framework (SWARF) provides a resource assessment and research agenda covering the historic counties of Cornwall, Devon, Dorset, Somerset, Wiltshire and Gloucestershire. The project was funded by English Heritage and local authorities within these areas, and provides a structure to inform decisions relating to future archaeological research. The Maritime Archaeological Research Agenda for England was commissioned by English Heritage and undertaken by researchers and professionals at the Centre for Maritime Archaeology, University of Southampton. The document provides a research framework relating specifically to the maritime, marine and coastal archaeology of England, thereby enabling long-term strategic planning, informing policy and providing information for researchers.

Characterisation

Characterisation is a method that has been applied by Historic England to the landscape, the sea and towns and cities. It forms a way of managing change within the historic landscape. In England the use of the characterisation method represents a move towards using integrated and holistic methods for the management and understanding of archaeology and cultural heritage and complements the traditional designation system that focuses on site specific elements.

Historic Landscape Characterisation

Historic Landscape Characterisation is a method of understanding and mapping the historical development of a landscape and is used to inform both landscape management and research associated with the historic environment. The Historic Landscape Characterisation allows the historic landscape to be given archaeological significance on a wider scale, not just on the basis of individual sites or monuments (Turner 2005, 7), and therefore informs the protection and management of rural landscapes. This is achieved through characterising the modern landscape, based on its physical appearance and use at different times in the recent past determined largely on the evidence of historic maps, into a series of 'landscape types'. These types 'define the broad characteristics which areas of land with similar past uses exhibit' (*ibid*, 6). The results are incorporated into a GIS format which allows the changes of landscape character over time to be recorded. The information generated through HLC projects provide the wider landscape context of those individual sites and monument records held by local HERs. It also allows the needs of the historic environment to be considered alongside those of the natural environment during consideration of development proposals, as HLC mapping is routinely checked against HERs when responding to planning applications and enquiries relating to the historic environment (Clark *et al.* 2004, 31).

An HLC project was carried out for Devon and Dartmoor National Park in 2004, in partnership with English Heritage, Devon County Council Historic Environment Service, Tamar Valley Service and the Historic Environment Service of the Dartmoor National Park Authority. This HLC provides a useful background to the environment of the study area, and is summarised below.

Much of the landscape that falls within the study area in East Devon is of a rural nature consisting of large patches of so-called 'Barton Fields' (large, regular enclosures of 15th to 18th century date, containing some curving boundaries which may follow earlier divisions within the pre-existing medieval fields), and modern enclosures adapting medieval and post-medieval fields. Areas of 'other woodland' line the coast within the far eastern part of the study area. The landscape surrounding the Axe Estuary is of a much more variable nature. The land to the west of the Axe Estuary is characterised by the dispersed settlements of Seaton, Beer, Sidmouth, Budleigh Salterton and Exmouth, as well as the smaller villages of

Colyford and Branscombe. Between the Axe Estuary and the Otter Estuary the coastline is comprised of 'rock', while the land in between the settlements is of a rural nature of varied characterisation, but comprising significant areas of 'Barton Fields' and modern enclosures adapting medieval and post-medieval enclosures, with smaller areas of woodland and 'medieval enclosures based on strip fields' between Sidmouth and Branscombe and to the west of Beer. Much of the land to the west of Budleigh Salterton comprises medieval enclosures adapting medieval and post-medieval fields, and 'medieval enclosures based on strip fields'. Areas of 'Barton Fields', 'post-medieval enclosures', 'former orchards' and 'medieval enclosures based on strip fields' separate the urban areas of Exmouth and Lypstone, with similar themes also shown in the landscape to the north of Lypstone.

Much of the land on the west bank of the Exe Estuary is characterised as 'post-medieval enclosures', with some smaller areas of 'medieval enclosures', 'medieval enclosures based on strip fields' and 'modern enclosures adapting medieval fields' within this. To the south of the 'park/garden' at Powderham is a large area of 'modern enclosure adapting medieval fields', among which lie the settlements of Kenton and Starcross. Immediately to the south of Starcross the landscape once again becomes more varied with smaller areas of 'post-medieval enclosures with medieval elements', woodland, 'former orchards', 'marsh' and 'recreation'. The settlements of Dawlish, Teignmouth, Bishopsteignton and Shaldon dominate the rest of this area, with noticeable areas of 'medieval enclosure' and 'medieval enclosure based on strip fields' to the north and west. The land to the south of the Teign Estuary is of a more variable nature.

The settlements of Torquay, Paignton, Goodrington and Brixham dominate much of the landscape of Torbay, with the coastline within this area largely characterised as 'rock'. The landscape between these settlements is of a varied nature, with noticeable areas of 'park/garden' and 'recreation' throughout. To the east of Brixham, Berry Head is characterised as 'rough ground' with a 'military complex', and the headland at Sharkham Point is also characterised as a coastline of 'rock'.

Much of the landscape that falls within the western part of the study area is of a coastal and estuarine nature, with 'sand', 'mud', cliffs and 'rough ground' well represented. The remainder of the area has a rural character consisting of large areas of 'Barton Fields', and smaller patches of modern enclosures based on medieval and post-medieval fields, 'medieval enclosures', 'post-medieval enclosures' and areas of woodland. There are small areas of dispersed settlement throughout this area at Stoke Fleming, Strete, Slapton, Torcross, Hallsands, East Prawle, Inner and Outer Hope, Thurlestone, and Bigbury-on-Sea, whilst larger settlements have developed within the sheltered estuaries at Dartmouth, Salcombe and Newton Ferrers.

Historic Seascape Characterisation

Historic Seascape Characterisation (HSC) maps and describes the historic cultural influences that shape present seascape perceptions across marine areas and coastal land. This includes activities that produced remains associated with marine archaeology and cultural heritage, the sites of historic naval battles or former maritime trading routes, as well as coastal land that contains a distinct maritime character, including areas of former land that have become submerged. Like the HLC methodology, the HSC approach allows a holistic view of the historic seascape, and therefore provides the wider context for the site or point specific datasets within the marine zone. It provides an evidence base relating to the historic environment that can be consulted during marine planning and preparation of Marine Policy Statements. It is also designed to assist with the implementation of long-term and sustainable measures relating to the management of both the inshore and offshore marine environment. Both the HLC and HSC share common principles and are therefore designed to work in collaboration.

An HSC project was completed for the South West Peninsula in 2014. The project defined areas that shared similar characteristics as Historic Seascape Character 'types' and was 'designed to enable more culturally-informed management of the marine environment and raise public awareness of the historic cultural dimension of the sea' (Dudley and Johns 2014, 7). The project was commissioned by English Heritage and formed part of the wider work associated with the National Heritage Protection Plan focused on identifying unknown marine assets and landscapes.

Devon Extensive Urban Survey Project

The Extensive Urban Surveys (EUS) project was initiated in 1992 and forms part of a national programme of surveys commissioned by English Heritage that cover the archaeology, topography and historic buildings of the historic towns and cities within England. The project was initially launched to implement Planning Policy Guidance Note 16, *Archaeology and Planning* in historic towns and cities, but is also now being used to contribute to wider aims such as planning and conservation initiatives. Extensive Urban Surveys are currently being undertaken for 17 of Devon's historic market and coastal towns. Five of these towns fall within the RCZAS study area: Exmouth, Dartmouth, Kingsbridge, Seaton and Teignmouth. Draft reports for some of these towns are currently available for consultation through the Historic Environment website of Devon County Council. The surveys will be completed by February 2016.

Devon Landscape Character Assessment

Landscape Character Assessments (LCAs) are used as a tool for managing landscape change at a county, district or AONB level, and are largely informed by the preceding HLC projects. A variety of sources are consulted during the production of an LCA, including data relating to geology, landform, soils, vegetation, woodlands and current land use. The HLC forms an important component of these assessments by providing the historical data relating to landscape patterns. The LCA can be used for a variety of purposes including preparation of development plans, assessing the impacts of new development, for the management of protected landscapes, and may also help to inform seascape assessments to assist with the preparation of Marine Plans.

The LCA for Devon (<http://www.devon.gov.uk/landscapecharacter>) describes the variations in character within different areas and different landscape types within the county and provides a more detailed level of assessment compared to that of the National Character Areas Assessment. The Devon LCA can be used to provide evidence for local development frameworks and plans to enable the distinctive and special aspects of Devon's landscape to be detailed. The assessment also provides strategies and guidelines for the protection, management and planning of the landscape.

The Devon LCA contains seven National Character Areas (NCA), of which two fall within the South Devon RCZAS study area; the South Devon NCA and the Devon Redlands NCA. NCAs are broad divisions of distinctive landscape that are defined by Natural England at a national level and follow natural as opposed to administrative boundaries. There are 159 National Character Areas within England and these divisions are used as a basis for the development of ecological and landscape strategies.

Each of the NCAs are further sub-divided into Character Areas. These divisions relate to unique, geographically-specific areas of landscape which are recognised on a county scale. The Devon LCA contains 68 Devon Character Areas. Profiles for each of the character areas falling within the study area are available to view through the Devon County Council website.

Each of the Devon Landscape Character Areas contain a further sub-division relating to Landscape Character Types (LCTs). This division is again based upon areas of landscape sharing similar characteristics, although they may occur in different parts of the county. Assessment at this level allows different landscapes within the county to be compared.

The smallest landscape areas sharing common characteristics are defined by Land Description Units. These are based on geographical information relating to geology, landform, vegetation and land use.

The English Seafront Project

A research project relating to England's seaside heritage is currently being undertaken by Historic England. The project seeks to raise awareness of the seaside as a heritage resource by charting the history, development, character and significance of England's seafronts and aims to contribute to the protection of coastal heritage by exploring the issues they currently face.

3. DESIGNATIONS RELEVANT TO THE STUDY AREA

3.1 World Heritage Sites

World Heritage Sites are places of outstanding universal value to humanity, which are designated by the United Nations Educational, Scientific and Cultural Organisation (UNESCO). The designation of a world heritage site can relate to sites of either natural or cultural significance, which are protected for the appreciation and enjoyment of future generations through their inscription onto the World Heritage List. Natural sites can be designated within either terrestrial or marine areas. This work is carried out according to an international treaty entitled the *Convention concerning the Protection of the World Cultural and Natural Heritage*, which was adopted by UNESCO in 1972.

The western part of the Dorset and East Devon Coast World Heritage Site, more commonly known as the Jurassic Coast, falls within the study area for the South Devon RCZAS (**Fig. 3**). The designated area comprises eight sections along 155 km of coast from Exmouth in East Devon to Swanage in Dorset. The site was inscribed onto UNESCO's World Heritage list as England's first natural World Heritage Site in 2001 and represents a near-continuous sequence of Triassic, Jurassic and Cretaceous rock exposures, representing much of the Mesozoic era (251-66 million years ago) or approximately 185 million years of the Earth's history (<http://whc.unesco.org/en/list/1029>).

3.2 Historic Environment Designations

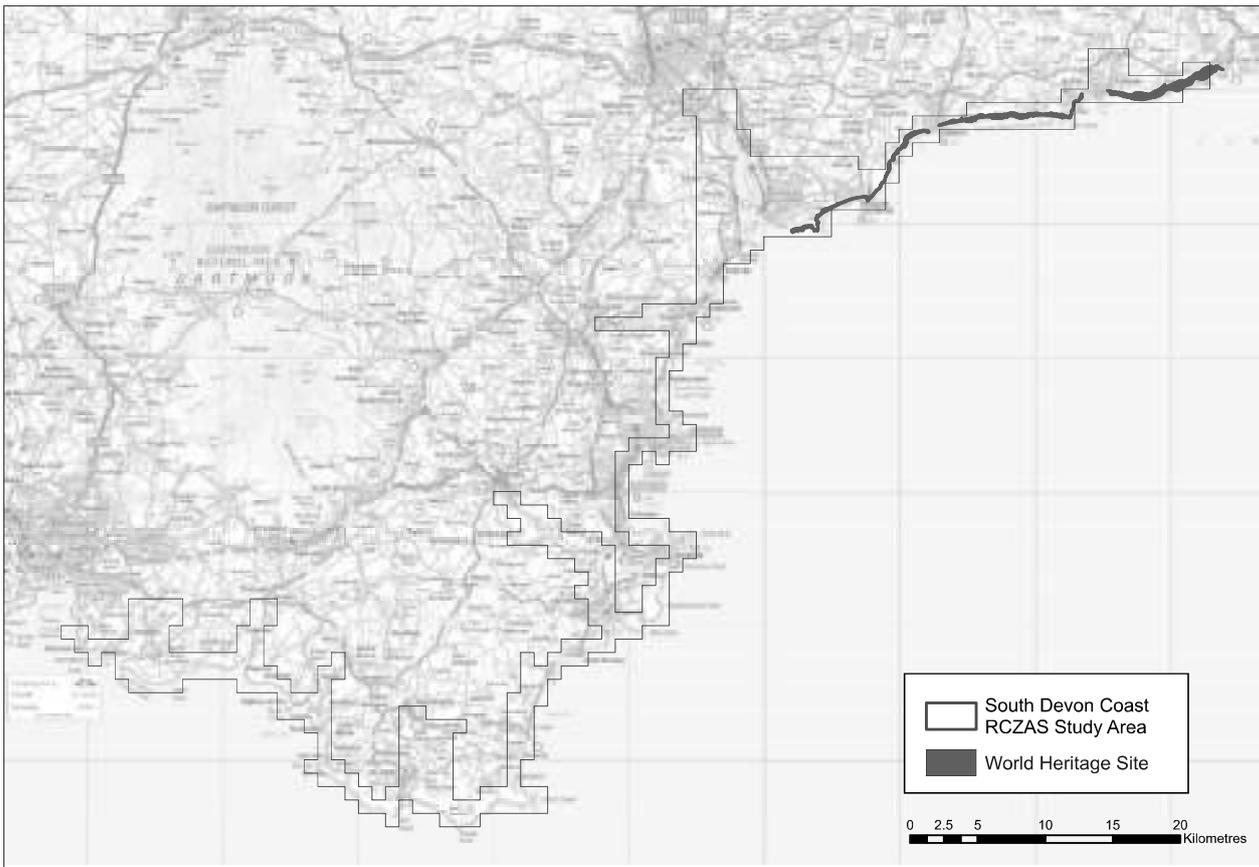
Conservation Areas

A Conservation Area is by definition a discrete area of special architectural or historic interest, with a specific character or appearance that it has been considered desirable to preserve or enhance. Most conservation areas are designated by the Council as the local planning authority. Within the study area there are eight Conservation Areas within East Devon District, ten within Teignbridge, 15 within Torbay, and ten within South Hams.

Scheduled Monuments

Scheduled Monuments, as defined under the *Ancient Monuments and Archaeological Areas Act (1979)* are sites which have been selected by a set of non-statutory criteria to be of national importance. These criteria comprise period, rarity, documentation, group value, survival/condition, fragility/vulnerability, diversity, and potential. Where scheduled sites are affected by development proposals there is a presumption in favour of their physical preservation. There is also a presumption against developments which have a significant impact on the integrity of the setting of Scheduled Monuments. Any works, other than activities receiving class consent under *The Ancient Monuments (Class Consents) Order 1981*, as amended by *The Ancient Monuments (Class Consents) Order 1984*, which would have the effect of demolishing, destroying, damaging, removing, repairing, altering, adding to, flooding or covering up a Scheduled Monument require consent from the Secretary of State for the Department of Culture, Media and Sport.

A total of 47 Scheduled Monuments fall within the South Devon RCZAS study area (**Fig. 4**). Of these six are located within East Devon, nine within Torbay and 32 within South Hams. These sites are listed within **Appendix 1**.



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Fig. 3: Location of the Jurassic Coast World Heritage Site, in relation to the Study area



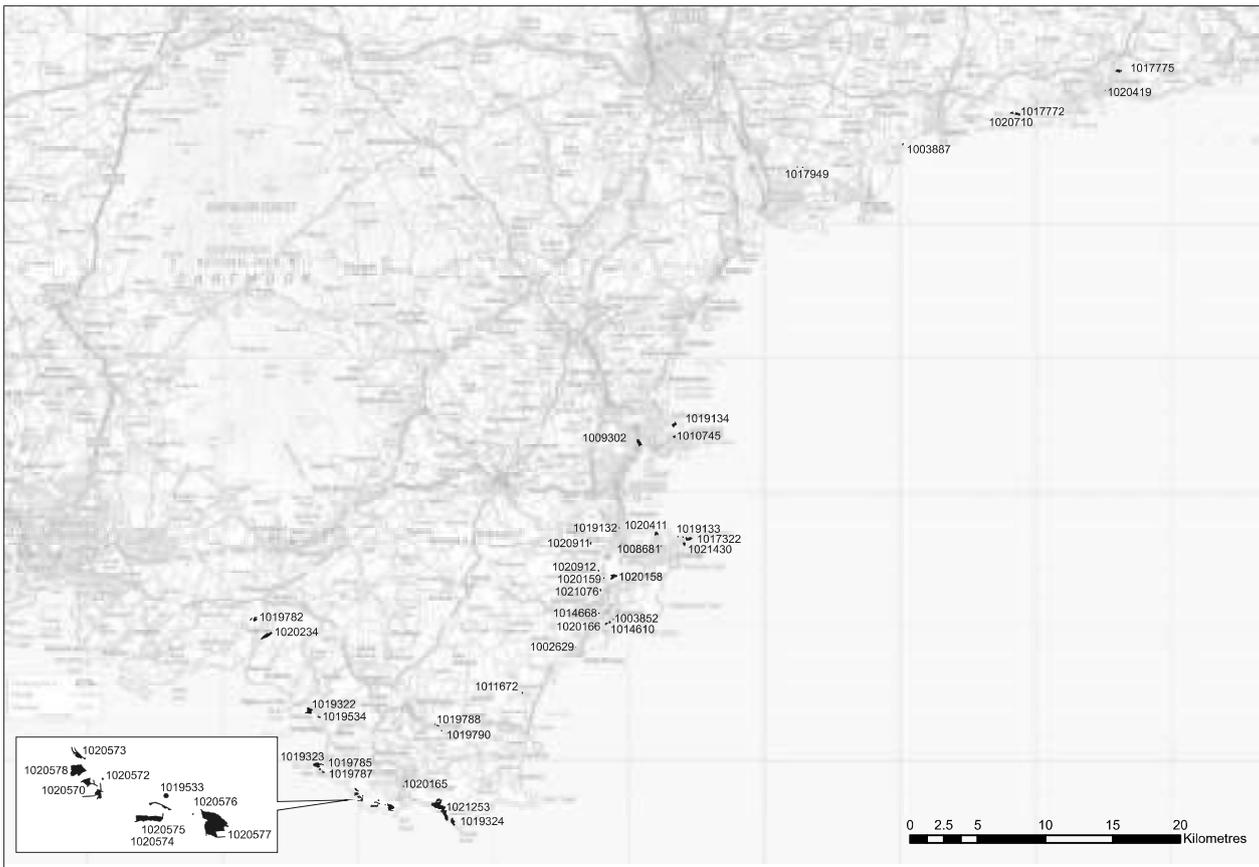


Fig. 4: Location of Scheduled Monuments within the Study Area (identified by NHLE no.)

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Listed Buildings

Buildings of national, regional, or local historical and architectural importance are protected by the Planning (Listed Buildings and Conservation Areas) Act, 1990. Buildings designated as 'listed' are afforded protection from physical alteration or effects on their historical setting.

There are a total of 2437 Listed Buildings within the South Devon RCZAS study area. These comprise 42 Grade I Listed Buildings, 102 Grade II* Listed Buildings, and 2293 Grade II Listed Buildings. A large proportion of these buildings fall within designated Conservation Areas within the study area. Listed Buildings of high significance (Grade I and II*) are listed within **Appendix 2**.

Registered Parks and Gardens

Designed landscapes of particular significance are afforded protection through inclusion on the Historic England *Register of Historic Parks and Gardens of Special Historic Interest in England*. There are a total of 54 Registered Parks and Gardens within the county of Devon, of which 16 fall within the South Devon RCZAS study area (**Fig. 5**). These comprise a Grade I Registered Park and Garden at Luscombe Castle, 0.5km to the west of Dawlish, the eastern extent of which falls within the study area, three Grade II* and 12 Grade II Registered Park and Gardens. Of these, three fall within East Devon, three within Teignbridge, four within Torbay, and six within South Hams. Only small proportions of the Registered Park and Gardens at Luscombe Castle (Grade I) and Stonelands House (Grade II) within Teignbridge District, Watcombe Park and Brunel Manor (Grade II) and Oldway Mansion (Grade II) within Torbay, and Langdon Court Hotel (Grade II), South Hams, fall within the study area. These sites are listed within **Appendix 3**.

Registered Battlefields

Battlefields of particular significance are afforded protection through inclusion on the *Historic England's Register of Historic Battlefields*. There are currently 46 important English battlefields recorded on this register which are offered protection through the planning system and by promoting a better understanding of their significance and public enjoyment.

There are no Registered Battlefields within the study area.

Protected Wrecks

The Protection of Wrecks Act 1973 is designed to protect the site of wrecks from interference by unauthorised persons, thereby protecting sites which are considered to be of historical, artistic or archaeological importance. There are a total of five Protected Wrecks within the South Devon RCZAS study area: the Church Rocks wreck off Teignmouth, the Salcombe Cannon site and the Moor Sand site off Gammon Rock within South Hams and the Erme Estuary and Erme Ingot sites off Battisborough Island also in South Hams (**Fig. 6**). Details of these sites are listed within **Appendix 4**.

Protection of Military Remains Act 1986

All military aircraft and vessels that have crashed, sunk or been stranded within the UK and its territorial waters are protected through the *Protection of Military Remains Act* of 1986, which is administered by the Ministry of Defence. Under this act, vessels may be designated either as a protected place or as a controlled site.

3.3 Natural Environment Designations

Although the following designations largely relate to the natural environment, the heritage value of these areas often forms part of their designation criteria or part of the consideration relating to their future conservation. Designations relevant to the South Devon RCZAS study area are discussed below in greater detail.

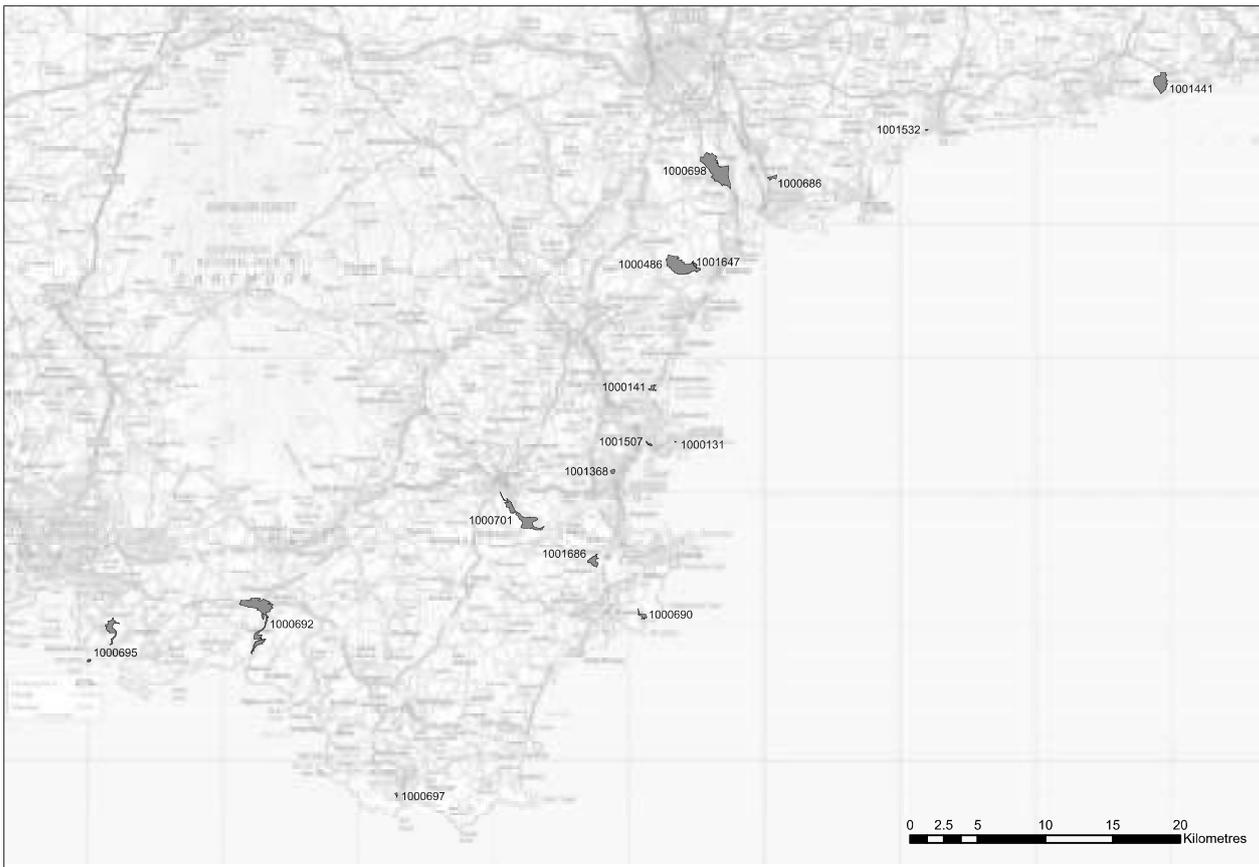


Fig. 5: Location of Registered Parks and Gardens within the Study Area (identified by NHLE no.)

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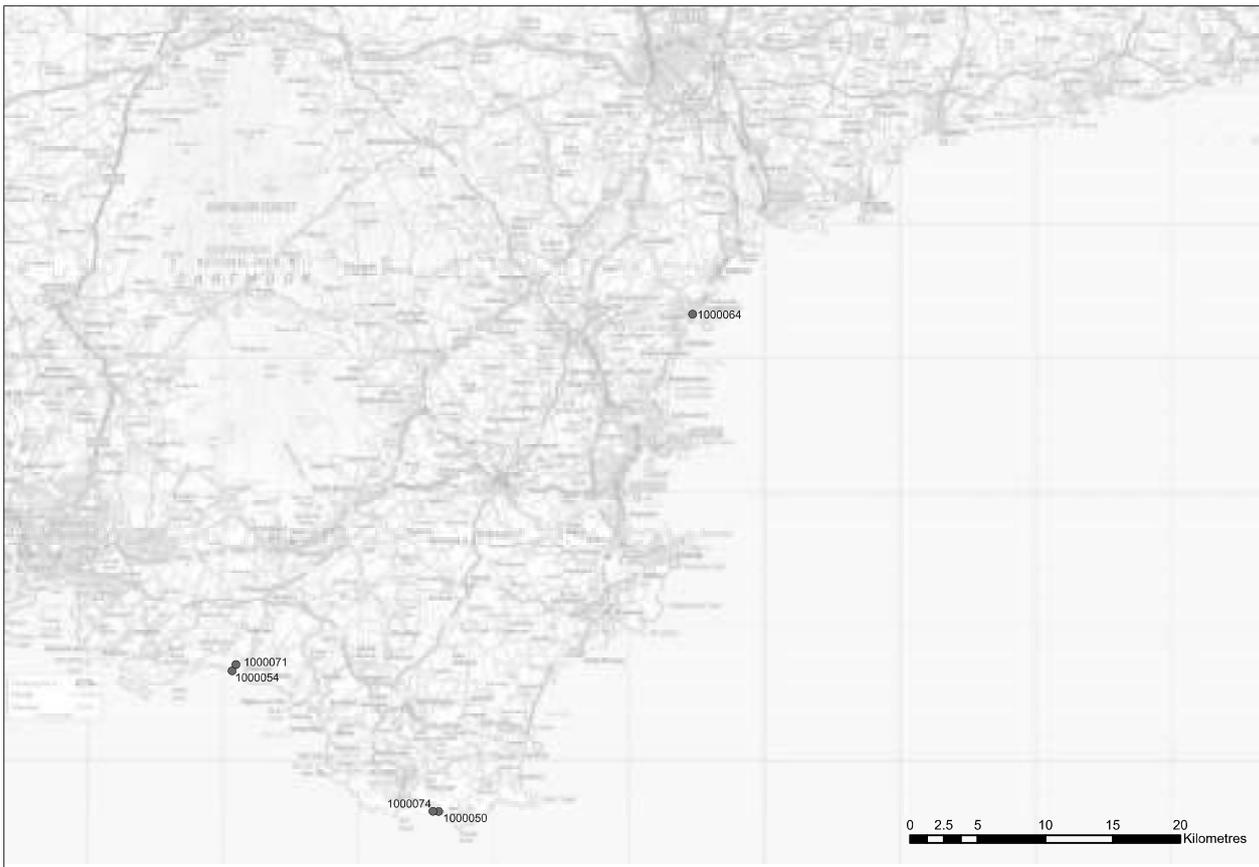


Fig. 6: Location of Designated Wrecks within the Study Area (identified by NHLE no.)

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Areas of Outstanding Natural Beauty

AONBs are designated under the *National Parks and Access to the Countryside Act* of 1949, and amended in the *Environment Act* of 1995. As a result of the Countryside and Rights of Way Act, 2000 Natural England has the power to designate AONBs in England that are outside national parks. These are areas of natural beauty which it is considered desirable to conserve and enhance, and can relate to wildlife, physiographic features and cultural heritage, as well as concepts of landscape and scenery.

The county of Devon contains a high proportion of protected landscapes, including five AONBs. In these designation areas the local authorities have a statutory duty to have regard to the protection and enhancement of the landscape and a responsibility to prepare and adopt management plans.

The RCZAS study area intersects with two AONBs; the South Devon AONB and the East Devon AONB. Approximately 153 square kilometres of the South Devon AONB fall within the survey area. Over 47 square kilometres of the coastal strip within the eastern part of the study area falls within the East Devon AONB.

Heritage Coasts

Heritage Coasts were established to conserve, protect and enhance the best stretches of undeveloped coast within England including their natural beauty, their terrestrial, coastal and marine flora and fauna, and their heritage features. Areas of Heritage Coasts have been defined following consultation between the relevant maritime local authorities and Natural England, and are used as an aid to local authorities in planning and management of coastlines.

Within the South Devon RCZAS study area Heritage Coasts have been designated within East Devon (an area of 35km²) and South Devon (an area of 129km²).

RAMSAR Sites

The *RAMSAR Convention* of 1971 is an international treaty that provides the framework for the conservation and use of wetlands and their associated resources. Under the terms of the convention, each contracting party is responsible for designating at least one wetland site for inclusion on the *List of Wetlands of International Importance* according to a specific set of criteria. The first RAMSAR site in the UK was designated in 1976, when there was an emphasis on selecting sites relating to waterfowl habitat within the UK. The Convention has since broadened its scope to include all aspects of wetland conservation and use. Many of the sites designated as RAMSAR sites are therefore also designated as Special Protection Areas (SPAs).

The Exe Estuary is currently the only designated RAMSAR site within the study area.

Special Protection Areas

Special Protection Areas (SPAs) are protected sites that have been classified for the protection of rare and vulnerable birds through Article 4 of the EC Birds Directive of 1979. The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. SPAs in terrestrial areas and territorial marine waters out to 12 nautical miles are classified under the *Wildlife and Countryside Act* of 1981.

There are currently two sites in East Devon that are designated as SPAs: the Exe Estuary and the East Devon Heaths.

Special Areas of Conservation

Special Areas of Conservation (SACs) are protected sites that have been designated under the EC Habitats Directive with the intention of making a significant contribution to the

conservation of habitat types and species, excluding birds, identified within the Directive as being most in need of conservation at a European level. SACs falling within terrestrial areas and territorial marine waters out to 12 nautical miles are designated under the *Conservation Regulations 1994*.

Within East Devon SACs have been designated at Beer Quarry and Caves, the East Devon Pebblebed Heaths, the River Axe from the Dorset border to the A3052, and Sidmouth to West Bay Coast. Dawlish Warren within Teignbridge, and Blackstone Point within South Hams are also designated as SACs. The South Hams has the South Hams Special Area of Conservation, and through its Habitat Regulations Assessment the Regional Spatial Strategy for the South Hams has identified this site as an area of concern as the development of housing, employment and transport infrastructure has the potential to adversely affect bat foraging and commuting habitat (South Hams Local Development Framework 2010).

National Nature Reserves

National Nature Reserves (NNRs) were established to protect important habitats, species and geology and can relate to both natural and semi-natural terrestrial and coastal ecosystems within Great Britain. NNRs are designated under the *National Parks and Access to the Countryside Act* of 1949 and the *Wildlife and Countryside Act* of 1981, and are managed to both conserve habitats and to provide opportunities for scientific research to be carried out within these environments.

There are four NNRs within the study area and these include Axmouth and Lyme Regis, which is the site of one of the largest and most important active coastal landslip systems in Western Europe. The other NNRs are located at Dawlish Warren, Berry Head promontory and Sharkham Point to the south of Torbay, as well as Slapton Ley, which contains the largest natural freshwater lake in South West England.

Site of Special Scientific Interest

SSSIs are a designation providing statutory protection for the best examples of the UK's flora, fauna, or geological or physiographic features. The designation was originally introduced under the *National Parks and Access to the Countryside Act* of 1949, revised under the *Wildlife and Countryside Act* of 1981, and improved provisions were made in the *Countryside and Rights of Way Act* (2000). SSSIs may extend into intertidal areas as far as the jurisdictional limit of local authorities, which is generally taken to be the Mean Low Water mark. The boundaries of some SSSIs may extend more widely in estuaries and enclosed waters, as there is a specific provision for marine SSSIs beyond the low water mark within England. There are a total of 34 SSSIs within the study area.

Marine Conservation Zones

Marine Conservation Zones (MCZs) were established under the *Marine and Coastal Access Act* of 2009 to protect nationally important marine wildlife, habitats, geology and geomorphology and can be designated within both the inshore and UK offshore regions of England and Wales. Torbay and Skerries Bank and their surrounds are currently the only MCZs within the study area, although the Devon Wildlife Trust has recommendations for a further ten proposed areas through its website.

4. COASTAL AND MARINE MANAGEMENT

4.1 Management Policy

The National Planning Policy Framework

General policy and guidance for the conservation of the historic environment are contained in Chapter 12 of the *National Planning Policy Framework* (NPPF; Department for Communities and Local Government 2012). Archaeological sites, buildings, Historic Parks and Gardens, Conservation Areas, Registered Battlefields or other aspects of the historic environment that have significance because of their historic, archaeological, architectural or artistic interest are considered heritage assets under this policy system. Designated heritage assets are afforded protection as either Scheduled Monuments, Listed Buildings or through their inclusion within Conservation Areas. The ministerial foreword to the NPPF states that 'Sustainable Development is about change for the better', and that 'Our historic environment – buildings, landscapes, towns and villages – can be better cherished if their spirit of place thrives rather than withers'.

In line with the 12 core planning principles, planning should 'conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations' (paragraph 17, p6). It is now Historic England's view that a proposal that fails to adhere to historic environment policies is not a sustainable development.

Policies relevant to the historic environment include paragraphs 128,129 132-135, 137 and 139. Under NPPF, local planning authorities should require a description of the significance of all heritage assets likely to be affected by a planning development, including impacts on setting. This should be set out with a level of detail proportionate to the assets' importance, and of a sufficient scale to allow the potential impact of the proposed development upon the assets' significance to be understood. As heritage assets are an irreplaceable resource, all affected by a development need to be recognised, and the significance of the asset taken into account. Any harm or loss to an asset requires justification; substantial harm to, or loss of, designated assets is considered to be wholly exceptional unless it is demonstrated that the public benefits of a development outweigh the harm or loss (Department for Communities and Local Government 2012, Section 12).

Local and neighbourhood plans should contain policies that determine the quality of development expected within an area. In addition to a list of other criteria, these should respond to the local character and history of an area and reflect the identity of local surroundings and materials without discouraging innovation (*ibid*, Section 7, paragraph 58). Local planning authorities should also have access to up-to-date evidence for the historic environment (*ibid*, Section 13, paragraph 169).

Local planning authorities should also set out strategic policies for the area including those relating to flood risk and coastal change management, as well as the conservation and enhancement of the natural and historic environment (*ibid*, Section 13, paragraphs 156 and 157).

UNESCO Convention on the Protection of Underwater Cultural Heritage

The *UNESCO Convention on the Protection of the Underwater Cultural Heritage* was adopted in 2001 and allows the protection of submerged cultural heritage by obligating state parties to preserve their heritage through *in situ* measures where possible. The Convention is an international treaty that was generated in response to the international looting and destruction of underwater Cultural Heritage. The convention also seeks to prevent commercial exploitation of the underwater resource, and encourages an exchange of information to promote public awareness. The Convention applies to all underwater heritage more than 100 years old.

Marine and Coastal Access Act 2009

The *Marine and Coastal Access Act* of 2009 provides the legal mechanism to ensure a new system of marine planning, and to allow the management and sustainable use and protection of the marine coastal environment. It seeks to do this through the work of a Marine Management Organisation (MMO) which functions as the marine planning authority for English territorial waters and UK offshore waters. Other key features of this act include the preparation of a Marine Policy Statement (MPS), the provision of a marine planning system, provision for a streamlined marine licensing system, designation of Marine Conservation Zones (MCZs), and provision of the coastal access duty (Dudley and Johns 2014, 9).

4.2 Coastal Management Frameworks

Marine Management Organisation

Following the *Marine and Coastal Access Act* of 2009 marine planning within the UK is under the control of the MMO which will deliver UK marine policy objectives for English waters through a series of statutory Marine Plans and other measures. The two areas covered by the MMO include the English Inshore (0-12 nautical miles) and the English Offshore Regions (12-c. 200 nautical miles). The MPS forms the framework for the preparation of marine plans and allows for consistency in decision making concerning marine areas. Marine plans will interpret and present the policies from the MPS at a sub-national level, allowing national policy to be applied on a local scale.

The South Marine Plans

The MMO is currently preparing draft marine plans for England's South inshore and offshore areas, and will set out how the MPS will be implemented within this area. Marine planning officially started in this area in April 2013, although work had begun in late 2012. The South Inshore Marine Plan Area includes a coastline stretching from Folkestone in Kent to the River Dart in Devon. The activities covered within the South Marine Plans have the potential to both directly and indirectly affect the marine cultural heritage, and the plans therefore need to be drafted in accordance with the provisions of the MPS and with regard to the protection of heritage assets.

Management of the Coastal Historic Environment

Historic England has worked with DEFRA to deliver the marine planning system mentioned above and currently work as a specialist advisor to the MMO for the English area of the UK Territorial Sea. In addition, Historic England have also produced advice on planning new developments affecting ports and are addressing the threats associated with coastal change through their targeted RCZA Projects covering the English Coast. Guidance from Historic England is also available on how coastal heritage should be considered as part of the SMP process.

Shoreline Management Plans

SMPs provide a large-scale assessment of the risks associated with coastal change and present a policy framework to assess these risks to people and the developed, historic and natural environments. These plans also provide an important part of the DEFRA strategy for flood and coastal defence. SMPs are non-statutory policy documents relating to coastal defence management planning, and are intended to inform wider strategic planning. The policies detailed within SMPs aim to achieve long-term objectives for the management of the coastline through a sustainable approach that considers the needs of the environment and local economy. As coastal sediment movements occur within distinct boundaries, it is considered that the management of the coast should reflect these boundaries as opposed to relating to the larger administrative boundaries. The policies contained within SMPs are therefore divided into sub-units. The plans are developed by Coastal Groups with representation from local authorities and the Environment Agency, and are put into effect by

the Environment Agency through their role in Flood and Coastal Erosion Risk Management (FCERM), as well as through neighbourhood and local planning (NPPF).

SMPs work in collaboration with other coastal plans including Estuary Management Plans, Catchment Flood Management Plans and Coastal Zone Management Plans, and inform key development plans including Regional Spatial Strategies and Local Development Frameworks. The SMP will also inform development control by highlighting areas of risk which will inform the suitability of land for development.

The SMP for Durlston Head in Dorset to Rame Head in Cornwall identifies policies over a 100 year timescale to manage tidal flooding and coastal erosion risks. The area of coastline that falls within the study area for the South Devon RCZAS is divided into 137 units, spread between Wembury in the west, and Uplyme in the east.

5. ASSESSMENT OF SOURCES

5.1 Historic Maps

A large number of historic maps that covered the RCZAS study area were consulted at the Devon Heritage Centre, the Plymouth and West Devon Record Office, and the Exeter Cathedral Archive. These are listed in **Appendix 5**.

Large-scale cartographic surveys of Devon were undertaken by Saxton in 1575, Benjamin Donn in 1765, and C. and J. Greenwood in 1827. While these maps are useful for providing a broad indication of the historic landscape of Devon and show the main transport routes and settlements, the scale of the maps is generally of insufficient detail to provide detailed information relating to the study area.

The two volumes of *Devon Maps and Mapmakers: Manuscript Maps Before 1840* (Ravenhill and Rowe 2002) proved useful for identifying early estate maps relevant to the RCZAS study area. A wide range of maps were consulted including detailed estate maps, such as those for Dawlish held by the Exeter Cathedral Archive, small-scale sketches showing parcels of land, stylistic maps of the rivers such as those of the River Exe held by the Devon Heritage Centre, as well as maps created as a result of works associated with transport improvements. Many of the large estate maps depict historic structures such as lime kilns and buildings and contain alphabetic or numeric reference to a survey book or table, containing details of land use and field names. Whilst many of these estate maps show a clear continuity to the later Tithe Survey, there were some occasions when features of archaeological interest were identified but were not depicted on the later Tithe Maps, indicating that they had been removed or had gone out of use by this date. Although of historical interest, many of the transport maps of roads and canals were of an insufficient scale to show any relevant detail beyond the course of a new road or canal.

The Tithe Maps of the 1840s contain a much larger amount of detail. Individual buildings, fields and boundaries are represented on these maps and they are labelled with a numerical reference to the associated Tithe Apportionment, where details of land ownership, occupation, field names, and the use of the land were recorded. These Tithe Maps often form the earliest complete maps of parishes and were produced in order to assess the tithe payable in cash to the parish church for the support of the church and its clergy. Varying proportions of 67 tithe maps fall within the South Devon RCZAS study area. These were analysed in hard copy format at the Devon Heritage Centre, Exeter and were available as a digital tithe mosaic, supplied by Devon County Council, which could be loaded into GIS software. The majority of the digitised tithe maps were accurately georeferenced and could therefore be compared with digital tiles of the later historic Ordnance Survey maps. There were, however, some small areas at the edge of some parish maps where records were lost due to the overlapping of the map with that of another parish and there was also a small area within the Kenton Tithe Map that was not accurately geo-referenced with the later maps, indicating an inaccuracy within the original survey. All of the Tithe Maps and Apportionments that fall within the East Devon AONB are also available to be viewed online as a result of the 'Parishscapes Project 2007-2010', and most of the Tithe Apportionments for Devon can be viewed online through the Devon Heritage Centre website.

The Tithe Maps and Apportionments proved to be a very valuable resource for research associated with the South Devon RCZAS. Many historical structures such as lime kilns, quarries and buildings are depicted on the Tithe Maps and can allow the sites of former structures present c. 1840 to be identified and recorded. Similarly, the layout of land depicted on these maps can provide evidence relating to former agricultural practices, such as large areas of medieval strip fields, and can also indicate the possible site of archaeological features through the study of boundary morphology. The information contained within the Tithe Apportionments has also proved to be a valuable source as a way of identifying features of possible archaeological interest through placename evidence, and

has allowed a detailed description of land use c. 1840 to be recorded, thereby giving a smaller scale of analysis compared to that available through the Devon HLC. Relevant data from tithe apportionments for all parishes falling within the study area was collated as part of the initial research phase, and any field names of potential archaeological interest were highlighted for further work.

By the end of the 18th century standards in mapping were being raised as a result of greater awareness, better instrumentation and the stimulus of the Napoleonic wars (Carr 1962, 137). The subsequent need for an official survey resulted in the founding of the Ordnance Survey in 1791. The large scale 25-inch Ordnance Survey maps were surveyed from the 1860s-1880s. Digital First and Second Edition 25-inch Ordnance Survey maps and the modern Ordnance Survey Master Map were obtained from Devon County Council under licence. These maps contain a large amount of detail relating to land use within the study area and proved a very valuable source for comparison of features identified on the earlier Tithe and estate maps. The detail contained within these Ordnance Survey maps also allowed features to be identified that had not previously been recorded within the Devon HER.

The sheer quantity of information held within historic maps meant that the research methodology had to be clearly defined at the outset of the project. The project focused on monuments such as quarries and lime kilns that were identified from the cartographic evidence, possible monuments based upon field name evidence from the Tithe Apportionments, early field systems and buildings depicted on the Tithe Maps, buildings of a rural character, for example barns and linhays, recorded on historic maps, as well as coastal assets such as piers, boat houses and coastguard stations. Anything within the urban core of a village or town was generally disregarded unless clearly labelled, as these urban areas would benefit from a more detailed historical study such as the Extensive Urban Surveys (EUS) that are currently being undertaken within the towns of Exmouth, Dartmouth, Seaton, Teignmouth, Newton Abbot/Kingsteignton, and Kingsbridge. Residential buildings that post-date the Tithe Map were not considered within the survey.

The existing HER data was analysed and where additional information relating to the monuments was identified from the historic maps, it was recorded along within the monument ID within an excel spreadsheet. Similarly, any features considered to have an archaeological or historical value for which there was not an existing HER entry were recorded within the spreadsheet.

5.2 Admiralty Charts

Historic charts held at the UK Hydrographic Office (UKHO), Taunton were consulted as part of this project. A range of charts were examined, including those providing an overview of large areas of coast such as the survey between Exmouth and Rame Head, surveyed in 1787. There is also a series of localised charts for the ports and estuaries of the South Devon coast including the Exmouth Bar and Harbour, Teignmouth Harbour, Tor Bay, and Salcombe Harbour. All charts consulted by the project are listed in **Appendix 6**.

Although admiralty charts were created primarily for navigational purposes, they often include a detailed outline of the coast and occasionally depict coastal assets such as coastguard stations and harbours. The 'Survey of the South Coast of England from Abbotsbury to Sidmouth' revealed evidence for a ferry crossing at Axmouth, two lime kilns, a chalk pit and a summer house to the north of Charton Bay. A number of the features of archaeological and historical interest from the charts relating to Exmouth had previously been recorded on the Devon HER. It should, however, be noted that the scale of many of these maps makes it very difficult to accurately geo-reference these features. Although the coastline is depicted on these early admiralty charts, it is difficult to determine the accuracy of this coastline as the surveys tended to focus on the depths of the navigable channels. It should also be noted that a number of the later admiralty charts took the land detail from the Ordnance Survey maps.

Errors do also occur on these maps, such as that on a chart of Exmouth where the outline of the 1954 revision does not show the end of the sand spit at Dawlish Warren. Although it is possible that this area may have been covered by a very high tide, there is no evidence for the spit having been removed (Carr 1962, 140).

5.3 Topographic Illustrations

A coastal historical resources guide for England (McInnes and Stubbings 2011) was published by the Crown Estate with the intention of promoting the use of historic works of art as a way of assessing and understanding coastal change. The guide aimed to 'identify which artists illustrated the coastline of the study area with the greatest topographical accuracy between 1750 and 1940 and thereby establish which of those artists and their works make the most significant contribution to our understanding of long-term coastal change' (*ibid*, 31). A list of the paintings, watercolours and prints identified for South West England is listed within this guide.

The sketchbooks by Peter Orlando Hutchinson, held at the Devon Heritage Centre, also provide a valuable tool for comparing the South Devon coastline of the mid-19th century to that of the present day. Hutchinson was born in Winchester in 1810, but spent most of his adult life in Sidmouth. His vast collection of sketches focus on the landscape of the South Devon coast, with particular emphasis on areas around Sidmouth, Peak Hill, and Teignmouth. It should also be noted that he often revisited areas that he had previously sketched in order to show how these areas had experienced noticeable landscape changes within his lifetime. An example of this is his focus on 'The Elephant Rock' on the east side of Langstone Point, near Dawlish. Hutchinson originally sketched this in 1868, and noted beneath the sketch that 'as the rock is soft it will probably not endure many years' (Sketchbooks Volume 5 104/136). His subsequent sketches dated to 1879 and 1888 show the erosion to this stretch of coastline, with the 'head' of the elephant having been lost and caverns and passages created within the area of the 'body'. Hutchinson's work therefore proves a valuable resource for understanding coastal change within South Devon within the mid-19th century, and his digitised sketchbooks and diaries have been made accessible through the 'In the Footsteps of Peter Orlando Hutchinson Project 2010-2013' undertaken by the East Devon AONB. These digitised sketchbooks were consulted as part of the research associated with the project initially with the intention of identifying heritage assets and noticeable changes to the coastline of South Devon, but the sheer quantity of sketches means that they are only acknowledged here for the contribution that they could make to further research associated with coastal change and the topographic setting and form of heritage assets.

Additional topographic illustrations providing detail of the South Devon coast include watercolours by William Payne painted between the years 1790 and 1830. Most of the paintings that were completed by Payne during the last ten years of the 18th century focus on Devon's coast and estuaries and therefore provide a useful record of the coastline at this time (Hunt 1986, 2). Diaries and watercolour paintings by John Swete, also held at the Devon Heritage Centre, provide an illustrated topographic commentary for the end of the 18th century. The journals provide details of tours undertaken by Swete throughout Devon and include numerous locations within the South Devon RCZAS study area (Gray and Rowe 1997, 1998). Additional topographic illustrations relevant to the study area can be searched through the local studies catalogue held by the Devon Heritage Centre.

5.4 RCZAS NMP South Devon Coast

The NMP project formed component one of the Phase 1 RCZAS for the South Coast of Devon and was completed in June 2014. The survey aimed to 'enhance the understanding of past human settlement, by providing primary information and synthesis for all archaeological sites and landscapes visible on aerial photographs or other airborne remote sensed data. This comprehensive synthesis of the archaeological data available on aerial photographs is intended to assist research, planning and protection of the historic

environment' (Horne 2009). The NMP survey created geo-referenced digital transcriptions of the form and extent of all archaeological sites and landscape features visible on aerial photographs within the study area. The results of the NMP project are available through the DCCHER, and through a project report (Hegarty *et al.* 2014).

Prior to the NMP project the HER recorded over 7480 monuments for the survey area, of which 3990 were considered to be 'NMP relevant' monuments such as earthworks, cropmarks and military structures. A total of 1501 archaeological features was transcribed during the NMP project, of which 398 were previously recorded on the DCCHER. Monuments of particular significance identified as a result of the NMP project include extensions to prehistoric field systems, enhanced knowledge of hillfort earthworks, the sites of previously unrecorded deserted medieval settlements, possible post-medieval coastal fortifications and an unusual lowland water meadow (Hegarty *et al.* 2014, 13). Few previously unrecorded features were identified from LiDAR data alone, but the value of the LiDAR tiles was high for the survey as it allowed additional detail to be identified from known archaeological sites (*ibid*, 36).

5.5 HER Data

All existing Historic Environment Records that fell within the study area were supplied in shapefile format by Devon County Council and Torbay Council. As the results of the NMP project were fed into the DCCHER, these records were made available for analysis as part of the general HER data supplied to the project. National Record of the Historic Environment (NRHE) and National Heritage List for England (NHLE) data was supplied by Historic England, while HER records were also supplied by the National Trust HBSMR. This information was loaded into Geographical Information Systems software as layers, which allowed the data to be cross-referenced.

The Torbay section of the project was slightly affected by some methodological issues, including the need to cross reference the Torbay HER data with the records created by the Component 1 NMP project currently held in the Devon HER and the necessity to create new records for all features recorded as opposed to simply amending pre-existing records. All of the records relating to sites within Torbay will be renumbered when accessioned to the Torbay HER at the end of the RCZAS project.

All data generated by the research was recorded into the Devon Historic Environment Record, using GIS software ArcGIS (from ESRI) and the HER software HBSMR (from exeGesIS). When creating new records and enhancing existing records the policy within the Devon HER was to create polygons wherever possible as this was considered to be the most accurate way of recording a site. Where records relating to a single monument were held by the Devon or Torbay HERs and the NRHE or National Trust HBSMRs, the numbers were cross-referenced.

5.6 NRHE Data

Point, line and polygon data was provided by the NRHE and was fed into the project GIS which allowed the data to be cross referenced with that of the Devon and Torbay HERs and the National Trust HER data. Records held by the NRHE but not the Devon HER were added to the HERs where there was a detailed description of the record and an accurate grid reference. This process excluded a large proportion of records relating to shipwrecks and aircraft crash sites recorded on the NRHE which lacked either, or in some cases both, a description and locational information as it was not considered productive to create new records for offshore assets that had little information within their NRHE records. The largest monument class to be added to the Devon HER from existing NRHE data were pillboxes, and records relating to the site of a WWII bombing decoy and machine gun emplacement have also been created from records held on the NRHE.

The NRHE held a total of 1838 records for the South Devon RCZAS study area. Seventeen of these records were provided as line data. These related to the Exeter Canal, and roads and railways throughout the study area. Records relating to the majority of these assets were already held on the Devon HER, although they were recorded as point or polygon data as opposed to line data. 685 records were available as point data, and a further 1136 records were provided as polygons. The NRHE data set is therefore of a much smaller scale than that held by the HER for the study area, which stood at over 8700 records prior to this DBA.

