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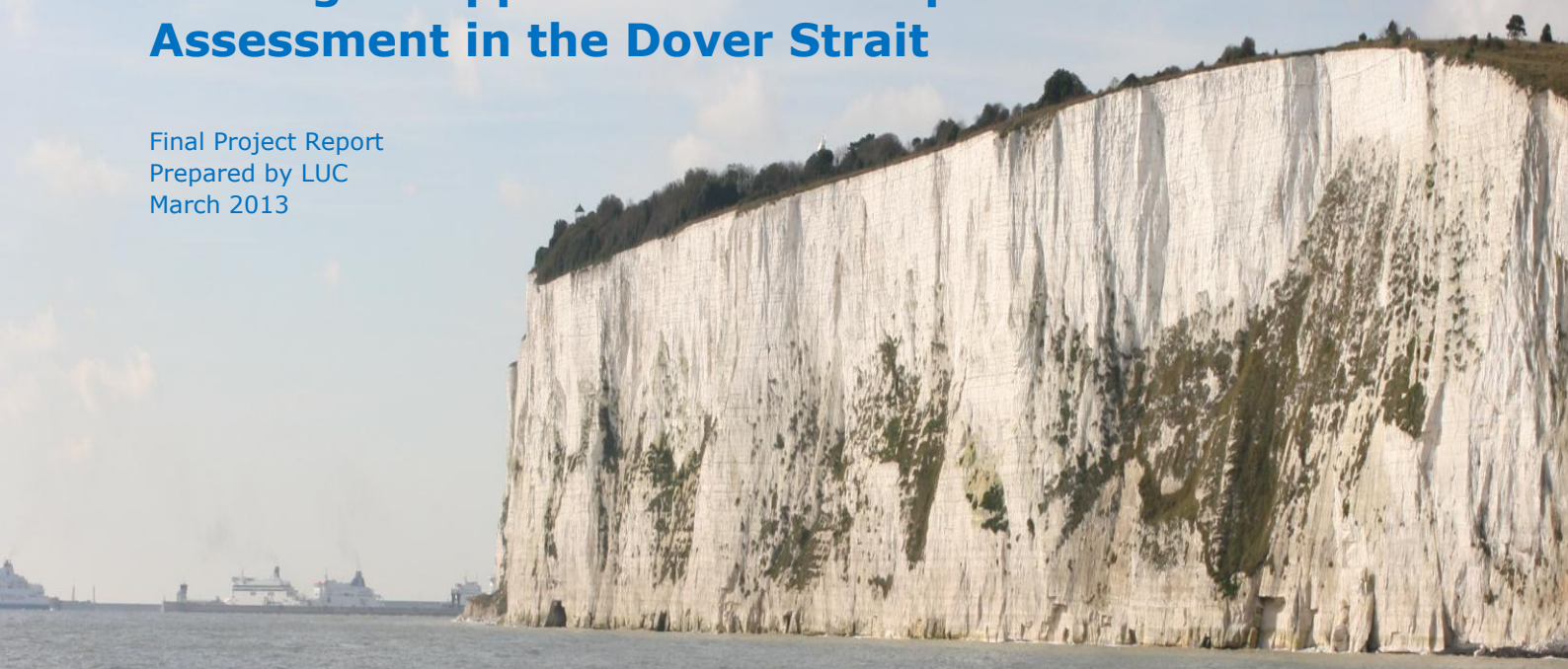
Piloting an approach to Seascape Character Assessment in the Dover Strait

Final Project Report
Prepared by LUC
March 2013



For Kent County Council as part of the NOSTRA (Network Of STRAits) Project

European Union
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KENT DOWNS
Area of Outstanding Natural Beauty

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Contents

1 Introduction

Background

1.1 LUC was commissioned by Kent County Council in August 2012 to undertake a pilot Seascape Character Assessment (SCA) to inform marine spatial planning in the Dover Strait. This is part of the wider Interreg-funded NOSTRA (Network of STRAits) programme, which is seeking to share ideas and best practice in marine spatial planning as applied to strait seascapes across Europe. The Dover pilot seeks to demonstrate how an assessment of the seascape covering the marine, intertidal and coastal zones can provide an evidence base to contribute to sound marine planning and management. This study follows the principles of the European Landscape Convention (ELC), which confirms the importance of 'seascape'.

1.2 The pilot work undertaken in the Dover Strait particularly sought to explore how the outputs of a Seascape Character Assessment could contribute towards the delivery of the ELC. Most of the European authorities in the NOSTRA project are signatories of the Convention – and as such are commonly working towards the same set of principles with regard to 'landscape' and 'seascape'. This is discussed further in Chapter 6.

1.3 The results and recommendations from the pilot SCA for the Dover Strait were presented at a NOSTRA workshop in January 2013, attended by a range of UK stakeholders as well as the NOSTRA partners from across Europe.

Structure of this report

1.4 This report is structured as follows:

- Chapter 2 sets out the context to this study
- Chapter 3 summarises the key steps in the method developed for the Dover Strait pilot SCA
- Chapter 4 presents the overall results of the Dover Strait pilot SCA
- Chapter 5 presents four examples of Seascape Character Area descriptions developed for the Dover Strait
- Chapter 6 discusses the application of SCA in Marine Planning and its relevance to the ELC and the management of straits (including comments received at the NOSTRA workshop)
- Conclusions and next steps
- Appendix 1: is a data table listing all sources of information that informed the spatial classification.

2 Context

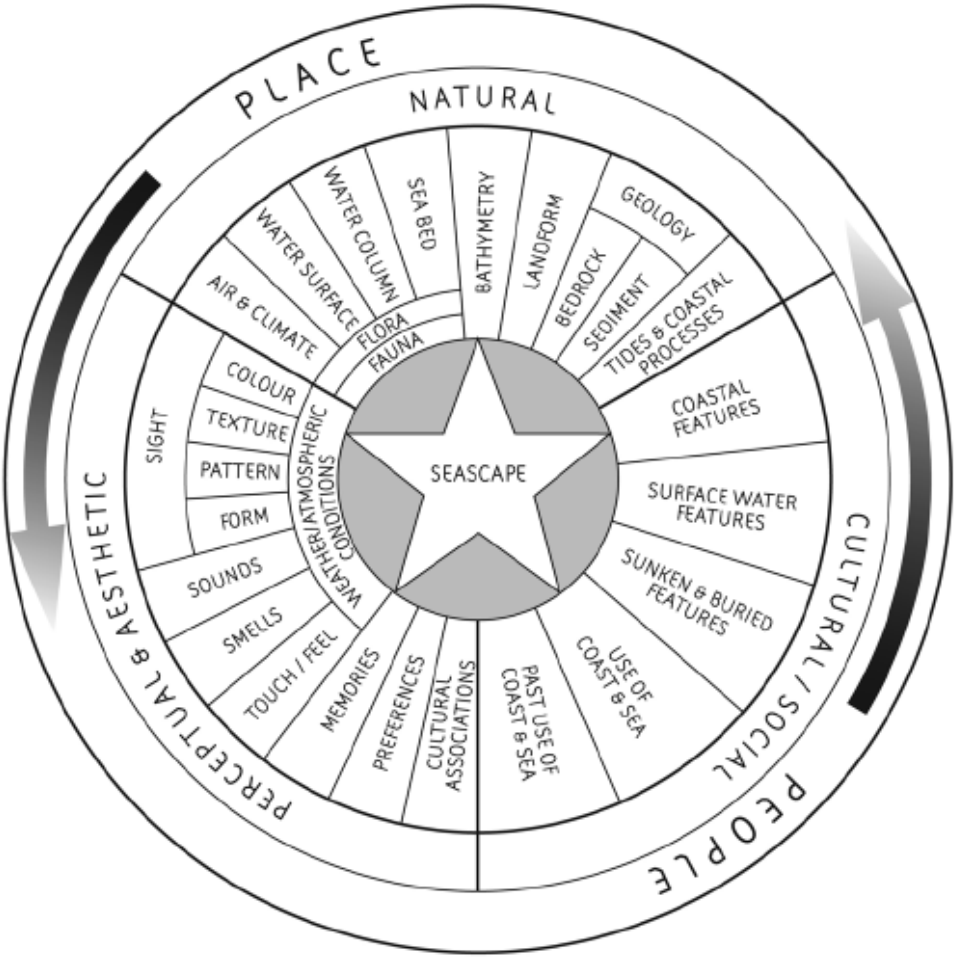
'Seascape' and Seascape Character Assessment

2.1 The term 'seascape' for the purposes of this study followed a definition compatible with the European Landscape Convention's (ELC) definition for 'landscape':

"An area of sea, coastline and land, as perceived by people, whose character results from the actions and interactions of land with sea, by natural and/or human factors"

2.2 The 'Seascape Wheel' (see below) provides a helpful illustration of all the different factors that interact to produce **seascape character**. The interactions between 'people' and 'place' are fundamental to an appreciation of seascape.

Figure 2.1: The Seascape Wheel



Source: Natural England (2012)

2.3 David Hutchinson (Marine Management Organisation), Christine Tudor (Natural England) and Dave Hooley (English Heritage) also presented at the NOSTRA workshop as representatives from organisations taking seascape characterisation work forward in England. Natural England have

produced a national approach document in the method of Seascape Character Assessment[1], and English Heritage have produced a method statement for Historic Seascape Characterisation[2].

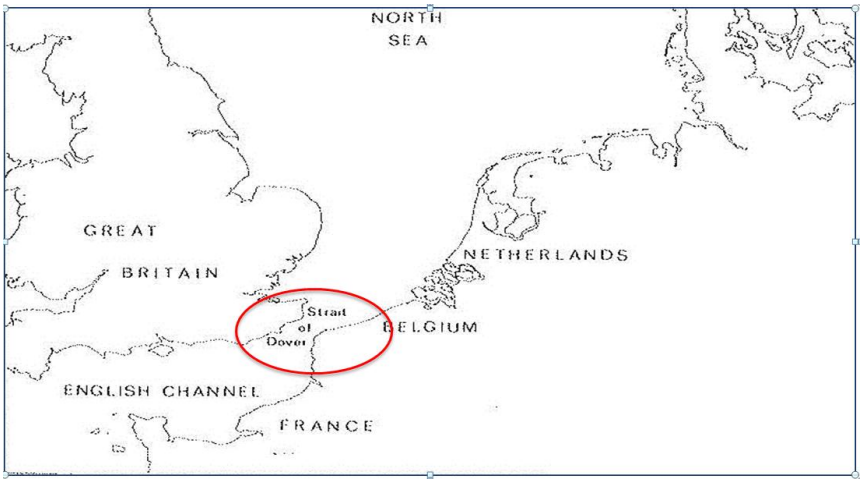
Figure 2.2: National guidance documents

Defining the Study Area

2.4 A key first step in the study was to define the Study Area for the purposes of piloting Seascape Character Assessment in the Dover Strait. This work is also intended to inform any future 'designation' of the Dover Strait' for example as a World Heritage Site.

2.5 Definition of the Dover Strait is by no means a simple task since the term means different things to different people and users. This section seeks to explore the geographical/spatial extent of the Strait.

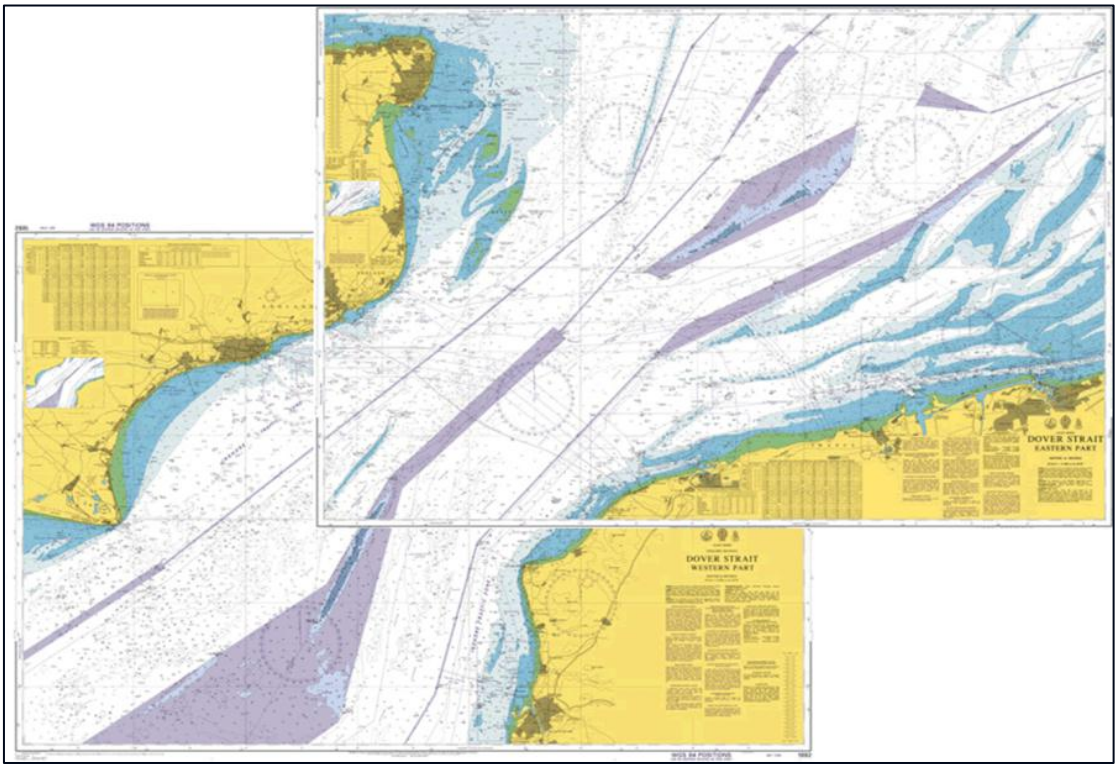
Figure 2.3: The European context of the Dover Stait



[1] http://publications.naturalengland.org.uk/publication/2729852
[2] http://www.seazone.com/uploads/event-HSC_Method_Statement_2008R024.pdf

2.6 In its broadest sense, the Dover Strait and its approaches include the North Sea and English Channel. North of the strait is the North Sea, and epi-continental sea occupying the shelf area between the British Isles and Norway, Denmark, Germany, the Netherlands, and Belgium. To the south west is the English Channel, which extends between the south coast of England and north coast of France widening out to the Atlantic Ocean in the west. See Figure 2.3 above.

