Cornish Ports and Harbours:

assessing heritage significance, threats, protection and opportunities

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Cornish Ports and Harbours

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

Historic England is committed to delivering constructive, impartial advice. This report was produced by Cornwall Archaeological Unit, commissioned by Historic England. The views suggested may not all be shared by Historic England.

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Cover illustration

Penzance Harbour (Photograph: HER, Cornwall Council, 2008; F84-148).

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Abbreviations

AONB	Area of Outstanding Natural Beauty
BAP	Biodiversity Action Plan
CA	Conservation Area
CAU	Cornwall Archaeological Unit
CC	Cornwall Council
CISCAG	Cornwall and Isles of Scilly Coastal Action Group
CMP	Conservation Management Plan
CRA	Coastal Risk Assessment
CRO	Cornwall County Record Office
CRZ	Coastal Risk Zone
EA	Environment Agency
FISH	Forum on Information Standards in Heritage
HC	Historic Characterisation
HER	Historic Environment Record
HE	Historic England
HEAP	Historic Environment Action Plan
HLC	Historic Landscape Characterisation
HPA	Heritage Partnership Agreement
HSC	Historic Seascape Characterisation
IFCA	Inshore Fisheries and Conservation Authority
IOS	Isles of Scilly
LPA	Local Planning Authority
MCO	Monument number in Cornwall HER
MHW	Mean High Water
MLW	Mean Low Water
MMO	Marine Management Organisation
NGR	National Grid Reference
NHPP	National Heritage Protection Programme
NCMIG	National Coast and Marine Issues Group
NMP	National Mapping Programme
NT	National Trust
OD	Ordnance Datum – height above mean sea level datum at Newlyn
OS	Ordnance Survey
RCZAS	Rapid Coastal Zone Assessment Survey
RIC	Royal Institution of Cornwall
RNLI	Royal National Lifeboat Institution
SEA	Strategic Environmental Assessment
SMP	Shoreline Management Plan
UKHO	United Kingdom Hydrographic Office

1 Summary

This report describes the results of the Cornish Ports and Harbours project carried out between 2013 and 2017 by Cornwall Archaeological Unit for Historic England.

The project aimed to establish effective methodologies for assessing the fabric, significance and character of English ports and harbours by using a study of those in Cornwall and the Isles of Scilly as a pilot. It involved a rapid assessment of the forces for change affecting Cornwall's ports and harbours and their vulnerability or capability to benefit from change, classifying the sites according to a range of variables, undertaking historic characterisation of selected ports and harbours and carrying out limited field work at the selected sites. Outcomes of the project are a widely disseminated report, a Historic Environment Action Plan (HEAP), management recommendations and a list of sites and features within ports that are candidates for designation.

The project was carried out in four stages:

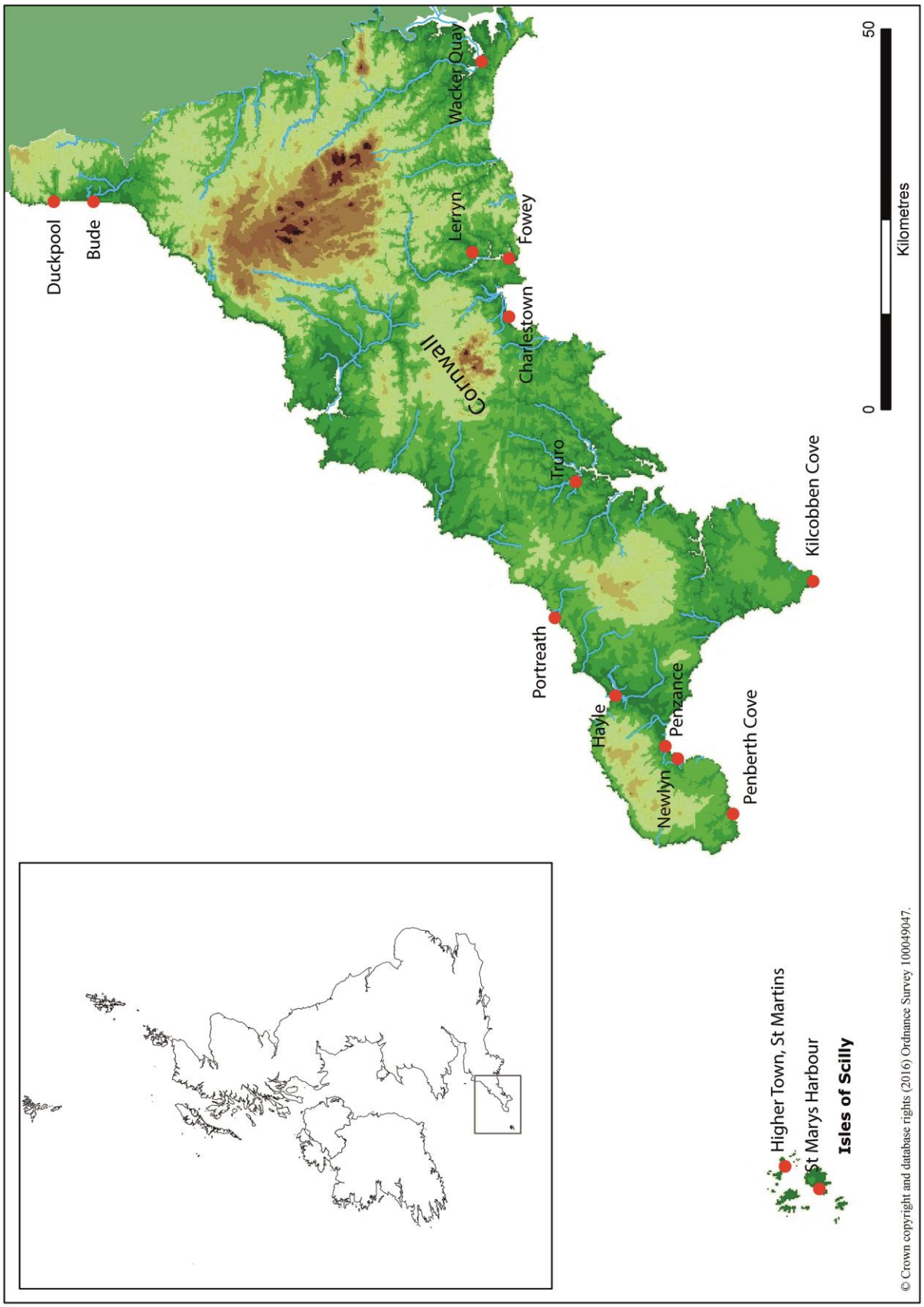
Stage 1: This stage was an assessment of the whole Cornish and Scillonian ports and harbours resource; it involved a rapid review of forces for change, previous work and sources. A long list of ports and harbours was compiled and transformed into an outline classification of sites using a number of variables — types of use, topography, chronology, scale, key components, current activity levels, associated settlement, and condition. This was then reduced into nine classes by a process of rationalisation: Beach; Civic provision, Commercial, Fishing, Industrial, Leisure, Local trading, Military and Multi-purpose.

Models for vulnerability and capacity to benefit from change were produced for each class and their significance assessed based on Historic England's *Conservation Principles*. Those classes most at risk and those most likely to benefit from change were then identified and a long list of potential sites for further study was produced. From this list 15 sites were selected for individual study and an updated project design was prepared for Stage 2.

Stage 2: This stage comprised further study of the 15 selected ports and harbours: Bude, Charlestown, Duckpool, Fowey, Hayle, Higher Town Quay and Old Quay, St Martin's (Scilly), Kilcobben Cove, Lerryn, Newlyn, Penberth Cove, Penzance, Portreath, St Mary's Harbour (Scilly), Truro and Wacker Quay. First the GIS database was set up and the study areas delineated. Rapid characterisation was undertaken of each port/harbour at scale of 1:2,500 to be viewed at the same scale with minimum polygon size of 0.1ha. Three previous time-slices were created for each port, based on 1940s RAF vertical photographs, *c*1907 2nd Edition OS mapping and *c*1840 Tithe mapping. Fieldwork was undertaken to identify typical components, identified in a gazetteer, and then individual reports were produced for each port/harbour.

Stage 3: During this stage the results were collated and reported on; products include this report, a summary of methodology and results for other local authorities to use, a PowerPoint presentation and a HEAP for Cornwall and Scilly's ports and harbours.

Stage 4: To ensure that assessment leads directly to actual protection, projects dealing with thematic subjects, such as this one, should have as a final stage the setting out of reasonable and realistic routes towards increased protection. A gazetteer long list of sites and features that are candidates was produced for consideration by Historic England's Designation Department. These were either candidates for new designation or features already designated that are proposed for review of extent or grade of protection. In preparing the gazetteer the main focus was on the ports and harbours selected for study in Stage 2. The Gazetteer has been submitted to HE's Designation Department for further consideration in discussion with Cornwall Council. In addition, following production of the HEAP and consultation with the LPA, a series of key management recommendations has been drawn up as separate document.



ports and harbours selected for Stage 2 study.

2 Introduction

2.1 Background

Ports and harbours, in Cornwall, Scilly and elsewhere in England make a major contribution to local character and distinctiveness, forming significant landscape features and reflecting the varied history, use and development of maritime settlements, their hinterlands and the sea. They typically include ranges of substantial and varied specialised buildings, structures, equipment, earthworks and spaces. Being at the interface of land and sea (whether that is open or within estuaries), they are, or in some cases were, important hubs that reveal much about both historic and current terrestrial and maritime activities. As the points where individuals and groups occasionally or routinely either cast off into or returned from the uncertain world of the sea, their histories are often unusually colourful. By contrast, today, the economic value and importance of ports and harbours is in part currently derived from their contribution to Cornwall and Scilly's tourism industry (English Heritage 2013).

As many ports and harbours are still in active use and so continue to develop and require maintenance in the face of natural and anthropogenic forces for change, they form an especially dynamic part of the coastal historic environment resource (English Heritage 2013).

2.1.1 Range of ports and harbours

In Cornwall and Scilly, and elsewhere in England, there is great variety in ports and harbours. Some are fairly simple, serving single purposes, but many became the focus of several or numerous activities, including those listed below, and their great variety in scale, form and components reflects this:

- Fishing (itself a multifarious activity);
- Exporting and importing, or more local transportation, of materials, including: industrial, commercial, agricultural and horticultural;
- Victualling naval and mercantile vessels;
- Building, making and repairing ships, boats and related materials (ropes, sails, engines, etc);
- Pleasure (inshore and offshore sailing, boating, swimming, promenading, eating, relaxing, etc);
- Ferrying;
- Serving and servicing maritime activities and infrastructures (lighthouses, coastguards, etc);
- Defence and aggression.

Chronologies also range widely, from probable prehistoric landing places at or near distinctive promontories, medieval coastal harbours and seasonal fishing centres and the apparently equally early tiny quays serving medieval farming hamlets on Cornwall's creeks, to the numerous post-medieval and modern constructions that made industry and commerce viable. The list of Cornish and Scillonian ports and harbours in the project brief included many small-scale, but probably relatively early port and harbour sites. All those minor sites have some evidence for use as a landing (often a road or lane leading down to the shore) and archaeological remains (quays, building plats, etc.) are either known or likely. Some of the forces for change discussed below may be expected to threaten such remains (English Heritage 2013).

2.1.2 Forces for change

Most port and harbour structures were designed and built to withstand the pressures of use and the forces of nature, and most contain within them the evidence of both routine maintenance and more or less radical change. Ports and harbours in Cornwall,

Scilly and elsewhere continue to be affected by changes in both use and activity levels (i.e., by neglect as well as development) and changes wrought by natural forces, including those that accompany climate change (English Heritage 2013).

2.1.3 Designations and protection

Heritage designations include; Listed Buildings, Scheduled Monuments, Registered Parks and Gardens, Conservation Areas (CAs), Heritage Coast and the Cornwall and West Devon Mining Landscape World Heritage Site (henceforward 'the World Heritage Site'). Conservation designations include: Areas of Outstanding Natural Beauty (AONBs); Areas of Great Historic Value (AGHVs); Areas of Great Scientific Value (AGSVs); Sites of Special Scientific Interest (SSSIs) and County Wildlife Sites.

The AONB designation reflects the aesthetic value placed on not just the coast, but also on the ports and harbours themselves. They serve as key punctuation marks within the coastal landscape: places of immediate human interest that catch the eye, fire the historical imagination and draw visitors in. The Cornwall AONB service recognises their value in the current (2011-16) Management Plan through the following policy.

Policy RCM 8 'Support AONB harbours as focal points for sensitive and sustainable fishing and maritime activity that enhances coastal character…'

In addition, ports and harbours have been incorporated in a fairly systematic way into the HBSMR element of the Cornwall and Scilly HER and for Scilly a Phase 1 Rapid Coastal Zone Assessment Survey (RCZAS), which included some port and harbour elements), has also been completed (Johns *et al* 2004). A Phase 1 RCZAS for North Devon and North Cornwall began in spring 2015.

2.2 Aims and objectives

This project aimed to improve understanding of a range of aspects of Cornish and Scillonian ports and harbours in order to help a range of agents (owners, users, planners, advisers, statutory and non-statutory agencies, etc.) make more fully considered decisions. As such it aimed to produce tangible, practical benefits for the historic environment of these important but vulnerable places (English Heritage 2013).

The project's objectives included establishment of effective methodologies for assessing fabric, significance and character of English ports and harbours generally by using the study of those of Cornwall and Scilly as a pilot. Consequently it always had an eye on nationwide patterns, variety and processes, and any existing studies of those, while concentrating on the ports and harbours of Cornwall in particular (English Heritage 2013).

2.2.1 Aims

The aims of the project, as set out in the project brief were to:

- Review the current levels of protection, improve understanding of construction techniques and attendant issues, and where feasible identify buildings and structures at risk so that the use of heritage resources can be prioritised on them.
- Set out gaps in knowledge that existed before the project began and remain once it is complete. In so doing to set out priorities for future research and recording.
- Use a study of the ports and harbours of this distinctive part of Britain as an opportunity to develop assessment methods that will have national relevance and national application, including developing means of assessing significance.
- Gather material that will help owners and managers to actively repair, maintain, manage and champion individual ports and harbours.

2.2.2 Objectives

Project objectives were to:

- Improve understanding of the historic character of the ports and harbours of Cornwall and Scilly and similar ports and harbours elsewhere in England.
- Develop a set of repeating Historic Character Types which will enable understanding derived from the study of particular examples to be translated with reasonable confidence to other places that have not been studied so closely;
- Improve understanding of key component types found in Cornish and Scillonian ports and harbours – features such as harbour gates, sluicing reservoirs and leats, capstans, bollards, quay walls, piers, fish cellars, slipways, harbour lights, etc;
- Inform practical management and targeted protection. This part of the study would also place particular emphasis on the following:
    - the range of construction methods used in quays, seawalls, harbour walls, etc,
    - implications for maintenance of structural aspects of ports and harbours, including weaknesses and elements requiring specialist maintenance,
    - the types and forms of ancillary structures and features directly associated with the use of ports and harbours (specialist buildings and components, harbour maintenance systems such as sluices, etc and interfaces with inland transport infrastructure such as canals, navigable rivers, roads, railways and tramways);
- Consider the general or typical condition of the ports and harbours of Cornwall, and also consider the particular condition of the selection that will be subjected to individual study. The project would produce a methodology for assessing condition, perhaps based on three grades (i.e. traffic light) or, if considered appropriate, five or more;
- Draw together understanding of the range of forces for change acting upon Cornwall's ports and harbours (including statistics and trend data, for example detailed GIS-based material provided on licence from the Environment Agency), and will also consider the predictable effects of these changes on the ports and harbours resource throughout the study area as a whole as well as on the selection subjected to individual study;
- Assess the ways that elements of ports and harbours are typically or specifically vulnerable to those forces for change, so as to concentrate attention on actions required to alleviate such vulnerability;
- Consider the extent to which some of those forces for change present opportunities that will benefit the historic environment of ports and harbours;
- Establish means of assessing the significance of historic ports and harbours by first considering the factors that affect established ways of judging historic, archaeological and architectural value (e.g. via the ways set out in Conservation Principles (English Heritage 2008) or those that underpin national and local designation processes). It will then set these against the ways that other stakeholders assess the value of these places (economically, socially, ecologically, aesthetically, etc) so that consideration of all forms of protection, as expanded upon immediately below, is as nuanced as it can realistically be;
- Critically review current levels of protection of the resource, including designation, and make structured recommendations for any appropriate strengthening, in consultation with the Historic England Designation Department West team. The study will consider the general or typical forms and levels of protection of ports and harbours in Cornwall, and will also consider the specific protection positions of a sample of ports and harbours selected because they are

either known to be subject to proposals for various forms of change or are vulnerable to such. Forms of protection to be considered included the following:

- Designation: are features designated at appropriate grades? Are there nationally important sites currently undesignated? Are there other types of port and harbour related features that ought also to be reviewed in terms of suitability for selected designation? Are there opportunities for the development of local lists covering ports and harbours?
- Ownership: are ports and harbours or features within them protected through forms of ownership e.g. Private, Public, Held in trust, Active, Consolidated, Fragmented, Common?
- Policy; are ports and harbours or features within them protected (or threatened) through adherence to accepted policy such as formal planning policy (as gathered together in the National Planning Policy Framework, or specified in legislation such as the Harbours Act 1964), policies developed and adopted by owners, agencies and others, regarding utilisation, maintenance and protection?
- Strategy: are ports and harbours or features within them protected (or threatened) through the effects of accepted strategy such as spatial planning, management, utilisation

- Utilise all of the above to prepare material that will lead to actual protection outcomes. These may include:
  - devising (in liaison with HE's Designation Department) a shortlist of sites and features to be further assessed with designation in mind;
  - using the research undertaken for this project to draft History and Description sections of Designation Consultation Reports;
  - setting out model management recommendations and if appropriate applying these to particular sites;
  - suggesting what factors may be taken into account when owners, authorities and agencies are considering establishing policies and strategies.

This project was to act as a pilot and establish methods of rapid practical assessment of ports and harbours that can be applied more widely, within England and beyond. Its conclusions, though initially tailored for Cornwall and Scilly, may also be expected to guide or shape those that might also be developed for ports and harbours that have similar histories, forms, vulnerabilities and potentials.

2.3 Methods

The project comprised four clearly defined stages:

2.3.1 Stage 1: Assessment of the whole Cornish and Scillonian ports and harbours resource

Stage 1 involved a rapid review of forces for change, previous work and sources. A long list of ports and harbours was confirmed (Appendix 1) from an initial long list presented in the Project's Brief. That was transformed into an outline classification of sites using a number of variables — types of use, topography, chronology, scale, key components, current activity levels, associated settlement, and condition. By a prescriptive process of rationalisation this was then reduced into nine classes: Beach; Civic provision, Commercial, Fishing, Industrial, Leisure, Local trading, Military and Multi-purpose.

Models for vulnerability and capacity to benefit from change were produced for each class and their significance assessed based on Historic England's *Conservation Principles*. Those classes most at risk and those most likely to benefit from change were then identified and a long list of potential sites for further study was produced. From

this list 15 sites were selected for individual study and an updated project design was prepared for Stage 2. The method statement for Stage 1 is attached as an appendix to this report (Appendix 2);

2.3.2 Stage 2: Assessment of 15 selected ports and harbours

The 15 selected ports and harbours were were: Bude, Charlestown, Duckpool, Fowey, Hayle, Higher Town Quay and Old Quay, St Martin's (Scilly), Kilcobben Cove, Lerryn, Newlyn, Penberth Cove, Penzance, Portreath, St Mary's Harbour (Scilly), Truro and Wacker Quay. The Historic Landscape Characterisation (HLC) attribute table was project-specific but largely based upon the structure of the Historic Characterisation (HC) Thesaurus (FISH 2015) with additional detail taken from the national Historic Seascape Characterisation (HSC) structure. At Sub-type level, terms were drawn as appropriate from the HC Thesaurus, the HSC terms gazetteer, the HE Monument Thesaurus (FISH 2016), or entirely new terms were created as necessary. The detail of the Sub-type level was created to enable more detailed management items to be considered in the reports. Once the HLC structure was agreed the GIS database was set up and the study areas delineated. Characterisation was undertaken of each port/harbour at scale of 1:2,500 to be viewed at the same scale with minimum polygon size of 0.1ha. Three previous time-slices were created for each port, predominantly based on the following sources, where available — 1940s RAF vertical photographs, *c*1907 2nd Edition OS mapping, *c*1880 1st Edition OS mapping and *c*1840 Tithe mapping. Fieldwork was undertaken to identify typical components, identified in a gazetteer, and then the individual reports were produced. The updated project design for Stage 2, which took into account the outcomes of Stage 1, is attached as an appendix to this report (Appendix 3).

2.3.3 Stage 3: Collation of results and reporting

During this stage the results of Stages 1 and 2 were collated in this report. The sections of the report were specified in the Brief and Project Design. Stage 3 also includes preparation of a PowerPoint presentation and a Historic Environment Action Plan (HEAP) for Cornwall and Scilly's ports and harbours. HEAPs are the equivalent of Biodiversity Action Plans (BAPs) developed by the natural environment sector. They may be expected to deal with important or specific types of site (cultural equivalents of animal or plant species) and make use of HLC Types in developing strategies to appropriately manage 'cultural habitats' (Clark *et al* 2004, 53).

Much of the methodology for this project mirrors that required in the preparation of a HEAP. Therefore the preparation of the HEAP involved collating the work already carried out into a formalised document (Appendix 4). The various stages for producing a HEAP are outlined in Clark *et al* 2004. Although included in Stage 3 of the project methodology, the HEAP for Cornwall and Scilly's ports and harbours will not be finalised before completion of Stage 4 of the project.

2.3.4 Stage 4: Securing protection outcomes

This project was lodged within Measure 4 of the NHPP which addresses the identified need to assess the significance and character of aspects of the historic environment that are under threat but whose significance and character are poorly understood. This stage, which was undertaken after production of this report, included preparation of a gazetteer of sites and features which was reduced to short list of candidates in consultation with HE's Designation Department. From this a formal short list of designation candidates was prepared with supporting statements.

Following consultation with the Maritime section of CC, a series of management recommendations was drawn up. For sites in CC ownership (and those which are part of the holdings of the National Trust) the recommendations can be directed towards particular sites and features.

The assessment of significance, character, threats, opportunities and condition that form important parts of this project will be reviewed to draw out key messages that those with the authority to do so can use when drawing up various forms of policy (as

in Local Plans and Neighbourhood Plans) and strategy, whether these are related to planning change, conservation or maintenance, guiding the design of change, or taking opportunities to extend or improve presentation of the history, significance and value of ports and harbours. The key messages will be presented in a document which will in effect be a supporting document to the HEAP drawn up as part of Stage 3.

3 Historical overview of Cornish and Scillonian ports and harbours

3.1 Cornish ports and harbours

Prehistoric ships did not need quays, waterfronts or hard landing places and could land on beaches or shallow coastal areas; nor was there a need for loading and unloading equipment and infrastructure or permanent settlement at these places (Hill and Willis 2013, 79). The Cornish coast is indented by numerous coves and inlets most of which are more or less suitable for the handling of boats. Some became the sites of fishing villages and harbours, others remained undeveloped (Ratcliffe 1995, 119).

The Cornish place-name element *porth* meaning 'door, doorway' or 'harbour' does not necessarily imply a formal harbour with constructed quay but rather a 'place where boat can put out, or come in'; as long as it is accessible a *porth* can be a large sandy beach or a narrow inlet with a rock or shingle bottom (Thomas 1985, 37). Consequently The numerous 'porth' place-names around the coast mark landing places of both greater and lesser importance (Rippon and Croft, eds, 2009, 198).

Fig 2 Tintagel Haven in the 19th century (Charles Thomas archive).

It has been suggested that the tin trading station called *Ictis* by classical writers should be seen as a generic type site, a late prehistoric form of 'port of trade' which foreign traders were encouraged to use by the offer of an easily recognisable and neutral coastal site with a safe anchorage and security for both themselves and their goods. St Michael's Mount is considered to be the archetypal *Ictis* but other sites in Cornwall could include St George's Island, Looe, and cliff castle sites at Pendennis Headland, St Catherine's Castle near Fowey and Black Head in St Austell Bay on the south coast. Possible sites on the north coast include St Ives Island, Trevelgue Head cliff castle near the estuary of the River Gannel, and the Rumps cliff castle near the estuary of the River Camel. Mount Batten and Burgh Island on the south Devon coast are other possible *Ictis* sites (Herring 2000, 116).

Because of the extraordinary concentration of early medieval imported pottery, especially from the Mediterranean, which far outnumbers that from all the other sites in Britain and Ireland, being perhaps a quarter of the total, it has been suggested that Tintagel was a primary point of entry for imported pottery for subsequent distribution elsewhere in Britain and Ireland from about AD 475 to AD 550. Although access into Tintagel Haven can be dangerous, it was not impossible for quite large ships to use as a harbour (Barrowman *et al*, 2007 329–30). St Michael's Mount and St George's Island, Looe may have been similar early medieval 'citadels', as well as Burgh Island near Bantham Ham on the south coast of Devon (Herring 2000, 121–2).

Fig 3 St Michael's Mount (Photograph: CAU).

Cornwall has some of the earliest records in Britain for the management of maritime resources due to the creation of the Earldom of Cornwall in 1140. The records are those of the 'Havener', the official responsible for the maritime interests of the Earldom and Duchy of Cornwall. The records include a variety of profits arising from maritime prerogatives; one of the most important was the Saltash ferry, attached to the honour of Trematon. Its revenues arose from the fees charged to row passengers and horses across the Tamar. At Saltash fares seem to have ranged from ¼d to ½d for each passenger and ½d for a horse (Doe 2006, 4-5; Kowaleski 2001, 56-7).

Most Cornish medieval towns had connections with the sea, as fishing ports, trading ports or both. Early documentation is poor but in the 14th and 15th centuries, the vigour of Cornish trade and the cosmopolitan character of some of the ports are apparent. In addition to coastal trade, Cornwall exported tin, fish, slate and some cloth, and imported salt, linen and canvas from Brittany, white fish, mantles and wood from Ireland, wine from France, wine and fruit from Spain (Preston-Jones and Rose 1986, 163).

Recent studies suggest that most of these Cornish towns were the deliberate creations of major landowners. Proprietors 'planted' urban settlements on their estates to stimulate economic activity and create a local focus for civic authority. The majority of

the new towns appear to be of the 13th and earlier 14th centuries, their locations favouring sites with good by potential for trade, most being ports. Tregony, Truro and Lostwithiel at the highest navigable points and lowest crossing places on major rivers served much larger hinterlands than towns established on the coast (like Penzance and Boscastle) or nearer river mouths (Padstow, East and West Looe, Fowey, Penryn, St Mawes). 'Thoroughfare' towns like Camelford, Mitchell and Grampound took advantage of major routeway traffic (Herring *et al* 307; Fox 1999, 403).

The major medieval ports included Fowey, Lostwithiel, Saltash, Padstow, Mousehole and St Michael's Mount; little is known of their early forms although the harbour at St Michael's Mount survives more more or less intact and the west quay at Mousehole may be medieval (Peter Herring, pers comm). Fowey was the dominant port in Cornwall, and was considered be one of the three finest harbours in south west England (the other two being Plymouth and Dartmouth). Fowey, Polruan and Lostwithiel provided 77% of the Cornish ships engaged on overseas trade in the early 14th century (Doe 2006, 20).

On the Fal Estuary, ports such as Truro, Tregony and Penryn were initially established at the heads of navigable creeks where they had good access to their hinterlands and were less prone to raiding by hostile ships. However the gradual silting of the upper parts of the estuary with waste from tin workings and the increase in size of ocean-going ships led to the growth of ports located nearer the estuary mouth, particularly Falmouth (Ratcliffe 1997, 2).

The period 1600–1800 saw significant economic growth in Cornwall and England as a whole. In the 17th century the local gentry began to invest in trade and fishing as well as mining and farming. Their control of many of Cornwall's 44 Parliamentary seats meant extra protection for local fishing interests. Another important development was the move westwards of the Cornish tin mining industry from Bodmin Moor to west Penwith. Penzance started to export tin on major scale and in 1663 successfully petitioned for coinage town status. Penzance's specialisation in the luxury goods trade in the 17th century led Newlyn to concentrate on fishing (Mattingly 2012, 2, 39).

Tradition holds that the vertically-set type of harbour walling was inspired by similar walling from the Low Countries from the late 17th century onwards (or possibly earlier). The best known of these are probably the town quays in Falmouth built for Sir Peter Killigrew, following the incorporation of the town, and the similar quays and sea walls at Flushing. However, the particular type as found in the old quay at St Mary's Harbour in Scilly, where the stones are also shaped so that they fit more tightly together, is less common. Similar local examples can be found at Sennen, Mousehole and Newlyn. Vertically-set walling is a very strong method for building quay walls with rubble stone as the stones bond tighter together as more weight is added. It is often argued that the walls were built without mortar so that the pressure of the sea can be absorbed (Eric Berry, pers comm).

Until the arrival of the railways changed the ancient pattern of trade, Cornwall depended on the sea for its transport. Roads and wheeled transport were virtually unknown in west Cornwall until the late 18th century, but there were many rivers, creeks and coves where small craft could put in and come close to the mineral workings (Tor Mark Press 1994, 3). A good example of a small local trading wharf is Scott's Quay on the Helford River (Fig 4) which was built in the early 1800s by Charles Scott who owned the manor of Trewadreva and with it much of the farmland, the local mines and most of Constantine. The quay was constructed to export minerals and stone from the local mines and quarries via the system of 'merchant schooners' which were important in coastal transport. As well as exporting minerals, the boats could bring in coal, timber, lime, salt and other such materials for use in the local economy. A hard road was also built from behind Constantine to allow horses and carts to carry the materials to and from the quay. The coming of railways in the mid-19th century put pressure on the schooner trade, whilst facilities at nearby Port Navas were better suited than Scott's Quay. With the decline of mining the Quay fell into disrepair by the start of the 20th century but was rebuilt by the owner in the 1930s (Mossop *et al* 2013).

Fig 4 Scott's Quay on the Helford River (Photograph: CAU).

Until the late-18th century Cornwall had few large specialised ports. The mining trade prompted the development of specialist industrial harbours throughout the region. Pre-eminent amongst these were: Portreath, Hayle and Devoran which jointly handled almost all the requirements and output of the mines and industries of west Cornwall. Smaller harbours were also built at St. Agnes, Par and Charlestown while harbours and quays at Newquay, St Michael's Mount, Porthleven, Looe, Calstock, Morwellham and New Quay were enlarged to cope with several phases of the expansion of mineral output.

Cornwall and west Devon had no suitable coal of its own, the inferior coals found in north and south Devon being mainly used domestically and for lime-burning. All the region's needs were brought from the coalfields of the Bristol area and subsequently from South Wales; an unlimited supply made accessible by sea and navigable river systems. Timber was also required in immense quantities for pump rods and underground props. Pine was found to be suitable, brought from Scandinavia and Canada, again by sea.

By far the greatest volume of transport from the mines was that of copper ore to the nearest port for shipment to South Wales for smelting. It was transported in its raw state, whereas other exports like tin or arsenic tended to be processed in Cornwall before being shipped. Mines in the region were concentrated on or near outcrops of granite and their associated ore bodies and a substantial transport network that formed a reliable, economic and high capacity link from mine to port, developed.

The shipping boom of the 19th century brought an era of prosperity that left its mark in the built heritage of Cornish ports (and Hugh Town in Scilly). The ports continued to be exporters of minerals, copper, tin and, increasingly, china clay but fish exports declined as the appearance of pilchard shoals became increasingly erratic. The main imports were coal, timber and miscellaneous domestic requirements, but there was worldwide trade with cargoes of fruit, oil, hides, tea; anything which brought an investment return (Doe 2014, 338).

Cornwall's industrial ports declined during the 20th century, partly as result of the increase in road transport but also because of a fall in demand for two of the county's

three extractive products — metalliferous mining and its associated engineering, and quarried stone and slate. Some china clay was still being exported from ports such as Newquay, Padstow and Porthleven in the early years of the 20th century before a series of natural and economic factors forced them to discontinue this business. Most of the county's china clay output went and continues to go by sea, but following the closure of Par it is now concentrated in vessels calling at Fowey. Although the entrance to Charlestown, Cornwall's first china clay port, was improved in the 1970s the ships that could use it were still too small and china clay is no longer exported from there (Chapman 2014, 390–10).

The Cornish fishing industry also gradually contracted throughout the 20th century, first as catches were reduced and regulation increased and then as fish stocks declined, more regulation was introduced and the effects of climate change became felt (Doe *et al* 2014, 344–5).

The general trend of maritime decline has been offset by diversification, usually in connection with the tourism industry. Penzance, Newquay and Bude were already well-established resorts before the coming of the railway in 1859 encouraged the establishment of other resorts such as Falmouth, while the marketing strategy of the Great Western Railway, which commenced at the turn of the 20th century, reinvented the Cornish coastline as the Cornish Riviera. The growth of tourism has helped create a 'post-industrial' economy in Cornwall and is a major force for change for Cornwall's ports and harbours (Doe *et al* 2014, 345, 355; Payton 2014, 398–9).

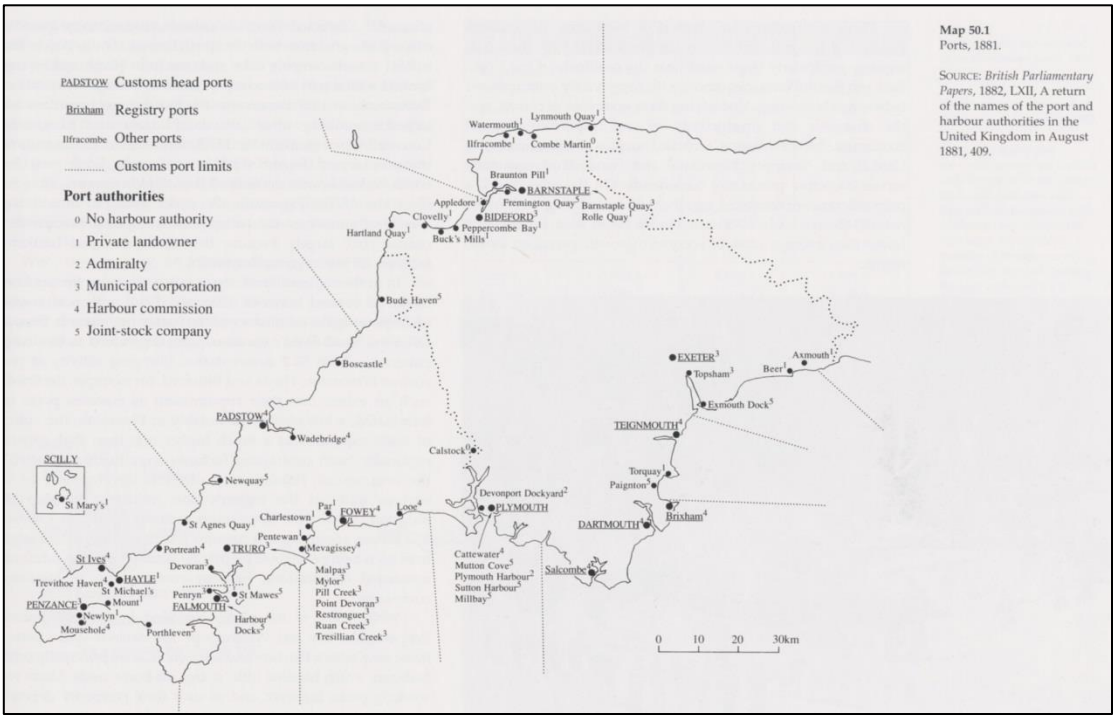


Fig 5 Cornwall and Devon ports from Brigit's Parliamentary Papers 1882, LXII, a Return of the names and the port harbour authorities in the United Kingdom in August 1881, 409.

3.2 Scillonian ports and harbours

The earliest visitors to Scilly were groups of Mesolithic hunter-gatherers who arrived in paddled boats. Recent excavations at Old Quay, St Martin's, recovered 57 microliths within a much larger spread of 5738 pieces of prehistoric worked flint. Intriguingly, no parallels have so far been found in any other Mesolithic assemblage from Britain or Ireland and the closest affinities are apparently with Belgian examples. This interpretation poses important questions about maritime mobility and cross-Channel contacts during the Mesolithic (Anderson-Whymark *et al* 2015).

Charles Thomas (1985, 165–72) suggested that the eastern side of the Scillonian archipelago would have been the most common approach from the sea until recent centuries. He used place-name evidence to support his theory of a Roman harbour in the Eastern Isles, that was relatively sheltered from all but easterly winds, associated with a shrine to a marine deity on Nornour and a beacon-fire on Chapel Down, the eastern summit of St Martin's. However, the water is very deep there; a larger and more suitable Roman harbour might have been the former topography of Crow Sound, which lies between the Eastern Isles and St Mary's, and affords a good anchorage for vessels of relatively deep draught and considerable protection from large swells during south-west and westerly gales (better than St Mary's Road), although strong east winds also render this anchorage untenable (Dixon and Mason 2011, 72). Arthur Quay, between the small uninhabited islands Middle and Little Arthur, is also a good harbour for small boats, with a breakwater formed by a natural configuration of boulders.

A feature of early-medieval Scilly, reflecting the picture seen in mainland Cornwall, is its wide-ranging international contacts through trade, evidenced by the presence of imported wares within ceramic assemblages on several sites. The excavated site at East Porth, Samson, in particular, exhibits an extremely rich and varied early-medieval material culture. The number and variety of imported ceramic wares is extraordinary, including fine table wares from the Mediterranean, E-ware from France, and amphorae (implying consumption of and the use of exotic food materials such as olive oil and wine) suggesting a high-status site with wide ranging economic and political contacts (Neal in preparation).

Secular rule on St Mary's, known during the medieval period as *Ennor*, was based at Old Town on the southern side of the island. Protected by Ennor Castle, first mentioned in 1244, and not visible from the open sea, the village was at the end of a bay that deep-water ships could not penetrate; the harbour, with its medieval quay, which is still extant, was known as *Porthenor*, 'the porth or landing-place for Ennor' (Fig 6: Thomas 1985, 210).

The centre of the medieval ecclesiastical administration by Tavistock abbey was St Nicholas' Priory on Tresco. The priory may have collected tolls for anchorage in St Helen's Pool to the south of St Helen's, which O'Neil (1950, 17) considered was probably the chief harbour in medieval times. New Grimsby Harbour on the western coast of Tresco was evidently also an important anchorage during the late medieval period as was Old Grimsby on the eastern side to a lesser extent.

In the late 1540s, when the islands had assumed a nationally strategic importance following the discovery of the Americas and the expediencies of Henry VIII's foreign policy, the focus of activity changed to St Mary's Road between St Mary's and Samson which is the most spacious deep-water anchorage in Scilly — although New Grimsby and Old Grimsby continued to be important harbours and were defended with fortifications.

Hugh Town, on St Mary's, owes its origins to the construction of Star Castle in 1593 and associated structures and the quay built in *c* 1601 below the gateway to the military complex, although the proximity of a medieval chapel dedicated to St Maudut (St Mawes) to the location of the new quay suggests that this may already have been an established landing place (cf Thomas 1985, 217).

Fig 6 The medieval quay at Old Town, St Mary's in June 2014 (Photograph: CAU).

Fig 7 St Mary's Harbour in October 2014, in the left foreground is the 'Old Quay' (Photograph: Eric Berry).

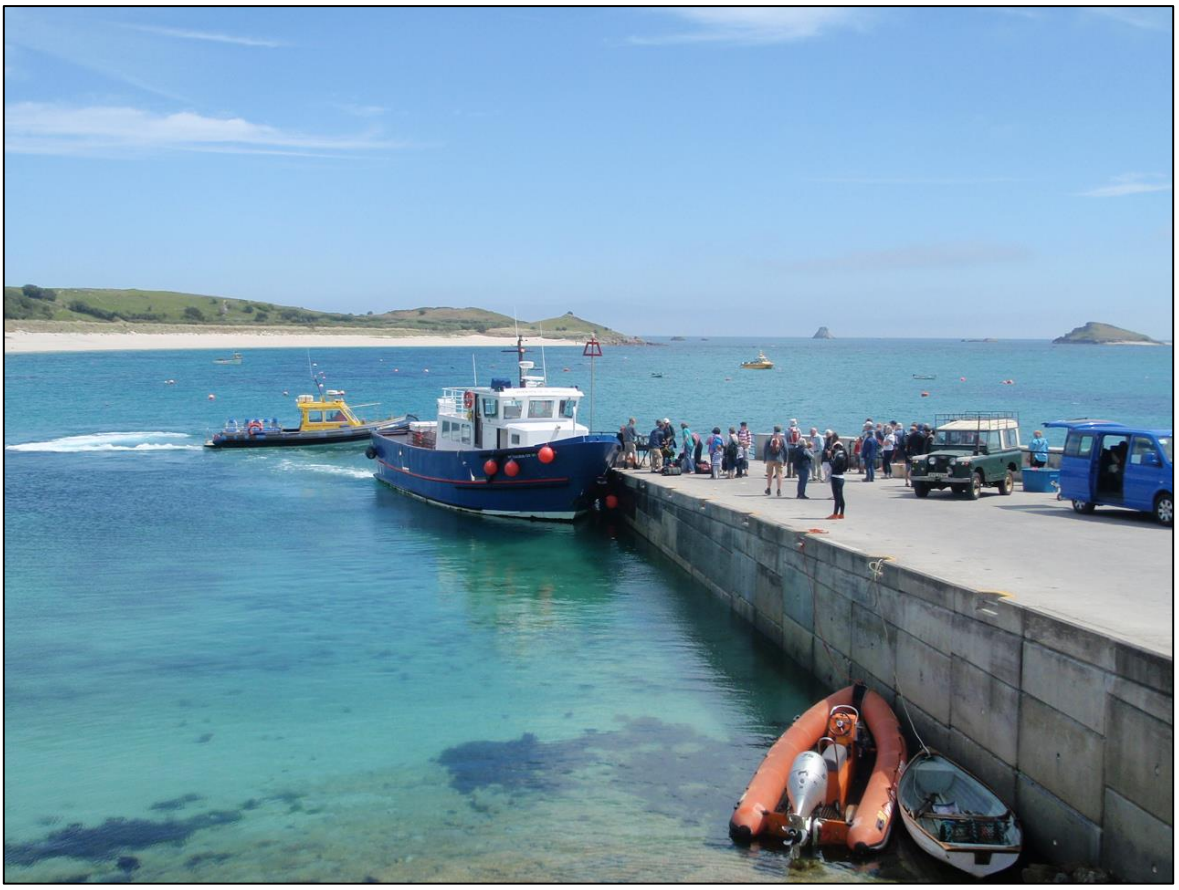


Fig 8 Higher Town Quay, St Martin's (Photograph: CAU).

Fig 9 Former kelp burning industry quay on Toll's Island, St Mary's (Photograph: CAU).

By the mid-18th century Hugh Town had developed beyond its early primary role as a service centre for the military complex on the Garrison to become a central place for the whole of Scilly, providing a variety of services to the populations of St Mary's and the off-islands. It was also the Customs port for Scilly and profited from servicing vessels sheltering in the Pool from bad weather or adverse winds. The town and harbour profited from the shipbuilding industry in the early and mid-19th century and the flower growing industry from the later 19th century. Improved rail and sea transport from the mid-19th century marked the beginning of Scilly's tourist industry and this now forms the largest part of its economy, with 120,000 visitors received annually at the beginning of the 21st century (Johns *et al* 2004, 58).

Today, St Mary's Harbour is the largest harbour in Scilly and terminal for the Penzance-Scilly ferry link (Fig 7). The main components of St Mary's Harbour are: quays, slipways, anchorage, storage areas, waiting room, public conveniences, warehouses, houses, lifeboat station, promenade, sea defences.

Successive phases of the development of St Mary's Harbour quay are still apparent. The early 17th century Old Quay, the 1835-8 extension to extension to Rat Island and the late 19th century seaward extension of the quay which was encased in pre-cast concrete blocks fixed to steel girders in the winter of 1993–94 (Gibson nd, 15–16). The pedestrian walkway exhibits a sort of horizontal stratigraphy with remnants of the 1993–94 and 2006 paving evident alongside the 2014–15 resurfacing (Johns *et al* 2016).

On all the off-islands the quays are their lifeline to the outside world, where passengers, mail, freight and supplies arrive and depart. The main off-island harbours or quays are Porth Conger (St Agnes), Church Quay and Anneka's Quay (Bryher), New Grimsby, Old Grimsby and Carn Near (Tresco), Higher Town Quay and (at low tide) Lower Town, St Martin's (Fig 8). In 2007-8 refurbishments were carried out to the quays at Porth Conger (St Agnes), Church Quay and Anneka's Quay (Bryher), Carn Near (Tresco) and Higher Town Quay, St Martin's. The components of the main off-island harbours/quays are: piers, quays, anchorages, storage areas, waiting rooms, public conveniences, boat houses, roads and tracks.

The main off-islands quays tend to date from the late 19th century. There are also number of smaller quays and harbours around the coasts of the islands, Periglis on St Agnes, Old Quay on St Martin's and Pendrathen on St Mary's, for example. Typical components are quays, storage areas, boat houses, roads and tracks. In addition there are a number of relict quays which are no longer used, some associated with the post-medieval kelp burning industry (Fig 9).

4 Application of Historic England's Conservation Values

Conservation Principles: policies and guidance for the sustainable management of the historic environment, containing Historic England's framework and guidance for assessing the range of values pertaining to the historic environment was published in 2008 (English Heritage 2008). *Conservation Principles* outlines Historic England's approach to the sustainable management of the historic environment. While primarily intended to ensure consistency in Historic England's own advice and guidance, the document is recommended to Local Planning Authorities to ensure that all decisions about change affecting the historic environment are informed and sustainable.

The guidance describes a range of heritage values which enables the significance of assets to be established systematically, with the four main 'heritage values' being Evidential, Historical, Aesthetic and Communal. This section describes the method of applying the method of applying HE's Conservation Values when assessing and summarising the heritage significance of each class, each HC Type and each Component Type. This process was based on the guidance set out in *Conservation Principles*.

4.1.1 Evidential value

Evidential value derives from the potential of a place to yield evidence about past human activity (English Heritage 2008).

Fig 10 The Old Quay at St Mary's Harbour has demonstrable evidential value, the original quay, dating to the early seventeenth century was rebuilt between 1749 and 1751 (Photograph: Eric Berry).

Physical remains of past human activity are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them. These remains are part of a record of the past that begins with traces of early humans

and continues to be created and destroyed. Their evidential value is proportionate to their potential to contribute to people's understanding of the past (*ibid*).

In the absence of written records, the material record, particularly archaeological deposits, provides the only source of evidence about the distant past. Age is therefore a strong indicator of relative evidential value, but is not paramount, since the material record is the primary source of evidence about poorly-documented aspects of any period. Geology, landforms, species and habitats similarly have value as sources of information about the evolution of the planet and life upon it (*ibid*).

Evidential value derives from the physical remains or genetic lines that have been inherited from the past. The ability to understand and interpret the evidence tends to be diminished in proportion to the extent of its removal or replacement (*ibid*).

Many Cornish and Scillonian ports and harbours possess tangible evidential value. The survival of the historic built waterfronts in Fowey and Polruan is impressive. At Charlestown the port's modern character lies in its retention of so many historic buildings and their proximity and relationship to the old docks and harbour, which have been singularly well preserved. At Penberth Cove, all of its historic fishing components survive and with very little evidence of alteration or addition of newer structures for other purposes.

The original Old Quay at St Mary's Harbour, dating to the early seventeenth century was rebuilt between 1749 and 1751 (Fig 10). The old quays at Newlyn and Penzance are probably largely 18th century in date and may preserve older fabric within their present structures. Beneath modern prefabricated concrete cladding Higher Town Quay, St Martin's, retains its historic structure with evidence for repairs and alterations over its lifetime and Old Quay, St Martin's, although repaired with concrete and cement, appears to retain much of the original fabric of the outer walls.

4.1.2 Historical value

Historical value derives from the ways in which past people, events and aspects of life can be connected through a place to the present. It tends to be illustrative or associative (*ibid*).

The idea of illustrating aspects of history or prehistory – the perception of a place as a link between past and present people – is different from purely evidential value. Illustration depends on visibility in a way that evidential value (for example, of buried remains) does not. Places with illustrative value will normally also have evidential value, but it may be of a different order of importance. An historic building that is one of many similar examples may provide little unique evidence about the past, although each illustrates the intentions of its creators equally well. However, their distribution, like that of planned landscapes, may be of considerable evidential value, as well as demonstrating, for instance, the distinctiveness of regions and aspects of their social organisation (*ibid*).

Illustrative value has the power to aid interpretation of the past through making connections with, and providing insights into, past communities and their activities through shared experience of a place. The illustrative value of places tends to be greater if they incorporate the first, or only surviving, example of an innovation of consequence, whether related to design, technology or social organisation. The concept is similarly applicable to the natural heritage values of a place, for example geological strata visible in an exposure, the survival of veteran trees, or the observable interdependence of species in a particular habitat. Illustrative value is often described in relation to the subject illustrated, for example, a structural system or a machine might be said to have 'technological value' (*ibid*).

Fig 11 'Q''s house in Fowey (Photograph: CAU).

Fig 12 Port Quin (Photograph: HER, Cornwall Council, 2006; F73-93).

Association with a notable family, person, event, or movement gives historical value a particular resonance. Being at the place where something momentous happened can increase and intensify understanding through linking historical accounts of events with the place where they happened – provided, of course, that the place still retains some semblance of its appearance at the time. The way in which an individual built or furnished their house, or made a garden, often provides insight into their personality, or demonstrates their political or cultural affiliations. It can suggest aspects of their character and motivation that extend, or even contradict, what they or others wrote, or are recorded as having said, at the time, and so also provide evidential value (*ibid*).

Some Cornish ports and harbours are associated with the development of other aspects of cultural heritage, such as literature, art, music or film; notably the Newlyn School of artists, the St Ives art colony and Fowey with Sir Arthur Quiller Couch, 'Q' (Fig 11), and Daphne du Maurier, and in Scilly the photographs of the Gibson family and others (e.g., Fig 15). Recognition of such associative values tends in turn to inform people's responses to these places. Associative value also attaches to places closely connected with the work of people who have made important discoveries or advances in thought about the natural world (*ibid*).

The historical value of ports and harbours depends upon both sound identification and direct experience of fabric or landscape that has survived from the past, but is not as easily diminished by change or partial replacement as evidential value. The authenticity of a place indeed often lies in visible evidence of change as a result of people responding to changing circumstances. Historical values are harmed only to the extent that adaptation has obliterated or concealed them, although completeness does tend to strengthen illustrative value (*ibid*).

The use and appropriate management of a place for its original purpose, for example as a warehouse, winch house or fish cellars, illustrates the relationship between design and function, and so may make a major contribution to its historical values. If so, cessation of that activity will diminish those values and, in the case of some specialised landscapes and buildings, may essentially destroy them. Conversely, abandonment or decline, as of a 'lost' harbour like Port Quin (Fig 12), may illustrate important historical trends, in this case the decline of pilchard fishing and the local mining industry (*ibid*).

4.1.3 Aesthetic value

Aesthetic value derives from the ways in which people draw sensory and intellectual stimulation from a place (*ibid*).

Aesthetic values can be the result of the conscious design of a place, including artistic endeavour. Equally, they can be the seemingly fortuitous outcome of the way in which a place has evolved and been used over time; the Isles of Scilly off-island quays such as Higher Town Quay, St Martin's are good examples of this. Many places combine these two aspects – for example, where the qualities of an already attractive landscape have been reinforced by artifice – while others may inspire awe or fear. Aesthetic values tend to be specific to a time and cultural context, but appreciation of them is not culturally exclusive (*ibid*).

Design value relates primarily to the aesthetic qualities generated by the conscious design of a building, structure or landscape as a whole. It embraces composition (form, proportions, massing, silhouette, views and vistas, circulation) and usually materials or planting, decoration or detailing, and craftsmanship. It may extend to an intellectual programme governing the design (for example, a building as an expression of the Holy Trinity), and the choice or influence of sources from which it was derived. It may be attributed to a known patron, architect, designer, gardener or craftsman (and so have associational value), or be a mature product of a vernacular tradition of building or land management. Strong indicators of importance are quality of design and execution, and innovation, particularly if influential (*ibid*).

Fig 13 'The Blue Door, Newlyn' (1934) by Harold C. Harvey. Born in Penzance, Harvey's work typifies the changing styles of the Newlyn and Lamorna painters and of Cornish life.

Fig 14 The appearance of the suite of maritime-related components at Old Quay, St Martin's, has been enhanced by the passage of time (Photograph: CAU).

Sustaining design value tends to depend on appropriate stewardship to maintain the integrity of a designed concept, be it landscape, architecture, or structure (*ibid*).

It can be useful to draw a distinction between design created through detailed instructions (such as architectural drawings) and the direct creation of a work of art by a designer who is also in significant part the craftsman. The value of the artwork is proportionate to the extent that it remains the actual product of the artist's hand. While the difference between design and 'artistic' value can be clear-cut, for example statues on pedestals (artistic value) in a formal garden (design value), it is often far less so, as with repetitive ornament on a medieval building (*ibid*).

Some aesthetic values are not substantially the product of formal design, but develop more or less fortuitously over time, as the result of a succession of responses within a particular cultural framework. They include, for example, the seemingly organic form of an urban or rural landscape; the relationship of vernacular buildings and structures and their materials to their setting; or a harmonious, expressive or dramatic quality in the juxtaposition of vernacular or industrial buildings and spaces. Design in accordance with Picturesque theory is best considered a design value (*ibid*).

Aesthetic value resulting from the action of nature on human works, particularly the enhancement of the appearance of a place by the passage of time ('the patina of age'), may overlie the values of a conscious design. It may simply add to the range and depth of values, the significance, of the whole; but on occasion may be in conflict with some of them, for example, when physical damage is caused by vegetation charmingly rooting in masonry or by the actions of the sea, Old Quay, St Martin's, is good example of this (Fig 14; *ibid*).

While aesthetic values may be related to the age of a place, they may also (apart from artistic value) be amenable to restoration and enhancement. This reality is reflected both in the definition of conservation areas (areas whose 'character or appearance it is desirable to preserve or enhance') and in current practice in the conservation of historic landscapes (*ibid*).

4.1.4 Communal value

Communal value derives from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory. Communal values are closely bound up with historical (particularly associative) and aesthetic values, but tend to have additional and specific aspects (*ibid*).

Commemorative and symbolic values reflect the meanings of a place for those who draw part of their identity from it, or have emotional links to it. The most obvious examples are the ports and harbours raised by community effort, such as Higher Town Quay, St Martin's (Fig 15) or Cornwall lifeboat stations such as Kilcobben Cove, which consciously evoke past lives and events but some buildings and places, such as Cornwall's Industrial ports, can symbolise wider values. Such values tend to change over time, and are not always affirmative. Some places may be important for reminding us of uncomfortable events, attitudes or periods in Cornwall's history. They are important aspects of collective memory and identity, places of remembrance whose meanings should not be forgotten. In some cases, that meaning can only be understood through information and interpretation, whereas, in others, the character of the place itself tells most of the story (*ibid*).

Social value is associated with places that people perceive as a source of identity, distinctiveness, social interaction and coherence. Some may be comparatively modest, acquiring communal significance through the passage of time as a result of a collective memory of stories linked to them. They tend to gain value through the resonance of past events in the present, providing reference points for a community's identity or sense of itself. They may have fulfilled a community function that has generated a deeper attachment, or shaped some aspect of community behaviour or attitudes. Social value can also be expressed on a large scale, with great time-depth, through regional and national identity (*ibid*).

Compared with other heritage values, social values tend to be less dependent on the survival of historic fabric. They may survive the replacement of the original physical structure, so long as its key social and cultural characteristics are maintained; and can be the popular driving force for the re-creation of lost (and often deliberately destroyed or desecrated) places with high symbolic value, although this is rare in England (*ibid*).

Fig 15 Higher Town Quay on St Martin's, Isles of Scilly has very strong Communal value. It was built by the island men in the late 1880s; the descendants of these men with surnames of Woodcock, Ashford, Jenkins, Goddard, Ellis and Hicks still live on St Martin's or the other islands (Photograph: © Gibson Collection).

5 Principal forces for change affecting Cornish and Scillonian ports and harbours

This section summarises our improved understanding of trends, impacts and opportunities resulting from the project.

5.1 Natural forces for change

Natural forces for change include;

- Gradual submergence (exemplified by Scilly but also a factor elsewhere), gradual transformation of the physical structure of ports and harbours, often accelerated by exposure to water and chemicals, weathering, erosion and decay;
- The effects of storms (perhaps increasing in frequency and violence), from the sea and from floods of rivers (as recently at Boscastle, Lostwithiel, etc);
- The continued siltation of estuaries, e.g. the Carrick Roads.

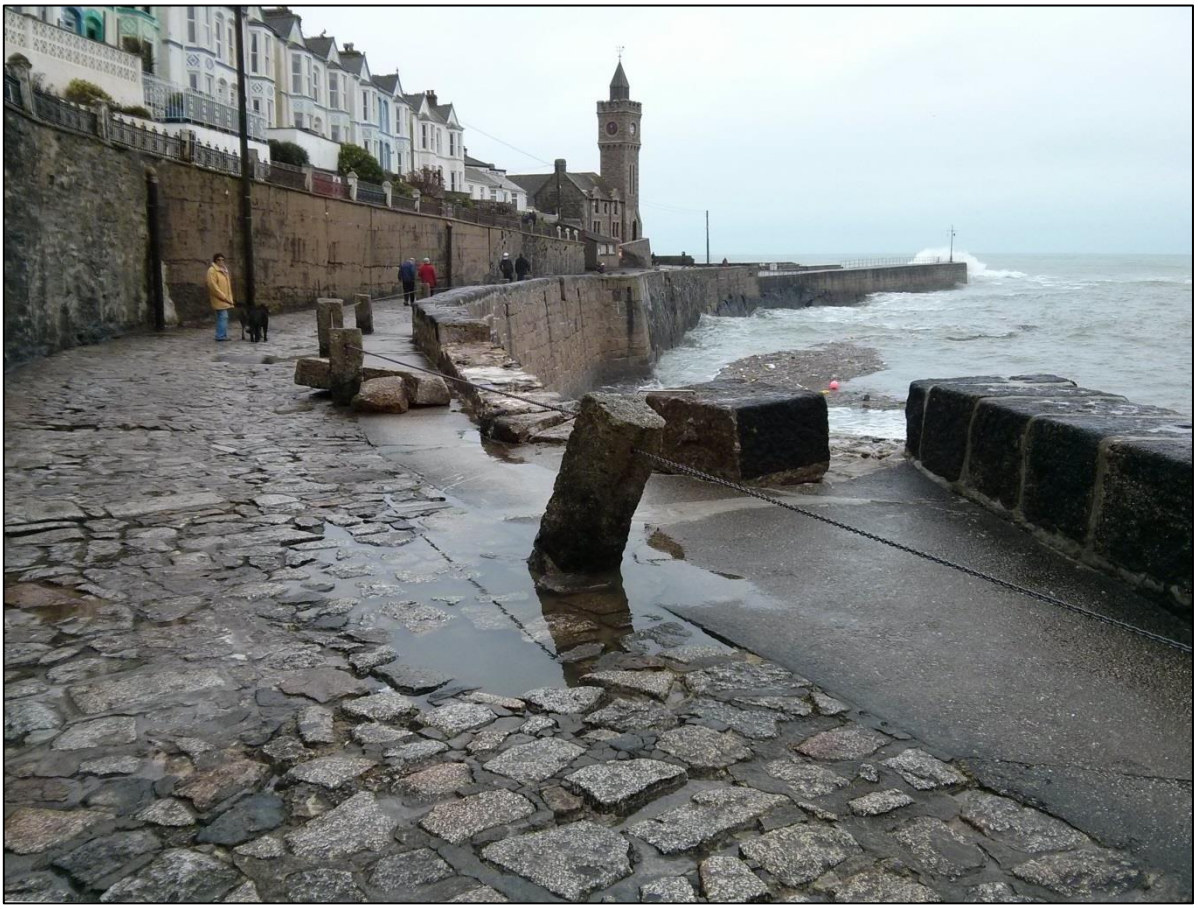


Fig 16 Storm damage at Porthleven, February 2014.

Since the project began in 2013 the potential effects of the natural forces which accompany climate change have become more manifest. The storms during the winter of 2013/14, in particular, caused structural damage to a number of Cornish and Scillonian ports and harbours including Kingsand, Mullion Harbour, Porthleven (Fig 16), Penzance, Lamorna, Penberth Cove, Portreath, St Mary's Harbour and Old Quay, St Martin's, emphasising that all Cornish ports and harbours as well other sections of the coastline are vulnerable to increased storm surges and extreme weather events.

Average global temperature and sea level have risen since the late 19th century and at an increased rate over the past few decades. Average UK temperature has risen since the mid-20th century, as have average sea level and sea surface temperature around the UK coast. Over the same time period, trends in precipitation and storminess are

harder to identify (UK Climate Projections (UKCP09)). Future sea-level rise around the UK is estimated to be between 12 and 76cm by 2090–2099 (Lowe *et al* 2009). This range is based on projections using low, medium and high scenarios for greenhouse gas emissions, and the central estimate for the medium scenario is 37cm by 2100, although this should not be taken as the most likely projection.

The Paris Agreement of November 2015 represented a historic moment in attempts to gain political consensus on effective measures to counter climate change. An enduring, legally-binding treaty, it is the first to commit all countries to cutting carbon emissions. 187 countries will reduce carbon emissions, starting in 2020, once 55 countries covering 55% of global emissions have acceded to it.

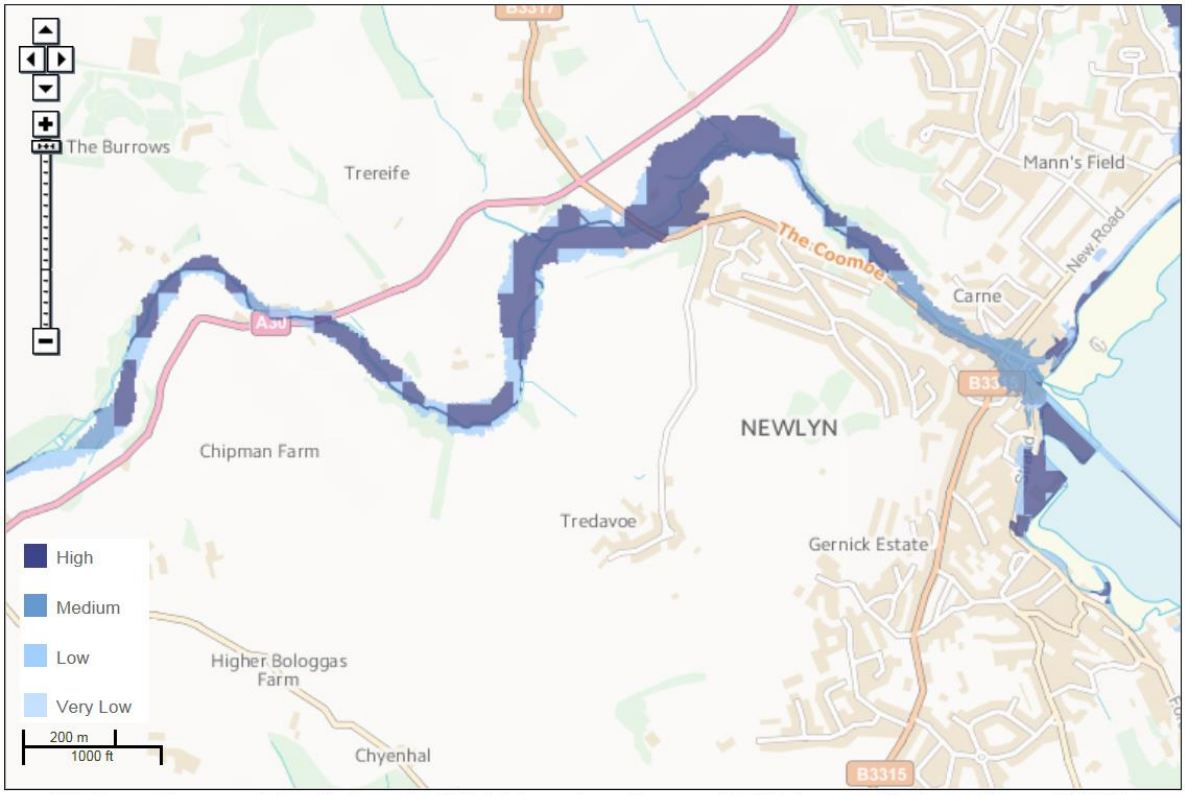


Fig 17 Risk of flooding from rivers and sea at Newlyn (© Environment Agency copyright and database rights 2015. © Ordnance Survey Crown copyright. All rights reserved. Environment Agency, 100026380. Contains Royal Mail data © Royal Mail copyright and database right 2015).

5.2 Anthropogenic forces for change

There is a determined agenda for social and economic change in Cornwall in line with UK government policy. Many ports and harbours are subject to pressures for new facilities to improve and extend commercial and leisure use, most typically in the form of marinas to service the potential leisure and tourism industry. There are pressures for individual ports and harbours to become financially sustainable under CC management. These include: Bude, Cadgwith, Penryn (with Mylor, Flushing, St Mawes and Restronguet), Penzance, Portreath, St Ives and Truro, (*cf* Cornwall Maritime Strategy 2012-2030).

Principal anthropogenic forces for change in Cornwall and Scilly include:

- Expansion, intensification or change of use, e.g. docks (Falmouth, Fowey, Par, etc), ferry termini (Penzance, St Mary's Harbour, Torpoint, Caffa Mill, etc), fishing (Newlyn, Mevagissey, East Looe, Cadgwith, etc), pleasure provision (Perranporth, St Ives, Newquay, Bude, Sennen, Portscatho, Looe etc), utilisation as hubs or

part of the infrastructure of maritime renewable energy generation (Hayle, Falmouth);

- Changes in method and scale of use, for example shifts of fishing to deep sea trawling, of warehousing to containerisation, of ferries to ro-ro, of small fishing boats to larger ones, etc;
- Changes in function, with numerous examples of increasing reliance of ports, harbours and their associated settlements on maritime leisure activities (yachting, swimming, diving, surfing etc), serving tourism, including much that involves enjoyment of the heritage values of ports and harbours (Polperro, Portloe, Mousehole, St Ives, Hugh Town etc), or primarily non-maritime residential use;
- Repair and restoration of elements of complexes. It might be noted that, as in much modern management of historic structures, the use of modern techniques and materials can be variably appropriate and effective, creating in some cases threats to both existing character and fabric;
- Settlement expansion, including onto the 'brownfield' areas of yards, wharves, works, etc (as at Hayle, Portreath, Falmouth, Penzance, Saltash);
- Other forms of successional use of buildings and structures (cellars, warehouses, lifeboat houses, capstan houses, etc) and spaces;
- Developmental responses to climate change (strengthening of structures, placement of material to diffuse the force of waves, etc);
- Reduction or cessation of use leading to neglect, abandonment and dismantlement;
- An indirect force is local topography, especially where it allows little or no room for manoeuvre in accommodating structures, etc as sea levels rise (as at Ropehaven, Portwrinkle, Polperro, etc);
- Dredging of approach channels and interiors of harbours (as at Penzance, St Mary's Harbour, Falmouth).

5.3 Threats and opportunities

Threats consequent on the above forces for change include the following:

- Physical loss of or damage to significant heritage assets, and incidentally, harbour structures that also serve as *de facto* flood and storm defence structures protecting land and settlements that contain other heritage assets;
- Loss of legibility of history; and
- Change of character and consequent diminution of distinctiveness and contribution to sense of place and local identity.

There are opportunities consequent to the anthropogenic forces for change, notably the following:

- Guiding future economic and community regeneration planning by a perspective which fully recognises and values the assets provided by the distinctive historic character of Cornwall's ports and harbours;
- Retaining economic use of failing or redundant structures and processes by thoughtful design of alternative uses;
- Maintaining viability of local economy and society and thus retaining functionality that ensures or encourages maintenance of assets and processes (the latter including sluicing silt from enclosed harbours); and
- Additional potential for tourism based directly on the rich historic character and unique historic and cultural assets of Cornwall's ports and harbours.

5.4 The Cornwall and Isles of Scilly Shoreline Management Plan

Until relatively recently, coastal defences were constructed on an *ad hoc* basis over often short lengths of coastline, the boundaries of which were usually marked by land ownership and administrative borders. This approach failed to consider the impact on other coastlines and often resulted in erosion and flood problems down drift of the defences.

In 1994 the Ministry of Agriculture, Fisheries and Food (MAFF) (now Defra) responded to the need for a more strategic approach by requiring that Shoreline Management Plans (SMPs) be in place for any operative authority seeking grant aid for coastal defence works.

The SMPs set policy for the management of coastal flooding and erosion risks for a predetermined length of coast. They are non-statutory high level documents that aim to balance those risks with natural processes and the consequences of climate change. SMPs need to take account of existing defences and the natural and built environments, and be compatible with adjacent coastal areas.

To best achieve their objectives the SMPs divide the shoreline of England and Wales into a series of cells and sub-cells, defined by coastal type and processes such as the movement of sediment (sand and shingle) within and between the cells. These cells contain 'Process Units' which are subdivided into a number of 'Management Units'. SMPs identify one of four shoreline management policies (see Table 1) for each Management Unit, which are then appraised based on technical, environmental, social and economic factors, in line with the Government's strategy for managing floods and coastal erosion.

The delivery of SMPs is achieved through operating authorities in coastal cells working collaboratively in regional coastal groups, but with designated "Lead Authorities" taking a project management role, in this case it is the Cornwall and Isles of Scilly Coastal Advisory Group (CISCAG).

The first round of SMPs for the Cornwall and the Isles of Scilly area was completed in 2000 and carried out in accordance with MAFF Flood Management Division's high level policy. At the time of the original SMP studies, Defra guidance suggested that SMPs be reviewed and, if necessary, updated approximately every five years. The Cornwall and Isles of Scilly SMP was completed in 2000 and SMP2 was completed in 2011 (Royal Haskoning 2011a; 2011b).

The boundaries of the Cornwall and Isles of Scilly SMP2 is contained within SMP sub-cells 6d, 6e, 7a and 7b, extending from Rame Head to Hartland Point, including the Isles of Scilly. This SMP area has been divided into 31 'Process Units'. Including estuaries, the total length of coast within the SMP2 is approximately 700km. The Cornwall and Isles of Scilly SMP2 includes coastline and valleys within the former Districts of Caradon, Carrick, Kerrier, North Cornwall, Penwith, and Restormel, which are now part of the Cornwall Council, and also North Devon.

Table 1 SMP Review Policy Options.

No Active Intervention (NAI)	A decision not to invest in providing or maintaining defences or natural coastline.
Hold the line (HTL)	Maintain or upgrade the level of protection provided by defences or natural coastline.
Managed realignment (MR)	Manage the coastal processes to realign the 'natural' coastline configuration, either seaward or landward, in order to create a future sustainable shoreline position.
Advance the line (ATL)	Build new defences seaward of the existing defence line where significant land reclamation is considered.

5.5 The Cornwall Maritime Strategy

'A future for Maritime Cornwall: The Cornwall Maritime Strategy 2012-2030' (the Strategy) was adopted by Cornwall Council in August 2012 following a series of Consultation Drafts and a Public Consultation document. It is the first, and to date the only, high-level maritime strategy to be produced by a local authority.