5.7 Wrecks

A large number of the records held by the NRHE relate to wrecks, although it should be noted that many of the entries record the position at which a ship or plane was wrecked and subsequently moved (known losses), as opposed to sites at which the physical remains of a wreck may survive. Records relating to both shipwrecks and aircraft wrecks within the NRHE data are shown as both point and polygon data, including a number of large circular polygons which often contain numerous records relating to different wrecks indicating the difficulty in accurately positioning these sites. Information relating to known losses was often reported in contemporary documents, but not accurately located, resulting in these sites being assigned less accurate grid references within the NRHE. In contrast, records relating to the position of wreck sites often contain a more accurate grid reference, but cannot necessarily be identified with known losses. The NRHE lists 637 wrecks as polygon data and 47 as point data, although it should be noted that of a number of these entries have been duplicated. An example of this is an entry relating to the 1817 wreck of an English fishing vessel which was wrecked at Beer during a storm, and which has 17 duplicate records within the NRHE data, but no grid reference or details are given within any of these records. Of the 50 records held by the Devon HER relating to wrecks 13 are based upon documentary evidence, five have been recorded from findspots, while the remaining relate to submerged monuments or structures identified from aerial photographic evidence. Only a small proportion of the records held by the Devon HER relating to wrecks match entries recorded within the NRHE data. No records relating to wrecks within the South Devon RCZAS study area are currently held by the Torbay HER. There is therefore potential for future research to cross-reference the data held within the NRHE with that held by the UKHO data on wrecks in order to provide more accurate records relating to maritime data and to reduce the duplication of records relating to the same sites.

Wrecks of WWI date along the South Devon coast are currently being researched as part of the HLF funded 'Forgotten Wrecks of the First World War Project' undertaken by the Maritime Archaeology Trust. The project coincides with the centenary of the war and seeks to raise awareness of the currently under-represented maritime history of WWI. The project area stretches along the south coast of Britain from Thanet in the east to beyond the Isles of Scilly in the west. In addition to investigating the war at sea and the sites of wrecks, the project is also investigating sites on land along the coast including intertidal wrecks, port installations, training grounds, barracks, depots, camps and coastal defences. The project will be undertaking surveys and site assessments, and will include community involvement and outreach.

A total of 30 entries relating to aircraft wrecks is recorded within the study area on the NRHE, but there are no entries relating to aircraft wrecks on either the Devon or Torbay HERs. A recent scoping study of aircraft crash sites at sea (Wessex Archaeology 2008) recognises the need for urgent national and local enhancement of records relating to these sites in order to address the imbalance between records and the number of known losses (Wessex Archaeology 2008, 63). It is proposed that the wealth of unpublished research relating to aircraft crash sites should be consulted as a priority for the enhancement of records (*ibid.* 64). The study recognises that the known resource relating to aircraft crash sites is relatively small and there is therefore potential for a large number of currently unknown crash sites to exist.

5.8 National Trust HBSMR Data

The National Trust HBSMR holds a total of 748 records for the study area, which were supplied to the project as shapefiles. A single record representing the site of a medieval boundary within Exmouth was recorded as line data, while the remaining records were available as point data, all of which were fed into the project GIS. This HBSMR contains information relating to archaeological sites, structures and historic landscapes held by the National Trust and is used by their archaeologists when providing advice to the Trust's property managers. The distribution of these records throughout the study area clearly reflects their association with large estates owned and managed by the National Trust, for example there are concentrations of records between South Down Common and Sidmouth, Exmouth, Greenway, between Southdown Cliff and Warren Point on either side of the Dart Estuary, as well as along much of the coastline within South Hams. There is a noticeable lack of evidence within the Torbay and Teignbridge Districts on the west side of the Exe Estuary, as well as within the far eastern part of the study area to the east of Beer.

There were a large number of sites that were already recorded within the Devon HER for which different or additional information was recorded within either the NRHE or National Trust HBSMR. In these cases the reference numbers for the record held in either the NRHE or National Trust HBSMR were added to the record within the Devon HER.

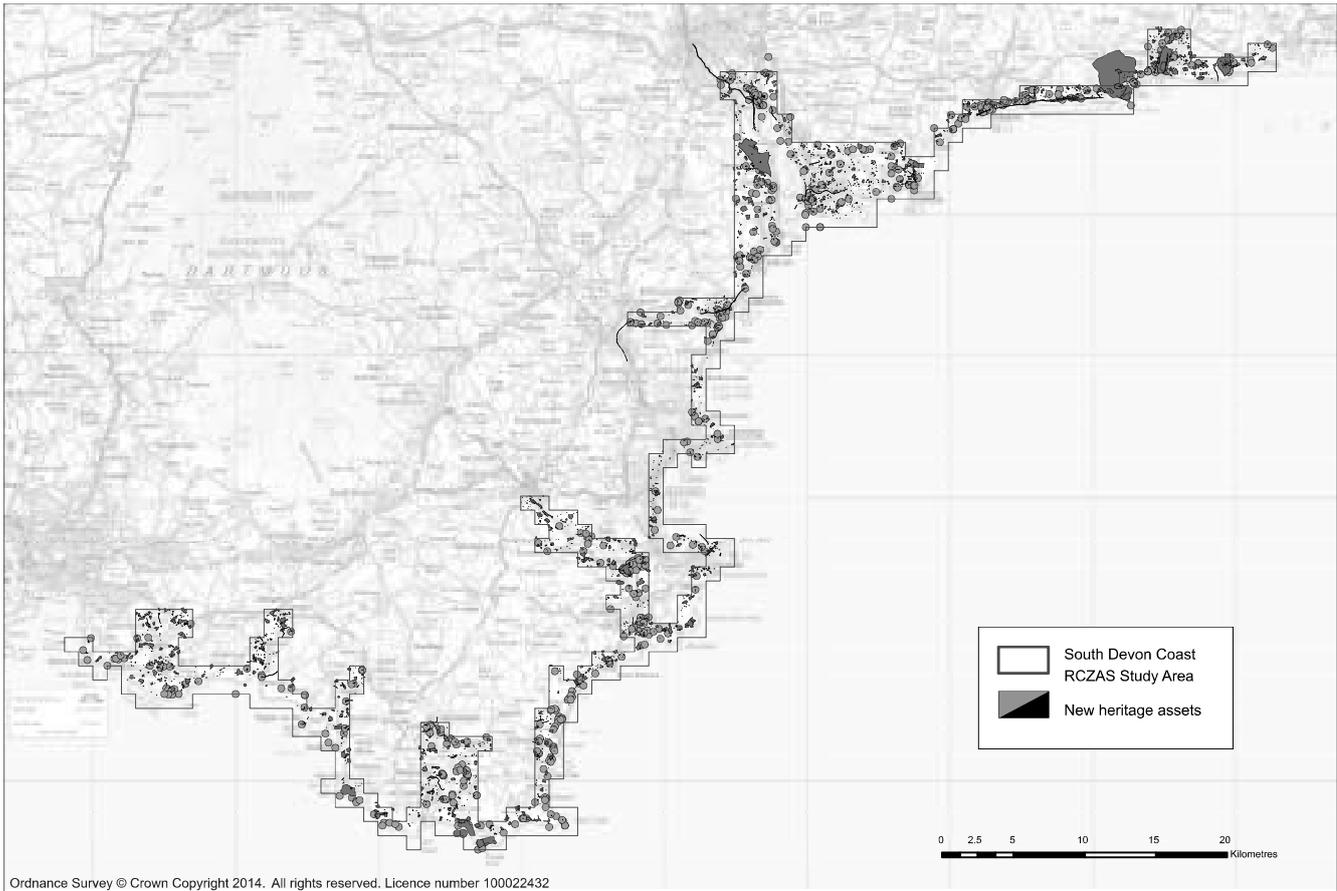
5.9 Portable Antiquities Scheme

The project team registered for research level accounts in order to access Portable Antiquities Scheme (PAS) data relevant to the study area. The PAS was established in 1997 with the aim of encouraging and facilitating the recording of archaeological objects uncovered by members of the public. The data is largely the result of metal detector users as well as field walkers. Data generated by the PAS is therefore subject to a range of interpretational issues and biases, for example the geographic distribution of finds on the PAS is largely affected by land use constraints, such as where metal detecting is and isn't allowed, while there is also a tendency for detectorists to concentrate on areas with known archaeology (Robbins 2014). These factors all need to be considered when using data generated by the PAS, and therefore this report does not aim to provide an in depth analysis of the PAS data, but rather highlights trends within the data to indicate areas of archaeological activity to complement that recorded within the other data sets.

5.10 Overview of Results: New and Enhanced Data

Prior to the survey the Devon HER contained records relating to 8705 monuments within the study area. Research associated within the DBA has identified a total of 2471 new records relating to assets that were previously unrecorded within the study area and has enhanced a further 1059 existing records. The distribution of all records created and updated by the RCZAS DBA is shown on **Fig. 7**.

Of the 2471 new records created by the DBA phase, 236 have been created from place or field name evidence based on information within the Tithe Apportionments. Field name evidence has indicated the location of six possible prehistoric barrows and the site of possible earthworks of potential prehistoric date, as well as identifying the site of possible remains relating to quarries, wells, barns, and lime kilns. The project has significantly enhanced the sites of former structures present c. 1840, including houses, barns, mills and limekilns. This includes individual buildings within rural contexts, as well as larger farmsteads and the site of shrunken/deserted settlements at East Budleigh and Rickham. With 237 incidences, barns are the single most numerous monument class recorded by the survey, followed by wells (183) and quarries (180). Records relating to maritime assets account for 7% of the total of new records created by the project. Boat Houses are the most numerous monument class within this category, with 40 new records created from the cartographic evidence. The project has also enhanced knowledge of former maritime structures as recorded on historic maps including dry docks, shipbuilding yards, piers, quays, breakwaters, coastguard stations, lifeboat stations, and historic ferry crossings.



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Fig. 7: Distribution of new heritage assets within the Study Area

The Devon HER derives monument period data from a 'From date' and a 'To date'. Where monuments cannot be accurately dated they are assigned to a broader period and are therefore inevitably given a longer date range than those that can be specifically dated. This may therefore give a misleading impression that those monuments dating to the middle or later prehistoric and historic periods may be under-represented within the record. The monument data is assessed here on the basis of the From date, considered to be the most representative of a monuments interpreted date. For HER interrogation purposes all monument records created or amended by the project are associated with a Source Record for this interpretation (SDV357736).

Prehistoric and Romano-British

Ten new sites of prehistoric date have been added to the Devon HER as a result of research associated within the DBA. These comprise the sites of seven possible barrows of early Neolithic to Late Bronze Age date, two findspots and an enclosure of Early Bronze Age or later date. A single findspot of Roman date has been added to the HER. The NMP component of the project created 48 new records for prehistoric sites, and a single record dating to the Roman period.

Early Medieval

Six sites of early medieval to post-medieval date and 79 sites of early medieval to modern date have been added to the Devon HER as a result of research associated within the DBA. Many of these records relate to buildings such as houses, farmhouses, barns and unassigned buildings. A small number of earthworks and the site of a shrunken village have also been recorded, although it should be noted that this latter record is likely to relate to a later phase of activity associated with a village of early medieval origin. The NMP component of the project created 226 new records dating to the early medieval period.

Medieval

Eight new sites of medieval date have been added to the HER as a result of research associated with the DBA. Although the historic landscape of Devon has been analysed through the HLC, the methodology for that project was based on evidence from the First Edition Ordnance Survey mapping and later modern Ordnance Survey maps. Research associated with the South Devon RCZAS identified five large field systems of likely medieval date that were identified from the Tithe Maps, but were not apparent on these later sources. New entries have therefore been made for field systems at Salcombe Regis, East Budleigh, East Portlemouth, and Thurlestone (**Figs 8 and 9**). An additional 46 new sites of medieval date were added to the HER by the NMP component.

Post-medieval

Three buildings, a quarry and a quay of post-medieval date, and 361 new entries of post-medieval to modern date have been added to the Devon HER. Assets relating to post-medieval agricultural practices include village and manor pounds, linhays and barns. Industrial assets include 46 new records relating to lime kilns, with an additional 29 sites recorded under the broader term of kiln (**Figs 10 and 11**). In addition to the large number of records relating to quarries, similar sites have also been recorded under the more specific categories of gravel pits, extractive pits, clay pits, chalk pits, sand pits, and flint pits. Coastal assets of post-medieval date include boat houses, slipways, landing stages, ferry terminals fish cellars, salt works, piers and coastguard stations. The NMP component of the project added 288 new sites of post-medieval date to the HER.

Tithe Mosaic supplied by Devon County Council



Extract from the Tithe Mosaic, approximately 1838-1848

First Edition map, © Crown copyright and Landmark Information Group Ltd



Extract from the Ordnance Survey First Edition 25 inch map, 1880-1899

Second Edition map, © Crown copyright and Landmark Information Group Ltd



Extract from the Ordnance Survey Second Edition 25 inch map, 1904-1906

OS VectorMap Local raster mapping supplied by English Heritage © Crown copyright 2014. All rights reserved. Ordnance Survey Licence number 100024900



Extract from the Ordnance Survey VectorMap Local raster mapping

Fig. 8: Field system c. 1840 to the East of Salcombe Hill, Salcombe Regis, largely removed by late 19th century



Tithe Mosaic supplied by Devon County Council



Extract from the Tithe Mosaic, approximately 1838-1848

First Edition map, © Crown copyright and Landmark Information Group Ltd

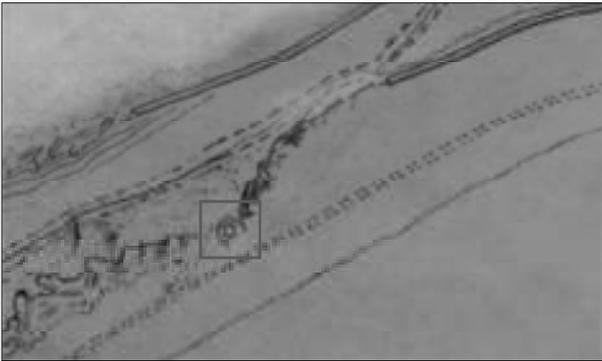


Extract from the Ordnance Survey First Edition 25 inch map, 1880-1899

Fig. 9: Field system c. 1840, East Portsmouth, largely removed by late 19th century

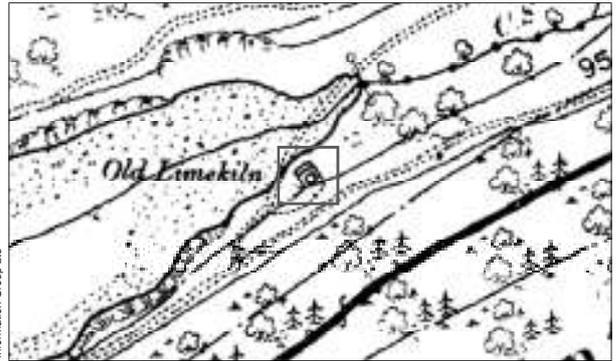


Tithe Mosaic supplied by Devon County Council



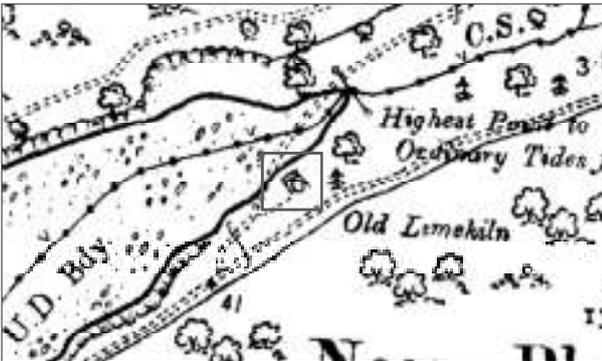
Extract from the Tithe Mosaic, approximately 1838-1848

First Edition map, © Crown copyright and Landmark Information Group Ltd



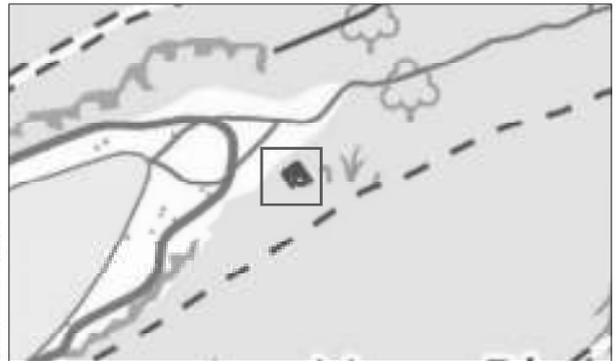
Extract from the Ordnance Survey First Edition 25 inch map, 1880-1899

Second Edition map, © Crown copyright and Landmark Information Group Ltd



Extract from the Ordnance Survey Second Edition 25 inch map, 1904-1906

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Extract from the Ordnance Survey VectorMap Local raster mapping

Fig. 10: Lime Kiln in Noss Plantation, Kingswear c. 1840, still extant today

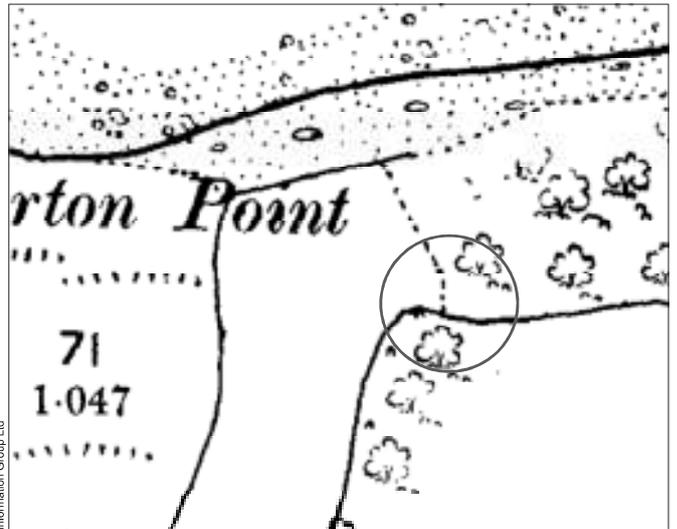


Tithe Mosaic supplied by Devon County Council



Extract from the Tithe Mosaic, approximately 1838-1848

First Edition map, © Crown copyright and Landmark Information Group Ltd



Extract from the Ordnance Survey First Edition 25 inch map, 1880-1899

Fig. 11: Lime Kiln at Hacombe with Combe c. 1840, removed by late 19th century



Modern

Three assets of WWI date and 39 of WWII date have been added to the HER as a result of research associated with this report. Many of these assets relate to defensive structures recorded on the NRHE, but for which there were previously no records on the Devon HER. An additional 647 new assets have been recorded under the broader modern period and include records relating to agricultural activities such as farmhouses and associated outbuildings, water management assets such as sluices and maritime buildings such as lifeboat stations, lighthouses and coastguard stations. Other maritime assets of modern date include landing stages, mooring bollards and slipways. An additional 470 new records were added to the HER by the NMP component of the project.

Unknown

A total of 142 assets of unknown origin, but pre-dating the modern period, and an additional 1287 records of uncertain date, has been recorded as a result of research associated with the DBA. The desk-based nature of the project has meant that a large number of assets were identified from historic maps. Whilst these sources proved useful for identifying the location of assets and can provide a broad idea of the time at which they were present in the landscape, it does not help to accurately date the features or to provide details of their function. Records relating to a large number of former buildings have therefore been identified by the DBA phase of the project, but it has not been possible to provide further details relating to their use or construction purely from the cartographic evidence. Where sites have been identified from cartographic evidence but are not shown on maps of an earlier or later date, it is possible to assign their period of use to a broad historical period, but there are numerous examples of features depicted on the Tithe Map for which an earlier date may be possible. It is therefore likely that a number of the sites that have initially been assigned under the unknown category will be able to be more accurately dated by subsequent field visits or further site-specific research. Examples of this include the site of a windmill at Brixham that was recorded based on land-use described as a 'Cottage Yard and Windmill' within the Tithe Apportionment, with a windmill shown on the corresponding Tithe Map (NGR 292188 56626). This circular building is not present on the later First Edition 25-inch Ordnance Survey map indicating that it had been demolished prior to 1899 (**Fig. 12**). Of particular significance are larger complexes of buildings that have been recorded from evidence depicted on the Tithe Maps, but not shown on the later historic Ordnance Survey maps, such as the site of a shrunken village at Rickham (**Fig. 13**). In several cases the site of these former buildings has remained undeveloped, indicating the potential for below-ground deposits to survive.

Tithe Mosaic supplied by Devon County Council



Extract from the Tithe Mosaic, approximately 1838-1848

First Edition map. © Crown copyright and Landmark Information Group Ltd



Extract from the Ordnance Survey First Edition 25 inch map, 1880-1899

Fig. 12: Windmill at Brixham c. 1840, removed by the late 19th century



Tithe Mosaic supplied by Devon County Council



Extract from the Tithe Mosaic, approximately 1838-1848

First Edition map, © Crown copyright and Landmark Information Group Ltd



Extract from the Ordnance Survey First Edition 25 inch map, 1880-1899

OS VectorMap Local raster mapping supplied by English Heritage, © Crown copyright and database right, 2014. All rights reserved. Ordnance Survey Licence number 100024800



Extract from the Ordnance Survey VectorMap Local raster mapping

Fig. 13: Shrunken village at Rickham, East Portlemouth c. 1840, now completely removed



6. PREVIOUS RESEARCH

6.1 Introduction

The scope of the study has included designated Heritage Assets (World Heritage Sites, Scheduled Monuments, Listed Buildings, Conservation Areas, Battlefield Sites, Registered Parks and Gardens) and non-designated Heritage Assets (archaeological sites and finds, historic buildings, other historic landscape features or locally-designated features, or areas, of cultural heritage importance).

There are a total of 2506 designated heritage assets within the study area. These comprise a World Heritage Site, 47 Scheduled Monuments, 42 Grade I Listed Buildings, 102 Grade II* Listed Buildings, 2293 Grade II Listed Buildings, 5 Designated Wrecks, a Grade I Registered Park and Garden, 3 Grade II* Registered Park and Gardens and 12 Grade II Registered Park and Gardens. Designated sites discussed below will be referred to by their designation number given in the National Heritage List for England (NHLE). Non-designated assets will be referred to by their HER reference. The following discussion provides an overview of the key characteristics of the coastal historic environment within each of the PSA units of the Durlston Head to Rame Head Shoreline Management Plan. These are considered in a regional and parochial context relating to the following archaeological periods, as defined by the Devon HER:

Prehistoric: Palaeolithic	698000 to -8001 BC
Prehistoric: Mesolithic	8000 to -4001
Prehistoric: Neolithic	4000 to -2201
Prehistoric: Bronze Age	2200 to -701
Prehistoric: Iron Age	700 to 42 AD
Roman	43 to 409
Post Roman	410 to 700
Saxon	701 to 1065
Medieval	1066 to 1539
Post Medieval	1540 to 1750
World War I	1914 to 1918
World War II	1939 to 1945
Modern	1751 to 2015

6.2 Thorncombe Beacon to Beer Head (PSA5; Fig. 14)

The Lower, Middle and Upper Palaeolithic

Records relating to the Palaeolithic period in Devon are characterised by two main site types; open landscape archaeology which is defined by artefact scatters and findspots, and settlement evidence. Many artefacts of this date are found in secondary contexts, although the Axe Valley is particularly rich in Lower Palaeolithic archaeology representing occupation of a lower valley floor (Straw 1999, 46). Although beyond the study area there is evidence to suggest that some of the artefacts from a site at Broom near Axminster have been found in near primary contexts (Straw 1999, 43).

Known activity of Palaeolithic date between Thorncombe Beacon and Beer Head largely comprises single findspots of artefacts, including stone axes and flint tools with a noticeable concentration between Seaton and Beer, although these have been recorded as residual finds with little correlation to archaeological features or deposits. Prehistoric tools have also been recorded from Lamberts Castle (MDV14407), and from within a stony alluvium overlying flood plain gravels to the west of the River Axe at Colyford Station (MDV11388). Although records relating to single findspots or artefacts scatters such as these may provide an indication of areas of prehistoric activity, they are rarely allocated precise dates and it is therefore often difficult to phase the early prehistoric archaeology of the coastal zone.

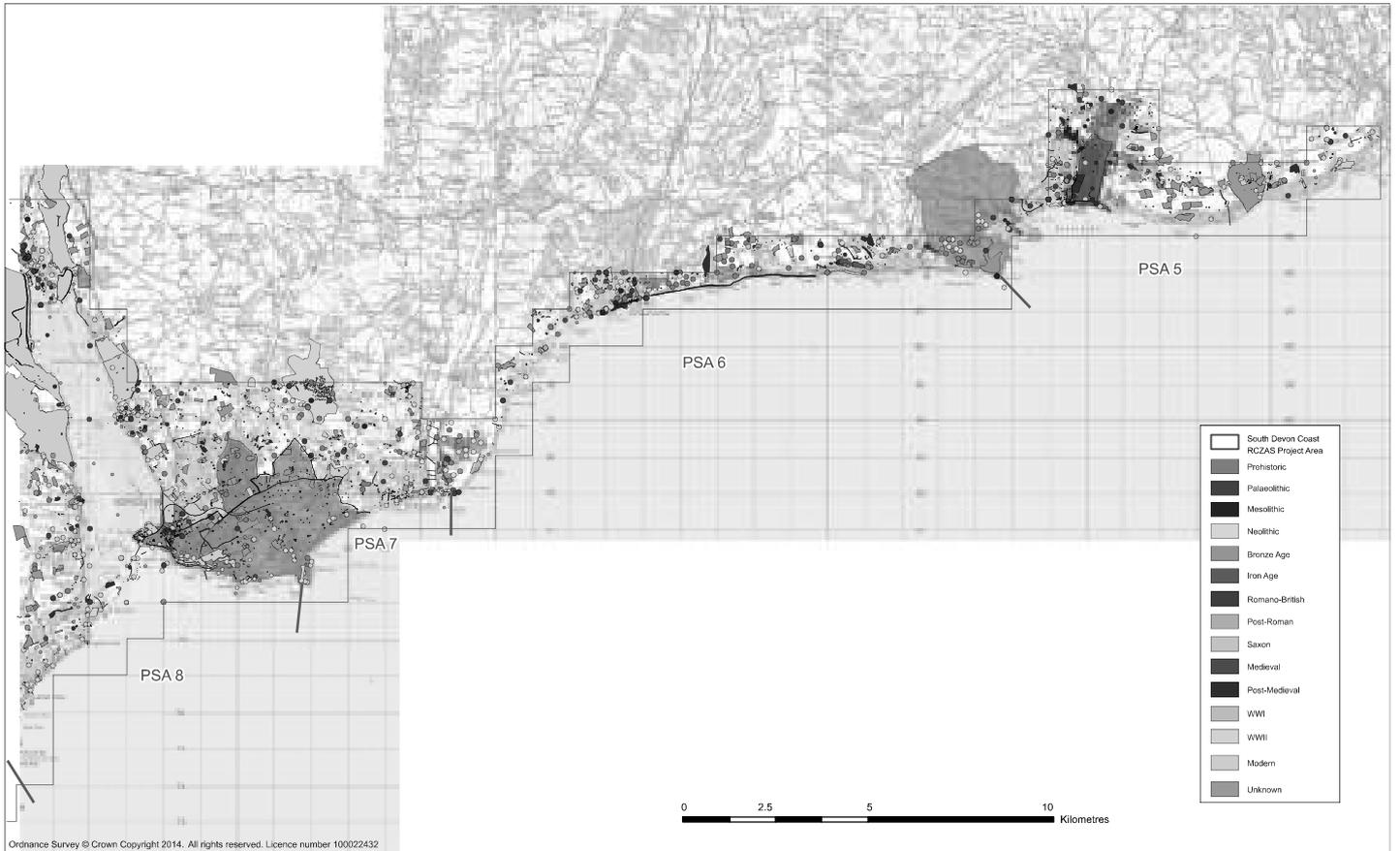


Fig. 14: Distribution of all heritage assets by period in East Devon and Exeter Districts



Mesolithic

The Mesolithic period in Devon is primarily characterised by artefact scatters and findspots relating to open-landscape archaeology. Diagnostic tools of this period include flint axeheads and small microlith points which are considered to be the technology required for occupation of largely forested areas (Roberts 1999, 48). Flint scatters of Mesolithic date have been found on the floodplain of the River Axe at Colyford within East Devon, and a single findspot of a flint tool has been recorded near Seaton.

Peat deposits dating to the Mesolithic period have been identified as a result of a geoarchaeological investigation at Seaton Marshes within East Devon and are believed to be alluvial, possibly associated with a phase of falling sea level (Clarke 2011).

Neolithic

Like the earlier Mesolithic period, the Neolithic period in Devon is characterised by artefact scatters, findspots and lithic working sites relating to open-landscape archaeology, and which indicate the location, extent and duration of settlement within this period. However, this period also sees the emergence of religious, ritual and funerary monuments in the form of barrows, causewayed enclosures, chambered tombs and long mounds.

Numerous artefact scatters indicating flint knapping sites ranging in date from the Lower Palaeolithic through to the later prehistoric period have been recorded within the vicinity of Beer. Beer Head is the westernmost outlier of flint-bearing chalk and provides a 'flawless jet-black flint of very fine fracturing quality' (MacAlpine Woods 1929, 10). Evidence relating to a flint implement factory site at Beer was discussed by MacAlpine Woods (1929) and a later excavation was undertaken at Bovey Lane, Beer Head in 1933. The excavation targeted the site of a dry valley which revealed evidence for a trailed valley deposit containing significant quantities of high quality flint artefacts (MacAlpine Woods and MacAlpine Woods 1933, 39). Tingle (1998) provides a critique of the published results of this excavation and presents the results of subsequent work at Bovey Lane in 1991. The earliest evidence for flint exploitation at Beer was found at the base of a colluvial deposit, where occupation debris including Hembury Ware pottery was found to be associated with flint debitage (Tingle 1998, 104), indicating an Early Neolithic date. Evidence from excavations and field walking has shown that activity continued within the Bovey Lane area of Beer Head in the Late Neolithic and Early Bronze Age periods and that it also expanded onto the headland above the cliffs (*ibid*, 105). It is suggested that future work at the site should focus on determining the extent of the colluvial deposit which is considered to be of high significance due to the preservation of artefacts and material within it (*ibid*, 105-106).

Beer Head is noteworthy because of its numerous former quarries of possible prehistoric to post-medieval date which are visible as earthwork pits from aerial photographic and LiDAR data, as well as the numerous lithic scatters that have been identified from this area indicating flint working within the immediate vicinity.

A possible flint knapping site is recorded in Seaton on the Devon HER (MDV63640), while records relating to findspots of flint artefacts and stone axes that been recovered from the Seaton area are also common. Single flint findspots of Neolithic date have been recorded on the Portable Antiquities Scheme (PAS) database at Colyford, with a fragment of polished stone axe recorded to the north of Colyford. Fragments of a sword dating to the Bronze Age have also been recorded to the north of Colyford on the PAS database.

A geological survey of the Axe estuary wetlands (ARCA 2008) has shown a sequence of strata showing the development of terrestrial peat deposits during the Middle Neolithic, as well as the later development of a salt marsh as a result of marine embayment in the late prehistoric period. A phase of renewed saltmarsh deposition within the later medieval period was also identified.

Bronze Age

This period is characterised by a greater number of monuments such as barrows and by the emergence of settlement evidence, including enclosures, roundhouses and their associated field systems.

Barrows dating to the Bronze Age within the study area fall within two distinct geographic areas; between Woodbury and Uplyme within East Devon and between Bolt Tail and East Prawle in South Hams. A review of the evidence relating to the barrows of South and East Devon was carried out by Grinsell (1983). Additional probable barrows and clearance cairns of later Prehistoric date (Early Bronze Age to Late Iron Age) have since been identified from aerial photographic evidence and images derived from LiDAR data at numerous locations within East Devon.

Excavations at three locations within Seaton have revealed evidence relating to Bronze Age settlement, industry and land division (Clarke 2011; Hughes 2011; McConnell 2011). In addition, evidence of an extensive but fragmentary relict field system of possible later prehistoric to medieval date is visible on aerial photographs and images derived from LiDAR data, and extends from the coast at South Down Common near Beer Head northwards towards Beer (MDV19842). The field pattern appears to have a co-axial structure.

Artefact scatters continue to be a feature of the Bronze Age landscape in this part of Devon, with a large assemblage of worked flint and chert recovered during an evaluation on land to the south of Court Farm, Seaton, indicating *in situ* activity dating to the earlier part of the Bronze Age (Hughes 2011, 6). Finds of Bronze Age metalwork are also common, with single artefact findspots relating to a spearhead (MDV11424), socketed axe (MDV30164), and a bronze rapier (MDV37379), recorded from this area.

Iron Age

Much of the archaeology relating to the Iron Age within the study area is characterised by hillforts and coastal promontory forts, with limited examples of smaller enclosed coastal settlement having been investigated through excavation. The large univallate hillfort and associated outwork at Hawkesdown Camp is designated as a Scheduled Monument (NHLE 1017775) and occupies a commanding position overlooking the upper estuary of the River Axe. The site has not been subject to excavation, but investigation within an area between the east rampart and the levelled outer rampart in 1987 and 1989 revealed seven lead slingshot of likely Roman date (Holbrook 1989).

Few other finds of Iron Age date are recorded within this area with the exception of a single gold coin (MDV61824) that was recovered from Seaton and produced by the Dobunni tribe.

Unassigned Prehistoric

In addition to the above sites, a large number of flint artefact findspots of unassigned prehistoric date have been recorded within this area on the Devon HER indicating a substantial amount of activity dating to the prehistoric period.

Romano-British

The most distinctive features of known Roman date within this area relate to sections of Roman road. Part of the Fosse Way has been identified within two locations near Axmouth (MDV11407 and MDV11416). This road linked Exeter with Lincoln and is believed to have started somewhere near the mouth of the River Axe and followed the approximate course of the Axmouth to Axminster Road. Part of another stretch of former Roman road between Charmouth and Exeter runs into Uplyme parish (MDV18577), and is reflected in the course of the modern A35. The route of the Roman road between Sidmouth and Lyme Regis (MDV18575) is also documented. A more detailed discussion of the network of Roman roads within the South West can be found within Margary (1957).

Documentary evidence has indicated the location of a Roman town at Seaton (MDV11112), although it is considered a possibility that any remains associated with this town have since been lost as a result of coastal erosion. A possible Roman fort lies at Couchill, immediately to the west of the town, and evidence for Roman settlement has been discovered at Honeyditches to the northwest of the town. The Honeyditches site has also revealed evidence dating to the later Iron Age through to the late Roman period (Silvester 1981b; Holbrook 1987), and a later phase of medieval occupation has been revealed (Miles 1976). Both of these sites lay beyond the study area for the South Devon RCZAS, but may provide a context for the Roman remains exposed within the area of Axmouth. It has been suggested that Seaton Marshes may have been the site of a Roman harbour (MDV42591), possibly associated with the Roman sites at Honeyditches or Couchill, as the River Axe was navigable further upstream in the Roman period.

An archaeological evaluation on land between Harepath Road and Colyford Road, Seaton in 2012 revealed a probable Romano-British enclosure, three occupation spreads of the same date which contained burnt material and iron working debris, as well as a series of pits and postholes that indicated the presence of a building or structure (Sims and Valentin 2012). The site also revealed evidence for activity dating to the Late Bronze Age and medieval period (*ibid*, 12).

Many of the remaining records dating to the Romano-British period on the Devon HER relate to single coin findspots, with noticeable concentrations of finds recorded at Beer, although these have been recorded as residual finds with little correlation to archaeological features or deposits.

Saxon

It is believed that the Saxon conquest of Devon was most likely undertaken during the latter half of the 7th to the early 8th-century, with Axmouth one of the earliest villages to be founded (Hoskins 1954, 41 and 325). The HERs hold a small number of records relating to Saxon settlement, the majority of which are based on documentary evidence; there is a distinct lack of archaeological evidence dating to this period within Devon. The Domesday Survey of 1086 provides an important record relating to settlement within this period, and Saxon charters have allowed an understanding of early land division, for example there is evidence of a charter relating to Saxon boundaries at Uplyme (MDV22018).

A discussion of saltworking on the River Axe is provided by Parkinson (1985) and an archaeological appraisal of the salt industry on Seaton marshes has been undertaken by Turton and Weddell (1993). The medieval harbour at Axmouth (MDV42595) may have been in use in the Saxon period.

Many records of this period are based upon documentary evidence, but it is often difficult to determine whether any physical evidence relating to these sites survives. For example, documentary evidence has indicated the possible site of a Saxon battlefield within Axmouth (MDV58963), which is suggested to be associated with the Battle of Brunenburgh in AD937. This entry is based upon historical documentary evidence, and Axmouth is only one of a number of possible sites to which this evidence may refer. There is currently no physical evidence for a battlefield in this location.

Medieval

In contrast to the Saxon period, the medieval period is well represented by both documentary and archaeological evidence within the HERs. The majority of non-designated assets dating to the medieval period relate to settlement, with houses, cottages, farmsteads, and barns recorded in high quantities. Farmsteads with a medieval origin are recorded throughout the study area and associated assets relating to agricultural practices are also numerous. Former field boundaries of medieval date are also present throughout the study area, while evidence of ridge and furrow and strip fields have also been recorded. The PAS

data for the medieval period is characterised by single findspots of coins and personal items including thimbles, a lock and stirrup strap. Remains associated with cooking pots have also been recorded across the study area.

Documentary evidence has established the location of medieval burghs and settlements at a number of locations throughout the study area. A shrunken settlement associated with the medieval manor at Bindon (MDV106533) is visible as a complex of earthwork banks and a ditch on aerial photographs and images derived from LiDAR data, while remains associated with a potential deserted settlement or infields of medieval date have been identified from aerial photographs within an area to the north of Rough Leigh Barn, Axmouth (MDV106556).

The town of Colyford was founded between 1225 and 1238 on land which had formed part of Colyton parish. Part of a deserted burgage plot from this medieval town was excavated in 1971, and a discussion of the significance of the finds and potential for further medieval remains from this town is provided by Miles (1975).

There is evidence of a medieval harbour at Seaton (MDV42590), which was considered to be a major port in the mid-14th century. The hull of a Tudor ship (MDV50744) has been documented from the Axe Estuary, while the remains of a medieval boat known as the 'Axe Boat' (MDV69888) have been recorded at its mouth. The remains of this boat were discovered eroding out of a shingle bank in 2001 by a diver. Radiocarbon samples taken from the timbers have been dated to the period AD 1400-1640, with preliminary investigations by the University of Southampton confirming that the construction of the vessel is consistent with a 17th century or earlier date (DAS 2002, 3).

Seaton is to be the subject of a characterisation study (Parkes 2013) as part of the Devon Historic Market and Coastal Towns Survey.

Post-Medieval and Modern

The majority of assets dating to the post-medieval period within the study area relate to settlement evidence, with individual houses and buildings recorded in large numbers. There are a total of 20 Grade I and 71 Grade II* Listed Buildings and seven Scheduled Monuments within the study area that date to the post-medieval period, the majority of which are concentrated within East Devon and South Hams. Many of these designated sites relate to houses, and assets associated with agriculture and defence. Axmouth Bridge is a Victorian bridge constructed of concrete that spans the River Axe on the eastern edge of Seaton at Axmouth Harbour and is designated as a Scheduled Monument (NHLE 1020419). The bridge initially opened as a toll bridge, but remained in use following the abolishment of the toll in 1907. The bridge has since been superseded by a modern road bridge immediately to the north.

PAS data relating to this period is characterised by musket balls which have been recorded to the north and west of Colyford and to the northeast of Seaton within East Devon; pistol shots have also been recorded to the north of Colyford.

Large-scale surveys carried out within this area of coastline include a survey of pillboxes in the Axe Valley (EDV5167) which was carried out between 2005-2008. There are number of records relating to WWII defences within this part of the Axe Estuary which formed part of the Taunton Stop Line. The line represents one of the strongest defences in Britain at the time, and comprised a series of Type 29 pillboxes and heavy machine gun pillboxes. The line was approximately 44m in length and was positioned to defend the two main routes from the South West; the main railway and road links that converge at Taunton and a rail link that runs through Axminster (Hellis 1992, 42). The route of the line followed canals and railway embankments and therefore formed an effective anti-tank barrier (Hellis 1992, 42). Three fortified areas were also placed along the length of the line, at Cogload Junction near Taunton, Ilminster, and at Axminster (*ibid*, 42). A number of the records relating to the

defences of the Taunton Stop Line were enhanced by the NMP component of the project (Hegarty *et al.* 2014, 99).

6.3 Beer Head to Otterton Ledge (PSA6; Fig. 14)

Palaeolithic and Mesolithic

Axes of Palaeolithic date have been recovered from the Bickwell Valley (MDV21580) and from Jacob's Ladder, Sidmouth (MDV11034). Single flint findspots and mammoth remains have also been recovered from the Sidmouth area.

Flint scatters of Mesolithic date have also been found at Sidmouth, and artefact scatters ranging in date from the Mesolithic to Late Neolithic periods are recorded on the Devon HER at Beer Head.

Neolithic

The greatest concentration of artefact scatters dating to the Neolithic period within the study area lie within East Devon, with numerous flint knapping sites recorded within the vicinity of Beer and noticeable concentrations of artefact scatters, together with the findspots of two stone axes recorded near the coast to the south of Otterton. Artefact scatters and the findspot of a Neolithic stone axe have also been recorded at Branscombe. Evidence from 19th century records and surface finds on Salcombe Hill, Sidmouth has indicated the occupation of this area during the Neolithic and Bronze Age (Pollard and Luxton 1978).

High Peak Camp is designated as a Scheduled Monument (NHLE 1003887) and is a multi-period site encompassing part of a Neolithic causewayed enclosure, located to the northeast of the village of Otterton. The site was subject to excavation in the late 1920s and between 1961-1964 (Carter 1930; Pollard 1966; Pollard 1967). Finds including gabbroic ware pottery sherds, polished stone axes from Cornwall and a jadeite axe fragment of Alpine origin have been found at the site. Flints dating to the Neolithic period and a perforated macehead have also been found within its vicinity.

Bronze Age and Iron Age

The hillfort at Berry Cliff Camp is designated as a Scheduled Monument (NHLE 1017772) and is located on the edge of the cliff at Littlecombe Hill, to the southwest of Branscombe village. The monument has been assigned broad dates ranging from the Late Bronze Age through to the Early Iron Age. Archaeological recording was carried out at Berry Cliff Camp in 2013 as part of the 'Unlocking Our Coastal Heritage Project' commissioned by The South West Coast Path Team and included a geophysical survey and the recording of exposed archaeological deposits. The survey showed that the eastern defences of the hillfort do not continue to the south of the coast path, as map evidence suggests, while areas of the core associated with the inner and outer banks had been exposed as a result of erosion associated with localised cliff falls (Smith 2013). A field system of possible Iron Age date, which is also designated as a Scheduled Monument (NHLE 1020710), sits immediately to the west of Berry Cliff Camp occupying an area of cliffs above Littlecombe Shoot.

A field system of probable prehistoric date is visible on aerial photographs and images derived from LiDAR data as subtle earthwork banks and cropmarks of levelled earthwork banks on South Down Common, to the north of Hooken Beach, Beer (MDV39952). It is likely that this forms part of the same field system as that recorded further to the east (see 6.2). Small concentrations of possible barrows are also recorded within this area on South Down Common to the southwest of Beer, between Berry Camp and Branscombe, and to the west of Branscombe. Some of these barrows are mentioned by Grinsell (1983) in a discussion of the barrows of South and East Devon. An additional small group of monuments visible as cropmarks from aerial photographic evidence have been recorded on the Devon HER within an area to the south of Otterton and may represent barrows.

Artefacts of Bronze Age date recorded on the Devon HER within this area include a very large flint scatter recovered from land around South Farm, Otterton (MDV74342) and a large concentration of flint artefacts recovered from the landscape to the west of Berry Cliff Camp, extending to the west towards Sidmouth. Two bronze axes have also been recovered from Sidmouth. The cropmark of a rectilinear enclosure of possible Late Iron Age or Roman date has been recorded at Otterton Point (MDV105804). A submerged forest of unassigned prehistoric date is recorded at Sidmouth (MDV51959) from which finds of Roman coins and mammoth teeth have been recovered.

Within recent years excavation and recording has been undertaken on targeted areas of the South Devon coast that are considered to be at increased risk from coastal erosion, in order to increase knowledge of the monuments before they are lost to the sea. A staged programme of archaeological investigations comprising an earthwork survey, aerial photographic transcription, geophysical survey and targeted trench excavation was undertaken on land at South Down Common during June and July 2011. The surveys were again carried out as part of the 'Unlocking Our Coastal Heritage' project. Archaeological features relating to later prehistoric and/or Romano-British settlement were identified, along with medieval/post-medieval cultivation remains (James 2011, 1).

Romano-British

The possible site of a Roman villa to the east of Otterton Point has been the subject of a limited excavation where part of a well preserved stone structure was revealed, together with finds of hypocaust tiles, roof slates and pottery dating from the later 2nd to 4th centuries. Evidence also revealed the presence of at least one other building within the vicinity (Brown and Holbrook 1989).

Many of the remaining records held by the Devon HER dating to the Romano-British period relate to single coin findspots, with noticeable concentrations of finds recorded at Sidmouth, although these have been recorded as residual finds with little correlation to archaeological features or deposits. A coffin of probable Romano-British date was found in Branscombe in the 19th century (MDV10904).

Post-Roman

There are a very small number of assets within the study area that date to the post-Roman period, but these include the remains of the previously mentioned scheduled fortified settlement at High Peak Camp, East Devon (NHLE 1003887). The post-Roman activity comprises a rampart and single ditch on the outside, with a smaller outer rampart on the eastern side. A recent phase of earthwork survey, geophysical survey, and targeted excavation was carried out at High Peak in 2012 on the site of the Neolithic causewayed enclosure and later Post-Roman fortification. The fieldwork was also undertaken as part of the 'Unlocking Our Coastal Heritage' project, in order to investigate key areas before the site is further eroded. The excavation revealed evidence for Neolithic activity in the form of flint artefacts, but as few features of this date were exposed, the fieldwork was unable to confirm the current interpretation of this site as a Neolithic causewayed enclosure. A previously unknown outer ditch associated with the post-Roman defences on the site was, however, identified during the excavation (Rainbird *et al.* 2013, 25).

Saxon and Medieval

There are a small number of records held by the Devon HER dating to the Saxon and medieval periods within this area, including a reference to the site of a possible Saxon mint at Sidmouth (MDV29879) and those relating to a medieval harbour at Sidmouth (MDV59133). A quarry to the east of Dunscombe Manor Farm (MDV106136) was used in the 14th and 15th centuries for work on Sidbury Church and has been re-opened on subsequent occasions, most recently in 1980 for restoration work on Exeter Cathedral.

Modern

Excavations were undertaken at Beer Head in 2006, where a range of sites including a Napoleonic Gun battery and a series of earlier field boundary banks that were considered to be under threat from coastal erosion were excavated by Exeter University students (DAS 2006, 6).

The coastal defence site at RAF Beer Head and radar station at RAF Branscombe were assessed as part of a survey of Royal Air Force Air-Defence Radar Stations, which aimed to document and record the surviving elements of RAF stations located within Devon (Passmore and Passmore 2008).

6.4 Otterton Ledge to Straight Point (PSA7; Figs 14-15)

This is an area of approximately 4.5km in length and is dominated by the urban area of Budleigh Salterton. Little archaeological work has been carried out within this area, although there are a small number of HER records which give an indication of the archaeological potential.

Prehistoric and Romano-British

Palaeolithic activity within this area is again represented by a small number of single findspots of axes, recovered from the vicinity of Budleigh Salterton and Woodbury Common.

Artefact scatters ranging in date from the Mesolithic to the later prehistoric period are recorded on the Devon HER at East Budleigh and Lympstone Common.

Artefact scatters comprising worked flints and a flint axe of probable Neolithic to late Bronze Age date have been recovered from an area to the north of Budleigh Salterton, while further artefact scatters and the findspot of a stone axe have been recorded from Woodbury Common. Additional flints of Prehistoric date have been recovered from the east bank of the River Otter. Although these records provide an indication for the location of prehistoric activity few of them are precisely dated.

Few sites of Bronze Age or Iron Age date have been recorded within this area, although a concentration of barrows and cairns are recorded to the northwest of Budleigh Salterton on East Budleigh Common. A small number of single finds of Roman date have also been recovered from this area.

Saxon and Medieval

There is a distinct lack of archaeological evidence dating to the Saxon and medieval periods within this area. The town of Budleigh Salterton is first mentioned in 1210 as '*Saltre*', a name derived from the salterns that existed at the mouth of the Otter Estuary (Hoskins 1954, 358). Salt working sites at Otterton are mentioned within the Domesday Survey (MDV66962), but the state of survival of any physical evidence is not currently recorded.

Post-Medieval to Modern

A dense concentration of quarries and extractive pits are recorded within this area on the Devon HER.

An inter-war airfield is recorded near The Warren, East Budleigh (MDV106337). This area is also noticeable for the site of an extensive WWII army training camp which is recorded on the Devon HER at Bicton Common and East Budleigh Common, and is visible as a range of structures and earthwork pit and bank features on aerial photographs from 1942 onwards.

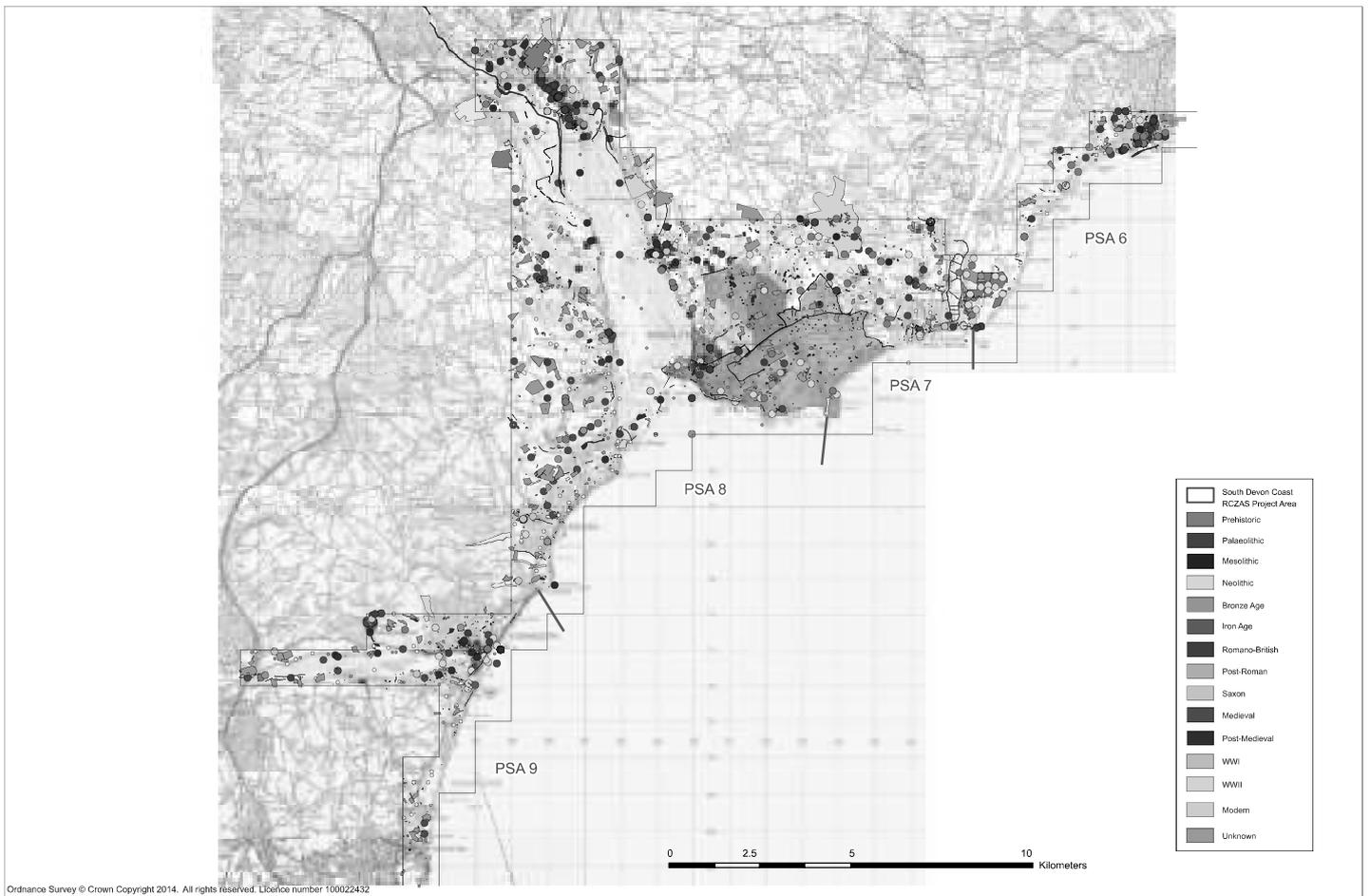


Fig. 15: Distribution of all heritage assets by period in Teignbridge District, with overlap

6.5 Straight Point to Holcombe (PSA8; Figs 14-15)

Prehistoric

As a result of the steep river gradients, the river gravels within the land to the west of the River Exe are fairly poorly preserved, and artefacts of Palaeolithic date within these areas are also noticeably sparse (Hosfield *et al.* 2008, 35). Where they do occur, findspots tend to represent small artefacts such as an artefact scatter and handaxe that was recovered from Dawlish Warren.