Figure 2.4: The Strait's navigational context (International Hydrographic Bureau)

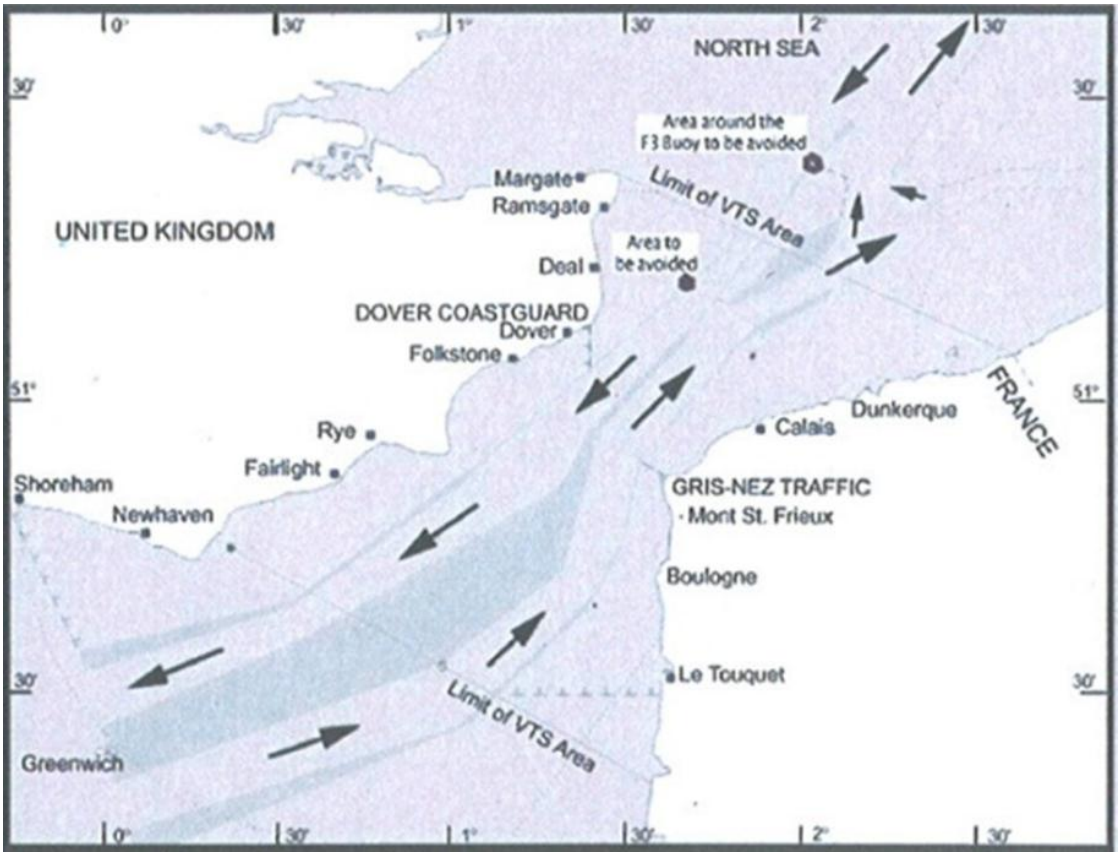


2.7 The decision on defining the Dover Strait for this project is where to draw the line at the extent of the strait in relation to the Channel and North Sea. Some known and agreed definitions of the strait are set out below.

2.8 The widely recognised definition of the Dover Strait is by the International Hydrographic Bureau (see Figure 2.4 above) which identifies it as the sea area, excluding harbours estuaries and tidal rivers, extending from the Greenwich Meridian to longitude 2 degrees 30 minutes E and from 50 degrees N to 51 degrees 30 minutes N. This takes in a large area from the Thames Estuary running out to the east across the North Sea and turning south to the French coast just north of Dunkerque. To the west the seaward extent of the Dover Strait runs south from just west of Beachy Head into the channel and turns to the east to Dieppe in France. This is clearly a very large and comprehensive area which has integrity from a maritime navigation view and is recognised by nautical charts and the Dover Strait Pilot. It is however very large encompassing a very wide variety of landscape and seascape types.

2.9 The World Vessel Traffic Services (VTS) Guide recognises the Dover Strait as a discrete entity (see Figure 2.5). In 1999, a new mandatory reporting system CADOVERP was introduced. All ships of 300 gross tonnage and over are required to report when entering and leaving the area. The system covers a 65 mile (km) stretch of the Dover Strait/Pas de Calais and is bounded by a line to the east drown from North Foreland to the border between France and Belgium; and by a line to the west drawn from the Royal Sovereign Light Tower (east of Newhaven) through the Bassurelle Light Buoy to the coast of France, south of Le Touquet. Again, this is a known and widely understood definition of the strait from a maritime navigation/safety angle. It is however a very large area that does not necessarily have a common seascape character, apart from the density of traffic, narrowness of the shipping channel and presence of navigational hazards such as unstable seabed and shifting sandbanks.

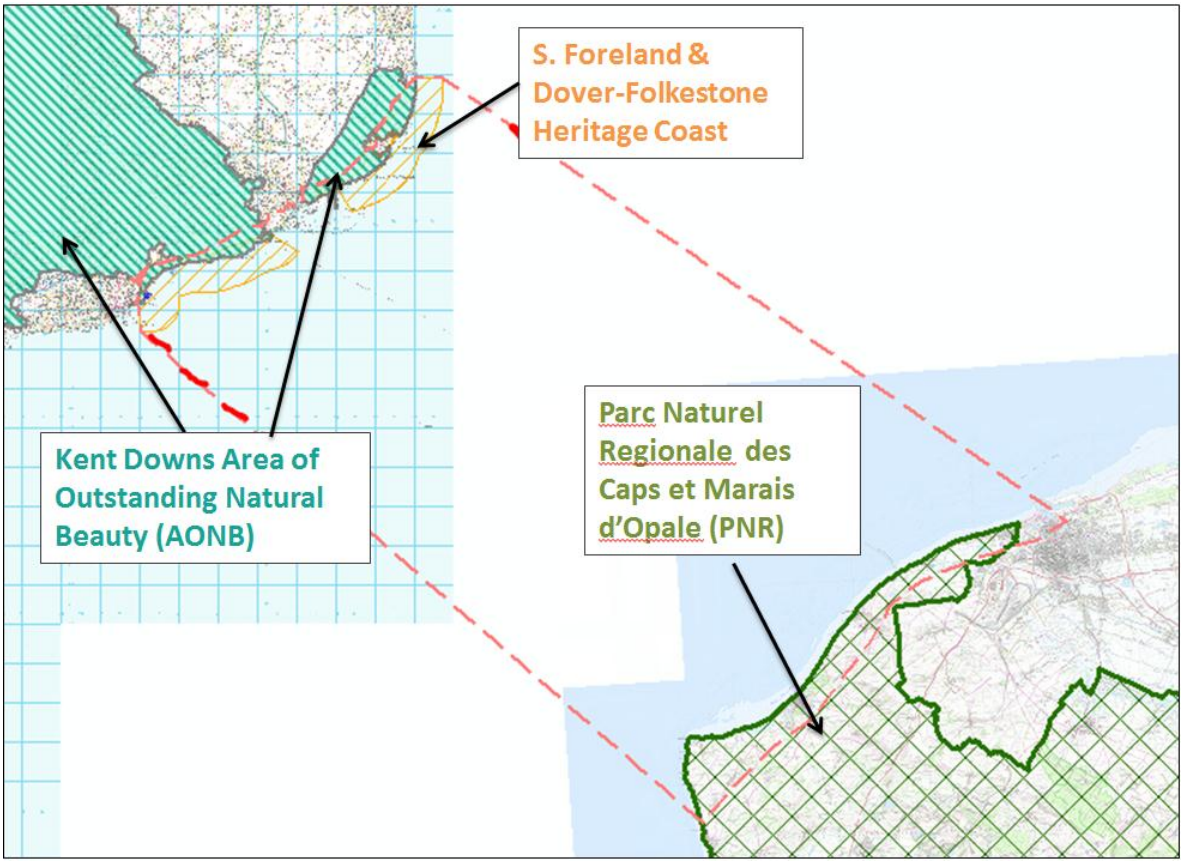
Figure 2.5: The Strait's navigational context (World Vessel Traffic Services Guide)



2.10 It was concluded, for the purposes of the Pilot, that the Study Area would encompass all of the Heritage Coast on the English side of the Strait (Folkestone-Kingsdown) – stretching across to France using arbitrary lines to take in the coastline broadly from Calais to Pointe du Nid de Corbet. These are indicated as red dashed lines in Figure 2.6. In this study we considered that the landward area of chalk cliffs, shingle beaches and coast defences was an integral part of seascape character including the main cross channel ports. The views from land to sea and sea to land and the experience of the coastal edge is key to understanding seascape character.

2.11 It should be noted that the lines represent the focus of the Dover Pilot SCA for the purposes of testing the approach, and do not follow changes in seascape character. Due to resource restrictions, the pilot work focused on the English side of the Study Area – but it is hoped that Pas-de-Calais Council may explore the French side in the future.

Figure 2.6: Local context (National landscape designations[3]) – a pragmatic approach to defining the pilot study area



Wider considerations

2.12 In undertaking the pilot SCA we looked at patterns emerging in the thematic baseline studies. These showed some interesting patterns but no common themes that could be used to define the extent of the study area. The chalk bedrock is obviously key to character forming the isthmus which original linked England and the continent, with strong cultural and visual links between France and England. Similar on the seabed the sand banks of Goodwin, Sandiette, Varne and Colbart can be seen to be part of the character of the Dover Strait rather than a separate entity.

2.13 The area has a strong cultural history and resonance, although it is difficult to define these spatially. Defence and invasion is one of the themes of the strait and today forms an important reference in the cultural landscape – features include the Tudor coastal defences of Henry VIII at Deal and Walmer Castle with their counterpart in Calais, when this part of France was ruled by England. The 7 days war and Napoleonic defences such as the string of Martello Towers and notably the World War II frontline fortifications, defences and anti-tank devices along the whole coast and exemplified at Dover Castle. The strait and White Cliffs also having a key resonance and identity with the evacuation of Dunkerque.

2.14 The Strait of Dover is a cohesive seascape. We suggest the following factors should be taken into account in defining a more precise Dover Strait area, in relation to any future 'designation':

- Include a larger area of the strait as recognised in maritime/navigation terms but be based around the narrowest part of the strait;
- Include the full extent of chalk seascape, plus the main areas of sand banks – Goodwin, Sandiette, Varne, Colbart – which are key to character of navigation, historic seascape and biodiversity;
- Include the extent of existing designated landscapes in England and France on the seascape edge;

[3] Please note that the French side of the Dover Strait also includes the Grand Site des Deux Caps – a national designation that is awarded to sites of natural, historic, maritime and architectural importance (http://www.les2caps.fr/Decouvrir/Les-paysages)

- Encompass key cultural references including Dunkerque beaches;
- Include main cross channel ports – Dover, Folkestone, Boulogne, Calais, including opportunities for regeneration.

2.15 In summary, we suggest an area roughly encompassing the seascape between Dungeness to Boulogne and Deal to Dunkerque as its lateral limits.

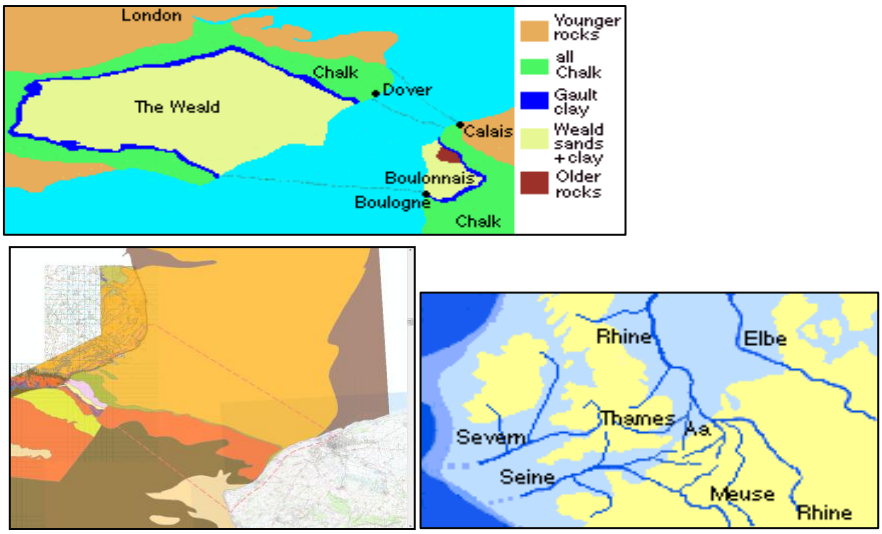
The Dover Strait: A Seascape of immense importance

2.16 The Dover Strait is a unique seascape resource – the strait links an integrated landscape of soaring chalk cliffs – the iconic White Cliffs of Dover and South Foreland and the distinctive Caps of the Opel Coast at Cap Blanc Nez and Cap Gris Nez, with strong cultural and visual links between France and England. The strait is a shallow, narrow (less than 30km) channel linking the North Sea, English Channel and Atlantic – and is of enormous strategic significance – seeing successive cycles of invasion and defence from earliest times. Despite fierce tidal currents, and the shifting and unstable Goodwin Sands, the Strait is one of the busiest shipping lanes in the world with more than 500 ship movements a day; by contrast it is also a migration route of international importance, with over 250 bird species recorded in any one year. The shallow waters are also important for the migration of fish and some cetaceans. Here, internationally nationally important biodiversity co-exists with maritime transport and shipping. The hundreds of wrecks which litter the bed of the channel are not only of great historic interest, but also create important spawning sites for marine wildlife.

Figure 2.7: The natural assets of the Dover Strait

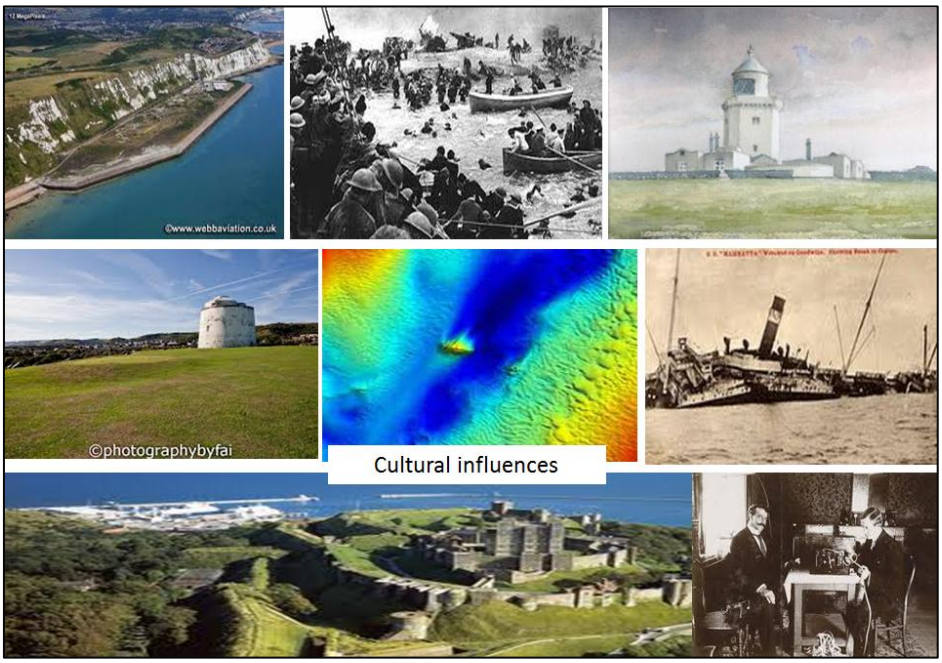
2.17 On the English side of the channel the White Cliffs form part of our national identity; forming a soaring seascape of vast horizons of sea and sky extending westwards to the subtle crumbling greensand and clay cliffs of Folkestone. These are seascapes of great diversity and contrast united by their coastal edge and relationship with the sea. The maritime towns of Dover and Folkestone are a focus for the main channel crossing points by ferry and tunnel. In France the Opel Coast is an exhilarating, windswept, remote seascape, with the busy ports of Calais and Boulogne and seaside towns of Wissant and Wimereux, punctuated by areas of wetland.