The Strategy's vision for Maritime Cornwall by 2030 is

- Cornwall has a sustainably managed maritime environment, which is well understood and known internationally as an excellent location for work, wildlife and for recreation;
- Cornwall's economy is supported by a diverse range of opportunities for ports, marine-related industries, transport and businesses including environmental technologies;
- Cornwall has a rich and enviable maritime heritage, a healthy maritime natural environment and landscape;
- Cornwall has distinctive, well-connected communities, resilient in the face of change.

This strategy has been adopted to ensure co-ordinated activity across Cornwall Council and its partners and is underpinned by a number of objectives:

- A sustainable, low carbon future for maritime Cornwall;
- Encouragement of partnership working;
- Promotion of low carbon maritime enterprise;
- A healthy, safe and vibrant coastline;
- Protect and develop the 'working harbour' role of Cornwall's estuaries, ports and harbours;
- Stronger connectivity through sustainable, low carbon transport;
- Ensure Cornwall's natural and historic maritime environment and culture is renowned worldwide and a source of pride and inspiration locally.

At various points the Strategy identifies strong roles for landscape and seascape character in building Cornwall's future sustainable economic and community development. The Strategy positively views landscape and seascape as:

- A positive asset for economic development, hugely important in creating distinctiveness of place and an environment in which people choose to live, work and build businesses (Cornwall Council 2012, 23); and
- Relevant to all economic activity and community cohesion in the area, not just an asset for the tourism industry (Cornwall Council 2012, 9).

5.6 Effects of port development

Historic environment assets include evidence for past environments, archaeological sites, historic buildings and the historic aspects of the wider landscape. These assets are unique and once they have been damaged or destroyed they cannot recover or be re-created. However, conservation of historic assets need not prevent development and change. Historic England recognises that the most effective way to conserve cultural values is to manage change by promoting awareness of the values that will be affected (English Heritage 2006; 2008).

Port development can have a wide range of effects on the historic environment. Assets affected can include marine archaeology, historic towns, historic dock structures, lighthouses and monuments. The wider effects of port development may include new roads or rail links for onward transport of goods (English Heritage 2006).

Such development may impact on the maritime historic environment in a number of ways. Direct damage to historic harbour structures and buildings may be caused by the construction and related processes necessary for the port to function. Particular operations such as capital dredging projects to aid navigation may result in localised changes to currents, which could result in damage to wrecks of archaeological interest, or cause buried items to be exposed. Redevelopment projects that involve advancing the line of the quayside could result in burial of, and compaction damage, to near-shore structures and wrecks (English Heritage 2006).

In all such cases, there are likely to be known heritage assets and previously unidentified heritage assets. Depending on the assessment of a heritage asset's significance proposed works should avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal (NPPF Clause 129). Where preservation *in situ* is not possible heritage assets should be examined and recorded or excavated prior to development. In the case of unknown features, it may be possible to predict the likelihood of finds given the local history and topography, but even thorough appraisal prior to development may miss some important finds, and it will therefore be important to have a mitigation strategy in place and provision, including financial allowance, to deal with the extra work and delay if unexpected finds are discovered (English Heritage 2006).

6 Selection criteria for Stage 2 ports and harbours

During Stage 1, the provisional list of ports and harbours drawn up by Historic England and circulated with the project brief was confirmed. This list contained information on 299 ports and harbours but was compiled rapidly and was unlikely to be comprehensive; nor did it include grid references. Consequently, a long list of Cornish ports and harbours was produced by querying the HER using all site types which could be indicative of a port or harbour. The resultant table was then filtered to remove duplicate records producing a list of 608 ports and harbours (Appendix 1).

The updated list of ports and harbours was then transformed into an outline classification of sites using eight variables: types of use, topography, chronology, scale, key maritime components (buildings, structures, spaces, etc) current activity levels, associated settlement (its form, scale, character, etc), and condition.

Each port or harbour was then assigned to a class that reflected morphology, functions, scale, chronology, etc. It is suggested in the project brief that there might eventually be roughly ten distinct classes that were whittled down from a 100 possible permutations resulting from five grades of scale and at least three options for each of the variables described above. The final classification was arrived at after a process of rationalisation and discussion with Cornwall Council's Maritime section and Historic England in order to take account of their views and specialist knowledge.

The final list contained nine classes and these are listed below in Table 2 with a brief description.

Table 2 Final list of classes of Cornish ports and harbours

No	Class	Notes
1	**Beach**	Beaches and coves used for various maritime purposes with little or no port or harbour infrastructure e.g. Crackington Haven, Duckpool, Penhale Sands, Godrevy, Praa Sands.
2	**Civic provision**	Usually small scale and built for a single purpose e.g. RNLI lifeboat stations Kilcobben Cove (The Lizard) and Penlee, St Helen's quarantine station (IOS).
3	**Commercial**	'Commercial' may be viewed as relating to trading functions beyond a purely local scale of activity e.g. Fowey, Bude Haven, Penryn?, Truro.
4	**Fishing**	Newlyn is a fishing port of national significance. Other fishing ports include Mousehole, Port Isaac, Penberth Cove, Porthgwarra, Sennen, Mullion Cove, Coverack, Cadgwith, Portscatho, Portloe, Gorran Haven, Mevagissey, Polkerris, Polruan, Polperro, Portwrinkle.
5	**Industrial**	Cornwall's tin and copper mining and china clay extraction prompted the development of specialist industrial ports and harbours from the late 18th century e.g. Portreath, Hayle, Devoran, St Agnes, Charlestown. Other industries include slate (Tintagel), serpentine (Poltesco). Minor sites include the kelp industry quays in Scilly such as Tean and Toll's Island.
6	**Leisure**	Ports and harbours that were purposefully built for leisure — Bude, a 19th century resort, is possibly the only example in Cornwall.

No	Class	Notes
7	**Local trading**	Includes medieval/post-medieval trading ports. Many are no longer used, often because of estuarine silting e.g. Tregony, Ruan Lanihorne, Lostwithiel, Tresillian. Minor sites include quays serving farming hamlets e.g. Polingey Quay (Percuil), Treath and Scott's Quay (Helford) or providing lifelines to islands e.g. the main IOS off-island quays Porth Conger on St Agnes, Higher Town Quay on St Martin's, IOS.
8	**Military**	Ports and harbours whose historical development and primary use was for military purposes e.g. Fort Picklecombe, Wacker Quay (Anthony), Crab Quay (Pendennis), Mylor Creek.
9	**Multi-purpose**	Most Cornish ports and harbours have a combination of activities: commercial, fishing, leisure ferry services and ship repair. Falmouth belongs to this class as do Looe, Penzance and St Mary's Harbour.

A long list was then prepared of those ports and harbours from each of the classes which were identified during Stage 1 as either most at risk from forces for change or are most likely to benefit from change. These were the sites which could potentially be taken forward for further study in Stage 2 of the project. From this long list of sites 15 ports and harbours were selected for more detailed study in Stage 2. The list included those ports and harbours with greater vulnerability or capability and included at least one site from each of the nine classes. The final list was drawn up in conjunction with the CC Maritime section who indicated those places where there is a likelihood of substantial change or development in the short to medium term. The final list of ports and harbours selected for study in Stage 2 and the reasons they were selected are given below in Table 3. The methodology for the Stage 1 assessment is detailed in Appendix 2.

Table 3 Final list of ports and harbours selected for study in Stage 2

Name	Class	Reason selected
Cornwall		
1) Duckpool	Beach (Scale 1)	A good example of a beach used for various maritime activities throughout history.
2) Penberth Cove	Fishing (Scale 3)	SMP Review priority area, storm damage Typical smaller fishing harbour.
3) Newlyn	Fishing (Scale 6)	Largest fishing port in Cornwall.
4) Wacker Quay	Military (Scale 2)	A good representative of this class.
5) Lerryn	Local Trading (Scale 3)	A good example of this class, successional use of buildings, development pressure.
6) Portreath	Industrial (Scale 4)	SMP Review priority area, storm damage. Deteriorating infrastructure. WHS.

Name	Class	Reason selected
7) Charlestown	Industrial (Scale 4)	Proposals for marina development. WHS.
8) Hayle	Industrial (Scale 5)	Needs a culturally sustainable regeneration strategy. WHS.
9) Truro	Commercial (Scale 5)	Still a commercial port and a good representative of this class.
10) Kilcobben Cove, The Lizard	Civic provision (Scale 2)	Not many of this class to choose from.
11) Bude	Leisure (Scale 4)	Possibly the only representative of this class in Cornwall.
12) Fowey	Multi-purpose (Scale 6)	A decline in china clay industry would affect the way the waters of the estuary are used.
13) Penzance	Multi-purpose (Scale 6)	SMP Review priority area, storm damage. Likely to change due to improved ferry link proposals.
Isles of Scilly		
14) St Mary's Harbour	Multi-purpose (Scale 4)	SMP Review priority area, storm damage. Improvements and extension to quay carried out 2014–16.
15) Higher Town Quay, St Martin's	Local trading (Scale 2)	Typical off-island quay providing main link with St Mary's Harbour.

7 Historic Characterisation

7.1 Historic Characterisation hierarchy for Cornish ports and harbours

The ports and harbours of Cornwall, both in their historic and modern capacities, demonstrate a variety of forms, scales and purposes. To a lesser or greater extent, however, there are elements of character and function common to all the ports and harbours that can be represented through the Historic Characterisation hierarchy of Classes, Broad Types, Character Types and Sub-types. Historic Characterisation has been the tool used to illustrate where natural and anthropogenic changes to port areas occur and where these are reflected through altered character and function.

Within the port-related areas being assessed it has been usual to identify categories of Historic Characterisation that relate to specific types of character and function or specific port-related activities. As ports and harbours have responded to historic and modern forces for change some of these categories have also changed, as reflected in the different Broad Type/Character Type hierarchies being employed, which at the lowest Sub-type level are captured in the disappearance of certain types of site and in the introduction of new ones.

Within the more closely port-related areas examples of this Broad Type/Character Type hierarchy include:

- 'Water Transport'
  - 'Maritime Safety' — key attributes: maritime safety features, such as coastguard stations, lifeboat stations, lighthouses.
  - 'Navigation Activity' — key attributes: areas associated with navigation-related activities, such as off-shore anchorage.
  - 'Navigation Channel' — key attributes: areas specifically associated with channels of navigation, whether active or disused.
  - Port and dock installation: areas or structures directly associated with port-related activities or port infrastructure, such as harbours, quays, dry dock, slipways, boat houses.
- 'Storage and Handling'
  - 'Warehousing' — key attributes: warehousing facilities for storage of goods or produce.
- 'Flood and Erosion Defence'
  - 'Sea Defence' – key attributes: Areas or structures constructed to combat coastal erosion or flooding, such as sea walls, groynes, breakwaters.
- 'Fishing'
  - 'Fish Processing' – key attributes: areas or structures associated with the processing for fish, such as fish cellars, fish markets, fish processing factories.
  - 'Fishing Settlement' — key attributes: sites or structures associated with fishing settlement, such as fishing villages, net lofts.

Within and around the port areas there is typically a transport infrastructure and ancillary industries that either support or supply port activities or benefit from them by association. Examples of Broad Types and Character Types relating to these include:

- 'Shipping Industry'
  - 'Marine Construction' — key attributes: sites or structures associated with marine construction, such as shipyards, ropewalks, marine engineering works.
- 'Processing Industry'

  - 'Processing Industry' — key attributes: sites associated with industrial processing, such as timber yards, coal depots, lime kilns, china clay dries, saw mills, foundries.
  - 'Water Power Production Sites' — key attributes: sites providing water power to industrial sites, such as pen ponds, mill ponds.
- 'Energy Industry'
  - 'Electricity Generation' — key attributes: sites associated with the production of electricity, such as power stations, renewable energy installations.
  - 'Gas Distribution' — key attributes: sites or structures associated with the distribution of gas, such as gas holders, gas pipelines.
- 'Food Industry'
  - 'Food Preservation' — key attributes: sites associated with, or deriving from, the manufacture, storage and preservation of food or drink-related products, such as ice works, salt works or granaries.
- 'Transport'
  - 'Transport' — key attributes: sites associated with the transportation of goods, vehicles or pedestrians, such as roads, railways, canals, cycle paths, footpaths.
  - 'Transport Site' — key attributes: sites associated with transport, such as car parks, bus stations.

Ports and harbours are typically established at the interface between land and sea, or river estuary. The location and topography of each site influences the form it takes, from something as simple as a small sheltered cove (Penberth Cove, Kilcobben Cove, Duckpool), to a village or town harbour and quay (Newlyn, Penzance, Lerryn), or at the other extreme, an extended river port or a large coastal port located close to major sea going trade routes (Fowey, Truro). The character of a port or harbour's setting reflects geological and climatic processes over millennia, coupled with comparatively recent human intervention and anthropogenic change. 'Cultural Topography' as an HC Type embodies the often-overlooked cultural half of the semi-natural and how it is made cultural by how we perceive and use it and, sometimes but not always, how we leave our mark on it. Examples of Broad Types and Character Types that reflect these processes include:

- 'Cultural Topography (Landward)'
  - 'Cultural Topography (Landward)' — key attributes: physical landward features, such as cliffs, dunes, watercourses.
  - 'Palaeolandscape Components' — key attributes: former landscape elements now preserved as geological features, such as the channel of a former river or stream.
- 'Cultural Topography (Coastal and Intertidal)'
  - 'Cultural Topography (Coastal and Intertidal)' — key attributes: features characteristic of the coastal intertidal zone but not directly utilised as part of the port or harbour, which might include parts of the foreshore, or features within an estuary, such as sandbanks, mudflats, saltmarsh.
  - 'Submerged Landscape' — key attributes: historic landscapes and landscape areas now submerged below sea level, such as submerged forests.

Historically, ports and harbours have always been vulnerable to outside attack during times of conflict and political unrest. Accordingly, there are often defensive structures and features located within, or in close proximity to, key port-related sites (demonstrated at most of the selected ports and harbours but particularly visible at

Fowey, for example). The umbrella Historic Characterisation Broad Type for such features is:

- 'Defence' — examples of the main Historic Character Types captured within this include:
  - 'Civil Defence Site' — key attributes: features associated with the protection of civilians or civilian property, such as air raid shelters.
  - 'Coastal Defences' — key attributes: military sites and structures associated with coastal defence; coastal batteries and pillboxes.
  - 'Anti-Invasion Defence' — key attributes; military features associated with the prevention of invasion by foreign craft; anti-tank obstacles.
  - 'Fortification' — key attributes; large fortified structures, usually placed at harbour and estuary mouths or in prime defensive locations; artillery forts.
  - 'Military Installation' — key attributes: Military bases and structures placed to support key defensive sites or military docks; military depot, embarkation point.
  - 'Military Transport' — key attributes: Military base or site directly associated with military naval or marine transport; submarine base, seaplane base.

As ports and harbours have adapted to modern forces for changes, such as seaside recreation and expanding urban development, many previously port-related features have experienced an alteration in character away from maritime or industrial and towards more leisure-orientated, residential or commercial functions (as at Bude, Portreath, Penzance, Hayle and Charlestown, for example). The hierarchy of Broad Types and Character Types associated with these aspects of modified character include examples such as:

- 'Recreation'
  - 'Seaside Recreation' – key attributes: sites within a coastal location that provide outdoor leisure activities or a space for these to be carried out; leisure beach, promenade, pleasure pier, for example.
  - 'Indoor Entertainment' — key attributes: indoor premises catering for specific leisure activities; cinema, aquarium, amusements, for example.
  - 'Recreational Accommodation' – key attributes: sites or premises that provide holiday accommodation; hotel, campsite, caravan park, for example.
  - 'Sports Site' — key attributes: Indoor or outdoor premises that specifically offer sporting facilities; lido, sports centre, swimming pool, for example.
  - 'Water Sports' — key attributes: Sites or premises specifically catering for water sports; sailing club, water sports centre, bathing/swimming (informal seaside bathing areas or rock cut pools), for example.
- 'Settlement'
  - 'Settlement' — key attributes: premises or larger groups of premises with a domestic, residential or mixed residential and commercial function; manor house, farmhouse, village, town, for example.
  - 'Enclosed Settlement' — key attributes: a prehistoric or Romano-British settlement, such as a cliff castle, hillfort or round, for example.
- 'Commerce'
  - 'Market' — key attributes: an area designed to provide space for stalls or commercial sellers, such as a market place, for example.
  - 'Commercial (other) — key attributes: premises of varying size that provides a retail or commercial function; shop, builder's merchants, inn, for example.

In addition to the cultural topography of port and harbour areas there are often areas of the coastal margins whose character reflect phases of historic land use that are superseded by port-related development, either through the rapid expansion of some of the larger ports and harbours during the 19th and 20th centuries, or through the siting of ancillary port-related elements at a distance from the main port areas — such as lighthouses, coastguard stations, modern dock facilities. The hierarchy of Broad Types and Character Types associated with these historic land use areas include:

- 'Woodland'
  - 'Woodland' — key attributes: areas of woodland with historic time-depth (since at least 1600 AD) that survive in a largely unaltered state — 'Ancient 'Woodland'; areas of woodland that derive from deliberate planting, such as plantations or ornamental woodland; areas of woodland that have regenerated through non-intensive land management schemes — 'Regenerated Woodland'.
- 'Rough Ground (Coastal)'
  - 'Rough Ground (Coastal) — key attributes: areas of coastal heathland, coastal pasture and mixed low scrub vegetation on coastal margins. These may comprise larger areas of clifftop land use as well as smaller discrete areas within the coastal strip that may have been historic 'waste' or un-managed coastal ground.
- 'Enclosed Land'
  - 'Enclosed Land (Coastal)' — key attributes: coastal ground under an agricultural management regime, such as fields or orchards.

7.2 Using Historic Characterisation to map historic regression

The character of the selected Cornish ports and harbours has been captured through Historic Characterisation to create a series of time-slices, which illustrate changes at key periods of port development, both historic and modern.

For the purposes of the Cornish Ports and Harbours project, these time-slices were assessed and developed through on-site fieldwork and using a range of documentary resources, such as historic OS and tithe mapping, maritime charts (where these were available), aerial photographs, historic photographs and written accounts. Three time-slices were created using the Historic Characterisation hierarchy for each port being assessed and these have been illustrated through mapping the port and harbour areas at Sub-type level.

The most recent time-slice always represents the present-day character of each port, showing the most up to date changes in form, function and character and illustrating where facilities and structures within modern ports have been adapted to accommodate pressures of development, economy and, most recently, climate change (see Fig 18).

The middle time-slice commonly represents change during or by the early 20th century, which captures the types and scale of change common to many ports at a time when many of the traditional staples of port economy, such as fishing and small-scale industry, were diminishing or being replaced. This was often synonymous with an increased pressure on port areas due to the rising popularity of seaside leisure and recreation and the development of coastal and seaside areas that accompanied this. Towards the latter part of this time-slice many port and harbour areas were being further adapted for defensive roles as part of the coastal defence systems of the two World Wars (see Fig 19).

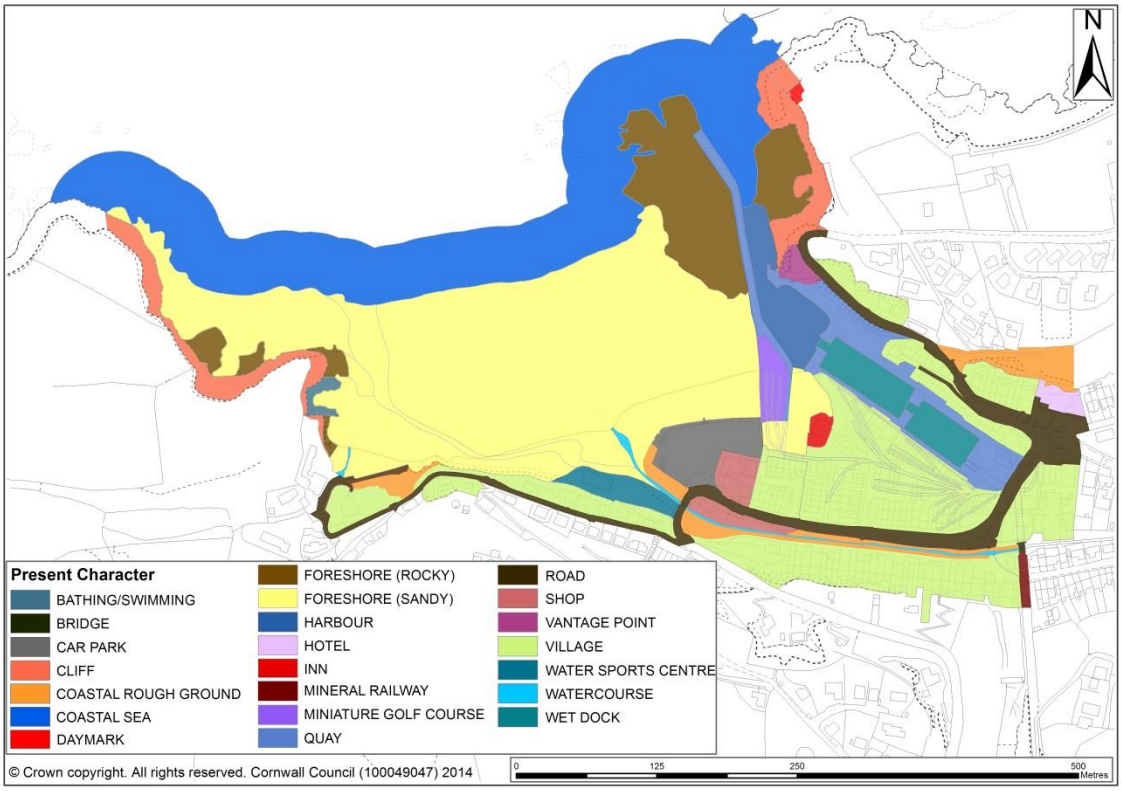


Fig 18 Present character map for Portreath showing characterisation to Sub-type level, based on OS digital mapping (2014).

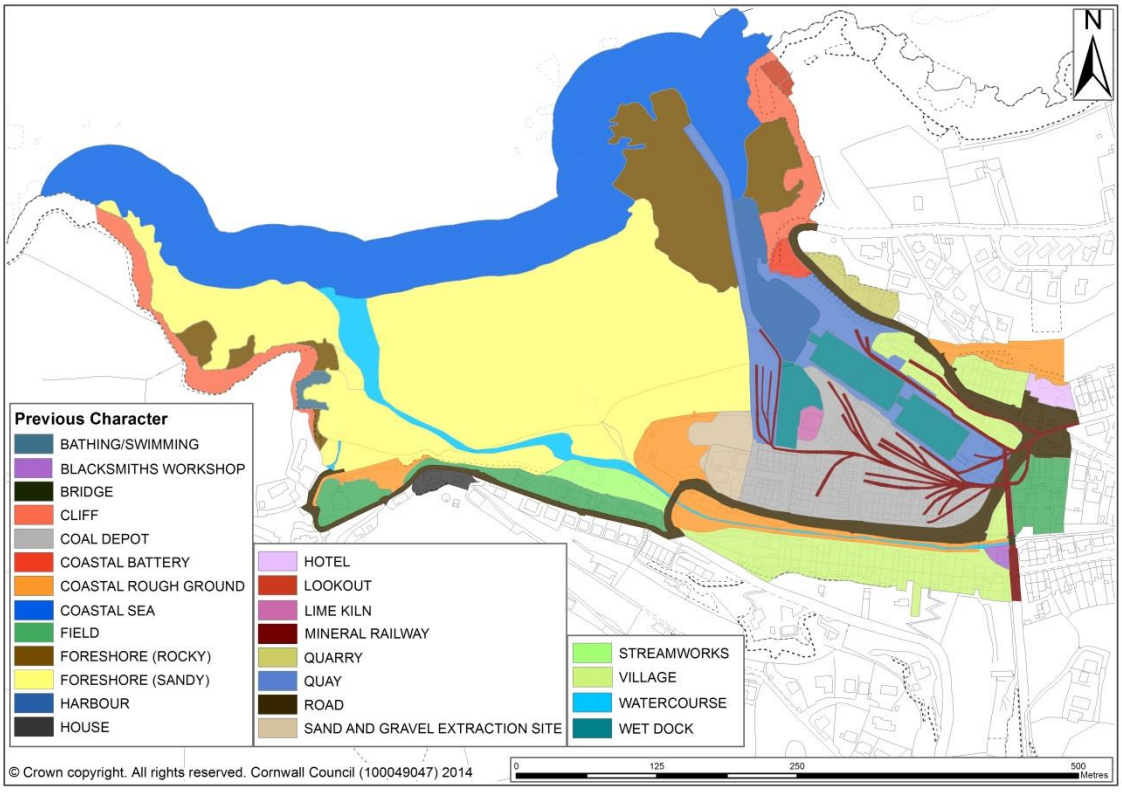


Fig 19 Late 19th to early 20th century previous character map for Portreath showing characterisation to Sub-type level, based on the c1880 and c1907 OS maps.

The earliest time-slice typically captures change from between the late 18th to the mid-19th century, at a time when most ports and harbours were more visually discrete, often still distinct from the town areas they served, and with the larger ports less multi-purpose in function. Maritime and industrial activity tended to be smaller in scale, save some of the larger ship-building centres; such as Fowey. It was commonly the case by this time that many of the key historic elements of port infrastructure, such as quays, docks and harbours, were in place and it was upon and around these key elements that subsequent changes focussed (see Fig 20).

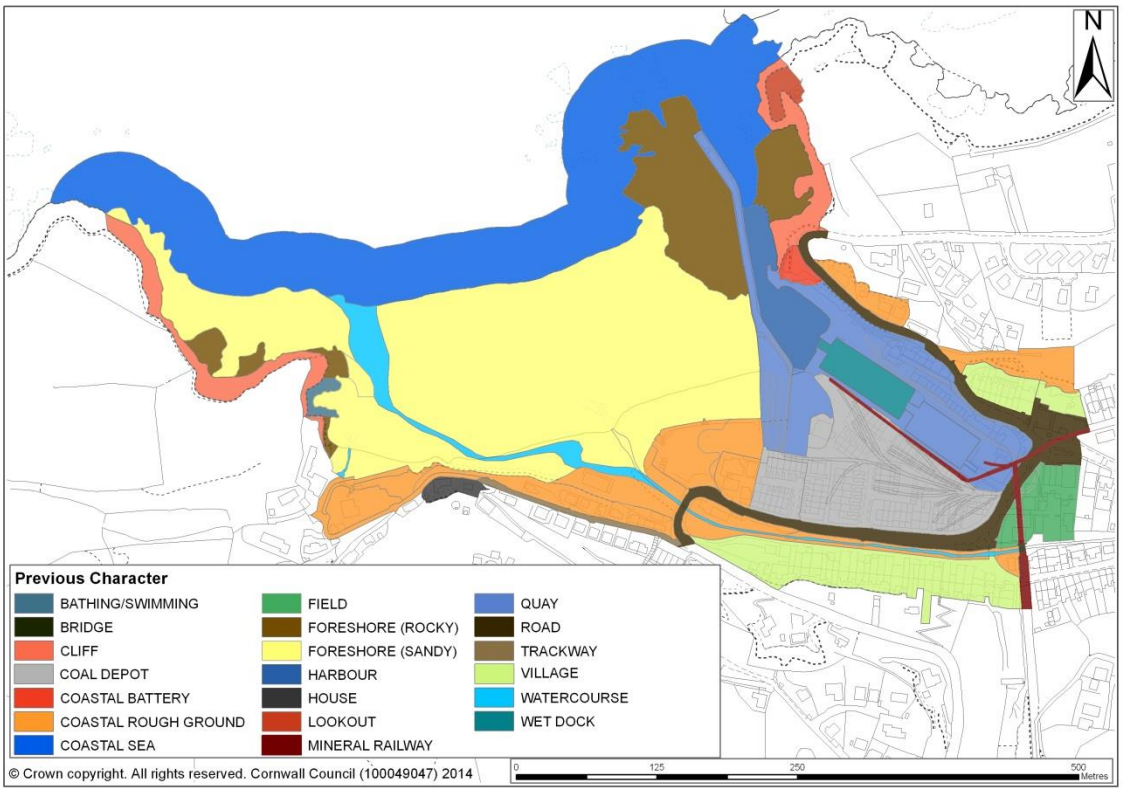


Fig 20 Early 19th century previous character map for Portreath showing characterisation to Sub-type level, based on the c1841 Tithe map.

8 Historic components

Change, involving the loss and/or adaptation of the inherited to meet the demands of the present and the future, has always taken place and is inherent in the historic cultural character of all places and the character and function of the selected Cornish ports and harbours have altered and adapted to meet historic and modern forces for change. This has played out at site (Historic Characterisation Sub-type) level through the loss of some distinctive historic elements; the alteration of some historic elements to fit new purposes; and the addition of new elements as ports and harbours strive to meet modern demands.

There are, however, some components of ports and harbours, both historic and modern, which are common to all, irrespective of size or function. The basic infrastructure of quays, slipways, jetties and harbours is typically found across the range of ports and harbours and many of these are historic features with a long time-depth of use and modification. Where ports and harbours have expanded and adapted over time, this has typically resulted first in the extension of the original quays and subsequently in the construction of new quays, jetties and slipways extending beyond the original site. In some instances the original quay has been abandoned in favour of a new site for the port or harbour, the old quay variously surviving but reduced in use (Newlyn, Old Quay/Higher Town Quay St Martin's) or lost altogether (Portreath, Wacker Quay).

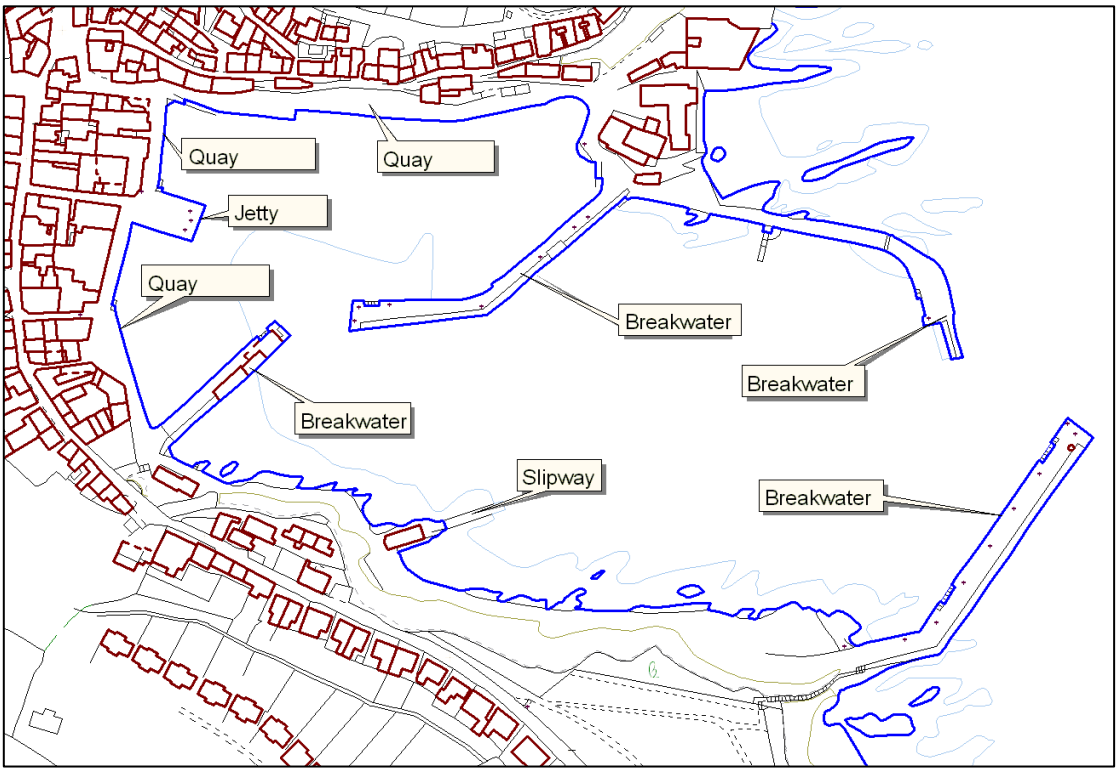


Fig 21 A suggested identification of harbour components at Mevagissey for the HER (from Smith 2003).

For historic ports on the large river estuaries of Cornwall, such as Hayle, Fowey and Polruan, it is common to find ferry-crossing points that span back in time to at least the medieval period. Often the modern ferry terminals associated with these are located at, or very close to, the same spot as their earlier counterparts.

Between the late 18th and late 19th centuries many ports and harbours had in close conjunction a range of industrial and warehousing premises, typically related to processing industries and the handling and storage of produce, commodities or fuel.

Common to these are components such as saw mills, limekilns, coal depots, foundries, blacksmiths workshops, smelting works, warehousing, granaries.

Additional historic port components may be found to reflect more specific port-related activities and industries, such as fishing and shipbuilding. These may be present during comparatively tight time spans, being lost or adapted as these industries diminished and declined (Portreath, Hayle, Penzance, Fowey, Charlestown, St Mary's Harbour in Scilly). In some ports these industries continue at a reduced scale, with some historic components surviving and in use into the present-day (Newlyn, Fowey, Polruan).

So for ports with a strong fishing association (Newlyn, Penzance, Fowey, Charlestown, Penberth Coveand Fowey, for example) we find a range of related components such as fishing villages, net lofts, fish cellars, fish markets and ancillary processing sites such as fish processing factories, ice works and salt works (Fig 22). For ports with strong links to shipbuilding (Hayle, Penzance, Charlestown, Hughtown (St Mary's) and Fowey, for example) there is a range of sites that include wet docks, dry docks, shipyards, ropewalks and boat yards.

Fig 22 Interior of a former pilchard pressing shed at Charlestown, with pressing beam sockets in the wall. The building was subsequently used as sailmaker's workshop and store and is being converted into a restaurant (Photograph: Eric Berry).

Within a few selective ports there have been very specific historic components associated with a particular industrial function or phase of port development. At Hayle, for example, there was significant modification of the industrial harbour to reflect the distinct estuarine locations of the two foundries at Hayle and Copperhouse and the extensive management of water to keep the harbour sluiced of silts from the upstream rivers. Reflecting this are historic components such as canals, sluicing ponds, sluices, sea walls and cinder banks. The historic extraction and export of gravels and beach sand, at ports such as Bude, Hayle, Newlyn and Portreath, featured components such as mineral railways, sand and gravel extraction sites and quarries. The growth of Cornwall's china clay industry saw the expansion of the port at Charlestown, which features historic components such as china clay dries, ore floors and, like Hayle, a

series of sluicing ponds and sluice channels set up above the harbour. The extensive china clay docks at Fowey are a more modern example of industrial particularity. Wacker Quay in its heyday saw use as a military depot serving the nearby fort, featuring components such as a military railway and military depot alongside the more typically found quays and jetties.

Many of these industrial components saw adaptation or changes in character as the industrial heyday of these ports declined: at Hayle, for example, the sluicing pond created through the enclosure of Copperhouse Creek has reverted to tidal estuary, comprising intertidal mudflats and saltmarsh, with the remains of the cinder retaining banks now reverted to areas of rough coastal ground and shingle foreshore. At Charlestown many of the former china clay dries and ore floors have been redeveloped as residential or commercial premises within the evolving town, left as open civic spaces, such as car parks or public areas, or incorporated within heritage centres as part of the increased leisure-orientated function of the present-day port; the sluicing ponds above the town have also seen additional use as boating ponds. At Bude, Hayle, Newlyn and Portreath the former mineral railways have been removed but sections survive as public footpaths or cycle paths, the majority of quarries and extractive sites reverted to beach, developed for housing or the site of new industry such as renewable energies (Hayle, for example). At Wacker Quay the quay saw temporary use during World War II as an embarkation point for troops heading to France but its character today is largely one of recreation, with many of the military components encroached on by regenerated woodland and a section of the former railway adopted as part of a leisure trail.

Dependent on whether the port or harbour is situated on the coast or within a river estuary, there are components relating to its physical setting that at various times during its history might also be directly associated with port-related use. For ports and harbours on the coast this might include components such as areas of shingle, sandy or rocky foreshore; the surrounding cliffs; areas of dunes or rough coastal ground or the surface coastal waters of a sheltered bay. For ports and harbours within a riverside setting this might include components such as areas of shingle, sandy or rocky foreshore; ancient or regenerated woodland, intertidal mudflats; saltmarsh or creeks.

The character of these various topographic and landscape components may be captured through Historic Characterisation Sub-types, based on their physical and cultural attributes; 'Foreshore (Sandy)', 'Cliff', 'Dunes', 'Coastal Rough Ground', for example. Where these components are adopted for port-related purposes, however, their character may change to reflect this new use; foreshore, dunes or rough coastal ground may be used as landing points or ferry terminals (St Mary's Harbour, Highertown Quay on St Martin's, Hayle, Fowey) for example, or become incorporated within shipyards (Fowey, Polruan, Hughtown St Mary's) or used to site wartime installations or defences (Duckpool, Wacker Quay, Fowey, Penzance). Inshore waters may be used as anchorages (Penzance, Newlyn, Hughtown St Mary's Harbour, Higher Town Quay on St Martin's) or to site modern marinas or mooring pontoons (Newlyn, Fowey), yacht clubs and water sports centres, for example. At Kilcobben Cove, the modern lifeboat station and incline slipway dominate the small beach and the steep cliffs above. The rise in industry at some river ports (Truro, Hayle) during the late 18th to 19th centuries saw sections of the river incorporated as timber ponds. Within the river estuaries themselves the main tidal channel was typically the navigation channel between port and sea, but where the route of this shifted over time new navigation channels were created and the former sections became disused (Truro, Wacker Quay, Hayle). Within many coastal estuaries there are dredged areas to combat siltation but these are not always easily identified, particularly where historic dredging has occurred.

The above changes of use to the physical components of a port or harbour setting may be historic, temporary or transitional, but where ports and harbours have expanded through commercial, industrial, recreational or climate-related forces for change this is likely to have brought about more permanent changes to their topography and setting. Examples of this include where areas of foreshore and coastal or tidal waters have been

lost to the construction of new quays, jetties, docks or shipyards (Hayle, Fowey, Polruan, Portreath, Truro); the construction of new marinas, pleasure beaches, parks and gardens, lidos, promenades or car parking (Bude, Fowey, Newlyn, Penzance); or for the construction of sea or flood defences (Penzance, Newlyn, Fowey, St Mary's Harbour).

With the advent of more stringent regard to maritime safety since the 19th century it is common to find related components both within the core of the ports and harbours and situated at a distance around the shoreline and along the cliff tops. Components such as lighthouses, seamen's missions, coastguard stations, lookouts and lifeboat stations, feature during this period either as newly constructed stand-alone sites or as sites adapted to this new purpose. Some of these sites continue into the present-day, whilst others have been adapted to new residential, commercial or recreational use.

Fig 23 The Red Store at Lerryn is an exceptionally well-preserved 19th century waterfront warehouse, one of the few remaining examples of the many riverside warehouses that adjoined the Fowey River and its tributaries. The building has recently been recently renovated for community use.

One of the most pressing forces for change for Cornish ports and harbours during the late 20th century and into the present day has been the rise of urban development within port and harbour areas and the increased demands of tourism to provide appealing and interesting visitor destinations. This has seen the replacement of many ancillary industrial and port-related buildings and sites being developed for residential, commercial or recreational use (Fig 23). This is reflected within historic port areas in the increase of components such as houses, shops, hotels, restaurants and cafes. This residential and commercial character has been captured through Historic Characterisation using Sub-types such as 'Town', 'Village', 'Shop', 'Hotel' or 'Inn'. Related to these are additional recreational Sub-types such as 'Visitor Centre', 'Museum' or 'Amusements'.

Where ports and harbours have adapted to the pressures of coastal erosion and climate change it has become more common to see port-related components such as breakwaters, sea defences, groynes and sea walls being constructed across areas of foreshore, alongside quays and promenades and across harbour, river and estuary mouths to deflect the potential damage from flood and erosion materials.

It is clear to see that when assessing the character of ports and harbours using Historic Characterisation that there are a group of port-related components we can expect to be consistently represented throughout a port's use. Others are transitional, dependent on external forces for change and may be temporarily represented or only appear at a relatively modern point in a port's history. Some present-day distinctive elements within what once comprised some historic port areas now have an entirely non port-related character but nevertheless represent once significant features of port-related activity.

9 Principal forces for change

This section relates each principal force for change to each class of port and harbour, to HC Types and to component types, emphasising vulnerabilities and capabilities.

9.1 Principal forces of change in relation to classes of port and harbour

9.1.1 Beach

Fig 24 Submerged forest exposed by winter storms on the beach at Chyandour, Penzance, in February 2014 (Photograph: CAU).

The main vulnerability of this class is climate change, increased storminess and extreme weather events resulting in erosion, flooding, loss of sand and possible exposure and degradation of archaeological remains and palaeoenvironmental deposits. In 2012, Phil Dyke, the National Trust coast and marine adviser, predicted that 'higher seas and stormier climate may ultimately strip sand from many much-loved Cornish coves and turn them, permanently, to stone' (from 'The Guardian' 8 February 2012]. The 2013-14 winter storms event confirmed this prediction, to some extent, stripping much of the upper and middle shore beach-sand from south western shores and dumping it well offshore, exposing the underlying bedrock and 'submerged forest' deposits and features for the first time in many years (Fig 24).

There has been small scale sand removal from some of Cornwall's beaches and dunes for centuries, although this has mostly stopped. Until recently, a 17th century Act of parliament allowed local farmers to remove sand from below the high water mark on any beach to improve the soils in their fields. With mechanisation, quantities of sand removal from beaches such as Poldhu increased at an alarming rate, leading to stony beaches and dunes vulnerable to erosion by the sea. Sand extraction from beaches and estuaries can result in a negative loss of sand from the system, reducing the beach and dunes effectiveness as natural sea defences. The sand supplying most dune systems is finite.

9.1.2 Commercial

Cornwall's Commercial (and Industrial and Multi-purpose) ports are vulnerable to a number of threats to their future economic viability:

- economies of scale leading to the concentration of activity at major deep-water ports;
- restricted maritime access for commercial vessels at some ports, e.g. Charlestown, Looe, Hayle, Penryn.
- the continuing competitiveness of road haulage;
- the county has a mainly agricultural hinterland, which restricts the type of cargoes that are likely to be handled to dry bulk and general cargo;
- insufficient cargo volumes may not justify investment by the private sector in port infrastructure, leading to the possible future deterioration and collapse of existing infrastructure at some ports (e.g. Charlestown, Hayle, Padstow) — some port infrastructure is already in a poor state;
- extreme weather and increased storminess — possible storm damage to infrastructure and costs of repair;
- limited land available for future development/expansion (e.g. Falmouth Docks, Fowey, Padstow);
- siltation of harbours and approaches e.g. Hayle;
- changes in technology and scale of use, for example of warehousing to containerisation etc;
- many commercial cargo vessel operators do not like their ships resting on the bottom of tidal harbours at low tide as it increases the risk of hull damage. Therefore, even in coastal/short sea trades, always afloat ports are generally favoured over NAABSA (not always afloat but safe aground) ports. The only Cornish ports which are always afloat are Fowey and Falmouth.
- dredging has long been an influence on the historic character of the waters in the United Kingdom, enabling many ports to develop much further and be accessed by far larger vessels than would otherwise be possible. It is a necessary requirement at the approaches to most active ports and will continue to be so. However environmental constraints (e.g., to protect maerl beds off Falmouth) may impose limits on the extent to which ever-larger vessels can be accommodated through deeper dredging.

9.1.3 Civic provision

Lifeboat stations are likely to benefit from being well-maintained and upgraded with modern technology, e.g. Kilcobben Cove. However, with no government funding, the RNLI is funded entirely through charitable donations. The economic and cost of living crisis may result in a decline in the number of donations to the RNLI and lack of funds to maintain lifeboat stations and other maritime safety infrastructure.

9.1.4 Fishing

The fishing industry gradually contracted throughout the 20th century, first as catches were reduced and regulation increased and then as fish stocks declined, more regulation was introduced and the effects of climate change became felt (Doe *et al* 2014, 344–5).

This had led to attempts at diversification, usually in connection with the development of the tourism industry, as at Padstow (Doe *et al* 2014, 345). There is additional potential for tourism based directly on the rich historic character and unique historic and cultural assets of Cornwall's Fishing ports and harbours.

In common with many of the other classes, threats to Fishing ports and harbours are lack of funds to invest in maintaining harbour infrastructure, negative effects of repair and restoration of elements of complexes, other forms of successional use of buildings and structures and increasing storminess and extreme weather as wreaked havoc in the south west between December 2013 and February 2014.

Fig 25 Mullion Harbour in June 2015 (Photograph: CAU).

Mullion Harbour is one of Cornwall's fishing harbours that is most at risk (Fig 25). Mullion Cove was one of the main seining (pilchard fishing) areas that centred on Mount's Bay. This industry as a whole was suffering a downturn when the Harbour was built in the early 1890s — it was commissioned by Lord Robartes of Lanhydrock to compensate local fishermen for continuing declining pilchard catches — and the fishermen were turning towards more lucrative lobster and crab fishing. The National Trust acquired the harbour in 1945 and today the Cove supports only a small fishing community, which mainly catches shellfish. It is now a popular tourist attraction for holidaymakers, painters and scuba divers, drawing in over 80,000 visitors each year. The Harbour itself undergoes frequent repair as a result of the storm damage that inevitably occurs every winter. The Trust has spent heavily on maintaining the pier walls since it came into their ownership. A study by Halcrow Group Limited and BSW Ltd in 2006 —commissioned by the Trust and with a group of stakeholders and other harbour owners actively involved — showed that with forecasted climate change, predicted sea level rises and increased winter storm activity, damage to the harbour is likely to increase. Following recommendations made by the study, the Trust is continuing to maintain the harbour and undertake minor repairs but that at some point in the future as severe storms continue to inflict damage, a tipping point will be reached where it will be necessary to call a halt to further work. At this point, with the involvement of local authorities and English Heritage, repairs would not be undertaken but the harbour walls might be consolidated to preserve most of the structure for as long as possible. In June 2016 a Conservation Management Plan for Mullion Harbour was commissioned by the Trust and one of its main aims is to identify this tipping point (The National Trust 2016).

9.1.5 Industrial

Some Industrial ports and harbours are protected as components of the World Heritage Site or through Listed Building status. Threats include lack of funds to invest in maintaining harbour infrastructure, negative effects of repair and restoration of elements of complexes, other forms of successional use of buildings and structures and increasing storminess and extreme weather as the winter of 2013/14.

A number of vulnerabilities were listed in the nomination document for inclusion of the Cornwall and West Devon Mining Landscape for inclusion in the World Heritage List (Cornwall County Council 2005).

- Unsympathetic conversion of historic buildings resulting in loss of character poses a threat which needs to be balanced with the threat of losing historic buildings altogether through neglect (Cornwall County Council 2005, 119).
- Lack of maintenance and neglect of historic fabric is a serious threat, particularly to buildings and structures which no longer have an economic use. Buildings that are unused and do not receive maintenance quickly become susceptible to the elements and decay can be surprisingly rapid (*ibid*, 119).
- Inappropriate alterations to historic fabric can lead to a significant loss of urban historic character (*ibid*, 119).
- Potential pressures deriving to visitor access include the visual and environmental impact of new or expanded facilities and traffic problems (*ibid*, 120).
- Extreme weather conditions are increasing as result of climate change resulting in coastal erosion, salt weathering, localised flooding and damage. Coastal defences need constant monitoring and consolidation to maintain their stability (*ibid*, 121).

Inappropriate development of poor quality design and materials will be damaging to Cornwall as whole, not just the World Heritage Site. The *Cornwall Maritime Strategy* aims to work towards more coordinated management of and advocacy for ports and harbours, to encourage further economic development whilst balancing the operational, leisure and environmental uses (Cornwall Council 2012, 20, Aim E4).

This class of ports and harbours has considerable potential to benefit from change. There are opportunities for heritage-led regeneration, growth of tourism, integrated environmental management, educational initiatives.

9.1.6 Leisure

Although Bude, a 19th century resort, is possibly the only example in Cornwall of a port or harbour that was purposefully built for leisure, leisure remains a major industry for Cornish and Scillonian ports (Doe *et al*, 2014, 422). During the last few years variable summer weather patterns and a declining economy have impacted upon visitor numbers across Cornwall. The seasonal tourism-based economy is both fragile and uncertain and is under increasing pressure to remain competitive against other destinations around the globe and in other parts of Britain. A few wet and stormy summers could cause much damage to Cornwall's tourist industry.

Key problems which the Cornish leisure industry needs to address in the coming years are: the seasonal troughs and peaks and the knock-on effects for local businesses and people; making the sector an attractive one to work in with higher wages and improved career prospects; the need to adapt to changing tourist demands; and growing and retaining tourist expenditure within the county.

There is generally poor public transport provision into Cornwall – particularly by rail. The Great Western Main Line provides the backbone of the Cornish network, but there are only a limited number of branch lines and many of the harbours are accessed via narrow roads or through shopping areas which can become congested with traffic during the peak summer period.

Maintaining air and sea links between the mainland and Scilly a major issue, exacerbated by the ending of the helicopter service and overdue replacement of the

Scillonian III, with knock-on effects for use of St Mary's Harbour (see below section 9.1.9).

The cruise market has been growing in recent years and there is potential for a greater number of cruise calls at Cornish ports and in Scilly, but Cornish ports and harbours are generally unable to accept visiting large leisure craft due to difficulty of maritime access while there have issues over the increased numbers of cruise ship visits to Scilly which some view as detrimental to the special character of the islands.

9.1.7 Local trading

The larger representatives of this class are mainly medieval/post-medieval river ports which have lost their original function and are now often located some way inland — usually affected by riverine and estuarine silting e.g Tregony, Ruan Lanihorne, Lostwithiel, Tresillian.

Many sites of this class are vulnerable to modern development, land reclamation, neglect and decay. For example, there are often development pressures as in the old waterfront areas at Lostwithiel.

Smaller, village or rural quays and associated stores or other buildings lack the physical restraints of extensive and intensively built up urban settlements and their historic settlement designations and are particularly vulnerable to modern riverside development which can cause the loss of features or character of sanding structures or their total removal. Damage to buried archaeological remains may also result (cf Parkes 2000, 58).

Land reclamation, new revetment of river banks using modern materials and other modification of the shoreline may also damage sites or rural environments and possibly cause increased erosion in other areas (cf Parkes 2000, 58).

Sites which have been neglected or abandoned can be subject to decay, robbing for stone, casual damage (such as modification by picnickers for barbecue structures) and incidental damage by cultivation or by paths crossing over them. Structures in disrepair which become dangerously unstable may also be more susceptible to damage or destruction by redevelopment, and quays, slipways or buildings which are not maintained are particularly vulnerable to coastal erosion (cf Parkes 2000, 58).

Coastal erosion is a major threat to river banks and creek shores. The threat to intertidal sites is shown by the loss of the surfaces and revetting walls of quays used into the present century. Mature trees can also topple into creeks, taking chunks of land with them and making sites on low river cliffs vulnerable (cf Parkes 2000, 59).

Parkes (2000, 59) noted in the '*Fowey Estuary Historic Audit*' that all of the disused small quays and slipways recorded around the creeks of the estuary were damaged and susceptible to further erosion, robbing or destruction.

Opportunities exist for the historic environment to make a contribution to the revitalisation of coastal economies and communities through heritage-led regeneration schemes, the support and encouragement of traditional skills and materials e.g. boat building, low impact and sustainable fishing methods.

The impending shortage of fossil fuels may lead to a revival of coastal distribution goods, instead of by land and, with it, the revival of small ports and smaller vessels able to penetrate Cornwall's waterways (Doe *et al* 2014, 422).

9.1.8 Military

Ports and harbours whose historical development and primary use was for military purposes, Military ports and harbours are often protected from inappropriate development through designation however the Stage 2 study of Wacker Quay showed that disuse, neglect and ignorance of military features can lead to damage and loss both to the features and the historic character of this class of port and harbour.

The impacts of climate change have the potential to alter or put pressure on the historic environment of Military ports and harbours: piers and other features might be damaged by flooding; increased storminess, rain and high winds may damage historic structures.

This class of port/harbour has the capacity to benefit from re-use for educational and leisure purposes and, as at Wacker Quay, can become the focus of community effort for professionally-supervised voluntary conservation work

9.1.9 Multi-purpose

Cornish Multi-purpose ports and harbours of this class are generally amongst the larger ports and harbours of the county, e.g. Falmouth and Penzance, while St Mary's Harbour is the main harbour for Scilly. These ports and harbours can accommodate a combination of commercial, industrial, fishing, and leisure activities; some have ferry services and ship repair yards.

Threats to their commercial viability include: competition from major deep-water ports elsewhere in the United Kingdom; competition from road haulage; poor or inadequate road and rail links; limited land available for future development/expansion (e.g. Falmouth, Fowey); insufficient cargo volumes to justify investment by the private sector in port infrastructure, leading to the possible future deterioration and collapse of existing infrastructure at some ports (e.g. Charlestown, Hayle, Padstow) — some port infrastructure is already in a poor state; extreme weather and increased storminess — possible storm damage to infrastructure and costs of repair; siltation of harbours and approaches e.g. Falmouth, Penzance; changes in technology and scale of use, for example of warehousing to containerisation etc; many commercial cargo vessel operators do not like their ships resting on the bottom of tidal harbours at low tide as it increases the risk of hull damage. Therefore, even in coastal/short sea trades, always afloat ports are generally favoured over NAABSA (not always afloat but safe aground) ports. The only Cornish ports which are always afloat are Fowey and Falmouth.

The cruise market has been growing in recent years and there is potential for a greater number of cruise calls at Cornish and Scillonian ports, but these ports and harbours are generally unable to accept visiting large leisure craft due to difficulty of maritime access. In addition, environmental constraints (e.g., to protect maerl beds off Falmouth) may impose limits on the extent to which ever-larger vessels can be accommodated through deeper dredging.

The ship repair market is a significant contributor of prosperity and employment in Cornwall. However, due to a perception that there is over-capacity within the north-western European market, no public sector funding is available.

The air and sea links between the mainland and the Isles of Scilly are the 'lifeline' for the communities and businesses of Scilly. The ferry service between Penzance and St Mary's Harbour is islands' only sea-link with the mainland and provides transport for the majority of freight and over 80,000 passengers to and from the Isles annually, a lower cost option for passengers and an alternative for air passengers when flights are cancelled. The *Scillonian III* passenger vessel does not sail between November and the end of March and there is a serious issue of maintaining adequate passenger links through the winter, a situation further aggravated by the loss of the helicopter service in 2011. There have been various proposals to improve transport links since the early 2000s, notably the failed 'Route Partnership' which proposed replacement of the *Scillonian III* and the Gry Maritha freight vessel with a single passenger-freight ship, plus refurbishment of St Mary's quay to accommodate the new vessel. Current harbour improvements to safeguard the future of the sea link for St Mary's and Penzance will create deeper water berths to improve the likelihood of the private sector continuing to operate the service. Without harbour improvements, it is unlikely that an affordable new vessel will be identified (see Duchy of Cornwall 2015b). Cornwall Council is promoting the scheme as the Local Transport Authority in partnership with the Council of the Isles of Scilly, Penzance Town Council, Duchy of Cornwall, Isles of Scilly Steamship Company and supported by the Cornwall and Isles of Scilly Local Enterprise Partnership and there are opportunities for the development of enhanced facilities at Penzance and St Mary's Harbour for the ferry service

Opportunities include sustainability advantages of using more water-based transport, including for freight and opportunities to better connect coastal communities.

China clay is a 'captive' commodity for Cornwall and there opportunities of growth for Fowey, although there little development land available and competition from the world china clay market to consider.

9.2 Principal forces of change for HC Types and components

Through the Historic Characterisation framework it has been possible to illustrate the changes in character of the port-related areas and their relative component parts, through assigning a hierarchy of Broad and Character Types and mapping these to Sub-Type level (see Sections 7 and 8). From this it is apparent that some principal forces for change more directly affect certain of these HC Types than others. Furthermore, in many cases the HC Types typically present within the port and harbour areas are seen to be affected by multiple forces for change, which emphasises the need for careful assessment of the issues facing present-day Cornish ports and harbours and the recommendations that will help sustain these vital qualities into the future.

9.2.1 Water Transport

The buildings, structures and spaces having a directly port-related function are captured under the HC Broad Type 'Water Transport', which incorporates HC Character Types such as 'Port and Dock Installation', 'Maritime Safety', 'Navigation Activity' or 'Navigation Channel'.

The principal forces for change affecting these Character Types include:

- 'Port and Dock Installation' (e.g. Sub-types: 'Quay', 'Harbour', Dry Dock', Ferry Terminal', 'Warehousing', 'Slipway', 'Jetty', 'Landing Point', 'Boat House'):
    - Expansion, intensification or change of use within port and harbour cores, potentially resulting in the modification or redevelopment of key port-related buildings, structures or spaces and expansion into previously non-maritime areas of villages, towns and coastal landscapes;
    - Changes in methods, technologies and scale of use, which might include the redundancy of some port-related components, potentially leading to loss or redevelopment, or the introduction of new ones;
    - Other forms of successional use of buildings, structures and spaces;
    - Changes in function within certain port and harbour areas and their associated settlements to meet the demands of residential and commercial expansion, tourism and leisure-related activities;
    - Repair and restoration to historic buildings or structures, which might be vulnerable to inappropriate or unsympathetic treatment;
    - Vulnerability to the effects of natural forces, including climate change, that might include gradual submergence, storm damage, weathering and erosion, or flooding.
    - Developmental responses to climate change, such as strengthening of structures, placement of material to diffuse the force of waves, etc.
- 'Maritime Safety' (e.g. Sub-types: 'Coastguard Station', 'Lighthouse', 'Seamen's Mission'):
    - Changes in use through residential, commercial or leisure-related development;
    - Reduction or cessation of use leading to neglect, abandonment or dismantlement;
    - Transformation or damage resulting from natural forces or climate change, such as weathering and erosion, storm damage, flooding.
    - Developmental responses to climate change, such as strengthening of structures, placement of material to diffuse the force of waves, etc.

- 'Navigation Activity'/'Navigation Channel' (e.g. Sub-types: 'Anchorage', 'Active Navigation Channel', 'Dredged Area'):
    - Changes in function in response to the growth of maritime leisure activities;
    - The continued siltation of rivers and estuaries;
    - The effects of natural forces and climate change, such as sea level rise, the scale and frequency of storms, flooding events, etc.

Whilst these core port-related components are vulnerable to the identified forces for change they also provide the greatest opportunity for sustainable and sympathetic development of port and harbour areas into the future, with the capacity to adapt to changes in local economy and culture. Careful and sympathetic development of these areas to provide new residential, commercial and recreational facilities can expect to achieve aesthetically pleasing results that also retain the historic character and significance of port-related assets.

Whilst the challenges of climate change may be expected to increase in future years, there is the opportunity for these HC Types and components to respond to careful development, reinforcement and maintenance in such a way that can help protect vulnerable coastal edges into the future.

9.2.2 Flood and Erosion Defence

The construction of flood and sea defences within port and harbour areas and along neighbouring stretches of coastline is tested more than ever by their continuing vulnerability to natural forces, such as erosion, weathering and storm damage and the increasing threat of climate change. As a result, more beaches, harbours and coastal stretches are seeing new defensive components, such as breakwaters, sea walls, groynes and flood defences, being built. These are often substantial structures that can impact on the visual aesthetic of historic port and harbour areas. Where historic sea and flood defence structures exist these are, by their very nature, subject to repair and re-fortification, which makes them vulnerable to unsympathetic treatment, particularly where practical need outweighs those of historic restoration.

With positive and sensitive development, however, these defensive structures can be designed to complement historic port and harbour areas and the coastal landscape. Continuing protection of these areas is also vital to retaining the port-related buildings, structures and spaces that make the Cornish ports and harbours such significant and appealing places in which to live, work and play.

9.2.3 Fishing

The HC Broad Type 'Fishing' incorporates the Character Types 'Fish Processing' and 'Fishing Settlement'. Components include Sub-types such as 'Fish Cellar', Fish Market', 'Fish Processing Factory', 'Fishing Village' and 'Net Loft'. The location of these components, often within or close to both port and settlement areas, makes them vulnerable to forces for change resulting from changes in use and developmental pressures as the historic decline in the fishing industry meets the escalating needs of settlement expansion, commercial growth and tourism. The coastal setting of these HC Types also makes them vulnerable to natural forces, such as weathering and erosion, and climate change. Principal forces for change to fishing-related HC Types include:

- Changes in methods and scale of use, which might result in the redundancy of some buildings, structures or spaces, leading to loss, abandonment or redevelopment.
- Repair and restoration to historic buildings or structures, which might be vulnerable to inappropriate or unsympathetic treatment;
- Other forms of successional use of buildings, structures and spaces;
- Developmental responses to settlement expansion, commercial growth, tourism and leisure-based activities;

- Vulnerability to the effects of natural forces, including climate change, that might include gradual submergence, storm damage, weathering and erosion, or flooding.
- Developmental responses to climate change, such as strengthening of structures, placement of material to diffuse the force of waves, etc.

The historic fabric of the majority of the 'Fishing' HC Types and components makes them aesthetically appealing and often historically significant. As such they have the capacity to increase the value and visitor appeal of port-related areas, as well as their commercial potential.

9.2.4 Port-Related Industry

The port-related industry of Cornwall and Scilly, both historic and modern, is typically characterised by HC Broad Types, such as 'Energy Industry', 'Shipping Industry', Processing Industry', 'Food Industry' and 'Extractive Industry'. Many of the HC Character Types and Sub-types associated with these reflect historic industries that have since reduced in scale and importance or become redundant as a result of changes in technology. Often, the historic buildings, structures and spaces where these industries were carried out were located towards the edges of port areas or within associated settlement areas, and as a result they have been particularly vulnerable to loss or redevelopment. The principal port-related industrial HC Types and Sub-types include:

- 'Marine Construction' (e.g. Sub-types: Shipyard', 'Dry Dock', Wet Dock', Ropewalk', 'Boat Yard')
- 'Processing Industry' (e.g. Sub-types: 'Lime Kiln', 'Foundry', Timber Yard', 'Tidal Mill', 'Saw Mill', 'Corn Mill', 'Blacksmiths Workshop', Coal Depot')
- 'Water Power Production Site' (e.g. Sub-Types 'Mill Pond', 'Pen Pond')
- 'Food Preservation' (e.g. Sub-types: 'Salt Works', 'Ice Works', 'Malt House', 'Granary')
- 'Mineral Extraction Site' (e.g. Sub-types: 'Sand and Gravel Extraction Site', Mineral Railway', 'Streamworks', 'Quarry')
- 'Electricity Generation' (e.g. Sub-types: 'Coal Fired Power Station', 'Renewable Energy Installation' (wave-power, wind-power, tidal power))
- 'Electricity Distribution'/'Gas Distribution'/Hydrocarbon Distribution' (e.g. Sub-types: 'Electricity Sub-Station', 'Gas Holder', 'Oil Works')

The principal forces for change associated with these include:

- Expansion, intensification or change of use within port and harbour cores, potentially resulting in the modification or redevelopment of key port-related buildings, structures or spaces and expansion into previously non-maritime areas of villages, towns and coastal landscapes;
- Changes in methods and scale of use, which might result in the redundancy of some buildings, structures or spaces, leading to loss, abandonment or redevelopment.
- Changes in function within certain port and harbour areas and their associated settlements to meet the demands of residential and commercial expansion, tourism and leisure-related activities;
- Reduction or cessation of use leading to neglect, abandonment or dismantlement;
- Other forms of successional use of buildings, structures and spaces;
- Repair and restoration to historic buildings or structures, which might be vulnerable to inappropriate or unsympathetic treatment;

- Developmental responses to settlement expansion, commercial growth, tourism and leisure-based activities, including expansion into 'brownfield' areas of yards, wharves and former industrial works;
- Vulnerability to the effects of natural forces, including climate change, that might include gradual transformation, storm damage, weathering and erosion, or flooding.

Where historic industrial buildings, structures and spaces survive these significantly contribute to the heritage appeal of port-related areas. Industrial buildings are often aesthetically pleasing as well as being places of historic interest. Changes in function or pressure to develop can be of positive benefit where the needs of the historic components that make up the industrial HC Types are sympathetically addressed.

9.2.5 Water Supply and Treatment

Buildings and structures associated with sewage treatment (e.g. Sub-types: 'Sewage Works', 'Sewage Pumping Station') and water provision (e.g. Sub-types: 'Water Pumping Station', 'Water Pipeline', 'Reservoir', 'Pond') may be located within or close to port areas and typically near to water sources or coastal margins. Some buildings and structures may have historic value and therefore some vulnerability to potential modification or redevelopment as a result of developmental pressures and/or changes in use. The major forces for change to these HC Types are likely to be those of natural forces, such as weathering, erosion and storm damage, and climate change, including sea level rise, storm damage and flooding.

Historic buildings and structures associated with water supply and treatment can be visually aesthetic as well as having significant heritage value. The development of such buildings can be an opportunity for sympathetic and appealing changes to commercial or residential function.

Reservoirs and ponds are likely to provide valuable wildlife habitats as well as the opportunity for leisure-related activities. Changes in use or function can be of positive benefit in these areas if appropriately developed and maintained.

9.2.6 Military Defence

The majority of military defence buildings, structures and spaces located within, or associated with, port areas are historic, relating either to the two World Wars, or further back to periods of late to post medieval maritime conflict. HC Types associated with military defence include 'Anti-Invasion Defence' (e.g. Sub-types: 'Anti Landing Obstacle', 'Anti-Tank Obstacle'), 'Coastal Defences' (e.g. Sub-types: 'Coastal Battery', 'Pillbox', Observation Post'), 'Fortification' (e.g. Sub-types: Artillery Castle', 'Artillery Fort'), Military Installation' (e.g. Sub-types: 'Military Base', 'Embarkation Point', 'Drill Hall'), Military Transport' (e.g. Sub-types: 'Dockyard', 'Military Railway', 'Seaplane Base').

Some older historic structures, such as the blockhouses at Fowey and Polruan, for example, may be ruinous but are now protected through statutory designation as Scheduled Monuments. Many of the 20th century wartime components, however, are either ruinous or lost. Some may be protected where they fall within Scheduled Monuments (as at Catherine's Point, Fowey, for example) but generally defensive features of this period are unprotected and vulnerable to further decay or redevelopment. The coastal location of the majority of defensive buildings, structures and spaces also renders them extremely vulnerable to natural forces for change, such as weathering, erosion and storm damage, and climate change, including sea level rise, storm damage and flooding.

There is a high level of interest in military buildings and defensive structures, added to which the location of these along the coastal reaches and estuarine valleys makes them appealing and characterful visitor attractions. As such, they have the capacity to boost the heritage and recreational value of port-related areas and increase visitor footfall.

9.2.7 Transport

Transport links within and between port areas and their associated settlement are typically vulnerable to changes in route, structure and function as technologies change and expansion and redevelopment occurs. Historic components such as railways and tramways may be modified to become footpaths, cycle paths and leisure trails as a result of reduced industrial function and the increase in leisure-related activities. Canals, such as those at Hayle and Bude, may face reduced use or redundancy; canal banks may become redeveloped or face decay through neglect and abandonment. Roads are subject to continual change and updating and historic routes may become altered or lost. Where transport routes are located close to the coastal edges or within and around river and estuary bottoms these are likely to become increasingly vulnerable to natural forces for change, such as erosion and storm damage, and climate-induced changes such as flooding, sea-level rise and storm frequency and ferocity.

Changes in function or the redevelopment of historic transport routes such as railways and canals creates the opportunity to provide leisure trails, cycle paths and trackways through port-related areas, opening these up to visitors and increasing awareness and appreciation. Redundant canals can be used for maritime-based activities or left to revert to semi-natural habitats, which, if managed sensitively, opens up further potential to increase visitor value.

9.2.8 Recreation and Leisure

The majority of recreation and leisure-related buildings, structures and spaces within and around port areas in Cornwall and Scilly are comparatively recent additions to, or modifications of, the historic ports and harbours landscape. The HC Types associated with recreation and leisure in port areas include 'Seaside Recreation' (e.g. Sub-types: 'Beach Huts', 'Parks and Gardens', 'Leisure Beach', 'Promenade', 'Coast Path'), 'Indoor entertainment' (e.g. Sub-types: 'Aquarium', 'Amusements', 'Museum'), 'Recreational Accommodation' (e.g. Sub-types: 'Hotel', 'Campsite', Caravan Park'), 'Sports Site' (e.g. Sub-types: 'Swimming Pool', 'Lido', 'Recreation Ground'), 'Water Sports' (e.g. Sub-types: 'Bathing/Swimming', 'Leisure Sailing Area', 'Sailing Club', 'Rowing Club').

Some recreational and leisure components have been created through historic buildings having been altered to provide leisure facilities or recreational accommodation or areas of foreshore or coastal waters having been modified or adapted to recreational use or maritime leisure activities. Where historic elements associated with former port-related functions survive these may be vulnerable to unsympathetic repair or modification and potential loss as a result of on-going redevelopment and expansion. Older components of the leisure industry, such as lidos, rock-cut bathing pools and amusements arcades, for example, are reflective of early fashions in leisure-based and vacation-related activities and these may be vulnerable to decay and abandonment or loss through redevelopment where their significance goes unrealised; the lido in Penzance, or the rock-cut pools at Bude, for example.

As with all coastal locations, recreational and leisure-based facilities are particularly vulnerable to natural forces for change, such as erosion and storm damage, and climate-induced changes such as flooding, sea-level rise and storm frequency and ferocity.

Tourism is now a high revenue opportunity for Cornwall and many other port and harbour areas across the country. The change in character of many port-related components to provide recreational or leisure-based functions has proved of considerable benefit to some coastal communities and that popularity is increased by the sensitive development of heritage assets and visually appealing coastal landscapes. Promoting and sustaining these areas in a sympathetic and long-term manner not only ensures their future well-being but also the longevity of port and harbour settings.

9.2.9 Cultural Topography

The coastal waters, estuaries and foreshore areas that make up Cornwall and Scilly's coastal and intertidal topography, and the cliffs, dunes and watercourses on the landward side, have long experienced both natural and anthropogenic forces for change. Cornwall and Scilly's ports and harbours have historically developed through the combination of their physical environment and the way their communities have perceived and moulded this to create their cultural setting. This symbiosis has both determined their origins and influenced their historic form and function as well as their capacity to accommodate future change.

At the present-day the principal amongst these are the threat of development through port and settlement expansion and the provision of recreation and leisure-related facilities, and potential loss or damage as a result of erosion and weathering, storm damage, flooding events and sea-level rise. These coastal areas typically form the interface between land-based ports and settlements and the open sea and as such they face on-going modification as the site of increased coastal defences, built to meet the challenges of future climate-change.

The semi-natural setting of Cornwall and Scilly's ports and harbours continues to provide value as the location of many small-scale maritime activities, as a coastal habitat and as an area of high visitor appeal and recreational provision. It also continues to reflect the combined effects of natural forces for change and the cultural shaping of the communities that work, live and play within it. Sympathetic protection of this Type will help to ensure its survival and sustain its future potential.

9.2.10 Settlement and Commerce

The ports and harbours of Cornwall and Scilly are typically associated with some form of settlement, the scale and nature of which may have seen significant historic change. Even the smallest coastal hamlets and villages have seen some degree of residential and commercial expansion and this is even more evident within the larger ports and town areas. Settlement expansion and development are significant forces for change and the pressures created through new residential and tourism-led development and commercial enterprise are ever increasing.

Whilst these forces for change might result in some loss of significant port-related heritage assets or a reduced legibility of port-related history, they also offer the opportunity to cater for the present-day needs of local communities and economies through creating viable and long-term development strategies. Achieving these can provide the capacity to sustain viability of local places and communities, retain functionality of heritage related assets and processes, and encourage the long-term maintenance of these into the future.