A small number of single flint findspots and an artefact scatter ranging in date from the Mesolithic to the later prehistoric period are recorded on the Devon HER in an area around Topsham. The site of a Late Neolithic/Beaker settlement at Topsham, Exeter has been indicated by a scatter of worked flints and by 13 pits and associated finds (Jarvis and Maxfield 1975).

Circular cropmarks of possible Early Neolithic to Early Bronze Age date are recorded as cropmarks from aerial photographic evidence near Topsham. A small number of artefact scatters ranging in date from the Neolithic period through to Late Bronze Age have been recorded from the vicinity of the Exe Estuary, and a polished stone axe of Neolithic date has been recovered from Dawlish (MDV13897).

An archaeological evaluation on land at lower RNSD in 2007 uncovered numerous pits, ditches and postholes with at least three phases of activity represented. Ditches and a flint scatter relating to the Neolithic and Bronze Age periods were exposed (Gilbert 2007). A full excavation of this area was carried out in 2012 and revealed field boundaries dating from the prehistoric through to the modern periods across the site. Drip gullies and postholes associated with four late prehistoric roundhouses were also excavated (AC archaeology in prep).

Evidence for probable prehistoric to Romano-British settlement has been identified from aerial photographic evidence to the east of Blackheath Farm, Powderham (MDV9985). There is also evidence for a prehistoric routeway on the east bank of the Exe Estuary (MDV44861), and numerous prehistoric artefact scatters have been recovered from the Topsham area. Additional earthworks and findspots of prehistoric date have also been recorded from Woodbury Common. A single find of an Iron Age coin has been recorded at Exmouth on the PAS database.

A considerable number of enclosures of probable prehistoric to Romano-British date have been recorded on the west bank of the Exe Estuary, many of which have been identified as cropmark ditches on aerial photographs and images derived from LiDAR data. Excavation has also revealed evidence of an enclosure ditch containing two pieces of pottery dated to the Middle Bronze Age at Minster Road, Exminster (Steinmetzer and Valentin 2008).

Two bowl barrows of Bronze Age date situated to the south of Lypstone Common are designated as Scheduled Monuments (NHLE 1017949). Additional Bronze Age activity is represented within this area by findspots of Bronze Age metalwork within the area of the Exe Estuary, and a single flint arrowhead of Bronze Age date has been recorded from Exmouth.

Romano-British

Significant quantities of Roman activity have been revealed at Topsham, which is considered to have been a port during the Early Roman period. The line of the modern Topsham Road is believed to roughly follow the course of the Roman road between Topsham and Exeter. Evidence for a possible Romano-British field system adjacent to the line of the Roman road was recorded at Lower RNSD, Topsham Road in 2007 (Gilbert 2007).

Many of the records dating to the Romano-British period relate to single coin findspots with noticeable concentrations of finds at Topsham and Lympstone, although these have been recorded as residual finds with little correlation to archaeological features or deposits. The PAS data relating to this period is also characterised by findspots of Roman coins and other small objects, with concentrations of finds recorded at Dawlish.

Excavation at The Topsham School in 1997 and 2000 revealed evidence of defences associated with a 1st century AD military base and graves of a later Roman inhumation cemetery (Sage and Allan 2004, 1). The remains of a Roman bakehouse with two ovens have been recorded at Yarde's Field, Topsham (MDV9946) and a Roman corn-drying oven have also been found in Topsham (MDV65498). A number of objects of Romano-British date were recovered from Park Field, adjacent to Exeter Road, Topsham in 1935 (Montague 1935, 206), and from Retreat Field, Topsham in 1936 and 1948 (Radford 1937; Shorter 1948). Evidence of timber buildings and associated features, believed to represent a Roman farmstead of 1st century date, was revealed by excavation at Topsham in 1974. Evidence for a boundary of probable 2nd century date and a cremation of late 3rd or 4th century date indicate a later reuse of the site (Jarvis and Maxfield 1975, 209). Other sites of Romano-British date within the vicinity of Topsham include the site of a rectilinear enclosure of potential Romano-British date which was initially identified as a cropmark during aerial reconnaissance (MDV56062).

A petrological study of Roman tiles that were reused within Exminster Church has allowed an insight into the production and transportation of Roman building materials within south Devon (Allan *et al.* 2008).

Saxon and Medieval

The Devon HER holds a small number of records relating to the Saxon period within this area, including a documentary reference to Saxon boundaries at East Budleigh and Littleham (MDV41872). The possible locations for castles dating to the medieval period have been suggested at Topsham and Exmouth, and harbours of medieval date have been identified at Topsham (MDV43553), Turf (MDV55978), Lympstone (MDV43555) and Powderham (MDV43556). The Devon HER also holds a small number of records relating to medieval industry and agriculture. This includes records relating to fish traps of probable medieval date within the Exe Estuary.

The town of Exmouth grew from the ancient parishes of Littleham and Withycombe Raleigh (Hoskins 1954, 396). Excavations at Fore Street, Exmouth between 1982 and 1984 revealed remains dating to the late Saxon and medieval periods (Weddell 1986, 107). A rescue excavation within the town of Exmouth in 1980 revealed occupation evidence dating from the 13th century onwards, with a small amount of Romano-British evidence that hints at settlement in this period as well (Weddell 1980, 91). Excavations were also undertaken at Kenton parish church in 2006 and revealed evidence for an early aisleless nave, to which a south aisle was added c. 14th century. Evidence for medieval bell casting was also revealed during the excavation (Allan and Young 2007, 83).

Three Grade II* Listed Buildings within the area have evidence for origins within the early medieval period and include the Parish Church of St Gregory, Dawlish (NHLE 1164203), Parsonage Farmhouse, Dawlish (NHLE 1168805), and Snapes Manor, Clyst St George (NHLE 1212753).

Post-Medieval to Modern

On the Devon HER this period is characterised by an increase in the number of assets related to industry and trade, such as the shipyards recorded at Lympstone. The Exeter Canal was constructed in the 16th century and runs southeast from Exeter to Turf Reach (MDV18147).

Artillery forts have been recorded from documentary evidence on the sand bar between Starcross and Exmouth, while the site of a Civil War skirmish at Powderham is also recorded within the Devon HER (MDV63491). An enclosure of post-medieval date that may represent a small Civil War fort, was exposed during excavation of Topsham School between 1997 and 2000 (Sage and Allan 2004, 22).

A survey of Exmouth Fort was undertaken in May 2014, as the site had been exposed by high tides and erosion over the winter of 2014. The site was constructed in 1862 and was demolished in the early 20th century during the construction of Marine Drive. The survey identified the remains of two structures associated with the fort; a gun emplacement and the remains of an interior building (Passmore 2014, 1).

This PSA unit is also noticeable for its remains of WWII date relating to coastal defence, training, and supply. Strategic sites relating to coastal defence within this area include the former stations at Floors Beacon (Exmouth) and Exminster. The coastal site at RAF Exminster was assessed as part of a survey of Royal Air Force Air-Defence Radar Stations in Devon (Passmore and Passmore 2008).

The site of a Royal Marines training camp of WWII origin has been documented at Lympstone (MDV55093). The camp was built in 1939 for the training of recruits, and continued as a training camp after the war, although it has been almost completely rebuilt since WWII. The site of the former United States naval stores depot of WWII date is recorded on the Devon HER to the northwest of Topsham (MDV55091), and is also visible as a range of structures on aerial photographs of 1945 onwards. The site comprised a range of nissen huts, hangers, pitched roof structures, storage areas and an earthwork railway siding and was established by the United States Navy as the largest depot in the UK from which to supply a number of D-Day embarkation points in the South West of England. The site had been completely cleared and partly developed for housing by 2012.

A small number of targeted projects have investigated remains associated with hulks (abandoned vessels that are no longer seaworthy) along parts of the South Devon coast. A research project investigating the hulks of the Exe Estuary was undertaken in 2005 by a team of archaeologists from the Universities of Bristol and Plymouth. The project was led by Martin Read of Plymouth University and aimed to record the remains of hulks located along the river edge and intertidal zone of the Exe. Approximately 20 hulks were identified by this survey and information relating to the results was subsequently added to the Devon HER (Read 2006). Two groups of hulks within this area are believed to form a ships graveyard of approximately 12 vessels. The results of the survey have also shown that at least five Brixham sailing trawlers have been abandoned on the Exe and this estuary may therefore hold the largest concentration of this vessel type. A residual hulks survey of the estuary of the River Exe was undertaken and formed part of a wider project instigated by Historic England. Two new vessels that were not previously recorded on the Devon HER were identified as part of this project (Stephenson 2010).

The Retreat in Topsham is described by Fox (1991) as one of several fine 18th century houses with estates in the lower Exe valley.

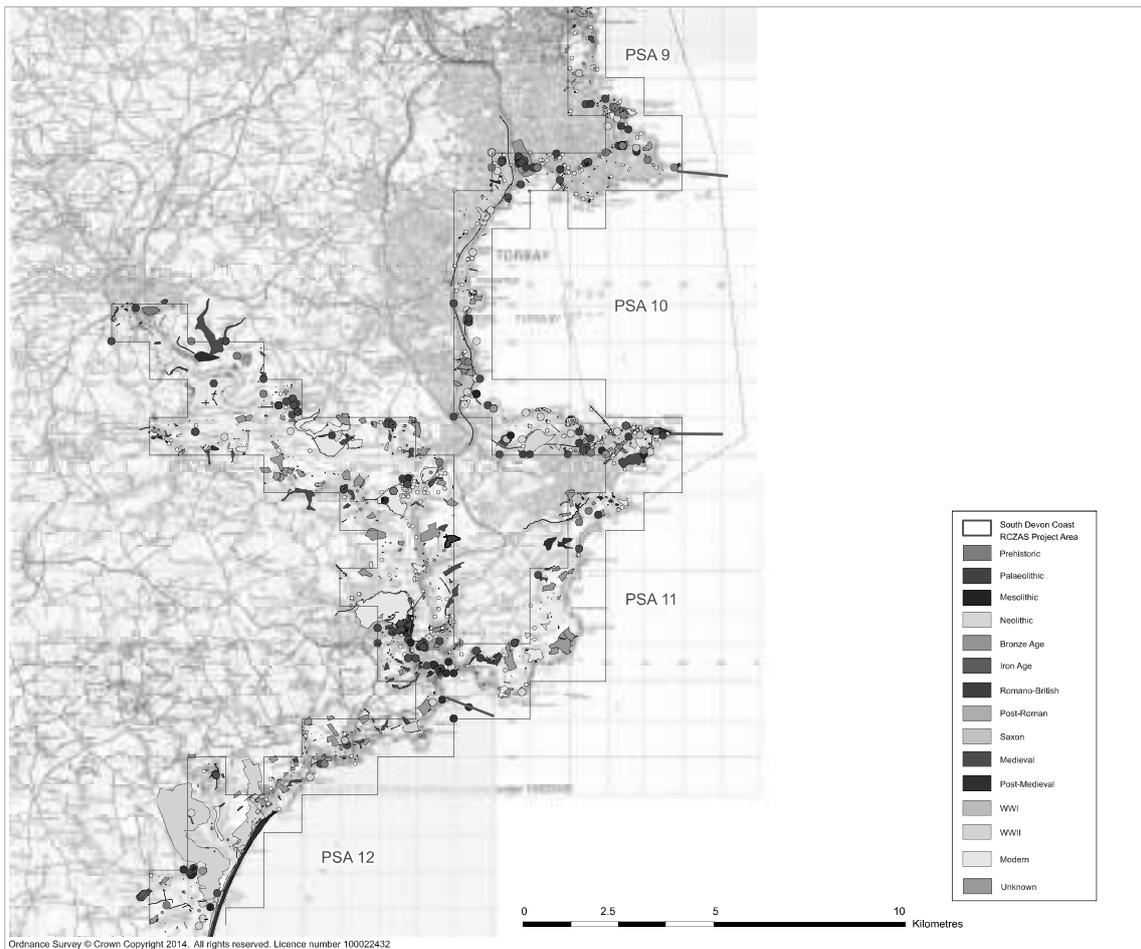


Fig. 16: Distribution of all heritage assets by period in the Torbay and South Hams District (East)

6.6 Holcombe to Hope's Nose (PSA9; Figs 15-16)

The Lower, Middle and Upper Palaeolithic

Evidence for Early and Middle Palaeolithic settlement activity in this PSA is well represented by the cave site at Kent's Cavern from which some of the material has been recovered from primary contexts. Kent's Cavern is a Scheduled Monument (NHLE 1010745) located on the western side of Lincombe Hill and 'holds what are by far the most important known extant Palaeolithic cave deposits in Britain and also provides *in situ* stratified deposits extending from the Palaeolithic to the Iron Age, as well as later occupation evidence' (NHLE 1010745). A large number of associated assets have been recorded on the Torbay HER, including cave deposits, tools and implements made of bone and stone, which range in date from the Palaeolithic period into the later prehistoric period. 'Faunal remains are prolific throughout the cave deposits, enabling the reconstruction of climatic changes through a number of Glacial/Interglacial cycles from the Middle Pleistocene onwards' (NHLE 1010745).

The oldest artefacts from Kent's Cavern include at least 14 handaxes of Lower Palaeolithic date which were found during an excavation by William Pengelly between 1865-80 (Straw 1999, 44). The context in which these artefacts were found would represent part of a pre-Anglian-glaciation occupation of Britain within the Palaeolithic (Hosfield *et al.* 2008, 34). Numerous artefacts of Early Upper Palaeolithic date have also been recovered from stratified contexts during excavations within Kent's Cavern (Straw 1999, 46). Evidence for occupation within the Middle Palaeolithic has also been found, where artefacts have again been recovered from a primary context (*ibid*, 46).

Open landscape archaeology of Palaeolithic date is represented within this area by single artefact findspots, with finds of Palaeolithic axes recovered from both the north and south banks of the River Teign.

Later Prehistoric and Romano-British

The Palaeolithic cave mentioned above at Kent's Cavern (NHLE 1010745) also contains deposits indicating its continued use within the Neolithic period, while both Bronze Age metalwork and finds of Iron Age date have also been recovered. The unpublished later prehistoric and Romano-British material retrieved from the site has since been re-examined and discussed by Silvester (1986).

An artefact scatter of Neolithic date has been identified at Babbacombe, while Bronze Age activity within this area is characterised by findspots relating to metalwork, with axes recorded from the north bank of the Teign Estuary and at its western end near Kingsteignton.

Part of a prehistoric field system designated as a Scheduled Monument (NHLE 1019134) at Walls Hill is of Late Bronze Age to Early Iron Age date. The site comprises field banks and associated clearance cairns which survive as low earthworks on an area of gently sloping clifftop overlooking Babbacombe Bay. A description of this field system, along with a series of similar systems that have been identified on areas of limestone upland around Newton Abbot, is given by Gallant *et al.* (1985). It is suggested that these sites represent a small number of ancient field systems that have been recorded within Devon beyond Dartmoor and Exmoor. A possible promontory fort at Anstey's Cove was interpreted as a Roman camp in the 19th century, but the internal features of which have since been destroyed by ploughing (MTO9781). Finds including Roman coins have been found at the site.

Medieval to Modern

The town of Teignmouth is a result of the merging of two parishes; East and West Teignmouth and has a long history as a small seaport, fishing town and market town (Hoskins 1954, 492). Coastal defences within Teignbridge District consist of an 18th century

battery recorded at The Den, Teignmouth (MDV9893), while numerous defences of WWII date are recorded on Teignmouth Beach and at The Ness, Teignmouth.

The Church Rocks Wreck (NHLE 1000064) is a Designated Wreck site located off the shore to the east of Teignmouth, and consists of a Venetian saker (cannon) of probable late 16th/early 17th century date, which was discovered in 1975 (Preece 2005, 10). The site was excavated during the following eight years where five more cannon were discovered, along with ceramics, copper cauldrons and fittings relating to the ship. Additional excavations were carried out in the 1980s where timbers forming part of the starboard stern section of the vessel were recorded (*ibid*, 10). A smaller series of excavation and recording phases were also undertaken throughout the 1990s (Preece 2004, 109-114).

An intertidal survey of the Teign Estuary (EDV5978) was undertaken in 2009, recording 54 new archaeological features and thereby increasing knowledge of the intertidal area through a combination of field survey, analysis of aerial photographs, LiDAR data and historic mapping (Dommett 2009).

6.7 Hope's Nose to Berry Head, Tor Bay (PSA10; Fig. 16)

Palaeolithic

Evidence for Early and Middle Palaeolithic settlement activity in Devon is also well represented by the cave sites at Windmill Hill, with Upper Palaeolithic Caves also recorded to the north of Windmill Hill, at Bench Cave (MTO9623) and Ansteys Cove (MTO15244). Evidence for single finds of flint artefacts of Early Upper Palaeolithic date have been recovered from Bench Cavern and Windmill Hill.

Windmill Hill Cave, Brixham is a Scheduled Monument (NHLE 1008681) and consists of a series of galleries and chambers extending approximately 40 metres into Windmill Hill, above Brixham Harbour. The cave was discovered in 1858 and investigations have revealed rich faunal remains associated with Palaeolithic flint implements and have shown undisturbed deposits to exist within the cave.

Mesolithic

A boat shaped flint tranchet of Mesolithic date was found within a deposit associated with a submerged forest at Torre Abbey Sands (MTO9713), Torquay, while single flint findspots have been recorded from Broadsands.

Neolithic

The chambered tomb, 630m to the northwest of Elberry Farm at Broadsands is a Scheduled Monument (NHLE 1019132) and consists of a chamber, passage entrance and surrounding cairn which, when excavated, was found to contain human remains. This chambered tomb is the only known surviving example of its type in Devon. The site was subject to investigations by Courtney Ralegh Radford in 1958 (Radford 1958). The finds from this excavation were subject to re-examination and radiocarbon dating in 2006 and 2009, and the results are presented along with a discussion of the excavation and wider context of the monument (Sheridan *et al.* 2008).

Ashhole Cavern is a Scheduled Monument (NHLE 1019133) within Brixham and consists of a main cave chamber with associated fissures and smaller chambers. Excavation has revealed human and animal bones, as well as artefacts, indicating that the cave was used within the Neolithic, Bronze Age, Iron Age and Romano-British periods. The Palaeolithic cave mentioned above at Windmill Hill (NHLE 1008681) also contains deposits indicating its continued use within the Neolithic period.

Three artefact scatters and three findspots of stone axes of Neolithic date have been recorded on the Torbay HER. A large number of worked flints have been recovered from

fields surrounding Churston Court Farm, indicating an occupation site of Neolithic and Bronze Age date (Parker Pearson 1981).

Later Prehistoric and Romano-British

There is currently limited evidence for activity relating to the later prehistoric period within this area, although finds of Iron Age date have been recovered from Ashhole Cavern (NHLE 1019133). Two ingot fragments and a copper alloy axe have been recorded on the PAS database from Paignton.

Many of the records dating to the Romano-British period relate to single coin findspots. Artefacts from this period were found beneath a peat deposit at Goodrington Sands (MTO10897), as well as within cave deposits at Berry Head (MTO9596).

Medieval to Modern

Torre Abbey is situated at the northern end of Tor Bay and is designated as a Scheduled Monument (NHLE 1009302). The site consists of the buried and upstanding remains of an abbey of the Premonstratensian Canons and was in occupation from 1196 to 1539. The history of the abbey is well documented and the site has been subject to numerous excavations which have shown the abbey church to have had a complex development. Recent geoarchaeological investigations undertaken at Abbey Meadow, Torquay, in between Torre Abbey and the seafront, have revealed deposits of peat and estuarine clays, which may represent evidence of former land surfaces of potential prehistoric date (Pears 2015).

Tor Bay was a popular location for the English Naval Fleet during the 17th and 18th centuries during which time a small settlement developed. The modern settlement of Torquay is largely a result of 19th century growth (Hoskins 1954, 500). Quarries dating from the post-medieval through to the modern period have been recorded in Torbay, including Blackler's Quarry at Petit Tor (MTO60110) that was an important source of marble, as well as a limestone quarry at Berry Head (MTO16265).

The remains of an emergency coast artillery battery in Brixham, designated as a Scheduled Monument (NHLE 1020411), were the subject of a survey conducted by English Heritage in 2003. In addition to the survey of the physical remains of the site, an oral testimony was also gained from a former Sergeant who had served at the battery during the war, thereby proving an important context for the physical remains and emphasising its heritage value (Newman and Salvatore 2003, 209). A D-Day embarkation slipway within Tor Bay is designated as a Grade II* Listed Building (NHLE 1382072).

There are 15 Conservation Areas within Torbay, which contain a large quantity of Listed Buildings. Registered Parks and Gardens within this area include the Grade II Listed Princess Gardens and Royal Terrace Gardens (NHLE 1001507) and the Grade II Listed Oldway Mansion (NHLE 1001368).

6.8 Berry Head to Blackstone Point (PSA11; Fig. 16)

Prehistoric

Palaeolithic activity within this area is again represented by a small number of single findspots of axes, including two Acheulian hand axes of Beer flint which have been recovered from Upper Brownstone Farm. These were described in detail by Smith and Rogers (1937).

Flint scatters of Mesolithic date have been found at Berry Head in Torbay and a large artefact scatter comprising several hundred waste flakes and worked flints of Mesolithic date were recovered from a silt deposit on the beach at Bayard's Cove, Dartmouth (MDV8528).

The Neolithic period is only represented within this area by a single find of a flint arrowhead which was found between Inner and Outer Froward Point (MDV80247). A small number of single barrows of probable Late Neolithic to Late Bronze Age date are also recorded within this area, including a barrow at Brownstone Farm that was excavated in the 1930's and 1940's (MDV9529). Occasional artefact scatters of unassigned prehistoric date have been recorded at a small number of locations along the east bank of the River Dart. The site of two possible enclosures of unassigned prehistoric date have been identified from aerial photographic evidence to the south of Galmpton (MDV67434 and MDV105004).

The hillfort at Greenway Camp is a Scheduled Monument (NHLE 020158) and is located on a steep slope at the end of a spur, occupying a promontory overlooking the River Dart. The remains of a curving rampart across the interior of the hillfort indicates evidence for two phases of construction. There is currently limited evidence for further activity of Iron Age date within this area, although the remains of possible ditches have been identified to the east of Waddeton from aerial photographic evidence and may represent an enclosure of Iron Age date (MDV28893). Artefacts of Iron Age and Roman date have also been found in an area with the field names 'borough' and 'berry parks', which may indicate the location of a former defended site. Remains associated with a field system of probable Iron Age date have been discovered at Berry Head Fort and form part of the scheduling (NHLE 1021430).

A find of a rotary quern has been recorded from Kingswear on the PAS database.

Romano-British

The PAS data relating to this period is also characterised by findspots of Roman coins and other small objects, with concentrations of finds recorded at Waddeton and Galmpton, although these have been recorded as residual finds with little correlation to archaeological features or deposits.

Saxon and Medieval

The main focus of medieval archaeology in this area relates to the town of Dartmouth which was formed from two settlements; Hardness to the north and Clifton to the south (Hoskins 1954, 382). The harbour is also important, in particular because it was the place of departure for the Second Crusade of 1147 and the Third Crusade of 1190 (*ibid*, 383). Dartmouth was the subject of a characterisation study (Weddell 2015) as part of the Devon Historic Market and Coastal Towns Survey.

Quarries dating from the medieval and later periods within this area include Waddeton Quarry (MDV29647) from which stone was used to build the 15th century Church of St Mary's in Totnes.

Post-Medieval and Modern

The post-medieval period within this area is characterised by an increase in the number of assets related to maritime industry and trade, with assets such as shipyards recorded at Dartmouth. There are also a number of assets associated with agricultural processes along this stretch of coast including catch meadows, for which there is a noticeable concentration around the Dart Estuary. The area is also notable for its remains associated with iron mining including the mine at Sharkham Point. PAS data relating to this period is characterised by musket balls which have been recorded from Dartmouth.

The Quay in Dartmouth has been described by Thorp (1983) and is recognised as the latest dated vernacular house on Dartmouth's New Quay. The area of Dartmouth is also noticeable for its collection of forts including the Scheduled Monuments (NHLE 1017322) at Berry Head Fort and Battery and Hardy's Head Battery within Torbay, batteries at Blackstone Point and Dartmouth Castle, as well as artillery forts known as Gallant's Bower (NHLE 1020166) and Bayard's Cove Castle (NHLE 1014668). Burials of post-medieval date were recovered during a small excavation near Dartmouth Castle in 1985 (Freeman 1985, 131).

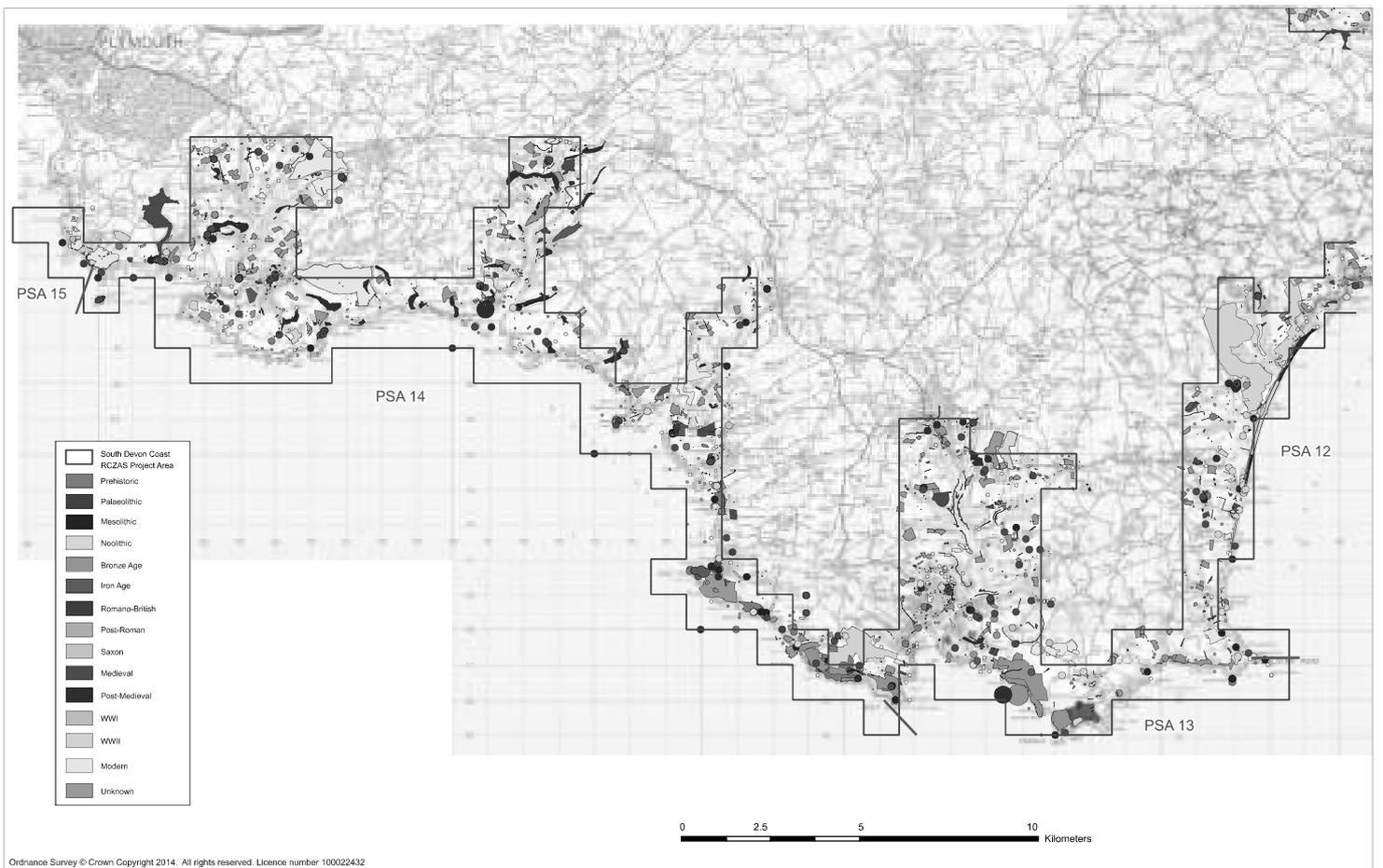
Excavations were carried out in the early 1960s and early 1970s at Berry Head, on the site of a battery dating to the Napoleonic War (Pye and Timms 1989, 1). It is also considered possible that remains associated with an Iron Age promontory fort exist at this site (*ibid*, 3). A survey was later undertaken by Exeter Museums Archaeological Field Unit in 1993, where an inventory and brief history was made of visible features. The last phase of defence of Berry Head was dated to WWII, when it possessed anti-aircraft guns and a Royal Observer Corps post (*ibid*, 12). A more recent phase of fieldwork, comprising excavation and historic building recording was undertaken in 2009 by Exeter Archaeology and Brixham Museum as part of the Torbay Coast and Countryside Trust's 'On the Edge' Project at Berry Head (Passmore 2009).

The coastal defence site at RAF Kingswear formed part of a chain of radar stations along the south and east coast of Britain during WWII. The site was assessed in 2008 as part of a survey of Royal Air Force Air-Defence Radar Stations in Devon (Passmore and Passmore 2008). There are also a number of records relating to D-Day preparations and WWII supply networks within this PSA. Three D-Day landing craft maintenance sites, designated as Scheduled Monuments (NHLE 1020911, 1020912 and 1021076) are recorded on the east bank of the River Dart, upstream from Dartmouth. Shipyards of WWII date have been recorded at Baltic Wharf, Totnes, while additional slipways and a ship repair works are recorded at Dartmouth and within the Dart Estuary to the north of Dartmouth. Slipways of WWII date are also present within the Kingsbridge Estuary.

Several phases of work associated with the conservation and consolidation of Dartmouth Castle have been undertaken within recent years (EDV697). A survey was also undertaken in 1991 on the remains of a WWII coastal gun battery at Brownstone Battery, Kingswear. The survey found the remains of the battery to be in very good condition (Wilson-North 1993).

A small number of large-scale surveys have been undertaken within this area in recent years, including an archaeological survey of weirs in the River Dart, which was carried out by Exeter Archaeology between 2004-2005 (EDV6538). A study of the archaeology along the coast path was carried out in 2003 and aimed to provide new and updated HER entries for all sites within this area based on field observations. The study covered an area extending from the districts' western boundary with Plymouth below Staddon Heights, through to its eastern boundary with Torbay near Sharkham Point. The study identified that much of the archaeology in this area was at risk of erosion, particularly in areas where valleys meet the coast such as Wembury and Mansands; areas with raised beaches such as East Prawle Point and Lannacombe and where the geology consists of Lower Devonian rocks of the Meadfoot Group (Batty 2003, 9).

Research has also been conducted into the hulks of the South Hams estuaries by students from the University of Plymouth between 1999-2000. Eleven hulks were identified within the Dart as part of the survey (Read 2001). The majority of the vessels identified within the River Dart are located within the side creeks, although there is one vessel within the main channel. Ships graveyards have been found at Old Mill Creek on the River Dart, where six hulks were recorded. The hulks represent a range of different boat types including racing yachts, trawlers, trading vessels and a ferry, while some of the vessels were used during WWII as moorings for barrage balloons (*ibid*).



6.9 Blackstone Point to Start Point (PSA12; Fig. 17)

Prehistoric

Little archaeological work has previously been undertaken along this stretch of the coast. An artefact scatter of Mesolithic date has been recovered from Slapton Ley, and additional artefact scatters ranging in date from the Mesolithic to the later prehistoric period have been recovered from the area of Start Point. A single monument is assigned to the Mesolithic period on the Devon HER; a 'stone circle' discovered as a result of ploughing within a field adjacent to Widdicombe House, Stokenham (MDV8377). The content of this record is currently limited and based on description as opposed to physical archaeological evidence, if present, the feature is more likely to be of Bronze Age date.

The Neolithic period is poorly represented along this stretch of coastline on the Devon HER by a findspot of a stone axe from an area to the north of Slapton (MDV13756). Burials associated with urns and cists of Bronze Age date were also recorded at Slapton in 1927 (MDV8378).

The slight univallate hillfort at Slapton Castle is designated as a Scheduled Monument (NHLE 1019236) of probable Late Bronze Age to Early Iron Age date. The monument is aligned on a northeast-southwest facing spur to the west of Slapton Sands. Much of the site has been affected by ploughing, but a geophysical survey in 2007 identified a series of anomalies likely to be related to pits, along with two rectilinear enclosures (MDV78800).

A small number of enclosures of unconfirmed date have been identified along this stretch of coast from aerial reconnaissance and aerial photographs.

Remains associated with submerged forests have been recorded at both Blackpool Sands (MDV60841) and Hallsands (MDV55532). The submerged forest at Hallsands has been observed on five occasions since 1974, with samples taken from the site indicating it to be between 3000-12000 years old.

Medieval to modern

The chantry college at Slapton was in occupation between 1373 and 1547 and the upstanding and buried remains are designated as a Scheduled Monument (NHLE 1011672). The site forms one of only four chantry colleges recorded within the southwest, while the quality of construction visible in the ruins indicates it was of some status.

Quarries dating from the medieval and later periods within this area include Beesands Quarry which is believed to have been a source for roof slate (MDV18313).

This stretch of coastline is dominated by records relating to former beach defences of WWII date, including anti-aircraft batteries, machine gun emplacements, pillboxes and anti-tank obstacles, and the site a military base at Beesands (MDV104376). Military training camps have also been recorded at Slapton Sands (MDV104598), an area which was chosen as the focus for operations by American forces in advance of the Normandy Landings. Much of the evidence relating to these records has been identified from research associated with the NMP component of the South Devon RCZAS (Hegarty *et al.* 2014, 58-62).

6.10 Start Point to Bolt Head (PSA13; Fig. 17)

Palaeolithic to Neolithic

Evidence for Palaeolithic archaeology within this area is characterised by single artefacts and small artefact scatters, with limited evidence for occupation at this time. Artefact scatters ranging in date from the Lower Palaeolithic through to the later Prehistoric period have been recovered from Lannacombe Beach.

Artefact scatters of Mesolithic date have been recovered from Peartree Point and from fields surrounding Woodcombe Sand. A large number of flint artefacts ranging in date from the Mesolithic through to the later prehistoric period have been recovered from an area between Prawle Coastguard Station and Langerstone Point. Single findspots within this area are sparse, with a single Mesolithic axe recorded from Holwell and a small number of single flint findspots dating to the Mesolithic period recorded on the PAS database near Start Point and Bolt Tail.

Neolithic activity within this area is characterised by a concentration of artefact scatters from an area to the west of East Prawle and an artefact scatter of Early Neolithic to Early Bronze Age date from West Charleton. A small group of bowl barrows of Late Neolithic to Late Bronze Age date is also recorded at West Charleton.

Bronze Age to Iron Age

Extensive coaxial field systems and remains of associated settlements of Bronze Age date have been recorded at numerous locations within South Hams including the Scheduled Monument at Signalhouse Point (NHLE 1019324), an area to the southwest of Rickham, and between Deckler's Cliff and Gammon Head which is also designated as a Scheduled Monument (NHLE 1021253). The field system at Deckler's Cliff has been subject to field survey as a result of The National Trust survey between Mill Bay and Prawle Point (Thackray 1990a) and by Newman (2003), and has been further researched by work associated with the NMP project for the South Devon coast (Hegarty *et al.* 2014). There is also evidence for associated settlement within this area. A field system of possible Early Bronze Age to post-medieval date has been recorded between Lannacombe Beach and Peartree Cove (MDV21377), and possible Early Bronze Age to Late Iron Age date from Woodcombe Point (MDV104236). A flanged axe and sherds of late Bronze Age pottery have been recovered from an area of coast falling between these two systems. Late Bronze Age pottery has also been recovered from an area to the southwest of Woodcombe Point. Additional artefact scatters of prehistoric date have been recovered from Peartree Point.

A semi-circular cropmark has been identified within Holset from aerial photographic evidence and may represent the remains of a Bronze Age settlement (MDV42921). A reave of Bronze Age date is recorded as a long boundary immediately to the south of this ring-ditch and curves around the hamlet of Holset, marking the extent of the Bronze Age field system to the south (MDV63347). Three barrows of Bronze Age date are recorded to the west of this boundary.

There have been a small number of investigations into wreck sites on the South Devon coast, with much of the recent work undertaken by members of SWMAG. There are three important wreck sites, all within close proximity to one another, located approximately two miles to the west of Prawle Point. Two of these wrecks date to the Bronze Age, and the other to the 17th century. The Moor Sand wreck (NHLE 1000050) is a wreck site off Moor Sand, near Gammon Head in South Hams and is protected, as it may prove to be the site of a vessel. The site consists of an assemblage of Middle Bronze Age weapons which are thought to represent part of a contemporary cargo indicating the location of a wreck within the vicinity. The site dates to 800-700 BC and represents the remains of a cargo ship carrying large quantities of copper and tin ingots (Yates 2010, 13) Only one additional find of an eroded blade has been made in recent times and it is therefore uncertain whether the assemblage represents the remains associated with a trading vessel, or possibly related to a ritual deposit (Preece 2005, 10).

The Salcombe Cannon is also a designated wreck site (NHLE 1000074). The site was explored by members of SWMAG who investigated a group of four cannon, dating to the 17th century, which were wedged within a gully near the Moor Sand site and had previously been discovered in 1994 by divers from Henley Sub Aqua Club. SWMAG carried out a magnetometer survey of the site in 2001 which indicated the potential for an area 50m to the

southeast of the site; an adze and cooking pot handle were found here, while in 2004 palstaves were recovered leading to the new site to be called 'Salcombe B'. Further artefacts were also recovered and dated to 1300-1150 BC (Yates 2010, 15). An additional survey was carried out by Wessex Archaeology in 2005. Although the subject of two separate listings, the archaeology from each site seemed to span the other and they were therefore investigated as a single project. During fieldwork in 2009 SWMAG identified another sword which proved to date 500 years later than the Salcombe B artefacts, but was consistent with those originally found off Moor Sand in 1977. A total of 259 copper ingots, including ten complete 'bun' ingots and 27 tin ingots was found and indicate the raw materials for a major bronze manufactory (Yates 2010, 15). The wreck lies close to the shore and there is evidence of Bronze Age roundhouses and field systems on the coast near the site, perhaps indicating the vessel may have been attempting to land when it foundered. No ship structure remains (Needham *et al.* 2013, 14).

Evidence of Iron Age settlement has been recorded on Portlemouth Down and consists of a field system with associated huts (MDV63340).

Prehistoric and Romano-British

A series of organic deposits dating to the prehistoric period have been identified at both North Sands and South Sands near Salcombe. Evidence derived from palynological sampling during the construction of a pond at North Sands indicated an increase in wetness within this area during the Roman period, and also indicated that the marsh has been entirely under freshwater influence throughout the last 2500 years (MDV51936). A watching brief during a borehole survey revealed a prehistoric organic deposit to the north of North Sands. Cartographic evidence also indicates the site of a submerged forest at North Sand Bay, while organic deposits associated with this forest have been identified. Boreholes have also been carried out at South Sands Bay and have revealed peat beneath the beach deposits, which extends approximately 100m inland and approximately 260m to the east out to sea. A layer of possible organic silt containing shell fragments was sealed beneath this (MDV55387).

An enclosure of likely prehistoric date has been identified from aerial reconnaissance to the south of West Charleton (MDV66945), while an earthwork possibly representing a prehistoric barrow, has been identified within the grounds of Hipplefield House, Salcombe (MDV36829). A possible cremation urn was found in the 18th century at East Soar Farm (MDV36190). Knowledge of this site is fairly limited, but it is situated within close proximity to the coaxial field system at Starehole Bay which may prove to be contemporary.

Medieval to Modern

The town of Kingsbridge sits at the head of the Kingsbridge Estuary. A bridge is documented here in the 10th century linking the royal estates of Alvington and Chillington. The town was granted a market in 1219 which prompted its initial growth (Hoskins 1954, 419). The wider landscape surrounding Kingsbridge contains some evidence relating to activity of medieval and post-medieval date. Quarries of medieval date within this area include Keynedon Quarry (MDV50739), and Geese Quarries (MDV15233) which documentary evidence has indicated were exploited for the extraction of roofing slate. Evidence relating to post-medieval industry within this area includes the site of two miners prospecting pits which fall within the scheduled area of the coaxial field system, hut circles and medieval farm buildings at Starehole Bottom (NHLE 1020577). The area is also notable for its remains associated with iron mining including the East Portlemouth Consols and Pig's Nose Iron Mine which are designated as Scheduled Monuments (NHLE 1021253).

The town of Salcombe largely grew during the 18th century as a fishing town (Hoskins 1954, 470). The garden at Overbecks is located to the south of Salcombe and is designated as a Grade II Registered Park and Garden (NHLE 1000697). The gardens date to the 20th century and occupy an area of approximately 2.5 hectares which contains a specialised

collection of Mediterranean and Australasian plants. The garden was first laid out in 1901 by Edric Hopkins, and was given to the National Trust in 1937.

This stretch of coastline is dominated by a concentration of forts and military remains. The artillery fort at Fort Charles, Salcombe is designated as a Scheduled Monument (NHLE 1020165). The site dates to the mid 1540s and is located at the mouth of the Kingsbridge Estuary. The site was later rebuilt as a Royalist stronghold in 1643, but was subsequently besieged by Parliamentarian forces, leading to surrender in 1646. The history of the site has been discussed in detail (Murch 1979; Stoye 1994) and several phases of work have been carried out at the site between 1994 and 2005. Additional recording was carried out by Exeter Archaeology between 1994 and 1997 as part of works associated with the conservation and consolidation of the building, and involved the production of a survey of the ruins and rock-cut features (Parker 1998). An additional phase of archaeological recording was carried out in 1998 and covered the external face of the drum tower and a section through the tower. A condition survey was carried out by Exeter Archaeology in 2005 in response to further evidence of erosion of the fabric (Parker *et al.* 2005). Additional assets associated with coastal defence within this PSA include an airfield of WWI date at Prawle Point (MDV55108), and the site of batteries on Rickham Common (MDV7043) and at Salcombe (MDV39586). A US naval base of WWII date is also referenced at Salcombe (MDV57218). The WWII coastal sites at RAF Start Point and RAF West Prawle were assessed in 2008 as part of a survey of Royal Air Force Air-Defence Radar Stations in Devon (Passmore and Passmore 2008).

As mentioned above, the Salcombe Cannon is a designated wreck site (NHLE 1000074) of 17th century date. Non-designated wrecks dating to this period are recorded within river estuaries as well as headland locations including Prawle Point. Research has also been conducted into the hulks of the South Hams estuaries by students from the University of Plymouth between 1999-2000. Fourteen hulks within the Kingsbridge Estuary were included within the study (Read 2001). The majority of the hulks within the Kingsbridge Estuary lie on the large mudflats beside the main channel, but some are also found within the side creeks. Ships graveyards have been found at Tosnos Point within the Kingsbridge Estuary. There are six known concentrations, or sites, of hulks within the Salcombe - Kingsbridge Estuary which were surveyed by students from the Institute of Marine Studies from the University of Plymouth as part of this survey (Davies *et al.* 2000).

Large-scale survey projects that have been undertaken along this stretch of coastline include the 'Life into Landscape' project which was carried out between 2003 and 2007 by the South Devon AONB and which aimed to enhance the natural beauty and rich heritage of South Devon. Activities associated with this project included the conservation of five Scheduled Monuments, grants for the conservation of the landscape heritage of South Devon, and the completion of 12 parish appraisals. An archaeological impact assessment for sites at Burgh Island, Torcross and West Soar was undertaken by Cornwall Council as part of the 'Unlocking our Coastal Heritage' project. The archaeological and historical significance of these sites was discussed and the results were fed into a structural survey report that formed part of a programme of conservation works undertaken in 2012 (Buck 2012). An archaeological survey was also carried out by the National Trust and ran from Bolt Head to Bolt Tail and Snapes Point (Thackray 1990b). All of the known sites along this stretch were examined, described and photographed. An archaeological assessment of National Trust land between Bolt Head and Bolt Tail was also carried out by SW Landscape Investigations in 2014 (MDV6587).

6.11 Bolt Head to Wembury Point (PSA14; Fig. 17)

Palaeolithic and Mesolithic

Palaeolithic activity within this area is again represented by a small number of single findspots of axes and artefact scatters such as those recovered from Bolberry Down, with a single handaxe recovered from Outer Hope.

A number of artefact scatters ranging in date from the Mesolithic period through to the later Prehistoric period, together with a single stone axe, have been recovered from clifftop locations at The Warren, Soar Mill Cove, Bolberry Down and Hope Cove. A discussion of the assemblage from Bolberry Down and the areas mentioned above is given in Berridge (1984). An additional artefact scatter and single flint findspot have also been recorded at Wembury. Other artefacts of unassigned prehistoric date have been recovered from Middle Soar.

Remains associated with an extensive submerged forest have been discovered on the beach at Thurlestone Sands, having first been recorded in 1866 and later exposed in 1923, when a number of prehistoric artefacts were recovered including a Mesolithic tranchet axe and pebble macehead, together with the remains of a wooden dug-out canoe (MDV8212). Additional submerged forests have been identified at Hope Cove (MDV44106), Challaborough (MDV105516) and at Mothecombe (MDV65398).

Neolithic

A possible Neolithic long barrow has been identified at the Warren, Malborough and consists of an elongated turf mound of earth and local schist slates. This sits within a scheduled area relating to a medieval farmstead, boundary work and earthwork enclosures 350m southeast of Middle Soar (NHLE 1020575). Finds of Neolithic date have also been recorded from part of the Bolberry Down lithic scatter.

Bronze Age

A number of the hillforts and enclosures within the study area have been assigned broad dates ranging from the Late Bronze Age through to the Early Iron Age, and scheduled, including the hillfort at Holbury Camp (NHLE 1019782), and the hilltop enclosure to the east of Middle Soar (NHLE 1019533) which sits within a coaxial field system. There are a noticeable concentration of barrows around the promontory at Bolt Tail which form part of the wider historic landscape surrounding the Iron Age cliff castle of Bolt Tail Camp (NHLE 1019323). Four barrows, designated as a Scheduled Monument (NHLE 1019534) are also recorded on an east-west aligned ridge overlooking the settlement site at Bantham Ham.

Extensive coaxial field systems and remains of associated settlements of Bronze Age date have been recorded to the west of Starehole Bay (NHLE 1020577) and to the south of Middle Soar (NHLE 1020574). Earthworks of a probable Bronze Age field system survive at Mousehill Brake (NHLE 1020573). Additional field systems are also recorded at The Warren (MDV04154) and to the east of Soar Mill Cove (MDV66002), which may prove to have origins in the Bronze Age. Two enclosures of possible Early Bronze Age to Romano-British date, as well as the site of three possible barrows have been recorded to the north of these field systems. A complex of ditched defined enclosures of possible Bronze Age to Romano-British date have been recorded to the west of Cofflete Creek, and the possible site of a cist burial has been identified to the east of Middle Soar (MDV22812).

A small number of artefacts of Bronze Age date has been recovered from this area, including metalwork from Thurlestone, part of a mould for a palstave was found on Burgh Island (MDV20159), and a gold ingot of possible late Bronze Age date has been found to the northeast of Knighton, Wembury (MDV71360). Fragments of bronze spearheads have also been recorded on the PAS database from Thurlestone and a copper alloy ring from Bigbury-on-Sea. Flint finds dating to the Bronze Age have been recorded at Bolt Head.

Iron Age

This stretch of coastline contains a number of sites of Iron Age date. Bolt Tail Camp is an Iron Age promontory fort located to the west of Hope Cove and is designated as a Scheduled Monument (NHLE 1019323). The Scheduled hillforts of Holbury Camp (NHLE 1019782) and Oldaport Camp (NHLE 1020234) are located further to the northwest of this promontory fort, overlooking the Erme Estuary. Ditched enclosures have also been identified within the wider landscape to both the north and south of the hillfort at Oldaport Camp from images derived from LiDAR data.

Two rectangular enclosures of Middle Iron Age to Roman date were first identified near Mount Folly Farm, Bigbury in 1989 during aerial reconnaissance. Preliminary excavation of this site in 2003 suggested a Late Iron Age date (Wilkes 2005, 5). The site has since been subject to several seasons of excavation as part of the Mount Folly Enclosures Project. A large assemblage of ceramics has been recovered from the site during excavation and indicates a wide range of contacts, with a high proportion of finewares represented within the assemblage (Reed *et al.* 2011, 310).

A potential field system of possible Iron Age to Romano-British date has been identified from aerial photographic evidence at Beacon Hill, Newton Ferrers (MDV103877). A possible multi-phase enclosed settlement of later prehistoric or Romano-British date has been identified from aerial photographic evidence on Coombe Down and consists of ditch defined enclosures, hut circles and possible associated field boundaries (MDV50145). A small quantity of evidence of prehistoric date has also been found at the multi-period site at Bantham Ham (Reed *et al.* 2011, 127). Remains associated with a possible prehistoric settlement have been exposed on the shore at Inner Hope (MDV22788) and the site of possible hut circles has been indicated on Burgh Island (MDV71757).

Romano-British to Medieval

The site at Bantham Ham, Thurlestone is designated as a Scheduled Monument (NHLE 1019322) and consists of a large Romano-British and post-Roman settlement site at the mouth of the River Avon. Documented material has been recovered from the site since the 19th century, and the site itself has been subject to several rescue investigations since 1978. During the 1978 investigations a number of features were revealed and interpreted as temporary shelters, together with evidence of hearths, middens, and substantial amounts of pottery of Romano-British and post-Roman date (Silvester 1981a). Archaeological recording was carried out at the site in 1997 and revealed two sides of an enclosure with a stone-revetted rampart, material of Romano-British date and palaeoenvironmental evidence (Griffith and Reed 1998, 109). The site is characterised by an area of sand dunes, and has produced evidence ranging in date from the prehistoric period through to the 7th-8th centuries, although the majority of the known activity is attributed to the Post-Roman period (Reed *et al.* 2011, 127). Additional work was carried out at Bantham Ham by Exeter Archaeology in 2001 during the construction of a new clubhouse for the Bantham Life Saving Club. Remains relating to the post-Roman occupation of the site were revealed, with pottery sherds indicating trade links between western Britain and the Mediterranean (*ibid*, 82). With the exception of Tintagel in Cornwall, Bantham Ham has the largest assemblage of later 5th and 6th century Mediterranean pottery from Britain (Bidwell *et al.* 2011, 93).

Many of the remaining records dating to the Romano-British period relate to single coin findspots with noticeable concentrations of finds at Newton Ferrers.

This stretch of coast is distinctive compared to the rest of the coast within the study area in that it contains several sites with evidence for post-Roman and Saxon occupation. A site was first discovered at Mothecombe in the 1950's when small quantities of imported Mediterranean pottery, animal bone and metal working debris were discovered. Work was undertaken on the site in September 2004, and recorded the material that was at greatest risk from coastal erosion. Two areas of deposits dating to the early post-Roman period were

exposed during the excavation, and evidence appears to 'suggest that the site was occupied periodically over a long period' (Turner and Roskams 2005, 4). Additional excavations between 2004 and 2011 revealed evidence for successive hearths and imported early medieval finds, while three phases of medieval structures were also revealed (Agate *et al.* 2012).

Excavations at Wembury Bay in 2005 targeted two features that had been exposed by coastal erosion. The fieldwork revealed evidence for occupation, with a probable hearth and timber structure exposed. A radiocarbon date has dated the features to AD 420-600, which is of a similar broad date range to the sites at Bantham and Mothecombe further to the east. However, the absence of artefacts and charred plant remains from this site is noticeably different from the deposits excavated at Bantham and Mothecombe (Reed 2005, 55). A pit has also been excavated to the north of Meadowsfoot Beach, which contained organic remains dated to the period AD 530-780 (MDV64838).

Oldaport Camp is designated as a Scheduled Monument (NHLE 1020234) and is defined by sections of large wall and ditches, situated on a spur to the southwest of the town of Modbury. Although listed as an Iron Age Promontory Fort within its listing description, the site has been the focus of much research within the last few decades during which it has been suggested that the earthworks represent defences of Romano-British or post-Roman date, with a later phase of activity including masonry features comprising a bank and ditch, thought to represent late Anglo-Saxon activity (see Rainbird 1998 and 2015 for a full discussion). An archaeological survey was carried out in 2014 by AC archaeology in order to inform future management of the site (Rainbird 2015).

Quarries dating from the medieval period within this area include Efford Quarry on the east bank of the River Avon (MDV41841).

Post-medieval to modern

There are a number of assets associated with agricultural processes along this stretch of coast including catch meadows, for which there is a noticeable concentration around the Yealm Estuary. Former fish cellars of probable post-medieval to modern date have been recorded at Burgh Island. Fish traps have been recorded within the Erme Estuary and fish weirs have been recorded within the River Avon. A post-medieval animal pound 430m south of East Soar Farm in South Hams is designated as a Scheduled Monument (NHLE 1020576).

The Erme Estuary is a designated wreck site (NHLE 1000071) and comprises an assemblage of cannon and other artefacts ranging in date from the 15th-18th centuries which indicates the location of a shipwreck. The cannon are periodically exposed by shifting sediment levels, and the current lack of structural remains associated with the finds prevents the accurate dating of the site.

Research has been conducted into the hulks of the South Hams estuaries, and included a study of the hulks within the estuaries of the Yealm, Avon and Erme Rivers (Read 2001). Between 1999-2000, students from the University of Plymouth carried out a survey of these areas and identified three hulks on the Yealm, and one on the Avon (Read 2001).