Figure 2.8: The physical influences that have shaped the Dover Strait



2.18 Defence and invasion is one of the themes of the strait and today forms an important reference in the cultural landscape – features include the Tudor coastal defences of Henry VIII at Deal and Walmer Castle with their Tudor counterpart in Calais, when this part of France was ruled by England. The 7 days war and Napoleonic defences such as the string of Martello Towers and notably the World War II frontline fortifications, defences and anti-tank devices along the whole coast and exemplified at Dover Castle. Communication is a further important theme, with Marconi's first experiments in radio. In March 1899 the first international wireless transmission was sent from Wimereux, France and received at South Foreland lighthouse, near Dover - "Greetings from France across the ether". Today, this landscape and seascape is one nationally designated as Heritage Coast and Area of Outstanding Natural Beauty (England) and Regional Park (France) – and greatly valued for tourism and recreation.

Figure 2.9: The rich cultural heritage of the Dover Strait



2.19 The Dover Strait is a cohesive seascape unified by geology, socio-economic functions, biodiversity, history and culture, and intervisibility. It is any area of multiple interests and values which requires sensitive and integrated management. A robust baseline seascape character assessment will provide an important spatial tool for marine and coastal management, protection and planning.

Figure 2.10: A busy strait for sea traffic[4]

[4] http://www.marinetraffic.com/ais/

Figure 2.11: The Dover Strait: a major contributor to the local economy

Figure 2.12: A popular area for recreation (a visit by French Interreg partners in 2009)

3 Seascape Character Assessment Method

Key steps in the approach

3.1 The Pilot SCA for the Dover Strait followed a four-stage process, as follows:

- Defining the purpose and scope of the assessment
- Desk study (including data collection and GIS analysis)
- Field and boat survey
- Classification and description

3.2 A short summary of each of the above steps, as applied to the Dover Strait pilot, is included below.

Step 1: Defining the purpose and scope of the assessment

3.3 This relates to a) the 'need' or 'purpose' of the seascape character assessment; and b) the geographic scope of the Study Area.

3.4 The purpose of the Dover Strait Pilot SCA was to test how a seascape classification at different scales could assist in the management and planning of straits in a European context.

3.5 Any Seascape Character Assessment should first understand ***why*** the assessment is needed, ***what*** it will be used for and ***who*** will be using it. This will inform both the scale of assessment and level of detail/format of the end product(s).

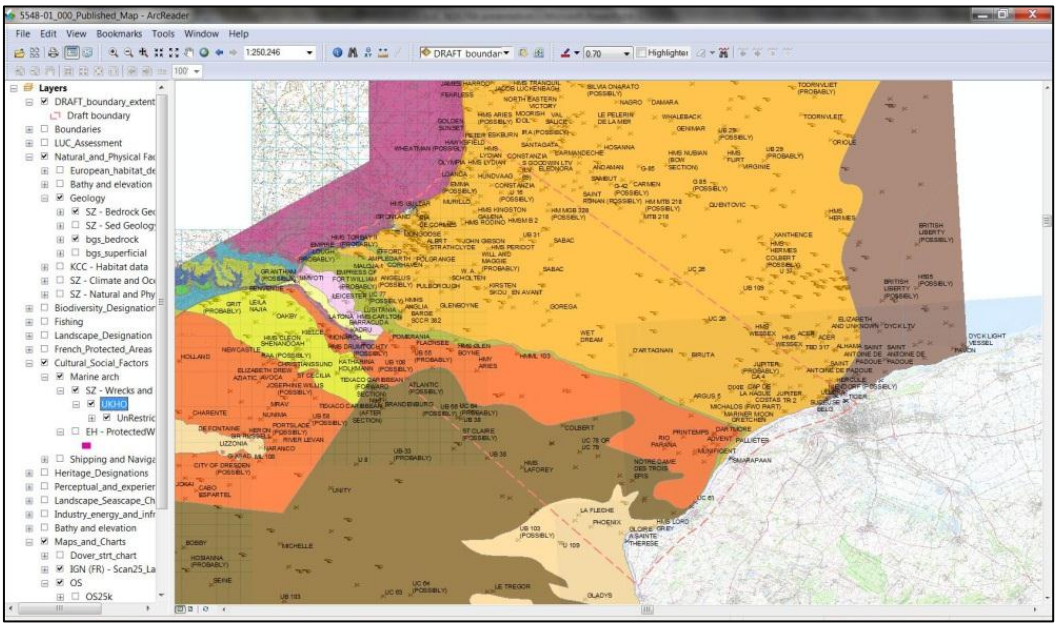
3.6 An appropriate Study Area should be selected (for the Dover Strait this is discussed in the previous chapter). This should explore both boundaries based on physical/natural characteristics; as well as any functional and administrative boundaries of the area (i.e. for implementing planning and management activity).

Step 2: Desk study

3.7 Once the purpose and scope of the assessment has been defined, available information should be collected and organised in a logical sequence. This includes digital [GIS] data and mapping, as well as any written information (e.g. from navigational publications such as coastal pilots).

3.8 For the Dover Strait Pilot, GIS information was organised by the key themes of the seascape wheel (Figure 2.1) and queried in an interactive map – see Figure 3.1 below.

Figure 3.1: Interactive GIS mapping for the Dover Strait Pilot



3.9 A record should be kept of the data/literature collected for the study (an example data list from the Dover Pilot is included in Appendix 1).

3.10 The desk-based study seeks to draft boundaries of 'Seascape Character Types' and/or 'Seascape Character Areas' at an appropriate level of detail for the purposes of the study (as defined under Step 1). Definitions and examples from the Dover Pilot are included in the next chapter.

Step 3: Field and boat survey

3.11 Once draft boundaries have been defined, a visit to the Study Area is essential in verifying the desk-study findings and incorporating further information not available from data alone (e.g. perceptions of different parts of the seascape; information on condition and/or sensitivity). If possible, boat survey should be included at this stage to gain a perspective of the seascape from the sea (rather than only the traditional perspective of the sea viewed from the land). Involving local sea users as skippers for the boat survey will help gain further information on the seascape from a sea user point of view.

Figure 3.2: IFCA (Kent and Essex Inshore Fisheries Conservation Authority) boat used to survey the Dover Strait Pilot Study Area

Step 4: Classification and description

3.12 Following the field and boat survey exercise, final boundaries should be drawn for the Seascape Character Areas and/or Seascape Character Types. In addition, written outputs should be produced to accompany the classification. The format, content and level of detail provided should reflect the purpose of the assessment and the users/audiences of the information.

3.13 It would be beneficial to undertake consultation on the emerging Seascape Character Assessment before it is finalised. For example, involving communities in discussing what they feel is most important in their local seascapes will assure compliance with the European Landscape Convention. Information on sensitivity and 'forces for change' can also be helpfully debated through consultation with key stakeholders (including users of the sea).

3.14 Example descriptions produced for the Dover Strait Pilot are included in Chapter 5.

3.15 The following chapter presents the results from the Dover Pilot SCA.

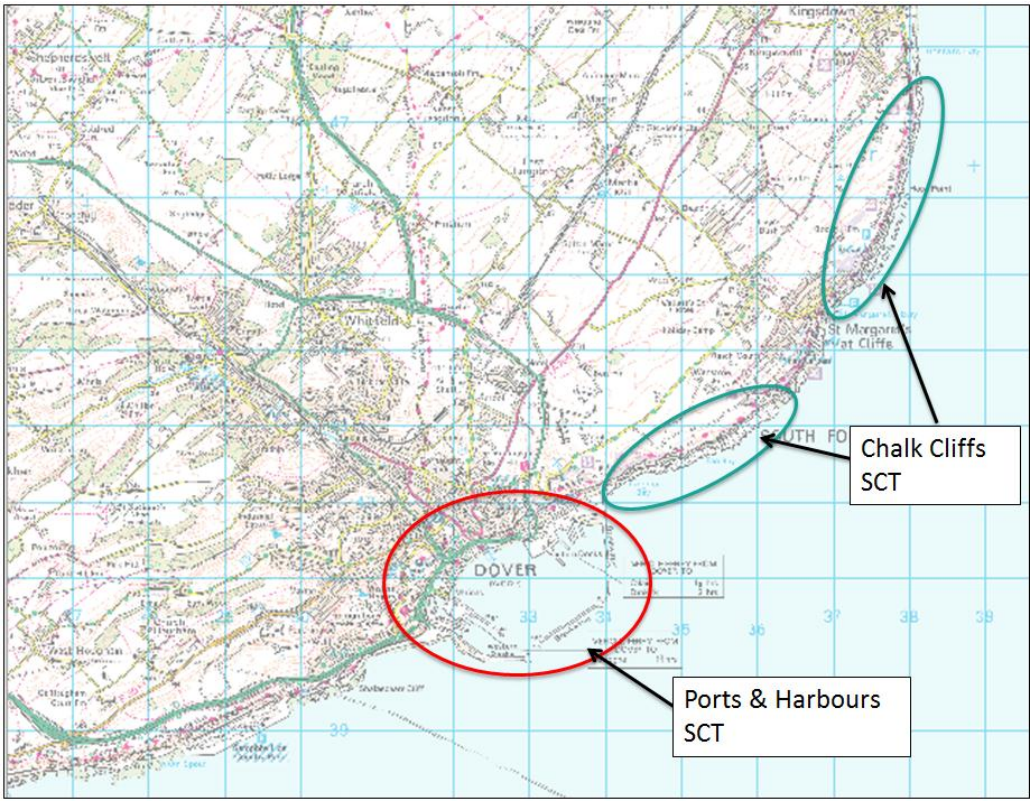
4 Results from the Pilot Seascape Character Assessment

4.1 The Pilot work tested different scales of 'Seascape Character Areas' and 'Seascape Character Types' to define the Dover Strait.

What are Seascape Character Types (SCTs)?

4.2 These are distinct types of seascape that are relatively homogenous in character, and may occur in different locations. They share similar combinations of geology, bathymetry, ecology, human influences and perceptual/aesthetic qualities. Examples from the Dover Strait Pilot include *Ports and Harbours* and *Chalk Cliffs*, see Figure 4.1 below.

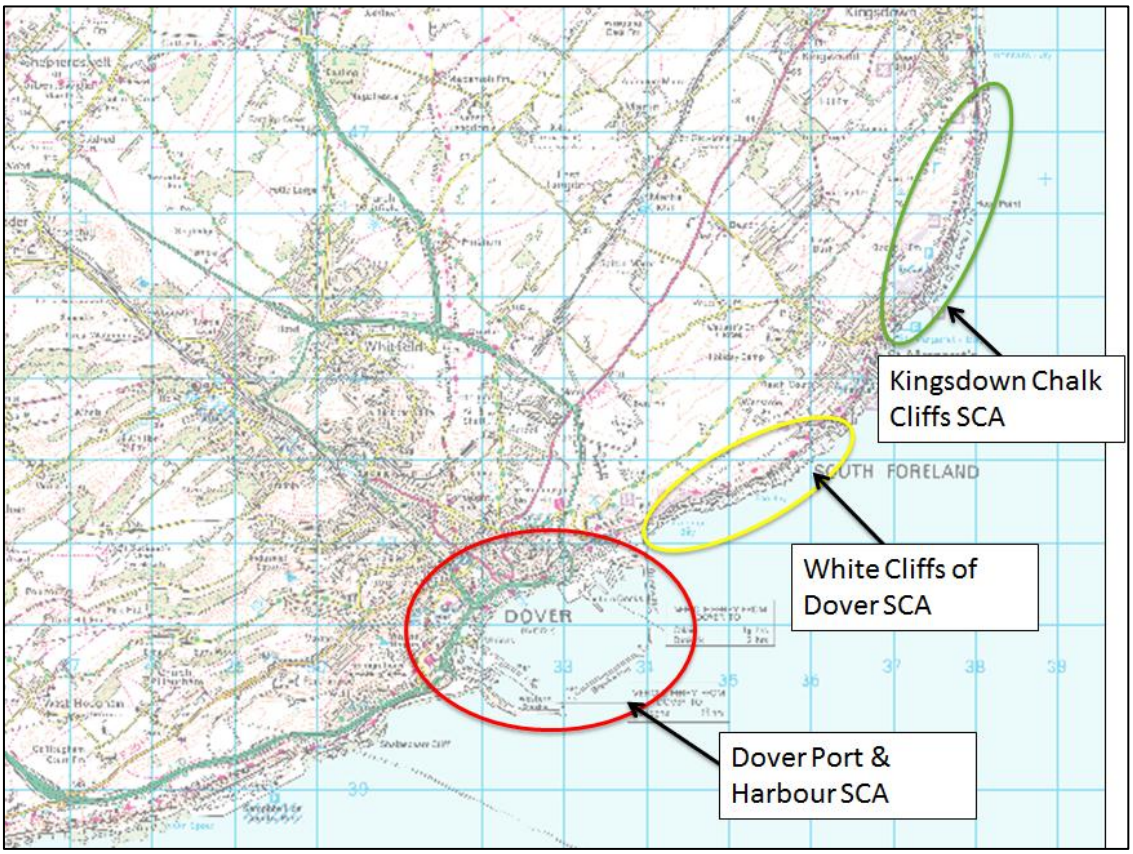
Figure 4.1: Example of Seascape Character Types



What are Seascape Character Areas (SCAs)?

4.3 Single unique areas, discrete in their geography, which have their own individual character and identity. They may represent a single Seascape Character Type, or be comprised of several. Examples from the Pilot SCA include *White Cliffs of Dover* and *Dover Port and Harbour*. See Figure 4.2.

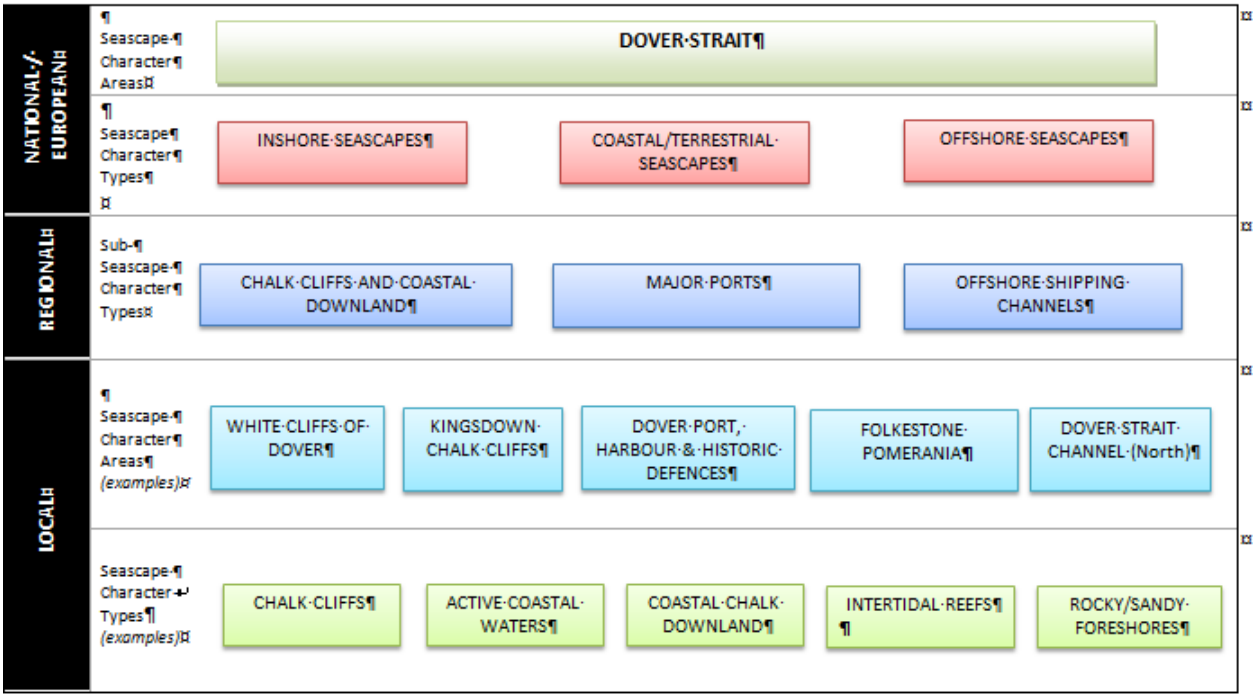
Figure 4.2: Example Seascape Character Areas



The Seascape Character Assessment 'Hierarchy'

4.4 Seascape Character Types and Seascape Character Areas can be used at different scales to suit varying marine planning purposes – e.g. larger-scale national and regional SCTs could be applied across different straits to plan for common concerns and issues. Local SCTs and SCAs could be used as an effective planning and management tool for protected landscapes (e.g. AONBs and PNRs) to implement activity in a particular location. Examples of how these sit within a 'hierarchy' for the Dover Strait are shown below.