9.2.11 Rough Ground (Coastal), Enclosed Land (Coastal) and Woodland

The expansion of port and harbour areas over time has resulted in the reduction or loss of some historic land use areas, both within and adjacent to historic port-related areas. Forces for change which result in the loss or reduction of these areas, comprising HC Types such as 'Rough Ground (Coastal)', Enclosed Land (Coastal), Woodland, for example, potentially decrease our understanding of historic land use activities and the ways in which local communities lived and worked together. They also potentially reduce legibility of the physical and cultural setting of individual ports and harbours, and the way these function as part of a wider community.

As well as port-related development, historic land use areas are under threat from present-day developmental pressures resulting from settlement expansion, from general neglect and abandonment as management regimes change over time, from natural forces for change, such as erosion, storm damage or flooding, and from the increasing threat of climate change.

These historic land use areas do, however, create the potential for retaining open green space along coastal strips, for opening up traditional management regimes along neglected areas of clifftop and for sensitive and appropriate management of woodland

areas. These areas often have a strong visual aesthetic and provide opportunities for recreational and leisure-based activities as well as continuing practical land use. By reducing the risk of over development and through sympathetic management, these areas will have the continued capacity to provide welcome and appealing amenity value.

10 Generic issues and recommendations

This section sets out generic issues and recommendations based on the previous section, and applies them to each class of port and harbour, to each HC Type and to each type of port and harbour component that have been mapped, described and assessed as part of Stage 2

10.1 Generic issues and recommendations for each class of port and harbour

10.1.1 Beach

Many beaches are protected by virtue of their ownership by AONB and Heritage Coast designations. Most of the coastal foreshore below MHW level in Cornwall and Scilly is owned by the Duchy of Cornwall and this includes most of the beach-landing areas of this class. Beyond Lowest Astronomical Tide, the seabed is owned by the Crown Estate seabed. The main generic issue affecting of this class is climate change, increased storminess and extreme weather events resulting in loss of sand and possible exposure and degradation of archaeological features and deposits.

Beaches should be monitored at least once a year to assess the effects of coastal erosion.

There is scope for further research the history of *porths* and the origin of coastal settlements.

10.1.2 Commercial

Continuing commercial viability is one of the issues associated with this class: economies of scale could lead to the concentration of activity at major deepwater ports and the continuing competitiveness of road haulage and increasing unitisation, even of bulk commodities, have reduced opportunities for coastal shipping. There is also restricted access at some ports and some of the smaller commercial ports may not be able to handle the increasing size of short sea and coastal vessels in the future. Cornish ports with significant access restrictions may see their cargo base dwindle over the next 10 years or so. Ports which cannot accommodate vessel of at least 2500-3000 dwt may struggle to maintain commercial traffic in the future, based on current trends in ship size (Cornwall Council 2009). Changes in technology and scale of use, for example of warehousing to containerisation, etc., and the development of port facilities may put pressure on designated and undesignated assets and can also, in certain circumstances, lead to environmental issues e.g., dredging.

In accordance with guidance issued by Historic England it is good practice to regularly review Conservation Area Appraisals to ensure they remain accurate and up to date.

In order to help better understand Commercial ports and harbours a proper digital survey of key historic components is recommended; this should include a measured topographical survey as well as surveys of historic buildings and structures.

Commercial ports and harbours would benefit from adequately-resourced Conservation Management Plans, informed by appropriate condition surveys and structural assessments. Such Plans should include a vision for the port or harbour along with a set of management policies, taking into account what has gone before. These policies should be specific to the needs of each port or harbour and its related heritage and the people who value it and its current management issues. It is important that there should be inclusivity across all port interests in generating such Plans, their Vision and management policies.

Future management of Commercial ports and harbours should combine planning system requirements with sustainable forward planning at ports, based on an inclusive approach to generating Conservation Management Plans accompanied by a relevant Vision and management plan policies.

To aid the appreciation and understanding of these historic ports and harbours by both locals and seasonal visitors, improved interpretation in the form of information boards or museum displays is recommended.

10.1.3 Civic provision

Ports and harbours of this class are likely to benefit from being well-maintained and upgraded with modern technology e.g. Kilcobben Cove at The Lizard, but there is no government funding and the RNLI is funded through charitable donations. The economic and cost of living crisis may result in a decline in the number of donations.

To aid the appreciation and understanding of these historic ports and harbours by both locals and seasonal visitors, improved interpretation in the form of information boards or museum displays is recommended.

Further research and publication of a popular booklet detailing the history of the Lizard lifeboat stations is recommended, including oral history accounts of present and former members of the lifeboat crew and support staff.

10.1.4 Fishing

Fig 26 Fishing boats on the beach at Cadgwith Cove (Photograph: CAU).

In addition to climate change-related events, a generic issue with many ports and harbours of this class (and others) is lack of funds to invest in maintaining harbour infrastructure, negative effects of repair and restoration of elements of complexes, and other forms of successional use of buildings and structures. At Mullion Cove ongoing maintenance of the structure of the harbour walls and breakwater has been needed since construction 115 years ago. Maintenance costs since 1992 have been over £1 million, indicating the extent to which this harbour is exposed to the power of the sea (Halcrow Group Limited and BSW Ltd 2006; The National Trust 2010).

Because the Harbour is under constant threat from slowly rising sea levels and increased storminess future options need to be assessed. At the time of writing Cornwall Council is working on a Heritage Partnership Agreement (HPA) with the

National Trust using Mullion Harbour as a pilot project with the idea of using it as model for HPAs for Cornwall Council owned ports and harbours. The first stage of the HPA is a Conservation Management Plan (CMP) for the harbour which was commissioned in June 2016 (The National Trust 2016). The Plan will include a vision for Mullion Harbour along with a set of management policies, taking into account what has gone before. These policies will be specific to the needs of Mullion Harbour and its port-related heritage and the people who value it and its current management issues. In particular, the CMP will identify the tipping point at which it will be necessary to call a halt to further work when, with the involvement of local authorities and Historic England, repairs would not be undertaken although the harbour walls might be consolidated to preserve most of the structure for as long as possible.

Cornwall's fishing harbours are often very picturesque and desirable places to live and another generic issue with this class is the displacement of traditional fishing communities. A good example is Cadgwith Cove, near the tip of the Lizard peninsula, a remarkably beautiful village which still has a small inshore fishing fleet (Fig 26). Few of the fishermen still live in Cadgwith, most reside in nearby villages such as Ruan Minor or The Lizard, while most of the houses and cottages in Cadgwith are second homes and holiday lets, or occupied by incomers, and the old fish cellars is now a café. Nevertheless, this process can have some beneficial economic and cultural effects and there is still a strong community ethos in the 'Cove'.

In accordance with guidance issued by Historic England it is good practice to regularly review Conservation Area Appraisals to ensure they remain accurate and up to date.

In order to help better understand Fishing ports and harbours a proper digital survey of key historic components is recommended; this should include a measured topographical survey as well as surveys of historic buildings and structures.

Cornwall's Fishing ports and harbours would benefit from adequately-resourced Conservation Management Plans, informed by appropriate condition surveys and structural assessments. Such Plans should include a vision for the port or harbour along with a set of management policies, taking into account what has gone before. These policies should be specific to the needs of each port or harbour and its related heritage and the people who value it and its current management issues.

Future management of Fishing ports and harbours should combine planning system requirements with sustainable forward planning at ports, based on an inclusive approach to generating Conservation Management Plans accompanied by a relevant Vision and management plan policies.

To aid the appreciation and understanding of these historic ports and harbours by both locals and seasonal visitors, improved interpretation in the form of information boards or museum displays is recommended.

10.1.5 Industrial

Cornwall's industrial ports declined during the 20th century, partly as result of the increase in road transport but also because of a fall in demand for two of the county's three extractive products — metalliferous mining and its associated engineering, and quarried stone and slate. Some china clay was still being exported from ports such as Newquay, Padstow and Porthleven in the early years of the 20th century before a series of natural and economic factors forced them to discontinue this business. Most of the county's china clay output went and continues to go by sea, but following the closure of Par Docks in January 2008 it is now concentrated in vessels calling at Fowey. Although the entrance to Charlestown, Cornwall's first china clay port, was improved in the 1970s the ships that could use it were still too small and china clay is no longer exported from there (Chapman 2014, 390–10.

There is determined agenda for social and economic change in Cornwall in line with UK government policy. Ports and harbours of this class are subject to pressures for new facilities to improve and extend commercial and leisure use, most typically in the form of marinas to service the potential leisure and tourism industry. There are pressures for

individual ports/harbours to become financially sustainable under CC management e.g. Portreath (Cornwall Maritime Strategy 2012-2030).

In accordance with guidance issued by Historic England it is good practice to regularly review Conservation Area Appraisals to ensure they remain accurate and up to date. Although it is part of the World Heritage Site, Portreath does not have a Conservation Area and this should be addressed.

In order to help better understand Industrial ports and harbours a proper digital survey of key historic components is recommended; this should include a measured topographical survey as well as surveys of historic buildings and structures.

Industrial ports and harbours would benefit from adequately-resourced Conservation Management Plans, informed by appropriate condition surveys and structural assessments. Such Plans should include a vision for the port or harbour along with a set of management policies, taking into account what has gone before. These policies should be specific to the needs of each port or harbour and its related heritage and the people who value it and its current management issues.

Future management of Industrial ports and harbours should combine planning system requirements with sustainable forward planning at ports, based on an inclusive approach to generating Conservation Management Plans accompanied by a relevant Vision and management plan policies.

To aid the appreciation and understanding of these historic ports and harbours by both locals and seasonal visitors, improved interpretation in the form of information boards or museum displays is recommended.

10.1.6 Leisure

Bude, a 19th century resort, is possibly the only example in Cornwall of a port or harbour that was purposefully built for leisure. However, over the last 150 years most Cornish ports and harbours have changed or diversified to some extent to accommodate the tourism industry.

During the last few years variable summer weather patterns and a declining economy have impacted upon visitors numbers across Cornwall. The seasonal tourism-based economy is both fragile and uncertain and is under increasing pressure to remain competitive against other destinations around the globe and in other parts of Britain. A few wet and stormy summers could cause much damage to Cornwall's tourist industry.

Key problems which the Cornish leisure industry needs to address in the coming years are: the seasonal troughs and peaks and the knock-on effects for local businesses and people; making the sector an attractive one to work in with higher wages and improved career prospects; the need to adapt to changing tourist demands; and growing and retaining tourist expenditure within the county.

There is generally poor public transport provision into Cornwall – particularly by rail. The Great Western Main Line provides the backbone of the Cornish network, but there are only a limited number of branch lines and many of harbours are accessed via narrow roads or through shopping areas which can become congested with traffic during the peak summer period.

The cruise market has been growing in recent years and there is potential for a greater number of cruise calls at Cornish ports, but Cornish ports and harbours are generally unable to accept visiting large leisure craft due to difficulty of maritime access.

Increasing development of the tourism industry at coastal locations may lead to congestion, honey-pot sites and the degrading of coastal locations.

In order to help better understand ports and harbours of this class a proper digital survey of key historic components is recommended; this should include a measured topographical survey as well as surveys of historic buildings and structures.

Leisure ports and harbours would benefit from adequately-resourced Conservation Management Plans, informed by appropriate condition surveys and structural assessments. Such Plans should include a vision for the port or harbour along with a set

of management policies, taking into account what has gone before. These policies should be specific to the needs of each port or harbour and its related heritage and the people who value it and its current management issues.

Future management of Leisure ports and harbours should combine planning system requirements with sustainable forward planning at ports, based on an inclusive approach to generating Conservation Management Plans accompanied by a relevant Vision and management plan policies.

To aid the appreciation and understanding of these historic ports and harbours by both locals and seasonal visitors, improved interpretation in the form of information boards or museum displays is recommended.

10.1.7 Local Trading

The larger representatives of this class are mainly medieval/post-medieval river ports which have lost their original function and are now often located some way inland — usually affected by riverine and estuarine silting e.g Tregony, Ruan Lanihorne, Lostwithiel, Tresillian.

Many sites of this class are vulnerable to modern development, land reclamation, neglect and decay. For example, there are often development pressures as in the old waterfront areas at Lostwithiel.

In accordance with guidance issued by Historic England it is good practice to regularly review Conservation Area Appraisals to ensure they remain accurate and up to date.

Digital survey of key historic components is recommended; this should include a measured topographical survey as well as surveys of historic buildings and structures. Cornwall Council is carrying out a pilot project with the Neighbourhood Group in the St Austell Conservation Area using a Smartphone app to carry out Local List Surveys, Buildings at Risk Surveys and Condition Surveys which could be extended to other groups to cover ports and harbours.

Larger Local Trading ports and harbours would benefit from adequately-resourced Conservation Management Plans, informed by appropriate condition surveys and structural assessments. Such Plans should include a vision for the port or harbour along with a set of management policies, taking into account what has gone before. These policies should be specific to the needs of each port or harbour and its related heritage and the people who value it and its current management issues.

Future management of Commercial ports and harbours should combine planning system requirements with sustainable forward planning at ports, based on an inclusive approach to generating Conservation Management Plans accompanied by a relevant Vision and management plan policies.

There are opportunities for the historic environment to make a contribution to the revitalisation of coastal economies and communities through heritage-led regeneration schemes, the support and encouragement of traditional skills and materials e.g. boat building, low impact and sustainable fishing methods.

To aid the appreciation and understanding of these historic ports and harbours by both locals and seasonal visitors, improved interpretation in the form of information boards or museum displays is recommended.

10.1.8 Military

Ports and harbours whose historical development and primary use was for military purposes**,** ports and harbours are often protected from inappropriate development through designation and can benefit from re-use for educational and leisure purposes.

To help better understand these sites digital measured survey are recommended for all visible features and archaeological remains. This should comprise a geo-referenced measured topographical survey undertaken with GNSS/GPS (to sub-centimetre accuracy) and/or total station equipment with supporting colour photographs taken with a digital SLR camera.

Monitoring and good maintenance of extant historic environment features is encouraged.

The potential for the survival of buried features should be considered if any ground disturbance or dredging is planned and appropriate provision should be made for assessment and recording.

Future management of Military ports and harbours should combine planning system requirements with sustainable forward planning at ports, based on an inclusive approach to generating Conservation Management Plans accompanied by a relevant Vision and management plan policies.

To aid the appreciation and understanding of these historic ports and harbours by both locals and seasonal visitors, improved interpretation in the form of information boards or museum displays is recommended.

10.1.9 Multi-purpose

Ports and harbours of this class are subject to similar generic issues and opportunities as many of the other classes, particularly Commercial, Fishing, Industrial, Leisure and Local Trading. One issue affecting this particular class is dredging. This can involve dredging of the harbour approaches in order to accommodate calls from cruise ships, e.g. as proposed at Falmouth, or dredging of the approaches to and interiors of harbours to improve ferry terminals, e.g. Penzance and St Mary's Harbour. Licences for capital dredging works are issued by the Marine Management Organisation (MMO) with consultation from Historic England on the historic environment. Where requires, archaeological recording during dredging works is guided by Written Schemes of Investigation, usually with Archaeological Reporting Protocols for discoveries that specify responsibilities for all parties.

In accordance with guidance issued by Historic England it is good practice to regularly review Conservation Area Appraisals to ensure they remain accurate and up to date.

In order to help better understand Multi-purpose ports and harbours a proper digital survey of key historic components is recommended; this should include a measured topographical survey as well as surveys of historic buildings and structures.

Multi-purpose ports and harbours would benefit from adequately-resourced Conservation Management Plans, informed by appropriate condition surveys and structural assessments. Such Plans should include a vision for the port or harbour along with a set of management policies, taking into account what has gone before. These policies should be specific to the needs of each port or harbour and its related heritage and the people who value it and its current management issues. It is important that there should be inclusivity across all port interests in generating such Plans, their Vision and management policies.

Future management of Multi-purpose ports and harbours should combine planning system requirements with sustainable forward planning at ports, based on an inclusive approach to generating Conservation Management Plans accompanied by a relevant Vision and management plan policies.

To aid the appreciation and understanding of these historic ports and harbours by both locals and seasonal visitors, improved interpretation in the form of information boards or museum displays is recommended.

10.2 Generic issues and recommendations for HC Types and port and harbour components

10.2.1 Water Transport

The main issues facing the HC Type 'Water Transport' and its finer-grained expressions (Sub-types) are the potential loss of functionality through changing economic climates and the developmental pressures resulting from settlement expansion. Loss or disrepair of historic fabric is a secondary issue that may potentially affect heritage assets as a result of neglect or abandonment, natural weathering processes or climate change.

General recommendations which might help counteract or mediate these issues would be to ensure that policies are in place to assist current working practices within Cornwall and Scilly's ports and harbours yet which allow flexibility to redevelop port-related buildings, structures and spaces where shown to be necessary and beneficial. Any redevelopment or repair of heritage assets should make provision for detailed assessment and recording of historic buildings and features by suitably qualified heritage professionals prior to any works taking place.

The potential effects of physical weathering forces and climate change should be monitored and, where necessary, the construction or modification of sea and flood defences should be considered. Any form of development or redevelopment should take into account the significance of heritage assets and take appropriate measures to protect this, as noted above.

Generally, it is recommended that awareness of the significance of Cornwall and Scilly's ports and harbours is raised to attract community engagement and raise the profile of port and harbour areas amongst a wider group of potential stakeholders, such as commercial investors, local businesses, potential developers, heritage protection groups and the large body of visitors to the county.

10.2.2 Flood and Erosion Defence

The main issue facing the HC Type 'Flood and Erosion Defence' and its finer-grained expressions is the escalating need to effectively counteract the effects of natural weathering processes and climate change. This may result in a need for more frequent rebuilding and expansion of existing defensive buildings and structures, with less flexibility to protect historic features as the threat increases. The requirement for additional defensive structures might be a problem where the topography of the port and harbour setting is a constraining factor.

General recommendations for this HC Type would be to continue to maintain existing defensive structures so as to offset needs for more extensive and potentially damaging repair and maintenance works. New development should consider the impact on surrounding heritage assets and where the reduction or loss of these is unavoidable this should be accompanied by a detailed programme of assessment and recording by suitably qualified heritage professionals.

10.2.3 Fishing

The main issues facing the HC Type 'Fishing' and its finer-grained Sub-types are those of loss of functionality as a result of the reduced fishing industry and the potential loss of related buildings, structures or spaces through redevelopment and changes in use (e.g. Newlyn, Charlestown, Penberth Cove). The location of many fishing-related components, such as fish cellars, net lofts, etc., also makes them vulnerable to the effects of coastal weathering and erosion and the effects of climate change.

General recommendations for this HC Type would be to implement policies put in place to protect the fishing industry and sustain it into the future; to redevelop fishing-related buildings, structures and spaces in a sympathetic manner and with careful respect of any surviving historic fabric and features; to promote awareness of the fishing industry in Cornwall and Scilly so as to attract community engagement and protection; to ensure that any reduction or loss of historic fabric or features does not occur without detailed assessment and recording by suitably qualified heritage professionals.

10.2.4 Port-Related Industry

The main issue relating to the industrial Port-Related HC Types and finer-grained expressions is that many of the historic buildings, structures and spaces that once comprised these are already lost to redevelopment or survive as only partial structures, often isolated from their wider industrial and port-related context.

Recommendations for this category would be to ensure the protection and survival of any surviving heritage assets and to ensure that any future redevelopment is sympathetic to their historic character and function and accompanied by a programme of detailed assessment and recording by suitably qualified heritage professionals.

Surviving industrial buildings and structures generally enhance and add distinctiveness to the built port or settlement landscape (e.g. Hayle, Bude, and Charlestown) and the inclusion of information boards that tell the story of a port's industrial heyday raise awareness and promote interest.

Where present-day port-related industrial components such as shipyards, boatyards and workshops remain in use these significantly contribute to the present-day character of port and harbour areas and it is important that these local businesses be encouraged and supported.

10.2.5 Water Supply and Treatment

The main issue facing those buildings, structures and spaces associated with water supply and treatment is the loss of historic functionality and the need to accommodate viable change. The majority of components associated with this HC Type reflect the historic needs of ports and harbours, such as the sluicing out of silts from river channels (e.g. Hayle and Charlestown). The aesthetic appeal of surviving historic buildings and structures is likely to make them attractive to redevelopment. Large bodies of water and historic water channels and leats will have the potential to be adapted as wildlife habitats or recreational sites.

General recommendations for this HC Type would include the sensitive redevelopment or repair of any historic buildings or structures accompanied by a detailed programme of assessment and recording, as noted for other HC Types, above.

The appropriate landscaping of surviving components such as reservoirs, ponds and leats should also be considered to maximise their potential for modern re-use, as recreational sites or wildlife habitats, for example.

10.2.6 Military Defence

Some military defensive structures, such as the blockhouses at Polruan and Fowey, are designated as Scheduled Monuments or as Listed Buildings, for example Charlestown Battery, and consequently protected to a certain extent. Many other wartime defences only partially survive, the main issue being the loss of legibility as to their historic character and function. Being located in predominantly coastal locations, these components of the HC Type 'Military Defence' might not be at high risk of redevelopment but a real issue is likely to be loss or decay through neglect. There are also risks from vandalism and/or deliberate clearance as many concrete military structures are still under-appreciated assets.

General recommendations for this HC Type, where possible and as funds allow, would be to implement a programme of detailed assessment and recording by suitably qualified heritage professionals. Where particular structures are identified as being at risk these should be consolidated where possible in order to preserve them into the future.

The retention of former military structures adds to the appeal of coastal walks and historic port and harbour areas and preserving them would benefit these sites as places of historic interest and as visitor attractions.

10.2.7 Transport

The HC Type 'Transport' and its relative Sub-types have experienced major historic changes in technology, which have impacted on their present character. Whilst some historic components are preserved intact or modified to bring them in line with modern usage, there has inevitably been some redundancy and loss of certain historic components, such as railways and canals. The increase in 20th and 21st century road development, in particular, has impacted on the setting of historic routes and their associated heritage assets. Although in many cases historic routes are preserved within modern road schemes, there has also been considerable loss or obscuring of former routes, with a resulting loss of legibility. A joint publication on guiding assessment and management of historic landscape character relating to the development of new road schemes and their impact was produced by the Highways Agency and Historic England in 2007 (English Heritage 2007).

Recommendations for this HC Type would be to continue to create pedestrian pathways, cycle routes and leisure trails from redundant sections of transport links (e.g. Hayle, Bude, Newlyn, Wacker Quay) and to preserve understanding of these through information boards where appropriate. To preserve the historic fabric of redundant sections of canal where possible; again, the use of information boards would help promote interest and awareness of historic character and function. Road schemes that are likely to impact on heritage port assets should consider the impact of development on port settings and any resulting loss of legibility in historic character. They should also mitigate against the loss of port-related heritage assets likely to result from new development.

10.2.8 Recreation and Leisure

The main issues relating to the HC Type 'Recreation and Leisure' and its component parts are those of comparatively recent alteration or replacement of former port-related areas and the potential scale of loss of former port areas and their historic setting. The survival of some earlier 20th century recreational components, such as hotels, lidos, bathing pools etc., adds to the present-day character of some pleasure beaches, as at Penzance and Bude, for example, but the introduction of recreational and leisure-based features and activities represents a significant change in use and the shift of cultural fashions from the late 19th century onwards. The coastal location of many seaside leisure areas means that the threat of damage or loss to weathering and erosional processes is high, the biggest of these being the threat from climate change.

The upward trend in tourism and recreational development has had a highly positive effect on many former industrial ports and harbours in Cornwall and Scilly, offering economic and social opportunities to counteract the reduction and loss of local maritime trade and industry. The potential for redevelopment has breathed new life into many Cornish ports and harbours and the appeal of these areas as visitor attractions generates welcome revenue.

The main recommendations for this HC Type would be to monitor the scale and character of future recreational redevelopment to ensure that the contributions to historic character and distinctiveness of place provided by heritage assets is preserved and that their significance and appeal is sustained. The monitoring of coastal sites through frameworks such as shoreline management plans, for example, should continue in order to assess the threat to these areas from erosional processes and climate change.

10.2.9 Cultural Topography

The main issues facing the Cultural Topography of Cornwall and Scilly's ports and harbours, and the Sub-types within the HC Types 'Cultural Topography' (Coastal and Intertidal) and 'Cultural Topography' (Landward), are those of loss through port expansion and settlement development and the threat of erosion and damage through natural weathering processes and climate change.

The coastal topography of Cornwall and Scilly is important on so many levels; as the practical interface between land and sea, offering physical protection against the effects of weathering and climate; as the place where maritime and leisure activities unfold; as the spaces around and in between the ports and harbours and their associated settlements, providing both landscape balance and context. The beauty and visual appeal of these physical spaces are integral to Cornwall and Scilly's popularity as places in which to live and work and as tourist destinations. Furthermore, they are the semi-natural spaces that communities have exploited and adapted to various purposes; that have influenced the way in which communities perceive and respond to the environment in which they live, work and play; and that are now vulnerable to the exigencies that arise from modern developmental pressures and the impacts of climate change and severe weather events.

General recommendations for this HC Type are to ensure the continued monitoring of shorelines against the impacts of climate change, to preserve the Type against inappropriate development or loss of area, so as to maximise preservation of setting.

The monitoring and recording of Palaeolandscape components (e.g., early soil/peat exposures in marine, inter-tidal, cliff-face exposures) is also recommended, with intervention where deemed appropriate 'by suitably qualified heritage professionals' where assessment indicates likely imminent loss of significant historic and/or palaeoenvironmental evidence.

10.2.10 Settlement and Commerce

The settlements and commercial sectors associated with Cornwall and Scilly's ports and harbours are vital to the support and longevity of local maritime activities and port-related businesses. Where settlement has expanded into former areas of port-related activity, such as 'brownfield' industrial sites, for example, this has provided new residential and commercial opportunity, often adapted to new purposes, such as retail and leisure or recreational activities. The potential issues concerning the HC Types 'Settlement' and 'Commercial' are those of over-development or unsympathetic development, where features of historic interest and significance are diminished or lost and the character and setting of historic port-related areas severely impacted.

General recommendations for these HC Types would be to ensure sensitive redevelopment where this is likely to impact on a port's character and to protect associated heritage assets and the historic port-related fabric from inappropriate repair, restoration or development. Any development works that could potentially impact on port character and significant port-related heritage assets should be accompanied by a detailed programme of assessment and recording by suitably qualified heritage professionals.

10.2.11 Rough Ground (Coastal), Enclosed Land (Coastal) and Woodland

The main issues facing areas of historic land use along the coastal strip are those of reduction or loss through expanding development; degradation or loss through neglect or abandonment; reduction, degradation or loss through weathering processes or climate change events.

General recommendations for HC Types such as 'Rough Ground (Coastal)', Enclosed Land (Coastal), Woodland, would be to implement appropriate management regimes to ensure long term preservation, visual appeal and habitat viability; to consider long term strategies to meet potential changes in use of these areas; and to consider the effects of potential development into these areas to avoid undue reduction and loss.

11 Summary of individual Stage 2 Port studies

This section summarises enhancements in understanding of significance, issues, opportunities and consequent recommendations for each of the selected ports and harbours.

11.1 Bude

The port of Bude grew from the late 18th century in response to the newly built Bude Canal, constructed to export sand inland for use in agricultural fertiliser. The study of Bude has enhanced understanding of how the port developed a dual personality from the early 19th century, with the industrial port concentrated around the mouth of the canal and the developing town to the northeast becoming increasingly popular as a coastal resort and holiday destination. The wide sandy bay and rocky foreshore served several functions, the sand being extracted for export by barge as well as being used as a leisure beach; the rocky foreshore being used to create tidal quaysides and moorings along the tidal channel as well as for creating rock cut bathing pools for visiting bathers.

As the town grew, the dunes and salt marshes between the canal and the River Strat became infilled. Previously the site of a causeway between the medieval Ebbford Manor and its tidal mill, the marshes were also used for making salt and alongside the dune formations, known as the Shalder Hills, the spoil heaps from this industry helped form

the topography of this part of town, which remained open ground well into the 19th century. Shalders Hill preserves some of this open ground into the present-day.

The industrial character of Bude began to recede with the closure of the canal during the 1890s and the canal and its associated port areas were gradually redeveloped to provide new residences and recreational accommodation as part of the flourishing holiday resort. The canal and upstream areas are now nature reserves and green walks and many former port buildings have been converted to residential or commercial use. The canal quaysides are used for parking and pedestrian areas, with the sea lock and tidal channels still used for mooring small leisure craft.

The main issues and opportunities potentially affecting Bude include:

- Developmental pressures, which threaten the historic town and port setting through incursion from unsympathetic modern development; at present the historic areas are separate and identifiably different from the modern town expansion to the east.
- Economic pressures and benefits; the dependency on tourism creates a vulnerability, with potential pressures including a declining economy and uncertain weather patterns. Counteracting this are the improvements to the Summerleaze beach area and the Bude Canal and the attraction of European grant funding for continuing restoration works.
- Weathering processes and climate change events, which are likely to put pressure on the low-lying beach areas and reclaimed ground to the east of these and on the outer harbour, breakwater and sea lock gates; recent storm damage in 2014 has already impacted on the sea lock gates and the low-lying ground is at medium to high risk from flooding.

The principal recommendations for Bude include an appropriate Conservation Management Plan to assess the management needs of the port-related heritage. An up to date Conservation Area Appraisal should also be undertaken. There is strong potential for surviving buried archaeological remains within the historic areas and any development in these areas should be accompanied by a detailed programme of assessment and recording by suitably qualified professionals. The existing flood defences should be monitored and reviewed to ensure they remain fit for purpose.

11.2 Charlestown

The harbour at Charlestown is the oldest china-clay port in the world. The majority of the built fabric of Charlestown is late 18th and 19th century in date and the present state of survival of the harbour is little altered from its late 19th century form. On the west side of Charlestown a complex system of sluicing ponds and leats was constructed in the late 18th century to flush silts out of the harbour: these were later used for boating and walks and are still used by the harbour, although no longer maintained. The granite-built dock remains the centre of the historic port and settlement, which has successfully adapted to its post-industrial function as a visitor attraction and heritage centre.

The study of Charlestown has enhanced the understanding of port development here, which remained tightly focussed around the wet dock into the 19th century. A wealth of historic industrial buildings and structures, which includes fish cellars, ore floors and china clay dries, are testament to the scale and complexity of industrial workings associated with the port. On the east side of Charlestown there is evidence for the two farming and fishing hamlets of Higher and Lower Polmear, which are at least medieval in origin. Surviving fish cellars on both sides of the harbour demonstrate the importance of fishing to the local economy of Charlestown before its growth as an industrial port from the late 18th century onwards under its then owner, Charles Rashleigh.

Tourism and leisure are now the main economic staple of the port; the harbour is frequently used as a film location and the attractive historic buildings and harbour setting are popular with visitors and holiday makers.

The main issues and opportunities potentially affecting Charlestown include:

- Developmental pressures: Charlestown retained its historic integrity as a result of being within single ownership for so long a period. More recently, it has been protected owing to its enclosed nature and its status as part of a World Heritage Site. In 2012 the harbour was offered for sale (although this did not go through); the sale of the harbour might create adverse pressures on Charlestown. Many of the historic industrial buildings are now converted to residential or commercial use. A recent marina proposal may have implications for the site if approved.
- Climate change: climate change events are already making an impact on Cornwall and Scilly's ports and harbours and there are already concerns about the poor state and longer term maintenance of the harbour infrastructure at Charlestown. It is likely that the pressures arising from climate change are likely to increase in the future and Charlestown harbour will be vulnerable to the effects of these.

The principal recommendations for Charlestown include an appropriate Conservation Management Plan to assess the management needs of the port-related heritage. An up to date Conservation Area Appraisal should also be undertaken. Currently the condition of the harbour infrastructure is of concern and there is an urgent need for remedial repairs and on-going maintenance. The potential implications of a change in harbour ownership should be monitored. There is a strong archaeological potential within Charlestown and any development, repairs or restoration should be accompanied by a detailed programme of assessment and recording by suitably qualified professionals.

11.3 Duckpool

The study of Duckpool has enhanced the understanding of the intermittent and transient history of use of the cove and the pool at its back – the 'Duck Poole' recorded by Norden in 1728. Archaeological excavation revealed a Romano-British industrial site at the beach-head and a further period of industrial use between the 7th and 11th centuries AD. The evidence suggests that the cove may also have functioned as a small early medieval harbour – perhaps serving the prosperous manor of Kilkhampton (Ratcliffe 1995).

Duckpool does not appear to have continued in use as a permanent harbour; the earliest record of its name dates to the 16th century. During the 19th century it was used as a sanding place and stone quarry: Duckpool Cottage is thought to have been built to house a sand dealer during the 1840s. During World War II anti-invasion beach defences were constructed at Duckpool, probably associated with the important military training camp at RAF Cleave on the clifftops to the north.

Duckpool in the present-day is a popular location for visitors and holiday-makers, drawn by the beauty of the cove and its dramatic setting. The waters are dangerous for swimmers, however, and this may be one of the reasons why the history of Duckpool as a landing place and harbour has been so discontinuous.

The principal force for change at Duckpool is that of climate change, which is likely to bring an increased risk of beach erosion and coastal flooding. The western end of the National Trust car park is threatened in the medium term, and the loss of the archaeological remains in this area is inevitable.

The principal recommendations for Duckpool include the monitoring of the site on an annual or bi-annual basis to assess the effects of coastal erosion. Further excavation at the western end of the car park should be carried out to uncover and record any further archaeological remains before their loss to erosion. Geophysical survey would be

beneficial to establish the extent of the below ground archaeological remains. Further research into the site would help place its use as a maritime and industrial site in context. Any ground disturbance or development within the cove should be accompanied by a detailed programme of assessment and recording by suitably qualified professionals.

11.4 Fowey

Fowey Harbour is the sum of its many parts, the modern port and harbour comprising considerable historic built waterfronts alongside thriving small-scale maritime industries and larger-scale commercial docksides. The study of Fowey, Polruan and Bodinnick has demonstrated how closely interlinked are the ports and settlements both sides of the Fowey Estuary mouth and the long history of maritime community and purpose that connects them. The historic maritime industries of fishing and ship-building continue at a reduced scale and are now largely confined to Polruan and small pockets within Fowey. The large commercial china clay docks at Fowey stand to the north of the town. The main core of Fowey now forms the commercial centre of the estuary, whose main draws are those of tourism and leisure-related activities; particularly within the boating sector.

Beyond the main cores of Fowey, Polruan and Bodinnick are the genteel residences, green walks and ornamental plantings of the elite families who once governed around the estuary, and whose legacy provides the backdrop enjoyed by the tourists and visitors of today. Fowey Harbour is particularly well endowed by the beauty of its physical setting, the close-knit nature of its local community and its accessibility to sea and land communication routes. This has been a principal factor behind its historic growth and importance and continues to allow it to adapt to modern changes in maritime activity, commerce and industry.

The main issues and opportunities potentially affecting Fowey Harbour include:

- Economic sustainability; particularly relevant to the smaller maritime enterprises and industries, but also the china clay docks, on which Fowey Harbour is largely dependent for financial revenue and support.
- Tourism; and the continuing popularity of Fowey Harbour as a visitor attraction and maritime centre.
- Environmental pressures; particularly pertinent to sustaining the quality and viability of the estuary and its habitats, as well as the unspoilt nature of its physical setting.
- Climate change; particularly the potential effects of sea level rise, coastal flooding and erosion and changes in marine biodiversity.

The main recommendations for Fowey Harbour include ensuring an appropriate Conservation Management Plan to consider the needs of the combined port-related heritage of Fowey, Polruan and Bodinnick whilst also ensuring the preservation of each settlement's distinctive character. Policy-making related to this should be specific to the maritime-related needs of Fowey, Polruan and Bodinnick, based on an understanding of all three sites; their commonality and differences, their contribution to the development of the port, how they are valued by the different communities they engage with, and their current management issues. Up to date Conservation Area Appraisals for each settlement would enhance and complement the Conservation Management Plan. These appraisals would inform stakeholders in Fowey Harbour's management and well-being on the significance of the wider harbour and its individual historic elements and the need for sensitive development. Any development within historic areas should be accompanied by a detailed programme of assessment and recording as there is high potential for surviving buried archaeological features. This should include any intended ground disturbance along the estuary edges and foreshore areas.

11.5 Hayle

The legacy of Hayle's industrial heritage is the character of its built waterside and creek-side setting. Hayle, which incorporates neighbouring Copperhouse, is now largely a residential and commuter town, with the port areas somewhat secondary to its economic function. The study of Hayle has enhanced our understanding of how the development of the port areas substantially adapted the topography of the Hayle estuary and generated the development of two separate industrial settlements. The continuing growth of the port further extended around the estuary edges to Carnsew, to the west, and Riviere, Phillack, on the north side of Copperhouse Creek. Despite their now being joined in urban terms, the once separate settlements of Foundry, Copperhouse and Riviere, retain their independent character. There is still a considerable survival of industrial heritage assets, which includes the historic quays and wharves, parts of Harvey's Foundry, the water management systems comprising Carnsew and Copperhouse Pools, and additional industrial buildings and structures within and around the port-side areas. The significance of Hayle's industrial heritage has earned it World Heritage Site designation. The use of Scoria Block in the construction of local housing and industrial buildings has created a distinctive vernacular architecture and many historic structures preserve this local building material. The creek-side areas at Carnsew and Copperhouse Pools are now managed to create significant wildlife habitats and the blend of natural and man-made environments within the Hayle estuary and its open harbour is one of the port's most distinctive qualities.

The main issues and opportunities that potentially affect Hayle include:

- The redevelopment of industrial heritage assets, which might result in their reduction or loss and threaten the port's World Heritage Site designation.

- Economic pressures and benefits, including the slow loss of business from industrial closure. The continuity of small-scale fishing brings some local economic benefit and there is the potential for new growth through renewable energies. Heritage grants and funding schemes have contributed to new opportunities for development and these may continue on the back of the port's World Heritage Site designation.

- Climate change is likely to have an increasing impact on the Hayle estuary and recent flooding events have already demonstrated the potential damage this might cause. The Environment Agency has already responded with some large scale landscape schemes to counteract this.

The main recommendations for Hayle include an appropriate Conservation Management Plan to assess the management needs of the port-related heritage. An up to date Conservation Area Appraisal should also be undertaken. The new development taking place in Hayle is a real opportunity to breathe new life into the harbour but the challenge is to ensure that new development is appropriate and sympathetic to Hayle and respects its historic significance and the visual aesthetic of its physical setting. Any development within historic areas should be accompanied by a detailed programme of assessment and recording as there is high potential for surviving buried archaeological features. Policies put in place to counteract the potential impact from climate change events should continue to be monitored and adapted as necessary to remain fit for purpose.

11.6 Higher Town Quay and Old Town Quay, St Martin's

Old Quay is first shown on Thomas Martyn's map of 1737 and it is possible that it was built in the 1680s by Thomas Eakins, the resident steward of the Godolphin proprietors of the islands, to help encourage the post-Civil War resettlement of St Martin's. One gets the sense of Scilly as a new frontier in the late 17th century, full of pioneers. In 1684, for example, the kelp industry was introduced to Scilly from Falmouth, by the

Nance family, who settled on Teän for several generations (Over 1987). In these early days it was probably regarded as a new and profitable technology.

An interesting result of the Stage 2 study was the identification of the early 19th century quay at Higher Town Bay. The lifetime of this quay falls between the historic mapping used for characterisation — the 1792 survey by Graeme Spence and the *c*1880 OS mapping —and Woodley (1822) appears to be the only commentator to mention it. He also gives a very good description of off-island quays in Scilly in the early 19th century; 'There is rude quay on the East side of Cruther's Hill, and small pier on the West; but both these places are dangerous for landing, (as indeed, are most of those in the Off-Islands) on account of the number of rocks and large stones . . . over which it is necessary to scramble before reaching the land. The Islanders, accustomed to these rude landing-places, are too indolent to endeavour to improve them, but to persons unused to such ways, they must needs be extremely unpleasant; and this excites a feeling of dissatisfaction, that the facilities afforded by nature for the construction of safe and commodious quays, have not been improved; and that some of the numerous blocks which now impede a landing, have not been employed by human industry so as to favour it, and protect the boats of the Islanders' (Woodley 1822, 256).

The study emphasised the Evidential, Historical, Aesthetic and Communal values of Higher Town Quay and Old Quay. The island's quays and their history have a special place in the heart of St Martin's people, 'Islanders also get together to repair the Old quay when necessary. It is the Island's original quay, built by Islanders, and although little used nowadays we have not been prepared to 'let it wash away'. It is part of our history as is New Quay, also built and renovated over the years by Islanders' (Perkins 2014, 24).

Old Quay was again damaged by the severe storms of early 2014 and the islanders collected a fund to pay for the necessary repairs. Recommendations included a historic building record of the quay to ascertain how much of the historic fabric survives and to inform future management. Designation as such was not recommended but it should be included on any Local List.

A key issue for the future management for Higher Town Quay and Old Quay and the other off-islands quays is the proposed change of governance for St Mary's Harbour (see below section 11.13)

11.7 Kilcobben Cove

Kilcobben Cove is just one example of the numerous small coves located around the Cornish peninsula, accessible by footpath from the steep cliffs above and with a history of indeterminate and sporadic use. The study of Kilcobben Cove has enhanced the understanding of these small coves, which may have been variously used by local fisherman, boatsmen, beachcombers and bathers, with nothing much of material evidence left behind to tell of their use; at Kilcobben Cove, however, there are the remains of a platform on the cliffs that held one of two post-medieval windlasses used by fishermen to winch in the local seine boat.

In the late 1950s Kilcobben Cove was selected as the new site for a lifeboat station on the Lizard. Wave tests had shown that the cove was the safest place to build a new lifeboat house and slipway and was sufficiently protected to safely launch a boat in all directions. The first lifeboat station opened in 1961 and was replaced in 2010 by the present house and slipway.

The main issues and opportunities that potentially affect Kilcobben Cove include:

- Changes to the RNLI infrastructure, which might include the general upkeep of the site and the on-going funding of the RNLI through public donation.
- Climate change events and sea level rise, which are predicted to affect Kilcobben Cove over the medium and longer term; an anticipated retreat of up to 6.6m of the shoreline is predicted over the next 100 years. The Shoreline Management Plan (SMP) policy for this section of coastline is 'No active intervention'.

The principal recommendation for Kilcobben Cove is to include the site in the research and publication of a popular booklet detailing the history of the Lizard lifeboat stations and their crews.

11.8 Lerryn

The port of Lerryn is sited on the medieval (or earlier) crossing at the head of the River Lerryn's navigable creek. The study of Lerryn has enhanced the understanding of historic development within a small river port, which served local communities into the late 19th century when changes in industrial technology and communications brought about its gradual decline. The historic quays that defined the port by the late 19th century still survive, although some are now in private use or incorporated within domestic gardens. Many of the historic port buildings, such as lime kilns, granaries, warehouses and boathouses, are also now converted to residential use; as is the Old Mill, formerly the site of a medieval corn mill and subsequently an ore stamps and saw mill.

Through the late 19th and early 20th centuries Lerryn became renowned for its annual regatta. A local china clay entrepreneur, Frank Parkyn Jnr, had Tivoli Park built on the south bank of the river; facilities included a plunge pool, fountains, a pond, a bandstand, and designated changing rooms for the regatta races. The regatta continued to run until 1968, with the exception of the two World Wars. Present-day Lerryn is now largely a residential commuter village, the character of the former port at its core one of leisure and recreation. Small boats still moor up as far as the medieval bridge and visitors and residents alike enjoy the peace and tranquillity of Lerryn's beautiful riverside setting.

The main issues and opportunities that potentially affect Lerryn include:

- Developmental pressures, such as the pressure for new housing development and successional use of historic buildings for residential purposes. Lerryn's Conservation Area Plan and the more generic Cornwall AONB Conservation Area Management Plan (south east) have so far protected Lerryn from overly unsympathetic development.
- Climate change; Lerryn's low-lying riverside setting is likely to make it susceptible to events arising from climate change, such as flooding and gradual sea level rise. The Lowertown area has already been affected by flooding, with damage to gardens and properties. The sheltered location of Lerryn may mean it is less exposed to storm damage but the high narrow valley could exacerbate flooding events from ground run-off and river overflow.

The main recommendations for Lerryn include an appropriate Conservation Management Plan to assess the management needs of the port-related heritage. An up to date Conservation Area Appraisal should also be undertaken. Whilst there is currently sufficient statutory protection against undue development of historic components within Lerryn it is important that future development proposals should be fully informed on the significance of its historic and cultural heritage and the contributions that heritage makes to Lerryn's present character.

11.9 Newlyn

The present-day port of Newlyn was established in its present location at the head of the Tolcarne valley during the late 19th century. The study of Newlyn has enhanced the understanding of how this shift in port focus led to the development of the 19th century town and a new core of industry at Coombe. Prior to the late 19th century the harbour was served by the two quays at Newlyn town and Fradgan, Street-an-Nowan. These two older quays and their associated settlements were linked to Tolcarne by water but not by direct road; the 'Strand' was constructed during the early 20th century to finally unite the three historic settlements that make up present-day Newlyn. The fishing industry that established Newlyn as a major fishing port continues to thrive, with the

present-day port at its centre. The historic fishing settlements of Newlyn town and Street-an-Nowan, where the origins of the fishing industry once lay, are now a warren of attractive narrow streets and tightly packed houses. During the 19th century these became the province of an important artist's colony renowned for the '*plein air*' style of painting. Nowadays they are a mix of local residences and holiday homes.

The main issues and opportunities that potentially affect Newlyn include:

- A decline in the local population since 2001, with unemployment in the area a real issue. The fishing industry is an economic staple of Newlyn but dependency on this also brings vulnerability.
- A new harbour development being proposed for Newlyn, aimed at regenerating the harbour and waterfront and safeguarding Newlyn's fishing industry into the future. The development would also increase public access to the harbour and boost visitor potential in the area.
- A marina development proposed at Penlee Quarry. This might boost employment potential in the area and increase visitor numbers, but there is a risk of potential overdevelopment of the area and a negative impact on the harbour setting.
- Climate change events, which have already had some effect on the harbour and waterfront. Flooding and erosion processes in Newlyn are likely to increase but the current sea defences offer good protection for the moment. The scale of these has some visual impact on the harbour setting, however, and the foreshore between Newlyn and Penzance is prone to falling beach levels.

The principal recommendations for Newlyn include an up to date Conservation Management Plan to assess the management needs of the port-related heritage. An up to date Conservation Area Appraisal should also be undertaken. Currently there are key historic port-related buildings and structures in Newlyn that are not protected by any heritage designation and this should be addressed. Current development proposals for the harbour and marina should ensure an appropriate scale of development and limit potential negative effects on the port and harbour setting. Any development within historic areas should be accompanied by a detailed programme of assessment and recording as there is high potential for surviving buried archaeological features. Existing sea defences and flood prevention schemes should be kept monitored and improved as required to keep them fit for purpose.

11.10 Penberth Cove

Penberth Cove is a small traditional fishing cove, located within a steep-sided valley at the mouth of the Penberth River. By the 1840s seine boats were worked out of the cove as part of the then lucrative pilchard fishing industry. The main historic components of the fishing cove and its associated settlement were in place by the mid to late 19th century, including a coastguard station on the approach road above the cove to the northwest. The study of Penberth Cove has enhanced the understanding of the small coves of Cornwall and Scilly, whose economy has been so historically dependent on fishing. At Penberth Cove, as in many places around the Cornish coast, there was some diversification towards flower growing during the 19th and early 20th centuries as the fishing industry declined, and the remains of small garden enclosures can still be seen as low earthworks on the, now wooded, eastern hillside.

Although some line fishing continues out of Penberth Cove at the present-day, its character has been arrested at the time of its fishing heyday, preserved through being taken into National Trust ownership. Although this character is perhaps that of a slightly idealised 19th century Cornish fishing cove, nonetheless the state of historic preservation is high and the picturesque setting and quaint appeal of Penberth Cove ensures its popularity as a visitor attraction.

The main issues and opportunities that potentially affect Penberth cove include:

- Successional change of use of historic buildings; there has been some conversion of use of historic fishing components, such as fish cellars, for example, to become equipment and boat stores. Some of the houses are currently occupied by local fisherman and if the industry declines further there may be pressure to convert homes and other fishing-related buildings to holiday lets, which may result in properties standing empty for part of the year.
- Restricted vehicle access to the cove; this is a double-edged sword. Limited access restricts the number of visitors as the cove can only be accessed by foot along the coastal path or by parking in the limited car park inland. Additional parking might increase car-borne visitors to Penberth Cove, which might create issues due to visitor pressure on the site.
- Climate change; Penberth Cove has been identified by the National Trust as one of 13 high-risk sites around the South West coast where the effects of climate change will be particularly severe. Damage during the severe winter storms of 2013–14 included erosion of the lower cliff on the east side of the cove and damage to the paved forecourt of Cliff Cottage.

The main recommendations for Penberth Cove include an appropriate Conservation Management Plan to assess the management needs of the port-related heritage. The historic capstan has suffered damage and requires repair and regular maintenance. The Listings at Penberth Cove should be reviewed to include the granite slipway. The effects of climate change should be monitored and any policies put in place to mitigate these should respect the significance and sensitivity of the historic and cultural heritage of Penberth Cove.

11.11 Penzance

The present-day port of Penzance still centres on its original medieval quay, although port-related activities have since extended the port in both directions along the waterfront. The main growth of the port was during the 18th and 19th centuries, when pilchard fishing and local industry were at their height. The extension of South Pier and the building of North Pier created a large harbour pool, which catered for an increase in maritime industries, such as shipbuilding, and opened up rail links to the wider trading market. The study of Penzance's port development has demonstrated the extent of port expansion since the late 18th century and how this has substantially altered the historic foreshore areas and created new patterns of foreshore drift and deposition. It has also demonstrated that much of the historic port is now incorporated into the developing town of Penzance, with many historic buildings and structures adapted to residential or commercial use. Tourism and recreational activities have become the main staple of Penzance's economy, although fishing and shipbuilding continue to have a role, along with the running of a regular freight and passenger link with the Isles of Scilly.

The main issues and opportunities that potentially affect Penzance include:

- Developmental pressures, which have already led to the conversion of many historic port-related buildings and structures to residential and commercial use and risk further loss of port-related heritage assets. On the plus side this development reflects Penzance's growth as a commercial centre and popular tourist destination, and the opportunity for long-term economic sustainability.
- A proposed marina development, currently on hold, but which is likely to impact on the port setting if the scale and character are not carefully considered. Positive benefits to the port would be increased visitor footfall and revenue potential.
- The loss of an helicopter link with the Isles of Scilly, which creates an opportunity for increasing the sea link currently provided by the *Scillonian III*.

- A programme of dredging aimed at improving access to the harbour, but which is likely to impact the medieval harbour, local wreck sites and palaeoenvironmental deposits.
- Coastal erosion, which has resulted in falling foreshore levels in front of the sea defences. The current defences have helped reduce the potential effects from weather and climate change events but have also created new, and potentially damaging, patterns of shoreline erosion and deposition.
- Climate change events, which are likely to increase the risk of coastal flooding and erosion and may have longer term adverse effects on the local tourism-based economy.

The principal recommendations for Penzance include an appropriate Conservation Management Plan to assess the management needs of the port-related heritage. An up to date review of the current Conservation Area Appraisal should be undertaken and a detailed digital survey of historic port-related components would be of benefit. Existing or planned development of historic port-related buildings and structures will have a positive effect on long term sustainability but should be sympathetic to the historic fabric of the harbour and endeavour to retain and respect historic character. New development in the harbour area should be accompanied by an archaeological assessment as there is the strong potential for surviving buried archaeological features and deposits; this includes plans for dredging within the harbour. Existing sea defences should be kept monitored and improved as required to keep them fit for purpose.

11.12 Portreath

Portreath probably originated as a small fishing settlement at the mouth of the Red River, which by the early 18th century was being developed as an industrial port by the entrepreneurial Bassett family. The first quay, built on the west side of the cove in 1713, was relatively short-lived, but a new pier and harbour built on the east side in 1760 survives into the present-day. The study of Portreath has enhanced understanding of similar industrial ports in Cornwall, which expanded rapidly from relatively simple beginnings during the 18th and 19th centuries, due to the rise in extractive industries and mineral exports, but experienced a decline into the 20th century as industrial technologies changed.

Port expansion at Portreath during the 19th century included the construction of an incline railway, which linked the port to the main line at Hayle. Ironically, the improvement of main line transport links contributed to Portreath's eventual demise, along with the relative collapse of copper mining from the 1860s. The port of Portreath already supported secondary industries such as fishing and ship building but further diversification failed to keep the port active and by the middle of the 20th century port activity had declined to almost nothing.

The present-day character of Portreath is that of a residential village and holiday centre, helped by a cleaner beach as a result of the diverted Red River. New housing development during the early part of the 20th century was dominated by bungalows and timber chalets. The pressure for housing in recent years has resulted in much of the historic harbour area being developed, with significant loss of historic legibility. A much reduced harbour activity continues, being used mainly for leisure and small-scale fishing.

The main issues and opportunities that potentially affect Portreath include:

- Developmental pressure, which in recent years has already resulted in the development of the harbour to the detriment of its distinctive historic character. The post-industrial development on the valley sides can be viewed as part of the transitional history of the port from industrial port to residential and holiday village, with continuing infill development.

- Economic pressures and benefits; the variable summer weather of recent years, along with a declining local economy, has impacted on the dependency of Portreath on its seasonal income from summer visitors. Of recent benefit to the town has been the inclusion of the Portreath tramroad in the Cornish Mineral Tramways route and the Mineral Tramways Heritage Project.
- Climate change; Portreath's beach, pier and harbour basins are likely to be at severe risk from climate change events such as coastal erosion, storm damage and flooding. The storms of 2014 almost completely destoyed the Monkey House building on the pier and to the eastern breakwater (it was rebuilt by CC contractors in autumn 2014). Flash flooding may also impact on the Red River and the lower-lying ground of the river valley at Portreath.

The principal recommendations for Portreath include an appropriate Conservation Management Plan to assess the management needs of the port-related heritage. Although it is part of the World Heritage Site, Portreath does not have a Conservation Area and this should be addressed. The potential for surviving buried archaeological remains at Portreath is high and any development in the historic core should be accompanied by a detailed programme of assessment and recording by suitably qualified professionals. The effects of climate change should be monitored and the reinstatement of the original lock gates and installation of new secondary lock gates should be considered to protect the harbour in the short to medium term.

11.13 St Mary's Harbour

The quay at Hugh Town was built in *c*1601 after the focus of settlement on St Mary's moved from Ennor Castle and Old Town to the northern side of the island following the construction of Star Castle in the 1590s. The proximity of a medieval chapel to the location of the new quay suggests that this may already have been an established landing place (Kirkham forthcoming).

The existing quay is a Grade II Listed Building comprising the original quay, dating to the early 17th century, rebuilt between 1749 and 1751, together with a number of subsequent extensions. The first extension in 1835–8 incorporated Rat Island into the structure and provided deeper water berths. The construction was of vertically-coursed granite faces founded mainly on the granite bedrock or sand overlaying the bedrock. The quay had two further extensions, by 40m length in 1889, and by 3m in length and 3m in width in 1999/94 when the inner quay walls from the Harbourside building to the end of the quay were encased in pre-cast concrete blocks fixed to steel girders; the end of the quay was also clad with timber buffering. St Mary's Harbour is the largest harbour in Scilly and terminal for the Penzance-Scilly ferry link. Alterations between 2014 and 2016 included a 23m long extension to the north-east end of the quay, quay widening and a section of new wall, new pedestrian paving along the quay, a new chilled store and freight store and refurbishments to the Harbourside building.

St Mary's Harbour has considerable evidential value. The quay structure itself holds evidence of its original construction and successive phases of repair. A number of historic cannon are reputed to have come from the wreck of the 18th century warship HMS *Colossus*, and have been set into the 1835–8 quay as mooring posts. Some of these were moved in 1994 during operations to widen the quay but others remain *in situ* (Kirkham 2003). It is also well documented in engravings and beautifully executed military maps, plans and surveys. Many of the key features and major aspects of the layout of the place shown in these early views and plans are still traceable within the present landscape of and around St Mary's Harbour and so provide a connection between the past and the present.

The distinctive fabric of the quay itself, together with the boat movement and activity on it, are key elements in the many views from and to Hugh Town. Town Beach is an important visual 'gateway' to Hugh Town for arrivals by sea. This is the town's historic

foreshore with its related areas; the buildings and sites associated with maritime activity are set around a spectacular curving beach.

St Mary's Harbour is a key element of Hugh Town's overall character. The rhythm of town life is marked out by the brief bustle of pedestrian and vehicle traffic which accompanies arrival and departure of the *Scillonian* and inter-island launches.

Besides its historic importance, the Harbour is a key component of the island's tourist industry upon which 80% of the local economy depends; as such it represents a significant asset as both a visitor attraction and community amenity. The quay is a special place for many people, islanders and tourists alike. Visitors arrive and depart here for short day trips and longer holidays on the islands with all the stores of memories created on each visit.

Maintaining air and sea links between the mainland and St Mary's is a major issue, exacerbated by the ending of the helicopter service and overdue replacement of the *Scillonian III*, with knock-on effects for use of St Mary's Harbour (see above section 9.1.9).

The other key issue for St Mary's Harbour is that the Duchy of Cornwall, which has been the statutory harbour authority on St Mary's since the 1890s, is now proposing to change the governance arrangements at St Mary's Harbour, which they feel are anachronistic. In April 2015 they submitted a formal proposal to the MMO to change the status of the harbour to a Trust Port. Any new Statutory Harbour Authority in Scilly will be given the assets it needs to carry out its function, although the Duchy would retain the freehold on any property. There has not been a Historic Environment Planning Advice Officer/Field Advisor for the Isles of Scilly since 2011 and this situation needs to be resolved as matter of urgency. This is crucial because the expertise present in Local Authority HE-advisory staff is needed to engage in the discussions surrounding the change of governance of St Mary's Harbour to ensure the relevant bodies are fully appraised and where possible take account of the conservation values of St Mary's Harbour and the other quay structures on the islands.

11.14 Truro

The medieval port of Truro was established to profit from sea going trade and the export of tin. Located at the upper navigable limit of the Truro River, it soon rose to become the biggest inland port in Cornwall, before sea-going trade transferred to Penryn with its better deep water berths. The study of Truro has enhanced the understanding of Cornwall's river ports, which have had to adapt to changes in local trade and industry as well as cope with the issues of siltation from mine wastes. This was a major cause of post-medieval decline in Cornish river ports, as navigable channels became choked and the tidal reach reduced.

The port of Truro expanded during the 18th century under local patronage, which led to the development of grand town housing around Lemon Quay, Back Quay and Town Quay. Whilst the main port core still focussed around these historic quays, by the early 19th century the port was expanding along both sides of the river, forming the industrial waterfront at Newham and the timber ponds and wharves at Garras Wharf and Malpas Road. From the early 20th century a steam passenger service ran out of Worth's Quay.

The later 20th century saw the eventual decline of the port of Truro as river siltation became increasingly problematic and urban expansion began to encompass the historic quays at the city's centre. A combination of infill development and modern road schemes has resulted in the loss and disconnection of parts of the historic port. The present-day working port now runs largely from Lighterage Quay at Newham, with some small-scale harbour activity still run out of Town Quay. Despite the loss of historic legibility from some port areas, there is good survival of the historic quays and some historic buildings and structures. Downstream towards Malpas, Boscawen Park, created from reclaimed ground in the early 20th century, has swallowed up a section of the historic river frontage but some smaller independent historic quays, such as Sunny Corner, survive, and the riversides are generally used still for the mooring of small leisure craft.

The main issues and opportunities that potentially affect Truro include:

- Loss of profile; Truro is probably regarded more as an urban commercial centre than an inland port due to the almost wholesale shift in maritime trade and freight handling to the larger vessels using the downriver port at Falmouth.
- Competition from road transport, which may result in the redundancy of the seaborne cargo trade run out of Lighterage Quay. This might open the quay up to new development.
- Continuing siltation of the Truro River, which is likely to cause increasing disuse of the navigable channel as this sees little or no dredging. As boat access reduces the quays are likely to be increasingly brought within urban redevelopment.
- Developmental pressures; continuing expansion of Truro is likely to bring increased pressure for new development land and improved road schemes. The redevelopment of the Newham area is already in discussion. Redundant, or soon to be redundant, areas of the former port are likely to be at greatest risk. There is, however, potential for regeneration within the historic urban core to include the improvement of heritage assets and a renewed opportunity to restore the historic waterfront, whose character is at present diminished.
- Climate change; the low-lying riverside areas at Truro are likely to be at increasing risk of flooding and the effects of sea-level rise. The flood barrier at Newham is intended to prevent potential flood events damaging the core areas of Truro, but some overtopping of some riverside areas is already known to occur.

The principal recommendations for Truro include an appropriate Conservation Management Plan to assess the management needs of the port-related heritage. A revision of the 2009/10 Conservation Area Appraisal and Management Plan should be undertaken in 2016. Historic maritime buildings and structures, such as the quay walls, should be retained and maintained and new development within the core port areas should consider ways to restore the historic character of the port and its heritage components. New ways to improve public access to the waterfront should be considered; this may include the long term revision of transport planning issues and current road schemes. The high potential for surviving buried archaeological remains requires that any new development be accompanied by a detailed programme of assessment and recording by suitably qualified professionals.

11.15 Wacker Quay

Situated on the River Lynher, a tributary of the River Tamar, Wacker Quay is an example of a small military quay that originated as a small timber quay built to export limestone in the 18th century. The study of Wacker Quay has enhanced the understanding of how so many of the smaller industrial quays of Cornwall and Scilly were adapted to serve new purposes as local forces for change dictated. For Wacker Quay, a military decision in the late 19th century to build Scraesdon Fort saw the expansion of the quay to support a light military railway link with Tregantle Down Battery. The military life of Wacker Quay was relatively short-lived, however, with only a brief recurrence of activity during the D Day preparations of World War II.

The present-day character of Wacker Quay is predominantly one of leisure, with the former railway line now part of a riverside leisure trail and the quay adapted for visitor parking and picnicking. The intermittent and transient use of Wacker Quay has nonetheless left the physical evidence of its former functions and the remains of the original lime kilns, the military railway and associated buildings and structures, the modified railway jetty and parts of the original quay. All survive to a lesser or greater extent. A hard standing that might have been created for the embarkation of troops is also visible on the southern edge of the quay.

The main issues and opportunities that potentially affect Wacker Quay include:

- Increased recreational use, which might put pressure on the local landscape, quay infrastructure and parking facilities.
- Protection under the TVAONB Management Plan 2014-19 and the Tamar Estuaries Management Plan 2013-18, which aim to minimise negative effects and promote positive forces for change. Potential project proposals associated with this should be careful to consider effects on the historic character and riverside setting of Wacker Quay.
- Climate change, which is likely to affect Wacker Quay through the increased risk of sea level change and flooding events. This may result in damage to historic structures as well as reducing the visitor appeal of the site, which may have further negative effects relating to reduced use or abandonment.

The principal recommendations for Wacker Quay include continuing the positive management of the site by the Tamar Community Trust through the TVAONB Management Plan, ensuring that existing and future management fully considers the significance of the historic cultural heritage of the site and how that contributes to the present character of Wacker Quay. The monitoring and good maintenance of extant historic environment features is encouraged, as outlined in the TVAONB Management Plan. A digital measured survey of the site should be undertaken of all visible features and archaeological remains within the defined project area. The potential for the survival of buried features should be considered if any ground disturbance or dredging is planned and appropriate provision should be made for their assessment and recording.

12 Improved understanding arising from Stage 2 port summaries

This section summarises how the individual studies have improved understanding of the classes of ports and harbours and Types of components that they are representatives of, and how their study in the project's Stage 2 has contributed to better understanding of issues and opportunities, and responses to these.

12.1 Beach

Only one example of this class, Duckpool on the north Cornwall coast, was selected for study in Stage 2. The car park is owned by the National Trust, foreshore below MHW is owned by the Duchy of Cornwall and beyond Lowest Astronomical Tide, is Crown seabed. Representative of the numerous small coves along the coastlines of Cornwall and Scilly, Duckpool comprises physical components typical of its class, such as the cliffs, foreshore (e.g. rocks, sand, and shingle) and adjoining coastal rough ground, with the South West Coast Path passing through. Components found at other examples of this class might include landing points and anchorages. Some beaches in Cornwall and Scilly have also been shown to contain palaeoenvironmental deposits, peat beds and submerged forests, which are sometimes exposed by storm events, although none are currently known for Duckpool.

The small valley leading down to the beach at Duckpool contains a narrow watercourse, modified along part of its length, where the valley floor widens towards the beachhead. This area has been the main focus of activity for the cove; the remains of a Romano-British industrial processing site represent the earliest known activity here, focussed on the top of the beach and partly underlying a modern carpark. By the 19th century a small quarry had been established here, alongside a sanders cottage and enclosures. During World War II many of the Cornish beaches were equipped with some form of

beach defences, which at Duckpool included a pillbox and a 'dragon's teeth' anti-tank device.

Like many Cornish beaches, there has been a diminishing of the small-scale industrial and maritime activities prevalent up to the early 20th century, in favour of more leisure-related use, and Duckpool typically reflects this transition. Modern components include public toilets and a small car park approached by a narrow metalled road that replaces the former mud track leading down to the beach.

Duckpool is protected from inappropriate development by virtue of its ownership and also by its AONB and Heritage Coast designations. As with Cornish beaches in general the principal force for change at Duckpool is that of climate change, which is likely to bring an increased risk of beach erosion and coastal flooding.

The National Trust has its own coastal and marine policy (The National Trust 2006 and see below section 12.1.3).

There are opportunities to enhance, promote and support the South West Coast Path, adjacent land, coastal public open spaces and beaches, for example by improving public transport connections and preparing for sea level rise and increased risk of coastal erosion (Cornwall Council 2012, 21 Aim F5). There are also opportunities for collaborative working with the Duchy, Crown Estate and the National trust designated areas such as the AONB. (ibid, 22 Aim G2).

12.2 Commercial

Truro and Fowey were the Commercial ports selected for study in Stage 2. Both are large and complex river ports with identifiable medieval port areas within an urban core. Both ports owe their historic growth to their role in sea going trade, which for Truro included the export of minerals and timber. Additional maritime industries in Fowey included fishing and ship building.

The study has identified a range of components which might be typical of Commercial ports: principally quays, jetties, slipways, warehouses, steps, mooring bollards. Associated commercial components might include railways, roads, bridges, customs houses. Particularly relevant to the Cornish river ports are components such as active navigation channels, disused navigation channels and dredging areas. Reflecting historic and modern needs for coastal and flood defence are components such as coastal batteries, artillery forts, pillboxes, gun emplacements and sea walls, breakwaters and groynes.

Truro has retained its commercial operations into the present day but has perhaps seen a greater extent of change and modification by the 20th century then many other ports within its class. The changes have principally been due to the diminishing of riverside industrial activity by the early 20th century, and the problems with river siltation, which have forced the move of the commercial quays further downstream from the original port. As a result the former medieval port and industrial quaysides have been subsumed within the developing modern town (Fig 27); 'Small coasters or river barges linking to larger ones out in the Carrick Roads used to serve the many quays along the city's river banks' (Chapman 2014, 391).

Fig 27 The problems with river siltation at Truro, which have pushed the commercial port downriver and away from the historic port and town (Photograph: CAU).

This is a pattern typical of many modern commercial ports, which are generally associated with an adjacent urban centre and which have had to respond to giant shifts in technological demand and urban development in order to remain economically buoyant. Often these pressures have coincided with the need to accommodate modern commercial facilities whilst simultaneously catering for physical changes to river estuaries and coastline. The result is that many modern Commercial ports are located at some distance from their historic origins, with potential loss of legibility of the historic quaysides as other, non-maritime, development takes over; Fowey, for example, also demonstrates a shift of location in the commercial focus of the port, which now lies at the Carn Point China Clay Docks.

Furthermore, whilst Truro has developed as Cornwall's primary urban centre, Fowey has seen growth as a tourist resort and leisure centre, much of whose activity remains focussed within the Fowey Estuary. From the study of these two ports it is clear that modern commercial maritime operations, certainly within Cornwall, are not sufficient to sustain many modern ports and there is a need for diversification and multi-purpose function.

There are therefore a number of issues and opportunities that potentially affect Commercial ports and which are well illustrated by Truro and Fowey. These include loss of profile, competition from road transport, river siltation, developmental pressures and climate change. Whilst Fowey is operated by its own harbour Authority, there are pressures for ports and harbours under Cornwall Council management, such as Truro, to become and remain financially sustainable.

12.3 Civic provision

This is a small class, currently with only two representatives in Cornwall: the RNLI lifeboat station at Kilcobben Cove on the Lizard and the former lifeboat station at Penlee Point near Mousehole. Had Kilcobben Cove not been selected as the site of the

present day lifeboat station, it would have remained in the Beach class, alongside Duckpool, just one of the many small Cornish coves that have been variously used by local fisherman, boatsmen, beachcombers and bathers, with nothing much of material evidence left behind to tell of their use. The study of Kilcobben Cove has enhanced the understanding of these small coves and how their selection for a specific purpose can substantially transform their character and function.

Fig 28 The modern build of the lifeboat station at Kilcobben Cove with its curved roofline presents an iconic modern building in its own right (Photograph: CAU).

As shown by Kilcobben Cove, typical components of the Civic Provision class of port might include lifeboat station, slipway, cliff railway, steps, commemorative memorial, trackway or road and car park.

The main issues and opportunities that potentially affect this class include; changes to the RNLI infrastructure, which might include the general upkeep of the site and the on-going funding of the RNLI through public donation and climate change events and sea level rise, which are predicted to affect these sites over the medium and longer term.

Individually the evidential value of these Civic Provision sites may be low but they have strong historical value when considered together with Cornwall and Scilly's lifeboat history and maritime safety infrastructure. Aesthetically, the modern build of the lifeboat station at Kilcobben Cove with its curved roofline presents an iconic modern building in its own right. There is a sense of 'discovery' of this building at the base of the cliffs when approaching the cove along the coastal footpath (Fig 28). The Communal value of this class is very high. The tradition of voluntary service in heroic lifeboat rescues is part of the soul of Cornish coastal communities. We only have to think of the intense emotions aroused by memories of the Penlee lifeboat disaster of 19 December 1981.

12.4 Fishing

Fishing has been one of Cornwall and Scilly's primary industries and, although substantially reduced in scale, it remains a strong influence on the character of many of

Cornwall's ports and harbours, both big and small. The two ports selected from this class for study, Newlyn and Penberth Cove, reflect the contrasting scale of Cornish fishing ports, from the small-scale local industry of Penberth Cove, to the large-scale, nationally significant commercial fishing port at Newlyn.

Fig 29 The slipway and capstan at Penberth Cove, with a converted fish cellar above (Photograph: CAU).

The appealing setting of Penberth Cove, now under National Trust ownership, attracts many visitors and this has led to the preservation of the historic cove and the fishing components within it. Alongside the fishing village as a whole, these include a capstan, fish cellars, slipway and harbour (Fig 29). As for Duckpool, above, Penberth Cove is protected from inappropriate development by virtue of its ownership by the National Trust and also by its AONB and Heritage Coast designations. The National Trust has its own coastal and marine policy (The National Trust 2006 and see below section 12.1.3).

The development of present day Newlyn still reflects its origins as three small and discrete fishing villages and the modern fishing port at Newlyn was established at the north easternmost of these, Tolcarne, along the coast from the earliest medieval harbour at Newlyn Town. Reflecting the larger scale of fishing industry associated with the port are components such as fish market, fish processing factory, ice works and seamen's mission, in addition to which are the typical port-related components such as quays, jetties, warehouses, coastguard station, lifeboat station and harbour.