The coastal defence sites at RAF Hope Cove (NHLE 1427493) and RAF Bolt Tail were assessed as part of a survey of Royal Air Force Air-Defence Radar Stations in Devon (Passmore and Passmore 2008). Hope Cove Ground Controlled Interception Radar Station is designated as a Grade II Listed Building. The radar station was constructed in 1952-4 and was converted to a regional seat of government in the late 1950's.

A survey was carried out by the National Trust in 1990 of land to the west of the Salcombe Estuary and covered Bolt Head to Bolt Tail and Snapes Point. An inventory was made of all

archaeological sites falling within this land and management recommendations were provided for each site (Thackray 1990b). Additional large-scale projects undertaken within this area within recent years include the 'Life into Landscape' project which was carried out by the South Devon AONB.

Unknown

The Erme Estuary Ingot Wreck is a Protected Wreck (NHLE 1000054) which was discovered in 1991 by SWMAG. The site consists of a large concentration of tin ingots which may represent the site of a shipwreck possibly related to the export of tin which had been mined from the local area. A series of timbers were also discovered within the same location as the ingots, but these most likely represent remains associated with a submerged forest as they predate the tin industry. Due to the lack of contextual evidence associated with the ingots the site is currently of an unconfirmed date.

6.12 Wembury Point to Devil's Point (PSA15; Fig. 17)

This is a short stretch of coast of approximately 2km in length in which the archaeology of the coastline is dominated by remains associated with WWII defences including bombing decoys, pillboxes and gun emplacements surrounding the site at Renny Battery. Two of the buildings at Renny Battery are Grade II Listed structures (NHLE 1270701 and 1108570). The remains of Renny Battery were investigated as part of a larger scale survey targeting the historical defences of Plymouth. The survey aimed to provide an inventory of the historical defensive works within Plymouth in order to promote awareness of this historical resource, and found the remains of Renny Battery to survive in good condition (Pye and Woodward 1996, 226). A total of 216 sites was investigated by this survey and encompassed a range of dates (*ibid*, 29).

7. ASSESSMENT OF RESULTS AND POTENTIAL

7.1 Impact of Geology, Soils and Land-use on the Survey Results

Devon is one of only three English counties to have both a north and south coast and, with the exception of Cornwall, it has the greatest proportion of coastline to area of any English county (Hoskins 1954, 12). It is therefore reasonable to suggest that the coastline has had a strong influence upon the history of settlement and activity within the county, particularly when considering that there were 'historically, only two narrow gateways into Devon from the rest of England: the northern gap between the Blackdowns and the Brendons, and the southern gap, less conspicuous, through the Axe valley' (*ibid*, 14). Although beyond the study area, the granite mass of Dartmoor dominates the topography of Devon, representing the remains of an ancient volcanic region which is also visible geologically within the lavas of the Exe and Teign valleys and the volcanic ash of western Devon (*ibid*, 14-15). A series of major rivers flow in all directions from Dartmoor, with the exception of the Tamar, Exe and Torridge, although these are fed by Dartmoor streams. This network of rivers has resulted in fertile lowlands which has proved attractive to farmers since the prehistoric period (*ibid*, 15).

The NMP project (Hegarty *et al.* 2014) recognised the impact that the underlying geology and soils can have on the results of their survey, both through the effect that these factors can have on the preservation of archaeological features, but also the visibility of these features within photographic sources. For example, areas of heavy, poorly drained soils or areas of shallow topsoil are likely to be of limited agricultural value, and may therefore remain in use as pasture or rough grazing land on which archaeological features have the potential to survive as earthworks (*ibid*, 29). In contrast, areas of free-draining soils are likely to be targeted for agricultural purposes, with the result that intensive work associated with agricultural practices can damage or destroy earthworks and will therefore impact the way in which these sites are identified (*ibid*, 29).

The NMP survey was divided into three blocks, which were further divided into Sub-Blocks. Block One, which ran from Plymouth to Dartmouth, was identified as the most agriculturally active of the three survey blocks. Much of Block Two, which ran from the Dart Estuary to the Exe Estuary, was dominated by the urban sprawl of Torbay, with areas of good agricultural land identified around the Dart and Teign estuaries. An additional area to the north of this block (Sub-Block M) was shown to contain a high potential for cropmark visibility within excellent quality agricultural land. Block Three, which covered an area from the Exe Estuary to Lyme Regis, contains smaller areas of urban development but a significant proportion of this area is classified as non-agricultural. The area around the Exe Estuary comprises a range in the quality of agricultural land, and has demonstrated good cropmark visibility (Hegarty *et al.* 2014, 25).

A key conclusion from the NMP project was that based on their results, the survival and visibility of earthwork monuments does not appear to correlate with a particular geology, but rather appears to be associated with particular marginal locations such as coastal cliffs or combes and this appears to have had a greater impact upon the results of the survey as opposed to the nature of the underlying solid geology (Hegarty *et al.* 2014, 29). A higher proportion of archaeological cropmarks were, however, identified in the areas of interbedded Permian sandstones and conglomerates that correspond with freely draining soils and therefore high quality heavily cultivated land. This proved to be the only instance in which geological conditions were shown to influence the results of the survey (*ibid*, 29). It was, however, acknowledged that even within these areas of land few previously unrecorded cropmarks were identified by the survey (*ibid*, 29). At the beginning of the NMP project it had been anticipated that the outcrops of chalk bedrock that were overlain by a mixture of both poorly and very well drained soils would prove to be productive for the identification of previously unrecorded cropmarks. No new archaeological cropmarks were identified within these areas by the NMP survey, but the areas are still considered to be of high potential and

therefore would benefit from systematic aerial survey, especially during drought conditions (*ibid*, 167).

The NMP project also concluded that archaeological remains were poorly represented in both the coastal and estuarine intertidal zones. It was considered that this may be a result of the steep profile of many of the estuaries along the South Devon coast, which originated as rias or drowned valleys, and the inaccessible or geologically resistant nature of much of the coastline (Hegarty *et al.* 2014, 13).

The NMP project report suggested that a targeted programme of aerial reconnaissance along the South Devon coast may help to ascertain whether the lack of archaeological sites recorded as cropmarks within this area is the result of a genuine absence of archaeological remains, or a reflection of the non-archaeological focus of previous aerial reconnaissance programmes (Hegarty *et al.* 2014, 30). Previously unrecorded ceremonial or mortuary prehistoric sites were poorly represented on the aerial photographs used within the NMP survey. The majority of monument records amended or created by the survey relate to the military or defensive role of the coast; the high proportion of aerial photographs that date to the 1940s mean that anti-invasion defences and training activity of WWII date dominated the survey results (*ibid*, 169).

7.2 Areas of Greatest Potential

Local Plans

The local plans covering the study area identify both individual heritage assets and areas of high archaeological potential. The East Devon District Local Plan (*East Devon District Council Local Plan 1995 - 2011, adopted July 2006*) identifies in-shore waters, intertidal zones, and the sea shore as important as they contain a rich and diverse archaeological heritage, while the Exe Estuary is identified as a coastal area of particularly high archaeological potential. The Parks and Gardens of Special Historic Interest within East Devon are also acknowledged as significant within the Local Plan.

Policies relevant to the management of archaeology and cultural heritage within Exeter are set out within the *Exeter City Council Adopted Local Plan (2004)*. This document identifies a series of Listed Buildings of importance, and acknowledges the high significance of Scheduled Monuments and Registered Parks and Gardens within Exeter. Remains of archaeological and historical interest are also acknowledged within the historic core of Topsham.

Policies for the management of archaeology and cultural heritage for Teignbridge District are set out in the *Teignbridge Local Plan 2013 to 2033* (adopted in May 2014), with those for Torbay set out within the *Saved Torbay Local Plan 1995-2011*. Policies relating to the management of archaeology and cultural heritage within South Hams District are set out within the *South Hams District Council Local Development Framework Core Strategy (2006)*, and the *South Hams Local Development Framework July 2010 Development Policies Development Plan Document*. Within these documents, the local authorities recognise designated sites including Scheduled Monuments, Listed Buildings, and gardens included in the National Register of Parks and Gardens of Historic Interest as the most significant sites within these areas. The distribution of these designated sites across South Devon proves the high potential for archaeological sites and remains of national importance to exist throughout the South Devon RCZAS area.

Areas of Greatest Significance

Previous fieldwork and research has identified archaeological deposits of possible national significance at a large number of locations throughout South Devon, but there is also considered to be areas which hold strong potential for further work. These are discussed below in greater detail.

The Axe Valley and Axe Estuary are considered to be areas of significance due to the survival of archaeological deposits dating to a range of periods. The Axe Valley is important for evidence relating to Palaeolithic activity, while peat deposits of Mesolithic and later dates have also been recovered from Seaton Marshes. The area is also noticeable for lithic scatters and individual findspots of prehistoric date. There is evidence of a medieval harbour at Seaton and there is also evidence of human intervention within this landscape to utilise the saltmarshes for animal grazing and salt production. A small number of hulks and wrecks have also been identified within the Axe Estuary (**see 6.2 above, PSA5**).

Hawkesdown Camp is a univallate hillfort, designated as a Scheduled Monument (NHLE 1017775) and is likely to be of Iron Age date, although a small number of finds of likely Romano-British date have been recovered as a result of fieldwalking within the vicinity of the monument. The site has not yet been subject to excavation (**see 6.2 above, PSA5**).

Beer Head is noticeable for its large concentration of lithic scatters, prehistoric occupation and flint extraction (**see 6.2 above, PSA5**).

The landscape surrounding Berry Cliff Camp has a high density of archaeological sites including the hillfort of Berry Cliff Camp which is designated as a Scheduled Monument (NHLE 1017772), a series of Bronze Age burial mounds to the east and west of the hillfort, and a field system of possible Iron Age date, which is also designated as a Scheduled Monument (NHLE 1020710) which sits immediately to the west of Berry Cliff Camp occupying an area of cliffs above Littlecombe Shoot. A concentration of artefact scatters of prehistoric date have also been recovered from the landscape immediately to the west of the hillfort (**see 6.3 above, PSA6**).

High Peak Camp is designated as a Scheduled Monument (NHLE 1003887) and is a multi-period site encompassing part of a Neolithic causewayed enclosure and the remains of a post-Roman fortified settlement. The site is notable for its post-Roman remains of which only a small number of sites are recorded within the study area, the remainder of which are all situated within South Hams, at Bantham Ham, Mothecombe, Wembury Bay and Oldaport, and are also considered to be of high archaeological potential.

Undesignated, but of particular importance, are the submerged forests identified throughout the study area at locations including Sidmouth, Torre Abbey Sands, and numerous locations with South Hams including Hope Cove, North Sand Bay, Hallsands, Blackpool Sands, Thurlestone Sands, Mothecombe and Challaborough.

Numerous enclosures of possible prehistoric to Romano-British date have been identified as cropmarks during aerial reconnaissance and from aerial photographs and digital images derived from LiDAR data, but have not been subject to excavation. Noticeable concentrations of enclosures sites have been recorded at Otterton Point, the banks of the Exe Estuary (**see 6.5 above, PSA8**), and from an area in South Hams between Bolt Head and Wembury Point (**see 6.11, PSA14**).

The area around the Exe Estuary is also notable for its remains of wrecks and hulks and there is the potential for further research related to industrial activities such as use of fish traps within the estuary. The area around Topsham is significant for its range of sites of prehistoric date, as well as a concentration of sites on which Romano-British activity has been identified (**see 6.5 above, PSA 8**). Although undesignated, the remains of a possible

Roman villa to the east of Otterton Point are also considered to be of good archaeological potential (**see 6.3 above, PSA6**).

A number of well-preserved prehistoric field systems have been identified within the coastal zone of South Devon and, in a number of the cases, associated settlements survive within the vicinity of the systems. The field system at Walls Hill is designated as a Scheduled Monument (NHLE 1019134) within Torbay. Extensive coaxial field systems and remains of associated settlements of Bronze Age date have been recorded at numerous locations within South Hams including the Scheduled Monument at Signalhouse Point (NHLE 1019324), an area to the southwest of Rickham, and between Deckler's Cliff and Gammon Head which is also designated as a Scheduled Monument (NHLE 1021253). A field system of possible Early Bronze Age to post-medieval date has been recorded between Lannacombe Beach and Peartree Cove, and possible Early Bronze Age to Late Iron Age date from Woodcombe Point (**see 6.6 above, PSA9 and 6.10, PSA13**). Extensive coaxial field systems and remains of associated settlements of Bronze Age date have been recorded to the west of Starehole Bay (NHLE 1020577), and to the south of Middle Soar (NHLE 1020574). Earthworks of a probable Bronze Age field system survive at Mousehill Brake (NHLE 1020573). Additional field systems are also recorded at The Warren and to the east of Soar Mill Cove which may prove to have origins of Bronze Age date (**6.11, PSA14**).

The cave sites at Kent's Cavern (NHLE 1010745), and Windmill Hill Cave, Brixham are designated as Scheduled Monuments (NHLE 1008681). Both are located within Torbay and contain evidence for Palaeolithic and later occupation. These two sites are of national significance as they provide evidence for some of the earliest occupation sites within Britain. Non-designated cave sites also within Torbay and containing evidence of Upper Palaeolithic activity include Bench Cave and Ansteys Cove (**see 6.6 above, PSA9 and 6.7, PSA10**).

Torre Abbey is also designated as a Scheduled Monument (NHLE 1009302) and represents the remains of the wealthiest Premonstratensian abbey in England. The ruins of the abbey are the most complete surviving example of a medieval monastic complex in Devon and Cornwall (**see 6.7, PSA10**).

The chambered tomb, 630m to the northwest of Elberry Farm at Broadsands, Torbay is a Scheduled Monument (NHLE 1019132) and is the only known surviving example of its type in Devon (**see 6.7, PSA10**).

The historic landscape surrounding Berry Head is considered to be of high archaeological potential due to the density of sites within the area. These include assets associated with Berry Head Fort which are designated as a Scheduled Monument (NHLE 1017322). Remains from a field system of probable Iron Age date have also been discovered at Berry Head Fort and form part of the scheduling (NHLE 1021430). Artefact scatters of Mesolithic date have also been recovered from the vicinity of Berry Head (**see 6.7, PSA10 and PSA11**).

The area between the entrance of the Dart Estuary and Waddeton is considered to be an area of archaeological potential due to the density of military remains in this area including batteries at Blackstone Point and Dartmouth Castle, as well as artillery forts known as Gallant's Bower (NHLE 1020166) and Bayard's Cove Castle (NHLE 1014668). Remains of WWII date within this area also include the coastal sites at RAF Kingswear and a motor torpedo base. Shipyards of WWII date have been recorded at Baltic Wharf, Totnes and three D-Day landing craft maintenance sites, designated as Scheduled Monuments (NHLE 1020911, 1020912 and 1021076), are recorded on the east bank of the River Dart, upstream from Dartmouth. Additional slipways and a ship repair works are recorded at Dartmouth and within the Dart Estuary to the north of Dartmouth (**see 6.8, PSA11**).

The area around Slapton contains a small number of sites of archaeological potential including the slight univallate hillfort at Slapton Castle which is designated as a Scheduled Monument (NHLE 1019236). The site has not yet been subject to excavation, and is in danger of increased damage caused by agricultural activities. Remains associated with a chantry college at Slapton are designated as a Scheduled Monument (NHLE 1011672) and form one of only four chantry colleges recorded within the southwest. This stretch of coastline is also dominated by records relating to former beach defences of WWII date (**6.9, PSA12**).

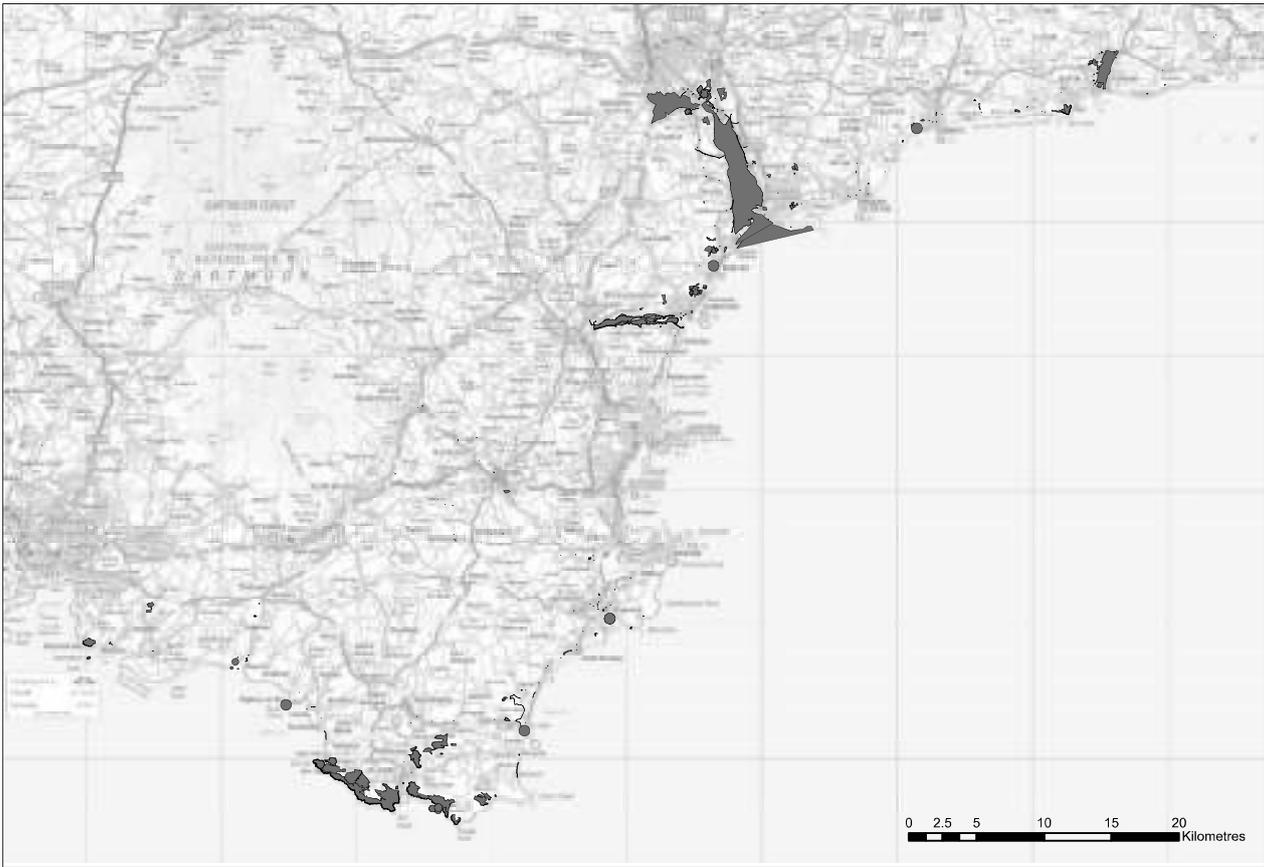
Although it has been subject to numerous phases of excavation, the post-Roman site at Bantham Ham, which is designated as a Scheduled Monument (NHLE 1019322), has produced a wealth of material relating to settlement activity and indicating its importance in trade networks at this time. The site is under threat from erosion and as the surrounding area of sand dunes change there is potential for further archaeological deposits to be exposed. The nearby Late Iron Age/Romano-British site at Mount Folly has also shown evidence for extensive trade networks, indicating the strong archaeological potential of this area of the Avon Estuary (**see 6.11, PSA14**).

There are a concentration of sites of prehistoric date within the coastal zone between Bolt Head and Wembury Point that are considered to be of strong archaeological potential. This includes a noticeable concentration of barrows around the promontory at Bolt Tail which form part of the wider historic landscape surrounding the Iron Age cliff castle of Bolt Tail Camp (NHLE 1019323), and the Scheduled hillfort of Holbury Camp (NHLE 1019782) on which limited work has been undertaken. Although designated as a hillfort (NHLE 1020234), the site at Oldaport Camp is currently thought to largely represent remains of Saxon date, and the site is considered to have good archaeological potential for further work (**6.11, PSA14**).

The entrance to the Erme Estuary is considered to be of high archaeological potential due to the location of the designated Erme Estuary Ingot Wreck (NHLE 1000054) and the Erme Estuary wreck site (NHLE 1000071). Other wreck sites of high potential include the designated Church Rocks Wreck (NHLE 1000064) located to the east of Teignmouth (**see 6.6, PSA9**), the Salcombe Cannon (NHLE 1000074), and Moor Sand wreck (NHLE 1000050) off Moor Sand, near Gammon Head (**6.10, PSA13**).

7.3 Areas of Low Record Density (Fig. 18)

In general there is a good coverage of HER data throughout the study area and, although gaps in the distribution of HER records do exist, they are fairly small in scale. There are a small number of rural areas that display a low density of records. This includes an area to the east and southeast of Otterton, between Shaldon and Maidencombe, between Sharkham Point and the entrance to the Dart Estuary at Kingswear, between Dartmouth and Stoke Fleming, to the north of Slapton, immediately to the north of Outer Hope, between Bigbury Bay Holiday Park and the entrance to the Erme Estuary, as well as between Mothecombe and Newton Ferrers. In most of these cases few event records are assigned to these areas, indicating the lack of either research-led or developer-funded work, although it should be noted that the area of coast between Sharkham Point and Kingswear did form part of the 2003 study of archaeology along the coast path. The low density of records within the area to the north of Slapton may be a reflection of the topography within this area, which is characterised by woodland on either side of The Gara river valley.



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FIG. 18: Distribution of recent interventions held as Devon HER Events



An analysis of HER data by period allows an insight into those areas of low monument density in which there is potential for future research. In some areas, such as Slapton Sands, the distribution of HER data initially appears to be good, but an analysis by period shows a high density of records relating to WWII defences compared with a noticeably low density of monuments of prehistoric date within this area. There are a number of examples within the study area where a lack of archaeological data can be attributed to topographic conditions. For example, a lack of records relating to terrestrial archaeology near the estuaries within South Devon may reflect the inaccessible nature of some of the river valleys as a result of their steep natural topography. Areas of significant landscape change, such as the landslip at South Down within East Devon, have the potential to restrict access to archaeological sites and change the topographic location of former heritage assets. It is also possible that areas of dense tree cover or deep water can restrict identification of archaeological sites from some sources such as aerial reconnaissance and aerial photography.

The use of both point and polygon data is perhaps a little misleading when seeking to determine areas of low record density, as polygon data is not limited by size and therefore a polygon can cover a large area but still only represent a single monument. Similarly, a single point may represent a site of considerable size. When creating new records or updating existing records, the Devon HER policy is to use a polygon to represent a site wherever possible, but in those cases where an accurate location cannot be identified point data is used. The point data will be replaced by a polygon if the extent of the site becomes confirmed in the future.

Evidence relating to settlement sites of Palaeolithic date is limited to the cave sites in Torbay, and a small number of sites within the Axe Valley where *in situ* deposits have been recovered. Additional assets of Palaeolithic date within the remainder of the study area are limited to single findspots of stone artefacts. The lack of Palaeolithic occupation sites beyond Torbay may prove to be a reflection of changes to the sea level since this period, with the result being that many of these early occupation sites were submerged during the rising sea levels of the Holocene.

Mesolithic and Neolithic activity within the study area is largely characterised by single flint findspots and artefact scatters, with noticeable concentrations within East Devon and South Hams; there is a noticeable low density of records within the area around the Exe, Teign, Dart and Erme Estuaries. The area between Bolberry Down and Wembury is also poorly represented by finds of Mesolithic and Neolithic date and, as this is a largely rural area comprised of good agricultural land, there is considered to be good potential for further work.

Barrows dating to the Bronze Age within the study area fall within two distinct geographic areas; between Woodbury and Uplyme within East Devon and between Bolt Tail and East Prawle in South Hams. Areas of field systems and enclosures of probable Bronze Age date are represented on clifftop locations within areas of East Devon and South Hams but, with the exception of the Exe Estuary, there is a noticeable lack of material of Bronze Age date from the estuaries of South Devon and from the area of Torbay. It is possible that the low density of terrestrial archaeology of Bronze Age date within these areas is a reflection of the steep topography of the estuaries and lack of identification of sites prior to the urban development of Torbay.

The distribution of sites of Iron Age date within the study area is fairly even, although they are fairly low in number and are largely characterised by hillforts and artefact findspots, with very noticeable areas of low record density in between the hillfort and coastal promontory sites. Recent excavations at Mount Folly, South Hams have shown the potential for substantial enclosed settlements to exist beyond the limit of the hillforts and there is therefore considered to be good potential for further work throughout the study area. In particular, the area between Branscombe and the Dart Estuary has few confirmed sites of Iron Age date and therefore represents a substantial area with potential for further research.

The Romano-British period is fairly well represented by single findspots of coins, although there is a noticeable lack of finds of this date from the area of the Teign Estuary and from some areas within South Hams. The presence of coins indicates activity of Romano-British date throughout the study area, although there are few confirmed archaeological sites in areas beyond East Devon and Topsham. In particular, there is a noticeable lack of sites in an area between the Dart Estuary and Bantham Ham and from Bantham Ham to Wembury.

The post-Roman period has a distinct lack of records compared to other periods and is currently represented by a single site in East Devon at High Peak and four sites in South Hams, between Bantham Ham and Wembury. Sites of Saxon date are fairly well distributed throughout the study area, but are often grouped in concentrations around villages and towns. A low density of records of Saxon date have been identified in the rural areas between Thurlestone and the Erme Estuary and at Slapton and Wembury.

The medieval period is well represented by both documentary and archaeological evidence within the HERs. A greater density of assets dating from the medieval period onwards are noticeable within the larger towns of the study area, including Sidmouth, Budleigh Salterton, Topsham, Dawlish, Teignmouth, Torquay, Brixham, Dartmouth and Salcombe. These noticeable concentrations are likely to reflect those areas with a high proportion of listed buildings, as well as those towns that have benefitted from historical surveys such as the Extensive Urban Surveys. The density of assets within the estuaries of South Devon also increases from the medieval period, with assets such as marker posts, slipways, landing stages, jetties and quays fairly well represented within the Devon HER.

The majority of assets dating to the post-medieval and modern periods relate to settlement evidence, with individual houses and buildings recorded in large numbers, as well as a large number of assets associated with agriculture and defence. There is also a large amount of evidence relating to post-medieval industry, with quarries recorded throughout the study area deliberately targeting the underlying geology. Pits relating to chalk extraction within the study area are clearly distributed in East Devon, whilst gravel pits target the river gravel deposits associated with the estuaries within the study area. Quarries have been recorded within South Hams, specifically targeting the mudstone and schist deposits for roofing material.

8. COASTAL CHANGE FROM THE LATE UPPER PALAEOLITHIC TO THE PRESENT

8.1 Introduction

The South West Archaeological Research Framework (SWARF) Resource Assessment recognises a date of c. 700,000 BP as the accepted date of the beginning of the British Lower Palaeolithic. However, evidence of early human footprints has recently been revealed in Early Pleistocene estuarine muds following erosion of the overlying cliffs at Happisburgh, Norfolk. The footprints, together with finds of flint artefacts within the area of Happisburgh, provide direct evidence of the earliest known human activity in northern Europe and date to c. 780,000 to 1,000,000 years BP, thereby indicating an earlier date for the beginning of the Lower Palaeolithic (Ashton *et al.* 2014, 1).

8.2 The Palaeolithic and Mesolithic

The Palaeolithic and Mesolithic fall within the Quaternary Period, which is divided into the Pleistocene and Holocene. The Pleistocene epoch was characterised by rises and falls in sea level as a result of the recession and advance of the northern ice cap. This also had an effect upon the base level of rivers and contributed to the formation of river terraces of silt and gravel (Edmonds *et al.* 1975, 81). Melting of ice sheets led to the isostatic rebound of land platforms within Devon, resulting in increased drainage. As a consequence, this increase in the volume and movement of water led to the deepening of river valleys, creating steep-sided gorges. Subsequent periods of changes in sea level led to the drowning of the lower valleys of these rivers, also known as rias, which remained open to the sea with the result that a series of naturally deep inlets were formed at the mouths of a number of the estuaries within South Devon (Hoskins 1954, 20). Although most of the river estuaries of South Devon were formed by this process, the Salcombe-Kingsbridge Estuary is a key example of a deep river valley that has become inundated by the sea as it is no longer fed by a main river, but rather by a series of small streams.

Research based on ice-core analysis has indicated that short-term climatic fluctuations were a feature of the Late Pleistocene, during which there were considerable changes in temperature (Hosfield *et al.* 2008, 25). Much of the evidence relating to human exploitation of coastal resources within the Pleistocene was later affected by the high sea levels which were characteristic of the Holocene. It should therefore be recognised that current coastal sites may be a reflection of terrestrial sites during periods of low sea-level, with areas of Palaeolithic coastline now likely to have been submerged (Westley and Bailey 2013, 10). Britain formed a peninsula of Europe during much of the Palaeolithic period, although it was isolated during brief interglacial periods of rising sea-levels (Westley and Bailey 2013, 10).

The mean sea level has risen 130-140m since the Last Glacial Maximum (LGM) c. 18,000 years ago (Hosfield *et al.* 2008, 27). The palaeo-geography of the coastal areas of the South West is currently not as detailed as that for the south and east coasts of England (*ibid.*, 27). However, in some of these coastal areas there is evidence that 'a substantial portion of the land available to the Late Upper Palaeolithic population that recolonised England after c. 12,600 BP was flooded by the sea by c. 7000 BP (c. 5990-5750 *cal BC*)' (*ibid.*, 27).

The Late Upper Palaeolithic to Early Mesolithic transition is dated to c. 10,000 BP and broadly marks the start of the Holocene (Hosfield *et al.* 2008, 23-24). The beginning of the Holocene was characterised by a period of global warming during which rising temperatures increasingly resulted in the melting of ice and therefore subsequent increase in sea-levels (Mithen 1999, 35-36). During the early Holocene, rises in sea level were at a rate of c. 1cm per year, although this rate dropped after c. 7000-6500 BP (Hosfield *et al.* 2008, 41).

The rising sea levels of the Late Glacial and Mesolithic resulted in the isolation of the mainland of Britain from Ireland and then continental Europe (Bell and Warren 2013, 35). Rapid sea-level rise within this period led to the retreating of shorelines inland, particularly those areas protected by coastal barriers of sand or gravel that were inundated (*ibid.*, 42),

and the resultant submergence of former coastal palaeolandscapes (*ibid*, 35-37). In the South West, the mean sea level has risen 30-40m in the last 10,000 years (Hosfield *et al.* 2008, 27). Deposits formed since the Pleistocene within South Devon include alluvium associated with rivers, blown sand and modern beaches. This includes the formation of an inner and outer spit at Dawlish Warren, a permanent spit at Denn Point, Teignmouth and a temporary spit to the northeast of The Ness, Teignmouth and the formation of barriers of shingle such as those at Slapton (Edmonds *et al.* 1975, 81).

Long (2000) argues that there have been few studies of relative sea-level and climate within North West Europe (Long 2000, 417). However, geological-based research used in conjunction with geophysical modelling has allowed significant advances within this field in recent decades (*ibid*, 421). A study of relative sea-level change along the south coast of Devon (Massey *et al.* 2008) employed 15 new sea-level index points from coastal barrier systems at Bantham Sands, North Sands, Slapton Sands, and Blackpool Sands. The study concluded that the sea level along the South Devon coast has risen by 21 ± 4 m during the past 9000 years, and that the rate of sea level rise slowed during the middle and late Holocene resulting in a rise of 8 ± 1 since ca. 7000cal. Yr BP (*ibid*, 431). The study also recommended the collection of additional basal sea-level index points covering the past 4000 years, within the late Holocene (*ibid*, 428).

8.3 Neolithic and Early Bronze Age

The Neolithic and Early Bronze Age both fall within the middle of the Holocene period, during which relative sea level rise decreased from the peak levels reached in the Early Mesolithic. The sea level curve for the South West shows sea levels were c. 5m below present levels at c. 4500 BC indicating that 'there was substantial coastal change resulting in the inundation and subsequent burial by marine and intertidal deposits of significant areas of former coastline' during the Neolithic (Wilkinson and Straker 2008, 64).

In parts of the South Devon coast the archaeological record shows clear evidence of coastal change through the identification of peat deposits associated with submerged forests. Much of the landscape of the Early to mid-Holocene has been preserved within these environments (Hosfield *et al.* 2008, 27). These distinctive deposits have been identified within intertidal areas of estuaries and bays, and are occasionally exposed during storm events or particularly low tides.

The distribution of coastal peats around the coast of England and Wales was discussed by Bell (1997), who concluded that there were then approximately 114 documented intertidal and cliff exposure peat sites within England. Bell identified that at least nine of these were pre-Holocene, with the remainder believed to be Holocene in date. The map provided by Bell shows a small distribution of known sites throughout the South Devon coast, but with noticeable concentrations further to the east around the coast of Hampshire and the Isle of Wight, and concentrations to the west around the coast of Cornwall.

The Intertidal and Coastal Peat Database was created as part of an English Heritage project to record the number of known sites and extent of peat deposits around the English coastline. The project aimed to assess the research potential, and to identify the number, distribution and characteristics of the sites in order to identify research priorities (Hazell 2008, 101). At the time of publication in 2008, the database held information relating to c. 340 sites, and forms a centralised resource to inform future work (Hazell 2008, 101). The database can be searched by county through the Historic England website. More recently, a project studying the known prehistoric submerged landscapes of Palaeolithic and Mesolithic date within England was carried out by Wessex Archaeology (2013) on behalf of English Heritage, and provides an audit of the current state of knowledge of these sites. The project scope included sites situated within England's inshore and offshore region.

Evidence relating to submerged forests has been found at numerous locations within the study area including Dartmouth, Tor Bay, Sidmouth, Salcombe Estuary and Thurlestone Sands (Bigbury Bay). The submerged forest at Thurlestone Sands was first identified in the 19th century and was later exposed in 1923 when artefacts and part of a possible canoe were uncovered. Subsequent recording of the peat deposits and exposed timbers was undertaken by Exeter Archaeology in 1998. The peat deposit was exposed on the beach over an area of c. 200m², and further investigation indicated that the peat deposit may exist beneath beach deposits over a much larger area bounded to the southwest by Thurlestone Rock and extending eastwards across the beach (Whitton and Reed 1999, 2). Radiocarbon dating at the base of the peat deposit showed that it had started to accumulate during the Bronze Age (*ibid*, 4). Recent geoarchaeological investigations undertaken at Abbey Meadow, Torquay, in between Torre Abbey and the seafront, has revealed deposits of peat and estuarine clays, which may represent evidence of former land surfaces of potential prehistoric date, as found associated with similar sites within South Hams (Pears 2015).

A study of the lowland peat deposits within coastal areas of South Hams was undertaken by M. Cove between 1994–2007. Within this study, Cove argues that during the Holocene, ancient woodland debris has been torn away from the coast during a constant process of marine erosion that removed head deposits off the old shore platform (Cove 2007, 295) and it was during the Holocene that the shoreline became similar to what is present today (*ibid*, 297). The study considered evidence from coastal valleys at Goodrington Valley in Torbay, North Hallsands and Blackpool Sands in Start Bay, Lannacombe Bay, North Sands and South Sands in the Salcombe Estuary, South Huish and South Milton valleys in Bigbury Bay. The study suggested that an extensive woodland area was present before the early Holocene transgression (*ibid*, 321).

8.4 Later Prehistoric and Romano-British

The Middle Bronze Age, Iron Age and Romano-British periods fall in the later part of the Holocene. The majority of the post-glacial rise in sea level (c. 55m in the last 11,500 years) was completed by c. 5000 BC, but subsequent changes have had a significant effect on the outline of the coast (Straker *et al.* 2008, 105). Peat deposits associated with the submerged forest at Thurlestone Rock, South Hams have been dated to the Late Bronze Age, which is an unusual date for an intertidal deposit and therefore suggests a period of very rapid coastal change in the area (*ibid*, 111).

During work associated with the investigation of the Moor Sand and Salcombe 'B' wreck sites, a study of sea level history and geomorphology of the area was undertaken in order to establish whether the dispersed artefacts found on the seabed were a result of an eroded terrestrial deposit, or were more likely to represent a deliberate deposition or wreck on the sea bed. Data relating to Moor Sand was compared with that from North Sands, Salcombe where sedimented organic layers at the base of lagoon deposits was dated at 4129 ± 59 ¹⁴ C yrs BP (AA-38836), placing sea level at a position of -3.1 ± 0.3m between 2900 and 2500 BC (Massey 2004). The research compared data derived from geophysical model calculations of the British Isles to that of the South Devon coast, and the results of the model were shown to agree with the geological evidence (Gehrels 2013, 15). The results of the investigation indicated that the position of the sea level at the time was c. -1.8m, indicating that the artefacts would have been in approximately 5-8m of water at the time of their deposition and that the cliffs at Moor Sand are considered to be relatively stable, so the artefacts are unlikely to have been a result of coastal retreat. The conclusion was, therefore, that the artefacts are likely to have been transported to their present position (*ibid*, 17).

There is also evidence that in prehistoric and Romano-British times there was not a barrier at the mouth of the Axe estuary, so the incoming tide was able to enter unobstructed and fill the whole of the lower Axe and Coly valleys (Parkinson 1985, 19-20). The volume of water passing into the estuary would have provided deep water anchorage for vessels (*ibid*, 29). A combination of coastal change and storm events during the 14th century led to the formation

of a large shingle bank across the entrance of the estuary, which progressively prevented the passage of merchant traffic into it. Merchant maritime activity finally ceased in the 17th century following a series of attempts to maintain a channel (Adams and Flatman 2013, 142).

8.5 Medieval to Modern

The medieval to post-medieval period is characterised by a series of smaller-scale changes along with occasional 'events' such as those mentioned above that affected the harbour at Axmouth. There continued to be major geomorphological changes to the South Devon coast, but relative sea level rise was minimal in comparison (Straker 2008, 209).

Documentary evidence is a valuable source for understanding coastal change in the historic period and accounts of landslips occurring in East Devon have been well documented. At South Down, between Beer and Branscombe, a considerable landslip had occurred in 1790 where 'a tract of from seven to ten acres, ranging along the brow of a steep cliff immediately overhanging the sea, suddenly sank down from 200 to 260 feet, presenting a striking group of shattered pinnacles and columns of chalk intermingled with the sunken fragments of the fields thus torn away from their native site; the remains of hedges still traversed these fragments, and a stile was seen undisturbed on the summit of one of the subsided columnar masses' (Conybeare 1840, 8). A landslip occurred on Christmas Day in 1839 on the undercliff of land belonging to Dowlands and Bendon Farms. A series of fissures was observed the following night which led to the formation of a great chasm (*ibid*, 3). The great chasm was described as measuring 400 feet across and 165 feet deep at its eastern end, 363 feet breadth and 210 feet deep in the middle, and 200 feet breadth and 130 feet deep at its western end (*ibid*, 4). On February 3rd 1840 a similar landslip, although smaller in scale, took place in the adjoining cliff of Whitlands (*ibid*, 7), while a similar landslip is believed to have taken place in an adjacent portion of the Whitlands undercliff a little further to the east in c. 1765 (*ibid*, 8).

Land reclamation during the post-medieval period has also had an impact upon the geomorphology of the coast. In the 17th century a reclamation bank was created within the Axe Estuary with the result that the tidal effect was eliminated from almost one third of the estuary (Parkinson 1985, 35). This reclamation would have transformed the area from a salt marsh into a fresh water marsh, allowing a large area for grazing livestock (*ibid*, 38). A study of the ports of the Exe Estuary was undertaken by E.A.G. Clark in 1960. Within this study Clark observes that 'since the marine transgression of post-glacial times there has been a gradual reclamation of the estuarine shores through sedimentation marsh formation, drainage schemes and embankments', such as the embankment on the western shore as a result of the extension of the canal to Turf in 1827 and the construction of the South Devon Railway to Dawlish in 1844 (Clark 1960, 4). These changes brought about by embankments, drainage and the anchorage of large ships within an area can have an impact upon the sandbanks within the estuary and sometimes can alter the course of the main channel (*ibid*, 9-10).

Storm events have had a diverse impact on localised areas of the South Devon coast. Within the study of the ports of the Exe Estuary, Clark notes that 'at one period the Warren terminated in a steep bluff 25 feet high, but this was swept away in 1859' (Clark 1960, 7). The village of Hallsands within South Hams was destroyed by sea in 1917. This was, however, largely effected as a result of large quantities of shingle having been removed from the beach between 1893 and 1902 for the construction of the Plymouth Breakwater, indicating the impact that human activity can have on the evolution of the coastline. Despite attempts to create coastal defences within this area in the following years, a series of storms has caused the erosion of the foreshore (Cove 2006, 43). The former beach at Hallsands was formed under different conditions that operated within the past and therefore could not be replaced by natural processes within present conditions, indicating that the sea-level within this area has stood at its present position for a significant period of time (Mottershead

1997, 41). A period of high spring tides and strong easterly gales between December 1978 and January 1979 caused considerable damage to properties within Torcross, resulting in the construction of the present sea defences (*ibid*, 36).

A severe period of storms occurred in the winter of 2014, during which gale force winds, high spring tides, storm surges, low atmospheric pressure and heavy rainfall led to the erosion of a number of parts of the South Devon coast. Erosion of the beach at Challaborough during these storms exposed archaeological deposits, including a ditch containing Iron Age and Romano-British pottery, while the remains associated with an Iron Age settlement were exposed in cliff deposits which had been impacted by large waves (BBC 2014a). The combination of high winds and rain severely affected the town of Dawlish, where a stretch of the railway track linking Cornwall and Devon was destroyed (BBC 2014b). At Beesands, in South Hams, the storms gouged out a long section of the sea defences which were positioned to protect the low-lying fishing village (BBC 2014b). At South Milton, also within South Hams, an area of sand dunes which had recently been restored were severely eroded and a road was demolished (BBC 2014b).

Within the East Devon AONB damage caused as a result of the 2014 storms included closure of part of the south west coast path as a result of a landslip in the Undercliffs NNR, while wave action almost removed beach chalets and exposed historic structures at Branscombe Mouth (East Devon AONB Partnership 2014, 7).

The South Devon AONB published on their website a list of effected sites within their management area. These included:

- Erosion of three areas of the cliff below the car park at Bigbury-on-Sea;
- Serious erosion damage to the beach head at Thurlestone (Leas Foot) Beach;
- Serious erosion damage to the beach head and sand dunes at Thurlestone (South Milton Sands);
- Cliff erosion between Hope Cove and Outer Hope which has undermined the cliff path;
- Partial collapse of a wall at the back of the beach at Salcombe South Sands beach;
- Damage to a culvert and wall at Salcombe North Sands beach;
- Damage to walls, slipway and fenders at Salcombe Town Jubilee Pier;
- Collapse of a section of facing wall at Kingsbridge Town;
- Public highway washed out at North Hallsands Beach;
- Access road washed out and fishermen's compound destroyed at Beesands Beach;
- Damage to houses and buildings at Torcross, car park coast defence;
- Car park eroded back and extensive erosion to beach head at Slapton Sands;
- Footbridge and beach access destroyed at Dartmouth Compass Cove;
- Damage to quayside walls at Dartmouth Town; and,
- Erosion of the coast path at Kingswear (South Devon AONB).

The South Devon AONB is currently undertaking a fixed point photography project with the aim of capturing changes in the landscape over the next 20 years. Eight sites have been chosen to be monitored within this area and comprises locations above Bridgend within Noss Mayo, Bigbury-on-Sea, Torcross, East Cornworthy, East Portlemouth, Sharkham Point, and the Sharpham Estate (English 2010, 1). A similar project has also been undertaken by the East Devon AONB at Branscombe and will help to inform issues relating to landscape change within these areas (Rouse and Planel 2015, 23).

8.6 Comparison of Coastline 1880s-90s and 2014

In order to understand recent changes to the coastline within the South Devon RCZAS study area, the coastline depicted on the digital First Edition 25-inch Ordnance Survey map (1880s-90s) was compared to that on the Ordnance Survey modern Master Map. A comparison was made between coastline and the MHW and MLW marks as shown on both

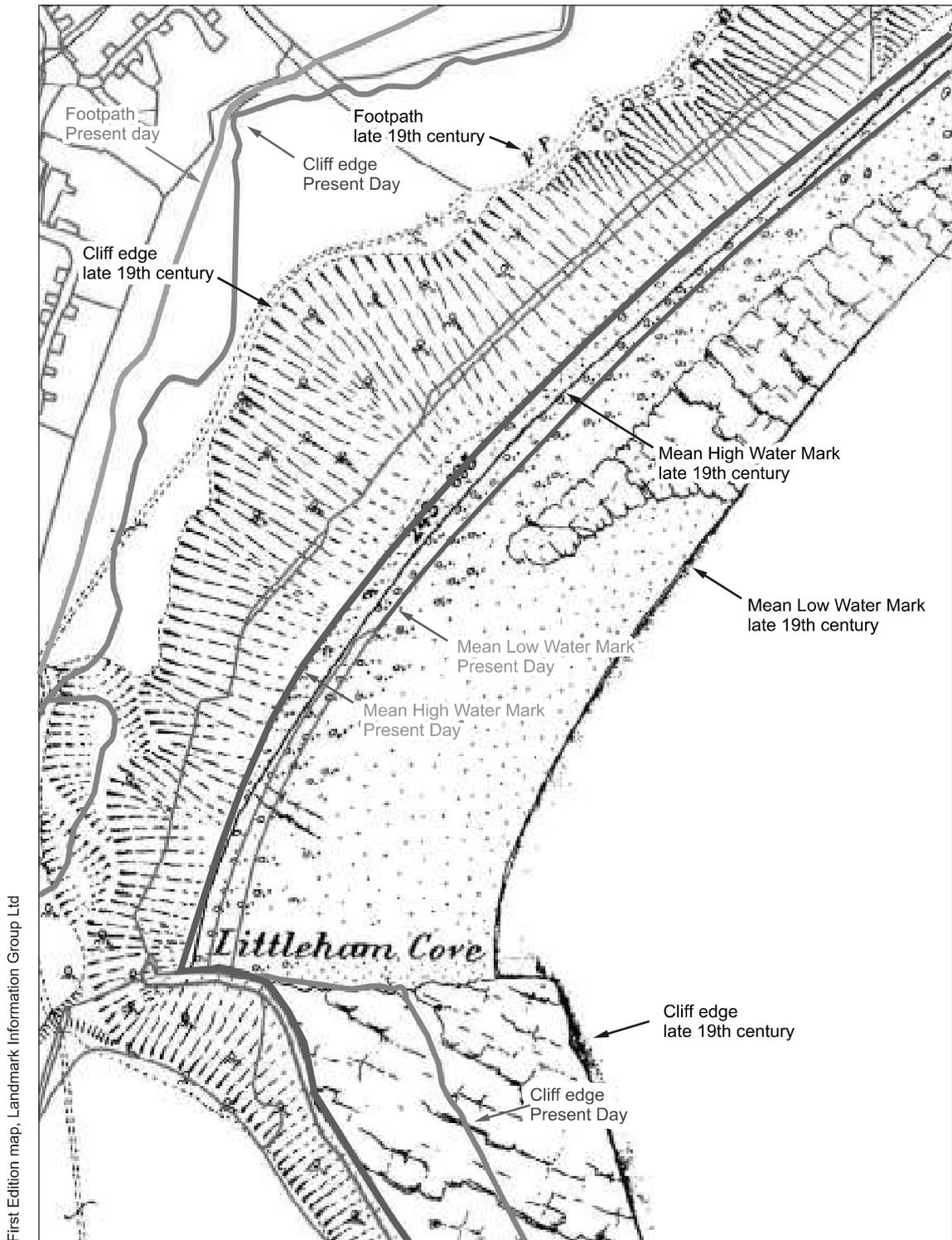
of these sources. The study showed there to be localised changes to the coastline within some parts of the study area.

The most noticeable changes identified throughout the study area relate to the position of the MLW and MHW, with these levels generally shown to be higher on the OS Master Map indicating a rise in sea levels since the First Edition Ordnance Survey maps. For example, changes to the position of the MLW and MHW marks since the First Edition OS maps at Budleigh Salterton have resulted in a smaller strip of beach, with some noticeable erosion to parts of the cliff top within this area as far as Littleham Cove (**Fig. 19**). It should, however, also be considered that these changes to the MLW and MHW may also be attributable to changes in the profile of beaches as well as changes to the sea level. Noticeable changes to the location of the MLW mark at Charton Bay and between Corbin Rocks and the Axe Estuary indicate a build-up of beach deposits within these areas. The coastlines at Higher Dunscombe Cliff and Salcombe Hill cliff show evidence of landslides to the north of the beach and erosion at the cliff top. The MLW mark to the south of the railway at Dawlish is considerably higher now than that shown on the First Edition map, with a much narrower strip of beach now depicted (**Fig. 20**). Smaller beaches are also shown at areas including Meadfoot Sands, Daddy's Hole and Tor Abbey Sands. In contrast, a slightly larger area of beach is shown at Oil Cove and Preston Sands.

Evidence for erosion is also identifiable from a comparison of these sources. The beach to the west of Straight Point is shown as sand on the Master Map, compared to the rocky outcrops on the First Edition, while there are further sandy areas shown along the beaches towards Orcombe Point. A greater number of rocks are exposed at Horse Rocks, immediately to the south of Horse Cove and to the north of The Parson and Clerk on the Master Map compared to those shown on the First Edition. A much narrower beach is depicted at Oddicombe Beach on the Master Map, with noticeable changes to the level of MHW and MLW, and potential evidence for erosion of the cliff top here, and to the west of Long Quarry Point, Babbacombe (**Fig. 21**). The beaches at Redgate Beach and Anstey's Cove are narrower on the Master Map compared to those shown on the First Edition and the low tide mark to the south of these beaches is at a higher level on the Master Map, exposing a small number of rocks within the intertidal zone.

This exercise has also proved useful for identifying changes to the layout of the estuaries throughout the study area since the end of the 19th century. Changes to the position of the river channel at the mouth of the River Axe are visible, and are related to the formation and reclamation of the saltmarshes within this area that have resulted in the formation of a shingle bar (Turton and Weddell 1993, 2-3). The channel of the River Otter to the west of Otterton Point is located further to the west on the modern Master Map and the position of the MLW mark has increased immediately to the west of the river mouth. There is a noticeable change to the layout of the sandbanks and channels within the Exe Estuary and the Teign Estuary on the Master Map compared to that shown on the First Edition. The position of the channels at the mouth of the Avon Estuary and the mouth of the Erme Estuary have also changed considerably since the First Edition map.

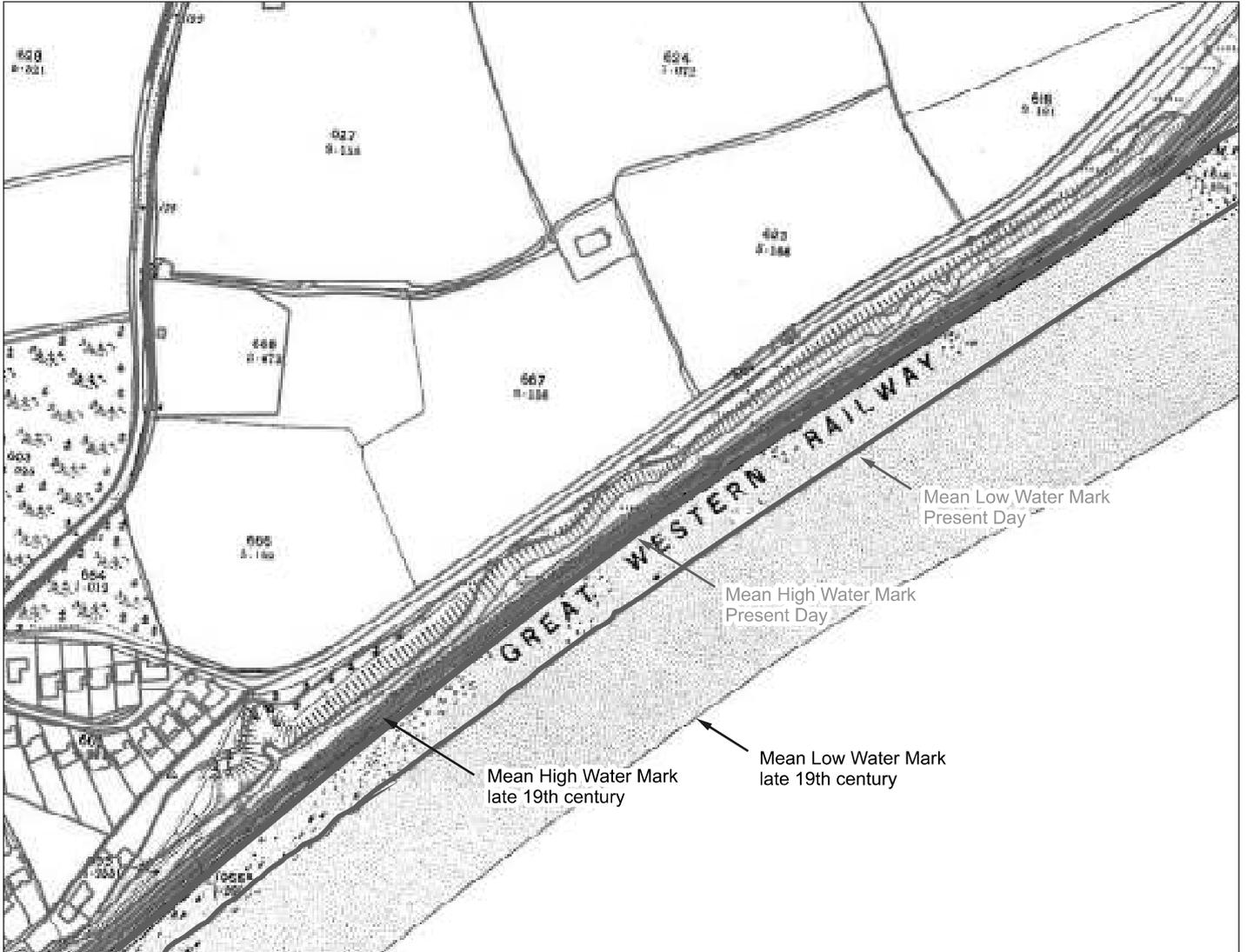
The comparison of the Master Map to the First Edition map has also proved useful for identifying the site of former coastal assets that are no longer present, although it is possible that elements of these assets may survive. This includes the site of a quay at South Sands which is depicted at the northern end of the cove on the First Edition map, but is not present on the Master Map (**Fig. 22**). A building is also shown on the 1840s Tithe Map on the cliff edge immediately to the east of the mouth of the Erme Estuary, but is not present on the First Edition, while the line of the coastline shown on the Master Map indicates that this structure may have been lost due to coastal erosion.