Figure 4.3: Example Seascape Character Assessment hierarchy for the Dover Strait



4.5 Figures 4.4 to 4.8 on the following pages show the following, as defined for the Dover Strait Pilot Seascape Character Assessment:

- National Seascape Character Types
- Regional Seascape Character Types
- Local Seascape Character Areas
- Local Seascape Character Areas and their constituent Local Seascape Character Types
- An example Local Seascape Character Area (zoomed in) with its component Seascape Character Types.

4.6 The full range of Seascape Character Types and Seascape Character Areas identified through the Dover Pilot is also set out in Table 4.1, after the above figures.

Mapping of the different scales of SCAs and SCTs

Figure 4.4: National Seascape Character Types

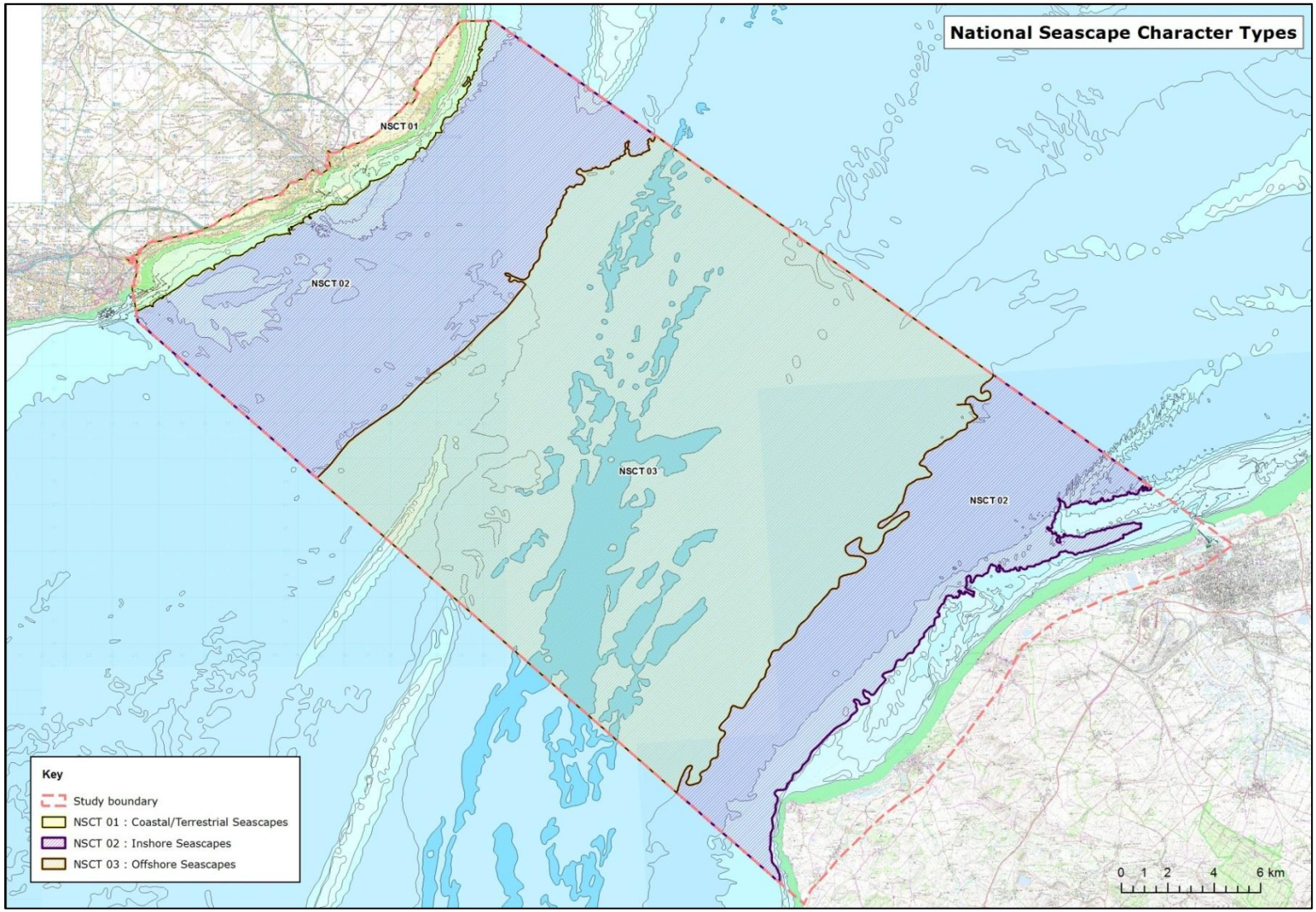


Figure 4.5: Regional Seascape Character Types

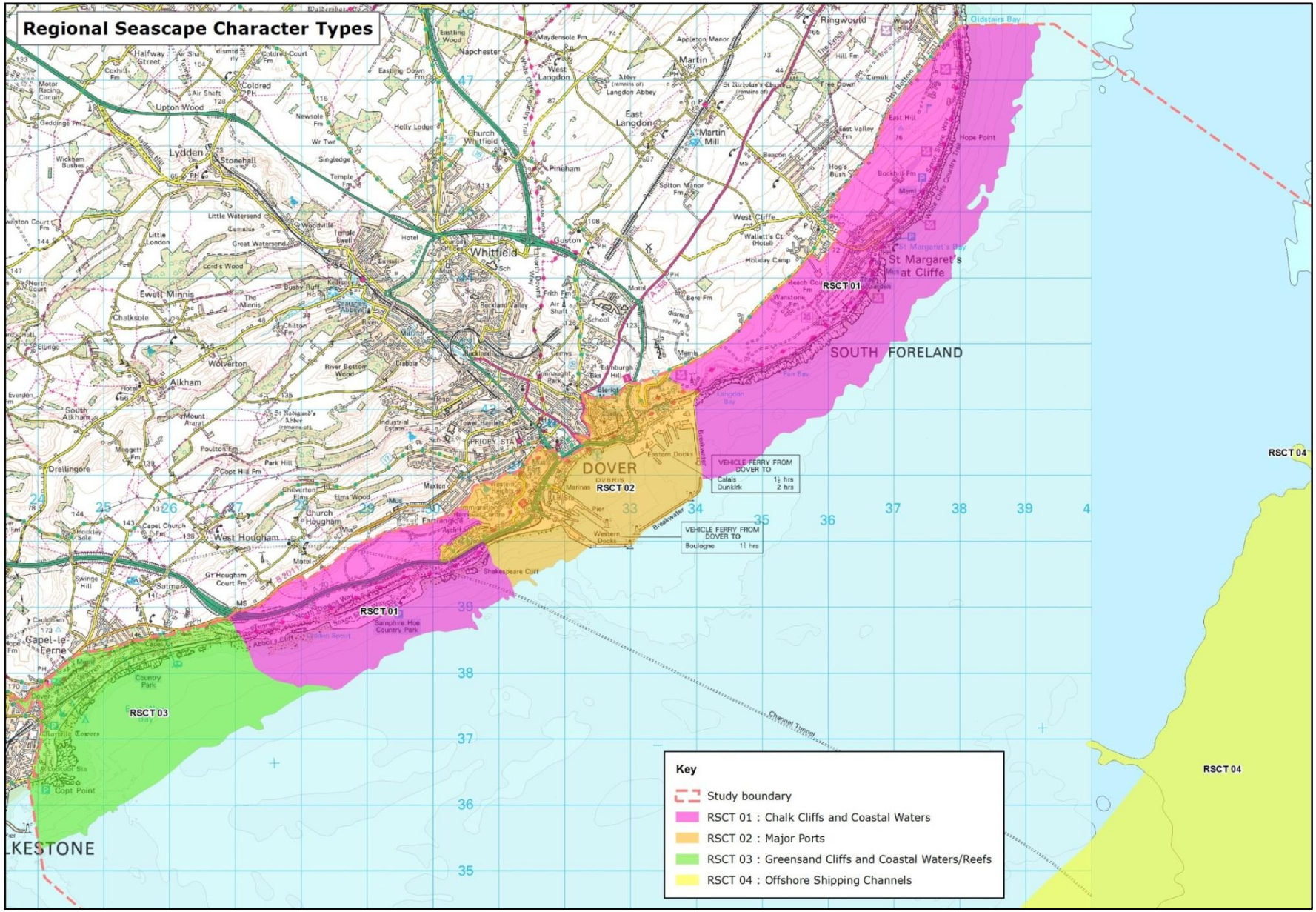


Figure 4.6: Local Seascape Character Areas

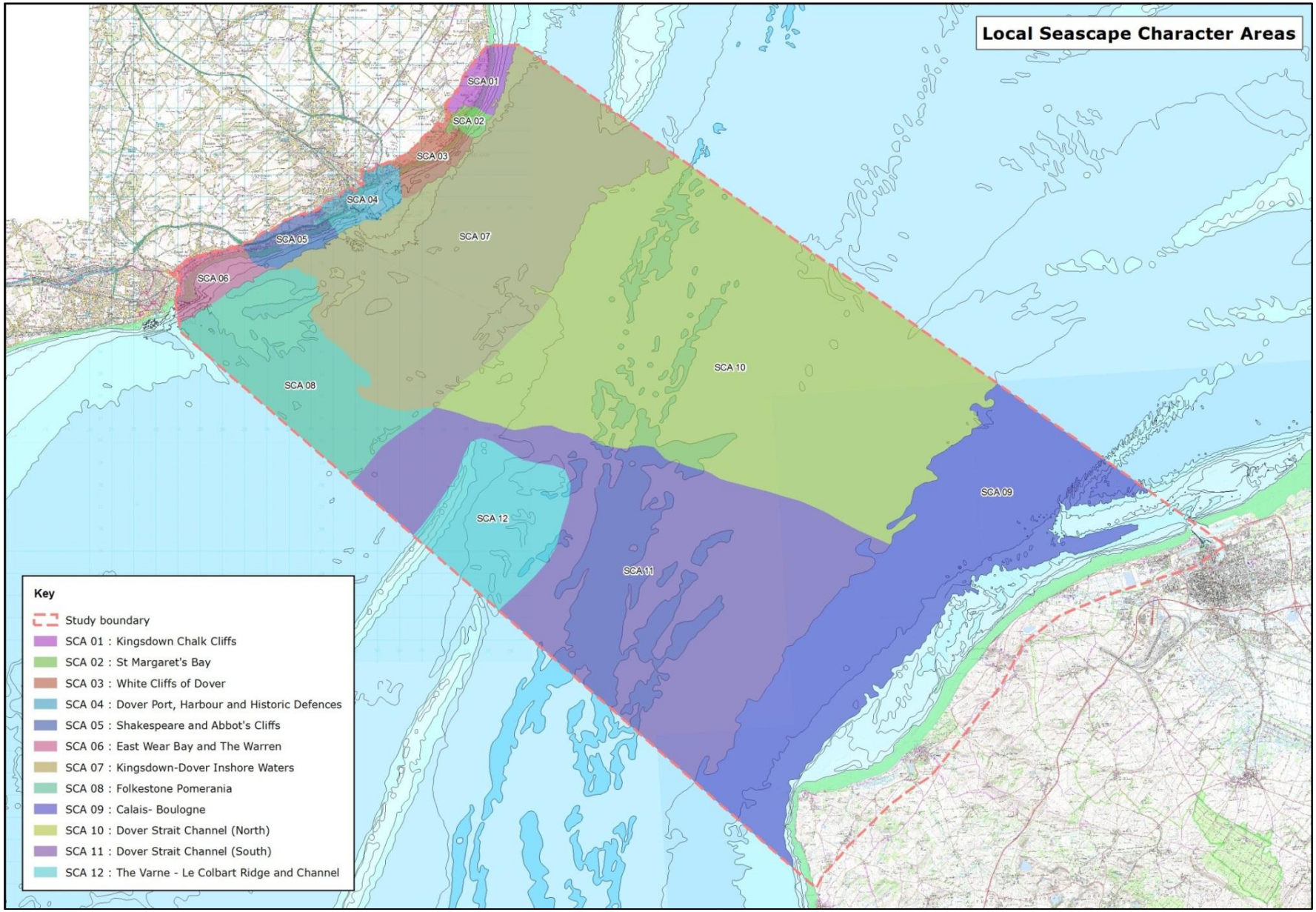


Figure 4.7: Examples of Local Seascape Character Types and Seascape Character Areas

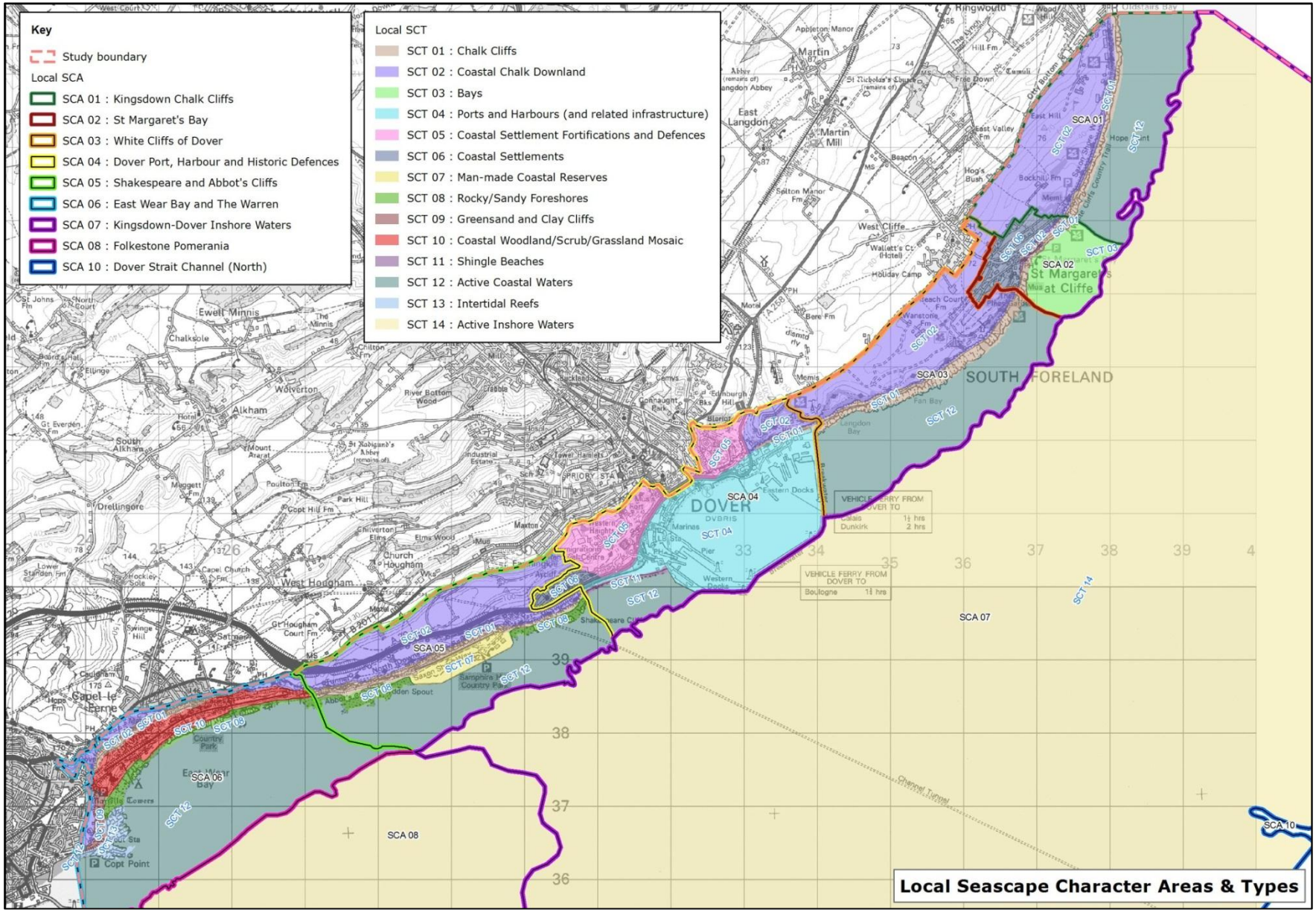


Figure 4.8: Example Local Seascape Character Area divided into Local Seascape Character Types