The study of both Penberth Cove and Newlyn has demonstrated the significance of Cornwall and Scilly's fishing heritage to the economic and social development of the region, and how its influence continues to determine the development of the modern day working ports and the protection of heritage assets within those ports and settlements where it is in danger of becoming lost. It therefore also demonstrates the vulnerabilities of the fishing industry to the pressures of modern development. Many of the components belonging to this class of port are protected by heritage and environmental designations.

The main issues potentially affecting this class of port include: developmental pressures, such as the pressure for new housing development and successional use of historic buildings for residential purposes; the vulnerability arising from dependency on

the fishing industry for economic survival; susceptibility to events arising from climate change, such as flooding and gradual sea level rise.

Opportunities include working to enhance the sustainable use of marine resources including: sustainable fisheries, shellfisheries and aquaculture and pursuing opportunities that integrate environmental, social and economic objectives (Cornwall Council 2012, 18 Aim C12) and work to enhance and support sustainable local seafood production, harvesting and consumption (ibid, 19 Aim D8).

Given the importance of the fishing industry to the Cornish economy, the local strategy aim has been to ensure the long term economic viability and sustainability of the region's fishing industry and fishing communities, while placing particular emphasis on the importance of fishing activities to communities based around fishing harbours.

There is a strong degree of interdependence between fishing harbours and the prosperity of the whole community; the harbours provide the infrastructure to support fishing activity; working harbours are attractions for tourists; tourists provide revenue for the local community. Apart from direct employment in fishing and fish processing and marketing, there are a large number of ancillary industries (boat building and repair, marine engineering, marine electronics companies, chandleries) that rely, to a great extent, on the fishing industry in the County.

12.5 Industrial

Fig 30 The Copperhouse Dock, Hayle, survives, but the adjacent quays and industrial premises are now redeveloped to residential and commercial use (Photograph: CAU).

Three Industrial ports and harbours were selected for study in Stage 2; Portreath, Charlestown and Hayle. Typical of so many ports in this Class, the study of these ports has demonstrated how they have had to adapt to the diminution of industry through the later 19th and early 20th centuries and how modern development has impacted on the legibility of the historic character of the place as well that of port heritage assets and former industrial premises associated with these (Fig 30).

Ports and harbours of this class might include the more ubiquitous port components such as quays, piers, slipways, docks, wet docks, dry docks, shipyards, boat houses, ropewalks, warehouses, mooring bollards, breakwaters and customs houses, alongside

more specifically tailored components such as sluices, sluicing ponds, tidal locks and canals. Industrial components associated with the port might include saw mills, foundries, timber ponds and yards, lime kilns, coal depots, china clay dries, ore floors and mineral railways. Remnants of former industries, such as fishing, might be reflected in components such as fish cellars, net lofts, ice works and fish factories. Larger river ports (e.g. Hayle, Fowey) are likely to contain long-standing ferry links and ferry terminals, often at least medieval in origin.

Along with the majority of the larger and more strategic coastal ports, more recent components might include lookouts, coastguard stations, pillboxes, coastal batteries, gun emplacements and anti-invasion defences; reflective of the history of maritime safety and the need to protect port areas and vulnerable stretches of coastline during times of conflict. As with all classes of Cornish ports and harbours included in the study, there is likely to be some form of recent coastal and flood defence provision, reflected by components such as sea walls, breakwaters and groynes.

All three ports selected for the Industrial class are within the Cornwall & West Devon Mining Landscape World Heritage Site, which was designated by the UNESCO World Heritage Committee in 2006. World Heritage Sites are inscribed for their 'Outstanding Universal Value' under the 1972 Convention for the Protection of the World Cultural and Natural Heritage.

World Heritage Sites have policy guidance on protection and management under circular 07/2009 and were added to land described as Article 1(5) land in the Town and Country Planning (General Permitted Development) Order 1995 on 1st Oct 2008. The effect of such as designation is to restrict permitted development rights for some types of minor development on the land. The area within its boundary is subject to a number of strategic policies detailed in its Management Plan guided by the site's mission and aims. The Cornwall & West Devon Mining World Heritage Site has its own planning officer.

The study of Hayle, Charlestown and Portreath has shown that the main issues affecting this class are: the redevelopment of industrial heritage assets which might result in the reduction or loss of their areas' historic industrial character and threaten their World Heritage Site designation; economic pressures and benefits, including the slow loss of business from industrial closure. The continuity of small-scale fishing brings some local economic benefit and there is the potential for new growth through renewable energies. Heritage grants and funding schemes have contributed to new opportunities for development and these may continue on the back of World Heritage Site designation; climate change is likely to have an increasing impact on the ports and harbours of this Class and flooding events have already demonstrated the potential damage this might cause. The Environment Agency has already responded with some large scale landscape schemes to counteract this.

12.6 Leisure

Over the last 150 years most Cornish ports and harbours have changed or diversified to some extent to accommodate the tourism industry and recreational or leisure-related components are common to a lesser or greater degree within most of the ports studied. It was therefore difficult to select a port or harbour that was purposefully built for leisure; Bude, a 19th century resort, is possibly the only example of this class in Cornwall, and even then it was established adjacent to a former industrial quayside built to export beach sand inland.

Typical components of the Leisure class include; leisure beach, bathing pools, lidos, beach huts, parks and gardens, swimming pools, hotels, boat houses, sailing clubs, marinas, leisure trails, visitor centres, museums, amusements and cycle paths. The historic industrial port of Bude also contains components such as a canal, sea lock, quays, warehouses, mooring bollards, mineral railway, lime kilns and saw mills.

The main issues potentially affecting this class include: developmental pressures which threaten historic town and port settings through incursion from unsympathetic modern development; economic pressures and benefits; the dependency on tourism creates a

vulnerability, with potential pressures including a declining economy and uncertain weather patterns, weathering processes and climate change events, which are likely to put pressure on low-lying beach areas and reclaimed ground.

Opportunities include promoting and supporting the role of sustainable tourism in local economic development, including sea angling, adventure tourism, and seaside holidays Cornwall Council 2012, 18, Aim C9) and developing enterprise linked to Cornwall's nnatural assets including tourism and research (*ibid*, Aim C10).

12.7 Local trading

This is possibly the largest class, encompassing a range of ports and harbours including medieval and post-medieval trading ports, many of which are no longer in use: often because of estuarine silting [e.g. Tregony, Ruan Lanihorne, Lostwithiel, Lerryn, Tresillian]. Minor sites include quays serving farming hamlets [e.g. Polingey Quay (Percuil), Treath and Scott's Quay (Helford)] or providing lifelines to islands [e.g. the main Scillonian off- island quays such as Higher Town Quay on St Martin's].

To illustrate this range Lerryn and Higher Town Quay (along with Old Quay), St Martin's were selected for the Stage 2 study.

Typical components of a larger port or harbour of this class might include; quays, landing points, anchorages, jetties, slipways, docks, warehouses, lime kilns, boat houses, smithies, granaries. Small quays might consist of a simple quay or landing platform accessed by a single track or road. Alongside these typical components, the Scillonian off island include components such as storage areas, waiting rooms and public conveniences, reflecting their dependence on sea going links for their daily trade and communication needs.

The study of Lerryn and Higher Town Quay, St Martin's has enhanced our understanding of change within these smaller local ports and harbours and how, where they have survived, they have relied on the on-going dependence of the local communities they serve for their longevity. The Scillonian off-islands are wholly dependent on their sea going network, whilst Lerryn has developed in recent years as a small commuter village, with the old quays primarily used for leisure-related activities and the mooring of small leisure craft.

The main issues that potentially affect ports and harbours of this class include; developmental pressures, such as the pressure for new housing development and successional use of historic buildings for residential purposes; susceptibility to events arising from climate change, such as flooding and gradual sea level rise.

The impending shortage of fossil fuels may lead to a revival of coastal distribution goods, instead of by land, and with it the revival of small ports and smaller vessels able to penetrate Cornwall's waterways (Doe *et al* 2014, 422).

12.8 Military

This class comprises ports and harbours whose historical development and primary use was for military purposes e.g. Fort Picklecombe, Wacker Quay (Antony), Crab Quay (Pendennis), and Mylor Creek. Wacker Quay was selected as the representative port for study, which enhanced the understanding of this example of a small riverside quay, adapted for a singular purpose, and therefore highly vulnerable to change once that purpose was removed. The principal military components of Wacker Quay include quays, jetties, active and disused navigation channels, a military base and railway, and a World War II embarkation point. There were also lime kilns from its earlier function as a small industrial quay. The military components of this class are often protected by Scheduling or Listing and the port areas themselves by various environmental designations.

Wacker Quay remains under M.O.D. ownership but its main use in the present day is recreational, with a leisure trail formed from the old railway line and the quayside a picnic area and recreational space. The quay is still used for mooring visiting leisure craft.

The main issues and opportunities that potentially affect this class include: increased recreational use, which might put pressure on the local landscape and quay infrastructure; and climate change, which is likely to impact through the increased risk of sea level change and flooding events. This may result in damage to historic structures as well as reducing the visitor appeal of the sites, which may have further negative effects relating to reduced use or abandonment.

12.9 Multi-purpose

Most Cornish ports and harbours host combination of activities but representatives of this class tend to comprise the larger ports and harbours which combine commercial, industrial, fishing, leisure, ferry services and sometimes ship repair. Falmouth belongs to this class as does Looe. Penzance, Fowey and St Mary's Harbour were the three ports from this class selected for study and this has enhanced our understanding of how so many of the region's larger ports and harbours have survived through diversification and their capacity to adapt to changing pressures of industry and commerce, as well as the physical changes increasingly wrought by climate change.

Penzance and St Mary's Harbour include a range of multi-purpose components, which such harbours, anchorages, landing points, slipways, quays, piers, jetties, hards, wet docks, dry docks, shipyards, fish cellars, seamen's missions, customs houses, lifeboat stations, coastguard stations, ferry terminals, hotels, lidos, swimming pools, parks and gardens and promenades. For the majority of these ports there are also ancillary components such as the sea walls and breakwaters of coastal flood defences and the coastal batteries, pillboxes and gun emplacements of wartime defence.

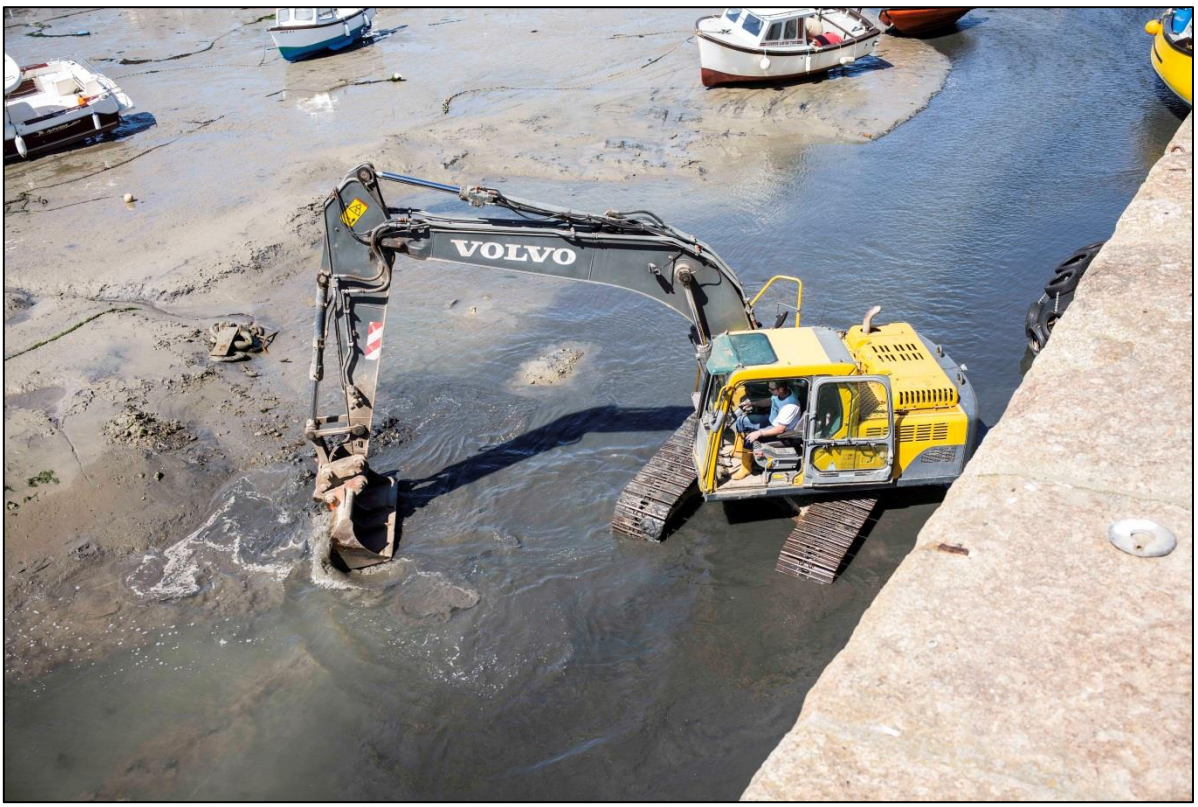


Fig 31 Dredging work in Penzance Harbour, spring 2015 (Photograph: Kevin Camidge).

Ports and harbours of this class are subject to the similar generic issues and opportunities as many of the other classes, with developmental pressures and climate change being principal amongst these (see above in sections 9.1.9 and 10.1.9).

Penzance Harbour, for example, witnessed a significant decline in maritime trade since the later 20th century. It retains some commercial and freight services, largely due to

its link to the Isles of Scilly, but much of its trade is now associated with maritime recreation and tourism. The harbour area has also been significantly affected by town development and planning decisions carried out through the latter years of the 20th century. This is particularly evident along Wharf Road and in the harbour core where the majority of the historic maritime buildings and warehouses are now converted to commercial or residential use. To some extent this reflects the growth of Penzance town as a popular tourist resort, the maritime edges of the town being progressively drawn into the commercial urban core and the harbour quays becoming the site of modern road and rail transport links and recreational provision.

The change in emphasis from a commercial harbour dealing in maritime-focussed trade to a leisure port appears set to continue for Penzance. The Penzance Harbour Users Association have established through community consultation that Penzance harbour is considered a major asset and a natural focus for new investment. This makes the port vulnerable to change but also opens up opportunities for future growth. Recent plans for a substantial marina development at Penzance are currently shelved due to funding being withdrawn. The marina development would potentially increase the number of visiting boats and the level of visitor footfall in the town, raising the amount of potential revenue brought into the town through the tourist trade. Negative impacts would include a substantial development potentially out of keeping with the scale and character of maritime Penzance, the allocation of available funding away from other more sympathetic development projects and the potential legacy of an unsuitable 'white elephant' if the anticipated use of such a development is not fulfilled.

One issue affecting this particular class is dredging. This can involve dredging of the harbour approaches in order to accommodate calls from cruise ships, as proposed at Falmouth, or dredging of the approaches interiors of harbours to improve ferry terminals, as at Penzance (Fig 31) and St Mary's Harbour. Licences for capital dredging works are issued by the MMO with consultation from Historic England on the historic environment. Where dredging works are required, archaeological recording is usual, guided by Written Schemes of Investigation. These are usually accompanied by Archaeological Reporting Protocols for discoveries that specify responsibilities for all parties.

The Cornwall Maritime Strategy seeks to develop a diverse range of opportunities for ports by 2030. Opportunities include the sustainability advantages of using more water-based transport, including for freight and opportunities to better connect coastal communities. China clay is a 'captive' commodity for Cornwall and there opportunities of growth for Fowey, although there little development land available and competition from the world china clay market to consider. There remains a significant ship repair industry in Cornwall, which generates prosperity and skilled employment in the county. Falmouth has a dry dock facility operated by A&P Falmouth, with an international reputation, and Penzance has a single dry dock which can accommodate dredgers and coastal/short sea vessels. Smaller ship repair and boat building enterprises also continue to operate at Fowey and Polruan.

13 Further uses / protection outcomes

This section sets out how the material presented in this report can be most effectively utilised by a range of actors, including planners, managers, historic environment advisers, those involved in improving presentation and access, etc. This serves as a published summary of the protection outcomes addressed as Stage 4.

13.1 Key players: roles and responsibilities

13.1.1 Historic England

A current statement of HE's mission statutory purposes, values and aims are set out in the opening pages of the HE Corporate Plan 2016–9.

https://content.historicengland.org.uk/images-books/publications/he-corp-plan-2016-19/three-year-corp-plan-2016-19.pdf/

The majority of port and harbour areas lie within Historic England's remit for the terrestrial historic environment, rather than the marine, and are therefore subject to the same land-based planning system as most other parts of England's land area. Historic England has produced a comprehensive range of guidance notes from heritage perspective on the role of port-related heritage assets and historic character in its relationship with the NPPF (Historic England 2015a, 2015b; Historic England NPPF webpage).

https://www.historicengland.org.uk/advice/hpg/decisionmaking/NPPF/

With historic character forming a dimension of character everywhere, it is part of the evidence base wherever the NPPF relates to the character of a place. In terms of the management of heritage assets Historic England has published '*Ports and the Historic Environment*' (Fisher Associates 2014) and, '*The Assessment and Management of Marine Archaeology on Port and Harbour Development*' (Wessex Archaeology 2016).

Other published and relevant HE guidance includes:

Making Changes to Heritage Assets:

https://historicengland.org.uk/images-books/publications/making-changes-heritage-assets-advice-note-2/

Conservation Area Designation, Appraisal and Management:

https://historicengland.org.uk/images-books/publications/conservation-area-designation-appraisal-management-advice-note-1/

The use of historic buildings in regeneration:

https://www.historicengland.org.uk/images-books/publications/heritage-works/

The Protection and Management of World Heritage Sites in England:
https://content.historicengland.org.uk/images-books/publications/protection-management-of-world-heritage-sites-in-england/ehwhsplanningcircularguidance.pdf/

Marine Licensing and England's Historic Environment:
https://www.historicengland.org.uk/images-books/publications/marine-licensing-and-englands-historic-environment/

13.1.2 The Marine Management Organisation

Since 2010, marine activities in the seas around England and Wales have been licensed, regulated and planned by the Marine Management Organisation (MMO) so that they are carried out in a sustainable way. Their responsibilities include planning and licensing for marine construction, deposits and dredging that may have an environmental, economic or social impact and producing marine plans to include all marine activities, including those they do not directly regulate. Preparation of the South West Inshore Plan commenced in 2016 and will be completed by 2021. However, most of the areas defined for this project's port studies, and those of its wider port Classes, lie above the MHW boundary of the South West Inshore Marine Plan area, within the scope of the land-based planning system administered by CC and the Council of the

Isles of Scilly, with larger port works potentially under the consideration of the National Infrastructure Commission.

13.1.3 The Cornwall & West Devon Mining World Heritage Site

The Cornwall & West Devon Mining World Heritage Site was designated by the UNESCO World Heritage Committee in 2006 includes a number of industrial ports and harbours. Of these Charlestown, Hayle and Portreath were selected for Stage 2 study. World Heritage Sites (WHS) are inscribed for their 'Outstanding Universal Value' under the 1972 Convention for the Protection of the World Cultural and Natural Heritage.

It was considered that the Cornwall and West Devon Mining Landscape, created principally during the period 1700-1914, made a key contribution to the evolution of an industrialised economy and society in the United Kingdom and throughout the world and has survived in a coherent series of highly distinctive cultural landscapes.

World Heritage Sites have policy guidance on protection and management under circular 07/2009 and were added to land described as Article 1(5) land in the Town and Country Planning (General Permitted Development) Order 1995 on 1st Oct 2008. The effect of such as designation is to restrict permitted development rights for some types of minor development on the land. The area within its boundary is subject to a number of strategic policies detailed in its Management Plan guided by the site's mission and aims.

13.1.4 Cornwall and Scilly Inshore Fisheries and Conservation Authorities

The Cornwall and the Isles of Scilly IFCAs (Inshore Fisheries and Conservation Authority) were established on 1 April 2011 as a result of the Marine and Coastal Access Act 2009. The Cornwall IFCA has taken over the duties, responsibilities and assets of Cornwall Sea Fisheries Committee, together with a broader remit for the sustainable management of the inshore marine environment. The Cornwall IFCA District extends from Marsland Mouth on the north coast of Cornwall, around to the western end of the Plymouth Breakwater in Plymouth Sound on the south coast, for all the waters out to the six nautical mile limit and includes the rivers and estuaries up to tidal limits.

The Isles of Scilly IFCA is the smallest of ten such authorities in England and consists of eight members. The administrative and financial functions are undertaken by the Council of the Isles of Scilly. The Isles of Scilly IFCA has the principal management responsibility for sea fisheries. The aim is to manage fisheries in a sustainable way balancing the social, environmental and economic benefits of exploiting the sea out to the six nautical mile limit around the outermost islands. One of its main functions is enforcement of local byelaws, relevant European Union regulations and national offences.

13.1.5 Port and harbour authorities

Port and harbour authorities have a responsibility (under section 48 of the Harbours Act 1964 as amended by the Transport and Works Act 1992) to consider the environment in their management of a port or harbour. This includes having regard to any building, site or object of archaeological, architectural or historic interest.

However, the port authority (as distinguished from a commercial port operator) also has a statutory function to ensure safe navigation under their own enabling legislation (e.g. Port of London Act 1968) to raise and remove vessels sunk and likely to become an obstruction, impediment or danger to the safe and convenient navigation. In such instances, Historic England encourages early consultation and involvement, and is able to offer advice on assessment and the practicalities of archaeological recording. An example of this is the late 19th century wreck of the barque *Antoinette* which was exposed in the Camel estuary near Padstow harbour in January 2010 and posed a hazard to shipping (Fig 32). An undesignated site assessment and emergency recording of the wreck was carried out before it was blown up by the Royal Navy (Johns *et al* 2011). Historic England urges port and harbour authorities to develop a strategic

approach to marine archaeology within the port limits, to identify and plan for future needs.

The reasonable costs of recording remains which are identified as being of interest and which will be damaged as a result of any development should always be considered from the outset as part of the cost/benefit analysis of the proposal. They should also be incorporated within the total costs of the project and reflected alongside other environmental mitigation costs.

Fig 32 Recording the wreck of the barque Antoinette in Padstow Harbour, 2010 (Photograph: Padstow Harbour Master).

13.1.6 Developers

As with all major developments, Historic England would expect the developer to carry out the necessary evaluation, and develop appropriate mitigation strategies. Historic England welcomes early involvement in such work and experience has shown that this can save time and money for all parties. Historic England is able to offer specialist advice, but the adjacent local authority archaeological service would also have a key role to play in relation to the planning process. The developer should employ appropriately qualified archaeological consultants to advise on action. Developers are also encouraged to obtain from the Crown Estate a copy of the revised Code of Practice for Seabed Developers produced by the Joint Nautical Archaeological Policy Committee, although the Duchy of Cornwall also has widespread owning interests in the foreshore around Cornwall and Scilly.

13.1.7 Owners and occupiers

In the marine zone, issues of ownership rights and responsibilities in relation to the seabed, 'built' heritage (wrecks or drowned structures) and artefacts, are very different to the terrestrial historic environment. Major differences of legal reporting and involvement of the original owner occur according to whether the historic asset is 'wreck' (i.e. from a sunken vessel or aircraft) or whether it is non-'wreck'. The implications of the recovery of wreck must be reported to, and reconciled by, the

Receiver of Wreck. Non-wreck would be regarded as being owned by the landowner —in most cases in relation to the seabed, the Crown Estate. In all cases, if the disturbance of such assets is planned, proper attention must be paid to determining their importance and factoring in the appropriate mitigation.

The Duchy of Cornwall

Most of the coastal foreshore below MHW level in Cornwall and Scilly is owned by the Duchy of Cornwall and beyond Lowest Astronomical Tide, is Crown seabed. The Duchy own and manage both of the Scillonian ports/harbours selected for Stage 2 study, St Mary's Harbour and Higher Town Quay, St Martin's. The Duchy has been the statutory harbour authority on St Mary's since the 1890s but is now proposing to change the governance arrangements at St Mary's Harbour, which they feel are anachronistic. Their intention to transfer operations to a new body was announced in August 2014. An initial round of consultation was held with major stakeholders in autumn 2014, a second round of public consultation was completed in 2015 (Duchy of Cornwall 2015b). In April 2015 the Duchy submitted a formal proposal to the MMO to change the status of the harbour to a Trust Port. Any new Statutory Harbour Authority in Scilly will be given the assets it needs to carry out its function, although the Duchy would retain the freehold on any property. The proposed change of governance will also have implications for the future management of the off-island quays on St Martin's, St Agnes and Bryher.

The National Trust

The National Trust owns some 586kms of coast and estuary in Devon and Cornwall (36% of the total), although most of their ownership ends at MHW level. The Trust have their own coastal and marine policy (The National Trust 2006) and have carried out a Coastal Risk Assessment (CRA) process for Devon and Cornwall to help enable them to understand and prepare for coastal change linked to both the rise in mean sea level (a subtle and incremental process) and increased storminess (sudden and chaotic events). It also takes account of consequential increase in erosion/accretion at the shoreline (The National Trust 2014).

Their Coast Risk Assessment (CRA1) project began in 2004 with the commissioning of Halcrow Consulting to look at the risks Trust properties face in the light of climate change driven sea level rise (SLR). CRA1 work was based on information derived from the Defra 'FutureCoast' project, a project forecasting coastal change, assessing both erosion and accretion as appropriate, and the Environment Agency (EA) flood risk data. CRA1 identified areas at risk from coastal erosion and flooding – the coastal risk zone (CRZ) based on a 1m SLR over the next 100yrs. CRA1 also informed the production of the advocacy document, Shifting Shores (The National Trust 2005). The CRA1 and Shifting Shores work streams were sponsored by and benefited from the input of the National Coast and Marine Issues Group (NCMIG). CRA1 broadly informed at which coastal properties the Trust are likely to see coastal change and described the nature of these changes – flooding, erosion and accretion. Coastal change in Devon and Cornwall will continue to lead to significant effects on the coastal economy and communities, cultural heritage and wildlife. These effects will vary over 20, 50 and 100 year timescales and we should plan to adapt accordingly. The details of these effects, in relation to the 53 Trust Properties were assessed as part of CRA2. The properties in Cornwall are: Boscastle, Carnewas, Chapel Porth, Cotehele (quay and quay buildings), Coverack, Crantock, Durgan, Erth Barton, Fowey, Godrevy, Greenway, Hemmick (Dodman), Looe to Plymouth road, Morwenstow, Mullion Harbour, Poldhu, Penarvon Cove and South Helford, Penberth Cove, Penrose (Porthleven, Loe Bar, Gunwalloe, Halzephron), Polperro, Poltesco, Porthcurnick, Port Gaverne, Kynance Cove, South Helford, St Michael's Mount, St Just (Penwith), Trelissick, Veryan (Carne), Zennor (The National Trust 2014).

13.1.8 Local authorities

In many cases the Local Planning Authority (LPA) will be the first point of contact, particularly for the on-shore and intertidal aspects of development — Cornwall Council

and the Council of the Isles of Scilly, administer the land-based planning system that covers most of this project's defined port areas. Local authority conservation officers deal mainly with historic buildings, historic environment planning advice officers deal with archaeological concerns. These officers implement the NPPF through the planning system and port character is important in the forward planning of these whole places. Other archaeological officers curate local Historic Environment Records (HERs). HERs are a record of all known archaeological remains, both designated and undesignated, within the areas of each local authority. In the majority of cases, conservation officers and archaeological officers are situated in planning departments at the district, unitary or county level and they are involved in the formulation of strategic planning and development control advice. The Cornwall and Scilly HER is maintained by Cornwall Council.

13.1.9 Local groups

Local groups can include neighbourhood forums, community archaeology groups, local history societies and a variety of other organisations. These groups can carry out a wide range of tasks, from the preparation of Neighbourhood Development Plans (neighbourhood forums) to building and condition surveys, compilation of local lists and Conservation Area Appraisals.

13.2 Further uses of the material presented in this report

The material presented in this report can be a key tool for assisting with the management of Cornwall's port-related heritage. It can be consulted in relation to planning applications by Historic England and by the LPA historic environment planning advice officers (buildings and archaeology) and also by many public and private bodies, for example The National Trust, in connection with development or management proposals and to inform and support a number of initiatives and projects or neighbourhood forums in the preparation of Neighbourhood Development Plans.

13.2.1 Heritage at Risk

The Stage 2 studies can highlight sites and buildings which are on Historic England's *Heritage at Risk Register 2015* (Historic England 2015c) the Methodist chapel and schoolrooms, Charlestown Road, Charlestown (NHLE 1144292) for example.

13.2.2 Heritage Partnership Agreements

Listed Building Heritage Partnership Agreements were introduced by section 60 of the Enterprise and Regulatory Reform Act 2013. They allow the owner of a listed building or buildings and their LPA to agree which necessary works to the building are routine and regular and, if done correctly, will not harm its special interest. The agreement grants listed building consent (LBC) for these works, for an extended period of time, and they can go ahead whenever convenient.

https://historicengland.org.uk/images-books/publications/setting-up-listed-building-hpa-advice-note-5/

In 2014 Fisher Associates carried out a study of ports and the historic environment for Historic England (Fisher Associates 2014). The study concluded that initial engagement with ports confirmed that a 'one-size-fits-all' approach to the port sector is not appropriate, and that engaging with the port industry is paramount for successful outcomes. It recommended a strategic approach comprising four key measures:

- Measure 1: Build better relationships.
- Measure 2: Stand-alone guidance on how to deal with historic environment and heritage assets
- Measure 3: Update master planning/other guidance
- Measure 4: Heritage Partnership Agreements (non-statutory/statutory).

Each of the strategy measures has its own merits in particular circumstances, with Measure 1 building the foundation for the other measures to be successfully implemented. The stand-alone guidance is possibly the most valuable, as this could be made available to all ports. This relies on Measure 1 being properly implemented with

on-going engagement. Updating the master planning guidance would assist ports that use it to develop their longer term strategies, while updating MTP2 would make the guidance available to all trust ports.

Heritage Partnership Agreements (HPAs), whether non-statutory or statutory, will be applicable to only some ports, which should become apparent as the relationship between Historic England and the port industry grows. Only a few (non-statutory) HPAs have been implemented to date, thus there is limited best practice to draw from, and there are mixed views on their success. As highlighted in this report, Cornwall Council is currently working on a HPA with the National Trust, using Mullion Harbour as a pilot project with the idea of using it as model for further HPAs for Cornwall Council owned ports and harbours. Heritage Partnership Agreements were recommended for the following Stage 2 ports and harbours: Penberth Cove, Penzance, Portreath and Truro.

13.2.3 Conservation Management Plans

The Stage 2 study identifies a number of ports and harbours which would benefit from an adequately-resourced Conservation Management Plan (CMP) informed by appropriate condition surveys and structural assessments. The CMPs should include a vision for the port-related heritage of the ports and harbours along with a set of management policies, taking into account what has gone before. These policies should be specific to the needs of individual ports and harbours and the people who value them. The policies should be based on an understanding these ports and harbours, how they are valued and their current management issues. CMPs were recommended for the port-related heritage of: Bude, Charlestown, Fowey, Hayle, Lerryn, Newlyn, Penberth Cove, Penzance, Portreath, St Mary's Harbour and Truro.

https://www.hlf.org.uk/conservation-plan-guidance

13.2.4 Conservation Area Appraisals

Conservation Areas were first introduced in 1967 through the Civic Amenities Act and to date more than 9000 exist in the UK. The current Act governing the designation of these 'areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance' is the Planning (Listed Buildings and Conservation Areas) Act 1990. Under this Act local planning authorities are required to designate conservation areas, to keep them under review and if appropriate to designate further areas. Designation remains the principal means by which local authorities can apply conservation policies to a particular area. Current guidance is set out in Conservation Area Designation, Appraisal and Management: Historic England Advice Note 1 2016.

https://historicengland.org.uk/images-books/publications/conservation-area-designation-appraisal-management-advice-note-1/

Most of the larger Cornish ports and harbours have Conservation Areas. Portreath is a notable exception, a fact highlighted by the Stage 2 study. In accordance with guidance issued by Historic England it is good practice to regularly review Conservation Area Appraisals to ensure they remain accurate and up to date. The Stage 2 studies recommend that Appraisals should be carried out for Hayle, Lerryn and Polruan and Bodinnick and that reviews should be carried out for Bude, Charlestown, Newlyn, Penzance and Truro.

13.2.5 Neighbourhood Development Plans

Neighbourhood planning was introduced through the Localism Act 2011. It is intended that communities can shape development in their areas through the production of Neighbourhood Development Plans, Neighbourhood Development Orders and Community Right to Build Orders. The local parish or town council will lead on neighbourhood planning in their areas. Where one does not exist then a community group known as a neighbourhood forum needs to be established to lead. Neighbourhood Development Plans become part of the Local Plan and the policies contained within them are then used in the determination of planning applications. Neighbourhood Development Orders and Community Right to Build Orders allow

communities to grant planning permission either in full or in outline for the types of development they want to see in their areas (Department for Communities and Local Government 2012a). The material presented in this report can help guide parish councils, town councils or neighbourhood forums in the production of Neighbourhood Development Plans and assist them in forming a view on planning applications in relation to Cornwall's ports and harbours.

https://historicengland.org.uk/advice/planning/plan-making/improve-your-neighbourhood/

http://content.historicengland.org.uk/content/docs/planning/planning-environment-neighbourhood-advice.pdf

13.2.6Local Lists

Local heritage listing is means for a community and a local authority to jointly identify heritage assets that are valued as distinctive elements of the local historic environment. Cornwall Council supports the development of local lists and is currently looking at a standard way of assessing criteria for inclusion on lists by neighbourhood groups based on Local Heritage Listing: Historic England Advice Note 7. The material presented in this report can help guide neighbourhood groups in the production of Local Lists in relation to Cornwall's ports and harbours.

https://historicengland.org.uk/images-books/publications/local-heritage-listing-advice-note-7/

13.2.7 Building surveys

In 2016 Cornwall Council carried out a pilot project with the neighbourhood group in the St Austell Conservation Area using a Smartphone app to undertake Local List Surveys, Buildings at Risk Surveys and Condition Surveys. This has the potential to be extended to other neighbourhood groups, community archaeology groups or local history society and the material presented in this report can be used to inform such surveys

13.2.8 Presentation and access

The material presented in the Stage 2 reports could be used to enhance or add to existing information for port-related heritage in the various ports and harbours and to contribute to town trails which celebrate that heritage e.g., Bude and Lerryn.

13.2.9 Cornwall Devolution Deal

The Devolution Deal was officially signed by the Prime Minister, the Secretary of State for Communities and Local Government, the Leader of Cornwall Council and others on 16 July 2015. Under the terms of the Deal, Cornwall Council will have greater powers over areas of public spending which are currently controlled by London. The deal covers a range of key areas including Heritage and Culture:

44. The Government recognises Cornwall's rich and unique heritage, including its historic revived language and passionate communities, and that this cultural distinctiveness is an important factor in Cornwall's local economy. It underpins tourism and is a key driver that attracts other business to the location.

45. In order to support the cultural heritage of the local area Cornwall Council, Cornwall and Isles of Scilly Local Enterprise Partnership and Government agree to:

- Invite local partners to create a Cornish Heritage Environment Forum so that Cornwall can develop their vision for heritage at a more local level. Cornwall would be able also to use this group to explore links to the local tourism agenda. This forum would build on the work of the existing South West Heritage Environment Forum.
- Cornwall Council and Historic England will jointly produce a study of the cultural distinctiveness of Cornwall's historic environment. This will inform the work of the new Cornish Historic Environment Forum and the development of the Framework Convention for National Minorities (FCNM).

- Engage Government, through the Department for Culture, Media and Sport, on how to best support tourism in Cornwall.

In 2016, as a result of the Devolution Deal, Historic Environment Strategy, CC, prepared a project design to undertake a review of what of what makes Cornish historic assets 'locally distinctive' and develop a way of assessing this heritage value, against the others already dealt with by methodologies such as *Conservation Principles* in order to inform decision making on non-designated heritage assets under the NPPF. As such it overlaps with other Historic England funded initiatives around local listing and nationally important but undesignated assets. The project will be steered by the Heritage Kernow Executive Board and funded by Cornwall Council and Historic England. It is anticipated that this report and overall results of the Cornish Ports and Harbours project will be of direct relevance to this new initiative.

13.3 How the HLC and Stage 2 products can be used

The concept of 'character' is an important consideration in many key planning documents and strategies. These frequently refer to character in relation to local distinctiveness and a sense of place, an understanding of which Historic Landscape Characterisation (HLC) can contribute to.

At the highest level in the planning system sits the National Planning Policy Framework (NPPF) which sets out the Government's planning policies for England. It makes clear that planning decisions should be based on up-to-date evidence about the historic environment and 'where appropriate, landscape character assessments should also be prepared, integrated with assessment of historic landscape character' (Department for Communities and Local Government 2012, 41).

With historic character forming a dimension of character everywhere, an understanding of it forms part of the evidence base wherever the NPPF relates to the character of a place.

Historic Landscape Characterisation (HLC) is a method of assessing the historic cultural landscape and its frequently recurring key characteristics or attributes to help inform the management of the historic environment.

This need for understanding historic cultural activity in terms of spatial planning has been extended to include the seascape and Historic England has developed the Historic Seascape Characterisation (HSC) method to include the sea, and/or areas of land whose character is perceived to be distinctly maritime (Tapper and Hooley 2012).

Ports and harbours are located at the interface of land-based and maritime cultural perceptions and HLC and HSC can both contribute significant evidence to understanding this complex and rich relationship.

A further key emphasis of the NPPF is the need for Local Authorities to produce a Local Plan to include 'a positive strategy for the conservation and enjoyment of the historic environment' (*ibid*, 3, 30). The Cornwall Local Plan contains Cornwall Council's strategic policies. It is available publically and includes reference to HLC in relation to understanding the historic environment in support of the HER (Cornwall Council 2016).

Cornwall Council has also used character to inform and support key management plans including its Maritime Strategy. The Cornwall and Tamar Valley Areas of Outstanding Natural Beauty (AONB) see character as a key evidence base for developing their five-year management plans (Cornwall AONB 2016; Cornwall Council 2012; Tamar Valley AONB 2014).

The Cornwall AONB's plan for 2016-2021, for example, aims to, 'Take a character led approach to management of the historic landscapes, settlements and seascapes of the AONB, using Historic Landscape Characterisation, Historic Seascape Assessment as key tools, integrated within key planning documents' (Policy CC 9; Cornwall AONB 2011).

The Cornwall-wide Historic Landscape Characterisation was undertaken rapidly on 1:25,000 paper maps but reduced down to 1:10,000, and later digitised (Herring

1997). This was produced to give a broad overview of the historic landscape at a Cornwall-wide or regional level.

In terms of complexity of scale, HSC has to deal with significant differences in the context and scale of cultural activity i.e. ranging from the vast areas of open sea hundreds of miles offshore, to a major port with a long history and all its land-based and seaward maritime-related activity. The HSC covering the South West, including Cornwall and the Isles of Scilly and offshore to the edge of UK territorial waters, was completed in 2014 (Dudley and Johns 2014). The HSC method takes a holistic view of the historic seascape defining areas that share similar and recurrent historic character as Historic Seascape Character 'Types'. This allows an understanding of the broad historic trends and processes to inform the sustainable management of change in the planning system.

The HLC produced as part of this project is very fine grained: created digitally at a scale of 1:2500 using the backdrop of the Ordnance Survey's Master Map and with a greater range of HLC classifications and tiers (see Appendix 3). By undertaking the HLC at this small scale it can provide a finer tool at a local level – at the level of the community or neighbourhood and port. It is envisaged that the Stage 2 products can be used as part of a holistic approach to understanding the full complexity of an individual port and its surrounding land- and sea- scapes.

In its scale, sub-type level and structure (with two previous phases) the Cornish Ports and Harbours HLC can contribute to understanding and explaining an area's historical development in considerable detail, providing a baseline understanding upon which values and management items can be discussed.

The Stage 2 products for the 15 Cornish ports and harbours should be used to help inform communities of the historic environment on their doorstep, and to help them input into Parish Plans and Landscape and Village Design Statements.

How this might be achieved will differ from parish to parish and by the resources available, but a valuable first step could be to distribute the reports to the Community Network leads in Cornwall Council. These leads are assisting local communities across Cornwall to complete Neighbourhood Plans.

It could also be a proactive step for Historic England to approach the commercial port operators and harbour authorities covered by the project. The HLC and corresponding Stage 2 reports could help provide baseline information to feed into the management plans, where required, for each port and be a way to start a dialogue with each organisation. It is likely that several of the ports might welcome this (see Fisher Associates 2014, 15–17).

13.4 Protection outcomes

To ensure that assessment leads directly to actual protection, projects dealing with thematic subjects, such as this one, should have as a final stage the setting out of reasonable and realistic routes towards increased protection.

A gazetteer long list of sites and features that are candidates was produced for consideration by Historic England's Designation Department. These were either candidates for new designation or features already designated that are proposed for review of extent or grade of protection. In preparing the gazetteer the main focus was on the ports and harbours selected for study in Stage 2. The Gazetteer has been submitted to HE's Designation Department for further consideration in discussion with Cornwall Council. In addition, following production of the HEAP and consultation with the LPA, a series of key management recommendations has been drawn up as separate document.

14 References

14.1 Primary sources

Ordnance Survey, *c*1880. *25 Inch Map* First Edition (licensed digital copy at CAU)

Ordnance Survey, *c*1907. *25 Inch Map* Second Edition (licensed digital copy at CAU)

Ordnance Survey, MasterMap Topography

Tithe Map and Apportionments, *c*1840. (licensed digital copy at CRO)

14.2 Publications

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15 Project archive

The HE project number is **146246**

The project's documentary, photographic and drawn archive is housed at the offices of Cornwall Archaeological Unit, Cornwall Council, Fal Building, County Hall, Treyew Road, Truro, TR1 3AY. The contents of this archive are as listed below:

1. A project file containing site records and notes, project correspondence and administration and copies of documentary/cartographic source material (file no 146246).
2. Project administration and reports are stored in the directory: \\Sites\ Maritime\Cornish Ports and Harbours 146246
3. Digital photographs are stored in the directory: \\Historic Environment Images\Maritime\Cornish Ports and Harbours 146246
4. The project GIS is stored in the directory: \\Historic Environment Data\HE Projects\Maritime\Cornish Ports and Harbours 146246
5. Historic England/ADS OASIS online reference: cornwall2-247298

Appendix 1: Enhanced table of all Cornish and Scillonian ports and harbours

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
1	Anderton Quay	Leisure	Early Modern	Present	Tidal estuary	Cottage	2	Quay, shipyard, boat house		243180	52100	LB (house, boat house)
2	Antony Passage	Leisure	Medieval	Present	Tidal estuary	Hamlet	3	Quays, ferry, ferry house, piers, slips, quarries, stores, lime kiln, jetties		241360	57260	Conservation Area, LB (ferry house), AONB
3	Backways Cove	Commercial	Early Modern	Early Modern	Cliff port (slate)	None survives	2	Roads and winch hards, yard, ruined buildings	ACVP	204507	85940	AONB
4	Bar	Leisure	Early Modern	Present	Tidal	Village	2	Pontoon, jetty, quay		184720	43036	
5	Barn Pool	Leisure	Early Modern	Modern	Beach head	None survives	2	Quay		245517	52963	HPG, AONB
6	Batten's Wharf	Commercial	Early Modern	Modern	Rocky cove	Town	2	Wharf, capstans, lime kilns, smithy, bathing pool		147598	29871	Conservation Area
7	Batty's Point	Commercial	Modern	Modern	Cliff port (gabbro)	None survives	3	Quay, quarries		180819	21890	
8	Bessy's Cove	Fishing	Early Modern	Modern	Rocky cove	Hamlet	3	Slip, rock-cut roadway, sea walls, stores, winch, fish cellars		155681	27940	LB (fish cellars), AONB
9	Bett Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay		238506	59809	AONB
10	Bishop's Quay	Commercial	Early Modern	Present	Tidal estuary	Cottages	2	Quay, lime kiln	Helford audit	172070	25490	LB (quay), AONB
11	Bodinnick	Ferry	Medieval	Present	Tidal estuary	Village	3	Quay, sea walls, ferry, stores, boatyard	Fowey audit, NT survey	212950	52160	Conservation Area, AONB
12	Bodmin Pill	Leisure	Early Modern	Present	Tidal estuary	Cottage	2	Quays, road, railway, recording studio	Fowey audit	212380	53790	AONB
13	Bohetherick	Commercial	Early Modern	Modern	Tidal estuary	None survives	3	Quay, slip, lime kiln	WHS Nomination survey, NT survey	242269	67902	WHS, SM (lime kiln, quay etc), LB (lime kiln), AONB
14	Bonallack	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, quarry, boat house	Helford audit	171740	26060	AONB
15	Bondcellars Quay	Commercial	Early Modern	Modern	Tidal estuary	Village	2	Quay, lime kiln, pier	Fal audit	186330	45990	
16	Booley	Uncertain	Early Modern	Modern	Beach head	Farm	1	Track		208811	52498	
17	Bosahan Cove	Fishing	Early Modern	Modern	Beach head	None survives	2	Road, boat house	Helford audit	177335	26253	AONB
18	Boscastle	Fishing	Medieval	Present	Tidal cove	Swollen medieval town	4	Pier, slip, wharf, warehouses, rocket station, lime kiln, fish cellars, shipyard, WW2 defence	Urban survey	209680	91355	Conservation Area; LBs (pier, sea walls, fish cellar, lime kiln), AONB
19	Bosloggas	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay	Fal audit	185510	34190	AONB
20	Bossiney Haven	Commercial	Medieval	Early Modern	Beach head	Reduced medieval town	2	Lime kiln	NT survey	206637	89440	AONB
21	Boyer's Cellars	Fishing	Early Modern	Present	Tidal estuary	Cottage, now a town	3	Fish cellars, lime kiln, boatyard	Fal audit	180009	33944	
22	Bramblecombe	Uncertain	Early Modern	Early Modern	Tidal	Cottage	2	Quay, track,		214424	54209	
23	Bream Cove	Uncertain	Early Modern	Early Modern	Rocky cove	None survives	2	Slip, boat house	Helford audit	179053	28528	AONB
24	Brockle's Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay	Fowey audit	212830	55970	AONB
25	Bryher, Great Popplestones	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	87515	15089	Conservation Area, AONB
26	Bryher, Great Porth	Fishing	Early Modern	Present	Beach head	Hamlet	2	Track, quay, boat houses	Scilly audit	87570	14687	SM (quay, prehistoric field system etc), Conservation Area, AONB

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
27	Bryher, Green Bay	Uncertain	Unknown	Unknown	Beach head	Hamlet	1	Track	Scilly audit	87937	14727	SM (prehistoric fields, Civil War battery), Conservation Area, AONB
28	Bryher, Kitchen Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	88040	15520	Conservation Area, AONB
29	Bryher, Rushy Bay	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	87524	14138	Conservation Area, AONB
30	Bryher, Stinking Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	87328	14795	Conservation Area, AONB
31	Bryher, The Bar	Ferry	Early Modern	Present	Beach head	Hamlet	2	Jetty, track	Scilly audit	88250	15241	SM (prehistoric boundary, cairns etc), Conservation Area, AONB
32	Bryher, The Town	Fishing	Early Modern	Present	Beach head	Churchtown	2	Quay, road, stores	Scilly audit	88108	14920	Conservation Area, AONB
33	Bude Haven	Leisure	Medieval	Present	Tidal estuary	Resort town	4	Canal, breakwater, site of chapel, WW2 defences, slips, 19C Storm Tower, boat houses, 1920s beach swimming pool, warehouses, lime kilns, fish cellar, lifeboat station	RIS	220631	106231	Conservation Area, SM (canal), LBs (breakwater, storm tower, canal sea-lock)
34	Bullard Quay	Uncertain	Modern	Modern	Tidal estuary	None survives	2	Quay		240560	55610	AONB
35	Burhills Wood Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		241849	61051	AONB
36	Burrhills Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		242110	60936	AONB
37	Cadgwith	Fishing	Medieval	Present	Rocky cove	Village	3	Slips, sea walls, fish cellars, lifeboat house, winch, stores, boat houses, shipyard		172170	14520	Conservation Area, LBs (lifeboat house, cellars, coastguard lookout), AONB
38	Caffamill	Ferry	Early Modern	Present	Tidal estuary	Town	3	Sea walls, stores, slips, ferry, rail station, lime kilns	Fowey audit, NT survey	212643	52248	Conservation Area, AONB
39	Calamansack	Uncertain	Early Modern	Present	Tidal estuary	None survives	2	Quay	Helford audit	174136	26615	LB (quay and ramp), AONB
40	Calenick	Commercial	Early Modern	Modern	Tidal estuary	Hamlet	2	Quay, lime kiln, boat house, smelting works		182514	43055	
41	Calenick Creek	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay	Fal audit	183060	43010	AONB
42	Calstock	Commercial	Medieval	Modern	Tidal estuary	Town	3	Quays, slips, wharves, mooring bollards, stores, ferry, viaduct, roads, railway, sidings, lime kilns	WHS Nomination survey, CISI	243495	68597	WHS, Conservation Area, LBs (lime kiln, cottages, etc), AONB
43	Cant	Fishing	Early Modern	Early Modern	Tidal estuary	Sewage works	2	Fish cellar		193530	74980	
44	Cant Cove	Uncertain	Early Modern	Modern	Tidal estuary	None survives	1	Hulk(s)		195291	74681	
45	Carbeale Mill	Leisure	Early Modern	Present	Tidal	Town	3	Quay, jetty, slips, boat yard, tide mill		243152	54831	LB (mill)
46	Carbeile	Leisure	Early Modern	Present	Tidal estuary	Edge of town	2	Tide mill, landing place, boat house, boat yard, hulks, quay, floating harbour		243072	54551	LB (tide mill)
47	Carclew	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quays	Fal audit	179749	38682	AONB
48	Cargreen	Leisure	Early Medieval	Present	Tidal estuary	Village	3	Quays, slips, mooring posts, ferry,		243610	62640	Conservation

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
								manure works, yacht club				Area, AONB
49	Carne	Leisure	Modern	Present	Tidal estuary	Cottage	2	Quays, slip	Helford audit	177220	24940	LBs (cottages), AONB
50	Carne Beach	Uncertain	Early Modern		Beach head	Hamlet	1	Road, WW2 defences	Roseland audit	190537	38274	AONB
51	Carnon Yard	Commercial	Early Modern	Early Modern	Tidal estuary	Hamlet	2	Quay, shipyard, mine	Fal audit	181462	38071	AONB
52	Catchole	Uncertain	Early Modern	Modern	Rocky cove	None survives	1	Track	Roseland audit	195282	40824	AONB
53	Cavehole Cellar	Fishing	Early Modern	Modern	Rocky cove	Cottage	2	Fish cellar		243875	50857	HPG, AONB
54	Cawsand	Fishing	Medieval	Present	Beach head	Village	3	Sea wall, slips, fish cellars, lime kiln, road, Palmerstonian fort, sailing club	Sewage treatment scheme assessment	243410	50160	Conservation Area, LBs (cottages, etc), AONB
55	Cellars Beach	Leisure	Early Modern	Present	Tidal estuary	None survives	2	Quay, fish cellar, floating harbour	Fal audit	185249	32452	AONB
56	Channals Creek	Commercial	Post Medieval	Early Modern	Tidal estuary	None survives	2	Quay, quarry (marl)	Fal audit	183456	38996	HPG, AONB
57	Chapel	Commercial	Early Modern	Early Modern	Tidal	Hamlet	2	Limekiln		241735	65805	
58	Chapel Point	Leisure	Modern	Present	Rocky cove	Villa	2	Slip, boat house		202753	43324	LB (houses), AONB
59	Chapel Porth	Sanding	Early Medieval	Modern	Beach head	Hamlet	1	Road, site of chapel	WHS Nomination survey	169771	49479	WHS, AONB
60	Chapeldown Cottages	Uncertain	Early Modern	Modern	Tidal estuary	Town	2	Quay		243779	54649	
61	Charlestown	Commercial	Early Modern	Modern	Beach head	Village	4	Piers, quays, basins, sea walls, capstan, slips, coastguard station, stores, boat houses, sluicing reservoir, custom house, fish cellars, lime kilns, shipyard, WW2 defences, film set	WHS Nomination survey, Town survey	203880	51640	WHS, Conservation Area, LBs (quays, basins, weighbridge, boat house, cottages, etc)
62	Church Cove	Fishing	Early Medieval	Present	Rocky cove	Hamlet	3	Road, slip, capstan house, fish cellars, stores		171473	12780	LBs (lifeboat house, cellars), AONB
63	Chyandour	Sanding	Early Modern	Modern	Beach head	Edge of town	1	Road, peat deposits	CSUS	148510	31116	
64	Clapper	Commercial	Early Modern	Early Modern	Tidal estuary	Hamlet	2	Quay, lime kiln		200470	71640	
65	Cliff Pill	Commercial	Early Modern	Modern	Tidal estuary	Cottage	2	Quay, lime kiln, road, ferry	Fowey audit	212792	55436	AONB
66	Clift Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		240180	55460	AONB
67	Clifton Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, lime kiln		242220	64720	LB (lime kiln), AONB
68	Collogget Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		242037	61606	AONB
69	Colona Beach	Uncertain	Early Modern	Modern	Beach head	None survives	1	Road	Roseland audit	202555	43155	AONB
70	Compass Point	Commercial	Early Modern	Early Modern	Rocky cove	None	2	Boat houses (or lime kilns)		220065	106418	LBs (Storm Tower and breakwater
71	Constantine Bay	Sanding	Early Modern	Modern	Beach head	Cottage, now resort	1	Road		185850	74549	AONB
72	Constantine Island	Uncertain	Bronze Age	Modern	Beach head	Cottage	1	Track, prehistoric monuments and middens, WW2 defences	NT survey	185779	75186	AONB
73	Constantine Quay	Commercial	Early Modern	Present	Tidal Estuary	Edge of village	2	Quay, quarry		170899	26292	
74	Coombe	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track, platforms	Fowey audit, NT survey	211329	50797	AONB
75	Coombe Lane	Leisure	Modern	Present	Tidal	Village	2	Boatyard, slip		243252	62926	

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
76	Copperhouse	Commercial	Early Modern	Modern	Tidal estuary	Town	3	Dock, quay, walls, mooring posts, warehouses, sidings, lime kilns	CSUS, WHS nomination survey, town survey, CISI	156800	37980	WHS, LB (dock), Conservation Area
77	Cothele Quay	Commercial	Early Modern	Modern	Tidal estuary	Hamlet	4	Quays, slips, ferry, lime kilns, warehouses, boat houses, barge, crane	WHS Nomination survey, NT survey	242399	68064	WHS, LBs (quays, lime kilns, stores, cottages, etc), AONB
78	Coule's Cove	Safety services	Early Modern	Modern	Beach head	Cottages	1	Road, coastguard cottages		155854	28050	AONB
79	Cove Head	Leisure	Modern	Present	Tidal	Village	2	Jetties		243351	56699	
80	Coverack	Fishing	Medieval	Present	Rocky cove	Village	4	Pier, harbourmaster's house, lifeboat house, slips, rocket station, coastguard station, fish cellars, sea walls, smugglers cache		178460	18200	Conservation Area, LBs (pier, quays, slips, walls, cellars), AONB
81	Crab Quay	Military	Post Medieval	Modern	Rocky headland	None survives	2	Quay, lime kiln, military fortifications, batteries		182655	31658	Conservation Area, SM (Pendennis Peninsula Fortifications)
82	Crackington Haven	Commercial	Early Modern	Present	Beach head	Resort village	2	Sea defences, WW2 defences, lime kiln	RIS	214220	96806	AONB
83	Crane Cove	Fishing	Early Modern	Early Modern	Rocky cove	None survives	2	Fish cellar		241900	49150	AONB
84	Crantock	Sanding	Early Modern	Modern	Beach head	None survives	1	Track, quarries		178877	61026	
85	Creek Stephen	Uncertain	Early Modern	Modern	Rocky cove	None survives	1	Road		188655	37276	AONB
86	Cremyll	Shipbuilding	Early Modern	Present	Tidal estuary	Village	4	Piers, quays, harbour, boat yards, warehouse, slips		245210	53460	Conservation Area, LBs (quays, cottages, etc)
87	Cremyll Ferry	Ferry	Early Modern	Present	Tidal estuary	Village	3	Ferry, ferry office, quay		245420	53430	Conservation Area, LBs (quays, ferry office, cottages, etc)
88	Crinnis (Carlyon Bay)	Leisure	Modern	Modern	Beach head	Resort	2	Sea defences, road, WW2 defences, entertainment complex, lido	Assessment	205627	52246	
89	Crooklets	Sanding	Early Modern	Modern	Beach head	Resort town	1	Road, resort features, 'submerged forest', WW2 defences,	RIS	220257	107206	
90	Cruglase	Uncertain	Modern	Modern	Tidal estuary	None survives	2	Slips	Fal audit	184330	34470	AONB
91	Cumble Tor	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, quarries		238270	59275	AONB
92	Cumble Tor Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay		238249	59072	AONB
93	Cumble Tor Woods	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, quarries		238267	59626	AONB
94	Danescombe Quay	Commercial	Early Modern	Modern	Tidal estuary	Hotel	2	Quay	WHS Nomination survey	242635	68890	WHS, AONB
95	Dannonchapel	Commercial	Early Modern	Early Modern	Cliff port (slate)	None survives	2	Roads and winch hards; tunnel to port	ACVP	203122	82453	AONB
96	Daymer Bay	Sanding	Early Modern	Modern	Beach head	Resort	1	Road, submarine forest		192844	77377	
97	Dean Point	Commercial	Modern	Present	Cliff port (gabbro)	None survives	3	Jetty, roads, quarries		180456	20205	AONB
98	Dennis Cove	Shipbuilding	Early Modern	Modern	Tidal estuary	Edge of town	3	Shipbuilding yard, wet dock, crane, quay, road		191994	74486	

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99	Dennis Scale	Commercial	Early Modern	Early Modern	Cliff port (slate)	None	2	Quay (wharf), lime kiln, road		204633	87549	AONB
100	Dennybowl Mill	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, tide mill		238042	54837	AONB
101	Devoran	Commercial	Early Modern	Modern	Tidal estuary	Village	4	Quays, bollards, wharves, sidings, yards, stores, ore hutches, sluicing pond, shipyard, lime kilns	WHS Nomination survey, Fal audit; wharves survey	179519	38974	WHS, Conservation Area, LBs (bollards, ore hutches)
102	Dinham	Commercial	Early Modern	Early Modern	Tidal estuary	Cottage	2	Quay, sea defences		197481	74636	AONB
103	Downderry	Leisure	Early Modern	Present	Beach head	Village	1	Track, coastguard station, military base		231592	53889	
104	Drillers Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, quarry		238480	59850	AONB
105	Duckpool	Sanding	Romano-British	Present	Beach head	None survives	1	Road, Roman and Early Medieval floors, WW2 defences, smuggling associations	Excavation report; ACVP	220146	111625	AONB
106	Duporth	Uncertain	Early Modern	Modern	Beach head	Village	2	Road, slip, holiday park (not extant)		203534	51175	
107	Durgan	Fishing	Early Modern	Present	Tidal estuary	Hamlet	3	Quays, slip, road, sea walls, fish cellars	Helford audit	177276	27294	LBs (quay walls, cottages, etc), AONB
108	East Portholland	Fishing	Medieval	Modern	Beach head	Village	3	Sea wall, stores, lime kiln, WW2 defences	Roseland audit, buildings survey; Caerhays survey	195929	41264	AONB
109	Eastdowns Lake	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		242080	54470	
110	Eastern Isles, Arthur's Quay	Uncertain	Early Medieval	Early Medieval	Beach head	None survives	2	Quay	Scilly audit	93920	13910	Conservation Area, AONB
111	Eastern Isles, Nornour	Uncertain	Bronze Age	Romano-British	Rocky cove	None survives	1	Prehistoric settlement, Romano-British shrine	Scilly audit	94440	14780	SM (prehistoric settlement), AONB
112	Egloshayle	Commercial	Medieval	Modern	Tidal estuary	Town	3	Quay, landing stages, road, warehouses, boatyards		199966	71895	LBs (quay walls)
113	Ellendale Quay	Commercial	Early Modern	Modern	Tidal estuary	Cottages	2	Quays, limekilns	WHS Nomination survey	242870	68840	WHS, AONB
114	Empacombe	Leisure	Early Modern	Present	Tidal estuary	Hamlet	3	Piers, quay, sea wall, mooring posts, roads, designed landscape features		244510	52930	LBs (quays, cottages, etc)
115	Erth Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, lime kiln		237950	55866	AONB
116	Ethy Rock	Uncertain	Early Modern	Modern	Tidal	None survives	2	Boat house		213096	56787	
117	Falmouth Docks	Commercial	Early Modern	Present	Promontory	Town	7	Breakwaters, piers, jetties, dry docks, wet docks, lifeboat station, railway sidings, warehouses, shipyards, cranes. Depots, foundry, coastguard station	CSUS, Fal audit	181991	32645	
118	Falmouth Greenbank	Leisure	Early Modern	Present	Tidal estuary	Town	3	Quay, ferry, landing stage, yacht club		180581	33559	
119	Falmouth Town	Ferry	Post Medieval	Present	Rocky foreshore	Town	4	Quays, slips, bonded store, mooring posts, piers, coal stores, ship building yard, landing stages, stores, warehouses, fish cellars, lime kilns, ferries, sailing club	CSUS, Fal audit	180752	32990	Conservation Area, LBs (quay walls, offices)

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120	Finnygook	Uncertain	Early Modern	Present	Beach head	Resort	1	Road		235968	53840	
121	Fishing Cove	Sanding	Early Modern	Modern	Beach head	None survives	1	Track		159577	42860	AONB
122	Fistral	Sanding	Modern	Modern	Beach head	Resort	1	Road		180050	62165	
123	Flushing	Fishing	Post Medieval	Present	Tidal estuary	Village	4	Piers, quays, sea walls, stores, slips, boat houses, fish cellars, ferry, sailing club	Fal audit	180820	33750	Conservation Area, LBs (quays, stores, etc), AONB
124	Flushing (Gillan Creek)	Fishing	Early Modern	Modern	Tidal estuary	Cottage	2	Sea walls, slip, quay, boat house, fish cellar	Helford audit	178253	25392	AONB
125	Flushing Cove	Uncertain	Early Modern	Present	Tidal estuary	Cottage	1	Road		178384	25199	
126	Forder	Leisure	Early Modern	Modern	Tidal estuary	Cottages	3	Quays, ferry, ferry house, piers, slips, quarries, stores, lime kiln		241212	58131	Conservation Area, LBs (tide mill, Mill pond walls, mill house), AONB
127	Foss	Leisure	Early Modern	Present	Tidal estuary	Hamlet	2	Pier, quay, sea wall, stores, quarry, lime kiln		243200	52230	
128	Fowey Docks	Commercial	Early Modern	Present	Tidal estuary	Edge of town	6	Sea walls, stores, jetties, conveyors, cranes, rail sidings	Fowey audit, NT survey	212803	52770	AONB
129	Fowey Town	Fishing	Medieval	Present	Tidal estuary	Town	4	Quay, wharves, warehouses, cellars, stores, slips, steps, mooring posts, custom house, jetties, ferry (to Polruan), lifeboat station, sailing club, yacht club	Fowey audit, NT survey	212630	51700	Conservation Area, LBs (stores, cottages, etc), AONB
130	Fowey Whitehouse Point	Ferry	Early Modern	Present	Tidal estuary	Town	3	Lighthouse, quay, ferry, slip, sea walls	Fowey audit, NT survey	212373	51459	Conservation Area, AONB
131	Frenchman's Creek (E)	Commercial	Post Medieval	Early Modern	Tidal estuary	None survives	2	Quay, road, quarry	Helford audit	174744	26246	LB (quay), AONB
132	Frenchman's Creek (W)	Fishing	Early Modern	Modern	Tidal estuary	None survives	2	Quays, landing stage, fish cellar	Helford audit	174623	26157	AONB
133	Garras Wharf	Commercial	Early Modern	Modern	Tidal estuary	Industrial estate	4	Quays, timber pond, smelting works, mooring posts, railway		182914	44342	
134	Gear Bridge	Fishing	Early Modern	Modern	Tidal estuary	None survives	2	Quays, slip, fish cellar, lime kiln, boat house, road	Helford audit	171641	25065	HPG, AONB
135	Gentle Jane	Fishing	Early Modern	Modern	Tidal estuary	Cottage	2	Road, boathouses, fish cellars?		194180	74595	AONB
136	Gillan Cove	Fishing	Early Modern	Present	Tidal estuary	Hamlet	2	Road, fish cellars, boathouses, stores, slip, landing stage, WW2 defences	NT survey; Helford audit	178722	25203	AONB
137	Godrevy Cove	Uncertain	Post Medieval	Early Modern	Beach head	None survives	2	Boat house		158150	42900	SM (prehistoric features on Godrevy Head), AONB
138	Godrevy Cove (St Keverne)	Uncertain	Medieval	Early Modern	Beach head	None survives	2	Road, site of jetty, corn mill		180442	20854	AONB
139	Golant	Leisure	Medieval	Present	Tidal estuary	Village	3	Sea walls, slips, stores, boat houses, quay, lime kiln, railway	Fowey audit	212319	54666	AONB
140	Gorran Haven	Fishing	Medieval	Present	Beach head	Village	4	Pier, quay, sea walls, lime kilns, fish cellars, roads, coastguard station, WW2 defences	Roseland audit	201420	41560	Conservation Area, LBs (quay, cellars, cottages, etc), AONB
141	Gorrangorras	Fishing	Early Modern	Modern	Tidal estuary	None survives	2	Boat house	Fal audit	179110	34320	
142	Great Perhaver	Commercial	Early Modern	Modern	Beach head	None survives	2	Landing stage, mine (ochre)		201530	42010	
143	Great Perlea	Uncertain	Early Modern	Modern	Rocky cove	None survives	1	Track	Roseland	195129	40692	AONB

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
									audit			
144	Greatwood	Leisure	Early Modern	Present	Tidal estuary	Hamlet	2	Slip, boat house	Fal audit	182056	36301	AONB
145	Greatwood Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay	Fal audit	182027	35609	LB (quay), AONB
146	Greeps Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		239560	56760	AONB
147	Griggs Quay	Commercial	Early Modern	Modern	Tidal estuary	Town	3	Quays, dock	WHS Nomination survey	154580	36380	WHS
148	Grove Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, quarries		237610	57490	AONB
149	Gugh, Dropnose Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	89162	8285	Conservation Area, AONB
150	Guineaport	Commercial	Early Modern	Early Modern	Tidal estuary	Hamlet, now part of town	2	Quay		199489	71931	
151	Gunwalloe Church Cove	Uncertain	Iron Age	Modern	Beach head	Churchtown	1	Road, cliff castle, churchtown		166166	20502	SM (cliff castle). LBs (church etc), AONB
152	Gunwalloe Fishing Cove	Fishing	Early Modern	Modern	Beach head	Hamlet	3	Road, coastguard station, stores, capstans (sites of), WW2 defences, fish cellars		165438	22382	AONB
153	Gweek	Leisure	Medieval	Present	Tidal estuary	Village	4	Quays, wharves, warehouses, timber yards, coal yards, roads, bridges, mills, cranes, slips, lime kilns, fish cellar, boat yard	Helford audit	170700	26560	LBs (quays, cottages, etc), AONB
154	Gweek (Lower Quay)	Commercial	Early Modern	Present	Tidal Estuary	Village	3	Quay, lime kiln		170864	26211	
155	Gwithian	Sanding	Bronze Age	Early Medieval	Beach head	None survives	2	Site of chapel, early medieval settlement		158801	42004	SM (prehistoric occupation sites), AONB
156	Gyllingvase Beach	Leisure	Early Modern	Present	Beach head	Resort	1	Road, sea walls		180866	31689	Conservation Area
157	Hall Farm	Fishing	Early Modern	Modern	Tidal estuary	None survives	2	Quay, fish cellar	Fowey audit, NT survey	212965	51947	AONB
158	Hallane	Uncertain	Early Modern	Modern	Beach head	Cottage	1	Road, mill, store		203362	48190	AONB
159	Halton Quay	Commercial	Early Modern	Modern	Tidal estuary	Hamlet	3	Quays, lime kilns, roads		241364	65503	LB (lime kiln), AONB
160	Halwartha	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Slip, road	Fal audit	184210	34070	AONB
161	Halwyn	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay	Fal audit	180230	38588	AONB
162	Halzephron Cove	Uncertain	Early Modern	Modern	Rocky cove	Cottage	1	Zigzag track		165604	21812	AONB
163	Harbour Cove	Uncertain	Iron Age	Modern	Tidal estuary	None survives	1	Road, extensive Iron Age/RB settlement		191121	76975	AONB
164	Harewood Cottage	Ferry	Early Modern	Modern	Tidal estuary	Cottage	2	Quay, ferry, waiting room	WHS Nomination survey	244609	69442	WHS, AONB
165	Harlyn Bay	Safety services	Iron Age	Modern	Beach head	Resort	2	Road, IRB statioon, Iron Age/RB cemetery		187889	75373	
166	Hatches Farm	Commercial	Early Modern	Modern	Tidal estuary	Cottages	2	Canal, bone mill, manure works, fish cellar	WHS Nomination survey	243586	71024	WHS, SM (canal), AONB
167	Hawker's Cove	Safety services	Early Modern	Modern	Tidal estuary	Hamlet	3	Watch house, lifeboat house, slip, coastguard station, road, walls		191204	77565	AONB
168	Hay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		236165	55619	LB (quay), AONB
169	Haye	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay (?)		242670	66590	AONB
170	Hayle	Fishing	Early Modern	Present	Tidal estuary	Town	5	Quays, docks, wharves, warehouses, bridges, foundry,	CSUS, WHS nomination	155646	37698	WHS, LBs (docks,