Extracts from the Ordnance Survey First Edition 25 inch map, 1880-1899 and Ordnance Survey MasterMap

TITLE
 Fig. 19: Littleham Cove, showing extent of cliff erosion since the late 19th century

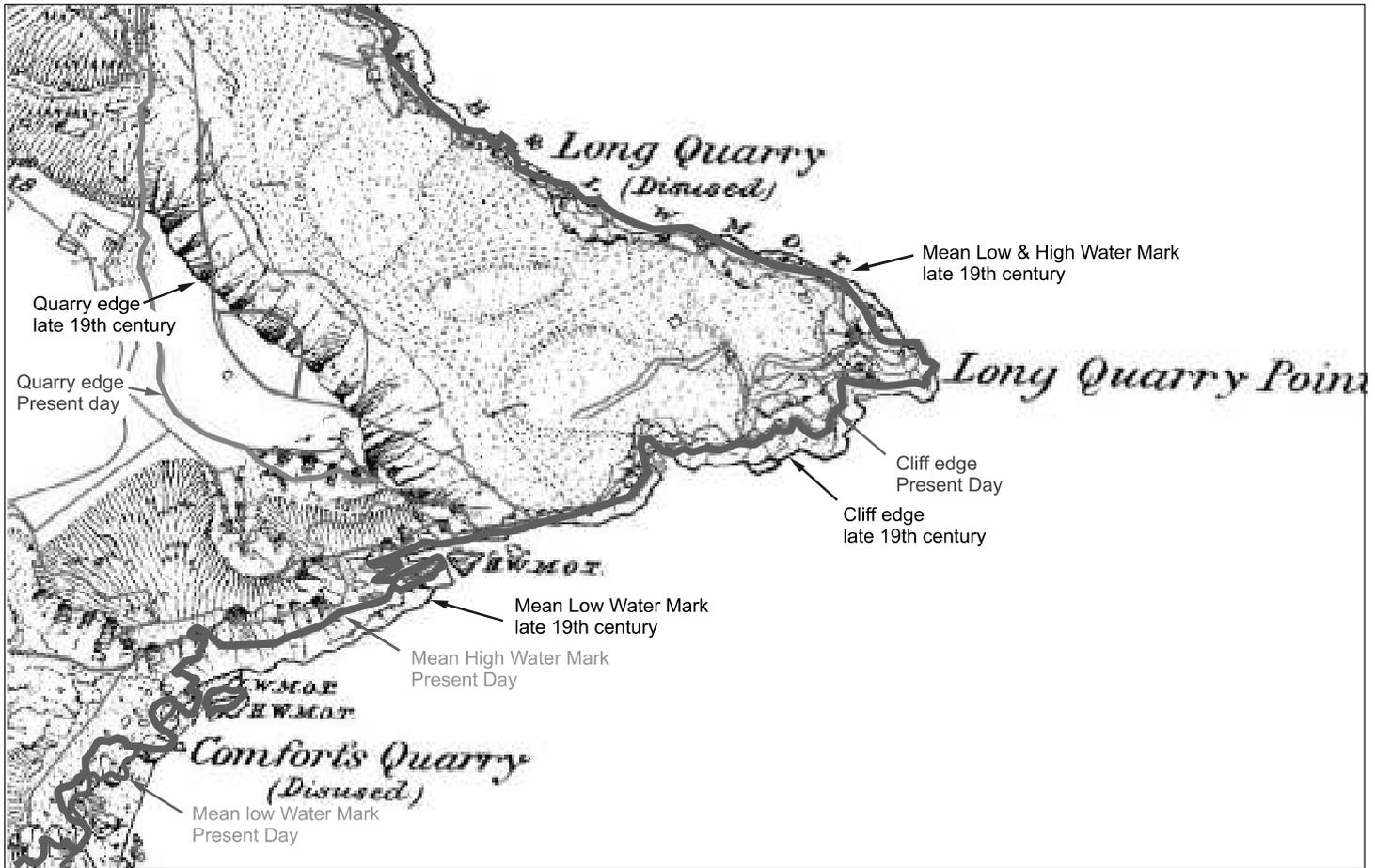




Extracts from the Ordnance Survey First Edition 25 inch map, 1880-1899 and Ordnance Survey MasterMap

Fig. 20: Dawlish, showing movement of low tide mark and receding beach since the late 19th century

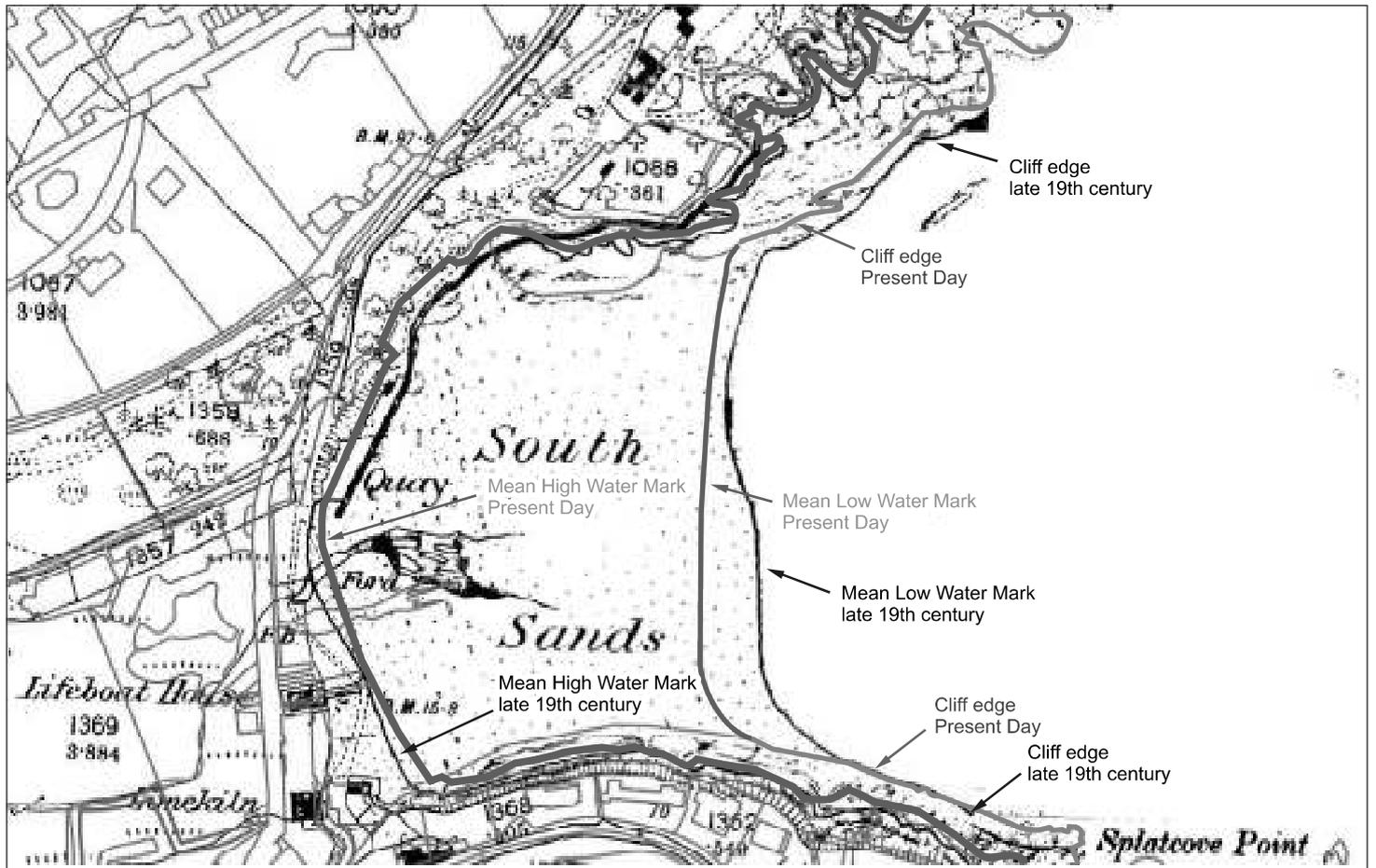




Extract from the Ordnance Survey First Edition 25 inch map, 1880-1899 and Ordnance Survey MasterMap

Fig. 21: Long Quarry Point, Babbacombe, showing evidence for cliff erosion since the late 19th century





Extracts from the Ordnance Survey First Edition 25 inch map, 1880-1899 and Ordnance Survey MasterMap

TITLE
Fig. 22: Quay at South Sands, Salcombe late 19th century, now no longer present



9. ASSESSMENT OF THREATS TO COASTAL HISTORIC ENVIRONMENT

The historic environment of the coastal zone is under threat from both natural processes related to sea level rise and coastal erosion, as well as also from increasing pressures relating to social and economic development. As a response to the threat posed by erosion to the foreshores and tidal estuaries, a national programme named CITIZAN (Coastal and Intertidal Zone Archaeological Network) has been established which targets the nationally important and exposed archaeological sites within these areas. The CITIZAN project delivers community-based training to allow a network of volunteers to monitor and record the archaeological sites that are considered to be most under threat. The project partners include MOLA, Council for British Archaeology, and the Nautical Archaeology Society, and the project is supported by the Heritage Lottery Fund, The Crown Estate, National Trust, and Historic England.

The Southwest Strategic Regional Coastal Monitoring Programme also provides a standard method for the monitoring of the coastal environment of the South West. Data collection from LiDAR surveys is undertaken at the Plymouth Coastal Observatory and is freely available for consultation through the Channel Coast Observatory website (www.channelcoast.org/southwest/). The programme is funded by Defra, with Teignbridge District Council acting as the lead authority and covers an area between Portland Bill, Dorset and Sharpness, Gloucestershire and is the result of a collaboration between maritime local authorities, the Environment Agency and the Coastal Groups of the South West.

SMPs provide a large-scale assessment of the risks associated with coastal change, and present a policy framework to assess these risks to people and the developed, historic and natural environments. The following discussion is based upon the results outlined within the Durlston Head to Rame Head SMP, which considered the potential impacts of coastal policy on designated assets, but here seeks to expand this discussion to include non-designated heritage assets that may be affected by the policies outlined within the plan. This SMP is divided into 17 PSAs, of which ten are relevant to the South Devon RCZAS (**Fig. 23**). In the following sections each PSA and sub-division are described, including a description of both designated and non-designated heritage assets located within areas identified by the SMP as being at risk of either erosion or flooding within the 0-100 year period. This information is also included on **Figs 23-33**. Where there are area designations (ie. Scheduled Monuments and Registered Parks and Gardens) only that part of the asset within the 'risk zone' is shown.

There are many areas along the South Devon coast that have a long history of coastal defence intervention to reduce the risk of flooding and erosion, with the form of the shoreline today therefore a result of these defences. As a result of past human intervention within this landscape, it is considered likely that it would not necessarily revert to 'naturally functioning' if defences were not to be renewed (Halcrow Group 2011, 32). 'As such, it is the social and economic sustainability of the SMP area which has driven policy selection for most of the developed areas of this frontage. Although policies leading to a more 'natural' shoreline in the long term have been identified where feasible' (*ibid*, 32).

The SMP for Durlston Head in Dorset to Rame Head in Cornwall identifies policies over a 100 year timescale to manage tidal flooding and coastal erosion risks. The area of coastline that falls within the study area for the South Devon RCZAS is divided into 137 units, spread between Wembury in the west, and Uplyme in the east.



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Fig. 23: Policy Scenario Areas within
the Durlston to Rame Head
Shoreline Management Plan

The four shoreline management policies considered within the plan are those defined by Defra, advised by the SDADCAG. These policies are:

Hold the line. Maintain or change the level of protection provided by defences in their present location.

Advance the existing defence line. Build new defences on the seaward side of the existing defence line to reclaim land.

Managed realignment. Allowing the shoreline position to move backwards (or forwards) with management to control or limit movement.

No active intervention. A decision not to invest in providing or maintaining defences (Halcrow Group 2011).

For the initial development of SMPs the shoreline of England and Wales was divided into 11 sediment cells which were based upon natural coastal processes. Each of these cells were further divided into sub-cells defined by coastal type and processes in order to create management areas for the SMPs. The sub-cells referred to below (5g, 6a, 6b and 6c) combine the policy units used within the two preceding SMPs that covered the area from Portland Bill to Rame Head (sub cells 6a, 6b and 6c) and Portland Bill to Durlston Head (sub cell 5g), and which have been adopted as the focus for the review of the current SMP document (Halcrow Group 2011). The SMP indicates that many of the heritage assets along the coast are likely to be protected through the preferred policies (e.g. Hold the Line, Managed Realignment) compared to a policy of No Active Intervention within these areas. Where possible damage or loss to features of the historic environment is identified mitigation measures are proposed. For non-designated assets mitigation should be considered at a scheme or project level as appropriate (Halcrow Group 2011, 41-42).

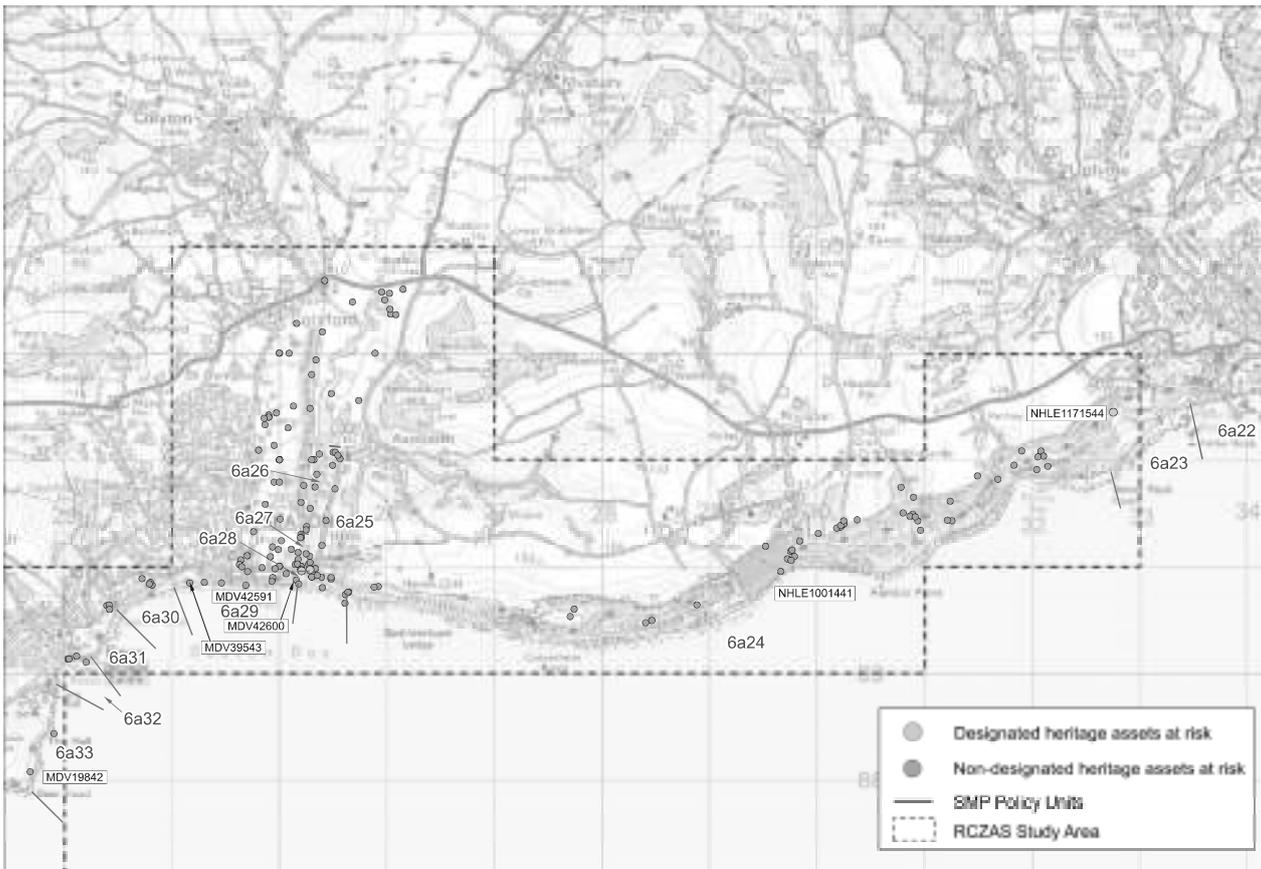
9.1 Thorncombe Beacon to Beer Head (PSA5) (Fig. 24)

This unit is characterised by geologically important cliffs and areas of landslip. It is argued within the SMP that the erosion of these cliffs is integral to their natural environment designations and landscape value, but this has to be achieved whilst managing the risk of flooding to some of the key towns within this area such as Seaton and Beer (Halcrow Group 2011, 34).

6a23 and 6a24. Monmouth Beach to Haven Cliff (West)

This is an area of geologically important cliffs which form part of the World Heritage Site, and include areas of large-scale landslides. The short, medium and long term preferred policy is for No Active Intervention. Within 50-100 years the rate of cliff erosion towards the western end of this stretch is likely to be outweighed by the occurrence of landslide events, with between 10 and 20m of cliff top recession predicted by 2105, which would therefore put the historic environment of this area at risk. It is predicted that within these timescales there may be potentially adverse impacts to Grade I and Grade II Listed Buildings, for example the Grade II Listed Underhill Dairy Farmhouse (NHLE 1171544) and up to approximately 0.5km length of frontage of the Grade II Rousdon Registered Park and Garden (NHLE 1001441) is potentially at risk from erosion (Halcrow Group 2011, 174-175).

In addition to the designated assets identified within the SMP, it is also likely that additional prehistoric artefacts may be exposed by cliff erosion within this area. There are also a number of non-designated assets of local importance relating to post-medieval and modern activity including three cottages, a well, quarry and those relating to land management, including a rabbit warren and orchard that may be affected by erosion. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include a programme of investigation and recording. It should, however, be noted that in this area of No Active Intervention there is currently no formal process of funding for this mitigation as the threat is not directly caused by the effects of a development scheme.



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Fig. 24: Thorncombe Beacon to Beer Head (PSA 5)



6a25 to 6a28. The Axe Estuary

The short term, medium term, and long term preferred policy is to Hold the Line at the Mouth Breakwater to Axmouth North (**6a25**). The existing defences within the outer parts of the Axe Estuary and the breakwater at the mouth of the estuary will be maintained to reduce the flood risk upstream. Within the upper parts of the Axe Estuary (Axmouth North to Seaton North) the recommended short term policy is one of Managed Realignment at strategic locations, whilst in the medium and long term there would be continued Managed Realignment or Hold the Line along current realignments (**6a26**). Within Seaton East the short term, medium term, and long term preferred strategy is to continue to maintain defences through a Hold the Line policy (**6a27**). Along the Axe Estuary Spit the policy is for No Active Intervention within the short, medium and long term (**6a28**). It is predicted that in the short, medium and longer term these policies may result in the partial loss of a Scheduled Monument due to erosion, as well as flood risk to Grade I and Grade II Listed Buildings. There is also a possible adverse impact on the putative Roman harbour (MDV42591), wrecks and palaeoenvironmental deposits within the estuary as a result of the Managed Realignment (Halcrow Group 2011, 179-181). These sites are considered to be situated within an area of greatest archaeological potential within the study area (see 7.2 above), and the impacts of the preferred policies upon these assets should be investigated further. Where these sites cannot be protected from erosion a programme of mitigation comprising excavation and recording may be appropriate.

In those areas of NAI, such as the Axe Estuary Spit, and those areas where the policy is of Managed Realignment, such as the upper part of the Axe Estuary, predicted coastal erosion and flooding may impact upon the remains of non-designated assets. This includes the site of a large number of pillboxes within the Axe Estuary. A series of assets within the Colyford Common area may also be affected including remains of WWII date, additional findspots associated with flint scatters within this area and remains associated within saltworking within the Axe Estuary. Immediately to the west of the mouth of the River Axe assets of unknown significance including the suggested site of a former Saxon battlefield may be at risk from flooding, as may buildings along the seafront including the former Seaton preventative service house (MDV42600). Non-designated assets situated on the area of cliff to the east of the mouth of the Axe Estuary may also be affected by erosion, including any surviving remains associated with a gun emplacement, lime kilns and possible defence obstructions. Where monuments may be at risk as a result of policies of Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include a programme of investigation and recording. It should however be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6a29 and 6a30. Seaton to Seaton Hole

The short, medium and long term policy is to continue to Hold the Line to protect Seaton by maintaining existing seawalls and defences to prevent the low lying areas to the east from flooding and to protect the cliff top assets to the west (**6a29**). At the western end of Seaton and Seaton Hole there would be continued maintenance of the rock revetment, which may require some reconstruction resulting in a policy of Managed Realignment in the medium and long term (**6a30**). This would reduce, but will not stop erosion, and may therefore pose a potential risk to cliff top assets. No known impacts on archaeological features are recorded within the SMP (*ibid*, 188).

Within the 50-100 year period coastal erosion of the cliffs above Seaton Hole may impact on non-designated heritage assets of local importance including a small number of detached houses, a quarry, remains associated with a former military complex to the south of Beer Road, and Old Beer Road itself which is potentially of medieval origin. It is also considered

possible that flooding associated with the rises in sea level may affect above and below ground deposits relating to the Seaton Emergency Battery (MDV39543), two structures of possible WWII date within the intertidal zone, as well as remains associated with beach scaffolding of WWII date. Where monuments may be at risk as a result of policies of Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets.

6a31 to 6a33. Seaton Hole to Beer Head

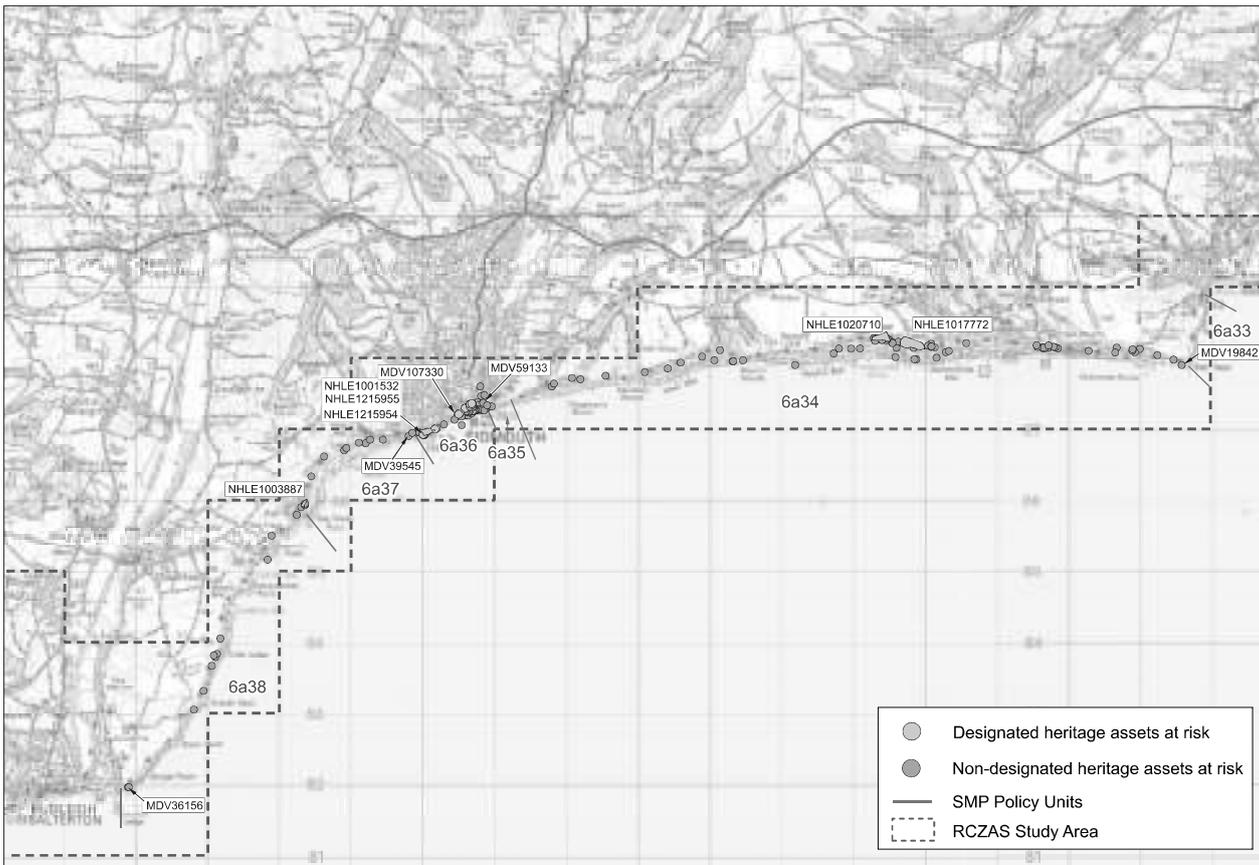
This unit is dominated by chalk cliffs, and the town of Beer. The short, medium and long term policy between Seaton Hole to Beer (**6a31**) and Beer to Beer Head (**6a33**) is for No Active Intervention of the cliffs. Cliff recession will remain negligible, but infrequent localised rock falls may result in some erosion of up to 50m by 2105 which would therefore put the historic environment of this area at risk. At Beer (**6a32**) the short, medium and long term policy is to Hold the Line of existing defences (Halcrow Group 2011, 194-195). No known impacts on archaeological features are recorded within the SMP, although there is considered to be a flood risk to Grade I and Grade II Listed Buildings (*ibid*, 196).

Additional artefacts associated with the Beer Head lithic scatter may be exposed as a result of the predicted erosion of the cliffs between Big Ledge and Beer Head, and part of the prehistoric field system identified between Branscombe Mouth and Beer (MDV19842) may also be impacted by erosion. These two sites are considered to be situated within an area of greatest archaeological potential within the study area (see 7.2 above) and the impacts of the preferred policies upon these assets should be investigated further. Where these sites cannot be protected from erosion, mitigation could include archaeological recording of the more significant assets.

It is also possible that erosion and rises in sea level in this area may impact the remains of non-designated assets of local and potential wider importance, including a medieval salt works and any surviving remains associated with a lighthouse and pillbox that are recorded to the east of the Heritage Centre, within Beer. The southern edge of the Jubilee Memorial Ground may also be affected by erosion within the 0-20 year period, as may the site of a smugglers cave at The Hall. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

9.2 Beer Head to Otterton Ledge (PSA6) (Fig. 25)

This is a predominately undeveloped stretch of coastline, with the exception of the town of Sidmouth. The cliffs within this area form part of the WHS, and their natural evolution is considered integral to their designated status. Sediment movement is controlled as a result of a series of headland-bays within this area. The policy, therefore, needs to allow the natural status of the coastline whilst recognising the importance of Sidmouth (Halcrow Group 2011, 35). There has been accelerated erosion of the cliffs to the east of Sidmouth, which is in part considered to be a result of the current defences, and it is possible that erosion in this area may increase the risk of flooding in the town (*ibid*).



- Designated heritage assets at risk
- Non-designated heritage assets at risk
- SMP Policy Units
- - - RCZAS Study Area

Fig. 25: Beer Head to Otterton Ledge (PSA 6)



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6a34. Beer Head to Salcombe Hill

This is an area of undeveloped coastline and the village of Branscombe. The short, medium and longer term policy is for No Active Intervention, which would mean that when the life of the existing sea wall has ceased in approximately 25 years, this area will remain undefended and so will continue to evolve naturally. The cliff recession at Beer is likely to continue as it has historically, with infrequent small scale cliff falls causing potential erosion of between 10 and 20m within the next 100 years. The softer clay-rich cliffs to the west are predicted to erode between 30 and 50m within the next 100 years (Halcrow Group 2011, 202-203), which would put the historic environment of this area at risk. The SMP identifies that this may result in the partial loss of two Scheduled Monuments; Berry Cliff Camp (NHLE 1017772), and a prehistoric field system (NHLE 1020710), (*ibid*, 204).

There are also a large number of non-designated heritage assets that are recorded within this area on the Devon HER. Prehistoric artefact scatters and single findspots recorded at Beer Head, the southern edge of a prehistoric field system at South Down Common (MDV19842), as well as the southern edge of two areas containing a dense concentration of earthwork banks and barrows to the east and west of Berry Camp, are all situated within one of the areas of greatest archaeological potential within the study area (see 7.2 above). The impacts of the preferred policies upon these assets should be investigated further. Where these sites cannot be protected from erosion a programme of mitigation comprising archaeological recording of the more significant assets would be appropriate.

There are also a series of non-designated assets of local importance relating to military and coastal defence structures such as pillboxes, anti-tank obstacles and a coastguard station. Assets relating to former land use including relict field boundaries are also at risk of erosion as a result of a No Active Intervention policy. Much of the area to the west of Branscombe also contains the remains of outbuildings and associated cliff plots which were farmed during the modern period, as well as former quarries, which are likely to be largely lost through coastal erosion to the north of Branscombe beach. At Weston Mouth assets of local importance including the remains of a former building, coastguard station, as well as assets associated with post-medieval and modern industry and agriculture, including limekilns, may be affected by erosion as a result of rises in sea level. Additional prehistoric findspots may also be exposed throughout this area as a result of cliff erosion. Any surviving remains associated with Cowe's Cliff Radar Station and stumps associated with the former railway line between Chit Rocks and Sidmouth may also be lost through erosion of this part of the cliff. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6a35 and 6a36. The developed area of Sidmouth

The short, medium and long term policy is to Hold the Line for Sidmouth through maintenance of existing defences (**6a36**). A short, medium and long term policy of Managed Realignment will be adopted for the currently undefended stretch at the mouth of the River Sid (**6a35**) to try to prevent flooding of the town (Halcrow Group 2011, 206-209). These policies will also ensure the continued protection for Grade II and Grade II* Listed Buildings and protection of the Grade II Connaught Registered Park and Garden from flooding and erosion (*ibid*, 209).

The SMP considers that this policy will allow continued protection of Listed Buildings within Sidmouth from flooding and will also therefore protect a larger number of non-designated assets that lie within Sidmouth. Erosion of the coast to the west of Chit Rocks may affect a small number of important assets including a Grade II Listed Clock Tower within Connaught Gardens (NHLE 1215955) and the Grade II Listed Jacob's Ladder (NHLE 1215954). Although non-designated, deposits associated with a submerged forest (MDV107330),

wrecks, and deposits associated with the medieval port of Sidmouth (MDV59133) are also considered to be of importance and may be at risk of erosion. The impacts of the preferred policies upon these assets should be investigated further and, where these sites cannot be protected from erosion, a programme of archaeological recording may be appropriate.

Non-designated assets of local importance that may also be affected by erosion and rising sea levels within this area include the remains of a lime kiln, remains associated with the former railway line, and a jubilee memorial. It is also possible that additional prehistoric artefacts may be eroded from the cliffs as a result of coastal change and rises in sea level at the eastern mouth of the River Sid. Where monuments may be at risk as a result of policies of Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets.

6a37 and 6a38. Chit Rocks to Otterton Ledge

This is a long stretch of largely undeveloped coastline. The short, medium and long term policy is for No Active Intervention along this area of sandstone cliffs where erosion rate is slow, but subject to small scale cliff falls. Within the next 100 years it is predicted that there may be between 20 and 30m of erosion between Chit Rocks and Big Picket Rock, and 40m towards Otterton Ledge (Halcrow Group 2011, 213) which would put the historic environment of this area at risk. The SMP predicts that this may increase the risk of erosion to Grade II and Grade II* buildings, the potential partial loss of High Peak Camp which is a Scheduled Monument (NHLE 1003887), as well as Connaught Grade II Registered Park and Garden (NHLE 1001532), (*ibid*, 215). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

A series of findspots associated with the hillfort and saltern at High Peak has been recorded within this area and it is considered possible that additional prehistoric artefacts may be exposed as a result of erosion within this area, which has been identified as one of the areas of greatest potential within the study area (see 7.2 above). Similarly, the remains associated with a Roman villa to the east of Otterton Point (MDV36156) have been identified as one of the areas of greatest potential (see 7.2 above), and could be affected by erosion as a result of a No Active Intervention Policy within this area. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

There are also a large number of non-designated assets within this area that may be affected by coastal erosion. These include a series of assets relating to WWII defences and earthworks, and includes the site of the Sidmouth Emergency Coast Defence Battery (MDV39545), which are considered to be of regional importance. Sites of local importance that may be affected by erosion within this area largely relate to assets associated with agriculture and industry including limekilns, quarries and field boundaries. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

9.3 **Otterton Ledge to Straight Point (PSA7) (Fig. 26)**

The shoreline between the headlands at Straight Point and Otterton Ledge plays an important part in ensuring sediment movement to the east and therefore maintaining the spit at the mouth of the Otter Estuary. There is also a need to protect Budleigh Salterton and the long term plan is to defend the town but allow erosion of adjacent frontages to minimise impacts elsewhere (Halcrow Group 2011, 35). It is indicated that this may cause loss of some cliff top assets to the west of Budleigh Salterton in the medium to long term.

6a39 and 6a40. Otter Estuary

The short, medium and long term policy for Otterton Ledge to Budleigh Salterton is a Managed Realignment within strategic locations within the estuary, with localised Hold the Line where defences already exist if funds are available. The short, medium and long term policy for the spit at the Otter Estuary is for No Active Intervention (Halcrow Group 2011, 218-219). No impacts on Scheduled Monuments are recorded within the SMP, but it is considered there may be possible damage to, or loss of, palaeoenvironmental deposits in the Otter Estuary through Managed Realignment or through changes resulting in movement of the spit at Budleigh Salterton (*ibid*, 220). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

This policy may also lead to the loss of some coastal assets of local importance, such as remains associated with capstans and mooring posts immediately to the west of the river mouth, while flooding within this area may affect saltings near the mouth of the river and remains of WWII date. Where monuments may be at risk as a result of policies of Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets, although there is currently no means of funding this work.

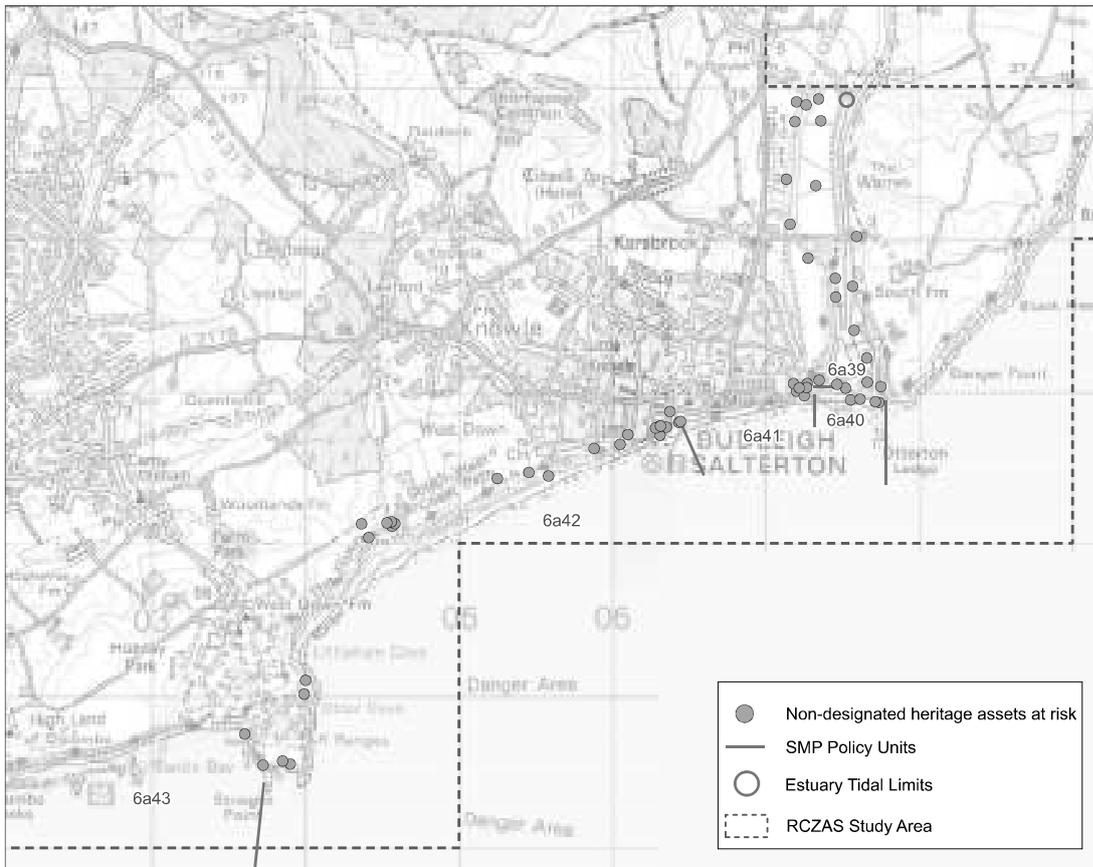
6a41. Budleigh Salterton

The short, medium and long term policy is to Hold the Line through maintaining the existing seawall and gabions (Halcrow Group 2011, 223). This is considered to protect some of the Grade II Listed Buildings within Budleigh Salterton against flood damage and would protect a number of non-designated heritage assets that lie immediately to the north of the beach, including a lifeboat station, pillboxes, lime kilns and areas of former salt workings.

6a42. Budleigh Salterton (West) to Straight Point

This is an area of undefended, slowly eroding cliffs which are a critical source of beach sediment for the shorelines to the east at Budleigh Salterton and the Otter Estuary. The short, medium and long term policy is for No Active Intervention within this area. The cliff is expected to erode between 40 to 55m within this area within the next 100 years as a result of natural erosion and sea level rise which would therefore put the historic environment of this area at risk. Less than 10m of recession is predicted near Straight Point, where erosion is a result of infrequent small scale cliff falls (Halcrow Group 2011, 227). The SMP identifies that there may be a risk of flood and erosion to some of the Grade II Listed Buildings (*ibid*, 229) and where there may be possible damage or loss to the historic environment mitigation measures are proposed.

Erosion within this area also has the potential to affect a small number of non-designated assets of WWII date between Straight Point and Budleigh Salterton. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.



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Fig. 26: Otterton Ledge to Straight Point (PSA 7)



9.4 Straight Point to Holcombe (PSA8) (Fig. 27)

This area includes the Exe Estuary and it is considered important that the policy allows ‘the conservation of currently undefended areas, which have outstanding landscape and geological value, whilst ensuring the continued protection of important social and commercial assets’ (Halcrow Group 2011, 35-36). The rail infrastructure within this area also needs to be considered.

6a43. Straight Point to Orcombe Rocks

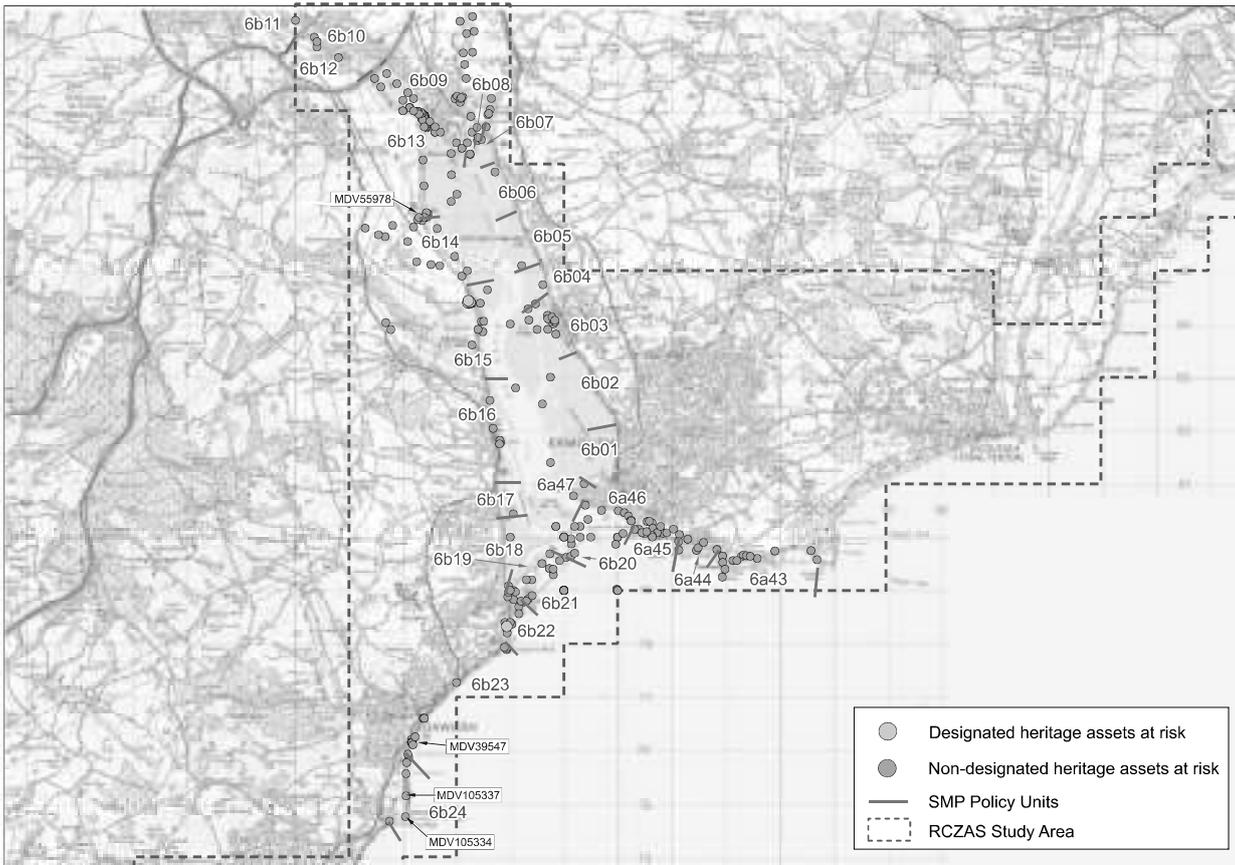
The short, medium and long term policy for this area is No Active Intervention. Cliff recession is predicted to be up to 50m within the next 100 years (*ibid*, 231), which would put the historic environment of this area at risk, although no known impacts on archaeological features have been recorded within the SMP.

Predicted coastline changes over the next 100 years as a result of erosion has the potential to affect the remains of a pillbox, lime kiln and rifle range at Sandy Bay, the remains of an observation post, an area of medieval ridge and furrow and a quarry to the west of Sandy Bay, as well as any surviving remains associated with a former coastguard station at Orcombe Point. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process.

6a44 to 6a47. Orcombe Rocks to Exmouth Spit

The short, medium and long term policy is to Hold the Line of existing seawalls and esplanade to protect the low-lying area of Exmouth. This covers the area between Orcombe Rocks to Maer Rocks (**6a44**), Harbour View to Exmouth Pier (**6a46**) and Exmouth Spit (**6a47**). Along The Maer frontage the medium term policy is for Managed Realignment, with a Hold the Line policy in the long term in order to establish a more sustainable defence line in the future in response to sea level rise, although this is subject to investigations within the short term where there is a Hold the Line policy (**6a45**) (Halcrow Group 2011, 234-235). These policies would allow continued protection of Grade II Listed Buildings from flooding within Exmouth (*ibid*, 237). They would also allow continued protection of non-designated assets within Exmouth, as well as a large number of non-designated assets relating to maritime industry at Exmouth Docks.

Continued protection of this area through maintaining defences would reduce the risk of flooding of WWII remains associated with an AA battery, a possible pillbox and beach defences and the remains of a site from this period to the north of Maer Rocks. It is, however, possible that realigned defences on The Maer may impact a series of assets relating to the historic use of the Maer. Assets of WWII date may also be affected, including remains of barbed wire entanglements, anti-tank obstacles and the remains of Exmouth fort. Any surviving remains relating to the former boat houses to the west of the Esplanade may also be affected by flooding. Where monuments may be at risk as a result of policies of Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss mitigation could include a programme of investigation and recording.



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Fig. 27: Straight Point to Holcombe (PSA 8)



6b01 to 6b07. Exe Estuary (East bank – Exmouth to River Clyst)

The outer eastern side of the Exe Estuary is largely defended. The short, medium and long term policy is to Hold the Line of existing defences on the outer eastern side of the Exe Estuary, which covers Exmouth (west) (**6b01**), Exmouth (west) to Lypstone (**6b02**), Lypstone (**6b03**), Nutwell Park (**6b04**), Lypstone Commando (**6b05**), Exton (**6b06**), and Exton to Lower Clyst (**6b07**) (Halcrow Group 2011, 243). The SMP considers this policy will allow continued protection of Grade II Listed Buildings within Exmouth and Lypstone from flooding or erosion (Halcrow Group 2011, 245).

It is, however, considered that this policy has the potential to result in the loss of some areas of intertidal habitat within the estuary as sea levels rise, as this area may be prevented from moving landward by the line of current defences. It is therefore possible that any heritage assets within these areas may therefore also be at risk. Assets that may be affected by sea level rise and coastal squeeze in this area include intertidal features, stone alignments, fish-traps, beacons, wrecks and hulks within the estuary. Evidence relating to palaeochannels within the River Clyst may also be affected. Where monuments such as these may be at risk as a result of Hold the Line policies, further studies will be necessary to identify the impacts upon these areas as part of the management of change (Halcrow Group 2011, 47-48). The Exe Estuary has been identified as an area of particularly high archaeological potential within the East Devon District Local Plan and, where damage or destruction of assets within this area cannot be avoided, it is proposed that a programme of mitigation comprising survey, excavation and recording be undertaken.

6b08. Exe Estuary – Lower Clyst

The short, medium and long term policy in this area is for Managed Realignment to create new areas of intertidal habitat (Halcrow Group 2011, 254-255). The SMP considers this policy will ensure continued protection of Grade II Listed Buildings within Topsham from flooding or erosion (*ibid*, 256).

Managed realignment within this area may, however, affect non-designated assets of local importance within the estuary of the River Clyst, including embankments and drainage systems, evidence relating to palaeochannels, medieval field systems, a factory at Oldham's Wharf, and remains associated with Bridge Mill. Where monuments may be at risk as a result of policies of Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The Exe Estuary has been identified as an area of particularly high archaeological potential within the East Devon District Local Plan and, where damage or destruction of assets within this area cannot be avoided, it is proposed that a programme of mitigation comprising survey, excavation and recording be undertaken.

6b09 to 6b11. Exe Estuary (East bank – River Clyst to Topsham Sludge Beds)

The upper east side of the Exe Estuary is largely defended, protecting regionally important infrastructure links and residential centres. The short, medium and long term policy in this area is to Hold the Line of the existing defences and covers Topsham (**6b09**), M5 (east) to St James' Weir (**6b10**) and Topsham Sludge beds (**6b11**) (Halcrow Group 2011, 259). The SMP considers this policy will allow continued protection of Grade II Listed Buildings within Topsham from flooding or erosion (*ibid*, 261).

It is, however, considered that this policy has the potential to result in the loss of some areas of intertidal habitat within the estuary as sea levels rise, as the intertidal area may be prevented from moving landward by the line of current defences. Any heritage assets within these areas may therefore also be at risk. This is most likely to affect hulks immediately to the north and west of Topsham. Where monuments such as these may be at risk as a result of Hold the Line policies, further studies will be necessary to identify the impacts upon these areas as part of the management of change (Halcrow Group 2011, 47-48). The Exe Estuary

has been identified as an area of particularly high archaeological potential within the East Devon District Local Plan and, where damage or destruction of assets within this area cannot be avoided, it is proposed that a programme of mitigation comprising survey, excavation and recording be undertaken.

6b12 to 6b18. Exe Estuary (West bank)

The short, medium and long term policy for this area is one of Hold the Line of existing defences along the western side of the Exe Estuary, which covers St James' Weir to M5 (west) (**6b12**), M5 (west) to Turf Lock (**6b13**), Powderham (south) (**6b15**), Starcross (**6b16**), Cockwood (**6b17**) and Cockwood to The Warren (**6b18**). Along Powderham Banks, between Turf Lock to Powderham (**6b14**), the medium term plan is to move to a policy of Managed Realignment (Halcrow Group 2011, 265-266). The SMP considers that this policy will allow continued protection from flooding of Powderham Grade II* Registered Park and Garden and Grade II Listed Buildings within Starcross and Cockwood. It has also been recognised that the managed realignment of Turf Lock to Powderham in the medium term has the potential to impact upon the medieval harbour at *Le Turffe* (MDV55978), the canal, and hulks and fish traps within this area (Halcrow Group 2011, 267). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

Continued maintenance of defences within this area will protect a large number of non-designated assets of local importance including remains associated with an engine house and shaft to the east of Matford Farm Park and the site of a quay and sluice keepers cottage on the west side of Exeter canal. There are also a large number of assets on Exminster Marshes that may be protected, including a concentration of buildings of WWII date, evidence of former palaeochannels and peat deposits, reclamation banks, a lime kiln and Grade II Listed Station House to the west of the railway station, possible remains of a medieval house and the Grade II Listed Turf Lock and Turf Hotel.

The policy of Managed Realignment between Turf Lock and Powderham may affect earthworks associated with saltworking, reclamation banks, drainage and any surviving remains associated with a former engine house and round house. A small group of Listed Buildings of importance, located to the east of Powderham, may be affected by schemes of managed realignment, as may a small number of assets of local importance relating to maritime and industrial activities, including boat houses, landing stages and a former extraction pit.

Maintaining the existing line of defences within Starcross and Cockwood will protect a small number of non-designated assets of local importance near Cockwood, including remains associated with former buildings, saltworks, and a small number of assets relating to maritime and agricultural activity, including limekilns, a boat house and a slipway. Where monuments such as these may be at risk as a result of Managed Realignment or Hold the Line policies, further studies will be necessary to identify the impacts upon these areas as part of the management of change (Halcrow Group 2011, 47-48). The Exe Estuary has been identified as an area of particularly high archaeological potential within the East Devon District Local Plan and, where damage or destruction of assets within this area cannot be avoided, it is proposed that a programme of mitigation comprising survey, excavation and recording be undertaken.

6b19 to 6b22. Dawlish Warren

Dawlish Warren spit extends across the mouth of the Exe Estuary and forms an important defence function from the inner estuary. The short term policy for this area is to Hold the Line along the seaward face of Dawlish Warren, whilst the estuary-facing side of the spit would be left undefended with a No Active Intervention policy. The medium and long term policies for these areas are not currently defined as there is uncertainty about the most appropriate method for managing Dawlish Warren to allow defence for the rest of the estuary and meeting the requirements of the Habitat Regulations (Halcrow Group 2011, 276-277). This is

currently the case for the following areas: Dawlish Warren (inner side) **(6b19)**, East – distal end **(6b20)**, Central – gabion defences **(6b21)**, and West – hard defences **(6b22)**. The SMP considers that this policy will have no known impacts on archaeological features within the short term, but any plans for realignment within the medium to longer term have the potential to have an adverse impact upon prehistoric deposits and WWII structures within this area (*ibid*, 279). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

Predicted flooding and sediment movement on Dawlish Warren also has the potential to affect a large number of non-designated assets of local and wider importance, including the remains of a 20th century settlement, a small number of wrecks, remains of an artillery fort, as well as a series of defence structures including pillboxes, beach scaffolding and anti-aircraft obstructions of WWII date at the far western end of the Warren, and two anti-aircraft batteries at the far eastern end. Additional structures of local significance relating to former land use on Dawlish Warren may also be affected, including reclamation structures and the remains of a former golf course. Where monuments may be at risk as a result of policies of Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level, and where the policy may result in their damage or loss, mitigation could include a programme of investigation and recording of the more significant assets.

6b23 and 6b24. Langstone Rock to Holcombe

This section of coast is completely defended by a seawall and provides protection for the mainline railway line and the town of Dawlish. The short, medium and long term policy within this area is to Hold the Line of existing defences, which covers Langstone Rock to Coryton Cove **(6b23)** and Coryton Cove to Holcombe **(6b24)**. The seawall prevents erosion of the cliff and therefore the cliff line has been largely fixed over the past century. The areas of headland are, however, expected to continue eroding, with a total erosion of 5 to 30m predicted within the next 100 years (Halcrow Group 2011, 284-285) which would put the historic environment of this area at risk. The SMP considers that this policy will allow the continued protection of Grade II Listed Buildings within Dawlish from flooding or erosion (*ibid*, 286).