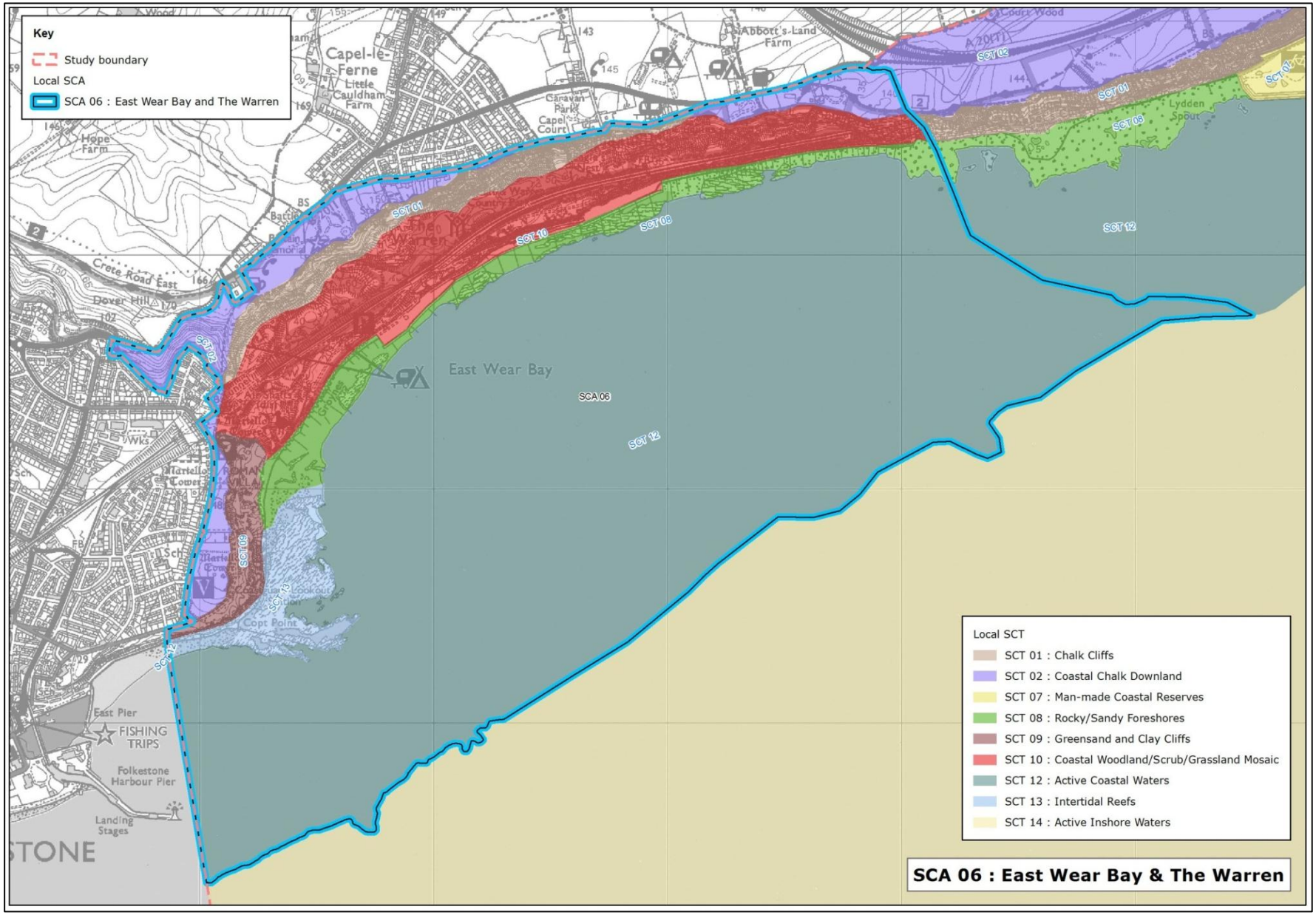


Table 4.1: A draft seascape classification for the Dover Strait Study Area (Dover Strait being a 'National' Seascape Character Area)

National Seascape Character Type	Regional Seascape Character Sub-Type (where required)	Local Seascape Character Area*	Local Seascape Character Types
NSCT 2: Inshore Seascapes	N/A	SCA 7: Kingsdown-Dover Inshore Waters	• SCT 14: Active Inshore Waters
		SCA 8: Folkestone Pomerania	• SCT 14: Active Inshore Waters
		SCA 9: Calais- Boulogne (to be refined further)	• SCT 14: Active Inshore Waters
NSCT 3: Offshore Seascapes	RSCT 4: Offshore Shipping Channels	SCA 10: Dover Strait Channel (North)	
		SCA 11: Dover Strait Channel (South)	
		SCA 12: The Varne-Le Colbart Ridge and Channel	
NSCT 1: Coastal / Terrestrial Seascapes	RSCT 1: Chalk Cliffs and Coastal Waters	SCA 1: Kingsdown Chalk Cliffs	• SCT 1: Chalk Cliffs • SCT 2: Coastal Chalk Downland • SCT 12: Active Coastal Waters
		SCA 2: St Margaret's Bay	• SCT 1: Chalk Cliffs • SCT 2: Coastal Chalk Downland • SCT 3: Bays • SCT 6: Coastal Settlements • SCT 11: Shingle Beaches • SCT 12: Active Coastal Waters

National Seascape Character Type	Regional Seascape Character Sub-Type (where required)	Local Seascape Character Area*	Local Seascape Character Types
		SCA 3: White Cliffs of Dover	• SCT 1: Chalk Cliffs • SCT 2: Coastal Chalk Downland • SCT 12: Active Coastal Waters
		SCA 5: Shakespeare and Abbot's Cliffs	• SCT 1: Chalk Cliffs • SCT 2: Coastal Chalk Downland • SCT 7: Man-Made Coastal Reserves • SCT 8: Rocky/Sandy Foreshores • SCT 12: Active Coastal Waters
	RSCT 2: Major Ports	SCA 4: Dover Port, Harbour and Historic Defences	• SCT 1: Chalk Cliffs • SCT 2: Coastal Downland • SCT 4: Ports, Harbours & Related Infrastructure • SCT 5: Coastal Settlement Fortifications & Defences • SCT 6: Coastal Settlements • SCT 11: Shingle Beaches • SCT 12: Active Coastal Waters
	RSCT 3: Greensand Cliffs and Coastal Waters/Reefs	SCA 6: East Wear Bay & The Warren	• SCT 1: Chalk Cliffs • SCT 2: Coastal Downland • SCT 8: Rocky/Sandy Foreshores • SCT 9: Greensand & Clay Cliffs • SCT 10: Coastal Woodland /Scrub/Grassland Mosaic • SCT 12: Active Coastal Waters • SCT 13: Intertidal Reefs

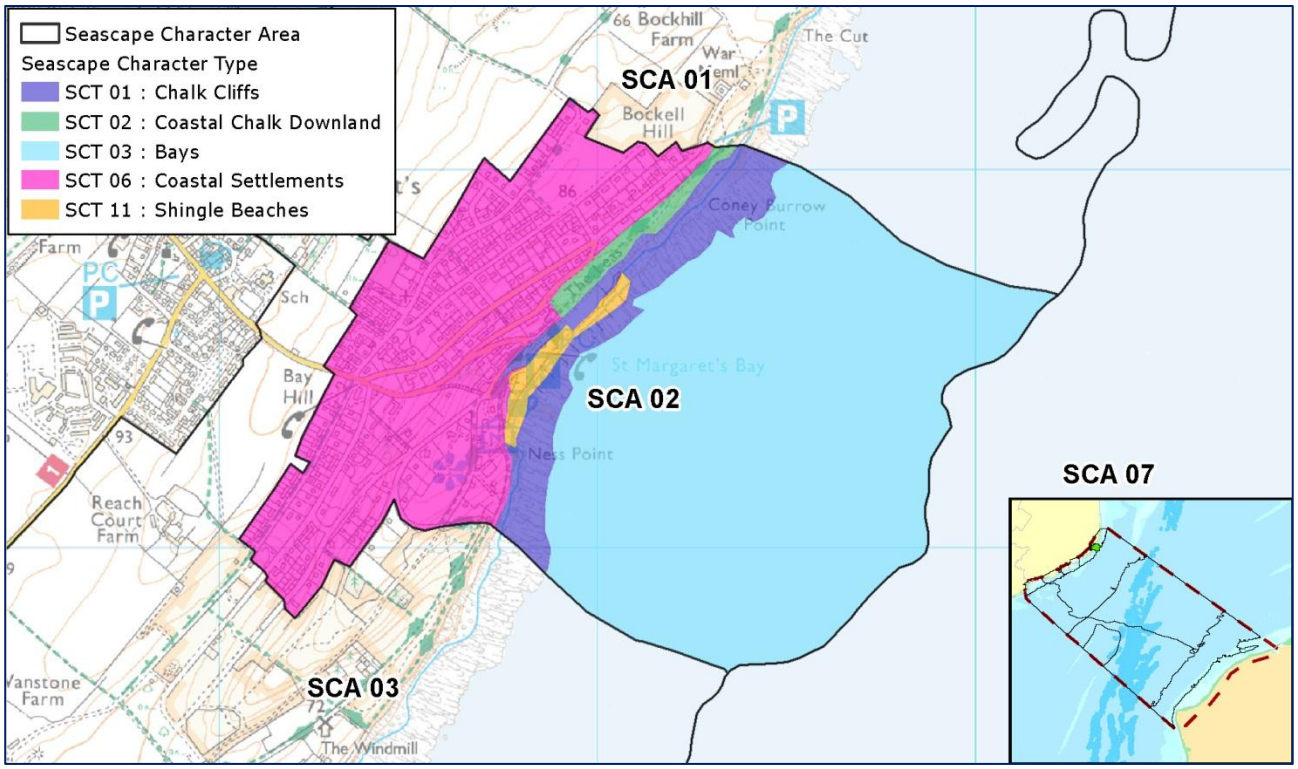
5 Example Seascape Character Area Descriptions

5.1 The Pilot work in the Dover Strait tested the production of Seascape Character Area descriptions – four in total. These are in draft format and are yet to be consulted upon, but they aim to give an idea of how information on seascape character can be summarised and presented for use in marine planning/management.

5.2 Partners in the project agree that there would be great benefit in completing the Seascape Character Assessment for the whole of the Strait, including holding stakeholder workshops to inform the classification and descriptions. Forthcoming work to roll out regional-scale Seascape Character Assessment across the English Marine Plan Areas will also provide a strategic spatial framework for more local studies such as the work undertaken to-date in the Dover Strait.

SCA 2: St Margaret's Bay

Location map



Representative photographs

The terrestrial boundaries the St Margaret's Bay Seascape Character Area largely follow the settlement limits of the village, as well as the geographical shape of the Bay. It extends seaward to cover the coastal waters within the Bay, broadly following the 15 metre bathymetry contour. The SCA includes coastal woodland clinging to the steep slopes rising up from the Bay, and a broad shingle beach with affords open views across the Dover Strait to France. All of the coastal waters and intertidal area fall within the recommended Marine Conservation Zone 11.1.

Seascape Character Description

Natural influences

- East/south-easterly facing bay with expansive views across the English Channel to France. The Bay is enclosed by high white cliffs, vegetated behind a shingle and cobble beach;
- Chalk cliffs and foreshore within the Dover to Kingsdown Cliffs SSSI/SAC, highly valued for their geological exposures, coastal geomorphology and cliff-top habitats of chalk downland and scrub;
- Important breeding sea bird colonies on the cliffs including fulmars, rock pippits, lesser-black backed gulls and the only Kent population of kittiwakes;
- Coastal waters extending to a maximum depth of 15 metres, with intertidal and subtidal chalk rocks forming reefs, ledges and gullies supporting a diverse range of marine flora and fauna;
- The chalk foreshore of the Bay, which extends into the sea as a wave-cut platform, is thought to represent the richest algal community in SE England;
- Relatively strong south-westerly tidal currents, with water flowing parallel to the coastline in the direction of Dover. However, the shape of the bay provides shelter from the prevailing winds, resulting in calmer conditions than in adjacent seascapes.

Cultural/historic influences

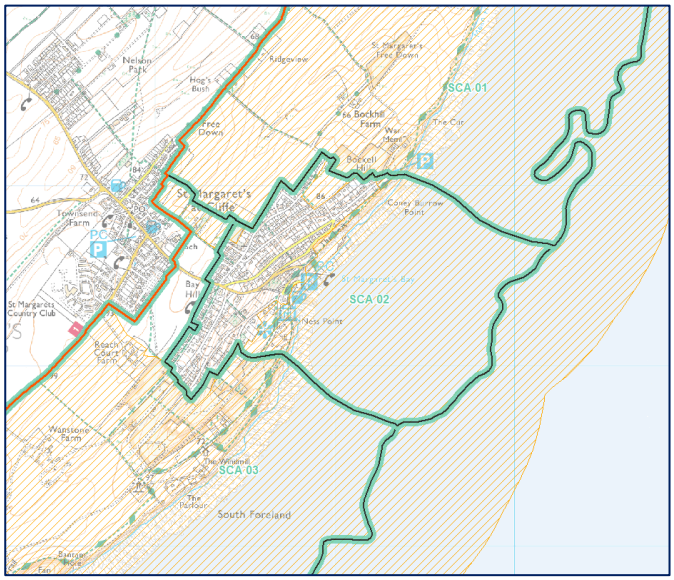
- The Dover Strait as a whole has played a key role in the defence of Britain and formed the location for successive invasions and defence;
- World War II pillboxes and tunnel entrances can be seen on the cliffs;
- The settlement's strategic location saw the siting of Second World War anti-aircraft and naval guns, aiming to prevent German shipping travelling along the French coast;
- St Margaret's Bay is a Conservation Area, with many large houses set within woodland overlooking the sea. It was once home to authors Noel Coward and Ian Fleming;
- The cliff above the Bay is thought to be the first place for the sun to reach the UK every morning;
- A beacon stands at the head of the Bay as an important navigational feature for vessels crossing the Strait.