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
								sawmill, reservoirs, custom house, gasworks, railway station, lime kilns, shipwrights workshop, shipyard, lifeboat station, canal	study, town survey, CISI			warehouses, bridges, wharfs
171	Helford	Fishing	Medieval	Present	Tidal estuary	Village	3	Quays, slips, stores, fish cellars, custom house, boat houses, sailing club	Helford audit	175800	25970	Conservation Area, LBs, (quays, cottages), AONB
172	Helford Passage	Ferry	Early Modern	Present	Tidal estuary	Hamlet	3	Road, ferry, slip, coastguard station, boat houses, stores, lime kiln, WW2 defences	Helford audit	176380	26944	AONB
173	Helford Point	Ferry			Tidal estuary	Village	2	Ferry terminal, jetty, waiting room	Helford audit	175990	26460	AONB
174	Hemmick	Fishing	Early Modern	Modern	Beach head	Cottage	2	Road, store, fish cellar	Roseland audit, NT survey	199422	40524	LB (cottage), AONB
175	Higher Anderton	Uncertain	Early Modern	Modern	Tidal estuary	Village	2	Quay		243113	52144	
176	Higher Penpoll	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay, track	Fowey audit	214123	54174	AONB
177	Hole Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		241990	60694	AONB
178	Holywell Bay	Sanding	Early Modern	Modern	Beach head	Resort	1	Road		176701	59052	
179	Hornifast	Commercial	Early Modern	Modern	Tidal estuary	Cottages	2	Quay, lime kiln		241100	65000	AONB
180	Ince Quay	Leisure	Early Modern	Present	Tidal estuary	None surrvives	2	Quay, slip (jetty)		239844	56149	AONB
181	Islington wharf	Leisure	Early Modern	Present	Tidal estuary	Town	4	Quays, lime kilns	Fal audit	178688	34547	LB (warehouse)
182	Jupiter Point	Military	Modern	Present	Tidal estuary	Country House	2	Quay, ferry, boat houses, jetties, stores		241550	56870	LB (cottage), HPG, AONB
183	Kea Wood	Ferry	Early Modern	Present	Tidal	None survives	2	Ferry		184581	42484	
184	Kennack Sands	Sanding	Early Modern	Modern	Beach head	Cottage	1	Road, WW2 defences	Assessment	173427	16511	AONB
185	Kenneggy	Sanding	Early Modern	Modern	Beach head	None survives	1	Road		156098	28237	AONB
186	Kennels	Commercial	Early Modern		Tidal estuary	Cottage	2	Pier, quay, sea walls, cellars, slips, jetties, lime kiln, customs house, fish pond	Helford audit	176530	26470	LB (lime kiln), AONB
187	Kilberick Cove	Uncertain	Early Modern	Modern	Beach head	None survives	1	Road	Roseland audit	192418	37990	AONB
188	Kilcobben cove	Safety services	Modern	Present	Rocky cove	None	2	Lifeboat station		171557	12572	AONB
189	Kiln Quay	Leisure	Early Modern	Present	Tidal estuary	Hamlet	2	Quay, road, mooring posts, flying boat station, military base	Fal audit	181565	33616	LB (quay), AONB
190	Kilna Quay	Commercial	Early Modern	Modern	Tidal estuary	Hamlet	3	Quays, lime kilns		235290	59900	LBs (lime kilns), AONB
191	Kilpark	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		236210	55915	AONB
192	King Harry Ferry (E)	Ferry	Medieval	Present	Tidal estuary	None survives	2	Slip, road, ferry	Fal audit	184307	39565	AONB
193	King Harry Ferry (W)	Ferry	Medieval	Present	Tidal estuary	Hamlet	2	Quay, mooring posts, steps, slips, chain ferry	Fal audit	184083	39627	LBs (quay, cottage),HPG, AONB
194	King's Cove	Fishing	Early Modern	Modern	Rocky cove	Hamlet	2	Slip, winch, road, stores, etc		155854	27887	AONB
195	Kingsand	Fishing	Post Medieval	Present	Beach head	Village	3	Sea walls, pier, slips, stores, fish cellars	Sewage treatment scheme assessment	243473	50481	Conservation Area, LBs (sea wall, cottages, etc), AONB
196	Kingsmill Lake	Commercial	Early Modern	Modern	Tidal estuary	Cottage	2	Quays, lime kiln		241443	62254	AONB
197	Kynance Cove	Uncertain	Early Modern	Present	Beach head	Hamlet	2	Road, stores	NT survey	168415	13340	AONB
198	Lamanna	Uncertain	Medieval	Modern	Rocky cove	Resort	2	Quay, track		225200	52200	

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199	Lamorna Cove	Commercial	Early Modern	Modern	Rocky cove	Hamlet	3	Pier, quay, sea walls, slip, crane, lime kiln, quarry		145040	24019	LB (quay), AONB
200	Lamorran	Uncertain	Early Medieval	Medieval	Tidal estuary	Churchtown	2	Landing point, church	Fal audit	187847	41734	LB (church), AONB
201	Lamorran Wood	Commercial	Early Modern	Early Modern	Tidal estuary	None survives	2	Lime kiln	Fal audit	188630	42225	LB (bridge), AONB
202	Landlooe Bridge	Commercial	Early Modern	Modern	Inland	None survives	2	Wharf, canal, quarry		224946	59561	
203	Landulph	Leisure	Early Modern	Present	Tidal estuary	None survives	2	Slip, road		243261	61189	AONB
204	Lansallos	Sanding	Unknown	Unknown	Beach head	None survives	1	Track, sanding way, building platform, road	NT survey	216621	51239	AONB
205	Lantic Bay	Uncertain	Uncertain	Uncertain	Beach head	None survives	1	Track, building platform	Fowey audit, NT survey	214763	50845	AONB
206	Lariggan	Uncertain	Unknown	Unknown	Beach head	Edge of town	2	Sea walls, timber yard, baths, peat deposits		146435	29100	
207	Lead Rock	Uncertain	Early Modern	Modern	Rocky cove	None survives	1	Slip (track)	Fowey audit, NT survey	209165	51655	AONB
208	Lelant	Commercial	Early Modern	Modern	Tidal estuary	Village	2	Quays	WHS Nomination survey	154834	37292	WHS
209	Lelant Wharf	Commercial	Early Modern	Modern	Tidal estuary	Village	2	Quay, wharfs, ferry	WHS Nomination survey	154907	37980	WHS
210	Lerryn (N)	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, boat house, dock, quarry, granary	Fowey audit, NT survey	213650	56920	AONB
211	Lerryn (S)	Leisure	Medieval	Present	Tidal estuary	Village	4	Bridge, quays, bollards, stepping stones, lime kiln, stores, boat houses	Fowey audit	213863	56940	Conservation Area, SM (bridge), LBs (lime kilns, bridge, store, cottages, etc), AONB
212	Limekiln Quay	Commercial	Early Modern	Modern	Tidal estuary	Cottage	2	Quay, boat houses, lime kiln	Fal audit	185070	41040	LB (lime kiln), HPG, AONB
213	Little Falmouth	Commercial	Early Modern	Present	Tidal estuary	Hamlet	3	Docks, slips, wharves, landing stages	Fal audit	180490	34140	LBs (docks), AONB
214	Little Petherick	Commercial	Medieval	Early Modern	Tidal estuary	Hamlet	2	Quays, lime kiln		191890	72170	LB (bridge and mill), AONB
215	Lizard Point	Safety services	Early Modern	Modern	Rocky cove	Hamlet	3	Lifeboat house, slip, road, sea walls, lighthouse complex, mooring bollard		170046	11488	AONB
216	Loe Beach	Leisure	Modern	Present	Tidal estuary	Hamlet	2	Boat house, slip	Fal audit	182496	38088	AONB
217	Long Cove	Safety services	Modern	Present	Rocky cove	None survives	1	Lifeboat station		186031	76507	
218	Long Rock	Uncertain	Early Modern	Present	Beach head	Village	2	Slip, road		149751	31207	
219	Long Sands	Uncertain	Early Modern	Modern	Beach head	None survives	1	Road		237994	53149	
220	Looe (East)	Fishing	Medieval	Present	Tidal estuary	Town	5	Piers, quays, warehouses, cellars, slips, steps, promenade, fish stores, fish processing sheds, cranes, bridge, rail sidings, light, lifeboat station, cellars, boat houses, sailing club	CISI	225450	53510	Conservation Area, LBs (piers, quays, bridge, cottages, etc)
221	Looe (West)	Leisure	Medieval	Present	Tidal estuary	Town	4	Quay, sea walls, warehouses, stores, steps, slip, site of chapel, bridge, roads	CISI	225363	53245	Conservation Area, LBs (quay walls,

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
												warehouse, cottages, etc)
222	Looe Island E	Uncertain	Early Modern	Modern	Rocky cove	Cottage	2	Track, slip		225859	51436	
223	Looe Island N	Leisure	Early Modern	Present	Beach head	Cottage	2	Track, slip		225715	51575	
224	Lostwithiel	Commercial	Medieval	Medieval	Tidal estuary	Town	4	Quays, sea walls, bridge, stores, rail sidings, lime kilns, mooring posts	Fowey audit; town survey	210460	59640	Conservation Area, LBs (bridge, cottages, etc)
225	Lower Anderton	Military	Modern	Modern	Tidal estuary	None survives	1	Torpedo station		244031	52383	
226	Lower Kenneggy	Uncertain	Modern	Moodern	Rocky cove	None	2	Wooden slip		156770	28060	AONB
227	Lower Newham	Commercial	Early Modern	Present	Tidal estuary	Industrial estate	4	Quays, wharves, factories, stores, warehouses, lime kiln	Fal audit	183380	43280	
228	Lower Penpoll	Leisure	Early Modern	Present	Tidal estuary	Hamlet	2	Quays, roads, lime kilns	Fowey audit	214650	54340	LB (limekiln), AONB
229	Lowhill Quarry	Commercial	Early Modern	Modern	Tidal	None survives	2	Quay, quarry		241402	57905	
230	Lowland Point	Commercial	Medieval	Post Medieval	Rocky cove	None survives	2	Quay	St Keverne assessment	180063	19438	SM (multi-period settlement site), AONB
231	Maenporth	Leisure	Early Modern	Present	Beach head	Hamlet, now a resort	2	Road, coastguard station, boat house, WW2 defences, lifebuoy house, limekiln	Fal audit	178944	29602	AONB
232	Malpas (Ferry)	Ferry	Early Modern	Present	Tidal estuary	Village	3	Landing stage, ferry	Fal audit	184512	42811	AONB
233	Malpas (Victoria Point)	Leisure	Early Modern	Present	Tidal estuary	Village	3	Quays, pontoons, slip, quarry		184289	42519	
234	Malpas Point	Ferry	Early Modern	Present	Tidal estuary	Hamlet	2	Ferry		184707	42683	
235	Marazion	Ferry	Medieval	Present	Beach head	Town	3	Sea walls, gazebo, site of chapel, jetties, slips, boatyards, causeway, fish cellars, lime kiln, ferry, sailing club	Sheppard	151979	30475	Conservation Area, LBs (gazebo), AONB
236	Marazion Green	Sanding	Early Modern	Modern	Beach head	Village	1	Road		150626	31237	
237	Markham's Quay	Commercial	Early Modern	Early Modern	Beach head	None survives	2	Road, quarry, quay?		195567	79829	AONB
238	Markwell Lane	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quays, quarry		237297	57484	AONB
239	Markwell Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay		236447	58533	AONB
240	Marraborough Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, lime kiln		241610	61938	AONB
241	Marsh Cottages	Commercial	Early Modern	Early Modern	Tidal estuary	Cottage	2	Quay (now some way from river)		200210	71700	
242	Marsland Mouth	Sanding	Early Modern	Modern	Beach head	Cottage	1	Road, building platform, WW2 defences	ACVP	221279	117411	AONB
243	Mawgan Creek	Uncertain	Post Medieval	Early Modern	Tidal estuary	None survives	2	Quays	Helford audit	171737	25370	AONB
244	Mawgan Porth	Sanding	Early Medieval	Present	Beach head	Resort	1	Coastguard station, road, early medieval settlement, WW2 defences		184811	67226	
245	Merthen	Fishing	Early Modern	Modern	Tidal estuary	None survives	2	Quay, boat house, fishermans house, lime kiln, oyster depot, track	Helford audit	173630	26660	AONB
246	Merthen Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, lime kiln	Helford audit	173150	26050	LB (quay), AONB
247	Merther Pond	Commercial	Early Modern	Early Modern	Tidal estuary	None survives	2	Lime kiln	Fal audit	185622	43486	AONB
248	Messack	Uncertain	Post Medieval	Early Modern	Tidal estuary	None survives	2	Quay, slip	Fal audit	184780	36190	AONB
249	Mevagissey	Fishing	Medieval	Present	Rocky cove	Village	5	Piers, breakwater, quays, wharves, stores, fish cellars, boat houses, lifeboat house, slips, mooring posts, rope walk, coastguard station, light house, watch house,	Slipway survey	201550	44800	Conservation Area, LBs (quays, piers, cellars, stores, cottages, etc),

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
								battery, lifeboat station				AONB
250	Middle Newham	Commercial	Early Modern	Present	Tidal estuary	Industrial estate	4	Quay, industrial estate		183269	43532	
251	Mill Creek	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay, road	Fal audit	185738	40076	AONB
252	Millbrook	Commercial	Early Modern	Modern	Tidal estuary	Town	3	Sea walls, landing stages, slips, lime kiln, quays, mill pond		242600	52270	
253	Millendreath	Leisure	Early Modern	Present	Beach head	Resort	2	Sea walls, slips, tidal swimming pool, lime kiln		226881	54122	
254	Millook Haven	Uncertain	Early Modern	Present	Beach head	Hamlet	2	Boat houses, road	RIS	218434	100051	AONB
255	Milltown Wood	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Boat house, lime kiln	Fowey audit	210776	57941	LB (lime kiln)
256	Mixtow	Leisure	Early Modern	Present	Tidal estuary	Hamlet	3	Quays, slips, roads, stores, pontoons, lime kiln	Fowey audit, NT survey	212900	52940	LBs (cottages), AONB
257	Moditonham Quay	Uncertain	Early Modern	Modern	Tidal estuary	Hamlet	2	Quay		241930	61277	AONB
258	Mother Ivey's Bay	Fishing	Early Modern	Modern	Beach head	Cottage	2	Fish cellars, life saving apparatus house, lifeboat station		186280	75990	AONB
259	Mousehole	Fishing	Medieval	Present	Rocky cove	Village	4	Piers, slips, sea walls, fish cellars, coastguard station, site of chapel	VCH study	146980	26310	Conservation Area, LBs (piers, fishing cellars etc), AONB
260	Mullion Cove	Fishing	Early Modern	Present	Beach head	Hamlet	4	Piers, slip, lifeboat house, stores, fish cellars, road, winch	Harbour survey	166660	17870	LBs (harbour walls, winch house), AONB
261	Mylor	Leisure	Early Medieval	Present	Tidal estuary	Churchtown	4	Pier, quays, landing stages, gridiron, dockyard, sea walls, slips, mooring posts, yacht club	Fal audit	182147	35312	SM (D-Day preparation point), LBs (pier), AONB
262	Mylor Bridge	Leisure	Early Modern	Present	Tidal estuary	Village	3	Quays, lime kiln, sea walls, stepping stones, stores, boat house	Fal audit	180553	36056	Conservation Area, LBs (quay, etc), AONB
263	Nancorras	Uncertain	Post Medieval	Early Modern	Tidal estuary	None survives	2	Quays	Fal audit	185940	34500	AONB
264	Nanjizal	Sanding	Early Modern	Modern	Beach head	Cottage	1	Road		135820	23602	AONB
265	Nanjulian	Fishing	Early Modern Modern	Early Modern	Rocky cove	None survives	2	Landing place, fishing station		135739	29211	AONB
266	Nanshuttal	Commercial	Early Modern	Early Modern	Tidal estuary	Cottage	2	Quay, lime kiln	Fal audit	185670	33720	AONB
267	Netstakes	Commercial	Early Modern	Modern	Tidal estuary	Cottages	2	Quay, lime kilns	WHS Nomination survey	243413	70606	WHS, AONB
268	New Bridge	Commercial	Early Modern	Modern	Inland	Cottages	2	Quay, lime kiln	WHS Nomination survey	243307	72102	WHS, AONB
269	New Quay	Fishing	Early Modern	Modern	Tidal estuary	None survives	2	Quay, boat house, fish cellar	Fowey audit, NT survey	212880	52380	AONB
270	New South Hooe	Commercial	Early Modern	Early Modern	Tidal estuary	None survives	2	Jetty, mine		242231	64465	AONB
271	Newham	Leisure	Early Modern	Present	Tidal estuary	None survives	2	Quay, landing stage	Fowey audit	210915	57870	
272	Newlyn	Fishing	Medieval	Present	Beach head	Town	6	Med, 19C and 20C piers; sea walls, lighthouse, slips, mooring posts, landing stage, jetties, coastguard station, fish cellars, fish works, icehouse, timber yard, etc	CSUS, VCH study	146500	28600	Conservation Area, LBs (old piers, fish cellars, etc)
273	Newporth Head	Uncertain	Early Modern	Modern	Rocky cove	None survives	2	Slip		179831	30121	
274	Newquay	Fishing	Medieval	Present	Beach head	Resort	4	Piers, lighthouse, jetty, rail terminal, warehouses, sea walls,	CSUS	180769	62073	LBs (both piers)

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
								shipyard, lime kilns, lifeboat station, huers' huts, fish cellars				
275	Newquay (Tamar)	Commercial	Early Modern	Early Modern	Tidal estuary	None survives	2	Dock	WHS Nomination survey	245327	69531	WHS, AONB
276	Newton	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Slip	Fal audit	183832	33240	AONB
277	Northcott Mouth	Sanding	Early Modern	Modern	Beach head	Hamlet	1	Road, WW2 defences	RIS	220249	108542	
278	Notter Bridge	Commercial	Early Modern	Modern	Tidal estuary	Hamlet	3	Quay, lime kiln, quarries		238431	60806	
279	Nun Cove	Sanding	Early Modern	Early Modern	Rocky cove	None survives	1	Track		180014	62523	
280	Okeltor	Commercial	Early Modern	Modern	Tidal estuary	Cottages	2	Quay, lime kiln	WHS Nomination survey	244422	68675	WHS, LB (lime kiln), AONB
281	Old Kea	Uncertain	Early Medieval	Medieval	Tidal estuary	Churchtown	2	Landing point, church	Fal audit	184435	41612	AONB
282	Old Mills Cove	Uncertain	Early Modern	Modern	Beach head	None survives	1	Road		224550	51838	AONB
283	Onjohn Cove	Fishing	Early Modern	Early Modern	Beach head	Cottage	2	Fish cellars, navigation aid, boat house, capstan		187184	75863	LB (fish cellars, capstan), AONB
284	Orchard	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		237883	56999	AONB
285	Padstow	Fishing	Early Medieval	Present	Tidal estuary	Swollen medieval town	5	Quays, docks, slips, custom house, warehouses, boat yard, shipyard, fish shed, mooring posts, breakwater, lime kilns, site of chapel, ferry, lifeboat station, sailing club	Assessment and recording of harbour	191950	75440	Conservation Area, LBs (quays, walls, warehouse, etc), AONB
286	Palace Cove	Fishing	Post Medieval	Early Modern	Beach head	None survives	3	Ruined pier, quay, fish cellars, tanks, building platforms, steps, track	Fowey audit, NT survey	216240	51160	AONB
287	Par	Fishing	Early Modern	Early Modern	Tidal estuary	Village	2	Fish cellar, lime kiln, slip		207559	53633	
288	Par Beach	Leisure	Modern	Present	Beach head	Resort	2	Caravan park, lime kiln, roads		208280	53256	AONB
289	Par Docks	Commercial	Early Modern	2007	Beach head	Village	5	Piers, quays, harbour, sluicing ponds, wharves, clay dries, yards, offices, slips, stores, fish cellar	Assessment	207700	52790	
290	Parbean Cove	Commercial	Early Modern	Modern	Rocky cove	None	2	Slipways, quarries	Helford audit	179570	24899	AONB
291	Parson's Creek	Leisure	Early Modern	Present	Tidal estuary	Churchtown	2	Quay, church	Fal audit	185170	41820	HPG, AONB
292	Parson's Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		243710	61610	AONB
293	Passage Point	Commercial	Early Modern	Modern	Tidal	None survives	2	Landing stage, quarry		241561	57305	
294	Penarvon Cove	Leisure	Modernq	Present	Tidal estuary	Cottage	2	Quay, slip	Helford audit	175660	26370	AONB
295	Penberth	Fishing	Early Medieval	Present	Rocky cove	Hamlet	3	Windlass, fish cellar, stores, road	NT survey	140253	22748	LBs (windlass, bridge), AONB
296	Pencalenick	Quarantine	Modern	Modern	Tidal estuary	None survives	2	Slip, isolation hospital	Fowey audit, NT survey	213406	51448	AONB
297	Pencalenick	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay, boat house	Fal audit	185960	45270	AONB
298	Pendeen Cove	Fishing	Early Modern	Early Modern	Rocky cove	Cottage	2	Fishing station, fish cellars, boat house, slips	WHS Nomination survey	138500	35870	WHS, AONB
299	Pendower	Commercial	Early Modern	Early Modern	Beach head	Hotel	2	Road, lime kiln, WW2 defences	Fal audit	189707	38157	AONB
300	Pengelly Cottage	Uncertain	Early Modern	Modern	Tidal estuary	Cottage	2	Quay		243320	56240	
301	Penkevel Wood	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay	Fal audit	187610	41390	AONB
302	Penleath Point	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, smallholders' plots	Fowey audit, NT survey	212960	51600	AONB
303	Penlee Point	Military	Early Modern	Modern	Rocky cove	None survives	1	Zigzag track, grotto, signal station		244271	48759	LB (grotto), HPG, AONB

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
304	Penlee Point	Safety services	Modern	Modern	Rocky headland	None	1	Lifeboat station		147322	26997	AONB
305	Penperth	Uncertain	Early Modern	Modern	Tidal estuary	Cottage	2	Quay	Fal audit	184399	38987	AONB
306	Penpol	Fishing	Early Modern	Modern	Tidal estuary	None survives	2	Quay, fish cellar, lime kiln	NT survey	179800	60770	
307	Penpoll Creek	Commercial	Early Modern	Modern	Tidal creek	Village	2	Wharves, sea walls		181213	38729	
308	Penpoll Mill	Leisure	Modern	Present	Tidal estuary	Hamlet	2	Quay, salt works		177070	24940	
309	Penpont	Commercial	Early Modern	Early Modern	Inland	Village	2	Quay		199785	75170	
310	Penquean	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quays, posts, railway, ruined buildings, quarry		195377	73974	AONB
311	Penquite	Leisure	Modern	Present	Tidal estuary	None survives	2	Quay, boat house, railway	Fowey audit	212380	55730	AONB
312	Penryn	Leisure	Medieval	Present	Tidal estuary	Town	4	Quays, piers, warehouses, wharves, cranes, stores, drawbridge, custom house, fish cellar, shipyards, boat house	CSUS, Fal audit; Anchor Warehouse study	178900	34256	Conservation Area, LBs (quays, warehouses, etc)
313	Pentewan	Commercial	Early Modern	Modern	Tidal estuary	Village	4	Breakwater, pier, quays, basin, watch house, reservoirs (sluicing), canal, mooring posts, fish cellar, lime kilns, sailing club	CISI, CAA	201920	47180	Conservation Area, LBs (harbour quays), AONB
314	Pentillie	Commercial	Early Modern	Modern	Tidal estuary	Country house	2	Quay, lime kiln		241186	64542	LB (lime kiln), AONB
315	Pentire	Uncertain	Early Modern	Early Modern	Beach head	None survives	2	Slipway, well		177840	60760	
316	Pentire Haven	Sanding	Early Modern	Modern	Beach head	None survives	1	Road		193322	79791	AONB
317	Pentireglaze Haven	Sanding	Early Modern	Modern	Beach head	Cottage	1	Road, shipwreck grave		193583	79655	
318	Pentowan	Commercial	Early Modern	Modern	Tidal estuary	Town (Hayle)	3	Quay, wharfs, calcining works, railway	CSUS, WHS Nomination survey, town survey, CISI	155294	37892	WHS, Conservation Area
319	Penzance	Ferry	Medieval	Present	Beach head	Town	6	Piers, quays, wharves, docks, slips, swing bridge, shipyard, viaduct, warehouses, lighthouse, custom house, lifeboat house, lighthouse depot and museum, foundry, mooring posts, capstans, cranes, railway terminus, lido, battery, sailing club	Sheppard, CSUS, Harbour assessment	147670	30040	Conservation Area. LBs (piers, docks, foundry, warehouses, depot, quays, etc)
320	Perbean	Uncertain	Early Modern	Modern	Rocky cove	None survives	1	Track, watch house		196643	41156	AONB
321	Percolan	Uncertain	Early Modern	Modern	Rocky cove	None survives	1	Track	Roseland audit	194498	39995	AONB
322	Percuil	Leisure	Early Modern	Present	Tidal estuary	Hamlet	2	Slip, sea walls, stores, boatyard, ferry, sailing club	Fal audit	185785	34016	AONB
323	Perran Wharf	Commercial	Early Modern	Modern	Tidal estuary	Village	3	Timber ponds, lime kilns, wharf, canal	WHS Nomination survey, Fal audit	177734	38604	WHS, Conservation Area, LBs
324	Perranporth	Safety services	Early Modern	Present	Beach head	Resort	3	Canal, road, site of chapel, lifeboat station		175702	54331	
325	Perranuthnoe	Sanding	Early Modern	Modern	Beach head	Churchtown	1	Road		153977	29276	AONB
326	Picklecombe	Military	Early Modern	Modern	Rocky cove	Fort	3	Quay, slip, landing stage, jetty, Palmerstonian fort, roads, breakwater	Plymouth defences survey	245650	51490	LB (fort), AONB
327	Pier Cellars	Fishing	Early Modern	Modern	Rocky cove	Cottage	3	Harbour, pier, fish cellars, sea walls, track, slip, torpedo station		244070	49560	AONB

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
328	Pill Cottages	Commercial	Early Modern	Early Modern	Tidal estuary	Edge of town	2	Lime kiln	Fowey audit	210401	59116	LB (lime kiln)
329	Pill Creek	Leisure	Early Modern	Present	Tidal estuary	Hamlet	2	Quay, shipwrights workshop, lime kiln, sea walls, boat house	Fal audit	182806	38436	LB (quays and boat house), AONB
330	Point	Commercial	Early Modern	Modern	Tidal estuary	Swollen hamlet	3	Quay, wharf, slips, stores, sidings, custom house, lime kiln, smelting works	WHS Nomination survey, Fal audit	181028	38501	WHS, LBs (quay, store), AONB
331	Polbathic	Fishing	Early Modern	Modern	Tidal estuary	Village	3	Quays, slips, fish cellar, lime kiln		235120	56960	LB (lime kiln, fish cellar), AONB
332	Polbathick Lake	Leisure	Early Modern	Present	Tidal estuary	Cottage	2	Quay, fish cellars		235430	56940	AONB
333	Polbrock	Commercial	Early Modern	Early Modern	Inland	None	2	Quay and wharf		201510	69370	
334	Poldhu Cove	Sanding	Early Modern	Modern	Beach head	Cottage	1	Road, WW2 defences		166655	20031	LB (bridge), AONB
335	Poldrissick	Commercial	Early Modern	Modern	Tidal estuary	Cottages	2	Quays		238125	59105	AONB
336	Poldrissick Quarries	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, lime kiln, quarries		238137	59398	AONB
337	Polgwidden	Fishing	Early Modern	Modern	Beach head	None survives	2	Fish cellar, mooring rings		171667	13632	AONB
338	Polgwidden Cove	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Boat house, mooring bollard, slip (D Day embarkation hard)	Helford audit	176824	26980	HPG, AONB
339	Polhawn	Uncertain	Early Modern	Modern	Rocky cove	Hamlet	1	Zigzag tracks, coastguard station, Palmerstonian fort		242084	49324	LB (fort), AONB
340	Polkerris	Fishing	Post Medieval	Present	Beach head	Village	4	Pier, sea walls, lime kiln, fish cellars, slip, roads, bollards, lifeboat station, sailing club	Fowey audit	209310	52103	Conservation Area, LBs (pier, lime kiln, cellars, inn, etc), AONB
341	Polkirt	Fishing	Modern	Modern	Rocky cove	Village	2	Boat house, path		201638	44347	AONB
342	Pollurian Cove	Fishing	Early Modern	Modern	Beach head	Cottages	2	Road, boat houses, WW2 defences		166872	18860	AONB
343	Polmear	Commercial	Early Modern	Modern	Beach head	Hamlet	2	Lime kiln		208743	53556	
344	Polperro	Fishing	Medieval	Present	Rocky cove	Village	4	Piers, quays, fish cellars, lime kiln, warehouses, sea walls, slips, land mark, site of chapel, coastguard station, watch house	Sewage treatment scheme assessment	220982	50963	Conservation Area, LBs (piers, quays, cellars, cottages, etc), AONB
345	Polridmouth	Leisure	Early Modern	Modern	Beach head	Cottage	2	Roads, sea walls, boat house, ornamental grounds	Fowey audit, NT survey	210297	50402	HPG, AONB
346	Polruan	Fishing	Medieval	Present	Tidal estuary	Village	4	Piers, quays, wharves, sea walls, slips, steps, mooring posts, ferry, cranes, watch house, ship yard, boat yard, sardine factory, jetty, fish cellars, boat house	Fowey audit, NT survey	212570	51051	Conservation Area, SM (blockhouse), LBs (Blockhouse, cottages, etc), AONB
347	Polstreath	Uncertain	Early Modern	Modern	Beach head	None survives	1	Track		201774	45453	AONB
348	Poltesco	Fishing	Early Modern	Modern	Rocky cove	Cottage	3	Road, fish cellar, capstan house, serpentine factory, canal	NT survey	172705	15670	LBs (serpentine factory, capstan house), AONB
349	Polvarth	Leisure	Early Modern	Present	Tidal estuary	Town	3	Quays, fish cellar, WW2 embarkation hard	Fal audit	185498	33084	AONB
350	Polwheveral Creek	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Boat house	Helford audit	174185	27876	AONB
351	Polzeath	Uncertain	Medieval	Present	Beach head	Hamlet, now a resort	1	Road, shipwreck grave		193690	78885	
352	Ponsence Cove	Uncertain	Early Modern	Present	Beach head	None survives	1	Road, sea wall	Helford audit	177727	26116	AONB
353	Ponsharden	Leisure	Early Modern	Present	Tidal estuary	Hamlet, now a	4	Quays, road, cellars, warehouses,	Fal audit	179557	34017	

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
						town		shipbuilding yard, boatyard, marina, ferry (Park and Float)				
354	Pont	Commercial	Early Modern	Modern	Tidal estuary	Hamlet	3	Piers, quay, bridge, lime kilns, ware house, boat house, sea walls, stores	Fowey audit, NT survey	214340	51883	LBs (quay, lime kiln, warehouse, boat house), AONB
355	Pont Pill	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay, WW2 ship repair workshop, track	Fowey audit, NT survey	213732	51537	AONB
356	Port Eliot	Leisure	Early Modern	Present	Tidal estuary	None survives	2	Boat house		236261	57951	LB (boat house), HPG, AONB
357	Port Gaverne	Fishing	Medieval	Present	Beach head	Fishing village	3	Quays, roads, fish cellars, lime kilns		200299	80887	LBs (fish cellars, cottages), AONB
358	Port Isaac	Fishing	Medieval	Present	Beach head	Swollen fishing village	4	Piers, quays, roads, slips, fish cellars, lifeboat station, breakwater, coastguard station, shipyard, lime kiln		199630	80920	Conservation Area, LBs (slips, walls, cellars, cottages, etc), AONB
359	Port Quin	Fishing	Medieval	Present	Beach head	Hamlet	3	Fish cellars, slip, sea walls, boat houses, quay?		197144	80480	LBs (walls, slip, cellars), AONB
360	Port William	Commercial	Early Modern	Early Modern	Cliff port (slate)	None survives	2	Road and winch hard, rock-cut platform		204650	86220	AONB
361	Portgiskey	Fishing	Early Modern	Modern	Rocky cove	None survives	2	Fish cellar		201748	46301	AONB
362	Porth Beach, St Columb	Fishing	Iron Age	Present	Beach head	Resort	2	Road, submerged forest, sea wall, fish cellar, huers' huts, shipyard, lime kilns, cliff castle		183022	62937	SM (Cliff castle)
363	Porth Chapel	Uncertain	Early Medieval	Modern	Rocky cove	Hamlet	1	Track, site of chapel, site of well	NT survey	138131	21904	SMs (holy well and chapel), AONB
364	Porth Joke	Sanding	Early Modern	Modern	Beach head	None survives	1	Road		177269	60397	
365	Porth Ledden	Uncertain	Medieval	Post Medieval	Rocky cove	None survives	2	Slip, wall	WHS Nomination survey	135342	31914	WHS, AONB
366	Porth Nanven	Sanding	Modern	Modern	Beach head	None survives	1	Road	WHS Nomination survey	135579	30894	WHS, AONB
367	Porth Navas	Leisure	Early Modern	Present	Tidal estuary	Hamlet	3	Quays, slips, stores, wharves, jetties, lime kiln, yacht club	Helford audit	175370	27640	AONB
368	Porth Saxon	Uncertain	Early Modern	Present	Tidal estuary	None survives	2	Slips, boat houses, road	Helford audit	178057	27091	AONB
369	Porth Sulinces	Uncertain	Unknown	Unknown	Beach head	None survives	1	Road?		161658	26521	AONB
370	Porthallack	Uncertain	Early Modern	Present	Tidal estuary	None survives	2	Slip, boat houses, track	Helford audit	178170	26970	AONB
371	Porthallow	Fishing	Early Medieval	Present	Beach head	Village	3	Slips, sea walls, fish cellars, stores, WW2 defences		179711	23193	AONB
372	Porthbean	Sanding?	Early Modern	Modern	Beach head	None survives	1	Road	Roseland audit	188210	36678	AONB
373	Porthbeor	Sanding?	Unknown	Modern	Beach head	None survives	1	Road	Roseland audit	186260	32048	AONB
374	Porth-cadjack	Uncertain	Early Modern	Modern	Rocky cove	None survives	1	Road		164190	44774	AONB
375	Porthcothan	Sanding	Early Modern	Modern	Beach head	Hamlet, now a resort	1	Road, smugglers' cache		185892	72074	AONB
376	Porthcurnick	Commercial	Early Modern	Early Modern	Beach head	None survives	1	Roads, peat deposit, WW2 defences	Roseland audit	187917	36019	AONB
377	Porthcurno	Sanding	Early Modern	Modern	Beach head	Hamlet	1	Road, WW2 defences, Cables		138674	22292	AONB
378	Portheras	Uncertain	Unknown	Unknown	Beach head	Cottages	1	Road, mills	WHS	138947	35760	WHS, AONB

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
									Nomination survey			
379	Porthgwarra	Fishing	Early Modern	Modern	Rocky cove	Hamlet	2	Slip, tunnel, capstan, stores, gulleys, fish cellars	NT survey	137135	21730	AONB
380	Porthgwidden	Leisure	Early Modern	Present	Tidal estuary	Hamlet	2	Boat house, sea walls, slips	Fal audit	182253	37835	AONB
381	Porthilly	Commercial	Medieval	Early Modern	Tidal estuary	Churchtown	2	Wall, road, lime kiln		193750	75388	LB (farmhouse), AONB
382	Porthkerris	Fishing	Medieval	Present	Beach head	Hamlet	3	Sea walls, slip, road, stores, fish cellar	St Keverne assessment	180589	22770	AONB
383	Porthkerris Point	Military	Modern	Modern	Beach head	Hamlet	3	Quay, military base, road	St Keverne assessment	180642	22973	AONB
384	Porthleven	Fishing	Medieval	Present	Rocky cove	Village	4	Piers, quays, wharves, warehouses, harbour office, lime kiln, timber yard, lifeboat house, pier light, sea walls, fish cellars	CISI	162810	25740	Conservation Area, LBs, AONB
385	Porthluney	Fishing	Early Modern	Modern	Beach head	Country house	2	Sea wall, WW2 defences, lime kiln, boat house	Roseland audit, buildings survey; Caerhays survey	197334	41333	LBs (lodges), Reg Park & Gdn; AONB
386	Porthmear	Uncertain	Early Modern	Modern	Rocky cove	None survives	1	Road		184899	71520	AONB
387	Porthmeor Beach	Commercial	Early Modern	Early Modern	Beach head	Town	2	Sea wall, fish cellars, slips, quay	CSUS	151566	40808	Conservation Area, LBs (fish cellars)
388	Porthminster	Uncertain	Early Modern	Modern	Beach head	Town	2	Capstans, road, coastguard cottages		151998	40111	
389	Porthmissen (Trevone)	Uncertain	Iron Age	Present	Beach head	Hamlet, now a resort	1	Road, IA/RB cemetery, IA/RB round		189176	75953	AONB
390	Porthnavas Creek	Uncertain	Modern	Present	Tidal estuary	Hamlet	2	Quays	Helford audit	175617	27597	AONB
391	Porthoustock	Fishing	Medieval	Present	Beach head	Hamlet	3	Pier, jetties, roads, lifeboat house, fish cellars, stores		180594	21820	AONB
392	Porthoustock	Commercial	Modern	Present	Cliff port (gabbro)	None survives	3	Quay, quarries		180919	21725	
393	Porthpean	Leisure	Early Modern	Present	Beach head	Hamlet	3	Sea walls, slip, fish cellars, road, lime kiln, sailing club		203160	50680	
394	Porthtowan	Sanding	Early Modern	Modern	Beach head	Hamlet, now a resort	1	Road	WHS Nomination survey	169278	47912	WHS
395	Portloe	Fishing	Medieval	Present	Rocky cove	Village	4	Sea walls, slips, stores, roads, lifeboat station, coastguard station, boat houses, lime kiln, flag staff	Roseland audit	193798	39386	Conservation Area, LBs (cottages), AONB
396	Portmellon	Fishing	Medieval	Present	Beach head	Swollen hamlet	3	Sea wall, slip, stores, fish cellars, lime kiln, lifeboat station, boatyard		201540	43930	LBs (cottages, inn), AONB
397	Portreath	Fishing	Early Modern	Present	Beach head	Mining town	4	Piers, docks, inclined tramway, sidings, coal yard, lime kiln, crane bases, fish cellar, shipyard	WHS Nomination survey	165613	45358	WHS, SM (daymark), LB (harbour)
398	Portreath (W)	Commercial	Post Medieval	Early Modern	Beach head	Edge of village	3	Quays		165100	45350	
399	Portscatho	Fishing	Post Medieval	Present	Rocky cove	Village	3	Pier, steps, sea walls, stores, fish cellars, slips, coastguard station	Roseland audit	187822	35257	Conservation Area, LBs (quays, cottages, etc), AONB

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
400	Portwrinkle	Leisure	Early Modern	Present	Beach head	Swollen hamlet	3	Piers, quay, lifeboat house, coastguard station, slip, fish cellar		235440	53810	Conservation Area, LBs (harbour, cottages)
401	Praa Sands	Sanding	Early Modern	Modern	Beach head	Resort	1	Road, sand pit, WW2 defences		157538	28150	AONB
402	Priest's Cove	Fishing	Early Modern	Present	Rocky cove	Hamlet	3	Slip, boat houses., site of capstan, building platforms	WHS Nomination survey	135229	31724	WHS, AONB
403	Prior's Brake	Commercial	Modern	Modern	Tidal estuary	None survives	2	Quay, quarry		236250	55880	AONB
404	Readymoney	Fishing	Early Modern	Modern	Beach head	Hamlet	2	Sea walls, stores, road, Henrician castle, fish cellar, lime kiln	Fowey audit, NT survey	211781	51092	Conservation Area, SM (St Catherine's Castle), AONB
405	Restronguet Passage	Leisure	Early Modern	Present	Tidal estuary	Swollen hamlet	3	Quay, slip, mooring posts, timber pond, jetty, slips, sea walls, crane, ferry	Fal audit	181413	37391	LB (quay), AONB
406	Restronguet Point	Leisure	Early Modern	Present	Tidal estuary	Hamlet	2	Quay, landing point, ferry, slip	Fal audit	181697	37119	AONB
407	Restronguet Weir	Leisure	Early Modern	Present	Tidal estuary	Hamlet	3	Quay, slip, landing stage, boat house, navigation aid	Fal audit	181769	36777	AONB
408	Rinsey (Porthcew)	Sanding	Early Modern	Modern	Beach head	None survives	1	Road	WHS Nomination survey	159316	26948	WHS, AONB
409	River Fal	Commercial	Modern	Present	Tidal estuary	None	5	Pontoons, moorings, victualling, refitting		184587	40340	
410	Rock	Ferry	Early Modern	Present	Tidal estuary	Hamlet, now a resort	3	Quay, crane, walls, slips, warehouse, lime kiln, quarries, posts, ferry, IRB station, sailing club		193230	75610	LBs (warehouse, quay, walls), AONB
411	Ropehaven	Fishing	Post Medieval	Modern	Rocky cove	Cottage	3	Pier, quay, wharves, stores, cottage, sea walls, track, slip, fish cellar	Assessment	203550	49000	AONB
412	Rotterdam Beach	Fishing	Early Modern	Modern	Beach head	Cottage	2	Road, fish cellars, building platforms? WW2 defences?		222607	51568	AONB
413	Roundwood	Commercial	Early Modern	Modern	Tidal estuary	Cottage	3	Quay, wharves, lime kiln, slip, shipyard	Fal audit; quay survey	183895	40408	LBs (quay, lime kiln), AONB
414	Roward's Quay	Uncertain	Early Modern	Modern	Rocky cove	None survives	2	Quay (natural feature?)		202625	43446	AONB
415	Ruan Lanihorne	Commercial	Early Medieval	Modern	Tidal estuary	Churchtown	2	Quay, lime kiln, church	Fal audit	189452	41915	AONB
416	Ruan River	Uncertain	Modern	Modern	Tidal estuary	None survives	2	Quay	Fal audit	188826	41913	AONB
417	Saltash	Leisure	Medieval	Present	Tidal estuary	Town	4	Pier, quay, sea wall, landing stage, boat houses, wharf, pontoon, warehouses, lime kiln, ferry, shipyards, sailing club	CSUS	243310	58660	SM (D-Day landing craft maintenance area), Conservation Area
418	Salter Mill	Leisure	Modern	Present	Tidal	Hamlet	2	Landing beach, tide mill, sea walls?		243067	63760	
419	Samson, East Porth	Uncertain	Unknown	Early Modern	Beach head	None survives	1	Track	Scilly audit	87850	12900	SM (prehistoric fields, settlements, cairns etc), Conservation Area, AONB
420	Samson, West Porth	Uncertain	Unknown	Early Modern	Beach head	None survives	1	Track	Scilly audit	87744	12796	SM (prehistoric fields, settlements, cairns etc),

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
												Conservation Area, AONB
421	Sand Acre Quay	Uncertain	Modern	Modern	Tidal estuary	None survives	2	Quay		242050	57560	AONB
422	Sandinway Beach	Uncertain	Iron Age	Iron Age	Beach head	None survives	1	Cliff castle		193507	80896	SM (cliff castle), AONB
423	Sandplace	Commercial	Early Modern	Modern	Tidal estuary	Hamlet	2	Quay, lime kilns		225030	56570	
424	Sandway Point	Fishing	Early Modern	Modern	Rocky cove	Cottage	2	Fish cellar(s), bathing stage		244060	51010	HPG, AONB
425	Sandy Mouth	Sanding	Early Modern	Modern	Beach head	None survives	1	Road, WW2 defences	ACVP	220194	110011	AONB
426	Sconhoe (Pentewan Beach)	Leisure	Modern	Present	Beach head	Resort	2	Lime kiln, holiday park		201705	46601	LB (lime kiln), AONB
427	Sconner Limekiln	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Lime kiln		236832	56485	LB (lime kiln), AONB
428	Scott's Quay	Leisure	Early Modern	Present	Tidal estuary	None survives	2	Quays, slip	Helford audit	173800	27280	AONB
429	Seaton	Leisure	Early Modern	Present	Beach head	Resort	2	Road, sea wall, lime kiln		230526	54317	
430	Sennen Cove	Fishing	Early Modern	Present	Beach head	Hamlet, now a resort	3	Pier, walls, capstan house, lifeboat station, stores, slips, fish cellars		135081	26323	Conservation Area, LBs (breakwater, slip, walls, castan house, stores), AONB
431	Shallowpool	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, lime kiln		223330	54980	
432	Sharrow Point	Fishing	Post Medieval	Early Modern	Beach head	None survives	2	Quay, fish cellar		239290	52140	
433	Shillingham Quay	Uncertain	Early Modern	Modern	Tidal	None survives	2	Quay		241334	57804	
434	Shorthorn Beach	Uncertain	Early Modern	Early Modern	Beach head	None survives	1	Sea defences, road, stream works, WW2 defences	Assessment	206165	52344	
435	Skinham Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		242554	60805	AONB
436	Sladesbridge	Commercial	Early Modern	Early Modern	Tidal estuary	Hamlet	2	Quays, lime kiln		201058	71445	
437	Slimeford	Commercial	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay	WHS Nomination survey	243900	69880	WHS, AONB
438	Soapy Cove (Gew-graze)	Commercial	Early Modern	Early Modern	Cliff port (serpentine)	None survives	2	Quarry		167568	14373	
439	Southdown	Leisure	Early Modern	Present	Tidal estuary	Hamlet	4	Quays, sea walls, former brickworks, slips, jetties, marina		243777	52677	LBs (quay, cooperage)
440	St Agnes, Beady Pool	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	88352	7429	Conservation Area, AONB
441	St Agnes, Berge Cooth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	87592	8232	Conservation Area, AONB
442	St Agnes, Cove Vean	Fishing	Early Modern	Modern	Beach head	None survives	2	Track, boat house	Scilly audit	88448	8100	Conservation Area, AONB
443	St Agnes, Hole of Cove Vean	Fishing	Early Modern	Modern	Rocky cove	None survives	2	Quay, boat house	Scilly audit	88520	7960	Conservation Area, AONB
444	St Agnes, Periglis, St Agnes	Fishing	Early Modern	Present	Beach head	Hamlet	3	Quays, slips, track, lifeboat house, stores	Scilly audit	87700	8400	SMs (two quays), Conservation Area, AONB
445	St Agnes, Porth Askin	Fishing	Early Modern	Modern	Beach head	None survives	2	Track, boat house	Scilly audit	88229	7427	SM (boat houses), Conservation Area, AONB
446	St Agnes, Porth Conger	Ferry	Early Modern	Present	Rocky cove	Hamlet	2	Quay, slip, coastguard station, road, landing stage	Scilly audit	88395	8494	Conservation Area, AONB

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447	St Agnes, Porth Coose	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	87748	8603	Conservation Area, AONB
448	St Agnes, Porth Killier	Uncertain	Unknown	Unknown	Rocky cove	None survives	1	Track	Scilly audit	88060	8516	SM (prehistoric settlement and fields), Conservation Area, AONB
449	St Agnes, The Bar	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	88665	8329	Conservation Area, AONB
450	St Anthony in Meneage	Fishing	Early Medieval	Present	Tidal estuary	Churchtown	2	Slip, stores, fish cellar, road, churchtown, WW2 defences	Helford audit	178295	25616	AONB
451	St Anthony in Roseland	Fishing	Early Medieval	Early Modern	Tidal estuary	Churchtown	3	Quay, slips, mooring posts, roads, cellar	Fal audit, Roseland audit	185501	32223	AONB
452	St Blazey	Commercial	Early Modern	Modern	Inland	Village	2	Canal, lime kiln	WHS Nomination survey	207064	55096	WHS
453	St Clement	Leisure	Early Medieval	Present	Tidal estuary	Churchtown	2	Landing point, church	Fal audit	185140	43866	Conservation Area, AONB
454	St Cyric's Creek	Leisure	Medieval	Present	Tidal estuary	Cottage	2	Landing place, priory	Fowey audit	213462	54547	AONB
455	St Germans	Leisure	Medieval	Present	Tidal estuary	Town	3	Quays, slips, sea walls, boat houses, lime kilns, ferry hards, viaducts, boat yards, roads, sailing club		236440	57010	Conservation Area, LBs (lime kiln, boat house), AONB
456	St Helen's	Quarantine	Post Medieval	Early Modern	Beach head	None survives	2	Track, pest house, quay, shipwreck grave	Scilly audit	89973	16775	SM (prehistoric settlement and fields, post-med quarantine station), Conservation Area, AONB
457	St Ives	Fishing	Medieval	Present	Beach head	Town	4	Piers, quay, wharves, harbour office, lighthouses, site of chapel, slips, custom house, lifeboat station, fish cellars, boat houses, lime kilns, sailing club	CSUS	151960	40690	Conservation Area, LBs (quays, lighthouses, warehouses, walls, fish cellars)
458	St John	Commercial	Early Modern	Modern	Tidal estuary	Churchtown	2	Lime kiln, fish pond, church		241017	53823	LB (lime kiln)
459	St Just in Roseland	Leisure	Early Medieval	Present	Tidal estuary	Churchtown	3	Quay, pier, sea walls, slips, stores, watch house, lime kiln	Fal audit; sea wall assessment	184595	35721	AONB
460	St Loy's Cove	Uncertain	Medieval	Modern	Rocky cove	Cottage	1	Road, medieval oratory, medieval chapel		142312	23099	
461	St Martins, Bull's Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	93544	15923	SM (prehistoric settlement and fields), Conservation Area, AONB
462	St Martins, Butter Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	92206	17042	Conservation Area, AONB
463	St Martins, Great Bay	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	92526	16187	SM (prehistoric settlement and fields), Conservation Area, AONB

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
464	St Martins, Little Bay	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	92323	16635	SM (prehistoric settlement and fields), Conservation Area, AONB
465	St Martins, Neck of the Pool	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	92059	15979	Conservation Area,, AONB
466	St Martins, New Quay	Ferry	Modern	Present	Beach head	Village	2	Quay, boat house, mooring bollard	Scilly audit	93084	15148	Conservation Area, AONB
467	St Martins, Old Quay	Fishing	Early Modern	Modern	Rocky cove	Village	2	Quay, slip, boat house	Scilly audit	92743	15187	Conservation Area, AONB
468	St Martins, Perpitch	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	93960	15461	SM (prehistoric settlement and fields), Conservation Area, AONB
469	St Martins, Porth Seal	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	91928	16605	Conservation Area, AONB
470	St Martins, Stony Porth	Uncertain	Unknown	Unknown	Rocky cove	None survives	1	Track	Scilly audit	93705	15905	SM (prehistoric settlement and fields), Conservation Area, AONB
471	St Martins, The Cove	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	92328	16923	Conservation Area, AONB
472	St Martins, The Porth	Ferry	Modern	Present	Beach head	Village	2	Track, quays, boat houses	Scilly audit	91410	16201	Conservation Area, AONB
473	St Marys, Bar Point	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	91713	12889	Conservation Area, AONB
474	St Marys, Carn Thomas	Safety services	Modern	Present	Rocky headland	None survives	2	Lifeboat station, slip	Scilly audit	90598	10766	Conservation Area, AONB
475	St Marys, Halangy Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track, battery, prehistoric settlement	Scilly audit	90896	12479	SM (battery), Conservation Area, AONB
476	St Marys, Innisidgen	Uncertain	Unknown	Unknown	Rocky cove	None survives	2	Slip, mooring bolllard	Scilly audit	92080	12780	Conservation Area, AONB
477	St Marys, Little Porth	Uncertain	Unknown	Unknown	Rocky cove	None survives	1	Track, cleared passage through boulders, breastwork	Scilly audit	91893	12894	SM (breastwork), Conservation Area, AONB
478	St Marys, New Quay	Fishing	Early Modern	Modern	Rocky cove	None survives	2	Track, cleared passage through boulders, breastwork, quay, boat house	Scilly audit	92656	12189	SM (breastwork), Conservation Area, AONB
479	St Marys, Newford Island	Uncertain	Unknown	Unknown	Rocky island	None survives	2	Quays	Scilly audit	90653	11291	Conservation Area, AONB
480	St Marys, Old Town	Fishing	Medieval	Early Modern	Beach head	Village	3	Quays, sea walls, slips, WW2 defences, fish processing trough	Scilly audit	91338	10110	SM (quays, WW2 pillboxes), Conservation Area, LB (fish salting trough), AONB
481	St Marys, Pendrathen	Uncertain	Early Modern	Early Modern	Beach head	None survives	2	Quay, slip, smuggler's cache	Scilly audit	91212	12723	Conservation Area, AONB
482	St Marys, Porth	Uncertain	Post Medieval	Early Modern	Beach head	None survives	2	Track, jetty	Scilly audit	92667	10579	SMs (WW2

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
	Hellick											pillboxes, breastworks), Conservation Area, AONB
483	St Marys, Porth Loo	Leisure	Modern	Present	Beach head	Village	1	Track, boatyard	Scilly audit	90857	11223	Conservation Area, AONB
484	St Marys, Porth Mellon	Uncertain	Unknown	Unknown	Beach head	Hamlet	1	Track, smugglers' cache, WW1 seaplane station	Scilly audit	90887	10819	SM (smugglers' cache), Conservation Area, AONB
485	St Marys, Porth Wreck	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	92997	10957	Conservation Area, AONB
486	St Marys, Porthcressa	Shipbuilding	Early Modern	Early Modern	Beach head	Town	3	Slip, shipyard	Scilly audit	90400	10400	Conservation Area, AONB
487	St Marys, Rat Island	Ferry	Post Medieval	Present	Beach head	Town	4	Piers, quay, jetties, warehouse, mooring posts, steps, lime kilns, ferry terminal, tide gauge	CSUS, Scilly audit	90187	10742	Conservation Area, LB (quay and breakwater), AONB
488	St Marys, South Pelistry	Uncertain	Post Medieval	Early Modern	Beach head	None survives	2	Track, quay	Scilly audit	92930	11915	SM (prehistoric field system, civil war fieldworks, kelp pits, and quay), Conservation Area, AONB
489	St Marys, Thomas Porth	Uncertain	Unknown	Unknown	Beach head	Hamlet	1	Track	Scilly audit	90892	11046	Conservation Area, AONB
490	St Marys, Town Beach	Leisure	Early Modern	Present	Beach head	Town	3	Sea wall, slips, lifeboat house, custom house, coastguard station, WW2 defences	CSUS, Scilly audit	90406	10577	Conservation Area, LBs (Custom house, cottages, etc), AONB
491	St Marys, Watermill Cove	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	92398	12257	Conservation Area, AONB
492	St Mawes	Fishing	Medieval	Present	Tidal estuary	Town	3	Quay, pier, sea walls, slips, stores, watch house, fish cellar, sailing club	Fal audit; sea wall assessment	184760	33010	Conservation Area, LBs (quay, cottages), AONB
493	St Michael's Mount	Fishing	Iron Age	Present	Beach head	Village	4	Piers, slips, sea walls, wharves, warehouses, boathouses, fish cellars, causeway, steps, bollards, etc	NT survey	151500	30100	Cons A, LBs (piers, bollards, barge house, fish cellars, warehouses, etc), HPG, AONB
494	St Winnow	Leisure	Early Medieval	Present	Tidal estuary	Churchtown	2	Quay, boat yard, sea walls, WW2 defences, churchtown	Fowey audit	211450	56990	LB (quay), AONB
495	Stepper Point	Commercial	Early Modern	Modern	Rocky cove	None survives	2	Landing stage, engine house, capstans, tramway, quarry, life saving apparatus house		191400	77990	AONB
496	Sunny Corner	Leisure	Early Modern	Present	Tidal estuary	None survives	2	Quay	Fal audit	183631	43276	LB (quay and garden wall)
497	Swanpool Beach	Leisure	Early Modern	Present	Beach head	Resort	1	Road, sea walls		180283	31297	
498	Tallack's Creek	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Slip, boat house	WHS Nomination survey, Fal audit	180025	38971	WHS

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499	Talland Sand	Commercial	Early Modern	Modern	Beach head	Cottage	2	Road, lime kiln, building platforms?, WW2 defences?		222368	51562	AONB
500	Tean, Back Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	90839	16563	SM (prehistoric settlement and fields), Conservation Area, AONB
501	Tean, East Porth	Commercial	Post Medieval	Early Modern	Beach head	None survives	2	Track, quay, mooring bollard, kelp pits	Scilly audit	90830	16330	SM (post-med quay, kelp pits, prehistoric settlement and fields), Conservation Area, AONB
502	Tean, St Helen's Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	90662	16531	SM (prehistoric settlement and fields), Conservation Area, AONB
503	Tean, West Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	90730	16461	SM (prehistoric settlement and fields), Conservation Area, AONB
504	Terras Bridge	Commercial	Early Modern	Modern	Tidal estuary	Cottage	2	Quay, canal		224829	55673	
505	The Gannel	Commercial	Early Modern	Present	Tidal estuary	Resort	2	Quays, slips, landing stages, boat house		178998	61247	
506	Tideford	Commercial	Early Modern	Modern	Tidal estuary	Village	2	Quay, lime kiln		235040	59730	AONB
507	Tideford Drive	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay		236060	59080	HPG, AONB
508	Tintagel Haven	Commercial	Early medieval	Modern	Beach head	Medieval town (Trevena), now a resort	2	Beach-head structures, landing stage, road, slate quarries, lead/silver mine, medieval castle, early medieval settlement	ACVP	205130	89050	AONB; SM (Settlement, castle, and church)
509	Tolverne	Leisure	Medieval	Present	Tidal estuary	Cottage	3	WW2 hard, jetty, store, medieval ferry	Fal audit	184530	40218	AONB
510	Torpoint	Ferry	Early Modern	Present	Tidal estuary	Town	3	Quays, jetties, chain ferry, ferry offices, slips, steps, lime kiln, sailing club	CSUS	244150	55110	
511	Torpoint (south)	Leisure	Early Modern	Present	Tidal estuary	Town	3	Quay, slip, jetty, ballast pond, manure factory, marina	CSUS	244050	54830	SM (ballast pond). LBs (ballast pond, manure factory)
512	Towan	Sanding?	Early Modern	Modern	Beach head	None survives	1	Road	Roseland audit	186921	32887	AONB
513	Treath	Fishing	Early Modern	Present	Tidal Estuary	Hamlet	3	Quay, landing stage, fish cellars, boat house, slips		176142	26174	
514	Trebarwith Strand	Uncertain	Early medieval	Present	Beach head	None survives	2	Beach-head structures, sea wall		204915	86408	AONB
515	Tredown Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, brick kiln		239210	56490	AONB
516	Treen Cove	Fishing	Iron Age	Modern	Rocky cove	Cottage	3	Fish cellar, boat house, track, coastguard station, huers hut, cliff castle, holy well and chapel		143483	38286	AONB
517	Tregagle's Hole	Uncertain	Early Modern	Modern	Rocky cove	None survives	1	Track, ruined cottage	Roseland audit	191549	37645	AONB
518	Tregantle	Uncertain	Modern	Present	Beach head	None survives	1	Road, fort		238518	52823	

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
519	Tregaskis Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay, boat house	WHS Nomination survey, Fal audit	178901	39171	WHS
520	Tregenna	Commercial	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay, tide mill (bone), road, quarries		196924	74442	
521	Tregonian Cottage	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay	Fal audit	185320	42280	AONB
522	Tregony	Commercial	Medieval	Medieval	Inland	Town	4	Quay, castle		192097	44738	Conservation Area
523	Tregunnel	Shipbuilding	Early Modern	Early Modern	Tidal estuary	Resort	2	Shipyard		180518	60865	
524	Tregunwith	Leisure	Early Modern	Modern	Tidal estuary	Cottage	2	Quay	Fal audit	180806	37812	AONB
525	Trelew	Leisure	Early Modern	Present	Tidal estuary	Hamlet	2	Lime kiln, sea defences, boat house, slip	Fal audit	181347	35407	AONB
526	Trelissick	Leisure	Early Modern	Modern	Tidal estuary	None survives	2	Quay, sea walls, road	Fal audit	183711	38866	HPG, AONB
527	Trelissick (E)	Leisure	Modern	Present	Tidal estuary	Country house	2	Jetty		184096	39506	
528	Treluggan Wood	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quays, quarries		237966	58485	AONB
529	Tremayne Quay	Leisure	Early Modern	Present	Tidal estuary	None survives	2	Quay, boat house	Helford audit	173460	26000	LB (quay), HPG, AONB
530	Tremoutha Haven	Commercial	Early Modern	Early Modern	Cliff port (slate)	None survives	2	Road, stacks of slates, watch house	RIS	213725	96530	AONB
531	Tremurlon	Leisure	Modern	Present	Tidal estuary	Cottage	2	Slip, quay	Helford audit	175290	26480	AONB
532	Trenant Point	Leisure	Early Modern	Present	Tidal estuary	None survives	2	Quay		225160	53920	
533	Trenant Wood	Uncertain	Modern	Modern	Tidal estuary	None survives	2	Quay		224778	53950	
534	Tresco, Abbey Farm	Military	Modern	Modern	Beach head	Village	2	Slip, WW1 flying boat station	Scilly audit	88950	14950	Conservation Area, AONB
535	Tresco, Appletree Bay	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	89155	13895	SM (prehistoric settlement and fields), Conservation Area, AONB
536	Tresco, Bathinghouse Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	89449	13706	SM (prehistoric settlement and fields), Conservation Area, AONB
537	Tresco, Borough Beach	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	89902	15294	SM (Battery), Conservation Area, AONB
538	Tresco, Crab's Ledge	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	89871	13912	SM (prehistoric settlement and fields), Conservation Area, AONB
539	Tresco, Crow Point	Ferry	Modern	Present	Rocky cove	None survives	2	Road, quay, slip	Scilly audit	89307	13366	Conservation Area, AONB
540	Tresco, Gimble Porth	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	88911	15932	Conservation Area, AONB
541	Tresco, New Grimsby	Ferry	Modern	Present	Beach head	Village	3	Track, quay	Scilly audit	88701	15287	Conservation Area, AONB
542	Tresco, Old Grimsby	Fishing	Medieval	Present	Beach head	None survives	3	Quay, coastguard station, rocket house, track	Scilly audit	89393	15644	SM (Battery), Conservation Area, AONB
543	Tresco, Pentle Bay	Uncertain	Unknown	Unknown	Beach head	None survives	1	Track	Scilly audit	90057	14395	SM (prehistoric settlement and

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
												fields), Conservation Area, AONB
544	Tresillian	Commercial	Early Modern	Modern	Tidal	Village	2	Quay, malthouse, lime kilns		186693	46249	
545	Trethem Creek	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay	Fal audit	186080	35150	AONB
546	Trevanson	Commercial	Early Modern	Early Modern	Tidal estuary	None	2	Lime kiln		198028	73411	AONB
547	Trevaunance	Fishing	Post Medieval	Present	Beach head	Mining town	3	Piers, quay, lime kiln, landing rock, road, fish cellar, shipyard, lifeboat station	WHS Nomination survey, Cove survey, CISI	172070	51720	WHS, AONB
548	Trevedor (E)	Uncertain	Early Modern	Early Modern	Tidal Estuary	None survives	1	Track		174411	26187	
549	Trevedor (W)	Uncertain	Early Modern	Modern	Tidal Estuary	None survives	1	Track		173850	26081	
550	Trevelyan Cove	Uncertain	Modern	Modern	Beach head	None	2	Boat house		153352	29473	AONB
551	Trevilling	Commercial	Early Modern	Modern	Tidal estuary	Hamlet	2	Quay, vitriol factory		198610	73165	AONB
552	Trevissome	Leisure	Modern	Present	Tidal estuary	House	2	Slips	Fal audit	179824	34224	AONB
553	Trevollard	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		238260	57830	AONB
554	Trevollard Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		238060	58070	AONB
555	Trewince Quay	Fishing	Early Modern	Modern	Tidal estuary	Cottage	2	Quay, fish cellar, lime kiln, road	Fal audit	186050	33530	LB (quay), AONB
556	Treyarnon	Fishing?	Early Modern	Present	Beach head	Villa, now a resort	2	Boat house, road, caravan park		185920	73980	AONB
557	Trolver Croft	Leisure	Modern	Present	Tidal estuary	Swollen hamlet	3	Quays, wharves, slips, stepping stones, boat yard	Fal audit	181407	38669	AONB
558	Truro	Commercial	Medieval	Present	Tidal estuary	City	5	Quays, warehouses, wharves, mooring posts, stores, lime kilns	CSUS, CAA, Fal audit	182910	44670	Conservation Area, LBs (quay walls, warehouses)
559	Tuckingmill Creek	Commercial	Modern	Modern	Tidal estuary	None survives	2	Landing stage, brick works, quarry, kilns	Fal audit	188556	41170	AONB
560	Tullimaar	Commercial	Early Modern	Modern	Tidal estuary	Cottages	2	Quays	WHS Nomination survey, Fal audit	178442	38836	WHS
561	Turnaware	Military	Modern	Modern	Tidal estuary	None survives	2	WW2 hard, quays, road	Fal audit, NT survey	183746	38316	AONB
562	Upton Towans	Sanding	Modern	Modern	Beach head	None survives	2	Slip		157140	40250	
563	Vault Beach	Uncertain	Early Modern	Modern	Beach head	None survives	1	Road	Roseland audit, NT survey	201505	40915	AONB
564	Venton Cove	Uncertain	Early Modern	Modern	Rocky cove	Cottage	1	Track		152806	30235	
565	Vugga Cove	Fishing	Early Modern	Early Modern	Rocky cove	None survives	2	Slip, fish cellar, boat house, road		177547	60990	
566	Wacker Lake	Commercial	Early Modern	Modern	Tidal estuary	Cottage	2	Quays, pier, lime kiln, tide mill, railway		238900	55090	AONB
567	Wadebridge	Commercial	Medieval	Modern	Tidal estuary	Town	4	Quays, warehouses, medieval bridge, swing bridge, railway station, sidings, slips, crane bases, lime kilns		199119	72462	Conservation Area, SM (bridge), LBs,
568	Wanson Mouth	Uncertain	Early Modern	Present	Beach head	Cottages	2	Slip, WW2 defences	RIS	219477	101100	
569	Warren Wood	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Boat house, quay	Fal audit	185145	40744	HPG, AONB
570	Watergate	Uncertain	Early Modern	Early Modern	Tidal estuary	Cottage	2	Quay		223400	54530	
571	Waterloo Quay	Uncertain	Early Modern	Early Modern	Tidal estuary	Edge of town	2	Quay	Fal audit	183402	43758	
572	Wear Cottages	Leisure	Early Modern	Present	Tidal estuary	Cottages	2	Sea walls, quay, landing stage		243789	52302	

UID	Name	Use	Period_ST	Period_END	Topography	Settlement	Scale	Key_Comp	Previous	NGR_E	NGR_N	Status
573	Wearde Quay	Leisure	Early Modern	Present	Tidal estuary	Hamlet	3	Piers, quays, landing stages, slips, stores, Civil War battery		242456	57627	SM (Civil War battery), LB (lime kiln), AONB
574	Weir Point	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay		243890	61990	AONB
575	West Down Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay		236450	58850	AONB
576	West Portholland	Fishing	Post Medieval	Modern	Beach head	Hamlet	3	Sea wall, cellars, lime kiln, WW2 defences	Roseland audit, buildings survey; Caerhays survey	195684	41162	LB (lime kiln), AONB
577	Whitesand Bay	Sanding	Early Modern	Modern	Beach head	Resort	1	Zigzag track		241158	50825	
578	Widemouth Bay	Uncertain	Romano-British	Present	Beach head	Resort village	1	Road, Romano-British land surface, WW2 defences, resort features		219869	102381	
579	Wiggle Sandway	Sanding	Early Modern	Modern	Beach head	None survives	1	Track		241882	50005	
580	Wilderness Point	Leisure	Present	Modern	Rocky cove	None survives	2	Landing stage, blockhouse, battery		245634	53213	LB (battery and block house), HPG, AONB
581	Winnianton	Uncertain	Early Medieval	Modern	Beach head	Hamlet	1	Road, early medieval settlement		165952	20685	
582	Withian Quay	Uncertain	Early Modern	Modern	Tidal estuary	None survives	2	Quay, landing stage	Helford audit	174845	25619	AONB
583	Wivelscomb Quay	Commercial	Early Modern	Modern	Tidal estuary	None survives	2	Quay, quarry		240070	57150	AONB
584	Wood Orchard	Uncertain	Early Modern	Early Modern	Tidal estuary	None survives	2	Quay, track		243719	62175	AONB
585	Woodgate Pill	Uncertain	Early Modern	Present	Tidal estuary	None survives	2	Quay	Fowey audit	211440	56560	AONB
586	Yeate Farm	Fishing	Early Modern	Present	Tidal estuary	None survives	2	Quay, landing point	Fowey audit	213001	52574	AONB

Appendix 2: Method for Stage 1 assessment

The aim of this stage was to carry out a rapid desk-based overview of Cornish ports and harbours, considering their significance, protection, condition, forces for change, vulnerability and opportunities. The method statement was set out in the project design (Young 2013) which was based on the brief (English Heritage 2013).

The first three broad tasks in this stage (Tasks 5 – 7) comprised a rapid assessment of forces for change, previous work and the potential of available sources in order to better define the purposes of the main assessment, the sources and methods to be employed, and the forms of analysis to be undertaken. As part of this task the results from two other pieces of work commissioned as part of NHPP Activity 4A3 were to be reviewed: 4A3.101, national review of ports and harbours, and 4A3.102, rapid review of threats and opportunities affecting them.

15.1 Rapid review of forces for change (Task 5)

This involved carrying out searches of relevant documents published by Cornwall Council and other local authorities, the Environment Agency (including EA trend data GIS layers which were incorporated in the SMP2 mapping), the National Trust (e.g. the NT coastal risk assessment summary for Cornwall and Devon which includes listings of the main issues impacting each location), English Nature and various web sources. Information was also sought through a series of structured discussions with Cornwall Council's Maritime section and the maritime manager and other bodies as appropriate. This task was broken down into four sub-tasks.

Literature and web search (Task 5a)

View EA trend data in GIS (Task 5b). This data included models and data relating to sea level change, coastal erosion, flooding, climate change, predictions of increased storminess and wave height, potential of coastal land slippage dues to excessive rainfall and flooding from the land, etc.

Structured discussions (Task 5c)

Prepare summary of results (Task 5d). A written and illustrated summary of the results of the review to be included in the project report (Stage 3).

15.2 Rapid review of previous work (Task 6)

This involved carrying out web and literature searches for published previous work on the history and archaeology of England's ports, harbours, quays, etc. in general and of Cornwall and Scilly's in particular, identifying the range of processes and events that led to ports and harbours being established and changed and thus influenced the form of their consequent material remains. The search was selective as there is a large amount of relevant material for Cornwall and Scilly alone. This task was broken down into two sub-tasks.

Rapid literature and web search (Task 6a)

Preparation summary of results (Task 6b). A written summary of the results of the review to be included in the project report (Stage 3).

15.3 Rapid review of sources (Task 7)

This task involved a rapid overview of systematically organised sources to assess their potential to inform more detailed and focussed recording, analysis and characterisation of England's ports, harbours, etc in general and of Cornwall and Scilly's in particular. These sources included

- HERs
- Modern and historic mapping
- Charts held by UKHO and other archives
- Aerial photography
- National Mapping Programme (NMP)

- Designation documentation
- Historic Landscape and Seascape Characterisations

This task was broken down into two sub-tasks.

Rapid assessment (Task 7a)

Preparation of summary of results (Task 7b). A written summary of the results of the review to be included in the project report (Stage 3).

15.4 Confirmation of the list of Cornish ports and harbours (Task 8)

On completion of the rapid assessment of aspects of ports and harbours nationally and those of Cornwall and Scilly in particular (Tasks 5 – 7) work focussed more on Cornwall and Scilly. The initial step was to confirm the provisional list of ports and harbours drawn up by HE. This list contained information on 299 ports and harbours but was compiled rapidly and was unlikely to be comprehensive. Nor did the HE list include grid references. This task was broken down into three sub-tasks.

Carry out HER search and export as Excel table (Task 8a). The HER was queried (via either HBSMR or GIS) using all site types which could be indicative of a port or harbour. The resultant table was then be filtered to remove duplicate records (e.g. a single port or harbour might contain four components and the search will list four records).

Comparison of this table with the HE list (Task 8b). The new list generated from the HER contained a greater number of sites than the HE list, but there were some sites on the HE list not picked up by the HER query. Therefore the two lists were cross-checked and the HER list updated as necessary.

Classification new sites as necessary (Task 8c). The HE list of sites included data on topography, associated settlement form, scale, designations, key components and previous study. The updated list produced from the HER was updated to include this information by converting the HE list into an Excel table and merging the two tables. Any new sites were classified in the same way that those on the HE list had been. To do this there was a rapid analysis of how the HE list has been classified (in particular the grading of scale on a 1 to 5 scoring) and classification of new sites as necessary.

15.5 Transformation of the list of sites into a classification (Task 9)

The updated list of ports and harbours was then transformed into an outline classification of sites using variables that could be recorded from the systematically organised sources identified during Task 7. These included eight variables:

- types of use;
- topography;
- chronology;
- scale;
- key maritime components (buildings, structures, spaces, etc.);
- current activity levels;
- associated settlement (its form, scale, character, etc.); and
- condition.

Each port or harbour was then assigned to a class that reflected morphology, functions, scale, chronology, etc. It was suggested in the project brief that it might be expected that there would be roughly ten distinct classes. This task was broken down into three sub-tasks.