It is possible that non-designated assets related to maritime and defence activities of local and wider importance situated on headlands within this area may be affected by erosion. This includes a group of five structures associated with the Dawlish Defence Battery to the north of Coryton's Cove (MDV39547), the remains of an observation post of WWII date (MDV105337) and the remains of an octagonal structure (MDV105334), most likely a customs lookout, at Hole Head. Where monuments such as these may be at risk as a result of Hold the Line policies, consideration should be given at strategy or project level and further studies will be necessary to identify the impacts upon these areas as part of the management of change (Halcrow Group 2011, 47-48). Where the policy may result in their damage or loss, mitigation could comprise investigation and recording of the more significant assets.

9.5 Holcombe to Hope's Nose (PSA9) (Fig. 28)

This area consists of a largely undeveloped section of coastline, with the exception of the towns of Teignmouth, Shaldon and Newton Abbot. The cliffs within this section are considered to be geologically resistant and therefore unlikely to be affected too strongly by erosion, although it is considered that beaches within this area will become narrower as a result (Halcrow Group 2011, 36). The rail infrastructure within this area abuts the coastline and therefore needs to be considered within the policy.



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Fig. 28: Holcombe to Hope's Nose (PSA 9)



6b25 to 6b29. Holcombe to Teignmouth (The Point)

The short, medium and long term policy for this area is to Hold the Line of existing defences including seawalls and groynes to protect the railway and reduce the risk of flooding at Teignmouth. This covers Holcombe to Sprey Point (**6b25**), Sprey Point (**6b26**), Sprey Point to Teignmouth Pier (**6b27**) and Teignmouth Pier to The Point (**6b28**). The defences within this area prevent erosion of the cliff toe and have resulted in negligible cliff recession over the last century, thereby largely protecting the historic environment of this area. The policy for The Point (**6b29**) is one of Managed Realignment within the short, medium and long term (Halcrow Group 2011, 289-290). The SMP considers that this policy may have the potential to put some Grade II Listed Buildings at risk from flooding, while a Protected Wreck may experience increased erosion resulting in a potential adverse impact (*ibid*, 292). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

Predicted erosion rates within this area also have the potential to affect a number of non-designated assets of local importance such as the remains of a former building and lime kiln to the south of Sprey Point, as well as assets of regional and wider importance, including a small number of defence structures of WWII date and a section of the South Devon Railway. Between Sprey Point and Teignmouth Pier assets may be at risk of flooding, including remains associated with former town defences in Teignmouth, as well as any surviving remains of a battery and beach scaffolding of WWII date. However, if the policies within the SMP are maintained, it is likely that some of these assets will be protected from flooding through the maintenance of Teignmouth Beach. The impacts of the preferred policies upon these assets should be investigated further and, where these sites cannot be protected from erosion, investigation and recording of the more significant assets may be appropriate.

6b30 to 6b35. Teign Estuary

The short, medium and long term policy for the Teign Estuary is to Hold the Line of existing defences, including the seawall and embankment defences, covering The Point to Teignmouth and Shaldon Bridge (**6b30**), North Shore (Teignmouth and Shaldon Bridge to Passage House Hotel) (**6b31**), Kingsteignton and Newton Abbot (**6b33**), Shaldon (**6b35**) and South Shore (Newton Abbot to Shaldon) (**6b34**), with a policy of No Active Intervention along the currently undefended sections within this area. In the upper estuary towards Newton Abbot it is recommended that a policy of Managed Realignment be implemented during the medium and longer term which would allow flood storage and space for the estuary to adapt to rising sea levels; this covers the Passage House Hotel to Kingsteignton Road Bridge (**6b32**) (Halcrow Group 2011, 298-299). The SMP considers that this policy will result in some Grade II Listed Buildings potentially being at risk from flooding (*ibid*, 301).

The Environment Agency Flood Risk Zone 2, as shown within the SMP, affects a large proportion of the Teign Estuary and therefore a number of existing defences will need to be maintained in order to reduce the risk of flooding. These will, however, prevent the movement of the Teign Estuary landward resulting in a vertical movement of the estuary, which may lead to some additional erosion (Halcrow Group 2011, 298). The combination of a Hold the Line and Managed Realignment approach is expected to reduce the risk of flooding to a number of areas including Teignmouth, Teignmouth Harbour, Shaldon, Newton Abbot and the mainline railway. This will also result in a number of both designated and non-designated assets that fall within this area being protected against the risk of flooding (Halcrow Group 2011, 301).

A Hold the Line approach may help to reduce the risk of flooding to a number of small non-designated assets, including the site of a former house and quay at Flow Point and the remains of a summerhouse to the north of Coombe Cellars. Assets within the Teign Estuary could however be affected by erosion, including remains associated with anti-invasion obstacles near the mouth of the river (MDV52948), as well as maritime assets associated with salt works and fishtraps. Managed realignment between the Passage House Hotel and

Kingsteignton Road Bridge may affect a group of non-designated assets on Hackney Marshes that are at risk of flooding associated with sea level rise, including an enclosure (MDV80857) and evidence of lynchets (MDV14460). On the south shore, non-designated assets of local significance relating to post-medieval and modern agricultural and maritime activity including a boathouse and limekiln may be at risk of flooding to the north of Netherton and at Arch Brook Bridge, and remains associated with a possible early medieval settlement at Coombe Cellars (MDV16459). A small number of assets of local significance, including a milestone and lime kiln located on the southern edge of the Teign Estuary near Shaldon, may also be affected by flooding.

The SMP indicates that some areas of Teignmouth and Shaldon are likely to be protected from the risk of flooding as a result of maintaining existing defences but, should these fail, a large number of Listed Buildings and non-designated assets within both of these urban areas could be at risk from flooding. Predicted changes in coastline as a result of erosion to the east of The Strand could affect any surviving remains of a small number of non-designated assets of local importance, as well as some of slightly wider importance including Shaldon Emergency Battery (MDV39548) and Gun Emplacement (MDV76029). Where monuments may be at risk as a result of policies of Hold the Line or Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6b36 to 6b40. Shaldon (The Ness) to Petit Tor Point

The short, medium and longer term policy is for No Active Intervention along this predominantly undefended stretch of coastline. Erosion of the cliff line is predicted to be up to 10-25m by 2105 (Halcrow Group 2011, 309) which would put the historic environment of this area at risk. This policy covers Shaldon (The Ness) to Maidencombe (North) (**6b36**), Maidencombe (**6b37**), Maidencombe (South) to Watcombe Head (**6b38**), Watcombe (**6b39**) and Watcombe to Petit Tor Point (**6b40**). The SMP considers that this policy will result in some Grade II Listed Buildings potentially being at risk from erosion (*ibid*, 311).

A series of non-designated assets of local and wider importance may also be affected by erosion along this area of the coast, including remains of former buildings and those associated with WWII defence structures. Between Maidencombe (South) to Watcombe Head it is possible that coastal erosion may affect the eastern edge of two areas of lynchets (MTO55733 and MTO55734), as well as any surviving remains associated with a former boat house (MTO48391) to the west of Watcombe Beach. Between Watcombe and Petit Tor Point coastal erosion has the potential to affect the far southeast corner of an area of lynchets (MDV104993) to the west of Shag Cliff and a small number of assets of unknown significance that have been identified from historic maps. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6b41. Petit Tor Point to Walls Hill

The short, medium and longer term policy for this area is to Hold the Line of existing structures, such as seawalls and revetments (**6b41**). Defences at Oddicombe Beach protect local release of sediment from cliff erosion. Total erosion of up to 15m is predicted by 2105 along the short length of unprotected cliffs (Halcrow Group 2011, 317). The SMP considers that this policy will protect Grade II Listed Buildings against erosion (*ibid*, 319).

A small number of non-designated assets may be at risk of erosion, including remains associated with Petit Tor Quarry (MTO48382), as well as a small number of remains associated with a group of assets of WWII date near Babbacombe Beach and a former coastguard station to the south of the beach, which may be affected by both flooding and erosion. The impacts of the preferred policies upon these assets should be investigated further and, where these sites cannot be protected from erosion, a programme of mitigation comprising investigation and recording of the more significant assets may be appropriate.

6b42 to 6b44. Walls Hill to Hope's Nose

The short, medium and longer term policy for this area is for No Active Intervention to continue along this stretch of largely undefended coast which would be allowed to continue to evolve naturally (Halcrow Group 2011, 322). This area covers Walls Hill (**6b42**), Anstey's Cove (**6b43**) and Anstey's Cove to Hope's Nose (**6b44**). The SMP considers that this policy will result in some Grade II Listed Buildings potentially being at risk from erosion and there is the potential for loss of the prehistoric field system at Walls Hill, which is a Scheduled Monument (NHLE 1019134), (*ibid*, 324). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

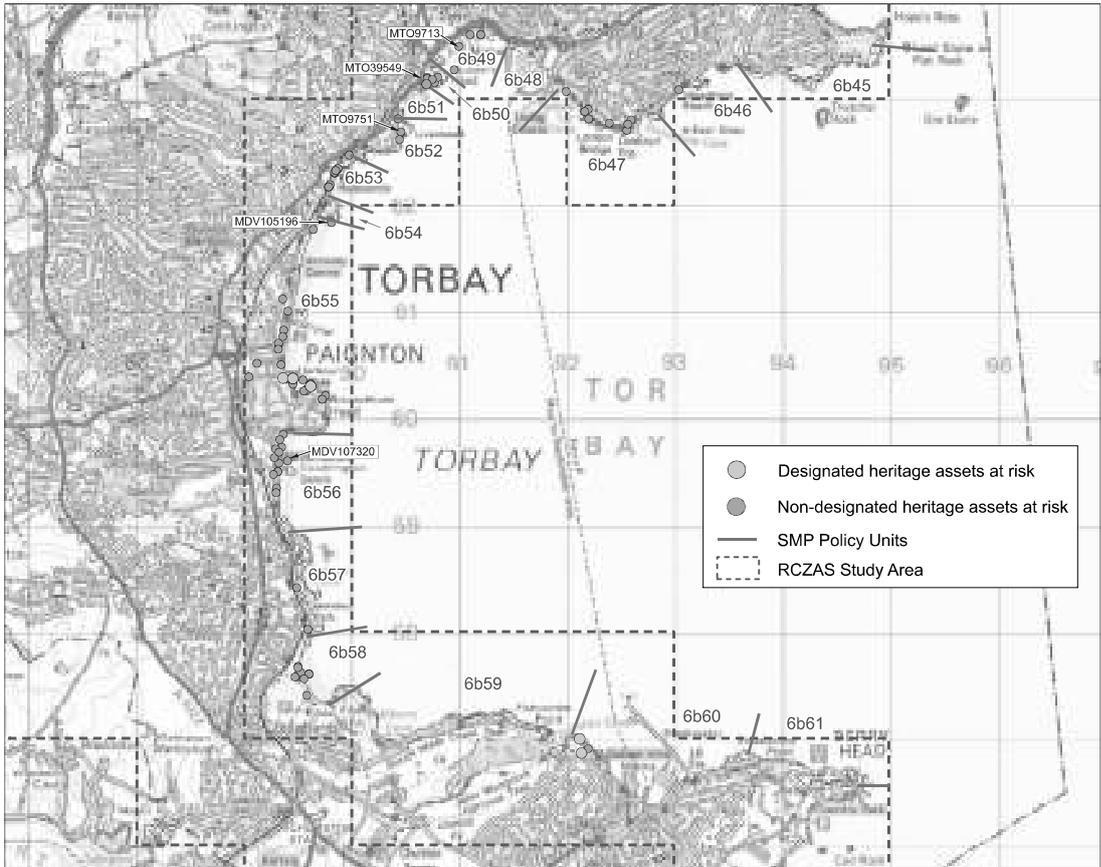
There are also a series of non-designated assets within this area that have the potential to be affected by coastal erosion. This includes the possible site of a promontory fort at Devil's Point (MTO9781) which is noteworthy as it may comprise archaeological deposits of Iron Age date which have been considered to be one of the areas of greatest archaeological potential within the study area (see 7.2 above). Additional assets of local and wider importance within this area that are at threat of erosion include buildings to the south of Withy Point and Redgate Beach, as well as former quarries between Withy Point and Redgate Beach. Remains associated with a former battery at Long Quarry Point (MDV111410) may also be affected by erosion and a cavern near Anstey's Cove (MTO9681) may be affected by both erosion and flooding. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

9.6 Hope's Nose to Berry Head, Tor Bay (PSA10) (Fig. 29)

This is a heavily developed area which encompasses the Torbay district and therefore 'the key driver is the continued protection of the important social and commercial assets, although this could adversely affect some of the designated geological features' (Halcrow Group 2011, 36). The embayed nature of the coastline within this unit means that the beaches tend to be self-contained, with limited movement of sediment between them.

6b45 to 6b47. Hope's Nose to Beacon Cove

The short, medium and longer term policy is to Hold the Line along Meadfoot Beach (**6b46**) through the maintenance of existing seawalls and revetments, which would protect against erosion and flooding of property and infrastructure. Along the rest of the undefended coastline, the policy is for No Active Intervention and erosion is expected to result in a total retreat of between 5 and 30m by 2105 (Halcrow Group 2011, 328) which would therefore put the historic environment of this area at risk. This includes the coastline between Hope's Nose to Meadfoot Beach (East) (**6b45**) and Meadfoot Beach (West) to Beacon Cove (**6b47**). The SMP considers that these policies will result in potential loss of Grade II Listed Buildings as a result of localised cliff recession along undefended parts (*ibid*, 330). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.



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Fig. 29: Hope's Nose to Berry Head (PSA 10)



Coastal erosion between Hope's Nose and Daddyhole Cove may affect a number of non-designated assets of local importance relating to local industrial activity such as quarries and limekiln, as well as a series of maritime assets including a breakwater and observation posts. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6b48 to 6b55. Beacon Cove to Roundham Head

The short, medium and longer term policy is to protect the developed frontages through a Hold the Line approach at Beacon Cove to Torre Abbey Sands (Torquay Harbour) (**6b48**), Torre Abbey Sands (**6b49**), Livermead Sands (**6b51**), Hollicombe Beach (**6b53**) and Hollicombe Head to Roundham Head (**6b55**). Along the undefended rocky headlands a policy of No Active Intervention will be adopted at Corbyn's Head (**6b50**), Livermead Head (**6b52**) and at Hollicombe Head (**6b54**) (Halcrow Group 2011, 334). The SMP considers that this approach will allow the protection of Princess Gardens and Royal Terrace Gardens Grade II Registered Park and Garden and a large area of Torre Abbey Scheduled Monument, from flooding (*ibid*, 336).

The predicted coastal erosion within this area may, however, impact upon some assets of regional and wider importance including any surviving remains associated with the Corbyn's Head Emergency Coastal Battery (MTO39549), deposits relating to Livermead Harbour, Torquay (MTO9751) and the localised submerged forest deposits (MTO9713).

Non-designated assets of regional importance that may be affected by erosion include remains associated with WWII defence at Hollicombe Beach and Oil Cove. Erosion within this area may also affect the remains of a linear structure of unknown significance within the intertidal zone to the south of Hollicombe Head (MDV105196). Flood risk at Paignton may affect a number of non-designated assets associated with maritime activity and WWII defence along the seafront, including a slipway, remains associated with air raid shelters and pillboxes. It may also affect both designated and non-designated buildings to the west of Esplanade Road and buildings associated with the North and South Quay at Paignton Harbour. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6b56 to 6b59. Roundham Head to Churston Cove (East)

The short, medium and longer term policy is for No Active Intervention on the undefended parts of the coast between Goodrington Sands and Broadsands (**6b57**) and Broadsands to Churston Cove (East) (**6b59**), as little or no change in cliff position is expected as a result of the resistant geology of the cliffs. At Goodrington Sands and Broadsands there is a need to provide protection from flooding and erosion and therefore a Hold the Line approach in the short term, whilst plans are put in place for a Managed Realignment of defences within the medium term. This may lead to a Hold the Line approach within the longer term at Goodrington Sands (**6b56**) and a No Active Intervention at Broadsands (**6b58**) (Halcrow Group 2011, 345-346). The SMP considers that there may be a possible risk of erosion as a result of small landslide events to a Scheduled Monument to the east of Churston Cove (*ibid*, 345). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

A small number of non-designated assets of local importance may be affected by erosion within this area; numerous quarries on the cliff edge between Churston Point and Fishcombe

Point, and the site of a possible saltern. Non-designated assets of regional and wider importance that may be affected by flooding associated with sea level rise include peat deposits at Goodrington Sands (MDV107320) and buildings and anti-invasion defences to the west of the beach. Flooding associated with sea level rise at Broadsands may also affect any surviving remains associated with a series of defence structures of WWII date, including a slit trench, searchlight battery, possible military building, anti-tank scaffolding and an anti-tank block. Where monuments may be at risk as a result of policies of Hold the Line or Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6b60 and 6b61. Brixham

The short, medium and longer term policy is to Hold the Line along the Brixham frontage through maintaining existing defences between Churston Cove (East) to Shoalstone Point (**6b60**). Along the undefended hard rock stretches of coast there is a policy of No Active Intervention, where negligible cliff recession is predicted by 2105 at Shoalstone Point to Berry Head (**6b61**) (Halcrow Group 2011, 353). The SMP considers that these policies would allow continued protection of a WWII Battery, which is designated as a Scheduled Monument (*ibid*, 355).

Maintenance of existing defences should therefore protect a large number of Listed Buildings and non-designated assets including slipways, piers, a pillbox, mooring points and an embarkation hard of WWII date, which would otherwise be at risk of flooding associated with sea level rise.

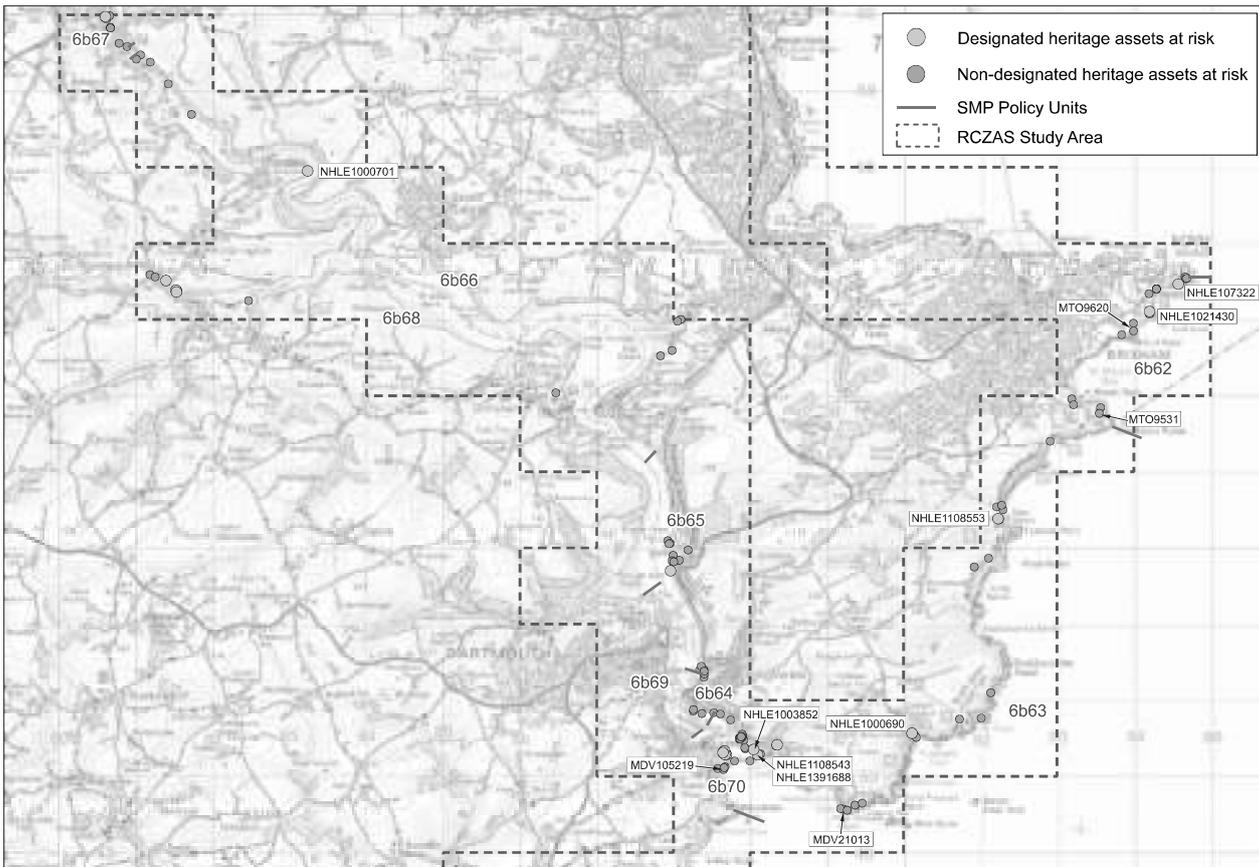
9.7 Berry Head to Blackstone Point (PSA11) (Fig. 30)

The cliffs within this area are considered to be of outstanding landscape value and the plan within much of this area is to allow natural evolution of the shoreline. This policy may lead to loss of some properties in St Mary's Bay due to erosion and defences within the Dart Estuary will need to be maintained to minimise the risk of flood and erosion (*ibid*, 37).

6b62 and 6b63. Berry Head to Kingswear (South)

The short, medium and longer term policy for this area is to allow natural retreat of the undefended stretch of coast through a No Active Intervention approach between Berry Head to Sharkham Point (**6b62**) and Sharkham Point to Kingswear (South) (**6b63**). Total erosion of between 7 and 10m is predicted along St Mary's Bay by 2055 (Halcrow Group 2011, 359) which would therefore put the historic environment of this area at risk. The SMP considers that this may result in the potential loss to erosion of a number of Grade I and Grade II Listed Buildings and part of a Registered Park and Garden (Halcrow Group 2011, 361). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

It is, however, also possible that erosion within this area may affect the southern and eastern edge of Berry Head Fort and Battery, as well as the eastern edge of the Old Redoubt and later Victorian Rifle Range a little further to the south, both of which are designated as Scheduled Monuments (NHLE 1017322 and NHLE 1021430). The southern edge of the Landscope Strip field system (MTO9620) may be affected by coastal erosion, as may the eastern edge of an Iron Mine at Sharkham Point (MTO9531). Additional non-designated assets of local importance may also be affected by erosion within this area including the remains of a building and garden to the southwest of Berry Head, the remains of a quarry to the east of Landscope Holiday Village and a small number of assets, including a quarry and adit to the south of St Mary's Bay, Brixham.



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Fig. 30: Berry Head to Blackstone Point (PSA 11)



Between Sharkham Point and Kingswear (South) erosion may affect remains of a Grade II Listed limekiln at Man Sands (NHLE 1108553) and may also approach towards the southern tip of the Grade II* Registered Park and Garden at Coleton Fishacre (NHLE 1000690). Given their close proximity to the cliff edge it is also possible that the Grade I Listed Kingswear Castle (NHLE 1108543), Grade II Listed Kingswear Torpedo Battery (NHLE 1391688) and Gomerock Tower (NHLE 1003852), which is a Scheduled Monument, may also be affected by coastal erosion. Non-designated assets of local importance that may also be at risk of erosion along this area of the coast include the possible remains of an extractive pit to the west of Sharkham Point, as well as a series of assets at Man Sands, including a former building, boat house and lime kiln. Possible remains of local importance largely identified through placename evidence may be exposed to the south of Scabbacombe Head, while remains of regional or wider importance associated with Brownstone Emergency Battery (MDV21013) may be exposed at Inner Froward Point. A number of assets at Mill Bay Cove, and surrounding Kingswear Castle and Gommerock Castle may also be affected by erosion including a pillbox and earthwork. Any surviving remains associated with former boat houses and a lighthouse to the southeast of Beacon Road, Kingswear, may also be exposed as a result of erosion within this area.

The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation

6b64 to 6b70. Dart Estuary

The short, medium and longer term policy is to continue to Hold the Line where defences already exist to improve flood protection within a number of areas including the large settlements at Kingswear, Totnes and Dartmouth. Within the currently undefended sections a policy of No Active Intervention will apply. This policy covers Dart Estuary – Kingswear (South) to Waterhead Creek (**6b64**), Waterhead Creek to Greenway Viaduct (**6b65**), Greenway Viaduct to Totnes South (east bank) (**6b66**), Totnes (**6b67**), Totnes South (west bank) to Dartmouth (North) (**6b68**), Dartmouth (North) to Halftide Rock (**6b69**) and Halftide Rock to Blackstone Point (**6b70**) (Halcrow Group 2011, 364). The SMP considers that this will result in no loss of Scheduled Monuments or Registered Parks and Gardens (*ibid*, 366-367).

The Environment Agency Flood Risk zones for this area are detailed within the SMP and indicate that flooding may affect a group of Listed Buildings and non-designated assets at both Kingswear and Dartmouth, but the risk of flooding should continue to be reduced within these areas if existing defences are maintained. Flooding also has the potential to affect the site of non-designated maritime assets, such as shipyards and quays and military remains of WWII date within the Dart Estuary, including pillboxes and a military base. A small part of the eastern and northeast fringes of the Grade II* Registered Park and Garden at Sharpham House (NHLE 1000701) may also be affected by flooding. Within the Totnes area a large number of heritage assets are at risk of flooding on either side of the River Dart. The remains of a limekiln to the south of Bow Creek may be affected by flooding associated with rising sea levels, while it is also possible that some of the designated and non-designated assets that lie to the west of Crownley Wood, Bow may also be affected.

It is possible that remains associated with a former pillbox to the east of Dartmouth Castle may be at risk of erosion, as may any surviving remains associated with a coastal anti-aircraft battery at Castle Cove (MDV105219). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

9.8 Blackstone Point to Start Point (PSA12) (Fig. 31)

This area is characterised by a shingle barrier which over geological timescales has progressively become segmented by emerging headlands as it has migrated landwards in response to rising sea levels (Halcrow Group 2011, 37). There are also a large number of shingle beaches within this area, such as Slapton Sands. The plan within this area is to undertake localised interventions, where necessary, to manage the natural realignment of Slapton Sands and there is the possibility that road access to Slapton Sands will be lost in the future (Halcrow Group 2011, 37). 'As the shingle ridges at Slapton Sands and Beesands Beach roll-back landwards, it will become increasingly difficult to continue to provide sustainable defence to all parts of the villages of Beesands and Torcross, so some realignment in these areas will need to be considered in the long term' (*ibid*, 37).

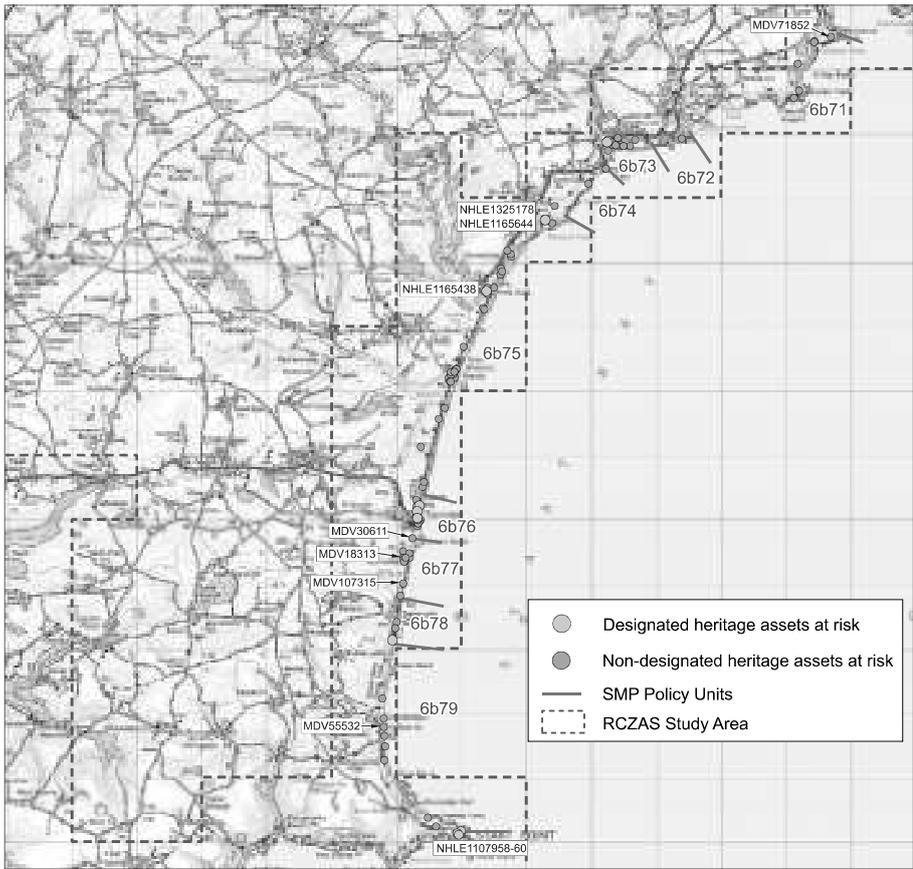
6b71 to 6b74. Blackstone Point to Strete

The short, medium and longer term policy is for No Active Intervention along this predominantly undefended stretch of the coast to allow it to continue to evolve naturally, with total erosion of about 10m predicted by 2105, which would put the historic environment of this area at risk. This area includes Blackstone Point to Stoke Fleming (**6b71**), Stoke Fleming to Blackpool Sands (**6b72**) and Blackpool Sands to Strete (**6b74**). At Blackpool Sands the policy is to continue to allow existing defences to be maintained or replaced if funding is available, but, if not, then to allow natural coastal evolution through a No Active Intervention policy (**6b73**) (Halcrow Group 2011, 375). The SMP considers that these policies may result in some Grade II Listed Buildings being potentially at risk from erosion. The submerged forest at Blackpool Sands will remain submerged and there may be a possible impact on the palaeoenvironmental deposits at Blackpool Sands (Halcrow Group 2011, 378-379). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

It is also possible that any surviving remains of local and regional importance associated with defensive structures of WWII date, including a battery and anti-aircraft battery at Blackstone Point (MDV71852), as well as structures at Compass Cove, Willow Cove, Coombe Point, Blackpool Bridge and Matthew's Cove, may be at risk of erosion. It is also possible that assets of local importance relating to buildings and agriculture and industry, such as quarries, within this area may be affected by flooding and erosion. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6b75 to 6b76. Strete to Limpet Rocks

The coastline in this area is characterised by vegetated sea cliffs, freshwater lagoons and shingle ridges. The short, medium and longer term policy for Slapton Sands frontage, which includes the stretch from Strete to Torcross North (Slapton Sands) (**6b75**), is Managed Realignment which will also involve reactive realignment of the road and will change to a policy of No Active Intervention in the longer term once the road has been abandoned. At Torcross North to Limpet Rocks (**6b76**) the policy is to Hold the Line within the short to medium term to protect assets within the village, but this will become a policy of Managed Realignment in the longer term. The small section of cliffs at the northern end of this section would be expected to have a total erosion of approximately 10m by 2105 (Halcrow Group 2011, 384-386) which would therefore put the historic environment at risk. The SMP considers that this approach will allow continued protection to Grade II Listed Buildings within Torcross, but the managed realignment in the long term between Strete and Limpet has the potential to impact on prehistoric deposits and WWII sites at Slapton (Halcrow Group 2011, 388). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.



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Fig. 31: Blackstone Point to Start Point (PSA 12)



It is possible that assets of national importance including the Grade II Listed Building (NHLE 1325178) and milestone (NHLE 1165644) at Asherne may be affected by coastal erosion within the 0-20 year period, while a Grade II Listed milestone at Strete Gate (NHLE 1165438) may be at risk of erosion within the 50-100 year period. There is also a large concentration of assets relating to buildings and defence structures of WWII date along the length of Slapton Sands that may be affected by erosion. Where monuments may be at risk as a result of policies of Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6b77 and 6b78. Limpet Rocks to Beesands

The short, medium and longer term policy at Beesands is to Hold the Line through the maintenance of the existing seawall and rock revetment which provides protection against flood and erosion, with the possible need to undertake Managed Realignment within the medium to longer term along the northern parts of this stretch. The rest of the section between Limpet Rocks to Beesands (North) consists of undefended cliff which would be allowed to erode naturally through a No Active Intervention approach (Halcrow Group 2011, 391-392). The SMP considers that this approach will protect Grade II Listed Buildings at Beesands from flooding, although it is possible that these will become at risk of flooding and erosion if Managed Realignment is implemented in the medium to longer term (*ibid*, 394).

It is possible that remains associated with Beesands Battery (MDV30611) and Beesands Quarry (MDV18313) may be at risk of erosion within the next 100 years, while a group of WWII military buildings and coastal defences within this area may be at risk of erosion and flooding. Peat deposits (MDV107315) of regional and wider significance at Beesands beach may also be at risk as a result of rising sea levels. Where monuments may be at risk as a result of policies of Hold the Line or Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48). The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6b79. Beesands (South) to Start Point

The short, medium and longer term policy is for No Active Intervention along this largely undefended section of coast where negligible erosion of the hard rock cliffs would be expected (Halcrow Group 2011, 397). The SMP considers that this policy will result in risk of further damage to Hallsands 'lost village' (*ibid*, 399). Deposits of regional and wider significance associated with a submerged forest at Hallsands (MDV55532) may be affected by a combination of flooding and erosion. At Start Point there are a group of assets that may be at risk from coastal change within the next 0-20 year period. This includes a piggery (NHLE 1107960), well house (NHLE 1107959) and lighthouse (NHLE 1107958), all of which are Grade II Listed Buildings. A small number of non-designated assets may also be affected by erosion within this area, including the site of a gallows and a signal station. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding.

9.9 Start Point to Bolt Head (PSA13) (Fig. 32)

With the exception of the settlements at Kingsbridge and Salcombe this area of coast has few defences and is characterised by cliffs of geological importance. The policy is therefore to allow continued natural evolution of the shoreline with no intervention (Halcrow Group 2011, 37).

6c01 and 6c02. Start Point to Limebury Point

The short, medium and longer term policy is for No Active Intervention along this area of predominately undefended coastline between Start Point to Prawle Point (**6c01**) and between Prawle Point and Limebury Point (**6c02**). There is considered to be negligible cliff recession, although very localised small scale cliff failures could result in up to 10m of erosion in small areas (Halcrow Group 2011, 401), which could therefore put the historic environment of this area at risk. The SMP considers that this policy may result in the potential loss of small parts of two areas of coaxial field system which are designated as Scheduled Monuments (NHLE 1019324 and NHLE 1021253), (*ibid*, 403). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

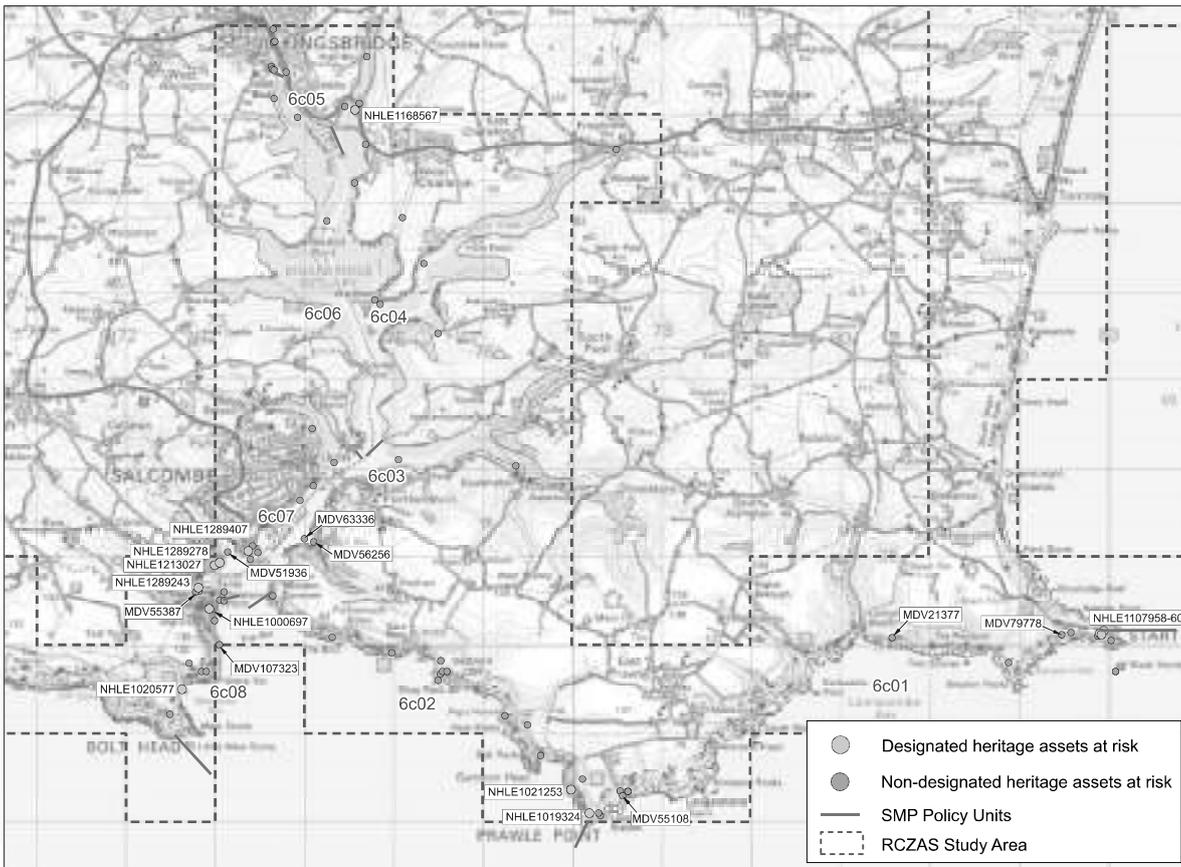
Between Start Point and Prawle Point there are a number of non-designated heritage assets that may be at risk from coastal change within the next 0-20 year period. This includes the southern end of a post-medieval field system (MDV79778) at Start Point, the southern end of a prehistoric field system at The Narrows (MDV21377), while additional prehistoric artefact scatters may also be revealed as a result of erosion of the cliffs near Peartree Point, Lannacombe Beach and Langerstone Point. Remains associated with Prawle Point Radar Station (MDV55108) and a small number of assets at Prawle Point may also be at risk of erosion.

Between Prawle Point and Limebury Point there are two areas of co-axial fields which are both Scheduled Monuments (NHLE 1019324 and NHLE 1021253). The projected line of potential erosion within the next 0-20 year period detailed within the SMP has the potential to erode the western edge from both of these areas. It is also possible that assets relating to industry within this area, including a series of assets relating to mines at Gammon Head, Pig's Nose and Deckler's Cliff may be affected by erosion. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6c03. Salcombe Harbour (Limebury Point to Kingsbridge Estuary – Scoble Point)

The short, medium and longer term policy is to Hold the Line where there are existing defences to reduce the flood risk to settlements. In other areas there will be a policy of No Active Intervention (Halcrow Group 2011, 407). The SMP considers that as a result of this policy there are some Grade II and Grade II* Listed Buildings which are at risk of flooding within this area (*ibid*, 408).

It is also possible that remains associated with a former mill at Mill Bay (MDV63336) might be affected by flooding associated with rising sea levels, as well as the remains of a slipway dating to WWII (MDV56256). Many of the other non-designated assets within this area are predicted to remain unaffected by changes in sea level or erosion. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.



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Fig. 32: Start Point to Bolt Head (PSA 13)



6c04 to 6c06. Kingsbridge Estuary

The short, medium and longer term policy is to Hold the Line of existing defences to minimise the risk of flooding and in those areas of undefended coast a policy of No Active Intervention is to apply (Halcrow Group 2011, 410). This relates to Scoble Point to Kingsbridge (**6c04**), Kingsbridge (**6c05**) and Kingsbridge to Snapes Point (**6c06**). The SMP considers that these policies will protect Grade II and Grade II* Listed Buildings, particularly at Kingsbridge, against the risk of flooding (*ibid*, 412).

It is predicted that the majority of non-designated assets between Scoble Point and Kingsbridge will remain unaffected by erosion, but there are a few small areas containing assets of local importance that may be affected by flooding including a gatepier, quay and limekilns. At Kingsbridge, it is possible that flooding may impact upon Grade II Listed lime kilns to the southeast of New Bridge (NHLE 1168567), as well as assets of local importance largely relating to maritime activity including a quay, landing stage and a tidemill. It is also possible that assets within the intertidal areas of the Kingsbridge estuary may be impacted by rising sea levels, including rows of navigation posts, wrecks, and hulks. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6c07. Salcombe (Snapes Point to Splat Cove Point)

The short, medium and longer term policy for this area is to Hold the Line of existing defences to reduce the risk of flooding, with a No Active Intervention policy within those areas of currently undefended coast (Halcrow Group 2011, 416). The SMP considers that this policy would allow continued protection of Grade II and Grade II* Listed Buildings, predominantly at Salcombe, but it also acknowledges that a small area of Overbecks Grade II Registered Park and Garden (NHLE 1000697) has the potential to be at risk from flooding and there is also a possible adverse impact on anti-aircraft batteries between Salcombe and Splat Cove (*ibid*, 417). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

It is also possible that the Grade II Listed lifeboat house (NHLE 1289243) to the west of South Sands may be affected by flooding as a result of rises in sea level and, although they have not been highlighted within the SMP, the Grade II Listed house and summerhouse at Moulton (NHLE 1213027), together with associated Grade II Listed outbuildings (NHLE 1289278). These are situated close to the area in which erosion is predicted within the next 0-20 years, indicating that the curtilage associated with this group of assets may be vulnerable to erosion within the longer term. Given its location on a natural rock island near the mouth of the Kingswear Estuary, it is also considered possible that surviving remains associated with Fort Charles which is designated as a Scheduled Monument (NHLE 1289407), may also be at risk from erosion. Additional assets of regional or wider importance that may be affected by flooding include prehistoric organic deposits to the west of South Sands beach (MDV55387), while deposits associated with a prehistoric submerged forest at North Sand Bay (MDV51936) may be affected by coastal erosion. A small number of assets of local or regional importance that may be affected by flooding include any surviving remains associated with a former limekiln at South Sands, and the remains of a military building of WWII date and a small fortlet to the east of Cliff Road. Non-designated assets including boat houses, landing stages, slipways and buildings within Salcombe should be protected by existing defences. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6c08. Splat Cove Point to Bolt Head

The short, medium and longer term policy for this area is for No Active Intervention and the total cliff erosion along this shoreline is not expected to exceed 10m by 2105 (Halcrow Group 2011, 419). The SMP considers that this policy may result in a small area of Overbecks Grade II Registered Park and Garden (NHLE 1000697) and part of a Scheduled Monument being at risk from erosion (*ibid*, 420). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

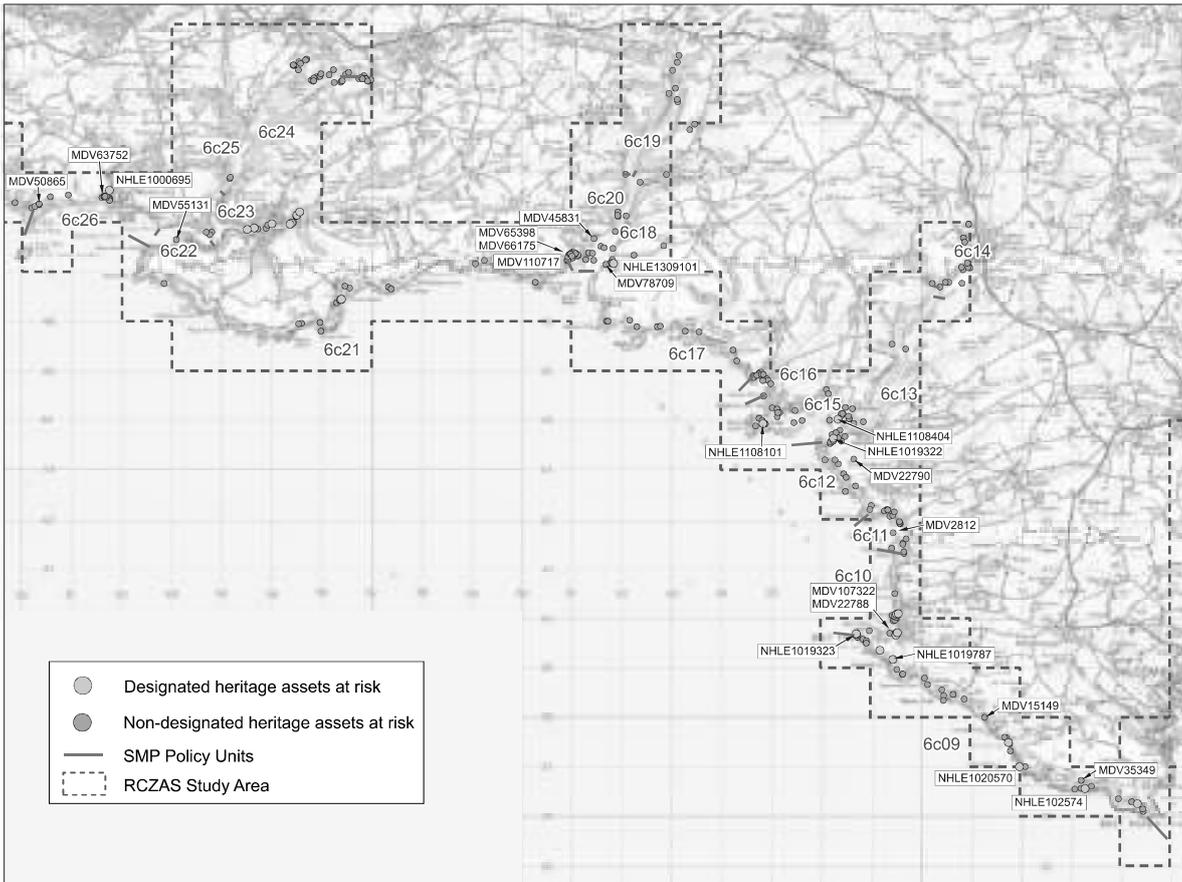
The co-axial field system, hut circles and medieval farm buildings at Starehole Bottom are designated as a Scheduled Monument (NHLE 1020577) to the north of Bolt Head and extend down towards the beaches at Starehole Bay. It is possible that within the next 0-20 year period erosion could occur on the eastern fringe of this monument. Erosion along this part of the coast may also reveal additional deposits relating to the submerged forest between Bolt Head and Salcombe (MDV107323), which is considered of regional or wider significance. A small number of non-designated heritage assets of local and regional significance relating to agriculture and WWII defence may also be at risk of erosion along this stretch of coast, including any surviving remains associated with a lookout and an anti-aircraft battery, while the eastern edge of a field system with evidence for ridge and furrow may also be affected. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

9.10 Bolt Head to Wembury Point (PSA14) (Fig. 33)

This area of coast includes the Avon, Yealm and Erme Estuaries and is characterised by cliffs of outstanding landscape and geological value. A large proportion of this coastline is undeveloped, and there are few coastal defences, leading to a policy of no intervention which may have the potential to damage or lose a number of cliff top assets (Halcrow Group 2011, 38). 'A policy of Hold the Line at Newton Ferrers and Noss Mayo within the Yealm Estuary would allow continued protection to this developed area' (*ibid*, 38).

6c09 to 6c12. Bolt Head to Avon Estuary (East)

The short, medium and longer term policy is for No Active Intervention along this largely undefended stretch of coast between Bolt Head to Bolt Tail (**6c09**), Bolt Tail to Thurlestone Rock (**6c10**) and Warren Point to Avon Estuary (East) (**6c12**). At Thurlestone Rock to Warren Point (**6c11**) existing localised defences could be maintained if funding was available, but, if not, it would be a policy of No Active Intervention (Halcrow Group 2011, 422). The SMP recognises that this policy could result in Grade I, Grade II and Grade II* buildings at Inner and Outer Hope being potentially at risk from erosion, along with five Scheduled Monuments comprising the field system, hut circles and four beacons to the south of Middle Soar (NHLE 1020574), medieval farmstead and field system at Warren Barn (NHLE 1020570), Five Round Barrows (NHLE 1019787), Iron Age Cliff Castle at Bolt Tail (NHLE 1019323), as well as the Roman settlement site at Bantham Ham (NHLE 1019322). Organic deposits and pillboxes at Thurlestone may also be affected (Halcrow Group 2011, 425-426). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.



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Fig. 33: Bolt Head to Wembury Point (PSA 14)



There are also a series of non-designated assets along this stretch of coastline that may be affected by erosion within the next 0-20 year period. Organic deposits of regional and wider significance associated with the remains of submerged forests at Inner Hope (MDV107322) and Thurlestone Sands (MDV2812) may be affected by erosion and rising sea levels. Erosion may expose additional prehistoric findspots within this area and may also affect the sparse remains of a prehistoric field system at Cathole Cliff (MDV15149), together with evidence of a prehistoric settlement at Inner Hope (MDV22788). A substantial number of assets of local and wider importance relating to WWII defences throughout this area may also be affected by erosion and flooding, including remains of Bolt Head Radar Station (MDV35349). Non-designated sites of local importance within this area also include assets relating to post-medieval and modern maritime activity, as well as agriculture and industry, including quarries and field systems. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6c13 to 6c15. Avon Estuary

The short, medium and longer term policy is for No Active Intervention within the outer parts of the Avon Estuary between the East Bank – Mouth to Stadbury Farm (**6c13**). The policy for Managed Realignment would be considered within the short term and would continue in strategic locations in the medium and longer terms within the upstream section – Stadbury Farm to Stakes Hill (**6c14**), with No Active Intervention along the currently undefended sections. Within the West Bank – Stakes Hill to Warren Point, Bigbury-on-Sea area (**6c15**) existing localised defences will be maintained or replaced if alternate funds are available, otherwise a policy of No Active Intervention will be adopted (Halcrow Group 2011, 431). The SMP considers that this policy may result in Grade I, Grade II and Grade II* Listed Buildings at Aveton Gifford being potentially at risk of flooding, while there is the potential for erosion to affect the Iron Age Cliff Castle and Roman settlement site at Bantham Ham which are both Scheduled Monuments (NHLE 1019323 and NHLE 1019322), (*ibid*, 434). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

Based on the predicted erosion zones within the SMP, it is suggested that a Grade II Listed Boat House (NHLE 1108404) and nearby quay at the mouth of the River Avon, and over half of the currently surviving remains of the Roman settlement at Bantham Ham, could be lost to erosion within the next 0-20 year period. The site at Bantham is considered to be situated within an area of greatest archaeological potential within the study area (see 7.2 above), and the impacts of the preferred policies upon these assets should be investigated further. Where these sites cannot be protected from erosion a programme of mitigation comprising excavation and recording may be appropriate.

There are also a series of non-designated assets of regional importance that could also be affected by erosion within this area, including the site of a possible prehistoric settlement (MDV22790) and a group of assets of WWII date near Bantham Ham. Erosion within this area may also expose additional wood and peat deposits which are currently of unknown date. There are also a number of non-designated assets located along the eastern edge of the Avon Estuary, between the mouth and Stadbury Farm, but these are predicted to remain largely unaffected by erosion and flooding within the next 100 year period.

A large amount of flooding is predicted within the upstream section of the Avon Estuary, between Stadbury Farm and Stakes Hill, but only part of the area to be affected by flooding sits within the RCZAS study area. Non-designated assets of local importance likely to be affected within this area largely relate to agricultural, industrial and maritime activity, including the site of quarries, limekilns and the site of a former watermill.

There are a small number of non-designated assets on the west bank of the Avon Estuary, between Stakes Hill and Cockleridge, but these are not predicted to be affected by either flooding or coastal erosion within the next 100 years. Coastal erosion is, however, expected to impact a number of non-designated assets between Cockleridge and Bigbury-on-Sea, including a series of military assets of WWII date and a former sand pit at Cockleridge Ham, together with any surviving remains of former buildings at Cockleridge. Assets relating to agricultural activity and mounds of unknown origin at Mount Folly Farm may also be affected by coastal erosion, as may a small number of assets of WWII date between Sharpland Point and The Warren that might also be affected by erosion within the next 0-20 year period. Coastal erosion on the northern edge of Burgh Island within the next 0-20 year period may also affect non-designated assets, including two pillboxes, two weapons pits, a lime kiln and a fish cellar. It is also possible that the Grade II Listed Burgh Island Hotel (NHLE 1108101) may become under threat from erosion.

Where monuments may be at risk as a result of policies of Managed Realignment, further studies will be necessary to identify the impacts upon any areas that were previously protected by defences as part of the management of change (Halcrow Group 2011, 47-48).

6c16. Warren Point (Bigbury-on-Sea) to Challaborough

The short, medium and longer term policy is to continue to allow existing localised defences to be maintained or replaced if alternative funding is available, otherwise a policy of No Active Intervention would be applied, as the undefended rocks at either end of this section would erode very slowly, with negligible recession predicted (Halcrow Group 2011, 438). The SMP considers that there may be an adverse impact as a result of this policy, resulting in the possible loss of a pillbox at Challaborough Beach (*ibid*, 440). Where there may be possible damage or loss to the historic environment mitigation is proposed.

There are, however, a number of other non-designated heritage assets within this area that may be affected. Erosion and flooding associated with sea level rise may affect a number of assets of local importance relating to maritime activities including a lookout, lifeboat station and boathouses, as well as a small number of assets of WWII date that are likely to be of local and wider importance, including anti-tank obstacle and pillboxes. Deposits of regional and wider significance associated with the submerged forest at Challaborough may also be impacted by flooding and erosion within this area. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6c17. Challaborough (West) to Erme Estuary (East)

The short, medium and longer term policy is one of No Active Intervention along this undefended section of coast, with a total erosion of up to 10m predicted here by 2105 (Halcrow Group 2011, 442) which would therefore put the historic environment of this area at risk. The SMP considers there to be no known impacts on archaeological features as a result of this policy.