Aesthetic / perceptual qualities

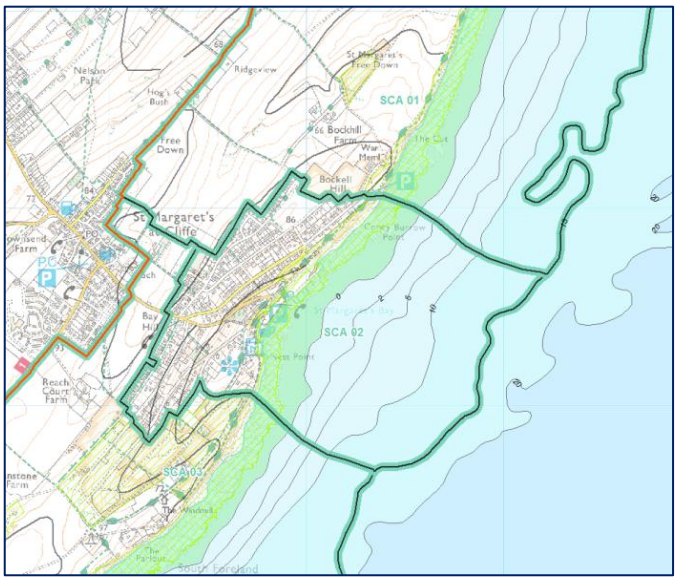
- Channel swimmers and submarine telephone cables start from St Margaret's Bay;
- The broad shingle beach is a popular tourism destination and site for recreational beach-based angling;
- The cliff tops are crossed by the Saxon Shore Way Long Distance Path[1], offering panoramic views across the English Channel to France;
- Shallow, accessible coastal waters used for seasonal fishing (often recreational), set netting, potting and recreational anchoring;
- Historic settlement character, with the sheltered, wooded bay combining to produce a sense of timelessness;
- Levels of tranquillity and remoteness seasonally broken by holiday makers and the frequent sight of ferries and cargo ships on the seaward horizon.

[1] This 160-mile route, from Gravesend to Hastings, is named after the line of historic fortifications that defended the Kent coast at the end of the Roman era

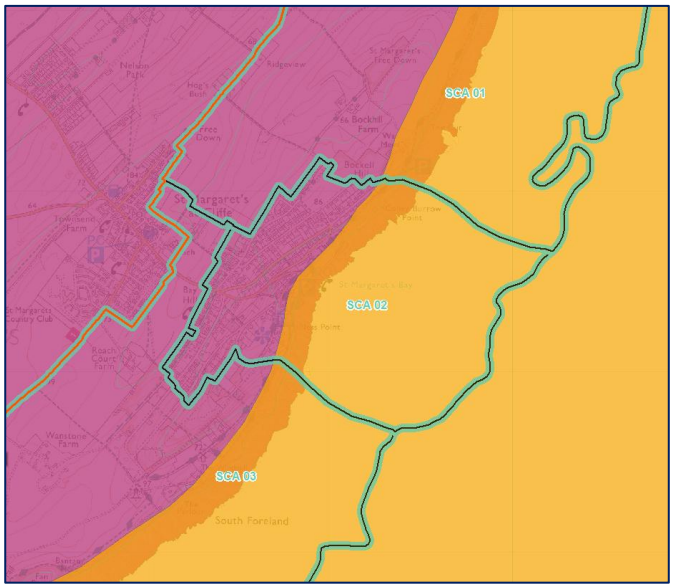
Mapped evidence used to inform assessment (PMF screenshots)



South Foreland Heritage Coast designation



Settlement boundaries and bathymetry



Onshore chalk (purple) and offshore chalk (orange)

Seascape evaluation

Current condition: Much of the coastal SSSI is in favourable condition, with some localised issues on the cliff-top downland relating to low levels of management – e.g. scrub encroachment, low species diversity, but generally under appropriate management. Seasonal fishing activity (particularly set netting and potting) can be high, although there is no evidence of this affecting the condition of the marine biodiversity. Commercial fishing (trawling) will cease if the rMCZ is designated.

Seascape sensitivity: The SCA is of international significance for its geology, coastal morphology and both terrestrial and marine biodiversity. The gradual erosion of the cliffs and foreshore as a result of sea level rise and coastal squeeze is not of immediate concern, although existing sea defences may need to be upgraded in the long-term to protect the socio-economic assets of St Margaret's Bay settlement. Tourism pressures, including recreational fishing and boating in the coastal waters; and visitors to the beach/historic village can reduce perceptions of tranquillity in high season.

Component / overarching Seascape Character Types

National/European-level SCT:

- NSCT 1: Coastal/Terrestrial Seascapes

Regional SCT (where relevant):

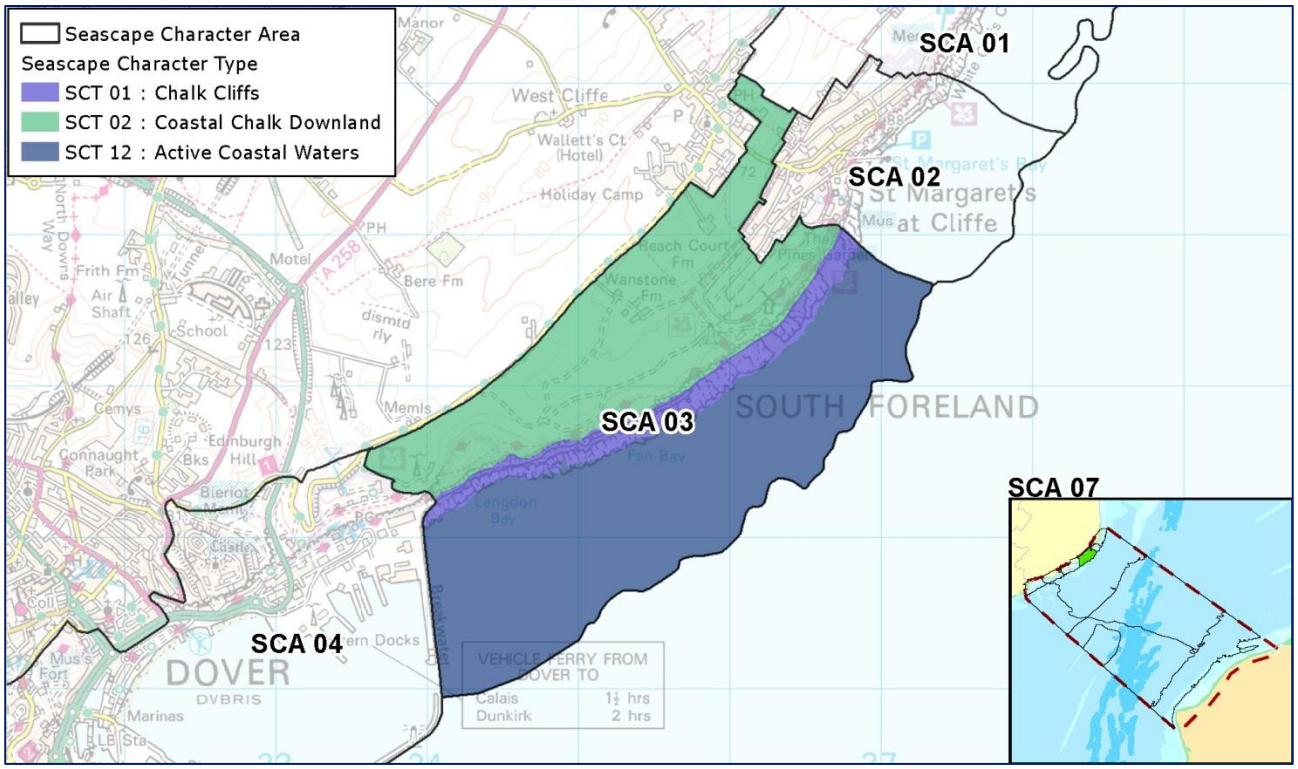
- RSCT 1: Chalk Cliffs and Coastal Waters

Local SCTs:

- SCT 1: Chalk Cliffs
- SCT 2: Coastal Chalk Downland
- SCT 3: Bays
- SCT 6: Coastal Settlements
- SCT 11: Shingle Beaches
- SCT 12: Active Coastal Waters

SCA 3: White Cliffs of Dover

Location map



Representative photographs

The inland boundaries for this coastal Seascape Character Area follow that of the South Foreland Heritage Coast, excluding development at St Margaret's at Cliffe. It extends the western edge of St Margaret's Bay along the coast towards Dover, ending at the edge of Fox Hill Down, and covers the surrounding coastal waters to 15 metres in depth. The SCA comprises the iconic White Cliffs of Dover topped by open coastal downland, with the vertical landmarks of South Foreland lighthouse and windmill forming important navigational features strongly visible from the waters within the Dover Strait. All of the coastal waters and intertidal area fall within the recommended Marine Conservation Zone 11.1.

Seascape Character Description

Natural influences

- South easterly facing coastline with sheer white chalk cliffs rising vertically from the coastal waters;
- Part of an internationally important stratigraphic reference site for extensive and near-continuous exposures of Lower, Middle and Upper Chalk, historically important for their contribution to the sciences of geology and coastal geomorphology (all designated as SSSI);
- Land slopes steeply up from the cliffs to form a gently undulating plateau, becoming more undulating towards Dover culminating in Langdon Bottom (a complex bowl). Fan Hole forms a steep dip in the cliff top above Fan Bay;
- Cliff tops consisting of nationally important chalk grassland and scrub, supporting important breeding sea bird colonies including fulmars, rock pippits, lesser-black backed gulls and the only Kent population of kittiwakes, as well as important populations of butterflies;
- Seabirds wheeling high in the sky are a feature connecting the sea, and sky.
- Coastal waters extending to a maximum depth of 15 metres, with intertidal and subtidal chalk rocks forming reefs, ledges and gullies supporting a diverse range of marine flora and fauna;
- Strong south-westerly tidal currents, with water flowing parallel to the coastline in the direction of Dover. The waters are more exposed to the winds funnelling through the Strait, sometimes leading to choppy, 'confused' seas.

Cultural/historic influences

- The Dover Strait as a whole has played a key role in the defence of Britain and formed the location for successive invasions and defence – the cliffs being the first the first defence for invasion by Julius Caesar in 55 BC;
- Following evacuation from Dunkirk the cliffs formed a welcoming backdrop for many thousands of troops;
- The SCA contains particular references to World War II, such as the near-complete Wanstone anti-aircraft battery and a bronze statue of Winston Churchill within The Pines landscaped gardens;
- The protected wreck of the Langdon Bay (English Heritage), located on the edge of Dover Harbour, is thought to be the remains of a Bronze Age vessel carrying a scrap metal cargo from France to Britain, indicating cross-channel trade in the Middle Bronze Age;
- Conspicuous navigation marks include the National Trust-managed South Foreland lighthouse, which stands 21 metres high on the headland, and a white windmill (near to the lighthouse) which is particularly prominent in strong sunlight;
- South Foreland is the location of Marconi's first experiments with radio, including the first two way ship to shore radio message using Morse code. The first international wireless transmission was sent from Wimmereux France and received at South Foreland lighthouse in 1899;

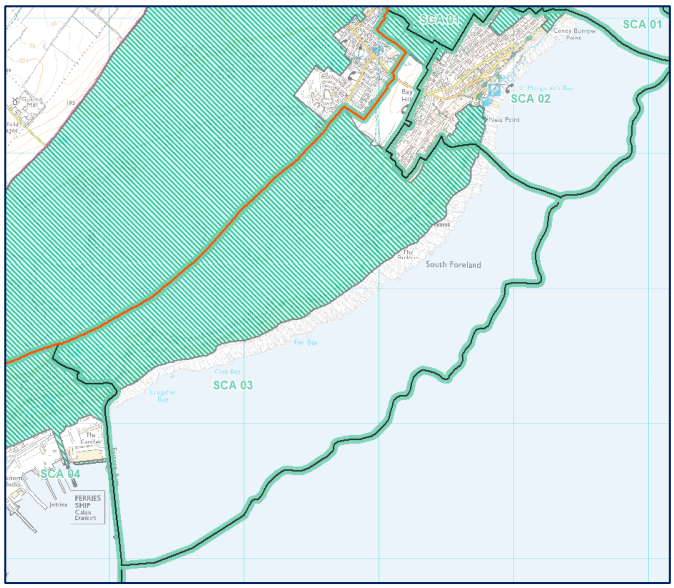
Aesthetic / perceptual qualities

- Iconic seascape – with the white cliffs of Dover forming part of our national identity – a visual reference for leaving and returning to England by sea immortalised in the famous World War II song by Dame Vera Lynn;
- The White Cliffs have long been a source of literary and artistic inspiration;
- A popular area for recreation, the cliff tops are crossed by the Saxon Shore Way Long Distance Path[1], offering panoramic views across the English Channel to France. There is no access to the base of the cliffs along most of the area;
- The area retains a sense of isolation and remoteness in parts with the sea and sky forming vast expanses and backdrop to the cliff top downland;

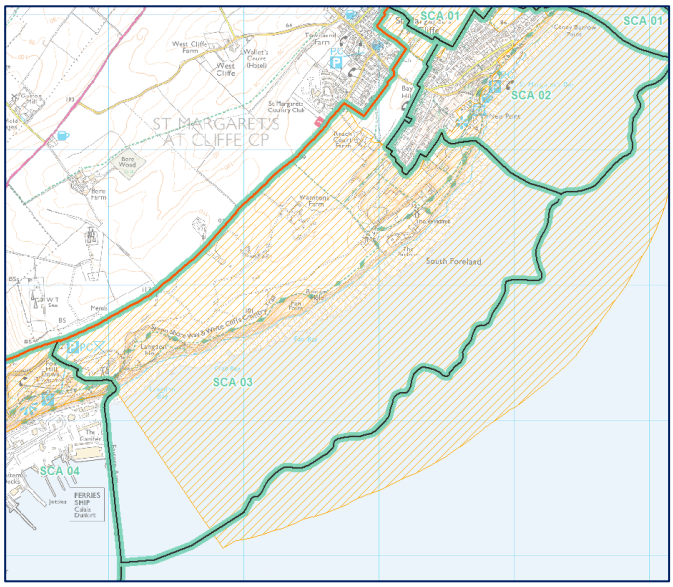
[1] This 160-mile route, from Gravesend to Hastings, is named after the line of historic fortifications that defended the Kent coast at the end of the Roman era

- Shallow coastal waters used for seasonal fishing (often recreational), set netting, potting, and recreational anchoring;
- The close proximity of Dover Harbour and visibility of the shipping channel in the centre of the Strait means ferries and large cargo vessels are frequent features on the close seaward horizons;
- A general absence of settlement on the cliff tops gives rise to a strong relative sense of tranquillity, with exposure to the elements being a key feature. Views of telecommunications masts behind the cliffs introduce strong human features into the seascape.