Production of long list of classes (Task 9a). Given that there were five grades of scale and at least three options for the other seven variables listed above, there were more

than 100 possible permutations for the purposes of classifying the ports and harbours. A long list of these was produced using a scoring matrix in either Excel.

Amalgamation of the long list (Task 9b). Initial amalgamation of the 100+ permutations into ten classes of site was done using a scoring matrix similar to that used in assessing Cornwall's HLC sensitivity to produce a draft classification.

Liaison with Cornwall Council's Maritime section (Task 9c). In order to finalise the classification a meeting was held with Cornwall Council's Maritime section in order to take account of their views and specialist knowledge.

15.6 Modelling of likely vulnerabilities to change scenarios (Task 10)

Based on the forces for change identified in Task 5, models were produced for each class of ports and harbours which assessed their vulnerability to the various change scenarios. This included liaison with Cornwall Council's Maritime section. This task was broken down into two sub-tasks.

Creation of vulnerability models (Task 10a)

Preparation of a summary of the vulnerability models (Task 10b). Production of a written summary of the results of the review to be included in the project report (Stage 3).

15.7 Modelling capability to benefit from change (Task 11)

Based on the forces for change identified in Task 5, models were produced for each class of ports and harbours which assessed their capability to benefit from the various change scenarios. This included liaison with Cornwall Council's Maritime section. This task was broken down into two sub-tasks.

Create capability models (Task 11a)

Prepare summary of the capability models (Task 11b). Produce a written summary of the results of the review to be included in the project report (Stage 3).

15.8 Assessment of significance of each class (Task 12)

Based on the forces for change identified in Task 5, the significance of each class of ports and harbours was assessed according to the four forms of valuing identified in *Conservation Principles* (English Heritage 2008):

- Evidential value
- Historical value
- Aesthetic value
- Communal value

The method and results of this assessment were presented in a written summary to be included in the project report (Stage 3).

15.9 Identification of those classes of ports and harbours most at risk (Task 13)

Based on the vulnerability models (Task 10) those classes of ports and harbours which are most at risk from change were identified. A document listing these classes and explaining why they are most vulnerable was prepared and included in the project report (Stage 3).

15.10 Identification of those classes of ports and harbours most likely to benefit from change (Task 14)

Based on the capability models (Task 11) those classes of ports and harbours which are most likely to benefit from change were identified. A document listing these classes and explaining how they might benefit was prepared and included in the project report (Stage 3).

15.10.1 Liaison with CC Maritime section over ports and harbours where change is most likely (Task 15)

A structured meeting was held with the Maritime section. The likely changes and timescale will be summarised in a document to be included in the project report (Stage 3).

15.10.2 Production of a long list of ports and harbours for more detailed study (Task 16)

A long list was prepared of those ports and harbours from each of the classes identified as part of Task 9, which are either most at risk from forces for change or are most likely to benefit from change. These are the sites which could potentially be taken forward for further study in Stage 2 of the project.

15.10.3 Production of a final list of ports and harbours (Task 17)

From the long list of sites (Task 16) 15 ports and harbours were selected to be subject to more detailed study in Stage 2. The list included those ports and harbours with greater vulnerability or capability and included at least one site from each of the classes identified during Task 9. The final list was drawn up in conjunction with the CC Maritime section who indicated those places where there is a likelihood of substantial change or development in the short to medium term.

15.10.4 Preparation of an updated project design (Task 18)

The original project design for Stage 2 was refined. The updated project design took into account the length of the list of ports and harbours identified for further study, what detailed assessment was feasible within the project resource and what level that assessment should take for each class of ports and harbours.

Appendix 3: Method for Stage 2 assessment

This section details the tasks to achieve the objectives for Stage 2 taking into account the outcomes of Stage 1.

15.11 Setting up the project GIS and associated database (Task 19)

To undertake a characterisation of the selected ports and harbours a GIS project was set up using ArcGIS 10 with a relational Excel (.xls) database in which attributes can be systematically recorded using the fields in the database structure set out below in Tables 4and 5.

Table 4 GIS database structure

Attribute Name	GIS database alias	Description and guidance, terminology	Population Method	Format	Width
ObjectID	FID	Unique reference number for HSC polygon/grid cell.	Automated by GIS software	Numeric	10
Name	NAME	Name of Port.	manual	String	100
Historic Character Class	HCC	Class as derived from English Heritage Historic Character Thesaurus and where necessary, EH Monument Type Thesaurus.	automated	String	100
Broad Character Type	BDTY	Broad Character Type (present, dominant; national strategic level).	automated	String	100
Character Type	TY	Character Type (present, dominant; regional level).	automated	string	100
Sub-character Type	SBTY	Sub-character Type (present, dominant; local level).	manual	string	100
Period	PRD	Benchmark period of origin of the area represented in the polygon. Recorded for present historic character.	manual	string	50
Source	SRC	Sources used to identify present historic character. Attribute values to record supplier, date, precise GIS file name.	manual	string	250
Confidence	CNF	Degree of certainty/confidence of HC interpretation of present historic character.	manual	string	25
Notes	NTS	Further background information on history of the polygon. Expansion on information recorded	manual	string	250

Attribute Name	GIS database alias	Description and guidance, terminology	Population Method	Format	Width
		at Sub-type level.			
Previous HC Class 1	PRVS_HCC1	Class as derived from EH Historic Character Thesaurus and where necessary, EH Monument Type Thesaurus. To enable further time-depth. Only characterised where there is evidence to support assessment.	automated	String	100
Previous Broad Character Type 1	PRVS_BDTY1	Broad Character Type (past, dominant; national strategic level).	automated	String	100
Previous Character Type 1	PRVS_TY1	Character Type (past, dominant; regional level).	automated	string	100
Previous Sub-character Type 1	PRVS_SBTY1	Sub-character Type (past, dominant; local level).	manual	string	100
Previous Period 1	PRVS_PRD1	Benchmark period of origin of the area represented in the polygon. Recorded for past historic character.	manual	string	50
Previous Source 1	PRVS_SRC1	Sources used to identify past historic character. Attribute values to record supplier, date, precise GIS file name.	manual	string	250
Previous Confidence 1	PRVS_CNF1	Degree of certainty/confidence of HC interpretation of past historic character.	manual	string	25
Previous Notes 1	PRVS_NTS1	Further background information on history of the polygon. Expansion on information recorded at Sub-type level.	manual	string	250
Previous HC Class 2	PRVS_HCC2	Class as derived from English Heritage Historic Character Thesaurus and where necessary, EH Monument Type Thesaurus. To enable further time-depth. Only characterised where there is evidence to support assessment.	automated	String	100

Attribute Name	GIS database alias	Description and guidance, terminology	Population Method	Format	Width
Previous Broad Character Type 2	PRVS_BDTY2	Broad Character Type (past, dominant; national strategic level).	automated	String	100
Previous Character Type 2	PRVS_TY2	Character Type (past, dominant; regional level).	automated	string	100
Previous Sub-character Type 2	PRVS_SBTY2	Sub-character Type (past, dominant; local level).	manual	string	100
Previous Period 2	PRVS_PRD2	Benchmark period of origin of the area represented in the polygon. Recorded for past historic character.	manual	string	50
Previous Source 2	PRVS_SRC2	Sources used to identify past historic character. Attribute values to record supplier, date, precise GIS file name.	manual	string	250
Previous Confidence 2	PRVS_CNF2	Degree of certainty/confidence of HC interpretation of past historic character.	manual	string	25
Previous Notes 2	PRVS_NTS2	Further background information on history of the polygon. Expansion on information recorded at Sub-type level.	manual	string	250
Previous HC Class 3	PRVS_HCC3	Class as derived from English Heritage Historic Character Thesaurus and where necessary, EH Monument Type Thesaurus. To enable further time-depth. Only characterised where there is evidence to support assessment.	automated	String	100
Previous Broad Character Type 3	PRVS_BDTY3	Broad Character Type (past, dominant; national strategic level).	automated	String	100
Previous Character Type 3	PRVS_TY3	Character Type (past, dominant; regional level).	automated	string	100
Previous Sub-character Type 3	PRVS_SBTY3	Sub-character Type (past, dominant; local level).	manual	string	100

Attribute Name	GIS database alias	Description and guidance, terminology	Population Method	Format	Width
Previous Period 3	PRVS_PRD3	Benchmark period of origin of the area represented in the polygon. Recorded for past historic character.	manual	string	50
Previous Source 3	PRVS_SRC3	Sources used to identify past historic character. Attribute values to record supplier, date, precise GIS file name.	manual	string	250
Previous Confidence 3	PRVS_CNF3	Degree of certainty/confidence of HC interpretation of past historic character.	manual	string	25
Previous Notes 3	PRVS_NTS3	Further background information on history of the polygon. Expansion on information recorded at Sub-type level.	manual	string	250
Link	LINK	URL hyperlink to report texts for each port.	manual	string	250
Creation_Date	CRT_DT	Date of dataset /polygon creation/completion	manual	string	10
Creator	CRTR	Name of the person/organisation who compiled the HC	automated	string	250

Period

Description: Reflects time-depth. Benchmark period of origin of the present character represented in the polygon, e.g. 'Post-Medieval'. For coastal areas, land HC 'periods' may be used on the basis of dates and periods recorded in documentary and secondary sources.

Terminology: As with HSC National Method (Tapper and Hooley 2010). Date ranges from MIDAS Heritage 2007 Information group 'Date and Period', (www.fish-forum.info).

- Lower Palaeolithic (500,000BC – 50,000BC)
- Upper Palaeolithic (50,000BC – 10,000BC)
- Mesolithic (10,000BC – 4000BC)
- Neolithic (4000BC – 2500BC)
- Bronze Age (2500BC – 800BC)
- Iron Age (800BC – AD43)
- Romano-British AD43 – 410)
- Early Medieval (AD410 – 1066)
- Medieval (AD1066 – 1540)
- Post Medieval (AD1540 – 1750)

- Early Modern (AD1750 – 1900)
- Modern (AD1900 – Present)
- Unknown (Unknown in HSC structure) (Uncertain in FISH)

Also, the option of adding further detail –

Based on English Heritage Periods List (FISH – Inscription – 2008 FISH forum).

- First World War (AD1914 – 1918)
- Second World War (AD1939 – 1945)

Source

Attribute Name: Source is recorded.

Description: Originator core datasets used to inform characterisation including map source and scale or bibliographic reference.

Terminology: Source datasets will vary according to project study area. It is recommended that data sources are recorded consistently.

- HC assessor
- Ordnance Survey, c1880. 25 Inch Map Second Edition
- Ordnance Survey, c1907. 25 Inch Map Second Edition
- Ordnance Survey, 2010. MasterMap Digital Mapping
- RAF, *c*1946. Vertical black and white aerial photography
- Tithe Map, *c*1840
- Other

Confidence

Attribute Name: Confidence is recorded.

Description: Confidence is informed by the level of detail observed from sources, whether cartographic or textual. It relates to and reflects the HSC assessor's confidence in the HSC interpretation. For the marine zone the confidence value given to the dominant level in the marine tier is carried over to CNF at conflated level, otherwise the CNF value is populated for historic character in the inter-tidal and coastal zones where only one level is mapped.

Terminology:

- Certain: established as true or sure; unquestionable; indisputable
- Probable: having more evidence for than against, but some room for doubt
- Possible: some evidence for, but considerable room for uncertainty

Notes

Attribute Name: Notes is recorded for each time-slice:

Description: Notes attribute allows further information of relevance and interest to the character assessment to be briefly recorded. It is not a substitute to for the Character Types texts themselves or the LINKS attribute field that hyperlinks to them.

Terminology: Free text.

Link

Attribute Name: Hyperlink to offline/online HTML resource holding reports for each individual port:

Description: Path to hyperlink to offline/online HTML resource holding reports for each individual port.

Terminology: The path mapped to the HTML resource will depend on location of the GIS HSC database and the report text.

Creation_Date

Attribute Name: CRT_DT

Description: Date of character assessment and database, polygon population.

Terminology: dd/mm/yyyy

Creator

Attribute Name: CRTR

Description: Name of the originator/compiler of the character assessment and database.

Terminology: Personal name, initials or organisation and project code etc.

Table 5 Historic Character Structure

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
CIVIC	FLOOD AND EROSION DEFENCE	FLOOD DEFENCE	FLOOD DEFENCES	Manmade constructions used to prevent water flooding the surrounding area. Often taking the form of a bank or wall but may be more elaborate e.g. the Thames Barrier.		HSC structure terms v2.4	N
		SEA DEFENCE	BREAKWATER	A structure which protects a beach or harbour by breaking the force of the waves.	In relation to a beach	HSC structure terms v2.4	N
			GROYNES	A structure extending into the sea for the purpose of preventing further movement of washed up sand and shingle.		HE Monument Thesuarus	N
			SEA WALL	No thesaurus entry (Sea defenses or specific items).		Cornish Ports and Harbours	N
	DEFENCE	CIVIL DEFENCE SITE	AIR RAID SHELTER	A fortified structure used to protect civilians and military personnel from enemy bombing.		HE Monument Thesuarus	Y
			POND	Thesaurus entry; A body of still water often artificially formed for a specific purpose. Example, a pond for fire- fighting.		HE Monument Thesuarus	Y
	COMMEMORATIVE	COMMEMORATIVE MONUMENT	WAR MEMORIAL	A structure, building or site commemorating soldiers and civilians killed in war.		HE Monument Thesuarus	Y
COMMERCE	COMMERCE	MARKET	MARKET PLACE	An area, often consisting of widened streets or a town square, where booths and stalls may be erected for public sales.		HE Monument Thesuarus	N
		COMMERCIAL (OTHER)	SHOP	A house or building where goods are made or prepared and displayed for sale and sold.		HE Monument Thesuarus	Y
			RETAIL PARK	A grouping of retail warehouses and supermarkets with associated car parking.		HE Monument Thesuarus	Y
			SHOPPING PRECINCT	A pedestrianized shopping street, or a more complex arrangement of shopping 'squares' and walkways.		HE Monument Thesuarus	Y
			BUILDERS MERCHANTS	The premises of a builders merchant where building materials such as stone, cement, bricks, tiles and timber could be bought.		HE Monument Thesuarus	Y
			INN	A public house for the lodging and entertainment of travellers, etc.		HE Monument Thesuarus	Y
	STORAGE AND HANDLING	WAREHOUSING	FISH WAREHOUSE	A large building where fish are stored before sale.		HE Monument Thesuarus	N
COMMUNICATIONS AND MOVEMENT	WATER TRANSPORT	MARITIME SAFETY	BUOYAGE	No thesaurus entry.		HSC structure terms v2.4	N
			COASTGUARD STATION	A building or group of buildings situated close to the sea used by coastguards to enable them to monitor the coastline.		HE Monument Thesuarus	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			DAY MARK	An unlit, highly visible and distinctive feature on the coast that can be used by mariners for navigation during daylight only.		HSC structure terms v2.4	N
			LANDMARK TOWER	A prominent structure situated on land specifically as a guide to navigation for travellers or as an aid/warning to sailors out at sea.		HE Monument Thesuarus	N
			LIFEBOAT STATION	A building designed to house a lifeboat, usually with a stone ramp to launch the boat into the sea.	Below MLW	HE Monument Thesuarus	N
			LIGHTHOUSE	A tower or structure, with a powerful light or lights at the top, usually erected at an important or dangerous point on or near the sea-coast for the warning and guidance of mariners, but can also be erected inland for the guidance of travellers.		HSC structure terms v2.4	N
			LOOKOUT	A building or site from which a lookout can be kept.		HE Monument Thesuarus	Y
			SEAMENS MISSION	A building, usually associated with a port or dock, where seamen could get a meal and a cheap room. Often established by religious groups for the moral betterment of seamen.		HE Monument Thesuarus	Y
			COAST PATH	No thesaurus entry. The original coast paths used by coastguards to walk from lighthouse to lighthouse to patrol for smugglers		Cornish Ports and Harbours	Y
			ROCKET STATION	No thesaurus entry; rocket apparatus station.		HE Monument Thesuarus (adaptation)	N
		NAVIGATION ACTIVITY	ANCHORAGE	An area off the coast where ships anchor.		HSC structure terms v2.4	N
			SAFETY AREA	No thesaurus entry; areas of the sea with navigation restriction (Tapper and Hooley 2012, 86).		HSC structure terms v2.4	N
		NAVIGATION CHANNEL	ACTIVE NAVIGATION CHANNEL	Channels charted or otherwise in active use by shipping.		HSC structure terms v2.4 (adapted)	N
			DISUSED NAVIGATION CHANNEL	No thesaurus entry; Historic channels no longer charted or recorded in active use by shipping (Tapper and Hooley 2012, 81).		HSC structure terms v2.4 (adapted)	N
			BURIED NAVIGATION CHANNEL	No thesaurus entry; Historic channels no longer charted or recorded in active use by shipping; and with evidence that the channel is now a buried feature (Tapper and Hooley 2012, 81).		HSC structure terms v2.4 (adapted)	N
			DREDGED AREA	No thesaurus entry; Removal of sediments from harbour channels and berths to ensure a safe depth of water (Tapper and Hooley 2012, 81).	Below MLW	HSC structure terms v2.4 (adapted)	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
		NAVIGATION HAZARD	DRYING HAZARD	No thesaurus entry; hazards subject to exposure above the sea surface at various states of the tide (Tapper and Hooley 2012, 81).	Below MLW	HSC structure terms v2.4	N
			HAZARDOUS WATER	No thesaurus entry; areas of water column and/or sea surface above various sea-floor hazards (Tapper and Hooley 2012, 84).		HSC structure terms v2.4	N
			MARITIME DEBRIS	No thesaurus entry; areas deemed hazardous due to the predominance of recorded obstructions and fouls not known to be associated with a wreck (Tapper and Hooley 2012, 84).		HSC structure terms v2.4	N
			ROCK OUTCROPS	No thesaurus entry; areas dominated by rocks rising from the general level of the seabed and breaking the sea surface at some or all states of the tide, posing a risk to navigation (Tapper and Hooley 2012, 84).	Below MLW	HSC structure terms v2.4	N
			ROUGH WATER	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			SHALLOWS	No thesaurus entry or HSC Sub-Type.	Below MLW	Cornish Ports and Harbours	N
			SHOALS AND FLATS	No thesaurus entry; shallow areas of sand banks, shoals, bars and spits (Tapper and Hooley 2012, 84).	Below MLW	HSC structure terms v2.4	N
			SUBMERGED ROCKS	No thesaurus entry; areas dominated by rocks rising from the general level of the seabed but not breaking the surface of the water at any state of the tide, posing a risk for navigation (Tapper and Hooley 2012, 84).		HSC structure terms v2.4	N
			WATER TURBULENCE	No thesaurus entry; areas of the water column and/or sea surface characterised by heavy swell, strong currents and tidal races which pose a risk for navigation (Tapper and Hooley 2012, 84).	Below MLW	HSC structure terms v2.4	N
			WRECK HAZARD	No thesaurus entry; wreck hazard (Tapper and Hooley 2012, 83).	Below MLW	HSC structure terms v2.4	N
		NAVIGATION ROUTE	COMMERCIAL SHIPPING ROUTE	No thesaurus entry; a route regularly used by ships engaged in commerce or trade (Tapper and Hooley 2012, 92 - part of shipping industry).	Below MLW	HSC structure terms v2.4	N
			FERRY CROSSING	No thesaurus entry; regular commercial passenger route across an area of sea (Tapper and Hooley 2012, 82).	Below MLW	HSC structure terms v2.4	N
		PORT AND DOCK INSTALLATION	PORT	A settlement area that combines a harbour and terminal facilities at the interface between land and water transportation systems.	Below MLW	HE Monument Thesuarus	N
			LANDING POINT	A place where vessels can land passengers and goods.		HSC structure terms v2.4	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			DRY DOCK	A stone-faced enclosure, with entrance closed by a floatable caisson or by gates, which can be pumped dry for inspection, maintenance, or repair of the hull or underwater fittings of a ship or ships.	Below MLW	HE Monument Thesuarus	N
			WET DOCK	A large, watertight enclosure in which the water is maintained at the high-tide level so that vessels remain constantly afloat in them.	Below MLW	HE Monument Thesuarus	N
			HARBOUR	A sheltered port for ships.		HSC structure terms v2.4	N
			HARBOUR POOL	An area of water adjacent to a port or harbour (Tapper and Hooley 2012, 82).		HSC structure terms v2.4	N
			BREAKWATER	A structure which protects a beach or harbour by breaking the force of the waves.	In relation to a port	HSC structure terms v2.4	N
			MARINA	A dock or basin, often inland, used for mooring yachts and other small pleasure craft.	In relation to a port	HSC structure terms v2.4	N
			QUARANTINE AREA	An area often linked to a port where vessels are detained due to concerns regarding infectious diseases (Tapper and Hooley 2012, 82).		HSC structure terms v2.4	N
			QUAY	An artificial paved bank or solid landing place built parallel to, or projecting out from, the shoreline to serve in the loading and unloading of vessels.		HSC structure terms v2.4	N
			CONTAINER TERMINAL	An area of a port, dock or harbour where cargo vessels can load and unload large storage containers. May include a rail terminal for containers which have been transported to the port by rail.		HE Monument Thesuarus	N
			FERRY TERMINAL	An area of a port, dock or harbour, often including buildings for passport control and customs, where passengers and vehicles using ferry services can embark/disembark and where supplies can be taken on board.		HE Monument Thesuarus	N
			WAREHOUSING	Buildings used for the storage of goods or merchandise (adapted from EH Thesaurus).		HSC structure terms v2.4	N
			WHARVES	A large wooden structure built alongside the water's edge where ships may lie for unloading.		Cornish Ports and Harbours	N
			CHINA CLAY DOCKS	No thesurus term. An area of quayside and quayside infrastructure specifically for the loading and transportation of China Clay.		Cornish Ports and Harbours	Y
			WORKING PIER	No thesaurus entry; a raised platform supported on spaced pillars or props and projecting out into the sea and designed to facilitate the transfer of cargo and/or passengers on and off shipping (Tapper and Hooley 2010, 98).		HSC structure terms v2.4	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			SLIPWAY	A structure inclined towards the water on which a ship may be built or lowered into the water.		HE Monument Thesuarus	N
			JETTY	A mole or pier-like structure situated at the entrance of a harbour, or running out into lake or the sea, so as to defend the harbour or coast.	In relation to a port	HE Monument Thesuarus	N
			TRAINING WALL	A wall structure built to direct a current into the desired channel in a harbour, river etc		HE Monument Thesaurus (adaptation)	N
			CAPSTAN	An apparatus around which cables or hawsers are wound for hoisting anchors, lifting weights, etc.		HE Monument Thesuarus	Y
			TIDAL LOCK	A double lock placed between tidal water and a canal, etc.		HE Monument Thesuarus	Y
			BOAT HOUSE	A house or shelter for the storage and/or launching of boats.		HE Monument Thesuarus	Y
			CUSTOM HOUSE	An office, particularly at a seaport, at which customs are collected.		HE Monument Thesuarus	Y
			HARD	A firm beach or foreshore used for landing and loading of ships and other vessels. In more recent times hards have been reinforced with concrete.		HE Monument Thesuarus	Y
			BOAT STORE	A place where boats are stored.		HE Monument Thesuarus	Y
			PORT AUTHORITY OFFICE	The office of the body controlling a harbour and docks.		HE Monument Thesuarus	Y
			SLUICING POND	No thesaurus entry. A reservoir or pond used to wash silts out of a harbour or dock.		Cornish Ports and Harbours	Y
			POST OFFICE	A building, department or shop where postal business is carried on		HE Monument Thesaurus	Y
		WATER REGULATION INSTALLATION	SLUICE	A dam which can be raised or lowered to regulate the flow of water.		HE Monument Thesaurus	Y
CULTURAL TOPOGRAPHY	CULTURAL TOPOGRAPHY (INTERTIDAL)	CULTURAL TOPOGRAPHY (INTERTIDAL)	CREEK	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			FORESHORE (ROCKY)	No thesaurus entry;		HSC structure terms v2.4 (adaptation)	N
			FORESHORE (SANDY)	No thesaurus entry; Intertidal zone, the predominant cover being exposed fine rock sediments of a grain size generally perceived as 'sand' (Tapper and Hooley 2012, 114).		HSC structure terms v2.4 (adaptation)	N
			FORESHORE (SHINGLE)	No thesaurus entry; Intertidal zone, the predominant cover being exposed coarse rock sediments of a grain size perceived as 'shingle' or 'pebbles' (Tapper and Hooley 2012, 115).		HSC structure terms v2.4 (adaptation)	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			LAGOON	No thesaurus entry; A body of shallow water of salt, brackish or fresh water, totally or partially enclosed from the sea by a sand bar, spit or reef running across the entrance (Tapper and Hooley 2012, 113-114).		HSC structure terms v2.4	N
			SANDBANK	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			MUDBANK	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	Y
			SPIT	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			SALTMARSH	No thesaurus entry. An area of land typically covered during times of high tide and exploited at times of low tide (e.g. for animal pasture).		Cornish Ports and Harbours	Y
			INTERTIDAL MUDFLATS	No thesaurus entry. Areas of mudflats that are exposed between High and Low tide. See HSC sub-type 'Mudflats'.		HSC structure terms v2.4 (adaptation)	Y
			COASTAL SEA	No thesaurus entry. An area of open water beyond the line of mean low tide.		Cornish Ports and Harbours	Y
		SUBMERGED LANDSCAPE	SUBMERGED FOREST	A forest killed by rising sea-level. Nowadays only tree stumps survive - ('Submerged forest' in EH Thesaurus).		HSC structure terms v2.4	Y
	CULTURAL TOPOGRAPHY (LANDWARD)	CULTURAL TOPOGRAPHY (LANDWARD)	CLIFF	No thesaurus entry; a tall, steep and largely exposed face of the local geological formation, usually of rock though in some area cliffs may form from erosion of softer materials such as boulder clay (Tapper and Hooley 2012, 112).		HSC structure terms v2.4	Y
			DUNES	No thesaurus entry. An area of blown sand consolidated with coastal grasses, usually adjacent to areas of open beach.		HSC structure terms v2.4	N
			WATERCOURSE	A channel used for or formed by the conveyance of water. Can be natural, eg. a river or artificial eg. an aqueduct.		HSC structure terms v2.4	N
		PALAEOLANDSCAPE COMPONENT	PALAEOCHANNEL	The course or channel of a river or stream preserved as a geological feature.		HSC structure terms v2.4	N
FISHERIES AND AQUACULTURE	AQUACULTURE	FISH FARMING	FISH FARM	A farm with a pond, river, lake or tanks where fish are kept and bred for commercial purposes.		HSC structure terms v2.4 (adaptation)	N
		SHELLFISH FARMING	COCKLE BEDS	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			MUSSEL BEDS	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			OYSTER BEDS	A place where oysters are bred for consumption.		HE Monument Thesaurus	N
	FISHING	BAIT DIGGING	BAIT DIGGING	No thesaurus entry; areas dominated by regular digging to acquire bait for fishing by various methods (Tapper and Hooley 2012, 93).		HSC structure terms v2.4	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
		FISH PROCESSING	FISH CELLAR	A building where fish are stored. Often taking the form of a single storey building with one room, but also may provide living accommodation for a fisherman above. Found mainly in the South West of England.		HE Monument Thesaurus	N
			FISH MARKET	A market where fish is sold.		HSC structure terms v2.4	N
			FISH PROCESSING FACTORY	A factory where fish are processed into food products.		HE Monument Thesaurus	N
		FISHING SETTLEMENT	FISHING VILLAGE	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			NET LOFT	A component of another building, often a house, used for storing nets		HE Monument Thesaurus	Y
INDUSTRY	ENERGY INDUSTRY	ELECTRICITY DISTRIBUTION	SUBMARINE POWER CABLE	No thesaurus entry; cable laid on or beneath the sea floor and used to transmit electricity from the mainland to islands or to offshore installations, or to link offshore electricity generators to offshore installations, or to linkoffshore electricity generators to the onshore national electricity grid (Tapper and Hooley 2012, 90).		HSC structure terms v2.4	N
			ELECTRICITY SUB STATION	Building containing transformers to reduce the high voltage of the National Grid to the lower voltage of domestic supply.		HE Monument Thesaurus	Y
		ELECTRICITY GENERATION	RENEWABLE ENERGY INSTALLATION - TIDAL POWER	No thesaurus entry; buildings, sites and structures associated with the harnessing of tidal power for electrical or mechanical power generation. Includes tidal mills, tidal barrages and directly associated pools, transmission and distribution facilities (Tapper and Hooley 2012, 90).		HSC structure terms v2.4	N
			RENEWABLE ENERGY INSTALLATION - WIND POWER	No thesaurus entry; buildings, sites and structures associated with the harnessing of wind power for electrical power generation. Includes tidal mills, tidal barrages and directly associated pools, tansmission (Tapper and Hooley 2012, 90).		HSC structure terms v2.4	N
			RENEWABLE ENERGY INSTALLATION - WAVE POWER	No thesaurus entry; buildings, sites and structures associated with the harnessing of wave power for electrical power generation (Tapper and Hooley 2012, 90).		HSC structure terms v2.4	N
			COAL FIRED POWER STATION	A coal-burning power station where domestic electricity for an area is produced		Cornish Ports and Harbours	Y
		GAS DISTRIBUTION	GAS PIPELINE	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			GAS HOLDER	Expanding storage tank for gas, often includes a meter for measuring the amount used.		HE Monument Thesaurus	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
		HYDROCARBON DISTRIBUTION	HYDROCARBON PIPELINE	No thesaurus entry; a pipeline involved in the transmission of oil or natural gas between facilities involved in their extraction, processing, storage and or distribution (Tapper and Hooley 2012, 89).		HSC structure terms v2.4	N
			OIL WORKS	Buildings, sites and structures associated with the retrieval, refining, processing and storage of petroleum oil.		HE Monument Thesaurus	N
	FOOD INDUSTRY	FOOD PRESERVATION	SALT WORKS	A site, building or factory used for the production of salt.		HE Monument Thesaurus	N
			ICE WORKS	A factory or plant for the manufacture of ice using mechanized refrigeration techniques.		HE Monument Thesaurus	N
			SPOIL HEAP	A conical or flat-topped tip of waste discarded from a mine or similar site.		HE Monument Thesaurus	Y
			MALT HOUSE	A building with malt kilns for the malting of grains and with other similar equipment for brewing work.		HE Monument Thesaurus	Y
			GRANARY	A building, or first-floor room in a building, for the dry and secure storage of grain after it has been threshed and winnowed.		HE Monument Thesaurus	Y
	SHIPPING INDUSTRY	MARINE CONSTRUCTION	BOAT YARD	A place where boats are built and stored.		HSC structure terms v2.4	N
			SHIPYARD	A place where boats or ships are built or repaired.		HSC structure terms v2.4	N
			DOCKYARD	An enclosure in which ships are built and repaired, and all sorts of ships' stores are brought together.		HSC structure terms v2.4 (adaptation)	N
			DRY DOCK	A stone-faced enclosure, with entrance closed by a floatable caisson or by gates, which can be pumped dry for inspection, maintenance, or repair of the hull or underwater fittings of a ship or ships.		HE Monument Thesaurus	N
			WET DOCK	A large, watertight enclosure in which the water is maintained at the high-tide level so that vessels remain constantly afloat in them.		HE Monument Thesaurus	N
			OPEN ROPEWALK	A long, narrow, rectangular plot of land used for the manufacture of rope. Usually walled, it may include small buildings and awnings at each end. Often attached to a warehouse.		HE Monument Thesaurus	Y
			ROPEWALK	A very long, narrow, roofed building, often two-storeyed, used for the manufacture of rope. Often attached to warehousing, an engine house or offices. Can be included within the complex of a textile mill.		HE Monument Thesaurus	Y
			BARK HOUSE	No thesaurus entry. A building where sails and nets were boiled in oak tannin to preserve them,	more general than ship or boat yard - it includes storage and freight aspects	Cornish Ports and Harbours	Y

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			MARINE ENGINEERING WORKS	Specialized engineering workshop particularly for the production of marine engines or other large components of ships.		HE Monument Thesaurus	Y
	PROCESSING INDUSTRY	PROCESSING INDUSTRY	LIME KILN	A kiln in which lime is made		HE Monument Thesaurus	Y
			TIMBER YARD	An open yard or place where timber is stacked or stored.	characterise if significant above yard options	HE Monument Thesaurus	Y
			TIMBER POND	Pond for storing cut lengths of timber to prevent them becoming seasoned.		HE Monument Thesaurus	Y
			COAL DEPOT	A depot used for the unloading of coal.	characterise if significant above yard options	HE Monument Thesaurus	Y
			SAW MILL	A factory in which logs are converted to timber by running them through a series of saws.		HE Monument Thesaurus	Y
			ORE WORKS	A site or building where ore is processed to obtain metal.		HE Monument Thesaurus	Y
			FOUNDRY	A workshop or factory for casting metals.		HE Monument Thesaurus	Y
			CHINA CLAY DRIES	Building with underfloor kiln used for drying China Clay slurry prior to packing and transportation. Central feature of China Clay Works.		HE Monument Thesaurus	Y
			TIDAL MILL	A type of WATERMILL, powered by retaining seawater at high tide and then releasing it at low tide via the water wheel.		HE Monument Thesaurus (adaptation)	Y
			FACTORY	A building or complex, housing powered machinery and employing a large workforce for manufacturing purposes.		HE Monument Thesaurus	Y
			SMELTING WORKS	A manufacturing complex incorporating furnaces, calciner and condenser flues.		Cornish Ports and Harbours	Y
			SPOIL HEAP	A conical or flat-topped tip of waste discarded from a mine or similar site.		HE Monument Thesaurus	Y
			METAL SMELTING SITE	Buildings, sites and structures associated with the smelting of metals.		HE Monument Thesaurus	Y
			STONE WORKING SITE	A site where rough stone is processed, shaped, worked or formed into finished products.		HE Monument Thesaurus	Y
			CHEMICAL WORKS	An industrial complex involved in the production of chemicals.		HSC structure terms v2.4	Y
			BLACKSMITHS WORKSHOP	Place where a smith works iron. May be for small scale local use or within a larger industrial complex.		HE Monument Thesaurus	Y
			CALCINER	A kiln for roasting ore.		HE Monument Thesaurus	Y

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			HAMMER MILL	A mill, including a forge and powered hammers where hot metal is shaped by hammering and rolling.		HE Monument Thesaurus	Y
			CORN MILL	A mill for grinding corn.		HE Monument Thesaurus	Y
			GLASS WORKS	A site where all the processes for the production of glass and objects made from glass are carried out.		HE Monument Thesaurus	Y
			STABLEYARD	No thesaurus entry. A stable or farmyard associated with an industrial site.		Cornish Ports and Harbours	Y
		WATER POWER PRODUCTION SITE	PEN POND	A pond storing water to supply a HAMMER POND.		HE Monument Thesaurus	Y
			MILL POND	The area of water retained above a mill dam for driving a mill.		HE Monument Thesaurus	Y
	EXTRACTIVE INDUSTRY	MINERAL EXTRACTION SITE	QUARRY	An excavation from which stone for building and other functions, is obtained by cutting, blasting, etc.		HE Monument Thesaurus	Y
			SAND AND GRAVEL EXTRACTION SITE	Sites associated with the extraction from the ground of sand and gravel.		HE Monument Thesaurus	Y
			STREAMWORKS	A place where tin ore is washed using a stream as the water source.		HE Monument Thesaurus	Y
			MINERAL RAILWAY	A railway used for the conveyance of coal and other minerals.		HE Monument Thesaurus	Y
			ADIT	Horizontal tunnel opening from the surface used for haulage or access to a mine. It can also be used for drainage.		HE Monument Thesaurus	Y
MILITARY	DEFENCE	ANTI INVASION DEFENCE	ANTI LANDING OBSTACLE	Obstacles placed in open spaces and alongside roads designed to prevent the successful landing of enemy airborne forces.		HE Monument Thesaurus	N
			ANTI TANK OBSTACLE	Obstacles like concrete cubes, cylinders or pimples erected in the defence of Britain.		HE Monument Thesaurus	N
		COASTAL DEFENCES	COASTAL BATTERY	A defensive gun battery positioned to face out to sea to fire on enemy ships and amphibious craft.		HE Monument Thesaurus	N
			PILLBOX	An often squat building with thick, loopholed walls and a flat roof, designed to accommodate a variety of weapons, usually strategically positioned to cover a vulnerable point in a defensive system.		HE Monument Thesaurus	Y
			SEARCHLIGHT BATTERY	A site in which one or more searchlights were positioned to locate enemy aircraft or surface vessels for the benefit of batteries and night fighter aircraft.		HE Monument Thesaurus	Y
			OBSERVATION POST	A building or site for watching specific military activities or the movement of enemy forces, etc.		HE Monument Thesaurus	Y

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
		FORTIFICATION	ARTILLERY FORT	A fortified building or site with purpose built emplacements for artillery pieces.		HE Monument Thesaurus	N
			ARTILLERY CASTLE	Castles constructed between 1481 and 1561 for defence using heavy guns.		HE Monument Thesaurus	N
		MILITARY INSTALLATION	MILITARY BASE	A building or group of buildings, often surrounded by a system of fortifications, used as a residential and training site by members of an armed force.		HE Monument Thesaurus	N
			MILITARY DEPOT	A building or group of buildings, often enclosed by a system of fortifications, used by an armed force for the storage and distribution of military equipment.		HE Monument Thesaurus	N
			ORDNANCE DUMP	No thesaurus entry; an area regularly used for disposal of spent or redundant military weaponry (Tapper and Hooley 2012, 106).		HSC structure terms v2.4 (adaptation)	N
			EMBARKATION POINT	A site from which troops could be embarked onto transport vessels prior to the D-Day landings can also apply to muster/departure points from which troops embarked for their journey to the Front.		HE Monument Thesaurus	Y
			OPERATIONS ROOM	A room used for directing military operations and exercises.		HE Monument Thesaurus	Y
			NAVAL FIRING RANGE	No thesaurus entry; an area of sea across which naval ships fire artillery at target sites or areas (Tapper and Hooley 2012, 106).		HSC structure terms v2.4	Y
			RIFLE BUTTS	A target range used for rifle and small arms practice and recreational purposes.		HE Monument Thesaurus	Y
			MILITARY BUILDING	A building of unknown purpose found at a military site.		HE Monument Thesaurus	Y
			DRILL HALL	A building or site used for the exercise and training of military personnel.		HE Monument Thesaurus	Y
		MILITARY TRANSPORT	NAVAL DOCKYARD	A naval base that builds, repairs, docks or converts warships, and is manned by civilian engineers and workers and administered by engineer duty officers.		HSC structure terms v2.4	N
			SUBMARINE BASE	Coastal base for the docking, launch and maintenance of submarines.		HE Monument Thesaurus	N
			MILITARY RAILWAY	No thesaurus entry; a railway constructed to serve a miltary installation.		Cornish Ports and Harbours	Y
			SEAPLANE BASE	A building complex with hangars and slipways built adjacent to a body of water where seaplanes can be stored and maintained.		HE Monument Thesaurus	Y
RECREATION AND LEISURE	RECREATION	SEASIDE RECREATION	BEACH HUTS	Groups of small timber one-roomed dwelling where holiday makers could rest after a day spent sunbathing, swimming and playing on the beach (adapted from EH Thesaurus).		HE Monument Thesaurus (adaptation)	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			PARKS AND GARDENS	No thesaurus entry; areas of parks and gardens used for entertainment and relaxation (Tapper and Hooley 2012, 109).		HSC structure terms v2.4	N
			LEISURE BEACH	No thesaurus entry; Largely inter-tidal areas, predominantly of sand, used mostly for leisure and relaxation by coastal visitors (Tapper and Hooley 2012, 110).		HSC structure terms v2.4	N
			PLEASURE PIER	No thesaurus entry; a raised platform, generally of iron and/or wood, supported on spaced pillars or props and projecting out into the sea and designed to provide primarily recreational access over the sea from the shore to an adjacent position near or below MLW (Tapper and Hooley 2012, 109).		HSC structure terms v2.4	N
			PROMENADE	A place for strolling, public walks, etc. Usually associated with coastal resorts.		HSC structure terms v2.4	N
			MINIATURE GOLF COURSE	A prepared area of ground, featuring a 'mini' golf course with obstacles, used to undertake the leisure pursuit of miniature golf or 'crazy golf'.		Cornish Ports and Harbours	Y
			VISITORS CENTRE (LEISURE)	A building or complex, often associated with a historic site or place of interest, containing interpretation panels and information for visitors to the site or area.		HE Monument Thesaurus	Y
			RECREATIONAL OPEN GROUND	No thesaurus entry; an area of coastal ground, possibly having a former function but since used for a variety of recreational pastimes - eg. picnicking, walking.		HSC structure terms v2.4	Y
			LEISURE TRAIL	No thesaurus entry; an area of coastal ground, possibly having a former function but since deliberately crafted to provide a trail for leisure walks and rides.		Cornish Ports and Harbours	Y
			COAST PATH	No thesaurus entry; the designated pathway around the coast in the SW.		Cornish Ports and Harbours	Y
			VANTAGE POINT	A position or place that allows a wide or favourable overall view of a scene or situation.		HE Monument Thesaurus	Y
		INDOOR ENTERTAINMENT	AQUARIUM	No thesaurus entry; an area of buildings, artificial ponds and/or tanks in which aquatic plants and animals are kept for observation and study (Tapper and Hooley 2012, 107).		HSC structure terms v2.4	N
			AMUSEMENTS	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			CINEMA	A building where people pay to see films and 'moving pictures'.		HE Monument Thesaurus	N
			THEATRE	A building used primarily for the performing of plays.		HE Monument Thesaurus	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			MUSEUM	A building, group of buildings or space within a building, where objects of value such as works of art, antiquities, scientific specimens, or other artefacts are housed and displayed.		HE Monument Thesaurus	Y
		RECREATIONAL ACCOMMODATION	HOTEL	A large building used for the accommodation of paying travellers and guests.		HE Monument Thesaurus	N
			CAMPSITE	An area of land used for camping. Often includes facilities for washing, catering and entertainment.		HE Monument Thesaurus	N
			CARAVAN PARK	A camping place set aside for the use of caravans.		HE Monument Thesaurus	N
		SPORTS SITE	SWIMMING POOL	A large, manmade pool, usually lined with tiles, rubber or similar. Can be placed in the open air, eg. a LIDO, or built as part of a covered sports centre.		HE Monument Thesaurus	N
			SPORTS CENTRE	A specially built building where facilities exist for the playing of a variety of sports.		HE Monument Thesaurus	N
			LIDO	A public recreational complex centred around an open-air swimming pool. Use SWIMMING POOL as a component of LIDO.		HE Monument Thesaurus	N
			RECREATION GROUND	A public ground with facilities for games and other activities.		HE Monument Thesaurus	Y
			RIFLE BUTTS	A target range used for rifle and small arms practice and recreational purposes.		HE Monument Thesaurus	Y
		WATER SPORTS	BATHING/SWIMMING	No thesaurus entry; area used by people predominantly for bathing and/or swimming (Tapper and Hooley 2012, 108).		HSC structure terms v2.4	N
			LEISURE SAILING AREA	No thesaurus entry; area used for recreational sailing, yachting, and other small craft pursuits (Tapper and Hooley 2012, 108).		HSC structure terms v2.4	N
			LEISURE FISHING AREA	No thesaurus entry; area dominated by use for recreational fishing and angling (Tapper and Hooley 2012, 108).		HSC structure terms v2.4	N
			RECREATIONAL DIVE AREA	No thesaurus entry; area used by recreational divers, sometimes concentrated on wreck sites and other areas of semi-natural or historic environment interest (Tapper and Hooley 2012, 108).		HSC structure terms v2.4	N
			SAILING CLUB	A building used as a social venue by people interested in, and involved with, the sport of sailing.		HE Monument Thesaurus	Y
			ROWING CLUB	A building used as a social venue by people interested in, and involved with, the sport of rowing. An area of the building may be used for the storage of canoes, sculls etc.		HE Monument Thesaurus	Y

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			WATER SPORTS CENTRE	An area of land incorporating bodies of water, either natural or manmade for use in water sports activities such as canoeing, rowing and sailing. Usually includes a leisure complex with facilities for the users.		HE Monument Thesaurus	Y
RELIGIOUS, RITUAL AND FUNERARY	PLACE OF WORSHIP	CHURCH	PARISH CHURCH	The foremost church within a parish.		HE Monument Thesaurus	Y
		CHAPEL	CHAPEL	A freestanding building, or a room or recess serving as a place of Christian worship in a church or other building.		HE Monument Thesaurus	Y
			CHURCH	A building used for public Christian worship. Use more specific type where known.		HE Monument Thesaurus	Y
			SEAMENS CHAPEL	A place of worship specifically for mariners and their families.		HE Monument Thesaurus	Y
	RITUAL SITE	RITUAL SITE	STONE ALIGNMENT	A single line, or two or more roughly parallel lines, of standing stones set at intervals along a common axis or series of axes.		HE Monument Thesaurus	Y
	CEMETERY	CEMETERY	BARROW CEMETERY	A cluster of closely spaced barrows and related monuments (eg. ring ditches). Use with specific barrow-types where known.		HE Monument Thesaurus	Y
WATER SUPPPLY AND DRAINAGE	WATER SUPPLY AND TREATMENT	SEWAGE TREATMENT	SEWAGE WORKS	A group of buildings in which local sewage is filtered and purified in large rectangular or circular tanks.		HSC structure terms v2.4	N
			SEWAGE PUMPING STATION	A building used to pump sewage from the sewers to the filter beds of a sewage works.		HE Monument Thesaurus	N
			SEWAGE PIPELINE	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
		WATER PROVISION	WATER PUMPING STATION	A pumping station used as part of a clean water supply system.		HE Monument Thesaurus	N
			WATER PIPELINE	No thesaurus entry or HSC Sub-Type.		Cornish Ports and Harbours	N
			RESERVOIR	A large natural or artificial body of water, sometimes covered, used to collect and store water for a particular function, eg. industrial or public use.		HSC structure terms v2.4	Y
			POND	A body of still water often artificially formed for a specific purpose.		HSC structure terms v2.4 (adaptation)	Y
		WATER CHANNEL	WATER CHANNEL	An artificial watercourse for the conveyance of water		HE Monument Thesaurus	Y
			LEAT	Artificial water channel, usually leading to a mill.		HE Monument Thesaurus	Y
COMMUNICATIONS	TRANSPORT	TRANSPORT	RAILWAY	A line or track consisting of iron or steel rails, on which passenger carriages or goods wagons are moved, usually by a locomotive engine.		HSC structure terms v2.4	N
			CANAL	An artificial navigable waterway used for the transportation of goods. Nowadays also used for recreational purposes.		HSC structure terms v2.4	N

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			TRAMWAY	A track inlaid into a surface, on which tram cars run for the conveyance of passengers and/or goods or raw materials.		HSC structure terms v2.4	N
			ROAD	A way between different places, used by horses, travellers on foot and vehicles.		HSC structure terms v2.4	N
			BRIDGE	A structure of wood, stone, iron, brick or concrete, etc, with one or more intervals under it to span a river or other space.		HSC structure terms v2.4	Y
			CAUSEWAY	A road or pathway raised above surrounding low, wet or uneven ground.		HE Monument Thesaurus	Y
			TRACKWAY	A pathway, not necessarily designed as such, beaten down by the feet of travellers.		HE Monument Thesaurus	Y
			CYCLE PATH	A path, or marked lane, designated for use by cyclists.		HE Monument Thesaurus	Y
			TOW PATH	A path running by the side of a canal or navigable river for use in towing vessels.		HE Monument Thesaurus	Y
			FOOTPATH	A path for pedestrians only.		HE Monument Thesaurus	Y
			FORD	A shallow place in a river or other stretch of water, where people, animals and vehicles may cross.		HE Monument Thesaurus	Y
			FOOTBRIDGE	A narrow bridge for people and animals to cross on foot		HE Monument Thesaurus	Y
			CANAL BANK	uf Thesaurus term. A raised levee or bank to enclose a canal.		Cornish Ports and Harbours	Y
		TRANSPORT SITE	CAR PARK	A place where cars and other road vehicles may be parked and left.		HE Monument Thesaurus	Y
			BUS STATION	A building and open area from which buses, usually those working local or regional services, begin or end their journeys.		HE Monument Thesaurus	Y
WOODLAND	WOODLAND	WOODLAND	PLANTATION	A group of planted trees or shrubs, generally of uniform age and of a single species.		HSC structure terms v2.4	Y
			REGENERATED WOODLAND	No thesaurus entry. Woodland that has regenerated resulting from a non intensive landscape management regime.		Cornish Ports and Harbours	Y
			ORNAMENTAL WOODLAND	No thesaurus entry. An area of woodland deliberately cultivated for pleasure and display.		Cornish Ports and Harbours	Y
			ANCIENT WOODLAND	Woodland believed to have existed since at least 1600 in England and in England defined as such by Natural England. Usually managed for timber, coppice etc and often contains dividing banks, trackways, charcoal burning platforms etc.		HC Thesaurus	Y
ROUGH GROUND	ROUGH GROUND (COASTAL)	ROUGH GROUND (COASTAL)	SCRUB	No thesaurus entry. Semi-natural where woodland regeneration has begun resulting from a non intensive landscape management regime.		HSC structure terms v2.4	Y

CLASS	BROAD TYPE	CHARACTER TYPE	SUB-TYPE	DESCRIPTION	SCOPE NOTE	Origin of sub-type classification	Addition to original table
			COASTAL ROUGH GROUND	Coastal area with rough vegetation created and maintained by grazing, often seasonal, and by fuel collection. Much is now neglected and reverting to scrub.		HC Thesaurus	Y
AGRICULTURE AND SUBSISTENCE	ENCLOSED LAND	ENCLOSED LAND (COASTAL)	FIELD	An area of land, often enclosed, used for cultivation or the grazing of livestock.		Cornish Ports and Harbours	Y
			ORCHARD	An enclosure used for the cultivation of fruit trees.		HLC Revisions to West Penwith (adaptation)	Y
	LAND USE SITE	FARM	FARMYARD	A yard or enclosure attached to a farmhouse, usually surrounded by other farm buildings.		HE Monument Thesaurus	Y
DOMESTIC	SETTLEMENT	SETTLEMENT	TOWN	An assemblage of public and private buildings, larger than a village and having more complete and independent local government.		HSC structure terms v2.4	Y
			VILLAGE	A collection of dwelling-houses and other buildings, usually larger than a hamlet but smaller than a town with a simpler organisation and administration than the latter.		HSC structure terms v2.4	Y
			HAMLET	Small settlement with no ecclesiastical or lay administrative function.		HLC Revisions to West Penwith	Y
			HOUSE	A building for human habitation, especially a dwelling place.		HE Monument Thesaurus	Y
			FARMHOUSE	The main dwelling-house of a farm, it can be either detached from or attached to the working buildings.		HE Monument Thesaurus	Y
			MANOR HOUSE	The principal house of a manor or village.		HE Monument Thesaurus	Y
			GARDEN	An enclosed piece of ground devoted to the cultivation of flowers, fruit or vegetables and/or recreational purposes.		HE Monument Thesaurus	Y
		ENCLOSED SETTLEMENT	CLIFF CASTLE	An enclosure created by constructing one or more lines of ramparts across a promontory which projects into the sea.		HE Monument Thesaurus	Y
			ENCLOSED HUT CIRCLE SETTLEMENT	A settlement showing evidence for one or more hut circles, enclosed by a distinct boundary ditch, wall, earth rampart or similar barrier.		HE Monument Thesaurus	Y
			HILLFORT	A hilltop enclosure bounded by one or more substantial banks, ramparts and ditches. Use more specific type where known.		HE Monument Thesaurus	Y
			ROUND	A small, Iron Age/Romano-British enclosed settlement found in South West England.		HE Monument Thesaurus	Y

15.12 Delineation of a study area for each port or harbour (Task 20)

A study area was delineated that included all parts that are likely to be affected by the forces for change identified in Stage 1. As defined in the Brief and Project Design this meant that substantial parts of associated settlements are excluded, but the cultural topography of the immediately adjacent sea, cliffs and intertidal zone was be drawn in. Consequently, the study areas included a buffer of 50m beyond Mean Low Water (MLW) although coverage extended to encompass the full extent of ports and harbour basins if necessary.

15.13 Undertake a rapid characterisation of each selected port or harbour (Task 21)

Characterisation was carried out at a scale of 1:2,500 to be viewed at the same scale. The minimum polygon size will be 0.1ha as this will allow for a finer-grained characterisation than the 0.5ha minimum polygon size suggested in the Project Design. It is proposed that there should be three 'previous' time-slices based on

- 1940s RAF vertical photographs (held by CC)
- *c*1907 2nd Edition OS mapping
- *c*1840 Tithe mapping

All distinguishable parts of each port or harbour complex will be assigned to a Historic Characterisation Type. These HC Types will have shared form, history and issues and it is to these that specific and generic recommendations will eventually be attached.

For the working parts of harbours and the immediately adjacent sea or river the HC Types will build upon those set out in the draft EH HLC thesaurus (see Appendix 7). These may be tailored and subdivided as appropriate for the purposes of the larger scale and more fine-grained work that will be undertaken in this project and may be supplemented with HSC terms and their scope (Tapper and Hooley 2010, appendix 1) or new terms and scope notes as necessary where there are gaps in the HLC thesaurus.

Care will be taken not to unnecessarily repeat work already undertaken adequately elsewhere although it will draw in and make incorporate elements of earlier work wherever relevant, using that previous work efficiently to provide context for this project's narrower focus on the port heritage. For example the work will make use of but not repeat work already done under the 2004 Scilly RCZA (Johns *et al* 2004) or the urban characterisations already previously undertaken (for example through the Cornwall and Scilly Urban Survey and Cornwall Industrial Settlements Initiative; CSUS and CISI respectively), though there may be benefit from deepening such characterisation work, at larger scales, in the areas immediately around the harbours themselves.

15.14 Field work to assess typical components (Task 22)

An assessment was made of those types of component either typically or often located at the hearts of ports and harbours – quays, jetties, breakwaters, sea walls, docks etc – and buildings, structures and spaces that have direct links with ports and harbours (fish cellars, boat houses, lifeboat slips, winches, mooring posts, yards, etc). This element involved fairly rapid field examination, recording such variables as materials, building styles, evidence for past change, distinctive details, condition, obvious issues and threats, etc.

15.15 Prepare individual reports for selected ports and harbours (Task 23)

An individual report was produced for each selected port or harbour. As defined in the project brief and the project design the reports included the following sections:

1. Introduction (location, scale, main functions)

2. Outline history (origins, change, maintenance, association with industry, land and sea use, and with settlement)
3. Description (components, disposition, relationship with natural topography, evidence for growth, contraction, change, material, condition)
4. Forces for change and consequent vulnerabilities and opportunities.
5. Designation status, ownership, occupancy, utilisation, management and planning arrangements.
6. Assessment of significance of whole complex and key components
7. Summary of recommendations
8. Images (historic and contemporary photographs and other representations – recognising that Cornish ports and harbours have long been subjects for artists), including:
    - Record shots of significant components;
    - Historic maps showing change and continuity;
    - Location maps of the port and harbour within Cornwall and of key components within each port and harbour;
    - Characterisation maps, utilising the suggested three time slices.

These individual reports are also included in the project report (Stage 3) as easily detachable appendices.

15.16 Editing reports (Task 24)

Each of the reports was edited internally by the project executive and externally by HE.

Appendix 4: Historic Environment Action Plan (HEAP) for Cornwall and Scilly's ports and harbours

See overleaf, the Historic Environment Action Plan (HEAP) is also available as a separate project product.

Appendix 5: Individual reports for ports and harbours

The individual reports on those Cornish and Scillonian ports and harbours selected for the Project's Stage 2 study (see Section 6 of the Report) are available as separate project products. An example of one of the Stage 2 port reports is provided here: that for Penzance.

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Cornish Ports and Harbours Historic Environment Action Plan

Cornwall Archaeological Unit

CORNWALL COUNCIL

Historic England

Cornish Ports and Harbours

Historic Environment Action Plan

Authors	Fiona Fleming and Charles Johns
Derivation	Work carried out during Stages 1, 2 and 3 of Cornish Ports and Harbours: assessing heritage significance, protection, threats and opportunities
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The views and recommendations expressed in this report are those of Cornwall Archaeological Unit and are presented in good faith on the basis of professional judgement and on information currently available.

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Cover illustration

Aerial photograph of St Ives, West Penwith, Cornwall © *HER, Cornwall Council, 2005; F69-043*

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1 Introduction

Cornwall has a rich historic maritime resource, which survives as a physical reminder of human response and interaction in the liminal coastal landscape and the processes that have led to the formation of Cornwall's historic ports and harbours as we experience them today. The evidence for these can be prominent and highly visible or hidden beneath layers of historic change and adaptation; from the smallest cove or harbour to the large multi-purpose ports. Change is inevitable where human perceptions, responses and actions are resource-led, economy-driven and susceptible to external pressures, such as environmental fragility and escalating climate change. The historic maritime environment can be particularly vulnerable to these factors for change, as the recent study of selected Cornish ports and harbours (see Johns and Fleming 2016) demonstrates.

Conserving the historic environment remains an important objective at the heart of national and local spatial strategies and planning policy. A range of protections exist to help achieve this, including national designations (scheduling, listing etc.), local government initiatives (conservation areas, local lists, etc.) and the practical efforts of local communities and interest groups. Nonetheless, there is continued pressure on the historic environment through the demands of modern development, changes in technology, economic fluctuation and natural processes and this requires ongoing attention to ensure that the policies in place remain up to date, relevant, and effective.

This Cornish Ports and Harbours Historic Environment Action Plan (HEAP) is aimed at highlighting what is special and important about Cornwall's historic maritime environment, at bringing to attention the key challenges and opportunities in managing and protecting Cornish ports and harbours into the future, and establishing what the priorities for action should be. The basis for the HEAP is the15 ports and harbours selected for study during Stage 2 of the Cornish Ports and Harbours project (Johns and Fleming 2016), which were selected as representative examples of Cornwall and Scilly's range of port or harbour classes (Fig 1). The HEAP process has been formulated using characterisation, analysis and assessment, by which to consider Cornish ports and harbours' vulnerability to a range of forces for change. In particular, Historic Landscape Characterisation (HLC) and Historic Seascape Characterisation (HSC) principles have been used to develop strategies to appropriately manage the 'cultural habitats' identified by this process (Clark *et al* 2004, 53). Much of the methodology applied in the Cornish Ports and Harbours study (Johns and Fleming 2016) has been the same as that used for the preparation of this HEAP (following the guidelines set out in Clark *et al* 2004) which summarises the collated results from the main study with reference to those sections that are relevant to, and should be used in conjunction with, it.

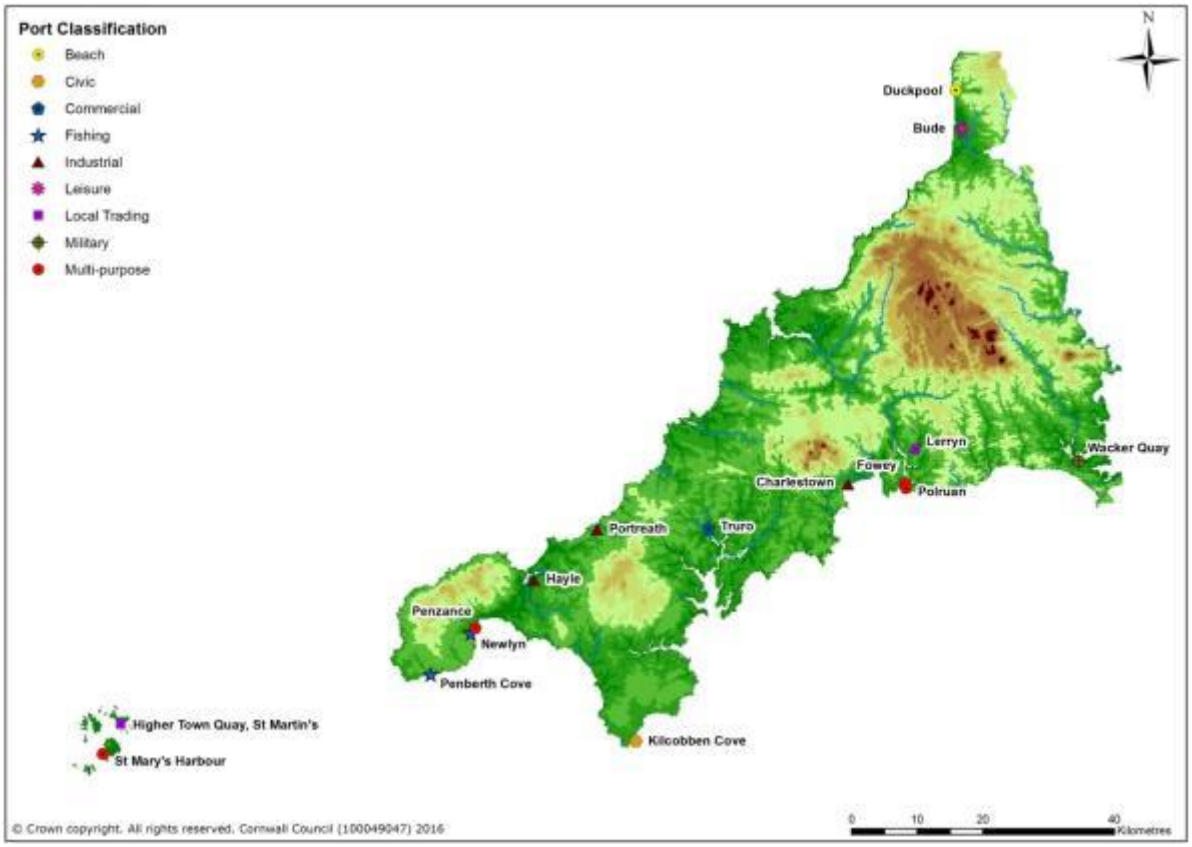

Fig 1 Location of Cornish Ports and Harbours selected and their classification.

2 The Resource

Ports and harbours, in Cornwall, Scilly and elsewhere in England make a major contribution to local character and distinctiveness, forming significant landscape features and reflecting the varied history, use and development of maritime settlements, their hinterlands and the sea. They typically include ranges of substantial and varied specialised buildings, structures, equipment, earthworks and spaces. Being at the interface of land and sea (whether that is open or within estuaries), they are, or in some cases were, important hubs that reveal much about both historic and current terrestrial and maritime activities. As the points where individuals and groups occasionally or routinely either cast off into or returned from the uncertain world of the sea, their histories are often unusually colourful. Indeed, the economic value and importance of ports and harbours is in part currently derived from their contribution to Cornwall and Scilly's tourism industry. As many ports and harbours are still in active use and so continue to develop and require maintenance in the face of natural and anthropogenic forces for change, they form an especially dynamic part of the coastal historic environment resource (English Heritage 2013).

Fig 2 The small fishing cove at Penberth Cove, West Penwith has been preserved under National Trust ownership.

In Cornwall and Scilly, there is great variety in ports and harbours. Some of these are fairly simple or serving single purposes,

perhaps small fishing coves, such as Penberth Cove (Fig 2), for example, local trading ports such as Lerryn, or the military quay at Wacker Quay, St Anthony. Others are more complex, serving a range of activities and functions, such as the multi-purpose ports of Fowey and Penzance (Fig 3). Many ports, such as Hayle, Bude, Portreath and Charlestown, for example, that were established around local industry and commerce have seen their original function diminish as industries and technologies changed (Fig 4). This has resulted in far reaching consequences on the economy and development of these ports, many of which have had to adapt to survive, to varying degrees of success.

Fig 3 The modern multi-purpose port of Penzance developed around the medieval quay from the late 18th century onwards.

The chronologies of Cornwall and Scilly's ports and harbours also range widely, from probable prehistoric landing places at or near distinctive promontories, medieval coastal harbours and seasonal fishing centres and the apparently equally early tiny quays serving medieval farming hamlets on Cornwall's creeks, to the numerous post-medieval and modern constructions that made industry and commerce viable (Johns and Fleming 2016, 3).

The scale, form and survival of the historic maritime environment of the Cornish ports and harbours directly relate to their historic origins and functions and the responses to forces for change that have impacted on these over time. The historic character of individual ports and harbours is a product of the material survival of the historic maritime environment and the social, cultural and physical influences that have variously moulded, adapted and altered this environment and its setting.

Cornwall and Scilly's maritime heritage is a significant aspect of their historic environment and historic character. Being a relatively narrow peninsula and with such a prominent coastline, Cornwall's historic, built, social, cultural, economic and semi-natural environments are all closely inter-linked with, and influenced by, the coastal landscape resource and the far-reaching links with the rest of Britain and beyond. The historic maritime character of Cornish port and harbour areas and their management, protection and nurture are therefore vital to Cornwall and Scilly's distinctiveness, past, present and future.

Fig 4 The former industrial port of Charlestown is now a popular visitor destination and is frequently used as a film set location.

Moving forwards, the management and protection of the historic environment and character of Cornwall and Scilly's ports and harbours depends on clear identification and understanding of the threats and opportunities that face them and putting into place effective means for handling change. Modern development, commercial expansion and unsympathetic use of redundant structures are universal pressures on the historic environment

everywhere but ports and harbours in Cornwall and Scilly also have particular vulnerability to threat in coastal areas; the anticipated impacts of climate change events, for example, are of increasing concern. The Cornish Ports and Harbours HEAP considers these concerns and suggests potential means of mitigation and opportunity that can be applied to the broader suite of ports and harbours in Cornwall and Scilly, and further afield (and see Johns and Fleming 2016, Sections 5 and 9). The initiative behind the development of HEAPs to create a process for assessing and delivering management strategies was first introduced in Cornwall (e.g., Herring and Preston-Jones 2003) and the Cornish Ports and Harbours HEAP aims to continue and expand on that legacy.

3 Aims

The aims of the HEAP are:

- To help guide strategic planning policy, guidance and advice; to facilitate conservation and management of the port-related historic environment and its character; and to enhance community understanding and enjoyment of this resource
- To embrace all aspects of port environments, including historic character, its physical setting, the built environment, the intertidal zones and the archaeology
- The philosophy of the HEAP starts from the recognition that the ports and harbours of Cornwall and Scilly are dynamic places that change over time
- To guide the design of development, ensuring that change is appropriate in terms of its impact on fabric and character
- To ensure that development or change is appropriate in terms of its impact on historic fabric and character and so seeks to guide the design of change
- To address issues affecting the sustainability of the historic environment and historic character of Cornwall and Scilly's ports and harbours
- To promote joint working and partnership in managing the Historic Environment
- To promote public understanding and enjoyment of Cornwall and Scilly's ports and harbours historic environment and historic character

The HEAP will be an inspiration for positive action by local organisations and communities, which will enhance the understanding of the historic ports and harbours and environment and its management. It will also:

- Help Cornwall Council to manage change and to ensure that planned development conserves and enhances Cornwall and Scilly's ports and harbours historic environment and historic character;
- Provide information to port authorities to assist with the drawing up of management plans;
- Provide archaeologists and the historic environment service with more information about the historic environment;
- Guide new historic environment initiatives by steering groups and other bodies with a vested interest in port heritage, protection and management.

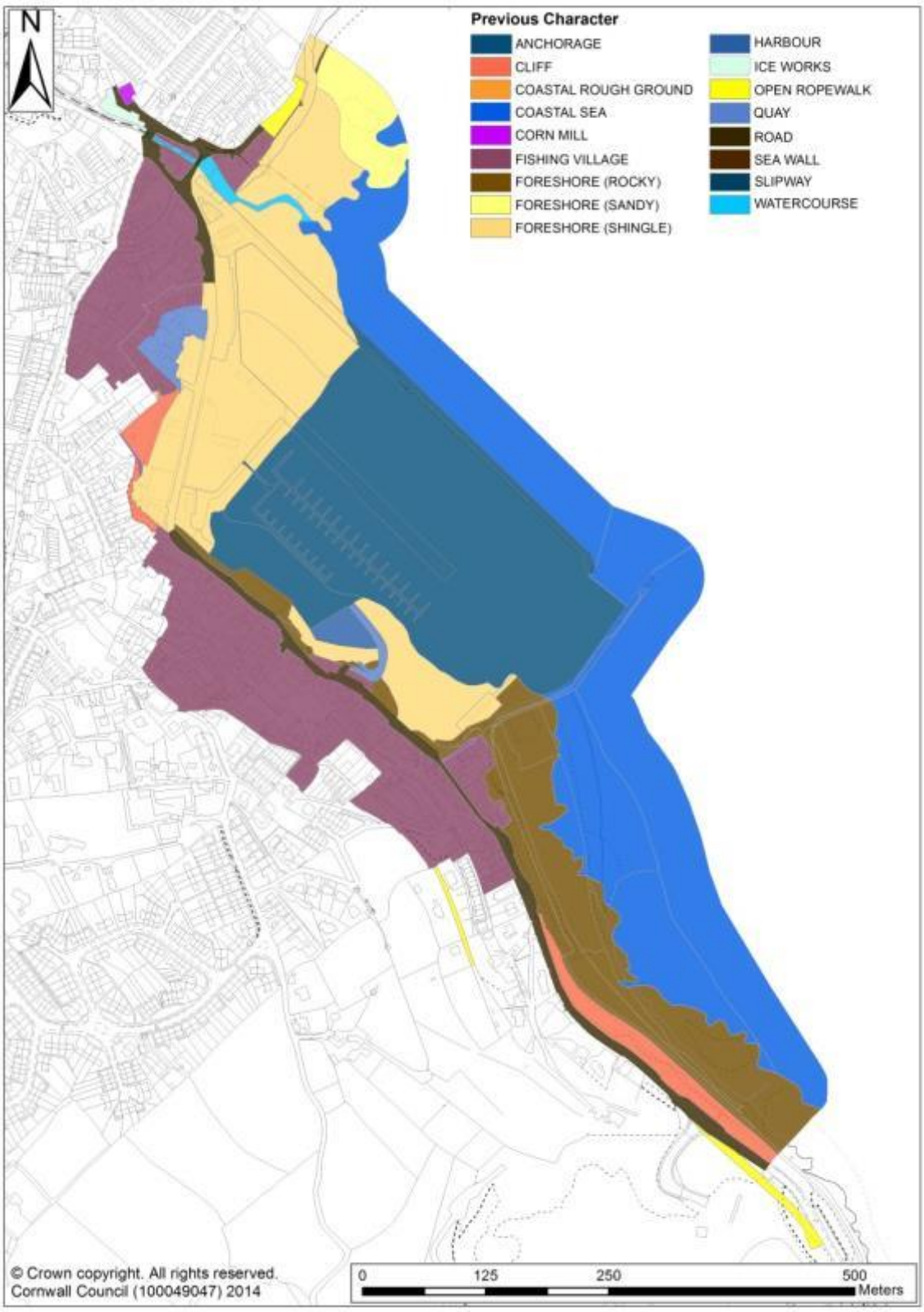

Fig 5 The early to mid-19th century characterisation of Newlyn, mapped at 'Sub-type' level. The characterisation illustrates the separate fishing villages of Newlyn Town and Street-an-Nowen and their individual medieval quays, before these were joined to form one large town in the early 20th century.

4 Characterisation

The 15 Cornish ports and harbours assessed in the main study (Johns and Fleming 2016) were selected as representative of the range of ports and harbours found within the county and their likely vulnerabilities to forces for change (Table 1). The scope of each port assessment was determined by those areas directly related to port character or function, which included isolated components that are, or were, directly associated with port activity. Typically this included the present-day working port areas; historic industrial buildings or structures with a port-related function; historic port areas now converted to new use (e.g. residential or commercial redevelopment, leisure provision); landscape areas that are, or were, the site of port-related buildings (e.g., coastguard stations, lifeboat houses, lookouts); coastal areas that have, or once had, a port-related function (e.g.. areas of foreshore used as landing points, shipyards or mineral extraction); inter-tidal areas that have, or once had, a port-related function (e.g., navigation channels, dredging areas, anchorages).