There are, however, a series of non-designated heritage assets of local importance within this area that may be affected by erosion. This includes the site of two teahouses, two smugglers caves and assets associated with localised agricultural and industrial activity, including the site of beacons, quarries and earthworks associated with a water meadow system. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6c18 to 6c20. Erme Estuary

The short, medium and longer term policy for this area is for No Active Intervention, as there is not expected to be a change within the form of the Erme Estuary (Halcrow Group 2011, 445). This applies to the Erme Estuary (East Bank – Mouth to Orcheton Wood) (**6c18**), Upstream section – Orcheton Wood to Pamflete Wood (**6c19**), and the West Bank – Pamflete Wood to Mouth (**6c20**). The SMP considers that, as a result of this policy, the Grade II Registered Park and Garden at Flete may be at risk of flooding and there is likely to be continued erosion of the early medieval settlement at Meadowsfoot Beach (*ibid*, 447). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

A Grade II Listed boundary stone (NHLE 1309101) and a large number of non-designated assets of local importance may also be affected by coastal erosion. This includes a number of assets relating to maritime and agricultural activities, as well as the remains of a pillbox (MDV78709). Within the upstream section of the Erme Estuary a small number of non-designated assets of local importance may be affected by flooding. These include assets relating to former buildings and to agricultural and industrial activities, such as quarries and water meadows. The remains of a pillbox (MDV45831) to the south of the Old Coastguard Cottages may also be affected by flooding within the West Bank section of the Erme Estuary.

Coastal erosion and flooding may impact a small number of earthworks of unknown date to the south of Owen's Hill. Flooding and erosion near Meadowsfoot Beach may also affect remains associated with two pillboxes, assets relating to maritime activity and a small number of archaeological features of unknown date. Remains of regional and wider importance associated with a submerged forest at Mothecombe (MDV65398) may also be impacted. The southern end of the gardens at Mothecombe (MDV110717) may also be affected by coastal erosion, while the 'stone circle' on Meadowsfoot Beach (MDV66175) is likely to be affected by both flooding and coastal erosion. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6c21. Erme Estuary (West) to Yealm Estuary (East)

The short, medium and longer term policy is for No Active Intervention, with up to 10m of erosion predicted in localised areas of slightly more erodible cliffs by 2105, depending on the occurrence of small scale cliff failures (Halcrow Group 2011, 451) which would therefore put the historic environment of this area at risk. The SMP considers that there is unlikely to be any erosion to Listed Buildings at Stoke within the short term, but they may potentially be at risk from erosion in the medium and longer terms (Halcrow Group 2011, 452). Where there may be possible damage to or loss of the historic environment mitigation measures are proposed by the SMP.

Coastal erosion along this area also has the potential to affect a small number of non-designated assets of WWII date which are likely to be of local or wider importance including an observation post and linear bank. Remains of local importance associated with former buildings, and assets relating to post-medieval and modern agriculture and industry including quarries and field systems may also be affected by erosion within this area. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

6c22 to 6c25. Yealm Estuary

The short, medium and longer term policy for the undefended sections of the Yealm Estuary (East Bank – Mouth to Passage House) (**6c22**), (East Bank – Newton Ferrers North to Fish House Plantation) (**6c24**) and (West Bank – Fish House Plantation to Season Point) (**6c25**) is for No Active Intervention. Along the Yealm Estuary (East Bank – Passage House to Newton Ferrers North) (**6c23**) area the policy is to Hold the Line through maintaining and improving existing defences (Halcrow Group 2011, 454). The SMP considers that Grade I, Grade II and Grade II* Listed Buildings are potentially at risk from flooding, particularly within Yealmpton and Newton Ferrers, although this risk will be minimised where defences are maintained (*ibid*, 456). Where there may be possible damage or loss to the historic environment mitigation measures are proposed.

Predicted flooding of Newton Creek may also affect a large number of non-designated assets of local importance, including cottages and other buildings, as well as assets relating to maritime and agricultural activities. It is also possible that the remains of the pillbox at Cellar Beach (MDV55131) may be impacted by coastal erosion. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

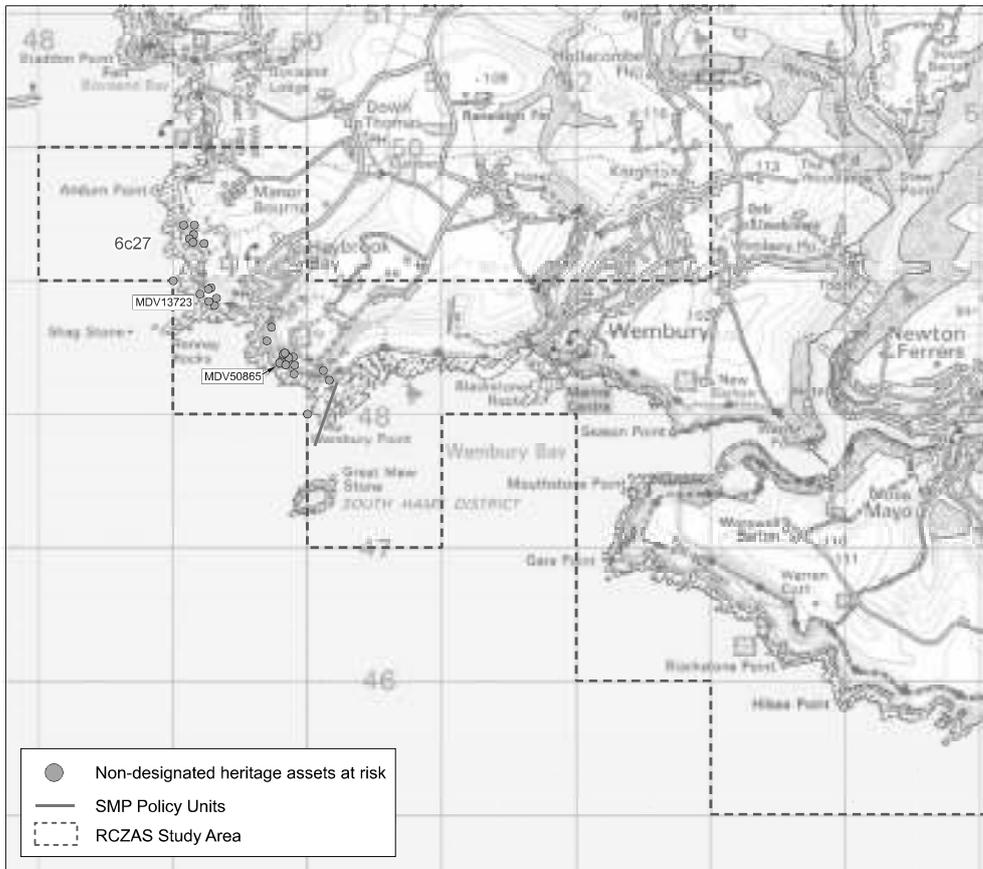
6c26. Season Point to Wembury Point

The short, medium and longer term policy is for No Active Intervention along this area of undefended coast. Cliff erosion is likely to be localised, with total erosion within these areas of up to 10m predicted by 2105, depending on the occurrence of small scale cliff failures (Halcrow Group 2011, 462) which would therefore put the historic environment of this area at risk. The SMP considers that the Grade II Registered Park and Garden at Langdon Court Hotel (NHLE 1000695) may be at risk from flooding and erosion (*ibid*, 464), and where there may be potential damage or loss to the historic environment mitigation measures are proposed.

It is, however, also possible that erosion may impact upon any surviving remains associated with the military training camp at HMS Cambridge (MDV50865) at Wembury Point and palaeoenvironmental deposits to the north of Blackstone Rocks (MDV63752) which are likely to be of regional or wider significance. Non-designated assets of local importance may also be affected by erosion in this area including a small number of assets relating to maritime activity, assets relating to medieval agricultural practices, including a hollow way and remains of medieval field boundaries near Wembury Point, as well as a small number of assets of WWII date, including pillboxes near Blackstone Rocks. Artefact scatters and features of prehistoric date have also been found in this area and may be further exposed as a result of erosion. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

9.11 Wembury Point to Devil's Point (PSA15) (Fig. 34)

The protection of Plymouth is the key policy driver within this management unit. The cliffs to the east of Plymouth are of outstanding landscape and geological value and a policy of no intervention would ensure these are maintained (Halcrow Group 2011, 38).



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Fig. 34: Wembury Point to Devil's Point (PSA 15)



6c27. Wembury Point to Mount Batten Breakwater

The short, medium and longer term policy between Wembury Point and Mount Batten Breakwater is for No Active Intervention along this predominantly undefended section of coast (Halcrow Group 2011, 466). The SMP considers that there may be a potential loss of Grade I, Grade II and Grade II* Listed Buildings within the next 100 years as a result of erosion (*ibid*, 468) and mitigation measures are therefore proposed for these areas.

It is, however, also considered possible that erosion may impact upon remains of regional and wider importance, including Renny Battery to the east of Renney Point (MDV13723) and any surviving remains associated with the military training camp at HMS Cambridge (MDV50865) at Wembury Point Battery. Additional military features dating from WWII also exist on the clifftop to the north and east of these structures and may be affected by coastal change within the longer term. The likely impact of the preferred SMP policy on these assets should be investigated further at scheme or project level and, where the policy may result in their damage or loss, mitigation could include archaeological recording of the more significant assets. It should, however, be noted that in those areas of No Active Intervention there is currently no formal process of funding for this mitigation.

9.12 Exe Estuary Flood and Coastal Erosion Risk Management Strategy

The Exe Estuary Flood and Coastal Erosion Risk Management Strategy identifies how the Environment Agency and its partners will manage tidal flood risk and erosion in and around the Exe Estuary, covering the area between Sandy Bay and Holcombe. The strategy follows on from, and reviews the policies contained within, the Durlston Head to Rame Head SMP. It concludes that the Environment Agency and partners should continue to defend most of the developed coastline, although the strategy has highlighted three areas within the scheme that will require a different approach to the recommendations within the Durlston Head to Rame Head SMP. In those areas of No Active Intervention policy (unit 6a43) the strategy recommends regular monitoring to allow a review approximately every ten years (Environment Agency 2014). At The Maer, Exmouth, the strategy agrees with the SMP recommendations of a Hold the Line policy in the short term for Policy Unit 6a45, but is a change to the policy of Managed Realignment in the medium to long term (*ibid*, 6). Between Powderham Banks and the Kenn Valley (unit 6b14) the strategy considers that the policy should remain Hold the Line in the medium and long term as opposed to the Managed Realignment suggested in the SMP (*ibid*, 13). At Dawlish Warren the strategy seeks to extend the policy outlined in SMP for Unit 6b19 into the medium and longer term. Within units 6b20 and 6b21 the strategy changes from Hold the Line in the short term to Managed Realignment within the short and medium terms and a policy of No Active Intervention in the long term (*ibid*, 15).

The Exe Estuary Flood and Coastal Erosion Risk Management Strategy also identified that part of Dawlish Warren is at risk of being breached as a result of sea level rise and storms, which would increase the risk of flooding to nearby areas. The Dawlish Warren beach management scheme (October 2015) is a joint project between The Environment Agency and Teignbridge District Council to address this threat by ensuring the sand spit continues to act as a barrier. As part of the scheme, the Environment Agency commissioned surveys and research to determine the historic potential of the area in order to inform management strategies. Part of this research involved a consideration of the impact that dredging for material to allow beach recharge in the area could have upon the offshore historic environment.

10. RECOMMENDATIONS AND PROPOSED FURTHER WORK

10.1 Research Priorities

The following research priorities and themes identified by the DBA are presented here with reference to the regional research priorities set out within SWARF (Webster 2008).

- *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 our current knowledge;*
- *Research Aim 10: Address our lack of understanding of key transitional periods;*
- *Research Aim 17: Improve the quality and quantity of environmental data and our understanding of what it represents;*
- *Research Aim 18: Target specific soil and sediment contexts for environmental information;*
- *Research Aim 23: Improve our understanding of past climate and sea level changes together with their effects on the peoples relationships with landscapes and the sea;*
- *Research Aim 25: Improve our understanding of Palaeolithic and Mesolithic landscapes;*
- *Research Aim 37: Increase our knowledge of maritime archaeological sites;*
- *Research Aim 38: Widen our understanding of the extraction, processing and transportation of minerals, stone and aggregates; and,*
- *Research Aim 46: Assess the information for Roman ports.*

10.2 Overview of Research Themes

Submerged Forests

Organic deposits associated with submerged forests have been widely referenced as being at risk of damage as a result of erosion and flooding associated with rises in sea level and have also been highlighted by the Local Authority curators within Devon as an understudied area of special interest. The nature of sea-level change means that submerged terrestrial sites within this area are likely to date to the Palaeolithic, Mesolithic, and possibly to the Neolithic periods. Further work within this area could therefore help to improve understanding of Palaeolithic and Mesolithic landscapes through the study of preserved land surfaces (SWARF Research Aim 25). This could also help to address regional biases such as those relating to the paucity of archaeology dating to the Lower and Middle Palaeolithic, particularly within Devon and Cornwall (SWARF Research Aim 3). Dix and Sturt (2013) comment that relatively little work has been done on detailed site-level analysis of submerged terrestrial sites and therefore the significant number identified along the South Devon coast provide an opportunity for further analysis at site specific levels which can be fed into local or regional studies.

Future work associated with submerged forests could address the need to improve consistency in sampling, assessment and analysis for all types of palaeoenvironmental evidence (SWARF Research Aims 17 and 18). Dix and Sturt identify a site at Bouldnor Cliff, off the north shore of the Isle of Wight as a case study for engaging with prehistoric sites, but argue that work of a similar scale needs to be undertaken on additional sites to provide a framework for investigation and that a ‘crucial avenue for further research lies in carrying out pilot projects in English waters’ (Dix and Sturt 2013, 8).

Further evaluation of submerged prehistoric land surfaces that are already considered to be of high potential will help to determine the value of such work and will help to address the need for a better understanding of the extent and chronology of coastal change within the Mesolithic-Neolithic transition (SWARF Research Aim 10). Subsequent landscape and regional-level reconstruction may prove an appropriate framework for analysing prehistoric contexts (Dix and Sturt 2013, 8).

Maritime Sites

Opportunities should be taken to understand the scale and nature of sea level change within the region (SWARF Research Aim 23). There is a need for research associated with the Palaeolithic and Mesolithic archaeology within the South West to include topographic modelling, deposit and site prediction, as well as palaeoenvironmental reconstructions below the current tidal limits. The submerged forests within the South West are considered to be an endangered resource and there is therefore an importance for these sites to be studied in detail before they are destroyed (Webster 2008, 285).

Few Roman harbours or landing places have been identified or investigated, but there are a number of potential sites within the South West, including Seaton and Topsham within the study area (SWARF Research Aims 37 and 46). Studies of Roman harbours may also complement research associated with coastal morphology and settlement (SWARF Research Aim 23). The Maritime Research Agenda also recognises that surprisingly few Roman harbours or landing places have been identified or investigated (Walsh 2013, 93) and suggests a small number of research questions to target the topic of Roman harbours and ports (Walsh 2013, 102-103). The archaeology of harbours and landing places of early medieval and post-medieval date has also been identified as a key research area within the Maritime Research Agenda (Carver and Loveluck 2013, 113; Adams and Flatman 2013, 147), as has research associated with ports of modern date and the effects that these had on small harbours (Dellino-Musgrave and Ransley 2013, 170).

Sea-Level Change

Palaeoenvironmental deposits have been identified at targeted locations throughout the study area which would benefit from more detailed work. Palaeoenvironmental evidence from beach deposits, such as those at Bantham and Salcombe, can be used to provide evidence of the development of coastal landscapes and, whilst complementing site-specific investigations, these deposits can be valuable for inter-disciplinary work associated with models of coastal change and post-glacial crustal movement and may provide additional locations for sea-level index points. The collection of basal sea-level index points covering the Late Holocene has been recognised as a priority by a recent study of relative sea-level change and post-glacial isostatic adjustment along the South Devon coast (Massey *et al.* 2008, 423).

Mining and Quarrying

Mining and quarrying on the South and East Devon coast has also been identified as an under-studied area of special interest by Local Authority curators. The NMP and DBA phases of the South Devon RCZAS have significantly enhanced records relating to quarrying within the study area.

The sites of three mines have been identified as at risk of coastal erosion as a result of policies within the Durlston Head to Rame Head SMP. There is therefore an opportunity for additional research and recording to be carried out at these mining sites prior to their damage as a result of erosion (SWARF Research Aim 38).

The need for accessible fine-scale LiDAR data has also been highlighted as an area of under-studied special interest by Local Authority curators. It is considered that future analysis of the Channel Coastal Observatory data, which was surveyed at 1m resolution, may allow a greater detail for analysis of sites such as field systems, landslips, quarrying and estuary landscapes than was visible within the LiDAR data available for the NMP phase.

10.3 Identification of Specific Sites and Areas that would benefit from Further Work

All of the sites identified as areas of greatest archaeological potential within Section 7 above, as well as those identified as being at threat of erosion as a result of policies outlined within the Durlston Head to Rame Head SMP within Section 9 above should be considered for further work. It should be noted that some of the following recommendations may lie beyond the scope of the RCZAS Phase 2 fieldwork.

Scheduled Monuments

Parts of a number of Scheduled Monuments within the South Devon coast study area are at risk of coastal erosion and it is therefore likely that targeted phases of excavation and recording may be required on these sites. Fieldwork of this nature has already been undertaken on some of the sites within East Devon as part of the 'Unlocking our Coastal Heritage Project' led by the South West Coast Path Team, but there is potential for further work at three sites within East Devon, four sites within Torbay, and ten sites within South Hams. These would comprise:

- Berry Cliff Camp (NHLE 1017772), East Devon;
- A prehistoric field system on the cliffs above Littlecombe Shoot (NHLE 1020710), East Devon;
- High Peak Camp (NHLE 1003887), East Devon;
- Field system at Walls Hill (NHLE 1019134), Torbay;
- WWII Emergency Coastal Battery and remains of a Victorian practice battery at Battery Gardens (NHLE 1020411), Torbay;
- Berry Head Fort and battery and Hardy's Head Battery (NHLE 1017322), Torbay;
- The Old Redoubt and later Victoria Rifle Range Target (NHLE 1021430), Torbay;
- Coaxial field system and semaphore station at Signal House Point (NHLE 1019324), South Hams;
- Coaxial field systems and associated later remains between Deckler's Cliff and Gammon Head (NHLE 1021253), South Hams;
- Fort Charles (NHLE 1020165), South Hams; and,
- Coaxial field system, hut circles and medieval farm buildings at Starehole Bottom (NHLE 1020577), South Hams;
- Field systems, hut circles and four beacons 510m south of Middle Soar (NHLE 1020574), South Hams;
- Medieval farmstead and field system at Warren Barn 500m south and 400m south west of West Soar (NHLE 1020570), South Hams;
- Regular aggregate field system 480m west of West Soar (NHLE 1020578), South Hams;
- Five round barrows 570m south of Hope Cove (NHLE 1019787), South Hams;
- Iron Age cliff castle known as Bolt Tail Camp (NHLE 1019323), South Hams;
- Roman settlement site at Bantham Ham (NHLE 1019322), South Hams.

There is also potential for research and fieldwork to be carried out on a smaller number of Scheduled Monuments within the study area that are not currently at direct risk of coastal erosion, but which are likely to hold archaeological deposits of significance that have not been previously subject to detailed investigations. These would comprise:

- Hawkesdown Camp (NHLE 1017775);
- Slapton Castle (NHLE 1019236);
- Holbury Camp (NHLE 1019782);
- Field System above Littlecombe Shoot (NHLE 1020710); and
- Iron Age field system at Berry Head Fort (NHLE 1021430).

Registered Parks and Gardens

Surveys should be undertaken on the small areas of the Registered Parks and Gardens that have been highlighted at risk to ascertain their present condition. This includes two sites within East Devon, and five sites within South Hams. These would comprise:

- Rousdon, East Devon (Grade II, NHLE 1001441);
- Connaught Gardens, East Devon (Grade II, NHLE 1001532);
- Coleton Fishacre, South Hams (Grade II*, NHLE 1000690);
- Sharpham, South Hams (Grade II*, NHLE 1000701);
- Overbecks, South Hams (Grade II, NHLE 1000697);
- Flete, South Hams (Grade II, NHLE 1000692); and,
- Langdon Court Hotel, South Hams (Grade II, NHLE 1000695).

World War II Defences

Analysis of the sites that are most likely to be affected by erosion as a result of SMP policy have shown a high proportion of sites related to WWII defences. This is not surprising given the targeted coastal location of many of these assets. Records relating to many of these assets have been enhanced as a result of the NMP phase of the project, large-scale surveys such as the Defence of Britain project, as well as site-specific recording and condition surveys undertaken at locations such as the emergency coastal batteries and radar stations. Field assessment should be undertaken on designated sites that fall within this category to determine their present condition. There is also scope for field investigation to be undertaken on a sample of the sites that have been identified from the NMP phase to determine the level of survival of WWII defences.

Hulk Surveys

The NMP component of the project found that estuarine intertidal remains were less well represented than anticipated, with this possibly due to the lack of ongoing surveys to target structural remains that may become visible within areas of shifting silts and muds. The NMP report recommended that these areas are targeted at low tide and after storm events in future aerial reconnaissance.

Additional hulk surveys could also be undertaken within the **Teign Estuary** and within the estuaries of **East Devon**. These are areas for which no surveys have currently been undertaken, and within which the SMP has shown intertidal areas are at risk. This would further enhance the understanding of assets within the intertidal zones and would allow sites such as the Axmouth wreck to be placed within their wider context. This could also complement investigations which are recommended for some of the historic ports of the estuaries within the study area. These include **Topsham** and **Axmouth** which are believed to have had Roman origins, the medieval port at **Turf** and **Livermead Harbour Torquay**.

Wrecks

The need for sustained study and recording of individual wreck sites has been highlighted as an understudied area of special interest by Local Authority curators, and the study and recording of wreck sites of various periods has also been discussed in detail within the Maritime Research Agenda (Hill and Willis 2013, 83 and 87; Walsh 2013, 93 and 104; Dellino-Musgrave and Ransley 2013, 166; Parham and Maddocks 2013, 194). There is therefore potential for further work within the estuaries and coastline of the study area. Further work is also recommended for the site of the Protected Wreck at **Church Rocks**, as the SMP predicts that this site may experience increased erosion which would result in a potential adverse impact. Shipwrecks within the study area are recorded within the Devon HER and the NRHE data, but in many cases these are documentary records relating to events as opposed to details of the physically surviving elements of the wrecks.

It is considered that a comprehensive survey of the area covering the intertidal zone to lowest astronomical tide would be worthwhile in order to identify any surviving physical remains associated with wreck sites as these are situated in areas that are likely to be vulnerable to sea level rise. This would also complement the hulk surveys that have been carried out, and that are recommended within the study area. A survey of this nature would allow current data to be updated with an account and condition survey of those wrecks that survive within these areas. This would identify those wreck sites that are most under threat from erosion and may allow those of potential national importance to be recognised and therefore considered for designation. The **Axe Estuary** is also recommended for a survey of this nature where a small number of wreck sites are known and where there is potential for further wrecks to be identified due to the former use of the estuary as a port. The lack of work associated with Roman wrecks, and indeed wrecks of other periods, has been highlighted within the Maritime Research Agenda (Hill and Willis 2013, 87; Walsh 2013, 93).

Submerged Forests

Deposits associated with submerged forests have been identified throughout the study area, with a noticeable concentration within South Hams. They have been recognised as an understudied area of special interest by Local Authority curators. A number of these sites have been identified as at risk of erosion and are occasionally exposed during storm events or particularly low tides. These events may therefore allow an opportunity for further recording and sampling of these sites.

Field Systems

The relict field systems on the South Hams marginal coastal land have been identified as an understudied area of special interest by Local Authority curators within Devon. An analysis of the policies within the Durlston Head to Rame Head SMP has shown that some of these field systems within the study area are at risk of coastal erosion within the next 100 years and there is therefore scope for additional work to be undertaken within these areas; at the very least to determine their current condition and the subsequent recording of those areas likely to be affected by erosion. In addition, the NMP project report also included a list of sites of potential national significance for which designation should be considered. These sites include the remains of a possible **prehistoric field system at Woodcombe Point** and **The Narrows**, and the remains of a **field system on South Down Common** (Hegarty *et al.* 2014, 196-198).

Sites identified by the NMP Phase

Due to variables within recent aerial photographs, Channel Coastal Observatory digital images and some areas of LiDAR data, the NMP project found it difficult at times to identify whether some of the new sites identified as earthworks still survive as upstanding features. Those sites to which this applies, as well as additional sites suggested for further work are listed within the NMP project report (Hegarty *et al.* 2014, 167; Appendix J). It is recommended that these sites are targeted for condition surveys within the subsequent fieldwork phase. In particular this may comprise the numerous enclosures of possible prehistoric to Romano-British date.

The NMP project report also included a list of sites of potential national significance for which designation should be considered, as well as a list of monuments that might warrant further attention (Hegarty *et al.* 2014, 166; Appendix 1). In addition to the two field systems mentioned above, these include the **Brownstone Emergency Coastal Battery** at Inner Froward Point, **two barrows at Ham Barn**, and a **barrow to the east of Rousdon** (*ibid.*, 196-198). Based upon the results of the NMP project it was also considered that there may be potential to extend the area of scheduling at four sites within the study area. These include the **Prehistoric Field System at Deckler's Cliff**, the **East Soar Field System**, an **Outwork of Hawkesdown Camp**, and the **Field System at Walls Hill** (*ibid.*).

Sites identified by the DBA Phase

During the DBA phase a number of sites and themes were identified where further archaeological work could be productive, either in enhancing knowledge of well-known sites or in establishing the presence/absence, character, date and survival of newly recorded sites. The sites of **shrunken / deserted settlement** identified by the DBA such as those recorded at **Rickham**, near East Portlemouth and **East Budleigh** should be further investigated to determine the potential for survival and investigate whether any earthwork features are visible. Where there is evidence for good preservation of archaeological deposits, these sites could be considered for designation. Additionally, a sample of sites of **former structures present c. 1840**, including houses, barns, lincages, mills, and limekilns should be investigated. The sites of **seven barrows** of possible Neolithic to Late Bronze Age date should be investigated, together with the location of possible **prehistoric barrows or enclosures** identified from field name evidence from the Tithe Apportionments, in order to determine the potential for survival of remains.

Section 7.2 above has considered those areas of highest archaeological potential within the study area. As well as relating to specific sites or monuments, it has also highlighted the potential for further work to be undertaken on certain areas which contain a dense concentration of assets covering a range of periods which would help to address SWARF Research Aim 2.

Surveys within areas of Low Monument Density

The NMP report also provides details of areas for which additional aerial reconnaissance surveys should be considered in order to enhance knowledge of specific areas. These include the **Exe Estuary**, areas of coast **from Salcombe Regis to Seaton** and **from Axmouth to the southwest of Lyme Regis**, as well as the major watercourses within the **Kingsbridge Estuary, Dart, Teign and Exe estuaries**, which could all benefit from surveys at low tide or after storm events in order to identify structural remains within the areas of shifting sand and mud (Hegarty *et al.* 2014, 167).

Section 7.3 above has considered those areas of low record density within the study area, and an analysis of HER data by period has shown a number of 'gaps' within the current evidence. There is therefore potential for further work relating to period specific evidence within the study area to address these current gaps in greater detail and determine whether they are the result of a current lack of work, or the result of other factors which would also help to address SWARF Research Aims 2 and 3.

Additional areas of low record density identified within Section 7.3 above include a small area to the **east and southeast of Otterton**, an area **between Shaldon and Maidencombe**, an area **between Sharkham Point and the entrance to the Dart Estuary** at Kingswear, **between Dartmouth and Stoke Fleming**, to the **north of Slapton**, immediately to the **north of Outer Hope**, **between Bigbury Bay Holiday Park and the entrance to the Erme Estuary**, and **between Mothecombe and Newton Ferrers**.

Sites Proposed for Designation Assessment

Sites that may benefit from further work with a view to assessing them for designation include:

- Remains associated with a possible Roman villa at Otterton Point;
- Late Prehistoric/Romano-British enclosures e.g. Otterton Point;
- Shrunken Settlement at Rickham;
- Brownstone Emergency Coastal Battery;
- Prehistoric field system at Woodcombe Point and The Narrows;
- Prehistoric field system on South Down Common;
- The 'stone circle' at Meadowfoot Beach;
- Reave and cropmarks at Holset; and,

- Enclosure bank and curvilinear bank at Owen's Hill.

The nature of the RCZAS DBA has resulted in a large number of new records being identified from historic maps. Whilst these sources proved useful for identifying the location of assets and can provide a broad idea of the time at which they were present in the landscape, it does not help to accurately date the features or to provide details of their function or current condition. The previous sections have therefore highlighted a number of sites which are at threat from coastal erosion within the next 100 year period, and has recommended a small number of these for further work in order to determine their extent and potential for the survival of deposits. Where the Phase 2 fieldwork shows these sites to be of high potential, and therefore of possible national significance, they should also be considered for designation against the criteria set out within the DCMS document 'Scheduled Monuments and nationally important but non-scheduled monuments' (2013).

10.4 Summary

In summary therefore, the following theme specific sites which would benefit from further work include:

- Coastal Scheduled Monuments under threat of erosion;
- Coastal Registered Parks and Gardens under threat of erosion;
- WWII defences at risk of erosion or loss;
- WWII defences identified by the NMP phase to determine their level of survival;
- Hulks within the Teign Estuary and the estuaries of East Devon;
- Roman and medieval ports;
- Designated wreck sites under threat of erosion;
- Wreck sites located within the intertidal zone to determine level of survival;
- Submerged forests;
- Relict field systems under threat of erosion;
- Sites identified by NMP and DBA phases to be considered for designation;
- Sites identified by the NMP phase to determine their level of survival;
- Sites identified by the DBA phase to determine their level of survival; and,
- Areas of low monument density.

11. CONCLUSIONS

11.1 The above section has provided a discussion of those research priorities that have been identified by the DBA for the South Devon study area, with reference to specific sites which are considered most at risk of flooding or erosion based on policies within the Durlston Head to Rame Head SMP. A Phase 2 fieldwork project is therefore seen as a priority in order to survey and record these sites before they are lost in order to inform future mitigation and shoreline management. While it is considered that these sites are currently most under threat from erosion and therefore should be targeted for further work, it must also be recognised that the unpredictable nature of the natural environment, as seen within the storms of 2014, may have a greater impact upon the coast of South Devon than that currently predicted within the SMP. It is therefore also recommended that mitigation for future damage should be a consideration.

12. ARCHIVE

12.1 The project archive is currently held at the offices of AC archaeology Ltd, at 4 Halthaies Workshops, Bradninch, near Exeter, Devon, EX5 4LQ. All records created and enhanced by the project are available through the Devon and Torbay HERs, which are publicly accessible via Heritage Gateway. All records created by the project that fall within Torbay District will be migrated to the Torbay HBSMR at the completion of the project.

- 12.2** Copies of the project report, HER records and digital mapping will be provided to Historic England in a format suitable for incorporation into their Corporate GIS. Copies of the shapefiles, polygons and point data will also be sent to Historic England and a copy of the project database will also be supplied so that the data can be transferred to the Historic England AMIE database. Copies of the project proposal, project design, project report and all other relevant project documentation will be deposited at Historic England. The PDF version of the report will be deposited with Historic England and Archaeology Data Service (ADS) so that it will be freely available on their websites.

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Appendix 1

Scheduled Monuments within the Study Area

Appendix 1: Scheduled Monuments within the Study Area

NHLE Number	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1002629	Site of chapel at Manor Farm	Chapel	Medieval	South Hams	SX 86139 48436
1003852	Gomerock Tower	Tower	Medieval	South Hams	SX 88874 50503
1003887	High Peak Camp	Causewayed Enclosure, Deserted Settlement	Early Neolithic, Medieval	East Devon	SY10342 85903
1008681	Windmill Hill Cave, Brixham	Cave	Middle Palaeolithic to Bronze Age	Torbay	SX 92457 55983
1009302	Torre Abbey	Causeway, Premonstratensian Monastery	Medieval	Torbay	SX 90826 63634
1010745	Kent's Cavern, Torquay	Cave	Lower Palaeolithic to Roman	Torbay	SX 93406 64128
1011672	Slapton Chantry College	College	Medieval	South Hams	SX 82170 45031
1014610	Dartmouth Castle	Battery, Boom Tower, Castle, Great House	Medieval to Post-medieval	South Hams	SX 88648 50276
1014668	Bayard's Cove Castle	Blockhouse	Post-medieval	South Hams	SX 87857 50964
1017322	Berry Head Fort and Battery and Hardy's Head Battery	Battery, Fort, Observation Post	Post-medieval to modern	Torbay Torbay	SX 94048 56668 SX 94489 56499
1017772	Berry Cliff Camp	Univallate Hillfort	Bronze Age to Iron Age	East Devon	SY 18840 88204
1017775	Hawkesdown Camp and associated outwork	Linear Earthwork, Univallate Hillfort	Iron Age	East Devon East Devon	SY 26271 91426 SY 26508 91433
1017949	Two bowl barrows at Big Wood, 580m south west and 470m south of Moorland Cottage	Bowl Barrow	Bronze Age	East Devon East Devon	SY 02520 84251 SY 02908 84220
1019132	Chambered tomb, 630m north west of Elberry Farm	Chambered Tomb	Neolithic	Torbay	SX 89319 57329
1019133	Ashhole Cavern	Cave	Neolithic to Roman	Torbay	SX 93701 56681
1019134	Prehistoric field system at Walls Hill	Field System	Prehistoric	Torbay	SX 93420 65047
1019322	Roman settlement site at Bantham Ham	Boundary Bank, Lake Village, Lynchet, Midden, Pillbox, Settlement, Temporary Camp	Roman to Modern	South Hams	SX 66379 43701
1019323	Iron Age cliff castle known as Bolt Tail Camp	Boundary Bank, Cliff Castle	Iron Age	South Hams	SX 67075 39639

Appendix 1: Scheduled Monuments within the Study Area

NHLE Number	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1019324	Coaxial field system and semaphore station at Signal House Point	Coaxial Field System, Signal Station	Bronze Age, Modern	South Hams	SX 77043 35378
1019533	Hilltop enclosure 380m east of Middle Soar	Enclosure	Bronze Age	South Hams	SX 71530 37015
1019534	Four bowl barrows 270m west of The Downs	Bowl Barrow, Quarry	Bronze Age, Post-medieval	South Hams	SX 67127 43226
1019782	Slight univallate hillfort known as Holbury Camp, 750m east of Holwell Lodge	Boundary Bank, Multiple Enclosure Fort	Iron Age	South Hams	SX 62094 50531
				South Hams	SX 62390 50516
				South Hams	SX 62438 50663
1019785	Four barrows 470m south west of Hope Cove, forming part of a round barrow cemetery	Bell Barrow, Bowl Barrow	Bronze Age	South Hams	SX 67192 39352
1019787	Five round barrows 570m south of Hope Cove, forming part of a round barrow cemetery	Bowl Barrow	Bronze Age	South Hams	SX 67426 39120
1019788	Three bowl barrows 310m west of Home Farm, forming part of a round barrow cemetery	Bowl Barrow	Bronze Age	South Hams	SX 75707 42684
				South Hams	SX 75867 42608
				South Hams	SX 75968 42568
1019790	Bowl barrow 400m south of Home Farm, forming an outlying part of a round barrow cemetery	Bowl Barrow	Bronze Age	South Hams	SX 76196 42210
1020158	Hillfort known as Greenway Camp, immediately north east of Cart Wood	Boundary Bank, Building Enclosure, Multiple Enclosure Fort	Iron Age, Post-medieval	South Hams	SX 88956 53745
1020159	Bowl barrow 690m north of Longwood House	Bowl Barrow	Bronze Age	South Hams	SX 88214 53610
1020165	Fort Charles	Battery, Battlefield, Watch House	Post-medieval to modern	South Hams	SX 73372 38055

Appendix 1: Scheduled Monuments within the Study Area

NHLE Number	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1020166	Civil War fieldwork known as Gallant's Bower	Battlefield, Boundary Bank, Building, Pound, Quarry, Siegework	Post-medieval to modern	South Hams	SX 88395 50198
1020234	Iron Age promontory fort known as Oldaport Camp	Fort, Promontory Fort, Quadrangular Castle	Iron Age, Early Medieval, Medieval	South Hams	SX 63232 49300
1020411	World War II Emergency Coastal Battery and remains of a Victorian practice battery, at Battery Gardens	Battery, Prefabricated Building	Post-medieval to modern	Torbay	SX 92092 56917
1020419	Axmouth Bridge	Bridge	Post-medieval	East Devon	SY 25302 89983
1020570	Medieval farmstead and field system at Warren Barn, 500m south and 400m south west of West Soar	Farmstead, Field System, Flint Scatter, Hut Circle, Pillow Mound, Stable	Mesolithic, Bronze Age, Medieval, Modern	South Hams	SX 70107 37279
				South Hams	SX 70174 37011
1020572	Bowl barrow 210m south of West Soar	Bowl Barrow	Bronze Age	South Hams	SX 70355 37331
1020573	Two hut circles and associated field systems and enclosure at Mousehill Brake	Cairn, Enclosure, Hut Circle	Bronze Age, Medieval	South Hams	SX 69907 37771
1020574	Field systems, hut circles and four beacons, 510m south of Middle Soar	Aggregate Field System, Beacon, Cairn, Hut Circle	Bronze Age, Post-medieval	South Hams	SX 71215 36592
1020575	Medieval farmstead, boundary work and earthwork enclosures 350m south east of Middle Soar	Boundary Bank, Enclosure, Farmstead, Field System	Neolithic, Bronze Age, Medieval, Post-medieval	South Hams	SX 71424 36855
1020576	Post-medieval animal pound 430m south of East Soar Farm	Pound	Post-medieval	South Hams	SX 72026 36671
1020577	Coaxial field system, hut circles and medieval farm buildings at Starehole Bottom	Building, Coaxial Field System, Field System, Flint Scatter, Hollow Way, Hut Circle, Leat, Mine, Wall	Bronze Age, Medieval, Post-medieval, Modern	South Hams	SX 72430 36470
				South Hams	SX 72430 36470
1020578	Regular aggregate field system 480m west of West Soar	Aggregate Field System, Flint Scatter	Mesolithic, Medieval	South Hams	SX 69910 37487

Appendix 1: Scheduled Monuments within the Study Area

NHLE Number	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1020710	Prehistoric field system on the cliffs above Littlecombe Shoot	Field System	Iron Age to Post-medieval	East Devon	SY 18403 88294
1020911	D-Day landing craft maintenance site on the River Dart, 560m south of Waddeton Court	Ship Repair Works	World War II	South Hams	SX 87223 56178
1020912	D-Day landing craft maintenance site on the River Dart, 270m south east of Maypool Cottage	Ship Repair Works	World War II	South Hams	SX 87809 54135
1021076	D-Day landing craft maintenance site on the River Dart immediately to the south of Lower Noss Point	Ship Repair Works	World War II	South Hams	SX 87974 52699
1021253	Coaxial field systems and associated later remains between Deckler's Cliff and Gammon Head	Adit, Building, Cairn, Coaxial Field System, Enclosure, Field System, Flint Scatter, Hollow Way, House, House Platform, Hut Circle, Hut Circle Settlement, Inclined Plane Mine, Ore Chute, Ore Stone, Pit, Pound, Quay, Tramway	Neolithic to Iron Age, Medieval to Modern	South Hams	SX 76043 36393
				South Hams	SX 76043 36393
1021430	The Old Redoubt and later Victorian Rifle Range Target, 540m south west of Berry Head Fort	Field System, Target	Iron Age, Modern	Torbay	SX 94134 56113

Appendix 2

Grade I & Grade II Listed Buildings within the Study Area

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1097666	I	Powderham Castle	Courtyard, Estate Office, Fortified Manor House, Gatehouse, Open Hall House, Service Wing, Stewards House, Wall	Early Medieval to Post-medieval	Teignbridge	SX 96824 83604
1097684	I	The Starcross Pumping House	Atmospheric Railway Engine House, Chimney, Engine Shed, Museum, Water Tank, Wesleyan Methodist Chapel	Post-medieval to Modern	Teignbridge	SX 97741 81752
1097909	I	Royal Glen Hotel	Coat Of Arms, Commemorative Monument, Hotel, House, Plaque	Post-medieval	East Devon	SY 12163 87222
1098593	I	Church of St Michael	Chest Tomb, Churchyard, Commemorative Monument, Effigy, Parish Church	Medieval to Post-medieval	East Devon	SY 25637 91036
1098596	I	Stedcombe House	Belvedere, Country House, Railings, Steps, Wall	Post-medieval to Modern	East Devon	SY 26412 91980
1103806	I	The Manse of the Point in View	Manse	Post-medieval	East Devon	SY 00830 83523
1107777	I	Gate Piers, Gates, Walls and Terraces immediately north and east of Flete	Arch, Courtyard, Gate, Gate Pier, Terrace, Wall	Post-medieval	South Hams	SX 62804 51417
1107794	I	Church of St Peter the Poor Fisherman	Church	Medieval	South Hams	SX 56394 46437
1107820	I	Flete	Country House	Medieval to Post-medieval	South Hams	SX 62782 51382
1108270	I	Church of St George	Commemorative Monument, Parish Church	Early Medieval to Modern	South Hams	SX 86117 55073
1108385	I	Sharpham House	Coach House, Country House, House, Service Wing, Villa, Wash House	Post-medieval to Modern	South Hams	SX 82701 57870
1108497	I	Church of St Gabriel and St Mary	Commemorative Monument, Parish Church, Plaque	Medieval to Post-medieval	South Hams	SX 84916 57135
1108543	I	Kingswear Castle	Blockhouse, Castle, Summerhouse, Tower	Medieval to Modern	South Hams	SX 89101 50282
1147247	I	Church of St John the Baptist	Commemorative Monument, Parish Church	Medieval to Modern	Teignbridge	SX 91097 73502
1164002	I	Church of St James	Parish Church	Medieval to Modern	South Hams	SX 82131 44990
1164812	I	Church of St Gregory	Parish Church	Medieval to Post-medieval	East Devon	SY 24715 90576

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1164838	I	A La Ronde	Cottage Ornee	Post-medieval to Modern	East Devon	SY 00480 83390
1164937	I	The Point in View	Almshouse, Nonconformist Chapel, School	Post-medieval	East Devon	SY 00788 83506
1168279	I	Mothecombe House	Country House, Terrace	Post-medieval to Modern	South Hams	SX 60860 47813
1168866	I	Puslinch House	Country House	Post-medieval	South Hams	SX 56950 50893
1169151	I	Church of St Werburgh	Parish Church	Medieval to Post-medieval	South Hams	SX 51844 48501
1169255	I	Church of All Saints	Gravestone, Parish Church, Plaque, Vestry, Wall Monument	Medieval to Post-medieval	Teignbridge	SX 95797 83311
1197516	I	The Butterwalk	Apartment, Jettied House, Merchants House, Museum, Row, Row House, Shop	Post-medieval to Modern	South Hams	SX 87788 51411
1197517	I	The Butterwalk	Apartment, Brewhouse, Crane, Jettied House, Merchants House, Museum, Row, Row House, Shop	Post-medieval to Modern	South Hams	SX 87783 51408
1197518	I	The Butterwalk	Apartment, Cafe, Jettied House, Merchants House, Row, Row House, Shop	Post-medieval to Modern	South Hams	SX 87775 51407
1197519	I	The Butterwalk	Apartment, Jettied House, Merchants House, Row, Row House, Shop	Post-medieval to Modern	South Hams	SX 87769 51406
1197563	I	Dartmouth Castle and Gun Platforms to west and south	Artillery Castle, Barracks, Battery, Boom Tower, Bridge, Fort, Lookout, Tower	Post-medieval to Modern	South Hams	SX 88670 50332
1197566	I	Walls of the ruined fortalice	Curtain Wall, Garden Feature, Tower	Medieval to Post-medieval	South Hams	SX 88630 50277
1204468	I	Church Of All Saints	Coat Of Arms, Commemorative Monument, Parish Church, Weather Vane	Medieval to Post-medieval	East Devon	SY 06618 84922
1206814	I	Parish Church Of St John The Evangelist	Parish Church	Post-medieval	Torbay	SX 91886 63653
1206852	I	Torre Abbey	Abbey, Chapter House, Church, Cloister, Curtain Wall, Gatehouse, Guest House, House, Piscina, Premonstratensian Monastery, Refectory, Roman Catholic Chapel, Steps, Tower, Undercroft	Medieval to Modern	Torbay	SX 90748 63816

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1208168	I	Bearscove Castle	Artillery Castle, Storehouse	Medieval	South Hams	SX 87865 50965
1269235	I	Church Of St Peter	Church, Parish Church	Post-medieval to Modern	Teignbridge	SX 93152 72451
1280012	I	The Spanish Barn, Torre Abbey	Abbey, Barn, Premonstratensian Monastery	Medieval, Modern	Torbay	SX 90722 63746
1280043	I	Parish Church Of All Saints	Commemorative Brass, Parish Church, Wall Monument	Post-medieval	Torbay	SX 92476 65274
1289171	I	The Old Chancel	Church, Date Stone	Post-medieval	Torbay East Devon	SX 92476 65274 SY 12467 87484
1293197	I	Church Of St Saviour	Chapel Of Ease, Church, Commemorative Brass, Commemorative Monument, Gravestone	Medieval to Modern	South Hams	SX 87764 51329
1297086	I	Church Of St Petrox	Lighthouse, Parish Church	Medieval to Post-medieval	South Hams	SX 88657 50310
1306538	I	Kitley House	Country House, Landscape Park	Post-medieval	South Hams	SX 55969 51462
1309398	I	Church Of St Winifred	Parish Church	Early Medieval to Modern	East Devon	SY 19547 88462
1317950	I	Tower Of Collegiate Chantry Of St Mary	Bell Tower, Chantry College	Medieval	South Hams South Hams	SX 82162 45061 SX 82165 45057
1325256	I	Church Of Holy Cross	Parish Church	Medieval to Post-medieval	South Hams	SX 55015 48153
1097529	II*	Coxen, Long Orchard	Coal Shed, House, Service Wing, Wood Shed	Modern	East Devon	SY 04655 83126
1097565	II*	Tidwell Manor	Country House, Rainwater Head, Steps	Post-medieval	East Devon	SY 05985 83295
1097668	II*	Stables House	House, Stable	Post-medieval to Modern	Teignbridge	SX 96661 83618
1097682	II*	Leslie House	Dower House, House	Post-medieval	Teignbridge	SX 96410 83125
1097703	II*	Mowlish Manor	Barn, Cross Passage House, House, Open Hall House	Medieval to Modern	Teignbridge	SX 95083 81022

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1097762	II*	Cross House	Bell Tower, Garden, Glasshouse, Summerhouse, Villa, Wall	Post-medieval to Modern	Teignbridge	SX 91019 73742
1097908	II*	St David's	Commemorative Monument, Railings, Statue, Terrace, Terraced House	Post-medieval	East Devon	SY 12345 87315
					East Devon	SY 12345 87315
1097931	II*	Bedford Hotel	Hotel, Library, Reading Room	Post-medieval to Modern	East Devon	SY 12503 87209
1097933	II*	Beach House	Villa	Post-medieval	East Devon	SY 12657 87247
1097956	II*	Coburg Terrace	House, Semi Detached House, Wall	Post-medieval	East Devon	SY 12447 87456
1097959	II*	Aurora; Church House	House	Post-medieval	East Devon	SY 12438 87398
					East Devon	SY 12438 87398
1098005	II*	Audley	Cottage Ornee, House	Post-medieval	East Devon	SY 12315 87636
1098515	II*	All Hallows School Including Former Stables Adjoining West And Forecourt Area Wall And Gate Piers To North	Carriageway, Country House, Forecourt, Gate Pier, School, Stable, Timber Framed House, Wall, Yard	Post-medieval to Late 20th Century	East Devon	SY 29516 90530
					East Devon	SY 29516 90530
1098598	II*	Axmouth Bridge	Road Bridge	Post-medieval	East Devon	SY 25298 89982
1098599	II*	Stepps Country Club	Country Club, Cross Passage House, Cruck House, House, Open Hall House	Medieval to Late 20th Century	East Devon	SY 26091 90946
1103877	II*	Broadway House	House	Post-medieval	Exeter	SX 96490 88316
1103914	II*	Salutation Hotel	Assembly Rooms, Gate, Hotel	Post-medieval	Exeter	SX 96550 88114
1103963	II*	Clara Place	House	Post-medieval	Exeter	SX 96418 88280
1104143	II*	Church Living And Church Living Cottage	Cider House, Cruck House, Hall House, Hayloft, Stable	Medieval to Modern	East Devon	SY 19571 88517
1104149	II*	Margells	Cruck House	Post-medieval to Modern	East Devon	SY 18852 88845
1104156	II*	Former Indoor Riding School 10 Metres South-West Of Nutwell Home Farm	Grain Silo, Riding School	Post-medieval	East Devon	SX 98757 85264

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1104187	II*	Exton Farmhouse	Farmhouse	Post-medieval	East Devon	SX 98446 86454
1107778	II*	Flete Lodge	Gate, Gate Lodge	Post-medieval	South Hams	SX 63051 51932
1107963	II*	Widdicombe House	Country House, Dairy, Landscape Park, Outbuilding	Post-medieval to Modern	South Hams	SX 81196 41729
1108493	II*	Sandridge Park	Carriageway, Conservatory, Country House, Courtyard, Landscape Park, Service Wing	Post-medieval to Modern	South Hams	SX 85990 56475
1108548	II*	Greenway House	Country House, Garden, Landscape Park, Service Wing	Post-medieval	South Hams	SX 87209 54755
1108590	II*	Wembury House	Country House, Railings	Post-medieval	South Hams	SX 53120 49207
1147732	II*	Green	Garden Porch, House	Post-medieval to Modern	Teignbridge	SX 91068 73620
1164203	II*	Parish Church Of St Gregory	Chest Tomb, Churchyard, Commemorative Monument, Gravestone, Parish Church, Plaque, Structure	Early medieval to Modern	Teignbridge	SX 95330 76643
1164569	II*	The Barn	House	Post-medieval	East Devon	SY 01418 80007
1165089	II*	Parish Church Of The Nativity Of The Blessed Virgin Mary	Parish Church	Medieval to Post-medieval	East Devon	SX 99288 84272
1168292	II*	Garden Wall Immediately South Of Mothecombe House	Garden Wall	Post-medieval	South Hams	SX 60861 47772
1168805	II*	Parsonage Farmhouse	Cruck House, Farmhouse, Hall House	Early Medieval to Post-medieval	South Hams	SX 55214 48605
1168902	II*	Courtyard Walls, Gatepiers And Outbuilding Immediately South East Of Puslinch House	Arch, Courtyard, Gate, Gate Pier, Outbuilding, Wall	Medieval to Post-medieval	South Hams	SX 56999 50877
1169166	II*	Powderham Castle Bridge	Bridge, Drive	Post-medieval	Teignbridge	SX 96582 83445
1169185	II*	Wall Approximately 90 Metres West Of Wembury House	Rampart, Steps, Wall	Post-medieval	South Hams	SX 53035 49189
1169515	II*	Bindon Manor House	Domestic Chapel, Manor House, Manorial Chapel	Medieval to Modern	East Devon	SY 27066 90457

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1169744	II*	Scoble	Farmhouse	Post-medieval	South Hams	SX 76017 39874
1170221	II*	Railings, Steps And Cast Iron Piers At Clara Place	Gate Pier, Railings, Steps	Post-medieval	Exeter	SX 96432 88266
1170373	II*	St Margaret's Church	Church	Medieval to Post-medieval	Exeter	SX 96537 88029
1170563	II*	Film Studio At All Hallows School; The Old Church	Church, Film Studio, School	Post-medieval to Modern	East Devon	SY 29388 90496
					East Devon	SY 29388 90496
					East Devon	SY 29388 90496
					East Devon	SY 29388 90496
1197496	II*	The Mansion House	Apartment, Office, Restaurant, Town House	Modern to Post-medieval	South Hams	SX8782351228
1197587	II*	No Name For This Entry	Apartment, Grocers Shop, Jettied House, Merchants House	Modern to Post-medieval	South Hams	SX 87790 51383
1206789	II*	Ilisham Manor Oratory	Premonstratensian Grange, Private Chapel, Steps, Undercroft	Medieval to Modern	Torbay	SX 93806 64125
1206808	II*	Hesketh Crescent And Attached Railings, No 1-15 And Attached Railings	Apartment, Crescent, Hotel, Railings, Terrace, Terraced House	Post-medieval to Modern	Torbay	SX 93010 63138
					Torbay	SX 93010 63138
1206840	II*	Parish Church Of St Matthias	Church Hall, Parish Church	Post-medieval to Modern	Torbay	SX 93191 64173
1208194	II*	Ramparts, Revetments, North Battery Platform, North And South Musketry Walls Of Northern Fort	Artillery Fort, Bastion Outwork, Battery, Gate, Gate Pier, Gun Emplacement, Rampart, Revetment, Wall	Post-medieval	Torbay	SX 94278 56521
1208626	II*	Britannia Royal Naval College, Main Complex And Attached Walls	Barracks, Chapel, Classroom, Clock Tower, Coat Of Arms, Drive, Naval College, Naval Officers House, Naval Officers Mess, Parade Ground, Steps, Wall	Post-medieval to Modern	South Hams	SX 87605 52046
1208761	II*	Churston Court	Covered Way, Hotel, House, Outbuilding	Medieval to Modern	Torbay	SX 90393 56414
1209616	II*	No Name For This Entry	House, Jettied House, Merchants House, Shop	Post-medieval to Modern	South Hams	SX 87794 51270