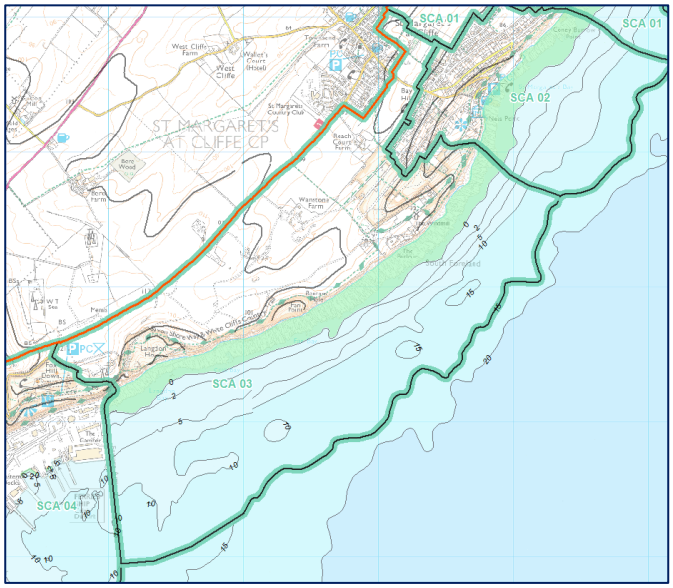
Mapped evidence used to inform assessment (PMF screenshots)



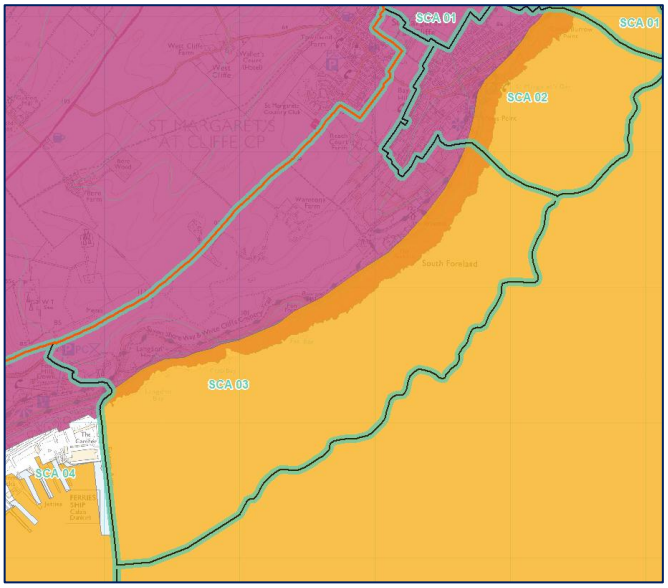
Kent Downs AONB designation



South Foreland Heritage Coast designation



Bathymetry



Onshore chalk (purple) and offshore chalk (orange)

Seascape evaluation

Current condition: Much of the area is under positive management by the National Trust as part of the White Cliffs Project. The coastal SSSI is in favourable condition, with some localised issues on the downland relating to low levels of management – e.g. scrub encroachment, low species diversity, but generally under appropriate management. Reversion and reintroduction of grazing management to promote chalk grassland is being promoted by the National Trust, although there remain areas of the cliff top not in positive environmental management which sever and isolate areas of chalk grassland. Seasonal fishing activity (particularly set netting and potting) can be high, although there is no evidence of this affecting the condition of the marine biodiversity. Commercial fishing (trawling) will cease if the rMCZ is designated.

Seascape sensitivity:
The SCA is of international significance for its geology, coastal morphology and both terrestrial and marine biodiversity. The gradual erosion of the cliffs as a result of sea level rise and natural erosion processes is not thought to be a major threat to the area's natural assets, nor settlement (as the cliff tops are sparsely developed). However, the Saxon Way may need to be re-routed at a future date. Tourism pressures, including recreational fishing and boating in the coastal waters; visitor numbers on the White Cliffs affecting perceptions of remoteness and tranquillity; proximity to the busy port of Dover with frequent passenger ferries/other marine traffic. There may be a future opportunity to promote a wider continuous and connected band of chalk grassland along and inland from the narrow cliff edge joining existing fragmented sites.

Component / overarching Seascape Character Types

National/European-level SCT:

- NSCT 1: Coastal/Terrestrial Seascapes

Regional SCT (where relevant):

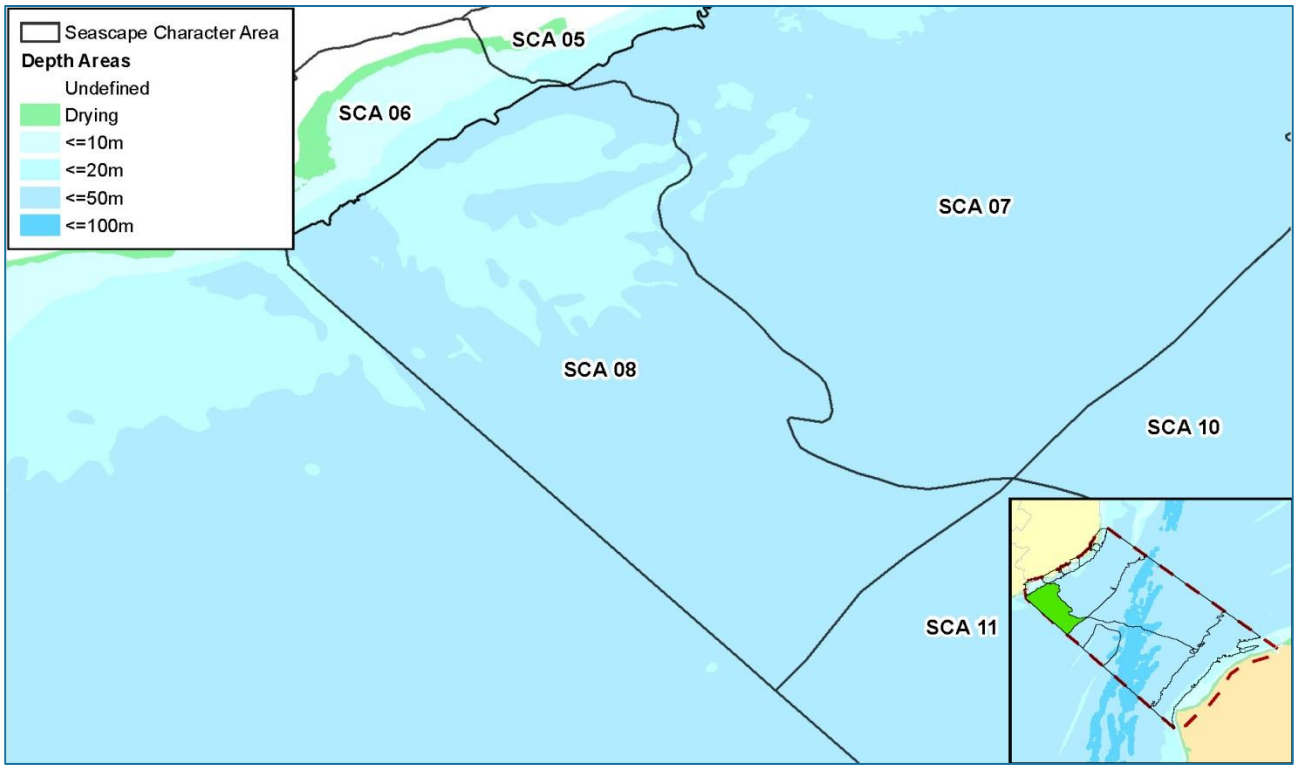
- RSCT 1: Chalk Cliffs and Coastal Waters

Local SCTs:

- SCT 1: Chalk Cliffs
- SCT 2: Coastal Chalk Downland
- SCT 12: Active Coastal Waters

SCA 8: Folkestone Pomerania

Location map



Representative photographs

This SCA covers the inshore waters located to the south-east of Folkestone, extending to a bathymetry depth of 20-30 metres. It is characterised by a unique subtidal reef system with a complex geology, supporting rare marine biodiversity and rich fishing grounds. The waters are also the location of a number of ship wrecks, demonstrating centuries of conflict and seafaring culture within the Strait. The SCA includes the majority of the recommended Marine Conservation Zone 11.4, with boundaries also closely informed by the underlying geology (particularly the break to chalk in the east).

Seascape Character Description

Natural influences

- Inshore Seascape Character Area located in the narrowest part of the Dover Strait, extending out from the fringes of East Wear Bay to the edge of the Dover Strait Shipping Channel;
- Complex underwater geology comprising outcropping Greensand (resulting in a hard and complex subtidal reef system), sandstones, mudstones and shales/gravels;
- Water depths ranging from approximately 20 to 30 metres; the seabed characterised by large depressions topped by exposed rock ledges and a gently sloping boulder-strewn platform;
- Diverse sea bed supporting rare marine habitats and species, with a rich fauna including sponges, coral, anenomes and sea squirts attached to rock ledges; and crabs, lobsters and fish occupying holes and crevices;
- Strong south-westerly tidal currents, with water flowing parallel to the coastline and diminishing slightly in strength away from the coast. The complex underwater topography gives rise to choppy water conditions in some locations.

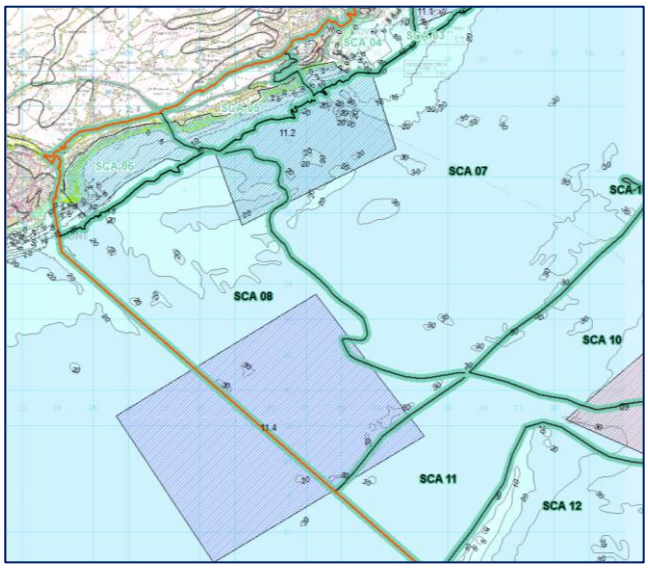
Cultural/historic influences

- The Dover Strait as a whole has played a key role in the defence of Britain and formed the location for successive invasions and defence with evidence in the form of fortifications on land and wrecks on the seabed;
- Seabed littered with ship wrecks – including the HMS Brazen (which sank after German bomb damage in 1940), a World War I German submarine, and the passenger liner Pomerania which collided with another vessel on its journey between New York and Hamburg in 1878;
- Inshore traffic area for vessels less than 20m length. Occasionally providing refuge for larger vessels from the offshore shipping lanes in bad weather conditions.
- Rich seas used for trawling and fixed nets (e.g. sole, bass, turbot) as well as lobster potting, shellfish harvesting (primarily scallop dredging), whelking and recreational angling;
- A number of sub-marine cables extending into the SCA from Copt Point, crossing the Channel to make landfall at Sangatte, west of Calais;
- Nationally important 19th century Martello Towers, linked to Napoleonic history, on East Cliff form valued navigation marks when viewed from the sea, along with prominent telecommunications masts on elevated downland at Capel-le-Ferne.

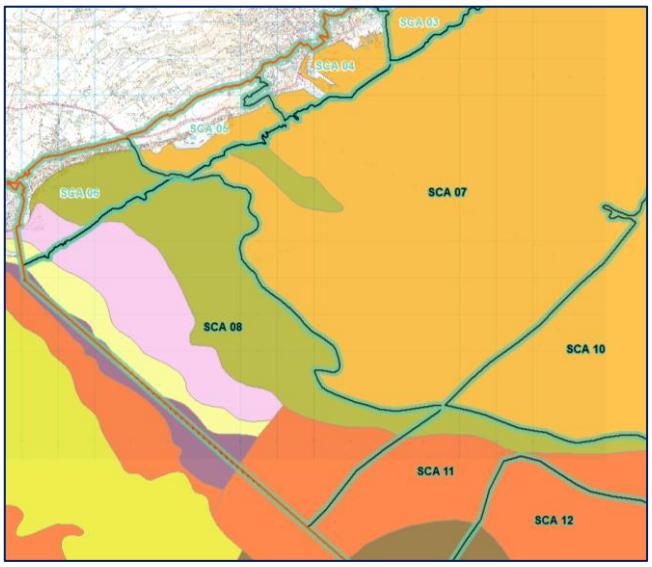
Aesthetic / perceptual qualities

- Strong naturalistic seascape dominated by sounds of the waves and the elements; interrupted only by the presence of boats and fishing vessels and borrowed views to busier seascapes (and coastal development at Folkestone and Dover);
- The close proximity of the main shipping channel and visibility of Dover and Folkestone harbours means ferries, fishing boats and large cargo vessels are frequent seascape features;
- Distant view to the vegetated cliffs and landslips of the Warren and the white chalk cliffs, and their associated features and navigation marks.

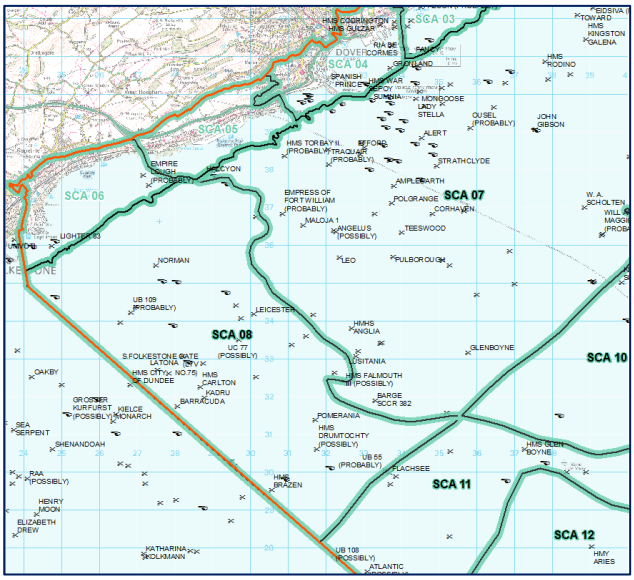
Mapped evidence used to inform assessment (PMF screenshots)



Bathymetry and rMCZ location



Bedrock geology



Location of ship wrecks

Seascape evaluation

Current condition: This is an intact seascape unit, with little overt human influence aside from fishing activities and transit of inshore traffic. The sensitive habitats and species found on the sea bed are likely to be affected by trawling, which will cease in part of the area should the rMCZ be designated.

Seascape sensitivity: As above – the most sensitive aspect of this SCA is the seabed, with its unique flora and fauna. The future possibility of a cessation of trawling activity, and the appropriate management of dredging (particularly for scallops) will help address these sensitivities in the rMCZ, although may displace these resulting in more intensive uses in undesignated parts of the character area. Occasional use of inshore waters for refuge of larger vessels in poor weather conditions may be pose a navigation/safety issue.