The historic character assessment of individual ports and harbours was carried out to a fairly fine-grained 'Sub-type' level (see Johns and Fleming 2016, Section 7). These Sub-types ranged in size, from individual buildings, such as coastguard stations, for example, to larger components, such as 'quays', harbours or 'fishing villages', each being attributed on the basis of a unified character or function (Fig 5). Sub-types were identified as the lowest level of an ascending hierarchy of Character types, Broad types and Classes. At a coarser grain of analysis the 'Broad type' provided the wider context of port character; mapping at the finer grained Sub-type level allowed the characterisation of significant port-related components and illustrated the more subtle changes within historic port areas. The historic characterisation of the 15 ports and harbours covered by the main study is discussed in greater detail in the main report (Johns and Fleming 2016, Section 7) and the data is held on GIS at the offices of Cornwall Archaeological Unit (CAU), Cornwall Council.

The majority of Cornwall and Scilly's ports and harbours have an immense time depth, typically demonstrating use back into the early medieval period, and often earlier. In most cases the historic growth of a port or harbour can be related to the dual aspects of location and economic impetus. Small coves around the Cornish coast (e.g., Penberth Cove, Kilcobben Cove, Duckpool, Praa Sands) provided vital historic landing places, harbours and fishing coves but were restricted from growing into larger ports by their physical geography; key locations around the deep river estuaries (e.g., Fowey, Hayle, Truro) determined larger local centres of maritime activity and seaborne trade, which subsequently developed into sizeable ports through their proximity to historic sea and land trading routes and the capacity to expand into ancillary areas of industry and settlement; smaller inland ports at the navigable head of rivers (e.g. Lerryn, Tregony, Lostwithiel) developed, and principally remained, as local trading ports; larger ports along the open coast (e.g., Penzance, Newlyn, Falmouth, Bude, St Mary's) developed in tandem with urban growth and seaborne trade, and the growth in local industries such as fishing, shipbuilding and mineral extraction. A small number of ports and harbours were established around the coast of Cornwall whose primary use was for military purposes (e.g., Wacker Quay (Antony), Crab Quay (Pendennis), Mylor Creek)

By the late 19th to early 20th centuries the decline in maritime industry along with external forces for change, such as wartime defence, settlement expansion and the rising popularity of coastal recreation, opened up the way for increased redevelopment within and around former port areas. This resulted in the construction of military coastal defences within key areas, although these were comparatively short-term, and an increase in residential, commercial and recreational development. Another evolving feature within many ports and harbours has been the provision of sea defences and flood protection schemes, some of which are historic and integrate heritage values with their practical purpose.

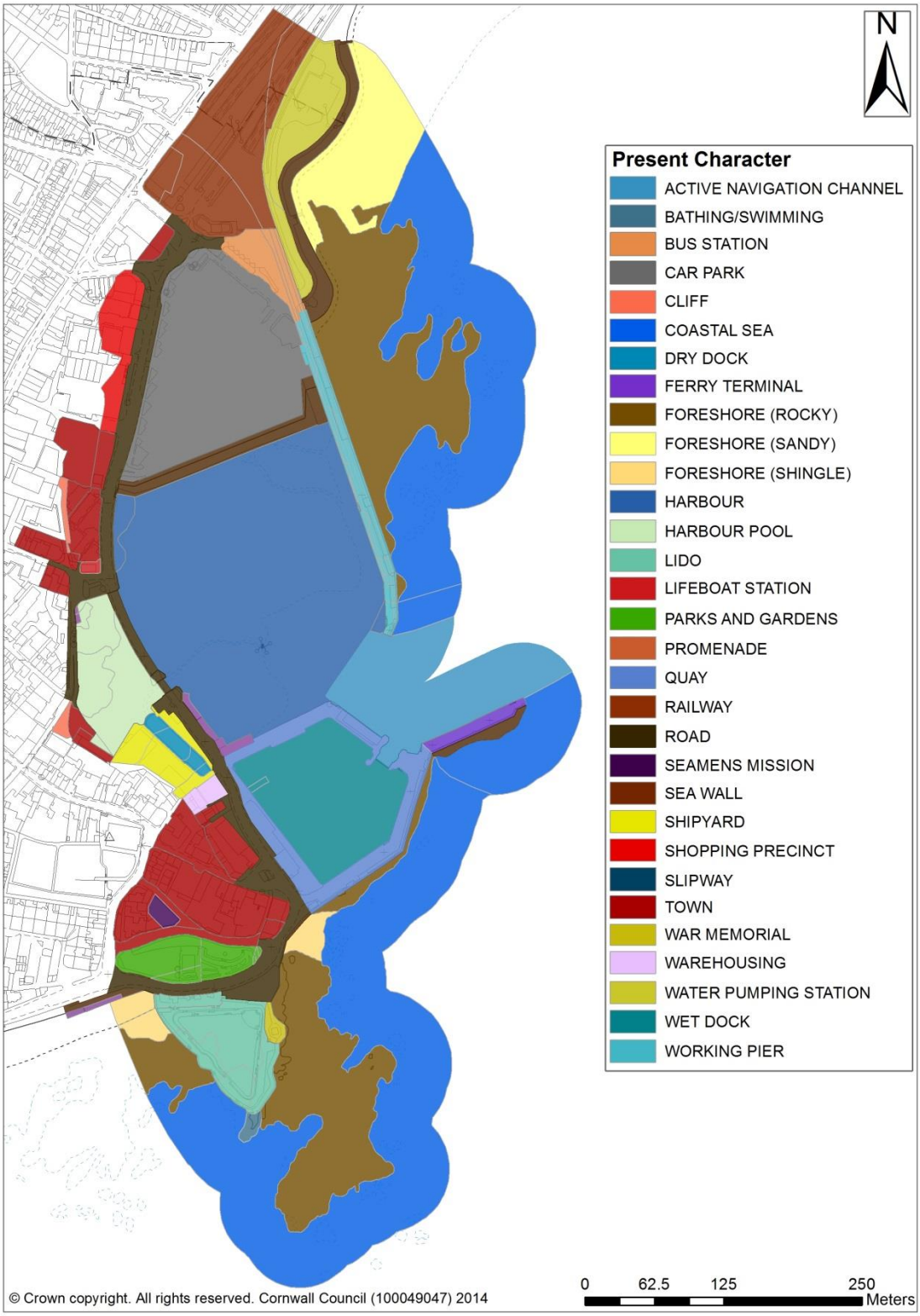

Fig 6 The present day characterisation of Penzance, illustrating the encroachment of residential and commercial development into former port areas; the provision of leisure facilities, such as the Jubilee Pool lido, which incorporates the former Battens Wharf; and the construction of defensive sea walls at the northern end of the harbour.

The characterisation of Cornwall and Scilly's ports and harbours illustrates the changes in port character that have occurred broadly over the last two centuries of port and harbour development, as this timeframe has been the most practical in terms of identifying changes in historic character through the use of historic mapping, aerial photography and practical fieldwork. The characterisation was presented through three time-slices to illustrate changes in historic character at key points in port and harbour development; broadly this translated as the early to mid-19th century (in some case the late 18th century where sources allowed), the late 19th to early 20th century and the present-day. The present-day character of many of Cornwall and Scilly's ports and harbours particularly illustrates the changes resulting from encroaching residential, commercial and leisure-based development, as well as the increased construction of coastal defences in response to the impacts from climate change events (Fig 6).

The characterisation of the 15 ports and harbours selected by the Cornish Ports and Harbours Assessment (Johns and Fleming 2016) has demonstrated the juxtaposition of certain character 'Sub-types' with different functional and cultural locations within port and harbour extents. As mentioned above (p6), these Sub-types represent component parts, or attributes of the coarser grain characterisation 'Broad types'. The Sub-types of which provide the finer grain character of individual structures or spaces with broader functional, cultural or topographic contexts.

Examples of Sub-types associated with historic port cores therefore typically include:

- quays, slipways, jetties, warehousing, harbours, anchorages, landing points, fish cellars, fish processing facilities, fishing villages, capstans, boat houses, shipyards, wet docks and dry docks.

Closely associated with, but usually peripheral to, the port core are Sub-types reflecting various aspects of maritime civic provision, such as;

- customs houses, lifeboat houses, coastguard stations, seamen's missions

Also closely associated with, and located both within and peripheral to, port cores there may be industrial Sub-types, such as;

- foundries, lime kilns, saw mills, timber yards, coal depots, blacksmiths workshops, mineral railways, corn mills, mill ponds, ice works, factories.

Within the coastal and intertidal areas there are likely to be Sub-types reflecting both semi-natural and man-made components, all of which have served a range of past and present cultural roles and which might include;

- foreshore (rocky, sandy or shingle), cliffs, dunes, saltmarsh, intertidal mudflats, coastal rough ground, navigation channels, dredging areas, disused navigation channels, watercourses, ancient and regenerated woodland.

With the changes to many ports resulting in a change to residential, commercial or leisure-based use, former port-related buildings, structures or spaces might be found to include Sub-types such as;

- villages, towns, shops, hotels, promenades, leisure beaches, water sports centres, car parks, recreational open ground, parks and gardens.

Related to specific periods of military threat might be Sub-types such as;

- coastal batteries, artillery forts, searchlight batteries, pillboxes, rifle ranges.

Related to the construction of early modern and modern coastal defences might be Sub-types such as;

- breakwaters, sea walls, groynes.

5 Assessment and significance

The significance of Cornwall and Scilly's ports and harbours has been assessed based on current understanding of the resource, including survival and condition of port-related structures and spaces and the evidence for historic function and heritage value at a local, regional and national level (see Johns and Fleming 2016, Section 4). Also considered are current views of what constitutes significance, including the visual aesthetics of individual port and harbour areas and their historic coherence, how they are perceived by the communities that live and work within them and those that visit them, and the level of demonstrated communal value and interaction. These aspects of what constitutes heritage significance are based on the English Heritage 'Conservation Principles, Policies and Guidance (English Heritage 2008). By its nature, significance is a subjective evaluation of heritage assets as they are perceived by contemporary society and any statement of significance is subject to change in the light of new discoveries or leaps in understanding. It is therefore important that what is currently considered important or significant about ports and harbours in Cornwall and Scilly, and further afield, be kept under regular review.

5.1 Historic port core infrastructure (e.g. quays, slipways, jetties, piers)

Assessment of many of Cornwall and Scilly's historic port cores has demonstrated a generally high level of survival of historic port core infrastructure, such as quays, jetties, slipways and piers. The condition of historic structures is also typically good to very good and historic port and harbour settings are generally well-preserved. There is often good legibility of the historic built fabric and clear evidence as to how this relates to later port development (Fig 7). Exceptions to this are found at some historic ports, typically those that had a specific industrial function or whose historic purpose was relatively short-lived. Ports such as Hayle and Portreath, for example have suffered considerable loss of historic industrial structures and features and, although the footprint of historic quays may survive to some extent, there has been substantial loss of setting through the intrusion of modern redevelopment (Fig 8).

Fig 7 The historic quays extending north from Town Quay in Fowey illustrate the growth of the harbour during the medieval and post-medieval periods. The granite jetties and steps reflect different phases of construction and still survive in excellent condition.

Fig 8 Copperhouse Dock, Hayle has been substantially encroached upon by modern redevelopment, resulting in substantial loss of historic setting.

Within some larger ports (e.g. Truro, Fowey, Penzance, Newlyn) there has been some displacement of historic port areas, sometimes through contraction of the historic port as a result of reduced activity (e.g. Penzance), sometimes through a shift of focus as a result of port expansion (e.g. Fowey, Newlyn), or through physical forces for change, such as river siltation, which have pushed the working core of a port to a new location (e.g., Truro, Lostwithiel). In such cases, the historic port areas typically remain in use, albeit in a reduced or changed form, but these are likely to have seen a greater extent of modification and loss of legibility, along with potentially reduced inter-visibility of port-related components.

The time depth of port activity is greatest for core historic components such as quays, jetties and slipways, and these often retain high visual appeal, which can significantly contribute to the attractiveness of the wider port setting. Due to their clear legibility and visual appeal they are commonly perceived to be important and integral features in their own right, with high communal, historic and aesthetic value. As a result of their location and setting, the majority of historic port areas also have high present-day amenity value, especially where core components have been adapted to secondary functions such as leisure and recreation (e.g. Lerryn, Fowey, Devoran, Wacker Quay).

Cornwall and Scilly's historic ports and harbours are a significant feature of its maritime coast and there is some rarity value in the number of quays that potentially retain some or all of their medieval fabric and form (e.g. Newlyn, Penzance, Fowey, St Mary's Harbour). These components are most likely to have been recorded in historic photographs and local accounts and in the present day are most likely to see periodic assessment and research as a result of conservation and management appraisals, enabling the character of these areas to contribute to planning roles for local character given in the National Planning Policy Framework (NPPF).

There is generally a good level of designation and protection in place for the majority of Cornwall and Scilly's historic port and harbour areas. This ranges from the wider coverage of Conservation Areas to more discrete sites covered by Listed Building and Scheduling designations. Management issues relating to these components include ensuring sensitive and appropriate repair to historic fabric by experienced contractors, preventing unsuitable development in these areas and inappropriate conversion of heritage assets to other uses, ensuring appropriate protection to heritage assets from the impacts of climate change events and coastal flooding (and see Johns and Fleming 2016, Section 10).

Fig 9 The early 20th century Seamen's Mission and adjacent coastguard station in Newlyn. The former Seamen's Mission is currently converted to use as a café.

5.2 Civic maritime structures (e.g. customs houses, coastguard stations, seamen's missions)

There is usually a reasonable survival of historic maritime buildings constructed for civic purposes, although many have since seen conversion to alternative use (Fig 9). Often the design and architecture of such buildings is attractive and therefore desirable to retain in some form. The peripheral location of some of these buildings to core port areas, however, means they are often vulnerable to redevelopment. The time depth of civic maritime structures typically dates from around the early 19th century or later, when maritime safety became a priority issue for ports on a national scale. The

significance of these components is partly that they represent a key phase of port development at a local, regional and national level.

Present-day perceptions of civic maritime structures may be reduced through loss or disassociation arising from development. There is often high historic and communal value to these components, however, due to the level of community heritage associated with them – particularly where maritime search and rescue is concerned, but also because those who manned these stations were an integral, and often well-documented, part of the local community.

Many historic civic maritime structures are protected as Listed Buildings or through their location within Conservation Areas. Those that are more peripheral to core port areas, however, may be unprotected and their isolation may make them vulnerable to inappropriate redevelopment. Management issues relating to these historic components are the same as for the core port heritage assets, largely ensuring sensitive repair and restoration, avoiding inappropriate redevelopment and conversion, and protecting from the impacts of coastal flooding and climate change (and see Johns and Fleming 2016, Section 10).

5.3 Historic industrial port structures and spaces (e.g. shipyards, foundries, saw mills, blacksmith's workshops, lime kilns)

Within Cornwall and Scilly's historic industrial ports and harbours there is the potential for poor survival of historic industrial structures and spaces due to late 19th century industrial decline, which has typically resulted in large areas of port-related industry being redeveloped for alternative use from the early 20th century onwards. Some shipyards and their related historic components do survive on a much reduced scale (e.g. Polruan, Fowey, Penzance) but within many of the industrial class of ports (e.g. Hayle, Portreath, Charlestown, Bude, Devoran, St Agnes) there has been significant loss of industrial features, usually replaced by non-maritime development (Fig 10). Where historic industrial components do survive there is usually significant impact on their setting and they are typically vulnerable to potential dereliction or conversion to new use.

Fig 10 The former coal yards and industrial quaysides at Portreath are now wholly redeveloped for modern housing.

The relationship between surviving industrial components and port-related areas is often hard to distinguish due to the wide-scale loss of associated industrial features. Often the significance of surviving heritage assets is misunderstood or overlooked and the low aesthetic value attributed to them renders them vulnerable to loss or unsympathetic redevelopment. The scale of redevelopment of industrial port-related components has resulted in a number of archaeological assessments and historic building projects in recent years, so that the industrial heritage of many of Cornwall and Scilly's major ports (e.g., Hayle, Portreath, Bude, and Charlestown) is comparatively well-researched and documented. There is continuing risk to many former industrial port areas in Cornwall and Scilly, however, due to the pressures of modern development.

Whilst there is protection in place for some industrial port-related areas and their surviving components through their inclusion within wider World Heritage Sites and Conservation Areas, or under protection from Listed Buildings or scheduling designations, this is an area which would merit review. Management issues for historic

industrial components include the upkeep of disused structures, ensuring appropriate and sensitive repair and restoration to historic fabric, and ensuring redevelopment is sensitive and at an appropriate scale (and see Johns and Fleming 2016, Section 10).

5.4 Coastal and intertidal landscapes (e.g. foreshore, cliffs, dunes, coastal rough ground)

Within the coastal landscapes and intertidal areas of port and harbour areas there is often a mixed survival of topographic features and the cultural roles they have served in the past. More robust features, such as cliffs and rocky shorelines have typically fared better than less durable features such as dunes, mudflats, coastal rough ground, and sand or shingle foreshores. Nonetheless, all features of the coastal and intertidal landscape of Cornwall and Scilly's ports and harbours, whether man-made or semi-natural, have shown themselves to be vulnerable to encroaching development, past and present, and of particular resonance in modern times are the increasing impacts of coastal flooding and climate change. Since the late 19th century there has been marked development of riversides (e.g., Fowey, Polruan, Truro, Falmouth) to accommodate new quays, yards and premises (Fig 11) and many coastal ports and harbours have been enlarged or altered to accommodate new maritime industry (e.g., Newlyn, Fowey, Falmouth) or increased leisure-related development (e.g., Bude, Penzance, St Ives, Mevagissey).

Fig 11 Late 19th and early 20th century shipyards extend along the shoreline to the north of Polruan, infilling between earlier quays and fish cellars.

Most at risk are those areas of foreshore or coastal rough ground closest to port areas or immediately adjacent to the coastal strip. These semi-natural coastal areas, with their cultural topography, have a very long time depth of use and adaptation dating back to the earliest hunter gatherer communities. Evidence of early industrial activity is recorded at some beachheads (e.g., Duckpool), and from the earliest period of maritime history the coves and inlets around Cornwall and Scilly's coastline were used as harbours, anchorages and landing points.

These coastal and intertidal landscapes typically have high aesthetic and communal value, being of significant appeal to both local and visiting communities. They are typically the location of a range of recreational and maritime activities and are popular areas of green space within urban and port development. They are often the site of peripheral port-related structures, such as coastguard stations, lighthouses, lookouts and coastal defences.

Although of comparatively low rarity value, communally these coastal and intertidal areas of Cornwall and Scilly's ports and harbours have regional significance as the location for much of their shore-based maritime activity and for their long time depth of cultural history. There are numerous archaeological sites recorded around Cornwall and Scilly's coastline, of various periods and comprising evidence of a range of functions; domestic, industrial, ceremonial and agricultural.

There is protection for some of these areas where they are located within designated areas, such as Cornwall's Heritage Coast, World Heritage Sites and Areas of Outstanding Natural Beauty (AONB's). Additional local designations for ecology and habitat may also apply. Management issues for these areas include ensuring appropriate scales of any proposed development, the management of coastal areas as part of farm stewardship schemes, where these apply, and the protection of vulnerable

areas against the impacts of coastal flooding and climate change events (and see Johns and Fleming 2016, Section 10).

5.5 Recreational and leisure structures and spaces (e.g. swimming pools, lidos, parks and gardens, leisure beaches, yacht clubs)

Cornwall and Scilly continue to be popular leisure destinations for both local visitors and holidaymakers and where recreational or leisure-orientated structures or spaces exist within port and harbour areas these are generally well-preserved and appreciated. In particular there are some good examples of late 19th and early 20th century recreational and leisure-orientated structures and spaces (e.g. lidos, parks and gardens, bathing pools, leisure beaches, yacht clubs) within their historic port and harbour areas. These leisure facilities are significant for reflecting contemporary social fashions in seaside leisure and typically have high communal value, although their aesthetic value can vary, dependent on location. In some cases, such as the Art Deco Jubilee Pool (MCO25115) in Penzance, for example, there is considerable architectural merit combined with a highly attractive visual setting (Fig 12). In areas perceived as being lower end holiday destinations or where there is a threat of redevelopment, however, survival may be less pronounced and there may be a higher risk of neglect. In some cases potentially significant recreational sites, such as the 19th century Regatta pleasure gardens and changing rooms (MCO57058) at Lerryn, have fallen into historic disuse, so that their restoration and care is no longer considered viable.

Fig 12 The Jubilee Pool lido, Penzance, built in 1935 on the foreshore of a small cove to the west of the main harbour. The lido incorporates the early 19th century Battens Wharf.

Typically, recreational and leisure facilities of late 19th to mid-20th century date replace earlier historic port-related structures and spaces, particularly areas of former foreshore or coastal rough ground, or where former maritime industrial features have fallen into disuse (Fig 12). As such, the cultural history of these sites potentially demonstrates rich and complex time-depth. Equally, the superseding recreational character of these port and harbour areas is significant in representing a period of social maritime history, which in Cornwall and Scilly has laid the foundations for a key facet of their present-day culture and economy.

The vulnerability of many of Cornwall and Scilly's coastal recreational sites to the threat of climate change and more localised issues such as neglect or redevelopment is therefore of significant concern, given their present-day dependence on recreation and leisure as a source of revenue. There may be some protection for historic recreational and leisure-based sites within port and harbour areas where they are located within Conservation Areas or protected under Listed Building designation. Management issues include appropriate upkeep and maintenance, particularly of significant structures and spaces, minimising the risk of redevelopment, and protecting against the impacts of coastal flooding and climate change events (and see Johns and Fleming 2016, Section 10).

5.6 Military sites and coastal defences (e.g. artillery forts, coastal batteries, pillboxes, searchlight batteries)

Military sites and structures within port and harbour areas were typically constructed in response to specific periods of military threat and were therefore variously prone to periods of disuse, re-fortification, and abandonment. As a result, military structures and spaces within Cornwall and Scilly's port and harbour areas may only partly survive, may survive but in poor condition, or have been lost altogether. The older medieval and post-medieval artillery forts, for example, typically situated at harbour mouths (e.g. Fowey, Polruan, Falmouth), are often ruinous but their historic, aesthetic and communal value combined is usually very high and they are often valued landmark sites (Fig 13). In comparison, many 20th century wartime structures, such as pillboxes, searchlight batteries, observation posts and disembarkation points, are likely to have been relatively short-lived and visually unexciting structures, which may have little or no designation or protection and which are typically more likely to have been abandoned, demolished or redeveloped. The World War II military base at St Catherine's Point, Fowey, for example, survives as a series of low building foundations within the woodland (Fig 13) and no visible signs of the gun emplacements or searchlight batteries on the point remain.

Fig 13 The medieval blockhouses at Fowey and Polruan are significant landmark sites either side of the Fowey harbour mouth. In contrast, the World War Two military site on St Catherine's Point barely survives above ground.

Port and harbour components of military character (except the older artillery forts) generally have a short time depth of use. They may also be perceived by some to have relatively low historic value but communally these military structures and spaces reflect a significant period in local and world history and, in their time, were vital to the defence of Cornwall and Scilly's ports and harbours and the broader coastal area. They are typically located close to core areas of all major Cornish ports and harbours but also extend beyond these to the wider towns and coastal areas they serve. Military conflict is also a relatively popular area of research and there is the likelihood for military documentary records to survive that record the activity and use of military sites within port and harbour areas and document the people who manned them. The social history associated with these components and how they are perceived by local communities is therefore relatively high in comparison to their visual impact.

Some military components of port and harbour areas, such as the older artillery forts and coastal batteries, are now protected by Listed Building or scheduling designations. More recent 20th century wartime structures have usually not seen any form of continued use since the end of conflict and commonly have no form of designated protection, except where they are located within a Conservation Area or World Heritage Site. Management issues for port and harbour sites of military character include the upkeep of the historic fabric, minimising the risk of redevelopment, and protecting against the impacts of coastal flooding and climate change events (and see Johns and Fleming 2016, Section 10).

5.7 Civic coastal defences (e.g. breakwaters, sea walls, groynes)

Civic coastal defences, historic and modern, generally survive in good condition and undergo maintenance to keep them fit for purpose, although, by default, they are positioned to take the brunt of any impacts from coastal flooding and storm events, so are always vulnerable to potential damage. There are some older examples of sea walls and breakwaters that contribute historic and aesthetic value to some of Cornwall and Scilly's ports and harbours (e.g. Hayle, Newlyn, St Mary's Harbour, and Penzance) but the majority are modern 20th century additions and the need to expand on these is ever increasing (Fig 14).

Civic coastal defences are typically located within and adjacent to core port areas and along vulnerable stretches of coastline. In some cases these components are extensive and highly visible; potentially impacting on the visual setting of some ports and harbours (e.g. Penzance, Newlyn). Nonetheless they are of high communal value to communities affected by the devastating impacts of increasing weather events.

There is often some amenity value to breakwaters and sea walls where these create promenade walks and spaces for recreational activity. They are not rare in themselves, except where a particularly early example survives (e.g. the sea wall (MCO34315) enclosing Copperhouse Pool, Hayle) but they are significant in illustrating the growing requirement for coastal defences in the light of increasing climate change events.

Fig 14 Historic phases of sea wall construction adjoining the South Pier, Penzance Harbour.

There is not generally any designated protection for these components, except where historic sites are located within a Conservation Area or World Heritage Site (e.g. Hayle; Newlyn). Management issues include the upkeep and repair of historic sea walls and breakwaters (particularly where damage occurs), the monitoring of defences to ensure they are fit for purpose, and the review of proposed new defences to assess the potential impact on historic port and harbour settings. Management opportunities include the representation of such sites within regional and national Shoreline Management Plans (SMPs) as these are at the forefront of present and future management of coastal areas and shorelines and the coastal defences present within coastal towns and port and harbour areas are critical to achieving this (and see Johns and Fleming 2016, Section 10).

6 Management Recommendations

6.1 Forces for change and effects of change

A comprehensive discussion of the forces for change for Cornwall and Scilly's ports and harbours is presented in Johns and Fleming 2016, Sections 5 and 9 and within the individual port and harbour reports. As mentioned above (p4), these ports were selected as representative of a range of port classifications identified in Cornwall and Scilly and the principal issues, threats and forces for change that related to these (Table 1). A brief summary of the key points is included here, along with a brief discussion of the effects of change and the management strategies recommended as mitigation against these.

The principal forces for change with potential for impact on Cornwall and Scilly's ports and harbours are:

- Changes in industry and technology
- Changes in economy and trade
- Greater need for coastal defences
- Pressures arising from local planning and development
- Changing policies and strategies in civic provision
- Reduction or increase in community engagement
- Location and topography
- Natural and environmental processes
- Climate change

The impacts resulting from the above forces for change throughout the course of individual port and harbour histories will vary according to a number of factors, such as location and topography, historic role and function and the capacity to adapt to changing situations. By their nature, forces for change can be both positive and negative and along with potentially damaging impacts on historic port and harbour settings and the fabric of historic structures and spaces there may be real opportunities for positive change achieved through sensitive redevelopment, due care and protection, research opportunities and increased community engagement.

T*able 1 List of ports and harbours selected for study in Stage 2 of the Cornish Ports and Harbours Project, their classification and identified issues, threats and forces for change (adapted from Johns and Fleming 2016, Table 3).*

Name	**Class**	**Reason selected and principal threats and forces for change**
Cornwall		
1) Duckpool	Beach (Scale 1)	A good example of a beach used for various maritime activities throughout history. Threats and issues include changes in industry and technology; climate change
2) Penberth	Fishing (Scale 3)	Typical smaller fishing harbour. An SMP review priority area (storm damage). Threats and issues include changes in industry and technology; pressures of planning and development; location and topography; climate change
3) Newlyn	Fishing (Scale 6)	Largest fishing port in Cornwall. Threats and issues include changes in industry and technology; changes in economy and trade; pressures of planning and development; climate change
4) Wacker Quay	Military (Scale 2)	A good representative of this class. Threats and issues include natural and environmental processes, location and topography; community engagement; climate change
5) Lerryn	Local Trading (Scale 3)	A good example of this class, successional use of buildings, development pressure. Threats and issues include changes in economy and trade; pressures of planning and development; climate change
6) Portreath	Industrial (Scale 4)	An SMP Review priority area, storm damage. Deteriorating infrastructure. A World Heritage Site (WHS). Threats and issues include changes in industry and technology; pressures of planning and development; climate change

7) Charlestown	Industrial (Scale 4)	Proposals for marina development. Within a WHS. Threats and issues include changes in industry and technology; changes in economy and trade; pressures of planning and development; climate change
8) Hayle	Industrial (Scale 5)	Needs a culturally sustainable regeneration strategy. Within a WHS. Threats and issues include changes in industry and technology; pressures of planning and development; climate change
9) Truro	Commercial (Scale 5)	Still a commercial port and a good representative of this class. Threats and issues include changes in industry and technology; changes in economy and trade; pressures of planning and development; natural and environmental processes; climate change
10) Kilcobben Cove, The Lizard	Civic provision (Scale 2)	Not many of this class to choose from. Threats and issues include changing policies and strategies in civic provision; climate change
11) Bude	Leisure (Scale 4)	Possibly the only representative of this class in Cornwall. Threats and issues include changes in industry and technology; changes in economy and trade; climate change
12) Fowey	Multi-purpose (Scale 6)	A decline in china clay industry would affect the way the waters of the estuary are used. Threats and issues include changes in industry and technology; changes in economy and trade; pressures of planning and development; natural and environmental processes; climate change
13) Penzance	Multi-purpose (Scale 6)	SMP Review priority area, storm damage. Likely to change due to improved ferry link proposals. Threats and issues include changes in industry and technology; changes in economy and trade; pressures of planning and development; natural and environmental processes; climate change
Isles of Scilly		
14) St Mary's Harbour	Multi-purpose (Scale 4)	An SMP Review priority area (storm damage). Improvements and extension to quay carried out 2014–16. Threats and issues include changes in industry and technology; changes in economy and trade; climate change
15) Higher Town Quay, St Martin's	Local trading (Scale 2)	Typical off island quay providing main link with St Mary's Harbour. Threats and issues include changes in economy and trade; climate change

6.1.1 Changes in industry and technology

Effects of change resulting from changes in industry and technology, past and present, may include some or all of the following:

- Historic industrial decline may have resulted in loss of function or purpose (e.g. Hayle, Portreath)
- Historic industry may continue but on a reduced scale (e.g. the shipyards in Fowey, Polruan and Penzance)
- Industrial heritage assets may be vulnerable to loss or conversion to new use (e.g. Hayle, Portreath, Charlestown)

- Large-scale redevelopment of former industrial 'brownfield' areas may occur/have occurred (e.g. Portreath, Hayle)
- Potential loss of historic legibility (e.g. Portreath, Hayle)
- Historic mineral extraction may alter beach profiles (e.g. Bude, Portreath)
- Modern industries and technologies may result in a shift of focus away from historic port cores (e.g. Newlyn, Truro, Fowey)
- Potential for protection of heritage assets through designation
- Opportunities for community engagement in local history
- Opportunities for new growth in manufacture and trade
- Opportunities for local employment
- Opportunities for new investment

6.1.2 Changes in economy and trade

- Changing use of port heritage assets, which may be vulnerable to conversion or redevelopment resulting in loss of historic legibility
- Potential for port decline and loss of historic function or purpose (e.g. Truro, Penzance, Lerryn)
- Opportunities for economic growth (e.g. the fishing port of Newlyn)
- Opportunities for local employment (e.g. the china clay docks at Fowey)
- Opportunities for wider engagement in business, commercial, industrial and recreational enterprise

6.1.3 Greater need for coastal defences

- Potential vulnerability to loss or encroachment on historic port and harbour areas through construction of modern sea walls and breakwaters
- Potential vulnerability to loss or modification of historic sea defences through the need for modern reinforcement, repair or modification
- Potential for protection of heritage assets through designation
- Opportunity for community engagement in local history

6.1.4 Pressures arising from local planning and development

- Potential for modern development to encroach on historic port cores due to developmental pressures and changes in port infrastructure (e.g. Penzance, Portreath, Truro)
- Port heritage assets may be vulnerable to insensitive redevelopment or conversion to new use
- Potential for loss of legibility of historic port areas due to encroaching development (e.g. Portreath, Hayle)
- Potential to enhance port and harbour areas through innovative and sensitive redevelopment
- Potential to enhance port heritage assets through sensitive conversion to new use
- Potential to attract commercial and business enterprise to former port areas through sensitive redevelopment

6.1.5 Civic provision

- Potential for lower perceptions of historic significance due to often isolated locations of heritage assets

- Vulnerability of modern civic provision to changes in Government funding and policy
- Vulnerability of heritage assets to insensitive development or conversion to new use
- Opportunities for sensitive and innovative conversion of redundant heritage assets to new use

6.1.6 Community engagement

- Potential lack of local interest due to low perceived value of historic ports or through lack of public access
- Potential lack of local support to port and harbour initiatives
- Opportunities to open up access to historic port areas (as being considered at Newlyn, for example)
- Opportunities to establish local user associations (e.g., Penzance Harbour Users Association)
- Opportunities for historical and archaeological research by local interest groups and professional bodies

6.1.7 Location and topography

- Restrictive setting may be a prevention to expansion (e.g. Polruan, Mullion, Boscastle)
- Restrictive setting may enhance present-day appeal (e.g. Cadgwith, Porthleven, Mullion, St Ives, Penberth Cove)
- Location and topography are factors in the level of a port's vulnerability to climate change events, coastal erosion and storm damage (e.g. Porthleven, Penzance)
- Ports adjacent to urban centres may be particularly vulnerable to pressures of urban expansion and development (e.g. Penzance, Truro, Falmouth)
- Ports on river estuaries may be vulnerable to issues such as siltation (e.g. Truro, Lostwithiel)
- Ports with attractive coastal or estuary settings may find opportunities in the leisure and recreation market (e.g. Fowey, Penzance, Looe, Padstow, St Ives, Bude)
- Ports located on or near major shipping lanes may find opportunities in continued trade and industry (e.g. Penzance, Fowey, Falmouth)

6.1.8 Natural and environmental processes

- River siltation is an issue for some major ports, potentially resulting in a shift of the working port to deeper waters (e.g. Truro, Lostwithiel)
- Potential for shifting coastal deposits and longshore drift to result in changes to navigation channels and the build-up of sandbanks, mud banks and dunes (e.g. Hayle, Newlyn, Penzance)
- Opportunities may arise for port and harbour expansion through reclaiming land build-up as a result of sedimentary and deposition processes (such as longshore drift, for example)

6.1.9 Climate change

- Extreme weather events are more likely to impact on vulnerable port and harbour areas (e.g., as seen at Porthleven, Newlyn, Penzance, Mullion, Portreath, for example)

- The effects of coastal erosion and deposition are likely to increase in port and harbour areas (e.g., Hayle)
- Potential for coastal erosion and deposition to result from the construction of coastal defences
- Potential for coastal flooding from sea level rise and storm events to become more prevalent within coastal areas
- Opportunities to review current coastal management policies
- Opportunities to re-model existing coastal defences and introduce up to date designs and technologies

6.2 Management strategies for conservation, enhancement or regeneration

Refer to the Issues and Recommendations Section in Johns and Fleming 2016, Section 10 for more in-depth discussion of management recommendations for Cornwall and Scilly's ports and harbours. This section synthesises the management strategies identified for the ports and harbours included in the main study, which can be extrapolated out to the wider suite of Cornish ports and harbours and contribute to broader strategies and policies for the management of historic ports and harbours nationwide.

The Cornish Ports and Harbours Assessment (Johns and Fleming 2016) details the relevant statutory bodies, local authorities, partnership groups, community groups and management bodies that make-up the wide range of stakeholders involved at setting out and putting in to practice management policies for Cornwall and Scilly's ports and harbours. It also details regional and national policies, such as the Shoreline Management Plan (SMP), the National Planning Policy Framework (NPPF), Local Plans, the Cornwall Maritime Strategy 2012-2030 (Fig 15), that have a responsibility towards addressing management issues associated with the care of the historic environment.

General principles for policy-making bodies to consider in regard to the present and future management of Cornwall and Scilly's ports and harbours would be to:

6.2.1 Identify objectives, targets and options:

- To maintain and protect the historic fabric and character of port and harbour areas
- To preserve port heritage assets variously through designation, through sustaining their purpose and function, through sensitive conversion of redundant assets to new use, through detailed building records of historic assets as part of planning policy and ahead of any redevelopment
- To develop sustainable port economies through supporting existing maritime enterprise and acting on future opportunities
- To explore and encourage opportunities for port and harbour regeneration
- To assess current measures for protection and conservation of port heritage assets and implement strategies for sustaining or improving these
- To ensure development within or adjacent to port and harbour areas is carried out sensitively and at an appropriate scale, with respect to their historic character

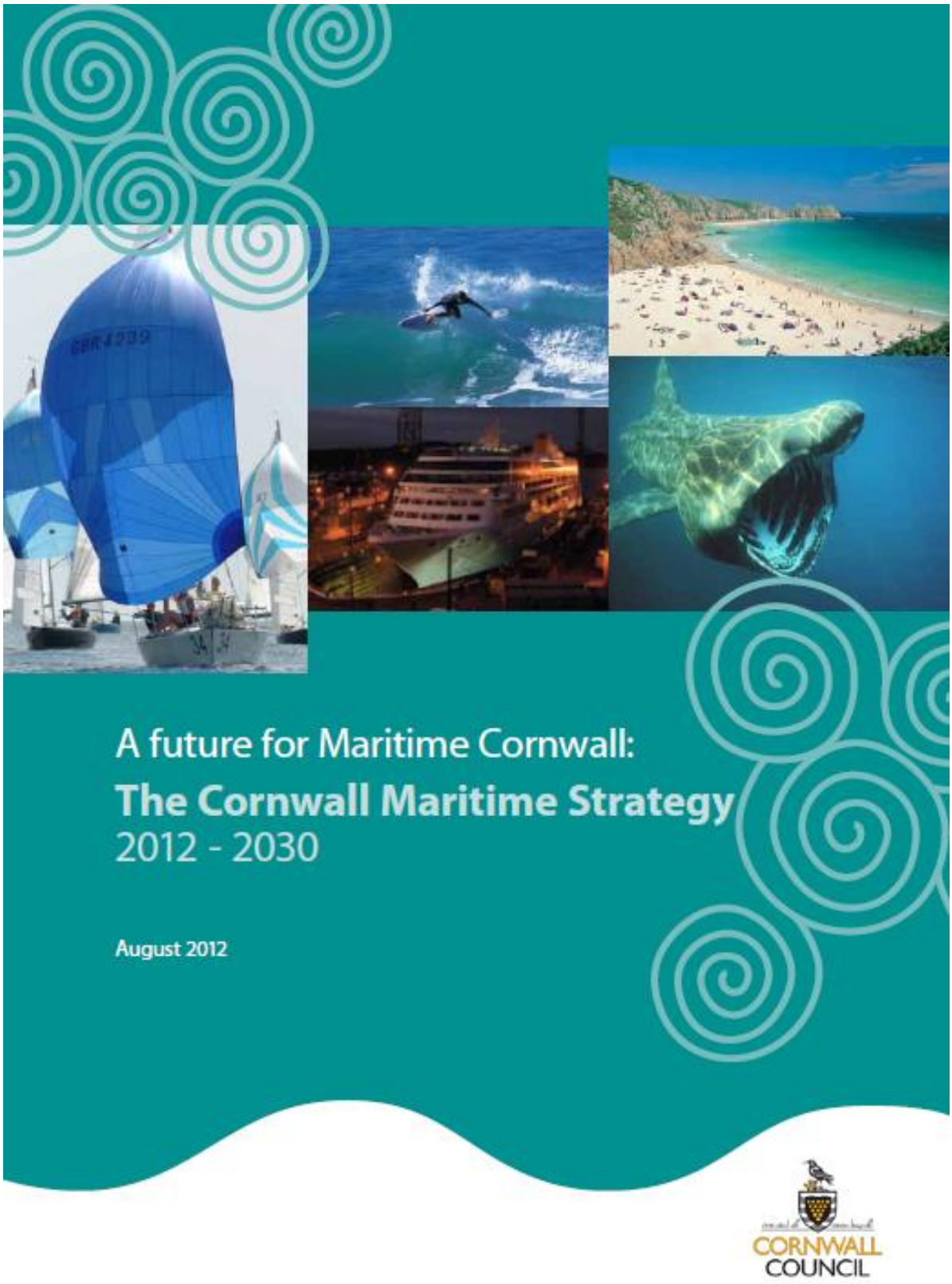

Fig 15 Front cover of the Cornwall Maritime Strategy 2012-2015.

- To promote local interest in port and harbour areas and to encourage opportunities for community engagement through raising port profiles amongst a wider group of potential stakeholders, such as commercial investors, local businesses, potential developers, heritage protection groups and the large body of visitors to the county -

Local interest groups such as neighbourhood forums, community archaeology groups and local history societies can carry out a wide range of tasks, from the preparation of Neighbourhood Development Plans (neighbourhood forums, see above) to building and condition surveys, compilation of local lists and Conservation Area Appraisals.

Heritage Partnership Agreements can be sought to encourage better relationships between port authorities and statutory bodies.

Local authorities should work jointly with communities and neighbourhood groups in the production of Local Lists of heritage assets, following the guidance set out in HE Advice Note 7 'Local Heritage Listing' (Historic England 2016).

Information on port-related heritage could be disseminated through such means as town trails, stand-alone information boards, leaflets, information guides and mobile apps.

- To continue to develop coastal defence strategies for the future protection of vulnerable port and harbour areas and adjacent coastlines
- To ensure the protection and enhancement of the historic character of Cornwall and Scilly's ports and harbours and their settings, which provide both landscape context and cultural space, and which generally have high visual appeal for local residents and visitors
- To ensure sustainable practices within port and harbour areas in order to protect and sustain sensitive marine environments

6.2.2 Develop, adopt and implement strategies based on initiatives and policies for:

Land-use planning

The Local Planning Authority should be consulted for all aspects of onshore and intertidal development. Any proposed development should adhere to the planning processes concerning archaeology and the historic environment as set out in the National Planning Policy Framework (NPPF) and the Cornwall Local Plan. Where development will affect significant heritage assets there should be proper provision made for detailed building recording and/or archaeological evaluation as appropriate.

Conservation Area Appraisals for port heritage areas should be undertaken, and existing appraisals reviewed. Existing designation for historic port and harbour areas should be assessed for suitability. Where appropriate extensions to existing Conservation Areas should be requested or new designations put into place to ensure optimum protection through current conservation policies.

Historic England and local authorities should be consulted on all aspects of protection and management of maritime archaeology and the historic environment within Cornwall and Scilly's ports and harbours and this advice should be acted on. This advice stresses the need for consultation with Historic England and the Cornwall and Scilly HER regarding management of the historic environment and on the implications of specific developments or other actions. It is vital that regional and local advice is taken and that the historic character of ports and harbours and all heritage assets within their present-day extents are considered, not just designated monuments, buildings and areas.

The strategies and policies set out in the Cornwall Maritime Strategy (Cornwall Council 2012) should be engaged with and action plans such as Maritime Action Plans, Shoreline Management Plans, the South West Inshore Marine Plan, Cornwall Beach Management Strategies, and AONB and Estuary Management Plans should be implemented.

Advice and policy set out by the revised Code of Practice for Seabed Developers produced by the Joint Nautical Archaeological Policy Committee should be engaged with and adhered to.

Up to date management plans should be commissioned for Cornwall and Scilly's ports and harbours, to comprise archaeological and environmental assessment of port areas (to include the inshore marine environment), the identification of forces for change and projected future needs, and a management strategy that considers developmental needs alongside those of the historic, coastal and marine environments.

Local neighbourhood forums should be established with the aim of encouraging local communities to actively engage with aspects of local planning and the production of Neighbourhood Development Plans, Neighbourhood Development Orders and Community Right to Build Orders.

Maritime wildlife/ecology

The advice and policies set out by the Marine Management Organisation (MMO) should be consulted and adhered to. The MMO is responsible for regulating, planning and licensing marine activities (e.g. dredging, marine construction) that may have an environmental, economic or social impact on marine environments.

The South West Inshore Plan, which is about to start and will be completed by 2021, should be consulted and adhered to.

The advice and policies set out by the Cornwall and Isles of Scilly Inshore Fisheries and Conservation Authority (IFCA) should be consulted and adhered to. The remit of the IFCA is the sustainable management of the inshore marine environment.

Tourism

Opportunities to educate and inform people about Cornwall and Scilly's ports and harbours should be explored, with the aim of promoting quality of life, attracting tourism and generating interest in local business potential.

Collaborative opportunities with agencies such as Natural England, the Marine Protected Area Network, the Cornish Mining World Heritage Site team, the National Trust and Historic England should be sought out, to work towards securing the protection, management and promotion of Cornwall and Scilly's historic ports and harbours, to include their historic character and port-related heritage.

Historical and cultural activities and events that celebrate Cornwall and Scilly's distinctive port-related heritage should be supported and encouraged.

Collaboration with local authorities and environment agencies to protect and manage Cornwall and Scilly's ports and harbours and their maritime setting should be encouraged in order to help preserve their historic character, protect their heritage assets and sustain their future survival.

Maritime enterprise and economy

Opportunities should be explored to build and expand on aspects of sustainable maritime economy, such as recreational and commercial fishing, marine aquaculture, ship repair, marine construction, leisure-based activities, tourism, marine renewables, waste processing and emerging knowledge-based industries. The aims would be to achieve these through innovative development and sound environmental and economic practices.

Feasibility studies and action plans should be produced, aimed at identifying the strengths, issues and opportunities of individual ports to gain a better understanding of their roles and the potential to develop sustainable economies and port facilities.

Funding initiatives (e.g., the European Maritime and Fisheries Fund) and partnership agreements aimed at supporting maritime enterprise and industry should be investigated.

The objective of the Cornwall Maritime Strategy (Cornwall Council 2012) is to recognise, protect and develop the 'working harbour' role of Cornwall's estuaries, ports and harbours. The aims of the strategy should be engaged with in order to work

towards more coordinated management and advocacy for ports and harbours as well as to encourage further economic development whilst balancing the operational, leisure and environmental uses.

The development of neighbourhood planning and regeneration initiatives should be supported and actively engaged with in order to work towards creating future employment opportunities, protecting vulnerable waterfronts and port infrastructure against the future impacts of climate change, and providing for sustainable maritime-related business and enterprise.

Access

The Cornwall Maritime Strategy (Cornwall Council 2012) should be engaged with in order to seek solutions to improving access to and connectivity with waterfront areas, beaches, estuaries and the open sea. This might include the provision of walkways, cycle routes, ferry transport, affordable public slipways and boating facilities and the removal of physical barriers to access.

The legibility of the historic relationship between port and settlement areas should be preserved through sensitive re-use of port heritage assets, opening up access ways between the two areas and promoting healthy and sustainable regeneration of maritime commerce and enterprise

Measures to enhance, promote, and protect public spaces within Cornwall and Scilly's ports and harbours should be undertaken, with the aims of improving safe access and increasing public understanding of historic character and heritage significance. These measures should include mitigation against the impacts of sea level rise and coastal erosion (such as maintaining the South West Coast Path and protecting beach and foreshore areas from the impacts of erosion and deposition as a result of climate change events).

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Penzance

Cornish Ports and Harbours

Assessing heritage significance, threats, protection and opportunities

Historic England

CORNWALL COUNCIL

Contents

Cover illustration: *Penzance Harbour (photo: Kevin Camidge).*

1 Introduction

Within a broader 'Cornish Ports and Harbours' project examining the heritage significance, protection and implications from forces for change affecting Cornwall's ports and harbours, Penzance has been chosen for detailed study as a good example of a large multi-purpose harbour. Discussion of the approach and working methods applied during the execution of the project can be found in the overall Project Report.

Penzance is located on the north-west shore of Mounts Bay in the extreme west of Cornwall (Fig 1). It probably originated as a small fishing settlement at the head of a sheltered cove in the lee of a low headland which provided a natural anchorage for local fishing boats and visiting boats.

A small quay and small harbour was constructed some time before 1512 and repaired several times as Penzance grew in size and status as a market centre and fishing port. During the 18th century the quay was significantly rebuilt and extended, creating valuable deep-water port facilities protected by a coastal battery.

There was a significant expansion of the harbour in the 19th century as the commercial port continued to thrive as both a local and foreign trade centre. The coming of the railway in 1852 marked a turning point in its history as the favourable location of Penzance saw the town grow in reputation as a health resort and holiday destination.

Penzance continued as an important commercial port throughout the 19th century and into the latter years of the 20th century, when road transport grew in competition. Today the working harbour continues to support a multi-purpose function, which now combines leisure facilities for local and visiting recreation craft with the busy machinations of the port; these largely consist of handling freight and supplies to the Scillies alongside modest fish landings. It is also the base for the *Scillonian III* passenger ferry operating between Cornwall and the Isles of Scilly. Commercial ship repairs are still carried out at Penzance Dry Dock Ltd. Some of the historic port buildings and warehousing are now converted as shops and restaurants and part of the harbour between Albert Pier and Wharf Road has been infilled for car parking.

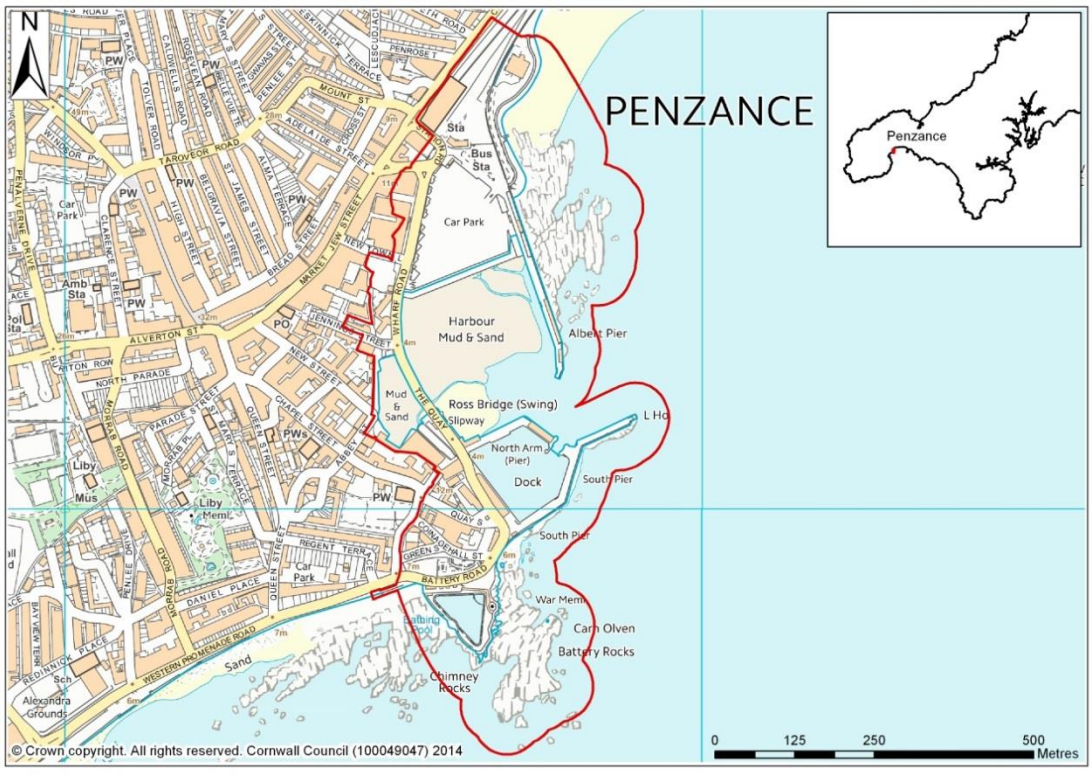

Fig 1 Location map. The red line denotes the study area.

2 Outline history

2.1 Early origins

'*Pensants, - standing fast in the shore of Mount-bay, ys the westest market towne of al Cornwayle, and no socur for botes or shyppes, but a forced pere or key.'*

(Leland 1540, in Polsue 1868)

Penzance probably originated as a small fishing settlement of fish cellars and net lofts tucked into the sheltered lee of the headland, some time prior to the 14th century. The ancient St Anthony's Chapel (now lost) once stood close to the nose of the headland, which was given the name '*pen sans*', Cornish for 'holy headland'. Subsequently the planned medieval market town of Penzance was established on the nose of the headland; this may have coincided with the construction of the earliest quay at the southwest end of what is now South Pier, later documented in a King Henry VIII charter as being in need of repair. The early quay was constructed along a spit of natural elvan rock, which partly enclosed the coastal waters from the south, with the rocky foreshore to the north curving round to form a larger natural bay and anchorage. Parts of the earliest quay may be incorporated into later rebuilds of South Pier. The spire of St Mary's Chapel in the heart of the medieval town (on the site of the present St Mary's Church) was used as a local navigation mark by sailors (Cahill and Russell 2003; Carter 1998; Cornwall Council 2010; Pool 1974).

The quay was repaired several times as the developing medieval and post-medieval town of Penzance grew in size and status as a market centre and fishing port (Cahill 2009). Despite a crippling raid by the Spanish in 1595, where part of the town was burned down, it continued to develop as an important maritime and market trade centre linking the south coast of England with south-west Ireland and mainland Europe.

The commercial port of Penzance properly developed from around the 17th century, by which time Penzance was the customs port for the wider Mounts Bay area and had gained the hard-won status of a 'coinage town', collecting tin coinage from the Penwith and Kerrier Stannary district for the Duchy purse. Linked with the expanding tin industry, Penzance principally traded in the import of timber, salt, iron and coal. In times of poor harvest large amounts of grain were added to this list. Export goods included herring and pilchards to southern Europe and the metropolitan markets in Bristol and London; the beach to the west of Battery Rocks was traditionally used by the seine boats to dry their nets. After Penzance became a coinage town in 1663, tin became a large part of the export market, with the addition of copper ore by the late 18th century (Cahill and Russell 2003; Carter 1998; Cornwall Council 2010; Pool 1974).

In 1740 a coastal battery was constructed on Battery Rocks (Figs 6 and 21), which included a defensive sea wall between the battery and the quay to the north; this wall ran along the rocky foreshore above a small sandy inlet to the north of Battery Rocks (Fig 20). During the war with France (1793–1815) the port continued its military function, serving as an important naval base and victualing station. A post-medieval shipyard (MCO29167) is recorded near Battery Rocks; its exact location is not known but it probably occupied the northern foreshore of a natural cove that existed here up until the construction of the Jubilee Pool in 1935 (Cahill and Russell 2003; Carter 1998; Pool 1974). During the medieval period the cove probably extended further northwards towards a shoreline of sand dunes bordering fields, with the fishing settlement adjacent to the north (Cahill 2015).

Fig 2 An etching of Penzance by William Penaluna, dated May 1817 (Penlee House Gallery and Museum PEZPH: 1996.246).

The quay at Penzance underwent a major rebuild in 1745, with a later extension in 1782 creating valuable deep-water port facilities. The rebuild was financed from the quay and harbour dues, which were granted to the town Corporation (Cahill and Russell 2003; The Cahill Partnership 2009). A coursed masonry construction of dressed granite enclosed a rubble masonry core and the resulting structure survives into the present day as a highly significant example of one of the largest and most complex 18th century quay structures in Cornwall; a granite-built arched storage arcade on South Pier also survives from this period (Fig 13) (The Cahill Partnership 2009).

Associated with the growth of the harbour was an increase in maritime-related industry and manufacture, which included boat-building, sail-making, ropewalks and tallow-chandlers; the Matthews dry dock and shipyard was one such establishment, constructed adjacent to the old harbour in 1815. Premises were generally small-scale and loosely focussed around the quay and harbour sides and extending along the foreshore in both directions. By this time access to the sheltered foreshore north of the harbour had opened up, with a series of landing places and slips accessed via New Street, Jennings Lane and New Town Lane (Cahill and Russell 2003).

2.2 The 19th century in Penzance

The 19th century was an economic boom time for Penzance. The local tin and copper industry was in a state of growth along with a widening European market for the export of pilchards and market garden produce from the rural Penzance hinterland. In response there was a massive expansion of the harbour in 1845–48. The South Pier was extended and St Albert Pier built (Fig 3), along with the improvement or new

construction of wharves, docks and warehousing along the foreshore north of the existing harbour, using backfilled mine waste from the Old Wheal Bolton mine at Ludgvan. Ross Bridge was built in 1881, completing the harbour expansion and enclosing the Abbey Basin; the Abbey Warehouse and its quay may also date to around this time (Fig 16). Extended port facilities included a lighthouse built by the Copperhouse Company of Hayle on South Pier in 1863, the construction of a north arm to South Pier to create a wet dock in 1884, a lifeboat station on Wharf Road in 1885, the realignment of the former Matthews dry dock and construction of a new dry dock by Holmans in 1900 (Cahill and Russell 2003; Carter 1998; Pool 1974).

Fig 3 Setting the foundation stone for the New Pier (Albert Pier). A photograph of an engraving of July 7th 1845. Delineator - FC Stockdale. Lithographer - Thomas Picken. (Penlee House Gallery and Museum PEZPH: 1989.554).

During the early 19th century a small quay (Battens Wharf) and slipway were constructed to the west of Battery Rocks (Fig 5), along with an ore works to the north. By the later 19th century two lime kilns were constructed on part of the barbican to the north of the former battery. The 19th century development of Penzance harbour was partly linked to the coming of the railway to the town in 1852, the new Albert Pier subsequently the site of a branch siding and railway sheds linked to the mainline station (Figs 3 and 4). The event also marked a turning point in the town's history. Whilst maritime trade continued as the mainstay of its wealth and economy, the favourable location of Penzance saw it grow in reputation as a health resort and holiday destination. This resulted in the redevelopment of some former maritime and coastal areas, which included a promenade and sea wall constructed at Western Green in 1843 and a remodelling of the Barbican to create St Anthony's Gardens. By the late 19th century the mining industry had declined, resulting in the decreased export of metal ores. Penzance remained an important commercial port, however, exporting a variety of goods such as china clay, cement, potatoes, coal, artificial manure and flowers (Cahill and Russell 2003; Carter 1998; Pool 1974).

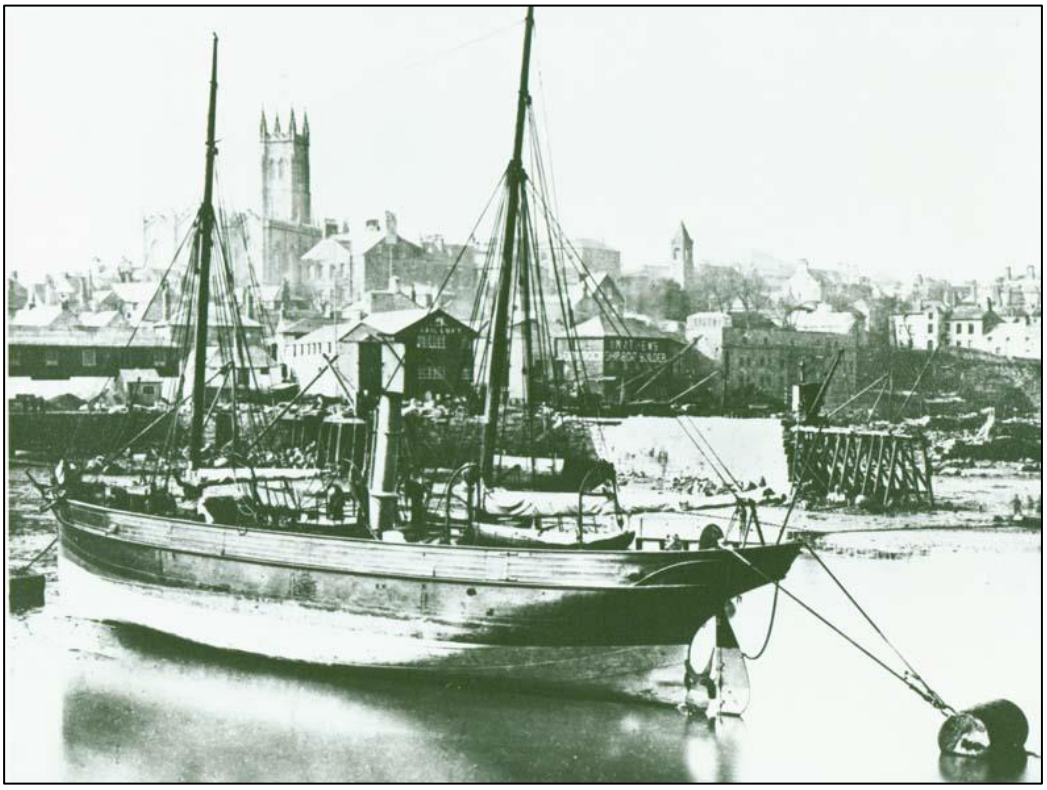

Fig 4 Building of the Wet Dock c 1881. © Gibsons of Scilly. (Penlee House Gallery and Museum PEZPH: 1991.435).

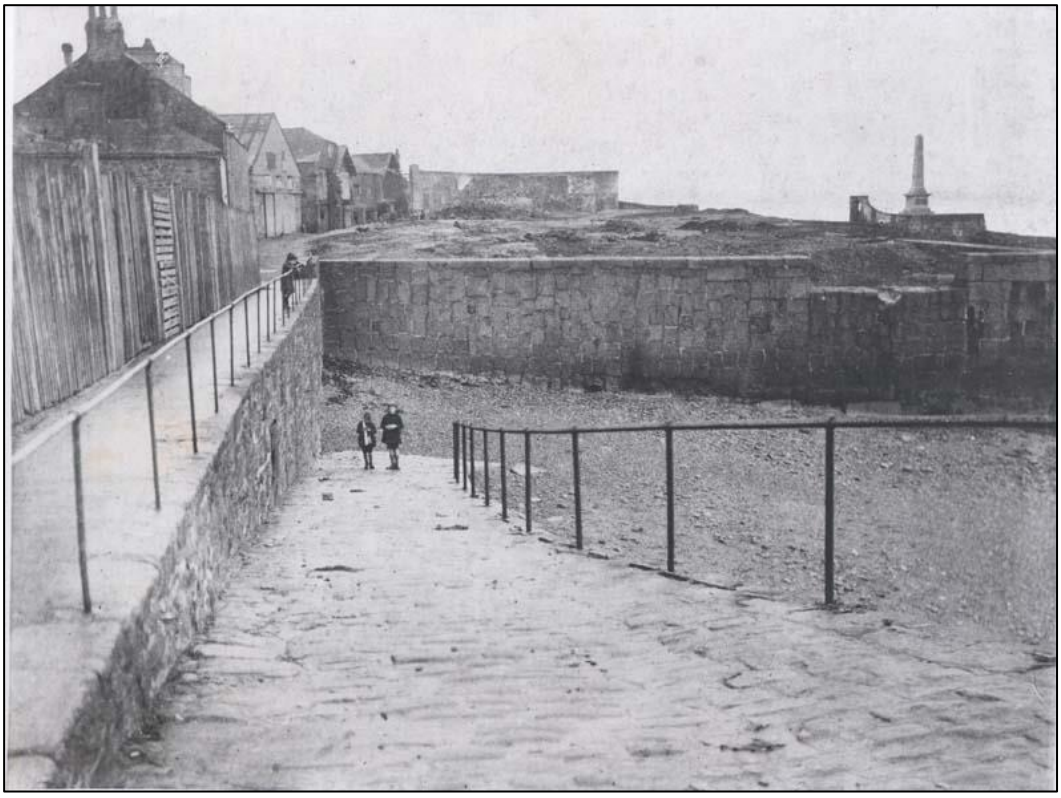

Fig 5 Sandy Slip, before the alterations, May 1922. Photographer unknown. Battens Wharf in the background. (Penlee House Gallery and Museum PEZPH: 1991.391).

Fig 6 War Memorial c 1930 – Raphael Tuck & Sons Ltd, London. Penzance 'Snap-Shot Album' (no.96). The war memorial sits on the extant base of the 18th century battery. The shingle beach in the foreground is now the site of Jubilee Pool. (Penlee House Gallery and Museum PEZPH: 1992.334).

Fig 7 The Wharf c 1930 – Raphael Tuck & Sons Ltd, London. Penzance 'Snap-Shot Album' (no.96). Penlee House Gallery and Museum PEZPH: 1990.309a).

2.3 Modern use

By the mid-20th century the impact of road and rail freight transport was making itself felt and the scale of Penzance's import and export trade reduced considerably. Today the working harbour is still a busy functional space, however, supporting a variety of small-scale multi-purpose maritime functions that include modest fish landings and the handling and shipping of freight and supplies to the Isles of Scilly; Penzance Harbour is also the operational base for the *Scillonian III* passenger ferry. The dry docks are still in use as the combined premises of a commercial ship repair yard, Penzance Dry Dock Ltd, and marine engineers, Penwith Marine Services. An outdoor lido (the Jubilee Pool) was built on Battery Rocks in 1935, expanding on the leisure character of the promenade and Western Green to the southwest of the harbour; during the Second World War the pool was the site of a short-lived coastal battery. To the east of Jubilee Pool a set of steps lead down to a small rock-cut bathing pool and this spot is still a favourite bathing point for town residents, even during the colder winter. During the 1950's the harbour was partly infilled between Albert Pier and Wharf Road to create a large visitor car park but still provides 240 moorings for resident recreational craft and berths in the west dock for up to 50 visiting yachts (months (Cahill and Russell 2003; Cornwall Council 2013).

Ross Bridge and Wharf Road now form a major thoroughfare linking the north of town with Western Green and the road westwards towards Newlyn. This dissects the historic harbour extent, creating difficult pedestrian access through the area and detracting from the visual aesthetic. Many of the historic port buildings and former wharf-side warehouses are converted to commercial use as shops and restaurants, encouraging visitors to the area but further altering the historic coherence of the port, harbour and former foreshore areas. Although there is still a sense of the spatial contrast between the historic town flanking the spine of the headland and the low-lying historic harbour and former foreshore where it extended around the sheltered bay, it is now harder to form a clear picture of how these elements originally formed and held together. In particular the modern transport interchange at the northern end of the harbour and Albert Pier is a busy and diverse area of large modern structures and continual traffic movement that dominates the historic fabric of the old harbour and town edges and reduces our understanding of the relationship between this area and the historic harbour-side, and how it developed over time.

Nonetheless, the harbour area and Wharf Road today do coalesce to form a vibrant and colourful waterside, popular with both locals and visitors alike. Many characterful and historic elements of the historic harbour and adjacent town do still survive in the buildings and the structural landscaping of the current streetscapes and quay sides. The harbour continues to provide a safe anchorage, although the nature of the boats has changed over the years, and the working harbour and adjacent maritime-related businesses is still a hub of sea-going activity.

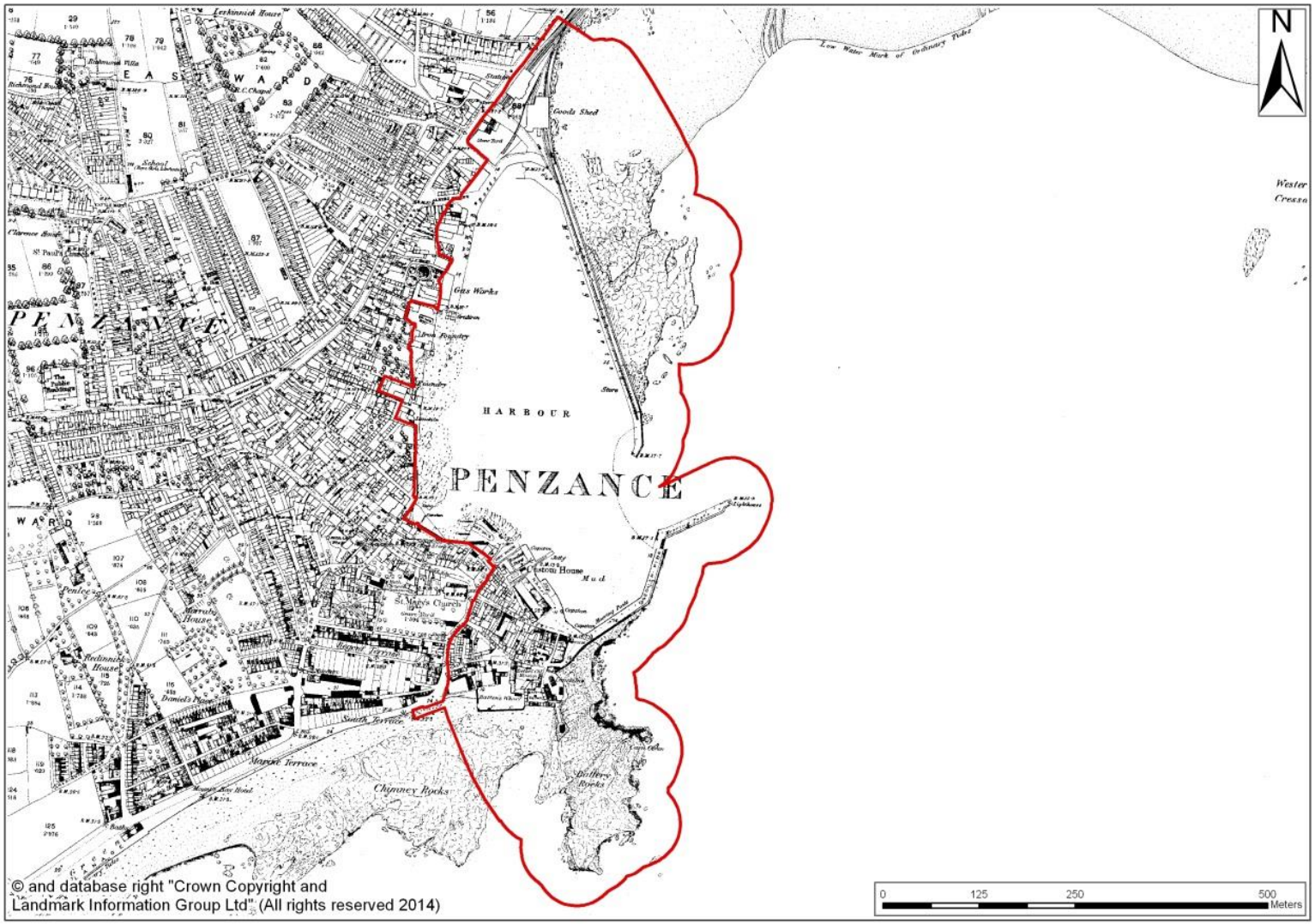

Fig 8 First Edition of the Ordnance Survey 25 Inch Map, c 1880.