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1209644	II*	The Cherub	Jettied House, Merchants House, Restaurant	Medieval to Modern	South Hams	SX 87787 51249
1209844	II*	Hatley St George	Villa	Post-medieval	Torbay	SX 92988 63362
1212730	II*	The Grange	House	Post-medieval	South Hams	SX 74051 38856
1212753	II*	Snapes Manor	Arch, Courtyard, House	Early Medieval to Post-medieval	South Hams	SX 74084 39743
1212759	II*	Church Of The Holy Trinity	Church, Date Stone, Plaque, Wall	Post-medieval	South Hams	SX 74005 39198
1212788	II*	Woodcot	House, Terraced Garden	Post-medieval	South Hams	SX 73625 38456
1213252	II*	Old Porch House	House	Post-medieval	South Hams	SX 73939 39156
1218065	II*	Royal Castle Hotel	Courtyard, Date Stone, Hotel, Inn, Jettied House, Merchants House	Post-medieval to Late 20th Century	South Hams	SX 87793 51372
1218424	II*	Parish Church Of St Luke	Church Hall, Parish Church, Steps	Post-medieval to Modern	Torbay	SX 91303 63948
1218459	II*	Little Theatre	Booking Office, Parish Church, Theatre	Post-medieval	Torbay	SX 92551 63076
1218480	II*	Church Of St Matthew	Parish Church, Rainwater Head	Post-medieval to Modern	Torbay	SX 90045 63720
1224027	II*	No Name For This Entry	Courtyard, Merchants House	Post-medieval	Exeter	SX 96755 87641
1224066	II*	No Name For This Entry	Courtyard, Merchants House	Post-medieval	Exeter	SX 96754 87627
1224068	II*	No Name For This Entry	Counting House, Courtyard, House	Post-medieval to Modern	Exeter	SX 96757 87617
1224070	II*	No Name For This Entry	Courtyard, Merchants House	Post-medieval	Exeter	SX 96774 87581
1224078	II*	No 40 (The Dutch House) Including The Garage The Dutch House	Counting House, Courtyard, Garage, Merchants House	Post-medieval to Modern	Exeter	SX 96800 87505
1224110	II*	Wall And Piers Of No 40	Wall	Post-medieval	Exeter	SX 96792 87498
1224192	II*	Exeter Country Club Weare House	Clock Tower, Country Club, Country House, Stable	Post-medieval to Mid-20th Century	Exeter	SX 95026 89910
					Exeter	SX 95026 89910

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1266994	II*	Wall And Gates Of No 27	Gate, Wall		Exeter	SX 96749 87619
1267061	II*	Shell House	House	Post-medieval	Exeter	SX 96703 87724
1267065	II*	Wall And Gates Of No 26	Gate, Wall	Post-medieval	Exeter	SX 96743 87632
1269098	II*	United Reform Church And Attached Wall	Church Hall, Church School, Gate, Nonconformist Chapel, Plaque, Steps	Post-medieval to Modern	Teignbridge	SX 94340 73117
1269111	II*	Church Of St James (Parish Church Of West Teignmouth)	Church, Parish Church, Town Defences	Medieval to Modern	Teignbridge	SX 93939 73098
1269155	II*	Bitton House	House, Local Government Office	Post-medieval to Late 20th Century	Teignbridge	SX 93501 73055
1281217	II*	Vicarsmead Including Boundary Walls Adjoining To East And West	Boundary Wall, Buttery, Cross Passage House, Cruck House, Gate, Hiding Place, House, Vicarage, Village Hall	Medieval to Modern	East Devon	SY 06448 84821
1292142	II*	No Name For This Entry	Apartment, Jettied House, Merchants House, Shop	Post-medieval to Modern	South Hams	SX 87793 51391
1293060	II*	Church Of St Mary The Virgin	Chapel, Coat Of Arms, Commemorative Monument, Parish Church, Vestry	Medieval to Post-medieval	Torbay	SX 90427 56419
1293272	II*	Ramparts, Counterscarp Revetment, Glacis, Musketry Wall Of Southern Fort	Bank (Earthwork), Fort, Gun Emplacement, Rampart, Revetment, Wall	Post-medieval	Torbay	SX 94112 56123
1293347	II*	Beacon Terrace	Gas Lamp, Terrace, Terraced House	Post-medieval	Torbay	SX 91891 63180
1297056	II*	No Name For This Entry	Date Stone, House, Jettied House, Merchants House, Shop	Post-medieval to Modern	South Hams	SX 87821 51323
1297087	II*	The Old Battery	Artillery Fort, Barracks, Battery, Fort, Gun Emplacement	Post-medieval to Modern	South Hams	SX 88692 50280
1306102	II*	Cromer House	House, Rainwater Head, Shop	Post-medieval	Exeter	SX 96574 87965
1306164	II*	The Belvedere	Belvedere, Estate Cottage	Post-medieval to Modern	Teignbridge	SX 96221 84172

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1306680	II*	Hele Almshouses	Almshouse, Chapel	Post-medieval	South Hams	SX 53250 49415
1306828	II*	Church Of St Winaloe	Parish Church	Medieval to Modern	South Hams	SX 74881 38357
1309086	II*	Wonwell Court	Cross Passage House, Farmhouse, Kitchen, Open Hall House, Service Wing	Medieval to Post-medieval	South Hams	SX 62958 47598
1317702	II*	Parish Church Of St Margaret And St Andrew	Lych Gate, Parish Church	Medieval to Modern	East Devon	SY 02909 81296
1324937	II*	Summer House About 290 Metres South East Of Sharpham	Summerhouse	Post-medieval	South Hams	SX 82904 57674
1324947	II*	Church Of All Saints	Commemorative Monument, Parish Church	Medieval to Modern	South Hams	SX 67324 42882
1325163	II*	Church Of St Peter	Parish Church	Medieval to Post-medieval	South Hams	SX 86201 48311
1325259	II*	Church Of St Peter	Parish Church	Post-medieval	South Hams	SX 54994 47753
1325264	II*	Garden Walls Immediately To South Of Puslinch House	Garden Wall, Gate Pier	Post-medieval	South Hams	SX 56932 50853
1333278	II*	Exton House	Barn, Conservatory, Farmhouse, House	Post-medieval to Modern	East Devon	SX 98420 86441
1333302	II*	Nutwell Court	Chapel, Country House, Crypt, Library, Statue	Medieval to Modern	East Devon	SX 98780 85035
1333434	II*	Boundary Wall, Piers And Gates Of Broadway House	Boundary Wall, Gate, Railings	Post-medieval	Exeter	SX 96481 88309
1333475	II*	Parish Church Of The Holy Trinity	Parish Church	Post-medieval to Modern	East Devon	SY 00211 80659
1333479	II*	Church Of St John In The Wilderness	Parish Church	Medieval to Post-medieval	East Devon	SY 02814 83370
1333511	II*	Outbuildings, Garden Walls And Enclosing Wall And Balustrade To Stedcombe House	Arch, Balustrade, Garden Wall, Kitchen Garden, Outbuilding, Path, Stable, Steps, Urn, Wall, Yard	Post-medieval to Modern	East Devon	SY 26383 91954
1333802	II*	Little Cob;	Row, Row House	Medieval	East Devon	SY 12533 87290

Appendix 2: Grade I and II* Listed Buildings within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
		Merton Cottage; Tudor Cottage			East Devon	SY 12533 87290
					East Devon	SY 12533 87290
1333807	II*	Church Of St Giles With St Nicholas	Commemorative Monument, Lych Gate, Parish Church	Medieval to Modern	East Devon	SY 12554 87374
1333985	II*	Church Of St Clement	Parish Church	Medieval to Post-medieval	Teignbridge	SX 97251 84413
1382072	II*	D-Day Embarkation Slipways And Adjoining Section Of Quay Wall	Slipway	WWII	Torbay	SX 91813 63205

Appendix 3

Registered Parks and Gardens within the Study Area

Appendix 3: Registered Parks and Gardens within the Study Area

NHLE Number	Grade	Heritage Asset Name	Monument Type	Period Name	District/Unitary Authority	NGR
1000486	I	Luscombe Castle	Formal Garden, Garden, Landscape Park Plantation	Post-medieval	Teignbridge	SX 94044 76650
1000690	II*	Coleton Fishacre	Terraced Garden	20th century	South Hams	SX 91025 50666
1000698	II*	Powderham Castle	Deer Park, Formal Garden, Landscape Park, Pleasance, Terraced Garden	Post-medieval	Teignbridge	SX 96433 83926
					Teignbridge	SX 96433 83926
					Teignbridge	SX 96433 83926
1000701	II*	Sharpham House	Ha Ha, Kitchen Garden, Landscape Park, Sculpture, Walled Garden, Wood	Post-medieval to 20th century	South Hams	SX 82127 57417
					South Hams	SX 82127 57417
					South Hams	SX 82127 57417
1000131	II	Castle Tor	Terraced Garden	20th century	Torbay	SX 93453 63705
1000141	II	Watcombe Park and Brunel Manor	Arboretum, Garden, Landscape Park, Pleasance, Public Park	20th century	Torbay	SX 91749 67743
1000686	II	A La Ronde, and The Point-in-View	Ferme Ornee, Garden	Post-medieval to 20th century	East Devon	SY 00633 83454
1000692	II	Flete	Garden, Landscape Park, Pleasance, Rock Garden, Terraced Garden, Water Garden	Post-medieval to 20th century	South Hams	SX 62437 48634
					South Hams	SX 62437 48634
					South Hams	SX 62437 48634
1000695	II	Langdon Court Hotel	Deer Park, Formal Garden, Garden, Landscape Park	Post-medieval	South Hams	SX 50079 47390
					South Hams	SX 51802 48873
1000697	II	Overbecks (Sharpitor)	Terraced Garden	Early 20th century to mid-20th century	South Hams	SX 72787 37437
					South Hams	SX 72787 37437
1001368	II	Oldway Mansion	Garden, Pleasance, Public Park	20th century	Torbay	SX 88821 61492
1001441	II	Rousdon	Landscape Park, Pleasance	Post-medieval	East Devon	SY 29364 90369
					East Devon	SY 29364 90369
1001507	II	Princess Gardens and Royal Terrace Gardens	Public Park, Terraced Garden, Terraced Walk	Early 20th century, Victorian	Torbay	SX 91530 63525
1001532	II	Connaught Gardens	Public Park	20th century	East Devon	SY 12059 86962
1001647	II	Stonelands House	Garden, Pleasance	Post-medieval to 20th century	Teignbridge	SX 94927 76880
1001686	II	Greenway	Landscape Park, Pleasance, Walled Garden	Post-medieval to 20th century	South Hams	SX 87370 54816

Appendix 4

Protected Wreck sites within the Study Area

Appendix 4: Protected Wreck sites within the Study Area

NHLE Number	Heritage Asset Name	Alternative Name	Monument Type	Period Name	District/Unitary Authority	NGR
1000050	Moor Sand	Findspot, Wreck	Craft	Middle Bronze Age	South Hams	SX 75942 36145
					South Hams	SX 75942 36145
1000054	Erme Ingot	Findspot, Wreck	Craft	Bronze Age, Roman, Early Medieval		SX 60660 46628
1000064	Church Rocks	Wreck	Armed Cargo Vessel, Cargo Vessel, Galley	Post-medieval		SX 94725 73210
1000071	Erme Estuary	Cannon, Wreck	Craft	Medieval to Post-medieval	South Hams	SX 60933 47103
					South Hams	SX 60933 47103
1000074	Salcombe Cannon Site	Cannon, Wreck	Cargo Vessel, Corsair, Privateer, Slave Ship, Xebec	Post-medieval		SX 75531 36147

Appendix 5

Estate Maps relevant to the Study Area

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 90M/E1	Ashprington	A Plan of Lower and Upper Sharpham and the Holy bear all Lying in the Parish of Ashprington in the County of Devon.	1749	William Doidge	NOT AVAILABLE	Unknown
DRO: 90M/E2	Ashprington	A Rough Plan of Hollabear Marsh. Sharpham Lands.	1826	Unknown	The River Dart is shown with an area of marshland to the north, within which Brick Meadow and a lime kiln are labelled, and Hollabear House is labelled and depicted.	Medium
DRO: 113A/13/1	Axmouth	Axmouth. Sketch	1820		Sketch of small area of land within Axmouth Parish.	Low
DRO: 3799/M-3/E/5/2&3	Berry Pomeroy	The Parish of Berry Pomeroy.	1759	Unknown	Rough hand drawn map of Berry House with index.	Medium
DRO: 3799/M-3/E/5/1	Berry Pomeroy	The Parish of Berry Pomeroy.	1759	Unknown	Rough hand drawn map of the parish.	Medium
DRO: 1039M/E61	Bishopsteignton	A Plan of the Barton of Radway Situate in the Parish of Bishopsteignton and the County of Devon, the Property of Mr Jno Comyns.	1782	James Foster	Watercourses and fields shown along with a numeric reference to a table giving details of field names and content. Buildings depicted in plan.	Medium
DRO: Z17/3/25d	Bishopsteignton	A plan of part of Higher Rixtaile in the Parish of Bishops Tington Devonshire The Property of the Honble General Vaughan.	Early 19th century	Unknown	Fields shown and buildings depicted in plan. Numeric reference to table giving details of field names and content.	Medium
DRO: 113A/23/1	Blackawton	Blackawton. Plan.	1836		Road Map. Insufficient detail/scale/scope.	Low
Exeter D&C: M3	Branscombe	A Map of Berry Farm in the Parish, and part of the Manor of Branscombe in the County of Devon, the Lande of the Venerable Dean and Chapter of Exeter.	1763	John Tothill	The coastline is depicted and an area of lime kilns are labelled. Fields are shown with an alphabetic reference to a table giving details of field names and content.	Medium
Exeter D&C: Ch.Comm/98/8785	Branscombe	Map of the Manor of Branscombe Parish of Branscombe and County of Devon Property of the Dean and Chapter of Exeter	1793	Alexr Law	Coast is shown with the high water mark labelled. Fields depicted with an alpha-numeric reference to table giving reference to land use and content.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 59/7/3/6	Brixham	The Manor of Brixham in the County of Devon part of the Estate of Chas: Hayne Esqr	1743	Josh Willey	Fields are depicted and labelled and outlined in colour according to the tenants. Buildings are shown in plan with the exception of the church which is drawn in elevation.	Medium
DRO: 53/6 Box 9/44	Brixham	Furseham Common.	1823	Henry King	Parcels of land are depicted with a numeric reference which gives details of the landowners names.	Low
DRO: DP133	Brixham	Chart of Brixham Roads in Torbay with the adjacent Shores and Town of Brixham Quay, showing the intended Breakwater as designed by J. M. Rendel. C. E.	1836	C. Greaves	Detail of Brixham Quay, and Garrison Hospital, Battery, a cottage and the Barracks are depicted and labelled on Berry Head. The site of an intended breakwater is shown to the northeast of Brixham Quay.	Medium
DRO: 346M/P1	Brixton	Drakes Estate.	1793	Unknown	Atlas of maps with numeric reference.	Medium
DRO: Z2/7	Brixton	Map of Halwell, Combe and other Lands in the Parishes of Plymstock and Brixton Devon	Early 19th century	Unknown	Roads and fields shown. The fields have a numeric reference to a survey book.	Medium
DRO: 113A/33/2	Brixton	A Plan of Roads in the Parishes of Brixton and Yealmpton Devonshire proposed to be Stopped as by Plan described	1827	Unknown	Plan showing roads and buildings. Some fields also shown and named.	Medium
PWDRO: 1957/1	Brixton	A Map of the Lands of Thos Copleston Esq; in the Parish of Brixton and County of Devon.	1746	John Richards	Fields are shown with an alpha-numeric reference to tables containing details of landholders, field names and content. Church and houses are shown in elevation.	Medium
PWDRO: 74/293	Brixton	An Accurate Survey of the Barton of Coffleet, The Manor of Brixton English and the Manor of Spriddlestone in the Parishes of Brixton and Yealmpton in the County of Devon Belonging to Thomas Lane Esqr Also of the several Leasehold Tenements held under the Trustees of the Charity founded by Elize Hele Esqr.	1785	William Gardner	Detailed plan showing fields with an alpha-numeric reference to tables that give details of tenements, land holders and field names.	Medium
PWDRO 74/291	Brixton	A Plan of the Manor of Brixton-English (the Property of Thos Splatt Esqr) in the Parish of Brixton and County of Devon	1789	Richard Cowl	Fields are shown with a numeric reference to a table containing details of field names and content. A small number of buildings are shown in plan.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
PWDRO 1957/9	Brixton	Rough Map of Holwell and Combe in the Parish of Brixton Devon The Property of E.P. Bastard Esqr	c. 1819	Unknown	Roads and fields are shown, with field names labelled. Some buildings shown in plan.	Medium
PWDRO: 1957/12	Brixton	Map of Halwell, Combe, Gore and other Lands in the neighbourhood of Elburton.	C. 1828	Unknown	Fields shown in various colours, named and with a numeric reference to a list which gives details of their content.	Medium
PWDRO: 74/61/19	West Charleton	A Map or Plan of the River and Harbour of Kingsbridge in the parishes of Dodbrook, West Alvington and Charlton in the county of Devon.	1796	Robert Ballmont	Map of Kingsbridge Harbour & Estuary within the Parishes of Charleton, Dodbrook & W.Alvington; Hand Sketch with limited detail.	Medium
DRO: 1869/EM3-4	West Charleton	Map of the Manor of Charleton within the Parish of Charleton in the County of Devon.	1839	J. Andrew	MAP NO LONGER AVAILABLE.	Unknown
113A/3/3	Charleton	West Alvington and Charleton. Sketch	1813	Unknown	Small hand sketch of road.	Low
113A/3/4	Charleton	West Alvington and Charleton. Sketch	1813	Unknown	Small hand sketch of road.	Low
48/13/1/12/5	Chivelstone	Plan of the Estate of Borough in the Parish of Chivelstone Devon belonging to Rawlin Mallock of Cockington Esqr.	1753	Unknown	Sketch plan showing fields with alphabetic reference to a table giving field names and content.	Low
1891B/P1	Churston Ferrers, Kingswear	Map of Lower Greenway Estate the Property of Colonel Edward Carlyon.	1839	John Grant Surveyor Torpeek Ugborough	The River Dart is depicted along with the Lower Greenway Ferry. Fields are shown with a numeric reference to a table giving details of field names and content. Buildings are shown in plan and a lime kiln is marked.	Medium
Exeter D&C: Ch. Comm 98/8791	Colyton	Road Green in Colyton.	1817		Fields, roads and buildings depicted with a numeric reference to a table with details of field names.	Medium
113A/58/1	Clyst St George	Clyst St George. Plan	1834	Unknown	Simple sketch map showing a road to be blocked. No additional detail shown.	Low
DRO: 3349A add/PZ1	Cockington	Torre Abbey.	Late 18th century	Unknown	Fields are depicted along with a numeric reference to a list containing details of land use and water supply. Some buildings are depicted in elevation.	Medium
DRO: 3349A add/PZ2	Cockington	Torre Abbey.	Late 18th century	Unknown	Similar to 3349A add/PZ1 but fields numbered differently.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 3349A add/PZ3	Cockington	Torre Abbey	Late 18th century	Unknown	Similar to 3349A add/PZ1 but fields numbered differently.	Medium
PWRDO 81 X/36	Cockington	A Plan of the Parish of Cockington in the County of Devon the Property of Roger Mallock Esq.	1801	Unknown	River and coast shown. Fields outlined in ink and buildings shown in plan.	Medium
DRO: 48/13/4/2/68	Cockington	Map of Shapley Estate in Sherwill Lane.	1826	Unknown	Ink sketch containing little detail.	Low
DRO: 113A/198/1	Cockington	Torquay, Cockington. Plan	1939	Unknown	Sketch showing the route of a new road between Livermead and Cockington. Little additional detail shown.	Low
DRO: 113A/198/7	Cockington	Torquay, Cockington and Paignton. Sketch.	1831	Unknown	Simple sketch showing the route of a road to be blocked	Low
DRO: 113A/63/1	Combeinteign-head	Comebeinteignhead. Sketch.	1816	Unknown	Simple ink sketch showing route of an old and new road near Milber Down.	Low
DRO: R9/1/Z/32	Dartmouth	-	1620	Nicholas Townsend	Map of Dartmouth with buildings shown in elevation along the network of roads. Two tide mills are shown.	Medium
DRO: R9/1/33	Dartmouth	-	1620	Nicholas Townsend	A Map of Dartmouth with buildings shown in elevation along the network of roads. The River Dart and Mill Pool are shown.	Medium
DRO: 72/14/1	Dartmouth	A Plan of Dartmouth Castle with a design to improve the principle Battery	1745	Unknown	UNABLE TO LOCATE.	Unknown
DRO: 2788Z/Z1	Dartmouth	-	c.1800	Unknown	Perspective view.	Low
DRO: DP84; HL	Dartmouth	-	1829	Unknown	Plan showing the site of an intended ferry.	Low
DRO: 484M/T/41	Dawlish	A Map or Plan referred to by the foregoing Indenture.	1837	Unknown	Fields are shown and labelled with their field names. A building is depicted in plan.	Medium
DRO: 1508 Devon/M&P/Kenton/Maps 15	Dawlish	-	c. 1760	Unknown	Dawlish Warren is outlined, a broken line depicts the area uncovered at the low tide mark. Fields are shown with an alpha-numeric reference relating to the survey book.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 1508M /London/M&P/ Dawlish 2	Dawlish	A Sketch of Lands Containing the Cockwood Estate, as formerly Purchased with the different exchanges made by the late Revd. J. Drury. D.D.	1838-1840	Unknown	Fields are shown in colour with alpha-numeric reference to a list giving field names which are grouped by estates and parcels of land.	Medium
DRO: 1508M Devon/M+P/ Kenton Maps 3	Dawlish	A Map of Cockwood Marshes otherwise Cofton and Cofford Marshes situated in the Parishes of Kenton and Dawlish in the County of Devon: The Property of The Right Honourable William Lord Visct Courtenay	1808	John Pascoe	Present or diverted course of the South Brook is labelled and depicted, with plots of marsh land labelled to the north.	Low
DRO: 1508M/M&P/ Kenton/Maps 4	Dawlish, Kenton and Powderham	A Map of Shutterton Marsh one part of which belongs to the Parish and Manor of Kenton and the other part thereof, which has been lately purchas'd, is situate within the Parish of Dawlish and now Annex'd to the sd. Manor of Kenton, in the County of Devon, the propy. of the Rt. Honble Wm. Lord Visct. Courtenay	1810	William Cartwright	The Shutterton Brook is labelled with the canal shown to the north. A small amount of land is shown on either side of these watercourses. A Salt House is marked on the River Exe.	Medium
DRO: 2729Z/E6	Dawlish	Manor of Dawlish Copy of the Map of the Estates of Little Cofton, Bakers and Harris Cofton, Whitburns Cofton, Cofton Copy, and Duck Aller in the said Manor.	1838	Unknown	Watercourses are shown, fields are shown with an alpha-numeric reference to a list giving details of field names, land use and content. Buildings are shown in plan.	Medium
Exeter D&C M/4	Dawlish	The Manor of Dawlish the property of John Inglett Fortescue Esq surveyed and mapped in one thousand seven hundred and eighty seven by Charles Law Exmouth Devon.	1800	Unknown	Map of land within Dawlish showing coastline and watercourses. Fields are depicted, with an alpha-numeric reference linking to a survey book. Parcels of land are labelled with reference to their owners. Buildings are depicted in plan.	Medium
Exeter D&C 2939	Dawlish	Survey and Valuation of the Manor of Dawlish in the County of Devon Held under the Dean and Chapter of Exeter by John Fortescue Esqr Taken in 1800 by Alexr Law	1800	Alexr Law	Survey book.	Low
DRO: 113A/70/1	Dawlish	Dawlish. Sketch.	1809		Simple ink sketch of a new highway on Luscombe Down.	Low
DRO: 113A/70/2	Dawlish	Dawlish. Plan.	1810		Ink sketch of a road to be enlarged near the edge of the cliff.	Low
DRO: 113A/70/3	Dawlish	Dawlish. Sketch.	1815		Simple ink sketch showing the route of the old and the new proposed roads between Starcross and Dawlish.	Low

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 113A/70/4	Dawlish	Dawlish. Sketch.	1830		Simple plan showing the route of an old and new proposed footpath.	Low
DRO: 113A/70/5A-B	Dawlish	Dawlish. Plans.	1831		Sketch map showing the route of an old and a new proposed road.	Low
DRO: 113A/70/7	Dawlish	Dawlish. Plan.	1840		Simple map showing the route of an old and a proposed new road. No additional detail shown.	Low
DRO: 113A/3/1	Dodbrook	West Alvington and Dodbrooke. Two sketches.	1812		Small road map, insufficient detail/scope.	Low
DRO: 113A/3/2	Dodbrook	West Alvington and Dodbrooke and sketch.	1812		Small road map, insufficient detail/scope.	Low
DRO: 96M/Box 36/15	East Budleigh	A Map of Part of the Crosses Estate situate at Dalditch in the parish of East Budleigh in the County of Devon the Property of Mr Williamson.	1824	Joseph Otton	Fields are shown with an alpha-numeric reference to a table giving names of parcels, land use and content.	Medium
DRO: 96M add/E12	East Budleigh	A Map of the Manor of Tidwell situated in the Parishes of East and West Budleigh and Budleigh Salterton in the County of Devon the Property of John Eyde Esqr.	1797	William Bond	Fields are outlined in colour and contain a numeric reference to tables with details of field names, land use and content. Writing very difficult to read as map is worn.	Low
DRO: D1508M/M&P /Teignmouth Maps 1	East Teignmouth and West Teignmouth	A Map of the Manor of East Teignmouth alias Teignmouth Courtenay also that part of the Manor of Kenton which lies in the Parishes of East and West Teignmouth in the County of Devon, being the Lands of the Honble Sir Willm Courtenay Bart	1759	William Hole	The coast and the River Teign are shown. Buildings within Teignmouth are depicted in plan and many areas are labelled giving an indication of their use, or former use.	Medium
DRO: ECA No.21	East Teignmouth and West Teignmouth	Plan of the Lands in the Parishes of East Teignmouth and West Teignmouth in the County of Devon.			Small plans showing fields and properties.	Low
DRO: 1508M Devon/M&P/ Teignmouth 4	East Teignmouth	-	Early 19th century	Unknown	The coast and the River Teign are marked. Buildings within Teignmouth are shown in plan, and some areas labelled. A fort is labelled on Teignmouth Denn.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: DP65	East Teignmouth	Plan of Proposed Turnpike Roads in the several Parishes of East Teignmouth, Dawlish, Kenton, Kenn, Mamhead and Chudleigh in the County of Devon.	1825	Roger Hopkins	Map of proposed turnpike roads. Placenames labelled, some buildings shown, and some fields on either side of the road numbered with reference to a survey book containing details of landuse and ownership. Features such as limekiln, saltworks and toll gates marked.	Medium
DRO: 1508M Devon/M&P/ Exminster A1	Exminster	Map of Collings Place and Kingsdon in the Parish of Exminster.	c.1800	Unknown	The River Exe is shown with surrounding fields labelled with an alphabetic reference relating to a survey book.	Low
DRO: 1508M Devon/M&P/ Exminster A3	Exminster	-	c.1829	Newtons and Berry Chancery Lane	The River Exe is shown with canal depicted to the south. Fields are shown and contain a numeric reference to a survey book.	Medium
DRO: 1508M Devon/M&P/ Exminster A4	Exminster	Crablake Tenement.	1795	Unknown	Fields are shown with a numeric reference to a table giving field names and content. Buildings are shown in plan.	Medium
DRO: 1508 London/M&P/ River Exe 2	Exminster	Exminster.			River Exe and Exeter Canal are depicted. Buildings are depicted in plan.	Low
DRO: 1508 London/M&P/ River Exe 3	Exmouth	-	18th century	Samuel Palke	Map of the River Exe showing the channel and Sandbanks. Powderham Castle and Dawlish Warren are also labelled.	Medium
DRO: 113A/73/1	Exminster	Dunchideock, Kenn and Exminster. Plan.	1821		Road map showing routes of old and new roads. Some surrounding buildings depicted but little further detail shown.	Low
DRO: 113A/76/1	Exminster	Exminster. Plan.	1803		Sketch showing route of old and new proposed footpath. Surrounding fields are named.	Low
DRO: 113A/76/2	Exminster	Exminster. Plan.	1825		Sketch showing road to be blocked. No additional detail shown.	Low
DRO: 113A/76/3	Exminster	Exminster. Plan.	1829		Sketch showing road near Pengelly Farm to be blocked.	Low

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 113A/106/4	Exminster	Kenn, Exminster and Shillingford St George. Sketch.	1818		Road map sketch. No additional detail shown.	Low
DRO: 113A/94/1	Holbeton and Newton Ferrers	Holbeton and Newton Ferrers. Plan.	1830		Road map sketch.	Low
DRO: 113A/137/2	Holbeton and Newton Ferrers	Newton Ferrers and Holbeton. Plan.	1827		Road map sketch of the NE part of Holbeton. Little detail shown.	Low
DRO: 1508M/Maps/Powderham 2	Kenton and Powderham	Map of the Manors of Powderham and Kenton. A Map of the Demesne of Powderham Castle with the Marsh adjoining the same.	1747-1759	Unknown	Land depicted in colour with an alphabetic reference to a list on the opposite page giving details of land use and content.	Medium
DRO: 1508M Devon/M&P/Kenton Maps 13	Kenton	-	c.1760	Unknown	Outline of fields shown. Little detail.	Low
DRO: 1508M Devon/M&P/Kenton Maps 14	Kenton	-	c.1760	Unknown	Outline of fields are shown with alphabetic reference to survey book.	Medium
DRO: 1508M Devon/M&P/Kenton Maps 17	Kenton	-	c.1760	Unknown	Incomplete map.	Low
DRO: 1508M Devon/M&P/Kenton Maps 17a	Kenton	-	c.1760	Unknown	Outline of fields shown with some owners named and a numeric reference to the survey book.	Medium
DRO: 1508M Devon/M&P/Kenton Maps 1	Kenton	Map of lands lying within the several Manors or Districts of Kenton-Courtenay, Chiverstone, Kenton, West-Town, Hayton, Wilsworthy including Pits-Moor, Hall Down and the Kenwoods, Lyston&c, South Town, Staplake, Starcross, Southbrook, Cofford, Week and Week Pit, all within the Parish of Kenton, in the County of Devon Belonging to The Right Honourable William Lord Viscount Courtenay.	1783	George Lang	Large detailed map showing the coast and River Exe. Individual fields are shown and labelled with their field names and a numeric reference to a survey book.	Medium
DRO: 1508M Devon/M&P/Starcross A4	Kenton	The Castle Grounds.	1820	Unknown	The River Exe is shown with surrounding fields depicted and labelled with tenants names. Not much detail relating to land use.	Low

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 1508M Devon/M&P/Rivers/Maps 4	Kenton, Lympstone	-	19th century	Unknown	The River Exe is shown with buildings depicted in plan within the settlements of Lympstone, Powderham, South Town, Kenton and Starcross.	Low
DRO: 1508M Devon/M&P/Powderham A5	Kenton	Old Tracing of part of Exwell.	19th century	Unknown	A small number of fields are depicted with field names.	Medium
DRO: 1508M Devon/M&P/Kenton Maps 19	Kenton	Plan of Painters Farm in the parish of Kenton.	19th century	Unknown	Fields are depicted and labelled with a numeric reference to table. Buildings are depicted in plan.	Medium
DRO: 1508M Devon/M&P/Kenton Maps 22	Kenton	A Plan of Cockwood Marshes As Formed by their first Draining.	19th century	Matthew Rowse	Canals and drains are shown within an area of marsh that are labelled. Lime Kilns are marked.	Medium
DRO: 484M/T3/20	Kenton	Lands in the Parishes of Mamhead and Kenton Devon.	1827	Samuel T Coldridge	Fields are shown in colour with alpha-numeric reference to table. Map was very difficult to read.	Low
DRO: 484M/T4/37	Kenton	The Schedule referred to by the above written indenture.	1836	Unknown	Fields are shown in colour grouped by estates, with a numeric reference to lists giving field names, land use and content. Buildings are shown in plan.	Medium
DRO: 1508M Devon/M&P/Kenton Maps 5	Kenton	A Map of Cofford Mill Estate.	1837	J. Brinsden	Fields are coloured according to land use, buildings are shown in plan.	Medium
DRO: 96M add/E14	Littleham	A Map of an estate in the parish of Littleham (late Mr Munday) belonging to Denys Rolle Esqr.	Late 18th century	Unknown	Fields are shown with an alpha-numeric reference to table giving field names, land use and content.	Medium
DRO: 96 addM/E11	Lympstone	A View of the Lakes, Sands, and Oister-Fishery on the Exmouth side of the river Exe; from Chickstone on the South to Darling's Rock on the North.	1743	William Chapple	Main channel of the Exe is shown with the sandbanks named. Various features are named including Gun Point and Fort Point. Houses and churches are drawn in elevation. Two salthouses are shown on the Warren, and a beacon is labelled in Exmouth.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 1508London/ M&P/River Exe 1	Exmouth and Lypstone	Map of the River Exe at its outlet to the sea.	1839	Jas. M Rendel	River Exe is shown with the principle channels named and high and low water marks shown. A toll house and saltworks are also marked.	Medium
DRO: 113A/107/3	Lypstone	Kilmington. Sketch.	1803		Small sketch showing route of diverted footpath.	Low
DRO: 113A/115/1	Lypstone	Lypstone. Sketch.	1819		Small sketch showing the route of a diverted highway. The landowners of the three adjoining fields are named.	Low
DRO: DP96	Lypstone	Exeter Turnpike Road, Lypstone to Exmouth.	1831		Sketch of the proposed route of the new turnpike road. Placenames labelled, some buildings shown, and some fields on either side of the road numbered with reference to a survey book containing details of landuse and ownership.	Low
DRO: ECA Book 58	Newton Ferrers	Plan of two Tenements, call'd New-How-House and Torr, situate in the Parish of Newton Ferrers in the County of Devon; given (with other Lands) by Sir John Maynard Knight towards the support of St. John's Hospital.	1756	John Richards	This may not be the correct location as it appears to cover an area outside the study area.	Low
PWDRO: 1798/1	Newton Ferrers	-	c.1600	Unknown	Sketch of the village but difficult to orientate.	Low
PWDRO: 308/182/1	Newton Ferrers	A Plan of the Estate called Collaton in the Parish of Newton Ferris in the county of Devon.	1770		Fields are shown with names and an alphabetic reference to lists with content.	Medium
DRO: 113A/21/1	Otterton	Bicton, Colaton Raleigh and Otterton. Plans.	1808		Map showing the route of an old and a proposed new road between Bicton Park and Otterton. Little additional detail shown.	Low
DRO: 1508M Devon/M&P/ Powderham Maps 1	Powderham	A Map of Lands within the Township of Powderham with the Glebe Lands of Powderham the Property of The Right Honourable William Lord Viscount Courtenay.	1785	George Lang	Large detailed map showing coastline and rivers. Fields are shown and named with a number reference to survey book.	Medium
DRO: 1508M/M&P/ Powderham A3	Powderham	-	1793	Unknown	The River Exe is shown and fields are depicted with names and numeric references to a list with names of tenements and content.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 1508M/M&P/ Powderham/ Maps 2	Powderham	Map of the Manors of Powderham and Kenton.			Fields are shown with an alphanumeric reference linking to a table containing field names.	Medium
DRO: 1508M/M&P/ Powderham/ Maps 3	Powderham	A Map of part of the Parish of Powderham in Lord Visc. Courtenay's Hands from Ladyday	1804	Unknown	The River Exe is shown with areas of marsh and fields. Buildings are shown in plan. Map is very difficult to read.	Low
DRO: 1508M Devon/M&P/ Powderham/ Maps 5	Powderham	Map of the Parish of Powderham in the County of Devon.	1836	Robert Dymond	Roads, rivers and streams are depicted. Fields are shown with a numeric reference to the table. Buildings are shown in plan.	Medium
DRO: 1508M Devon/M&P/ Powderham/ Maps 4	Powderham	A Map of Lands belonging to Powderham Castle.	1836	John Brinsdon	The River Exe is shown with surrounding fields. Buildings are shown in plan.	Medium
DRO: 1508M Devon/M&P/ Kenton/Maps 6	Powderham	A Vale of Land Called Milllands Bottom lying in the Parishes of Kenn, Kenton and Powderham Devon.	1839	Jno Grant	River and mill stream are depicted, fields are shown with a numeric reference to list giving names of owners, lessees and occupiers. Buildings are shown in plan	Medium
DRO: 1508M Devon/ Harbours 18	Powderham	-	Later copy of 1828 map	James Green	Map relating to the canal basin.	Low
DRO: 281M/E8	Seaton and Beer	Plan of Estates in the Parishes of Beer and Seaton, Honiton and Combrawley Devonshire belonging to James Thomas Benedictus Marwood Esqr.	1783	J Sturge	Outline of buildings shown within Beer, some fields shown with a numerical reference to a survey book.	Low
DRO: 113A/169/1	Seaton and Beer	Seaton and Beer. Plan.	1819		Road Map. Little detail shown relating to land use.	Low
DRO: 113A/169/2	Seaton and Beer	Seaton and Beer. Plan.	1834		Road Map. Little detail shown relating to land use.	Low
DRO: DP6a	Seaton	Seaton to River Tone (Somerset) Canal.	1793-4	Unknown	Map showing route of proposed canal. Buildings depicted in plan. Some fields shown with a numerical reference.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: DP121	Seaton	Road from Upottery to Seaton.	1835	William Dawson	Road Map. Little detail shown relating to land use.	Low
DRO: 113A/183/1	Shaldon St Nicholas and Stokeinteignhead	Stokeinteignhead and Shaldon (St Nicholas). Sketches.	1831		Small sketch showing stretch of highway to be blocked.	Low
DRO: 337Badd2/M&P/7	Sidmouth	Map Broadway...Parishes of Sidmouth and Sidbury in Devon...and distances from each other and from the...the one fences belonging therefore...	Mid 18th century	Unknown	Road map. Some buildings shown in plan. Sidmouth church shown in elevation. A small number of fields are shown with a numerical reference.	Low
DRO: 382add/P13	Sidmouth	Plan of the Parish of Sidmouth and of the Parish of Salcombe Regis in the County of Devon.	1835	Enlarged from the Ordnance Map of Devonshire, by Murray Vicars, Surveyor.	Map showing the proposed site of a chapel within Sidmouth. The network of roads are shown and some of the buildings within Sidmouth are shown in plan. A sea wall and the site of a proposed harbour are also marked.	Medium
DRO: 906M/Z7	Sidmouth	The Manors of Sidbury, Sidmouth, Salcombe and Weston.	19th century	Unknown	Sketch map showing boundaries of manors and surrounding network of roads.	Medium
DRO: 961M add/ME2	Sidmouth	Plans of Manors and Lands in the County of Devon The Property of Sir John Kennaway Bart Robert Dymond Land Surveyor, Exeter.	1823-25	Coldridge	Sidmouth Beach is shown with plots of land to the north of this coloured and labelled with an alphabetic reference and field name. Roads and footpaths are also shown and some buildings shown in plan. A fort is depicted and labelled to the north of the beach.	Medium
DRO: 113A/176/1	Sidmouth	Sidmouth. Plan.	1794		Road map showing site of new road within Sidmouth.	Low
DRO: 113A/176/2	Sidmouth	Sidmouth. Plans.	1827		Road map showing site of new road within Sidmouth.	Low
DRO: 113A/176/3	Sidmouth	Sidmouth. Plans.	1833		Road map showing site of new road within Sidmouth.	Low
DRO: DPQ/RUM20	Sidmouth	Brandy Cross to Sidmouth road.	1811	J. Pascoe	Road map showing site of proposed new road within Sidmouth.	Low

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 52/5 UFP	Sidmouth	Manor of Sidmouth The property of Thomas Jenkins Esqr.	1789	William Day	UNFIT FOR PRODUCTION	Unknown
DRO: 1508M/M&P/ South Pool Maps 1	South Pool	A Map of Lands lying within the Manor of North Pool in the County of Devon Belonging to The Right Honble Wm: Ld: Visct: Courtenay.	1777	George Lang	Frogmoor Creek is shown, and fields are shown outlined in colour with field names and a numerical reference to a survey book. Buildings depicted in plan. Quarry and lime kiln are labelled.	Medium
DRO: DD3725	Stoke Gabriel	A Plan of the Barton of Sandridge lying in the Parish of Stoake Gabriell in the County of Devon belonging to Pomeroy Gylbert Esqr.	1748	William Doidge	Fields are shown within a network of roads with an alphabetic reference to a table giving details of field names and content. Buildings are shown in plan.	Medium
DRO:563Z/P1	Stokeinteign-head	A Plan of the Manor of Ringmore lying in the Parish of Stokeninhead and St Nicholas both in the County of Devon belonging to the Rt Honble Ld Clifford.	1741	William Doidge	Detailed map showing fields set within a network of roads with an alphabetic reference to tables containing details of field names and content.	Medium
DRO: 1508M Devon/M&P/V 3	Stokeinteign-head	A Survey with Maps of Lands lying within the Manors of Ilton, Saltcombe; Collaton Prawle, Portlemouth, East-Sewer, Bolberry-Beacham, & Bolberry Allen in the Parish of Marlborough; Galmeton and South Huish, in the Parish of South Huish; Thurlestone in the Parish of Thurlestone; with Lands in the Parishes of South Milton, and W-Alvington and also the Manor of North-Pool in the Parish of South-Pool and County of Devon. Belonging to The Right Honble: Wm: Ld: Visct. Courtenay.	1777	George Lang	Most of the fields shown on this map area beyond the project area.	Medium
DRO: D1508M/M&P /Rivers Maps 2	Topsham	A Map of Topsham Harbour within the Port of Exeter, shewing the Coast and distinguishing the Villages and Creeks on each Side from Topsham to Exmouth, and thence to the Bar: Shewing also the present Course of the Channel, and ye several Beds or Banks of Sand as they now appear at Low Water.	1757	William Chapple	The River Exe is shown with the channel and sandbanks. Houses are shown in elevation. A number of features are labelled including a watch house, salt works, Nutwell House and Powderham Castle.	Medium
DRO: 3612M/T11	Topsham	-	1787	Unknown	UNABLE TO LOCATE	Unknown
Exeter D&C Ch. Comm. 98/8791	Topsham	A Survey and Maps of Manors and Estates in the several Parishes of Up-ottery, Tamerton, Topsham, Cullumpton, Winkleigh, Huntsham, Tiverton, Colebrooke and Colyton.	1817	John Coldridge	Fields are shown with a numeric reference to a table. A tithe barn is labelled within the Glebe Lands of Littleham.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
Exeter D&C Ch. Comm. 6068/5/3	Topsham	Plan of Premises in Topsham, shewing that part of the Lands of the Dean and Chapter proposed to be taken for enlarging the Church Yard.	1827	Saml T Coldridge	The River Exe is shown. Some of the buildings within Topsham are shown in plan and labelled according to use.	Low
DRO: 2729/E5	Topsham	A Map of the Town of Topsham in the County of Devon.	1836	I. Poole	Detailed plan showing layout of Topsham.	Medium
DRO: 113A/197/1	Topsham	Topsham. Plan.	1804		Map showing the old and proposed new footways through the grounds at Newport.	Low
DRO: 113A/197/2	Topsham	Topsham. Plan.	1808		Map showing the route of a proposed new footpath. Little additional detail shown.	Low
DRO: 113A/197/3	Topsham	Topsham. Plan.	1813		Map showing the route of a proposed new road from Exeter to Topsham. Little additional detail shown.	Low
DRO: TD 386	Tormoham	-	1808	Unknown	UNABLE TO LOCATE	Unknown
DRO: 3799M/E8/1	Totnes	-	1700	Unknown	The River is depicted and bridges shown. Little detail relating to land use.	Low
DRO: 6107	Wembury	A Survey of the Estates of Charles Holmes Calmady Esqr and Pollexfen his wife Situate in the Several Counties of Somerset, Devon and Cornwall.	1788-1789	Richard Davis	Roads and streams are shown, fields are shown and labelled with alpha-numeric reference to the survey book.	Medium
PWDRO 74/153/33	Wembury	A Survey and Valuation of the Manor of Down Thomas situated in the Parish of Wembury, in the County of Devon. Property of John Spurrell Pode Esqr.	1791	Alexander Law	The English Channel is marked, fields are shown with alpha-numeric references.	Medium
DRO: Z2/6	West Alvington	A Map of the Manors of Batson and Shabbacombe in the Parish of Marlborough with Gerston and other Lands in West Alvington Devon.	1813	Unknown	Fields are depicted with a numeric reference to a table giving field names and content.	Medium
DRO: ECA Book 58: 5/3/48.3 Map 21	East and West Teignmouth	Plan of Lands in the Parish of East-Teignmouth and West-Teignmouth, in the County of Devon; given by Alice Heath, Widow towards the Support of the Poor of Grendon's Alms-houses, call'd the Ten Cells.	1756	John Richards	Some fields are shown with an alpha-numeric reference to a list giving content.	Medium
DRO: 1508M Devon/Maps/Special Subjects/Rivers M1	West Teignmouth	A Draught of The Harbour of Teignmouth.	1727	Richard Prowse	The River Teign is shown. Some of the buildings on either side of the river are depicted in elevation.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: 5846Z/E6	West Teignmouth	Map of Bitton Estate situated in the parish of West Teignmouth in the County of Devon The Property of William Mackworth Praed Esqr.	1790	Alexander Law	The coast is shown. A small number of fields are shown with an alphabetic reference to a table with details of field names and content. Buildings are depicted in plan.	Medium
DRO: 260M add/P1	West Teignmouth	Map of Land in the Parish of West Teignmouth Devon The Property of the late James Coysh Esqr.	1829	J. Taperell	Network of roads are shown with buildings shown in plan. Some fields shown with a numeric reference to a table giving details of field names and content.	Medium
1508/London/Estate/M&P/Teignmouth 1	Teignmouth	A plan of the harbour of Teignmouth, Taken in May 1771.	1771	Unknown	The River Teign is shown with surrounding villages marked and buildings depicted in elevation. The site of a fort and windmill are marked.	Medium
DRO: 113A/192/1	West Teignmouth	West Teignmouth. Sketch.	1802		Small sketch map showing route of proposed new road and detail of owners of properties surrounding this.	Low
DRO: 113A/192/2	West Teignmouth	West Teignmouth. Sketch.	1823		Small sketch map showing the diversion of a stretch of highway. The field names are given for those parcels that will be impacted by the new route of the road.	Low
DRO: Z2/4	Withycombe Raleigh	A Map of Marpool Hall, the Seat of Thomas Hull Esqr.	1768	William Hayman	Buildings of Marpool Hall shown in plan with surrounding land illustrated.	Medium
DRO: 346M/E834	Woodbury	-	1783	Unknown	Fields and roads are shown and named and a sand pit is labelled. The map relates to measurements concerning old and proposed new road and footpath.	Medium
DRO: 346M/E838	Woodbury	-	1785	Unknown	Map of land at Nutwell. River Exe is depicted. Fields and roads are shown and named. Brice's Yard and a boat house are labelled and depicted.	Medium

Appendix 5: Estate Maps Relevant to the Study Area

Reference	Parish	Title	Date	Surveyor	Notes	Assessment
DRO: EC Drawer 1	River Exe	Part of the River Exe from an actual survey.	1761	Unknown	River Exe is depicted with sandbanks and channels. Houses are shown in plan, churches are shown in elevation. Salt works and lime kilns are labelled.	Medium

Appendix 6

Admiralty Charts Relevant to the Study Area

Appendix 6: Admiralty Charts Relevant to the Study Area

UKHO ref.	Title	Date	Surveyor	Notes	Assessment
OCB26 A1-A3	Torbay	1808-1857	Lieut. Murdoch Mackenzie	Surveyed 1781. Overview of Torbay. Reservoir marked at Brixham, Batteries marked to the east and west of Brixham.	Medium
OCB26 B1-B9	Torbay	1857-1908	Capt. Sheringham R. N. assisted by Lieut. Cox and Mr Taylor, Mast R. N.	Surveyed 1852. Main towns of Torbay labelled and depicted. Iron Mine labelled to the west of Sharkham Point.	Medium
OCB26 C1-C19	England – South Coast Torbay	1908-1952	Surveyed by Staff Captain F. Haslewood, R. N. assisted by Mr H. J. Lanyon	Surveyed 1904-6. Main towns of Torbay labelled and depicted. Quarries marked to the east and west of Brixham. Breakwater coastguard station, batteries and barracks shown on Berry Head. Plan of Torquay Harbour.	Medium
OCB23 A1-A3	Survey of the South Coast of England from Abbotsbury to Sidmouth	1809-1858	Lieut. Murdock Mackenzie	Surveyed 1787. Overview of Abbotsbury to Sidmouth. Shows settlements at Sidmouth, Salcombe, Dunscombe, Weston, Branscombe, Beer, Seaton, Axmouth, Dowlands, Rousdon, Charton, Whitlands, and Piney. Ferry marked at Axmouth and two lime kilns and a chalk pit marked. Summer house marked to the north of Charton Bay.	Medium
OCB25 A1-A6	A Chart of Part of the Coast of Devonshire from Exmouth to Rame Head	1826-1864		Overview of coastline between Rame Head and Exmouth. Settlements marked.	Medium
OCB25 B1-B5	England – South Coast Sheet 11 Dodman Point to Start Point	1864-1880	Surveyed by Captns Williams and Sheringham and Com H. Cox assisted by J. S. Taylor, A. B. Osborne, J. S. Wells, and J. E. Davis, Masters, R. N.	Surveyed 1856-60. Overview of coast between Dodman Point and Start Point. Shows topography of land and settlements labelled. Breakwater marked at Plymouth. A small number of flagstaffs are labelled along the coast.	Medium
OCB4 A1-A2	English Channel – Sheet 2, from Portland to Dungarvon on the English and Irish Coasts, and from St Brieve to Quiberon on	1811-1846		Overview of the west end of the English Channel showing placenames on the coast.	Medium

Appendix 6: Admiralty Charts Relevant to the Study Area

UKHO ref.	Title	Date	Surveyor	Notes	Assessment
	the French				
OCB24 A1	A Plan of Exmouth Bar and Harbour	1829-1853	Lieut. R Loney, R., N.	Surveyed January 31st 1829. Detailed plan of Exmouth Bar showing Coastguard Station, Mill, and a lime kiln to the west of Exmouth	Medium
OCB1154 A1-A4	Teignmouth Harbour	1838-1853	T. A. B. Spratt, R. N.	Surveyed 1836. Settlements of Teignmouth and Shaldon depicted.	Medium
OCB27 A1-A3	A Chart of Dartmouth Harbour	1829-1855	Capt. M. White, R. N.	Surveyed 1826. Kingswear Castle, Old Castle, Dartmouth Castle, St Petrox, Battery, Reboubt labelled at entrance to River. Dartmouth Old Castle and Floating bridge to north of town also shown.	Medium
OCB28 A1-A5	A Survey of Salcombe Harbour, South Coast of Devonshire	1829-1862	Captain Martin White, R. N.	Surveyed 1825. Overview of Salcombe Estuary.	Medium
OCB28 B1-B16	England South Coast Devonshire. Salcombe River	1863-1967	Commander Henry L. Cox. R. N. Assisted by Messrs A. B. Osborne and J. E. Davis Masters R. N. B6: Re-sounded by Staff Commander F. Haslewood, R. N., assisted by Mr H. J. Lanyon, 1901. Published 1st Jan 1863.	Surveyed 1859. Detailed chart of Salcombe Estuary. Topography of Estuary shown and settlements labelled. Individual buildings and features such as lime kilns and quarries depicted. Also includes two views of the estuary.	Medium
OCB28 C1-C2	Salcombe. England South Coast Salcombe Harbour	1967-1972	Lieut. CDR D. R. Benson, R.N., Inshore Survey Squadron 1961 and by Lieut.-CDR J. M. Mackay, R. N., H. M.	Surveying ship "Medusa," 1961. Detailed chart of Salcombe Estuary. Topography of Estuary shown and settlements depicted. Also includes two views of the estuary.	Medium
OCB30 A1	A survey of Plymouth Sound Hamoaze, Catwater and Cowsand Bay	1810-1822	Lieut. Murdock Mackenzie	Surveyed 1779. Far western end of project area shown.	Medium

Appendix 6: Admiralty Charts Relevant to the Study Area

UKHO ref.	Title	Date	Surveyor	Notes	Assessment
OCB30 B1-B7	A survey of Plymouth Sound	1822-1861		Far western end of project area shown. Topography of coastline shown.	Medium
OCB30 C1-C18	Plymouth Sound and Hamoaze	1861-1899	Commander H. L. Cox; A. B. Osborne and J. E. Davis, Masters, R. N.	Surveyed 1856-60. Far western end of project area shown. Topography of coastline shown. Quarry and ruins marked at Wembury Point.	Medium
OCB5011 A1, B1- B2, C1	Symbols	1835-1910			Medium

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