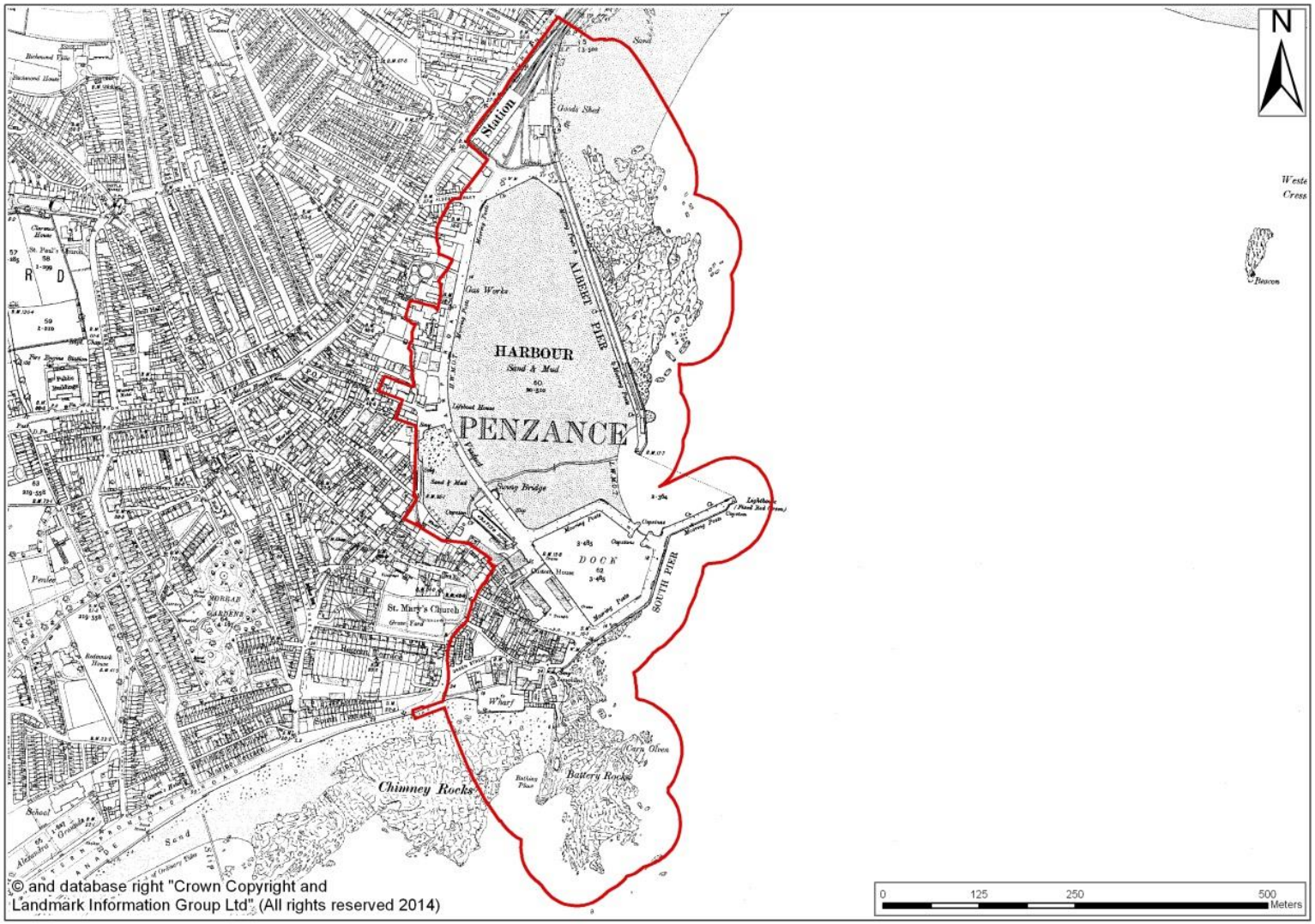

Fig 9 Second Edition of the Ordnance Survey 25 Inch Map, c 1907

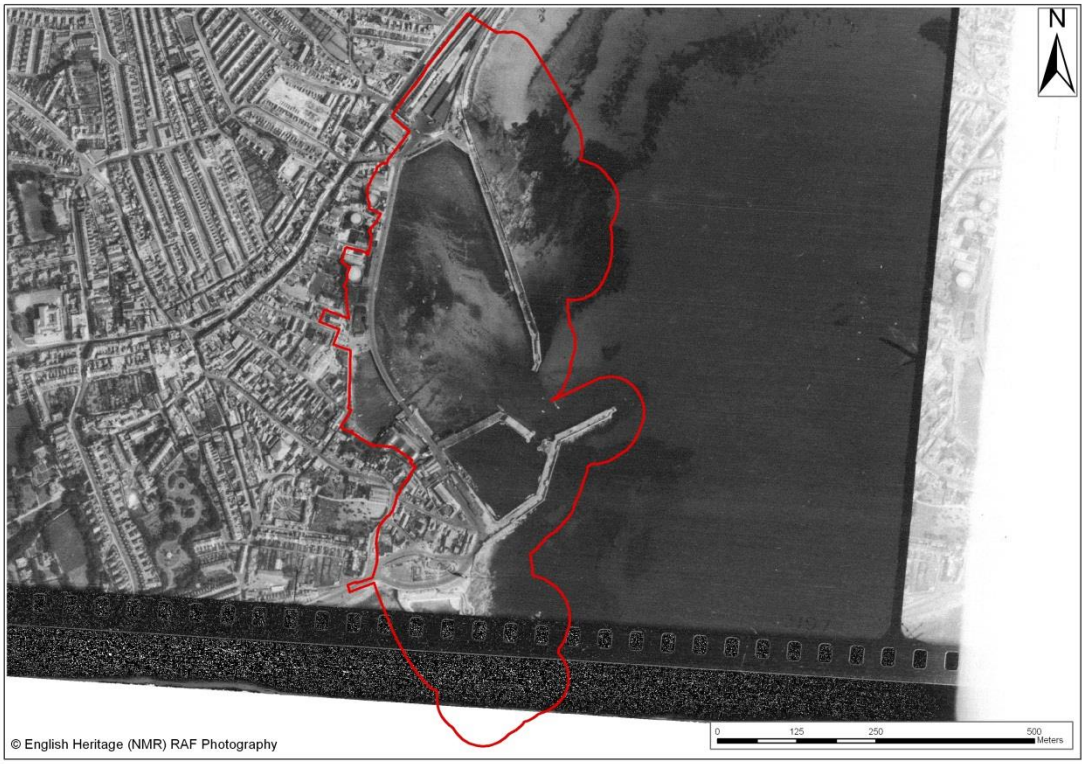

Fig 10 RAF aerial photograph (1946: Ref No A20 3306 12 July 1946).

Fig 11 Aerial photograph (Cornwall Council 2005).

3 Description

Penzance harbour (centred at NGR SW 4772 3005) is sited at the south-west extent of the town in the lee of a north-south running spur of higher ground. The earliest medieval quay may still survive within the fabric of the later South Pier but the modern harbour extent now occupies the natural bay formed by South Pier and the rocky foreshore to the north, where Albert Pier is sited. A wet dock is enclosed by South Pier and the North Arm pier and the dry docks are still in use within the commercial shipyard.

Many of the historic elements of the harbour and associated structures still survive, although some are much altered in form and function. The natural topography of the foreshore strip and sheltered bay to the north of the harbour is now partly obscured by modern redevelopment. The cove at Battery Rocks has been infilled by the construction of Jubilee Pool; the construction of the 18th century coastal battery had already altered the natural topography of this area to some degree. In addition the harbour beyond the wet dock has suffered some deposition of tidal mud and silts as a result of the early modern quay extensions. The historic harbour and port area is now dissected by Wharf Road and Ross Bridge.

The study area comprises the historic harbour and South Pier and, to the north, Wharf Road and Albert Pier and the extended harbour enclosed by these. It also extends to the modern railway station. To the south of the harbour it includes St Anthony Gardens, the Jubilee Pool and Battery Rocks and a small section of the town to the south-west of the harbour, formerly the site of the medieval fishing settlement from which Penzance harbour originated.

3.1 Gazetteer

No.	Site type	MCO	NGR (SW)	Period	Description	Designation & Grade
1	SLIPWAY	-	47483 29860 47532 29879	EARLY MODERN	Modern concrete slipway onto the Promenade Beach	None
2	QUAY	-	47562 29874 47623 29878	EARLY MODERN	The southern end of Battens Wharf still survives as part of Jubilee Pool (Site 3)	Part of the listing for Jubilee Pool
3	LIDO	25115	47634 29826	EARLY MODERN	Jubilee Pool constructed in 1935	Listed Building Grade II
4	TIDAL SWIMMING POOL	-	47649 29759	EARLY MODERN	Rock cut bathing pool and steps S of Jubilee Pool (Site 3). Shown on the *c*1907 OS map	None
5	WALL	-	47642 29750	EARLY MODERN	Two sections of granite walling SW of the rock cut pool on Battery Rocks (Site 4), function unknown	None
6	COASTAL BATTERY	25113	47674 29848	EARLY MODERN	The base of the 18th century battery and causeway survive W of Jubilee Pool (Site 3), currently the site of a WW1 war memorial (Site 7)	Listed Building Grade II

No.	Site type	MCO	NGR (SW)	Period	Description	Designation & Grade
7	WAR MEMORIAL	25114	47671 29847	EARLY MODERN	WW1 war memorial standing on the base of the 18th century battery (Site 6)	Listed Building Grade II
8	SEA WALL	-	47675 29904 47682 29932	EARLY MODERN	Section of early 20th century granite sea wall built across a former tidal inlet	None
9	SEA WALL	-	47682 29931 47756 29989	EARLY MODERN	Section of granite sea wall originally constructed in the mid to late 18th century and rebuilt late 19th century	None
10	QUAY	25108	47697 29962 47779 30015	MEDIEVAL	Part of the medieval quay may survive within the 18th century rebuild	Listed Building Grade II*
11	QUAY	-	47779 30015 47809 30104	EARLY MODERN	Late 18th to mid-19th century expansion of South Pier, having several phases of construction	Listed Building Grade II*
12	QUAY	-	47809 30104 47897 30145	EARLY MODERN	Late 19th century expansion of South Pier	Listed Building Grade II*
13	STORE HOUSE	-	47740 29982	EARLY MODERN	An open arched late 18th century granite storage building on South Pier (Site 11)	Part of the Grade II* Listed South Pier
14	LIGHTHOUSE	29133	47893 30142	EARLY MODERN	Lighthouse built by Hayle Copperhouse Company in 1863	Part of the Grade II* Listed Quay
15	QUAY	-	47627 30094	EARLY MODERN	North Arm extension to South Pier to create wet dock, completed in 1884	Part of the Grade II* Listed Quay
16	CAPSTAN	-	47775 30100	EARLY MODERN	Four capstans, one on each corner by the wet dock gates	Part of the Grade II* Listed Quay
17	HARBOUR MASTERS OFFICE	-	47747 30121	EARLY MODERN	Harbour masters office on north arm of South Pier	Part of the Grade II* Listed Quay
18	WET DOCK	-	47714 30058	EARLY MODERN	Wet dock, built 1884	None
19	STORE HOUSE	-	47634 30107	EARLY MODERN	Two buildings, one of timber, both with corrugated iron roofs. Harbour buildings, possibly boat houses, which postdate the *c*1907 OS map. Now part converted to a shop and café	None

No.	Site type	MCO	NGR (SW)	Period	Description	Designation & Grade
20	SLIPWAY	-	47588 30152 47619 30111	EARLY MODERN	Granite built slipway to the SE of Ross Bridge, shown on the *c*1907 OS map	None
21	SWING BRIDGE	-	47572 30159	EARLY MODERN	Ross Bridge, constructed in 1881, replaced in 1981	None
22	BOOKING OFFICE	-	47579 30126	EARLY MODERN	An early modern brick built harbour building, currently a booking office and shop for Mermaid Boat Trips	None
23	DRY DOCK	6597	47554 30082	EARLY MODERN	Dry dock rebuilt in 1882 and taken over by Holman's in 1904. The scar of the former Mathews dry dock is visible within the later structure (Site 24)	Listed Building Grade II
24	DRY DOCK		47595 30071	EARLY MODERN	Two small dry docks shown on the c1880 OS map are likely to be those built by Matthews in 1815. The scar of the southernmost of these is visible in the later rebuild (Site 25)	None (but intersects with the Grade II Listed Holman's Dry Dock
25	SHIPYARD		47575 30091 (centred)	EARLY MODERN	The shipyard enclosing the dry dock has been in existence since at least 1815, having been altered and extended during the later 19th century	None
26	BONDED WAREHOUSE	-	47612 30066	EARLY MODERN	Granite bonded warehouse, incorporating an older store to the rear	Earlier component to rear is Grade II Listed
27	FISH CELLAR	-	47620 30049	POST MEDIEVAL/ EARLY MODERN	Granite fish cellar incorporated into later Custom House building	Part of Grade II Listed Customs House
28	CUSTOMS HOUSE	-	47604 30040	EARLY MODERN	Granite built customs house, now converted to residential use	Listed Building Grade II
29	TRAMWAY	41253	47620 30036	EARLY MODERN	Part of the tramway running from Trinity House to the quay, constructed in 1896 and closed in 1962	None

No.	Site type	MCO	NGR (SW)	Period	Description	Designation & Grade
30	DEPOT	41253	47622 30035 47655 30000	EARLY MODERN	A store house taken over by Trinity House in 1861	Listed Building Grade II
31	QUAY	-	47634 30084 47704 29973	MODERN	Extension of quay over former slipway. A medieval quay (MCO4866) may have stood here – referred to in a document of 1512. Corrugated sheds on the quay were built in 1922 for the steamer company Coast Lines Ltd	None
32	WEIGHBRIDGE	-	47663 29988	MODERN	A granite built weighbridge office in Trinity Square	None
33	INN	-	47673 29957	POST MEDIEVAL	Parts of the Dolphin Tavern date from at least the 16th century	None
34	WAREHOUSE	-	47666 29939	EARLY MODERN	A late 19th century granite warehouse to the south of the Dolphin Tavern	None
35	QUAY	-	47624 30084 47686 29966	EARLY MODERN	A quay side was built on reclaimed land at the foot of Quay Street and north along the former foreshore, infilling a former tidal inlet	None
36	SEAMENS MISSION	-	47567 29954	MODERN	Sailors Institute and Mission, built in 1908	None
37	WAREHOUSE	-	47509 30102	EARLY MODERN	Abbey Warehouse, early to mid-19th century in date	Listed Building Grade II
38	QUAY	-	47506 30113 47491 30188	EARLY MODERN	A quay associated with the Abbey Warehouse still survives, currently used for car parking	None
39	SLIPWAY	-	47484 30147 47487 30187	POST MEDIEVAL/ EARLY MODERN	A slipway at the foot of Abbey Street, one of the post medieval slips down onto the foreshore	None
40	SLIPWAY	-	47492 30222	MODERN	A granite built slipway on the north side of Abbey Basin	None
41	BOLLARD	-	47489 30215	MODERN	A granite warping post at the north end of Abbey basin	None

No.	Site type	MCO	NGR (SW)	Period	Description	Designation & Grade
42	BOLLARD	-	47565 30169	MODERN	Two granite warping posts at the north end of the swing bridge for steering boats into the dry dock. Shown on *c*1907 OS map	None
43	LIFEBOAT HOUSE	39254	47502 30265	EARLY MODERN	Lifeboat house, 1885 to 1917, currently in use as a bistro	Listed Building Grade II
44	SLIPWAY	-	47669 30492	MODERN	Modern slipway at south east corner of Wharf Road car park	None
45	WORKING PIER	-	47770 40204 47691 30502	EARLY MODERN	Albert Pier, constructed in 1845, extended in 1853	Listed Building Grade II
46	ENGINE SHED	-	47778 30242 47773 30268	EARLY MODERN	Railway engine sheds on Albert Pier	Part of Grade II Listed pier
47	STEPS	-	47782 30219	EARLY MODERN	Steps cut into the top of the sea wall at the S end of Albert Pier	Part of Grade II Listed pier
48	DERRICK	-	47767 30263	EARLY MODERN	The base of a derrick survives on Albert Pier	Part of Grade II Listed pier
49	BOLLARD	-	47772 30207	EARLY MODERN	A warping post for steering shipping on the southern end of Albert Pier	Part of Grade II Listed pier
50	MOORING BOLLARD	-	47770 30219 47757 80294	EARLY MODERN	A row of granite mooring bollards on Albert Pier	Part of Grade II Listed pier
51	RAILWAY	-	47768 30269 47701 30471	EARLY MODERN	Railway lines on Albert Pier survive, embedded into modern surfacing	Part of Grade II Listed pier
52	WAREHOUSE	-	47547 30506	EARLY MODERN	A granite warehouse dating to 1872 on Wharf Road, now in use as commercial premises	Listed Building Grade II
53	BOOKING OFFICE	-	47808 30088	EARLY MODERN	An arched stone building built into the quay wall, now the check in point for the Isles of Scilly passenger ferry. Shown on the *c*1880 OS map. Similar to the 18th century storehouse on South Quay (Site 13)	Part of the Grade II* Listed South Quay

No.	Site type	MCO	NGR (SW)	Period	Description	Designation & Grade
54	HARBOUR	-	47658 30256	MEDIEVAL/ POST MEDIEVAL	Penzance harbour is late 19th century but the anchorage that preceded it probably has late prehistoric origins	None
55	HARBOUR POOL	-	47522 30165	EARLY MODERN	Abbey Basin, formed by the construction of Ross Bridge (Site 25) in 1881	None

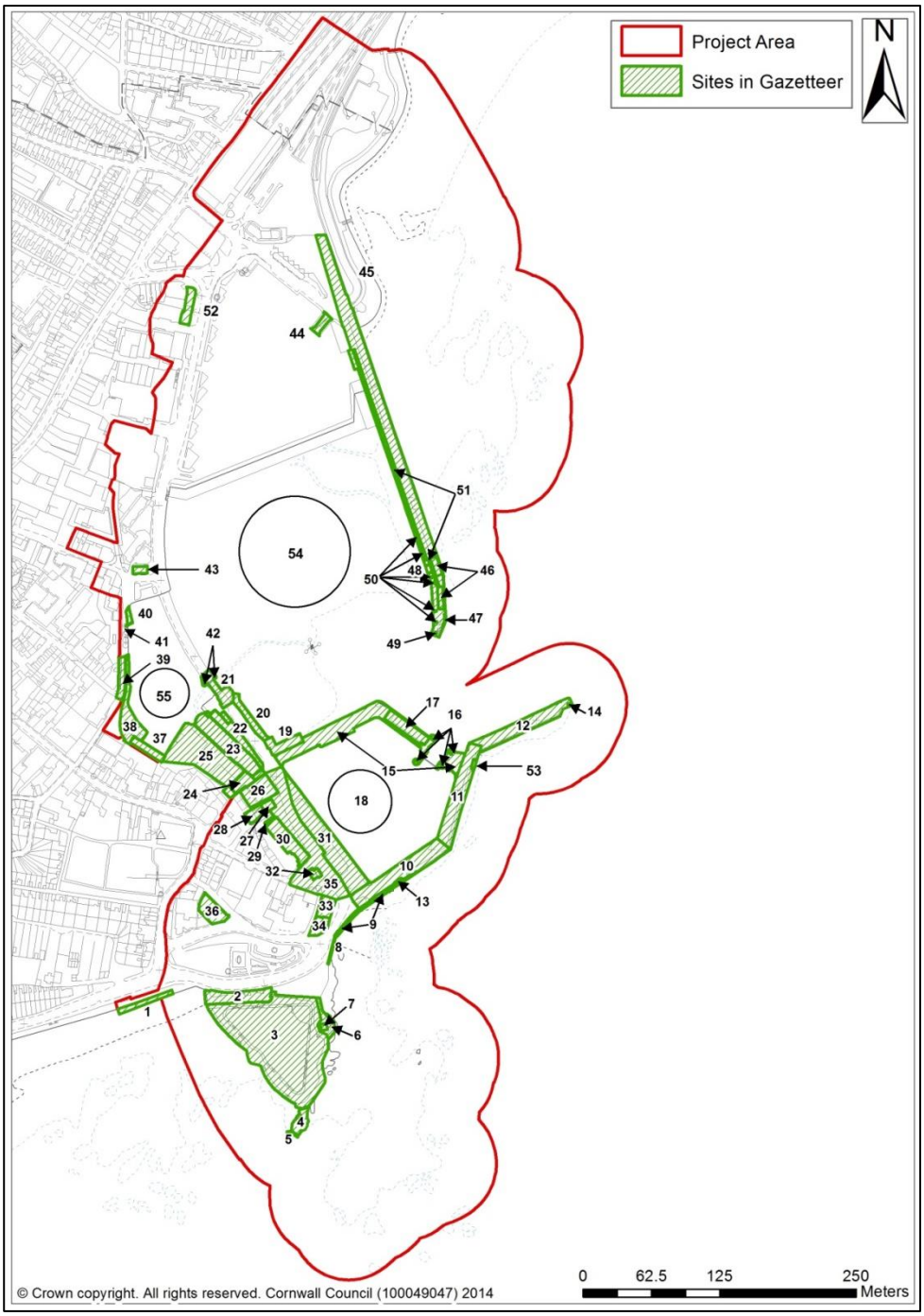

Fig 12 Plan showing Gazetteer entries.

Fig 13 Looking west along South Pier (Site 10) towards the Dolphin Tavern (Site 33). The earliest medieval quay structure may be preserved within later rebuilds, some of which are 18th century in date.

Fig 14 Looking northwest across the floating dock (site 18) from South Pier (Site 10) towards the former steamer company sheds and Holmans dry dock (Site 25).

Fig 15 Looking up Quay Street from the Dolphin Tavern (Site 33). Trinity House (Site 30) and a modern weighbridge office (Site 32) are right of shot at the edge of Trinity Square, once a sandy inlet (Site 35).

Fig 16 Looking west across Abbey Basin (Site 55) towards Abbey Warehouse (Site 37). The sloping path on the right is probably one of the post medieval slips (Site 39) onto the former foreshore.

Fig 17 The former Holmans Dry Dock (Sites 23 and 25) (now owned by Penzance Dry Dock Ltd) from Ross Bridge (Site 20).

Fig 18 The south end of Albert Pier (Site 45); a former railway shed (site 46) survives along with a section of railway line (Site 51). Granite mooring posts (Site 50) line the quay and some of the historic quay surface and walling can also be seen.

Fig 19 Jubilee Pool (Site 3), from Battery Road; the curving wall in the foreground may be a component of Battens Wharf (Site 2), which survives within the lido structure.

Fig 20 The defensive sea wall on the south side of South Pier (Sites 8 and 9); the construction clearly shows several phases of rebuilding and repair.

Fig 21 the base of the 18th century battery (Site 6) from Battery Rocks, now the site of a WWI war memorial (Site 7).

Fig 22 The rock cut bathing pool and steps (Site 4) on Battery Rocks to the south of Jubilee Pool. A section of walling (Site 5)is extant to the southwest.

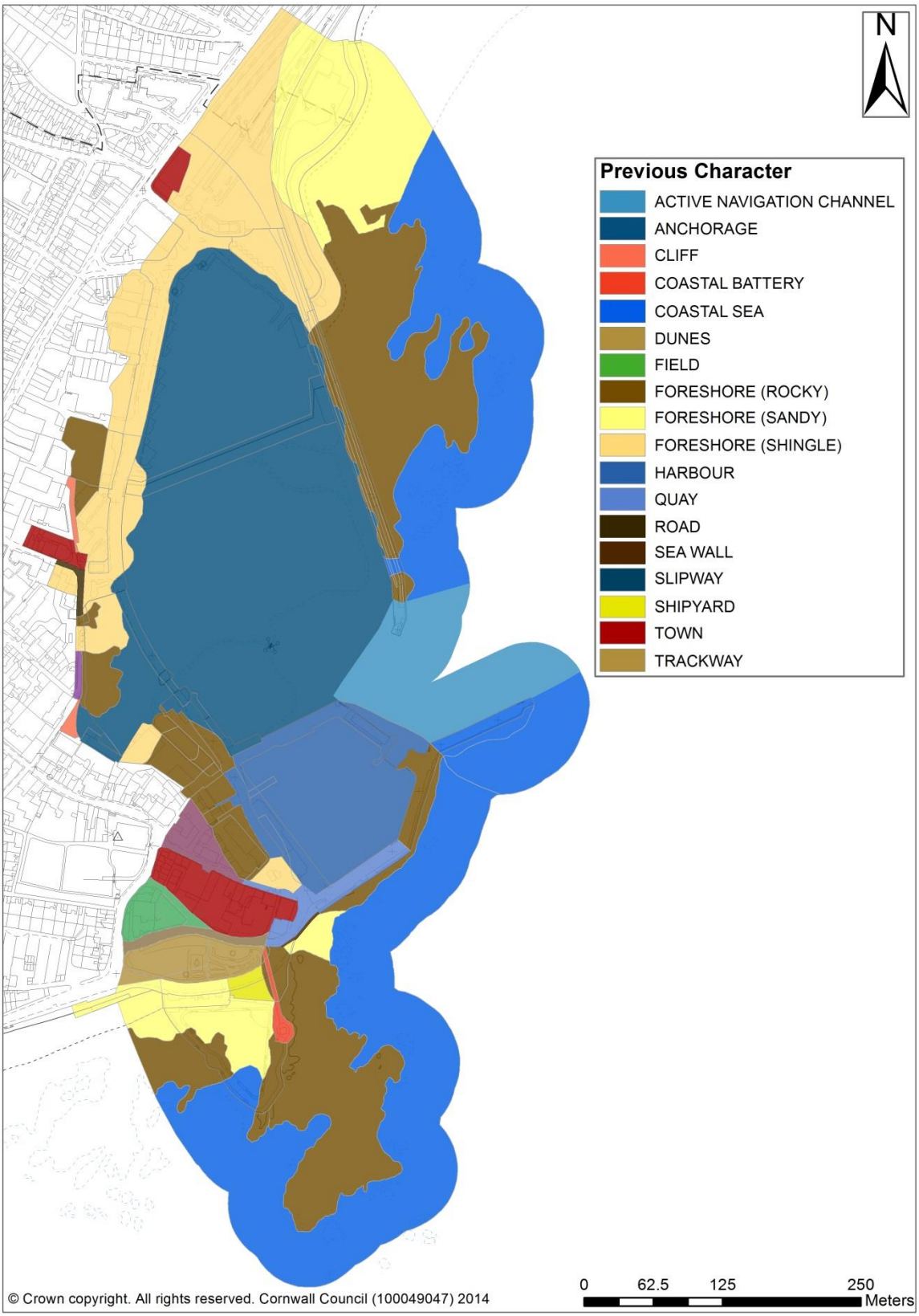

Fig 23 Late 18th to early 19th century previous character map showing characterisation to Sub-Type level, based on the c 1841 Tithe Map.

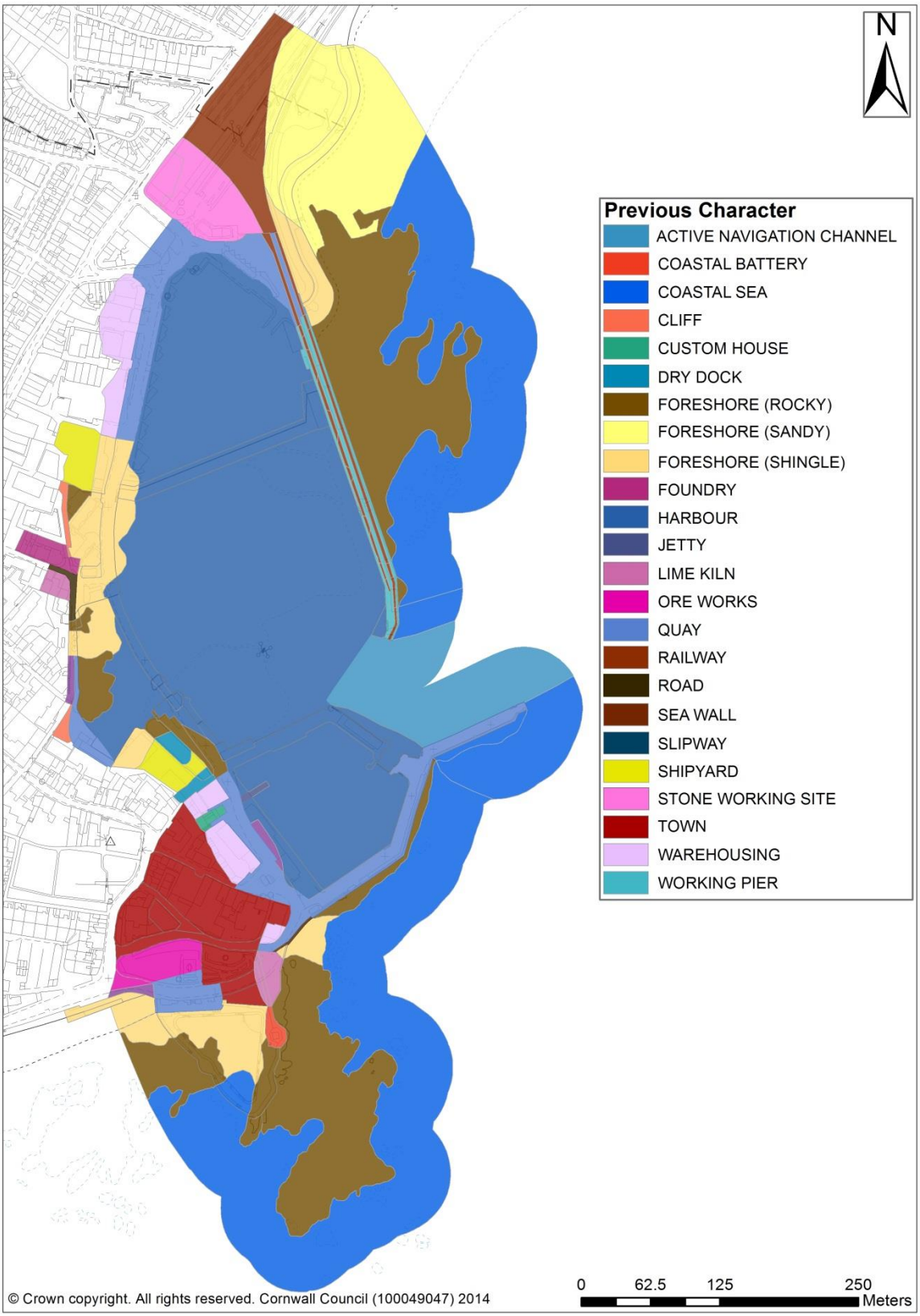

Fig 24 Late 19th century previous character map, based on the c1880 OS map.

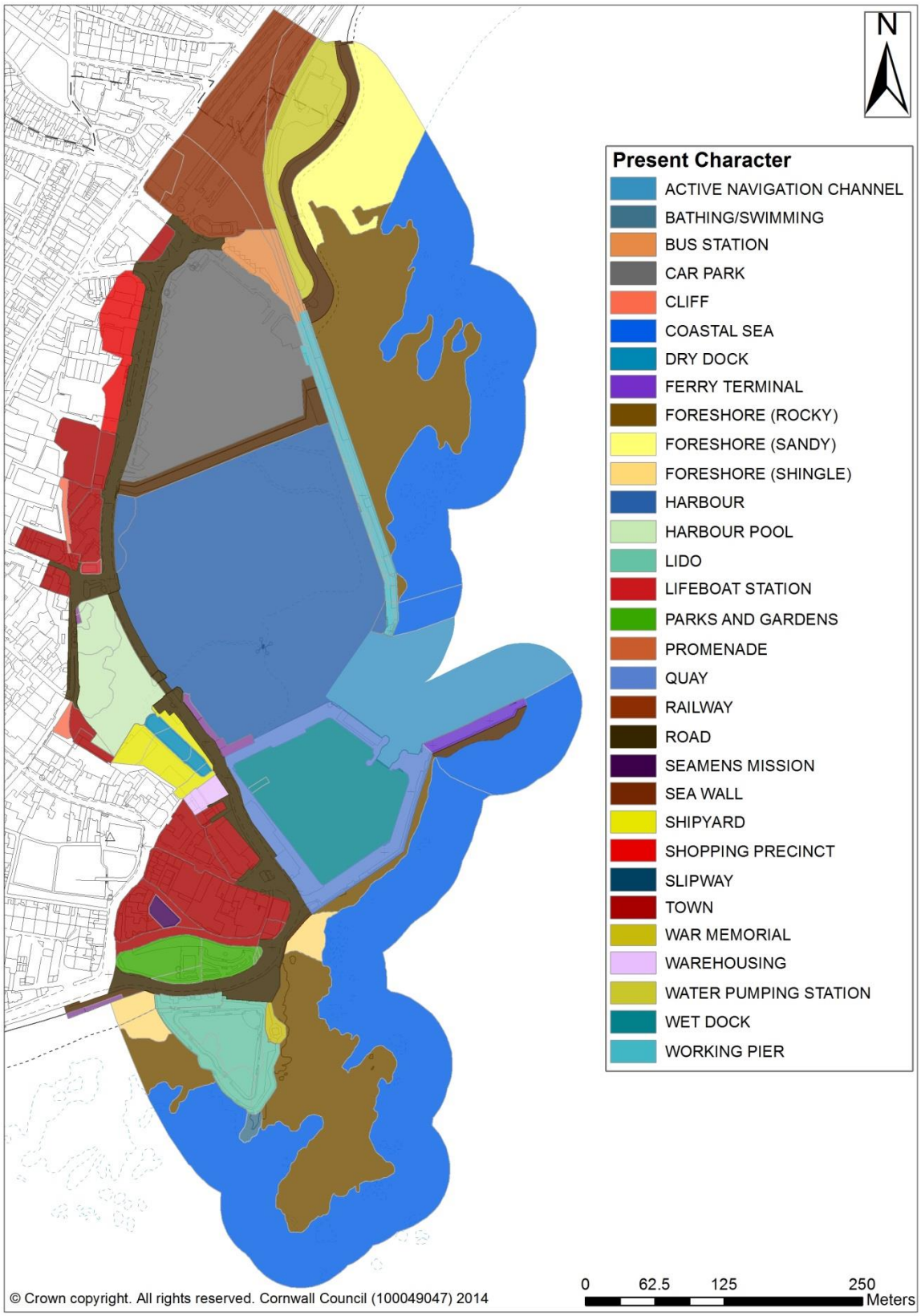

Fig 25 Present character map, based on OS digital mapping (2014).

3.2 Historic character

The following sub-sections present the results of a rapid characterisation of the study area using information from three 'previous' time-slices based on: the 1841 Tithe mapping and the *c* 1880's First and Second Edition Ordnance Survey mapping (mid to late 19th century character); *c* 1907 Second Edition Ordnance Survey mapping and 1946 RAF vertical photographs (early to mid-20th century character) with present character based on 2014 Ordnance Survey digital mapping. The characterisation mapping is shown at Sub-Type level, the lowest hierarchy of historic characterisation. These component parts or site types are discussed below within a broader context of characterisation aimed predominantly at 'Broad Type' level.

3.2.1 Late 18th to early 19th century character

The late 18th to early 19th century character of Penzance (Fig 23) captures the development of the port-related areas prior to any large-scale alteration of the early foreshore. The physical coastal landscape would have been the site of human activity and cultural adaption over millennia but this intervention is not always visible to the eye, although evidence of physical change may lie buried below the surface. The historic characterisation of these areas of Penzance during this time slice is therefore contextualised under the Broad Type Cultural Topography (Intertidal), Sub-Types 'Foreshore (Shingle)', 'Foreshore (Sandy)' and Foreshore (Rocky)'. The developing town along the backbone of the headland is outside of this study area but the base of the rocky headland retains the core of early settlement that formed part of the planned medieval town, characterised as Broad Type 'Settlement', Sub-Type 'Town'.

A single quay ran from the foot of the headland, rebuilt and extended by this point but not yet part of the wider port expansion of the later 19th century (Fig 23). The small harbour created by the quay's presence was simply part of a larger anchorage created by the sheltered bay, with a naturally-formed deep navigation channel between the outlying spits of rocky foreshore. These elements formed part of a cohesive port-related character, embodied within Historic Characterisation hierarchy Broad Type 'Water Transport' Character Types 'Port and Dock Installation and 'Navigation Channel', Sub-Types 'Quay', 'Harbour', 'Anchorage' and 'Active Navigation Channel'.

To the south of the quay a section of defensive sea wall (Broad Type 'Flood and Erosion Defence') ran around the edge of a small sandy inlet between the quay and Battery Rocks. The coastal battery and its causeway (Broad Type 'Defence', Sub-Type 'Coastal Battery') occupied the western edge of Battery Rocks; at some point during the post medieval period a small shipyard (Broad Type 'Shipping Industry, Sub-Type 'Shipyard') may have stood on the foreshore to the west of the battery (Fig 23). At this point the foreshore and coastal margins to the southwest of the town were still a mix of sand and sand dunes (Broad Type 'Cultural Topography (Landward)', Sub-Type 'Dunes') backed by open fields (Broad Type 'Enclosed Land, Sub-Type 'Field').

3.2.2 Late 19th century character

By the late 19th century the character of Penzance harbour was changing radically, reflecting the massive expansion that was occurring as a result of the boom time in local trade and industry. The characterisation for this time slice reflects this expansion in progress. The northern end of the harbour had seen the build-up of the natural foreshore for the construction of Albert Pier and Wharf Road, characterised as Broad Type 'Water Transport, Sub-Types 'Working Pier', 'Quay' and 'Warehousing' (Fig 24). The mainline station and railway (Broad Type 'Transport', Sub-Type 'Railway') had been constructed, to include sidings and sheds along St Albert Pier. The original quayside on the south side of the harbour had been extended and rebuilt, with additional warehousing and a customs house occupying the built up ground on the former rocky foreshore and the small shingle beach in front of the Dolphin Inn. Two small dry docks lay to the north within a small shipyard. The majority of these components formed part of the broader port-related character (Broad Type 'Water Transport', Character Type 'Port and Dock Installation'), defined by Sub-Types 'Quay', Warehousing', 'Customs

House', Dry Dock'. The shipyard (Sub-Type) is characterised under Broad Type 'Shipping Industry, Character Type 'Marine Construction'.

In addition to the expanded port and dock facilities there was a distinct industrial character to sections of the town bordering the harbour and Wharf Road by the late 19th century. Industrial premises included lime kilns, ore works and foundries. A stone working site was sited to the southwest of the railway station. These individual industrial elements (Sub-Types) are collectively characterised under the Broad Type 'Processing Industry'. A small industrial core was particularly notable to the south of the harbour at Battery Rocks, where small-scale premises and yards had become established adjacent to Battens Wharf. A substantial ore works stood to the north of the quay and lime kilns occupied the built up ground adjacent to the former coastal battery, incorporating part of the former causeway. Interspersed with these small industrial premises were modest cottages and dwellings expanding out from the back plots of the former medieval town. This amalgamation of relatively poor housing and small-scale industry is collectively characterised as Broad Type 'Settlement', Sub-Type 'Town'.

3.2.3 Present character

The present character of Penzance reflects the development of the port and docks by the early 20th century and the subsequent changes to this during the later 20th century as a result of the diminishing role of the harbour and the growth of the town as a commercial centre and tourist attraction (Fig 25).

The continuing expansion of the harbour during the latter years of the 19th century and the first decades of the 20th century saw the construction of North Arm Pier, the extension of the quay and the creation of a wet dock. The extended quay subsequently became the terminal for the *Scillonian* passenger ferry link with the Isles of Scilly. The 19th century construction of the Ross Bridge created the tidal Abbey Basin. A small quay and the Abbey Warehouse were sited at the western edge of this (Fig 25). As before, these individual elements form part of the broader context of port-related character, captured by Broad Type 'Water Transport', Sub-Types 'Quay', 'Wet Dock', 'Ferry Terminal' and 'Harbour Pool'. By the early 20th century the two small dry docks were replaced by one larger dry dock (Broad Type 'Water Transport'), now amalgamated within an extended shipyard run by the Penzance Dry Dock Company *Broad Type 'Shipping Industry', Sub-Type 'Shipyard').

The port facilities along Wharf Road and Albert Pier were eventually replaced by a through road along the harbour edge, the former warehousing now taken over by a shopping precinct and small-scale commercial premises and cafes or converted to residential use (Broad Types 'Commercial' and 'Settlement', Sub-Types 'Shopping Precinct' and 'Town'). This 20th century development finally incorporated any surviving sections of foreshore. The present day through road now incorporates part of the quaysides to the southwest of the harbour, effectively dividing the working harbour from the shipyard and warehouses to the southwest. Some of these, along with the former customs house and Trinity House Depot (subsequently the National Lifeboat Centre Museum), have also been converted as shops or restaurants or been adopted for residential use. The cohesive character of these areas is now predominantly urban in nature, characterised as Broad Type 'Settlement', Sub-Type 'Town'.

The northern end of Wharf Road had become a transport hub of a different kind by the latter part of the 20th century. The railway station was extended over the site of the former stone working yard and a bus station and visitor car park constructed on the northern end of Albert Pier, infilling part of the harbour as a result (Fig 25). Characterised as Broad Type 'Transport', these are distinguished as Sub-Types 'Railway', Bus Station' and Car Park'. Adjacent to the railway station a water pumping station (Broad Type 'Water Supply and Treatment', Sub-type 'Water Pumping Station') was constructed, contained by a substantial sea wall (Broad Type 'Flood and Erosion Defence, Character Type 'Sea Defence') to the east (Fig 25).

To the south of the harbour by Battery Rocks the change in character has distinctly moved away from industrial and towards the 20th century leisure market. The present

day character is predominantly recreational, with related elements (Sub-Types) characterised under Broad Type 'Recreation'. Redevelopment of the former ore works and adjacent yards and workshops has created St Anthony Gardens (Sub-Type 'Parks and Gardens'). The lime kilns to the north of the battery have disappeared beneath the remodelled road scheme that accesses the promenade and Western Green to the west. The base of the coastal battery survives but is now the site of a war memorial (Broad Type 'Commemorative', Sub-Type 'War Memorial'). Batten's Wharf and the shingle cove adjacent to Battery Rocks now form the site of a seaside lido, Jubilee Pool (Sub-Type 'Bathing/Swimming').

4 Designation, ownership and management

4.1 Designations

4.1.1 Heritage designations

Scheduled Monuments

A Scheduled Monument is one designated by statute as a site of national importance and is protected by The Ancient Monuments and Archaeological Areas Act 1979, as amended by The National Heritage Act 1983. By law, any proposed work affecting such sites requires Scheduled Monument Consent from the Secretary of State for Culture, Media and Sport.

There are no Scheduled Monuments in the study area.

Listed Buildings

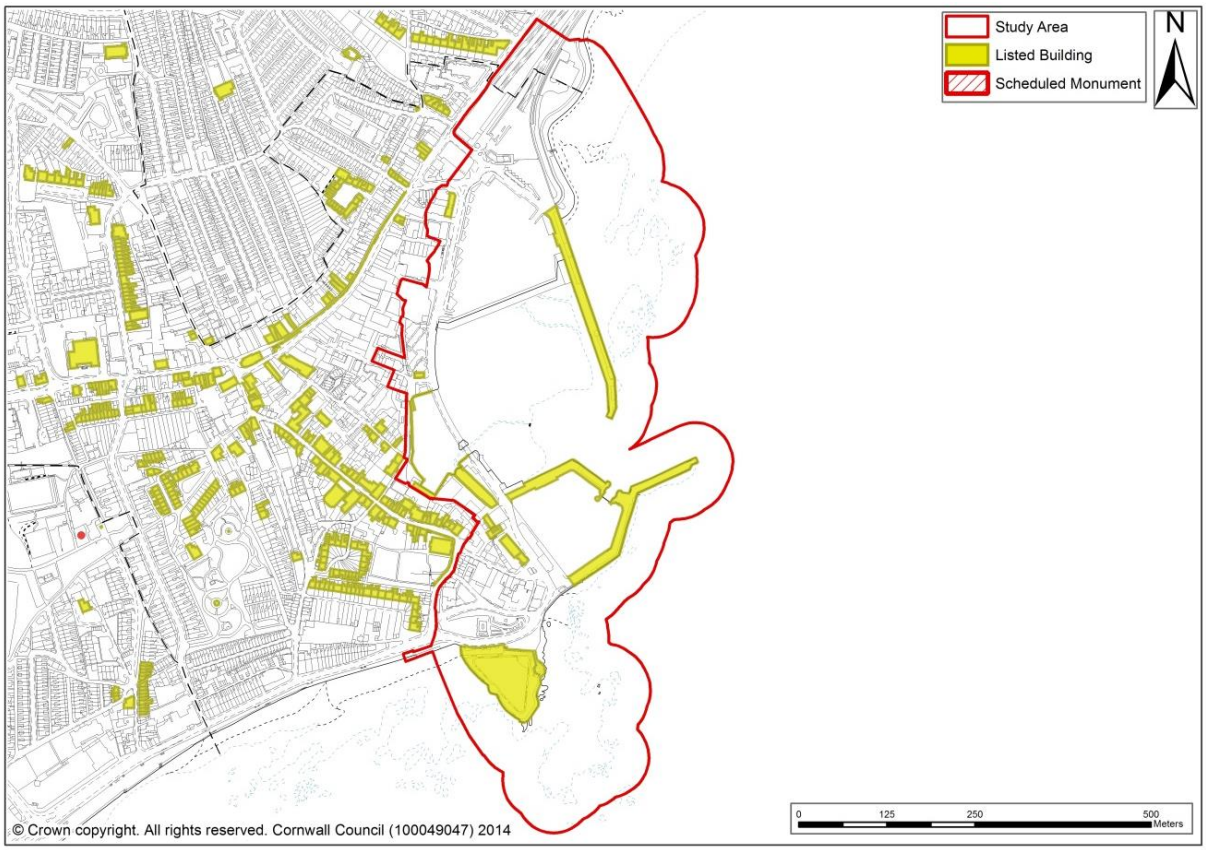

Fig 26 Listed buildings in the study area.

In England and Wales the authority for listing is granted to the Secretary of State by the Planning (Listed Buildings and Conservation) Act 1990.

The study area contains the following Listed Buildings (Fig 26):

- South Pier (Grade II*);
- Albert Pier (Grade II);
- Old Lifeboat House (Grade II);
- Dry Dock at Penzance Shipyard (Grade II);
- Abbey Basin Quays and Slipway (Grade II);
- The Abbey Warehouse (Grade II);
- Custom House (Grade II);
- Trinity House Depot (Grade II);
- Battery and War Memorial (Grade II);
- Jubilee Pool (Grade II).

The Historic England (HE) South West office is in Bristol. HE provides input and advice on heritage matters for Listed Buildings and Scheduled Monuments, together with strategic overviews and support at local, regional and national levels.

Listed Building Heritage Partnership Agreements

Listed Building Heritage Partnership Agreements (LBHPAs) were introduced by section 60 of the Enterprise and Regulatory Reform Act 2013. They allow the owner of a listed building or buildings and their local planning authority to agree which necessary works to the building are routine and regular and, if done correctly, will not harm its special interest. The agreement grants listed building consent (LBC) for these works, for an extended period of time, and they can go ahead whenever convenient. Guidance on setting up LBHAs is given in Historic England Advice Note 5 (Historic England 2015a).

Local Listed Building Consent Orders

Local Listed Building Consent Orders (LLBCOs) were introduced by section 60 of the Enterprise and Regulatory Reform Act 2013. They allow a Local Planning Authority to grant listed building consent for an extended period for works of any description for the alteration or extension of groups of listed buildings in all or part of their area, or buildings of a particular description in their area. This is a pro-active and blanket grant of consent, which means that owners of those listed buildings will not have to make individual applications, but will be able to proceed with the works, subject to any conditions that may be attached to the Order. Guidance on LLBCOs is given in Historic Advice Note 6 (Historic England 2015a).

Heritage at Risk

There are no sites or buildings in the study area that are listed on Historic England's *Heritage at Risk Register 2015*.

Penzance Conservation Area

Conservation Areas were first introduced in 1967 through the Civic Amenities Act and to date more than 9000 exist in the UK. The current Act governing the designation of these 'areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance' is the Planning (Listed Buildings and Conservation Areas) Act 1990. Under this Act local planning authorities are required to designate conservation areas, to keep them under review and if appropriate to designate further areas. Designation remains the principal means by which local authorities can apply conservation policies to a particular area. Current guidance was set out by English Heritage in the 2011 publication 'Understanding Place: Conservation Area Designation, Appraisal and Management'.

Penzance Conservation Area was designated in 1969 and extended in 1976 (DC 0182). Penzance Conservation Area Character Appraisal and Management Proposals report was produced by Cornwall Council in 2010.

Article 4(2) directions

Under Article 4 of the General Permitted Development Order 1995, a local authority may bring certain permitted development rights under their control. There are two routes to serving such notice – the more usual relates specifically to conservation areas and is covered by Article 4(2).

Penzance Conservation Area is already covered by an Article 4 Direction. Further information on what additional restrictions apply can be obtained from the Local Planning Authority.

Local Lists

Local heritage listing is means for a community and a local authority to jointly identify heritage assets that are valued as distinctive elements of the local historic environment. There is no local list for Penzance apart from sites recorded in the HER. Cornwall Council supports the development of local lists and is currently looking at a standard way of assessing criteria for inclusion on lists by neighbourhood groups based on the 'Good Practice Guide for Local Heritage Listing' (English Heritage 2012).

4.1.2 Conservation designations

There are no conservation designations within the study area.

4.2 Ownership

Penzance Harbour is now a local authority owned harbour managed by the Cornwall Council Harbours Board. It has a resident Harbour Master and a recently established Penzance Harbour Users Association.

Penzance Harbour currently offers commercial ship repairs from Penzance Dry Dock Ltd who operates a dry dock and marine engineering services from Penwith Marine Services. Mooring facilities provide 240 moorings for recreational resident's craft and up to 50 berths within the wet dock for visiting yachts. The port continues to handle modest fish landings but its main cargo consists of supplies and freight to and from the Isles of Scilly. It also provides the operational base for the *Scillonian III* passenger ferry, which operates between Cornwall and the Isles of Scilly.

4.3 Planning arrangements

4.3.1 The Marine Management Organisation (MMO)

Marine activities in the seas around England and Wales are licensed, regulated and planned by the Marine Management Organisation (MMO) so that they are carried out in a sustainable way. Their responsibilities include planning and licensing for marine construction, deposits and dredging that may have an environmental, economic or social impact and producing marine plans to include all marine activities, including those they do not directly regulate. The study area will come under the South West Inshore Plan which will be completed by 2021.

4.3.2 The National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) is the national planning policy document for England and Wales. This national guidance is applied at a more local level by Councils (also known as Local Planning Authorities), who form area specific policies and proposals that reflect the broad guidance of the NPPF, but with more locally specific detail.

4.3.3 Cornwall Local Plan

In Cornwall the main policy document is the emerging Cornwall Local Plan, which aims to control and influence the use of land in the public interest by identifying areas where development can and cannot take place. Sitting underneath the Cornwall Local Plan are area-based policies for settlements, reflecting the specific character and needs of each place. These are referred to as either Town Frameworks or Neighbourhood Plans — Neighbourhood Planning is now a potential way ahead for bringing positive management actions forwards.

The NPPF requires that Local Plans 'be prepared with the objective of contributing to the achievement of sustainable development.' Local Plans should cover a 20 year period, and be able to demonstrate that the content of the Plan is deliverable, meaning that a sufficient number of sites have been identified to achieve the objectives of the Plan.

From 1 April 2009, the six District Councils and the County Council became a unitary authority - Cornwall Council. Many of the planning policies that were used by the former districts have been saved until such time that a county wide Local Plan is adopted. These policies will be used to determine planning applications that are submitted to Cornwall Council, albeit that the national guidance of the NPPF will be given greatest weight in decision making if the saved policies are considered out-of-date.

4.3.4 The Cornwall Maritime Strategy 2012–2030

'*A future for Maritime Cornwall: The Cornwall Maritime Strategy 2012-2030'* was adopted by Cornwall Council in August 2012. It is the first, and to date the only, high-level maritime strategy to be produced by a local authority. Section 1.4 of the Strategy identifies strong roles for landscape and seascape character in building Cornwall's future sustainable economic and community development. The following objectives of the Strategy are of particular relevance to this study:

- Objective E: To recognise, protect and further develop the 'working harbour' role of Cornwall's estuaries, ports and harbours;
- Objective F: To better connect Cornwall's coastal communities and destinations and support sustainable, low carbon transport; and
- Objective G: Ensure Cornwall's natural and historic maritime environment and culture is renowned worldwide, and is a source of pride and inspiration to residents and visitors.

4.3.5 Cornwall Devolution Deal

The Devolution Deal gives Cornwall greater powers over public sector funding and is the first stage of a longer journey towards delivering the full Case for Cornwall, sets out details of the additional powers and freedoms we want from the new Government.

The Deal was officially signed by the Prime Minister, the Secretary of State for Communities and Local Government, the Leader of Cornwall Council and others on 16 July 2015.

Under the terms of the Deal, which is based on the proposals set out in the Case for Cornwall which were formally agreed by the full Council, Cornwall will have greater powers over areas of public spending which are currently controlled by London. The deal covers a range of key areas including Heritage and Culture:

44. The Government recognises Cornwall's rich and unique heritage, including its historic revived language and passionate communities, and that this cultural distinctiveness is an important factor in Cornwall's local economy. It underpins tourism and is a key driver that attracts other business to the location.

45. In order to support the cultural heritage of the local area Cornwall Council, Cornwall and Isles of Scilly Local Enterprise Partnership and Government agree to:

- Invite local partners to create a Cornish Heritage Environment Forum so that Cornwall can develop their vision for heritage at a more local level. Cornwall would be able also to use this group to explore links to the local tourism agenda. This forum would build on the work of the existing South West Heritage Environment Forum.
- Cornwall Council and Historic England will jointly produce a study of the cultural distinctiveness of Cornwall's historic environment. This will inform the work of the new Cornish Historic Environment Forum and the development of the Framework Convention for National Minorities (FCNM).
- Engage Government, through the Department for Culture, Media and Sport, on how to best support tourism in Cornwall.

5 Forces for change

5.1 Development Pressures

Penzance Harbour has witnessed a significant decline in maritime trade since the later 20th century. It retains some commercial and freight services, largely due to its link to the Isles of Scilly, but much of its trade is now associated with maritime recreation and tourism.

The harbour area, to include Wharf Road and Albert Pier, has also been significantly affected by town development and planning decisions carried out through the latter years of the 20th century. This is particularly evident along Wharf Road and in the harbour core where the majority of the historic maritime buildings and warehouses are now converted to commercial or residential use. To some extent this reflects the growth of Penzance town as a popular tourist resort, the maritime edges of the town being progressively drawn into the commercial urban core and the harbour quays becoming the site of modern road and rail transport links and recreational provision.

The change in emphasis from a commercial harbour dealing in maritime-focussed trade to a leisure port appears set to continue for Penzance. The Penzance Harbour Users Association has recently identified concerns about the future of Penzance Harbour. They have established through community consultation that Penzance harbour is considered a major asset and a natural focus for new investment. This makes the port vulnerable to change but also opens up opportunities for future growth.

Recent plans for a substantial marina development at Penzance are currently shelved due to funding being withdrawn. The marina development would potentially increase the number of visiting boats and the level of visitor footfall in the town, raising the amount of potential revenue brought into the town through the tourist trade. Negative impacts would include a substantial development potentially out of keeping with the scale and character of maritime Penzance, the allocation of available funding away from other more sympathetic development projects and the potential legacy of an unsuitable 'white elephant' if the anticipated use of such a development is not fulfilled.

5.2 Isles of the Scilly transport links

The loss of the helicopter link to the Isles of Scilly has impacted on visitors to Penzance and Scilly but there is an opportunity for increasing the seagoing link currently provided by the *Scillonian III*. This would potentially bring a higher visitor footfall to the harbour and increase harbour revenue and income for neighbouring commercial premises such as the shops and cafes now lining the harbour areas. Associated with this are the potential impacts of dredging on palaeoenvironmental deposits, the medieval harbour and wreck sites — a programme of capital dredging works is currently being carried out to improve access to the harbour (Johns forthcoming).

5.3 Coastal erosion

The foreshore levels in front of the coastal defences at Penzance have fallen significantly in the time that these have been monitored (broadly since the 1960s). The construction of the sea defences over the years has aimed to reduce the impact of coastal flooding and storm impact but has also been partly influential in creating the current patterns of shoreline erosion and deposition, as has the historic construction of the harbour. The eroding foreshore and falling beach levels have no natural recharge form the protected shoreline and the weak tidal currents in this area mean there is low sediment transport potential. Conversely the impact of reducing foreshore levels in front of the coastal defences is creating an increased risk of their becoming undermined. This risk is exacerbated by the risk of overtopping waves as climate change brings greater risk of damaging storms and sea level rise (see below).

5.4 Climate change

Average global temperature and sea level have risen since the late 19th century and at an increased rate over the past few decades. Average UK temperature has risen since the mid 20th century, as have average sea level and sea surface temperature around the UK coast. Over the same time period, trends in precipitation and storminess are harder to identify (UK Climate Projections (UKCP09)). Future sea-level rise around the UK is estimated to be between 12 and 76cm by 2090–2099 (Lowe *et al* 2009). This range is based on projections using low, medium and high scenarios for greenhouse gas emissions, and the central estimate for the medium scenario is 37cm by 2100, although this should not be taken as the most likely projection.

The Paris Agreement of November 2015 represented a historic moment in the fight against climate change. An enduring, legally-binding treaty, it is the first to commit all countries to cutting carbon emissions. 187 countries will reduce carbon emissions, starting in 2020, once 55 countries covering 55% of global emissions have acceded to it.

'Estimates suggest that net sea level rise in the South West could be between 20 and 80 cm by the 2080s. The sea level in Newlyn, a location with one of the five longest sea level records in the UK, has risen by approximately 20 cm since 1920. It has been suggested that a sea level rise of 20 cm by 2030 would compromise freshwater and coastal habitats, sea defences and increase the frequency of coastal flood events, and due to the coastal topography, managed retreat is not always an option.' (Cornwall Maritime Strategy 2012-2030; Annex)

The predicted rise in sea level in the next century due to global warming could have a profound effect on areas of Cornwall's low-lying shoreline (although historic Penzance was hit by a Tsunami in 1755, with a rise of 8 feet in sea levels).

Recent storm damage during the winter of 2013-2014 has also demonstrated the vulnerability of historic harbour structures along Cornwall's coastline to the ferocity of storms, which are also likely to increase as a result of global warming. The South Pier and Jubilee Pool both suffered substantial storm damage during the winter of 2013-2014 and the Jubilee Pool will be closed for refurbishment for the summer of 2015.

'Climate change in Cornwall is expected to result in wetter, stormier winters and drier, hotter summers, with extreme weather events such as storms becoming more common. There is increasing uncertainty about the projected changes to precipitation, particularly for the summer months' (Cornwall Maritime Strategy 2010-2030; Annex)

The Cornwall and Isles of Scilly Shoreline Management Plan Stage 2 review currently recommends a hold the line policy for the shoreline at Penzance, which anticipates that in future years the area vulnerable to potential erosion and flooding will gradually push further inland. The natural topography of Penzance harbour, being built out onto naturally durable rocky outcrops, may be better protected than other areas of the adjacent coastline.

Penzance Harbour is currently covered by the Cornwall Maritime Strategy 2012-2030. As well as looking to protect the natural and historic maritime and environmental of the coastline of Cornwall and its communities, the objectives include '*protecting and developing the 'working harbour' role of Cornwall's estuaries, ports and harbours'* and '*to better connect Cornwall's coastal communities and destinations' (pp 20-21)*. These are particularly pertinent to Penzance whose working harbour sustains Cornwall's links with the Isles of Scilly and whose growing leisure industry partly relies on expanding the current harbour facilities to promote use by visiting yachts and leisure craft.

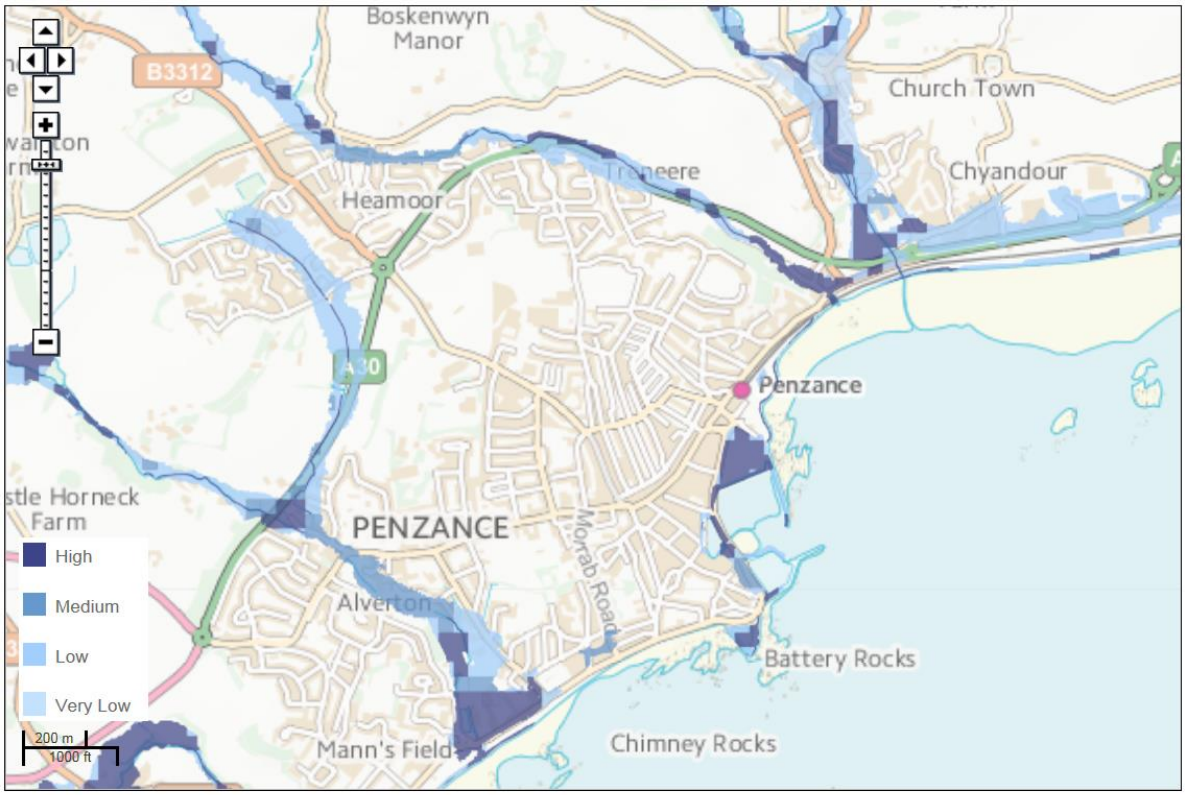

Fig 27 Risk of flooding from rivers and sea at Penzance (© Environment Agency copyright and database rights 2015. © Ordnance Survey Crown copyright. All rights reserved. Environment Agency, 100026380. Contains Royal Mail data © Royal Mail copyright and database right 2015).

The areas marked as 'High' on Figure 27 indicate that each year, this area has a chance of flooding of greater than 1 in 30 (3.3%). This takes into account the effect of any flood defences that may be in this area. Flood defences reduce, but do not completely stop the chance of flooding as they can be overtopped or fail.

6 Assessment of significance

In 2008, English Heritage published 'Conservation Principles', a framework and guidance for assessing the range of values pertaining to the historic environment (English Heritage 2008). This guidance identifies four main types of values: Evidential, Historical, Aesthetic and Communal. The following subsections present a preliminary assessment of the values and significance relating to Penzance Harbour's port-related heritage.

6.1 Evidential

—'the potential of a place to yield evidence about past human activity'

Elements of the 18th century quay (South Pier) survive and may preserve some of the older medieval and post medieval fabric of the earliest quays at Penzance. The 18th century coastal battery and its causeway also survive and several phases of the defensive sea wall (dating between the later 18th and early 20th centuries) are visible on the south side of South Pier. The 19th century Battens Wharf has been retained within the modern structure of Jubilee Pool. Many of the historic harbour buildings remain, although the majority of these are now converted to residential or commercial use. The present dry dock retains physical evidence for the earlier dry dock within its present

form. There is a section of surviving tramway and a turntable on the north side of Trinity House, although its link with the historic quayside is lost.

The topography of the historic shoreline is preserved in the current building line behind the harbour and along Promenade Road and Wharf Road. Many of the historic back lanes and slipways (e.g. Barbican Lane, New Street, Jennings Street and Abbey Street) that once accessed the foreshore are also well preserved. Some of the historic warehousing along Wharf Road survives, although now converted to commercial use. The harbour has lost some of its historic form and context through the construction of the car park and bus station but Albert Pier remains extant, complete with sections of the quayside railway lines and sheds. On both South Pier and Albert Pier there is much evidence of their historic form and associated quayside furniture; to include granite mooring bollards, warping posts, derricks and capstans. The phasing of harbour development can be discerned through the different structural forms of granite walling and quay surfacing.

6.2 Historical

— 'the ways in which past people, events and aspects of life can be connected to the present (it tends to be illustrative or associative)'

The coastal battery remains a visual reminder of the defensive role of Penzance during the Napoleonic Wars; the WWI war memorial that now stands upon it continues the link with military defence and remembrance of those who served locally.

The majority of the working components of the modern harbour continue to reflect its function by the later 19th century, when the harbour as it is seen today fully took shape; the wet and dry docks, adjacent boatsheds and warehousing, the Custom House, Lifeboat House and former Trinity House Depot, and the *Scillonian III* ferry, which perpetuates the link with the Isles of Scilly. Although many of the historic harbour buildings are now converted to a different commercial, and often non-maritime, use, their former nature and function are typically preserved in their built form and by the names of the businesses that now occupy them. Through the construction of the Wharf Road car park and the bus station, Albert Pier has become somewhat separated from the rest of the harbour complex and its maritime role, both historic and modern, is less evident, although visual elements of its original function and relationship with the railway to the northwest still survive within the fabric of the quay and quayside buildings. Likewise, the former warehouses on Wharf Road are largely lost to modern retail development, again severing the link between the northern end of the harbour and its older southern counterpart.

The modern character of the harbour area today remains distinct from that of the town on the higher ridgetop. Historically the harbour was always set apart from the town at the foot of the cliff, with much of the maritime trade and mercantile-related business run from the fine houses and business premises on Chapel Street. This distinction is still apparent in the street layout and building character of the two areas.

Penzance once played a key role in the pilchard industry that was widespread throughout Cornwall. Although the seine boats no longer draw their nets out on the Promenade Beach to dry there are still subtle reminders of the historic fishing capability of the harbour. The former Custom House that fronts the harbour is partly built on a former fish cellar. St Anthony Gardens preserves the conjectured name of the medieval fisherman's chapel that once stood to the west of Barbican Lane, the partial remains of which are documented to be incorporated within the garden walls. Fishing remains a small part of the modern working harbour but not on its once historic scale.

6.3 Aesthetic

— 'the ways in which people draw sensory and intellectual stimulation from a place'

Penzance harbour today is a bustling, vibrant centre of maritime and commercial activity, full of colour and sound. The working harbour and dry dock generate a natural energy and there is the continual movement of a variety of maritime craft, from pleasure boats to commercial shipping; particularly busy in-season. Whilst not wholly

aesthetic in itself the harbour is set against the steep backdrop of the town with its winding streets and historic buildings. Far ranging coastal and sea views can also be appreciated from many points around the harbour and its immediate environs, reinforcing the primacy of the sea in Penzance's historic development.

Parts of the harbour and its surroundings now strongly reflect the rise of tourism and recreational activity from the later 19th century onwards. St Anthony Gardens and Jubilee Pool provide both a striking visual and sensory aesthetic and the natural rock cut bathing pool on the southern end of Battery Rocks remains a popular bathing point to dedicated locals and visitors throughout the year. The local shops, cafes and restaurants that now occupy many of the historic harbour buildings provide a year round attraction and a natural hub of leisure-related activity. The variety of boats and shipping that now use the harbour facilities creates its own visual aesthetic, a vibrancy of movement, colour and sound.

6.4 Communal

— 'the meanings of a place for the people who relate to it or for whom it figures in their collective memory'

Although Penzance harbour receives many visitors every year it retains a strong centric focus of local business and maritime purpose. It also sustains the link between Cornwall and the Isles of Scilly. The harbour and its maritime trade were the formative reason behind the development of the commercial town and the local community continues to benefit from the business generated by the harbour facilities and the small business potential created through the conversion of some of the historic harbour buildings. Local residents are also finding opportunity to settle in the area as more residential units become available. This historically functional area of Penzance now sees a more subtle blend of maritime working business and local residential and commercial activity. Today the 'local' community is a diverse mix of bohemian artists and thinkers, long-standing Cornish families and migrated out-of-county residents. Visitors to Penzance contribute a seasonal buzz of appreciation for the historic town and bustling waterside along with generating welcome seasonal income. Penzance remains primarily a working town and harbour, however, and that balance is to be respected and preserved.

7 Summary of recommendations

As reflected in the three characterisation time slices presented for Penzance, the port area has developed through time from a small fishing settlement by a natural anchorage and harbour in the lee of a narrow foreshore to a large-scale multi-purpose maritime port and trade centre, with more recently an increasing emphasis on leisure and recreation-based activities. The distinctive character of the harbour area today is therefore largely due to the symbiotic relationship between the site's natural topography, the changing demands of maritime trade and export over time and the 20th century growth in leisure and tourism. Much of the historic harbour area, particularly the northern end, now caters to modern commerce, a busy road and rail transport interchange and the provision of visitor car parking to the rest of Penzance. Key to the appreciation of the present harbour-side, however, is the survival of the historic quays and quay-side infrastructure and the historic buildings associated with these.

Cornwall Council is currently working on a Heritage Partnership Agreement (HPA) with the National Trust using Mullion Harbour as a pilot project with the idea of using it as model for HPAs for Cornwall Council owned ports and harbours, such as Penzance. The first stage of the HPA will be a Conservation Management Plan for the harbour. Penzance and its port-related heritage would also benefit from a similar HPA and an adequately-resourced Conservation Management Plan, informed by appropriate condition surveys and structural assessments. The Plan should include a vision for Penzance along with a set of management policies, taking into account what has gone before. These policies should be specific to the needs of Penzance and its port-related heritage and the people who value it and its current management issues.

A number of the historic harbour buildings and structures are Listed Buildings, and the whole falls within a Conservation Area. Although the re-use of the historic buildings sustains their preservation it is important that future development is sympathetic to the historic built fabric of the harbour area and that it endeavours to retain their historic character. Currently there is also some loss of coherence in the wider harbour area caused by the main thoroughfare which now cuts through the harbour along Wharf Road and the creation of the car park and bus station. The large-scale retail development in this area of the town over recent years has also exacerbated this to some degree. It is important that future development does not cause further separation of the historic harbour elements and that some thought is given to restoring their former relationship. The proposed marina development, although currently on hold, has received some contention and if it does eventually proceed there should be a review of its suitability, appropriateness and scale in respect of the existing historic harbour side.

In accordance with guidance issued by Historic England it is good practice to regularly review Conservation Area Appraisals to ensure they remain accurate and up to date. It was the intention to review and monitor the Penzance CA Appraisal with a formal review to take place within 5 years of its adoption by Cornwall Council, so it is recommended that the formal review should take place in 2016.

There has been only limited archaeological intervention or historic assessment of Penzance Harbour and to help better understand the area a proper digital survey of key historic components is recommended; this should include a measured topographical survey of the harbour area and its relationship to the ridgetop town as well as full buildings surveys of selected historic buildings and structures. New development within the harbour area and in the vicinity of Quay Street, Coinagehall Street and Barbican Lane should be accompanied by appropriate archaeological intervention as there is a strong likelihood for surviving below-ground remains to be associated with the earliest settlement and harbour development and/or the industrial premises that were a feature of the harbour peripheries by the 19th century. This area suffered as a result of the 1930's slum clearances, with substantial loss of historic built fabric. A large unsightly tarmacked area beside Jubilee Pool has replaced the former lime kilns and cottages in this area and some sympathetic landscaping here would be beneficial.

The potential for the survival of buried archaeological features and deposits should be considered if any ground disturbance or dredging is planned and appropriate provision should be made for assessment and recording.

To aid the appreciation and understanding of the historic harbour by both locals and seasonal visitors, there should be some provision of well-placed information boards containing a brief written account of the harbour's origins and development, supported by selected historic photographs and mapping.

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