Component / overarching Seascape Character Types

National/European-level SCT:

- NSCT 2: Inshore Seascapes

Regional SCT (where relevant):

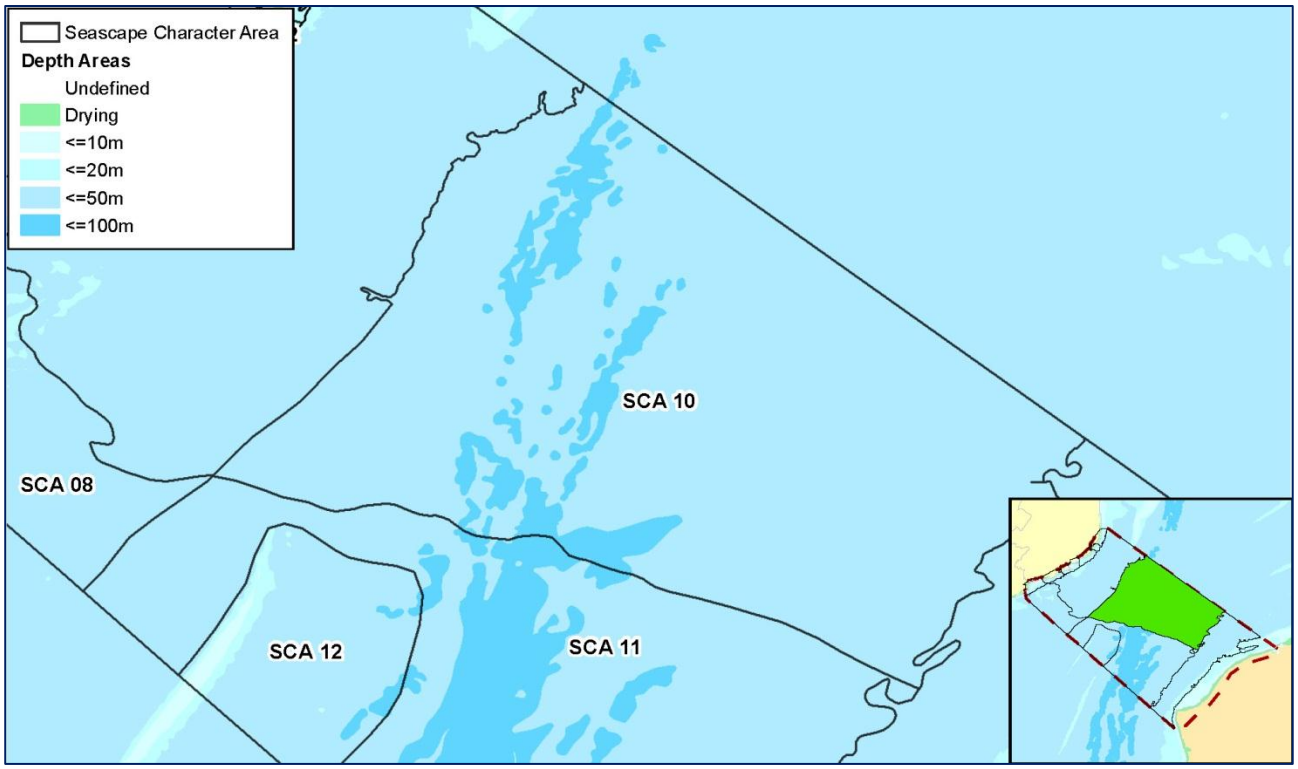
- N/A

Local SCTs:

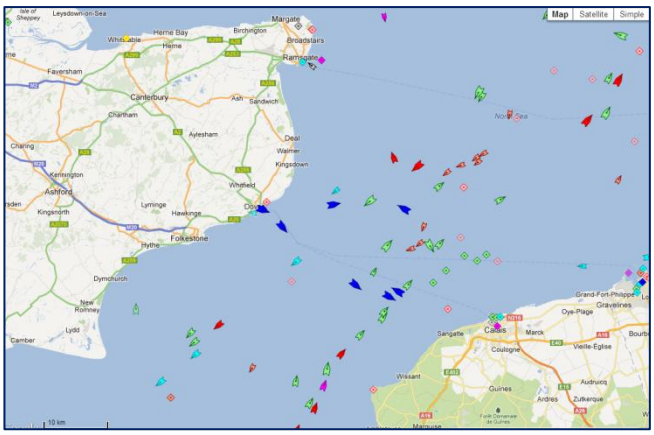
- SCT 14: Active Inshore Waters

SCA 10: Dover Strait Channel (North)

Location map



Representative photographs



Live shipping map (http://www.marinetraffic.com/ais/)

The lateral boundaries for this offshore SCA are defined by the 30m bathymetry contour and are equivalent to the boundary between the inshore and offshore traffic zones. This area contains the deeper water shipping and main through traffic of the Dover Straits. Part of its character relates to the chalk bedrock with the SCA boundary to the south defined to the south by the argillaceous, mudstone and sandstones. To the north the chalk extends out beyond the narrow straits towards the North Sea. The area contains both English and French territorial waters.

Seascape Character Description

Natural influences

- Broad north-west to south- east deep channel approx. 18km wide containing the two shipping lanes;
- Underlain by chalk bedrock, extending from the distinctive White Cliffs of Dover, outcropping at the corresponding chalk coast of France at Cap Blanc Nez;
- Rocks covered by a veneer of sediment forming important marine habitat (sub tidal sediment - high benthic species distinctiveness) includes part of proposed Offshore Foreland rMCZ and Cap Gris Nez SPA/site of community importance;
- Relatively shallow waters but forming part of the deep water shipping channel of the Dover Strait with water from 30m deep to either side with a deeper central channel of >50m depth maintained by dredging;
- Contains part of the English Channel Outburst Flood Feature – a geomorphological feature providing evidence of the North Sea flood which created the channel separating England from mainland Europe;
- Complex tidal currents meeting from the western English Channel/ Atlantic and the North Sea sometimes creating turbulent conditions depending on wind direction;

Cultural/historic influences

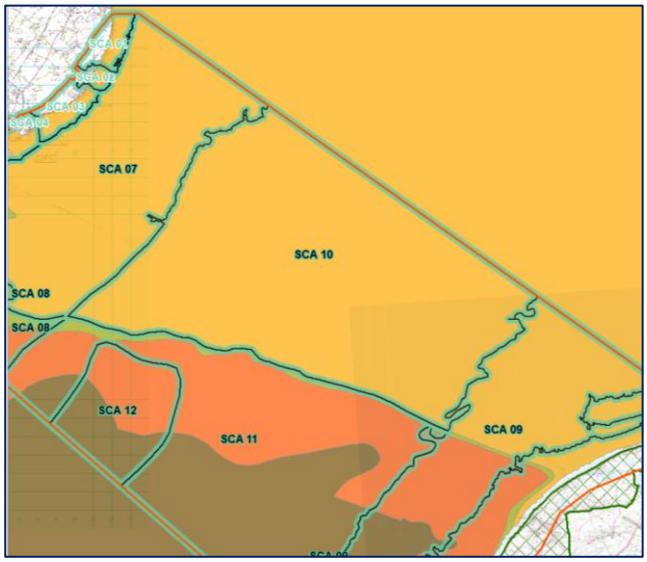
- The Dover Strait as a whole has played a key role in the defence of Britain and formed the location for successive invasions and defence – Romans, Norman Conquest, Napoleonic and two World Wars;
- Wrecks on the sea bed are a testament to past maritime uses;
- This SCA is part of the first IMO[1] approved traffic separation scheme in the world - maritime traffic follows a one way system southwards along the English side and north along the French side separated by a central traffic separation zone;
- The Dover Straits is a vessel traffic services reporting area for vessels over 299 gross tonnage and above;
- International shipping channel contains a very high volume (400 – 500 vessels a day) of large commercial freight/cargo vessels, tankers, fishing vessels plus cross channel passenger ferries. It is one of the busiest channels in the world;
- The area is likely to contain important fish spawning and nursery grounds. Fishing is limited by the marine traffic which dominates this narrow area of the straits, although fishery vessels frequently pass through the area and there is some trawling for cod and other white fish.

Aesthetic / perceptual qualities

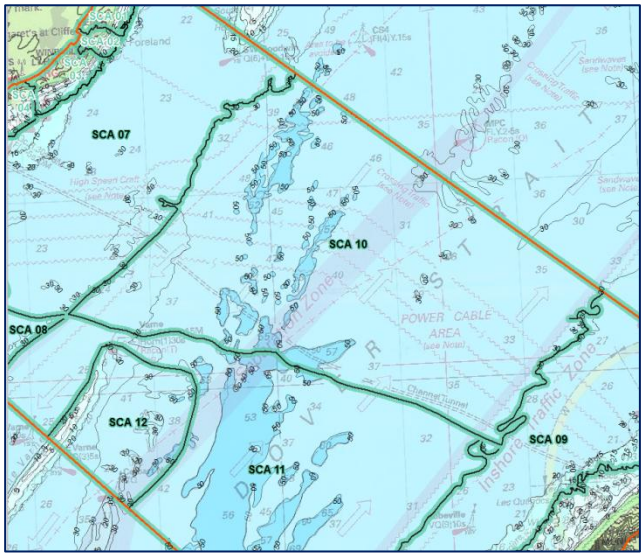
- A busy dynamic area defined by transport movement, regularly used by over 400 commercial vessels per day, and a steady stream of cross channel traffic between Dover and Calais. In views from the coast, maritime traffic is key to the character of the Strait;
- Weather conditions in the Strait are liable to rapid change. Even in comparatively light winds, the strong tides can give rise to rough seas with steep breaking waves. Visibility is often poor, changing quickly to dense fog, even in strong or gale-force winds;
- Narrow straits with intervisibility to both the English and French coasts which are no more than 16 km distance, but often periods of low visibility due to climatic conditions;
- The narrowness of the Strait and views to French and English coasts mean that this off shore area is rarely perceived as remote or wild, although wind and tides often create rough seas;
- At night time, the lights of shipping, maritime navigation devices and on the adjacent coastlines are a key visual influence within the area and from the shore.

[1] International Marine Organization

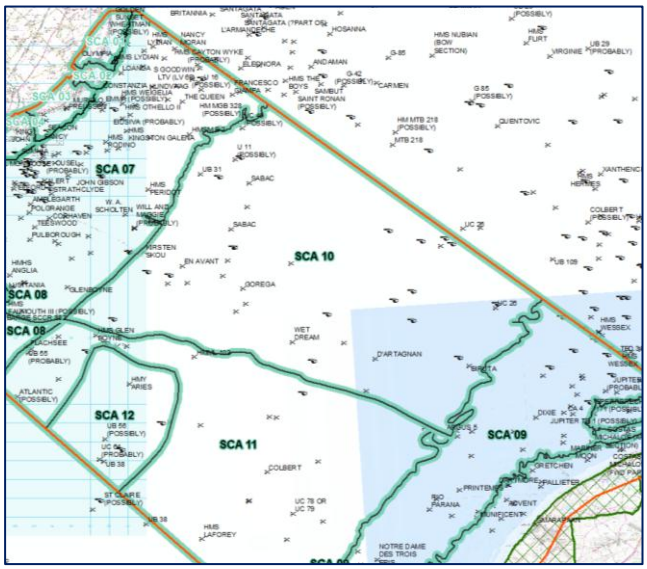
Mapped evidence used to inform assessment (PMF screenshots)



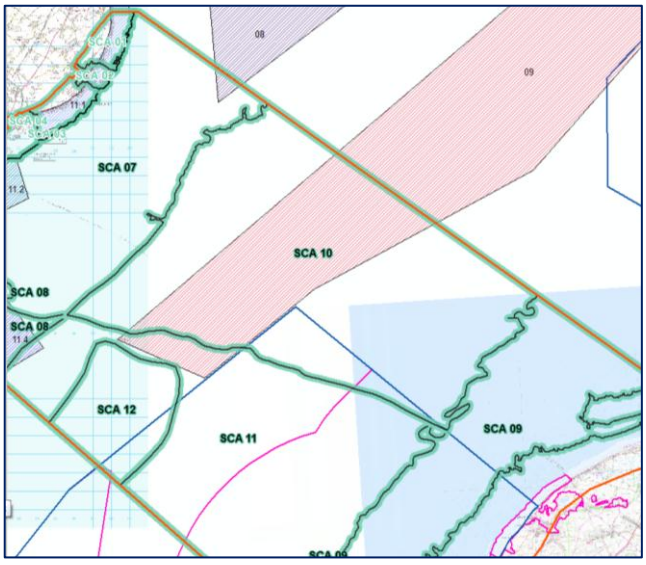
Chalk bedrock geology (orange)



Bathymetry and Traffic Separation Zones



Ship wrecks



Marine biodiversity designations

Seascape evaluation

Current condition:

Condition information on offshore SCAs is difficult to assess – further information from partners/stakeholders required

Seascape sensitivity: This is an area of high biodiversity value both for marine habitats and birds, including bird migration routes, and is of geological importance (channel outburst feature). The designation and integrated (cross territorial) management of marine conservation area is a key opportunity. This needs to be balanced with commercial use of the channel as a major/international seaway. Traffic is zoned for safety (and it is part of the vessel traffic services reporting area) although sea conditions can frequently make navigation difficult. Marine pollution/discharge of hazardous cargo is a concern in these busy waters and sensitive habitats.

Component / overarching Seascape Character Types

National/European-level SCT:

- NSCT 3: Offshore Seascapes

Regional SCT (where relevant):

- RSCT 4: Offshore Shipping Channels

Local SCTs:

- N/A

6 Relevance of Seascape Character Assessment to the ELC and Marine Planning

Links to the European Landscape Convention (ELC)

6.1 The ELC applies to the entire territory and:

'covers natural, rural, urban and peri-urban areas. It includes land, ***inland water and marine areas****. It concerns landscapes that might be considered outstanding as well as everyday and degraded landscapes'*

6.2 The aims of the ELC are to *'promote landscape protection, management and planning, and to* ***organise European co-operation on landscape issues'*** (Article 3).

6.3 Looking at the ELC articles in more detail, a Seascape Character Assessment such as the one trialled in the Dover Strait contributes to their delivery in the following ways:

- Identification and assessment of landscapes/seascapes (Article 6c)
- Developing objectives for the future of the seascape for Marine Spatial Planning (Article 6d)
- European co-operation (Article 7) – *for straits such as Dover which cross national territories*
- Exchange of information (Article 8)
- Consideration of transnational/transfrontier landscapes (Article 9) – *as above for transnational seascapes such as the Dover Strait*

Use of Seascape Character Assessment as a Marine Planning tool

Implementing the Marine Strategy Framework Directive (2008)

6.4 This recognises that many of the threats facing Europe's seas require cooperation between member states to tackle them effectively. The Marine Strategy Framework Directive (MSFD) aims to achieve Good Environmental Status in Europe's seas by 2020. SCA can help contribute towards the following requirements of the Directive:

- An assessment of the current state of the seas
- A set of characteristics of Good Environmental Status offshore waters, with associated targets and indicators
- Provide a spatial framework for decision-making and monitoring progress

Informing planning and management in straits

6.5 SCA produces an agreed spatial framework which can be used by the many users and aspects of the marine environment – fisheries, biodiversity, transport, maritime, historic etc. In seascapes such as straits – where multiple uses, users and natural, cultural and historic assets combine to produce their unique character, an SCA provides an effective means of integration to streamline future decision-making.

Assessing seascape sensitivity and condition

Seascape sensitivity

6.6 The term 'sensitivity' means the relative ability of a seascape to accommodate change. It reflects:

- seascape character;
- the nature of change; and
- the way both are experienced

6.7 Undertaking an assessment of sensitivity is a way of understanding how vulnerable or resilient a seascape is to change. The information contained within a Seascape Character Assessment – particularly its written descriptions – can provide a comprehensive evidence base for assessing sensitivity to change.

Seascape quality and condition

6.8 An analysis of seascape condition will need to be informed by field/boat survey – and can be incorporated into a Seascape Character Assessment in the following ways:

- the extent to which typical character is represented in particular locations;
- the intactness of the seascape from visual, functional and ecological perspectives; and
- the condition or state of repair of individual elements of the seascape

6.9 The results of an analysis of condition can then help guide future management requirements (protect, manage, plan/restore/enhance) – a particularly helpful tool for coastal/marine protected landscapes.

NOSTRA workshop comments on the use of SCA in Marine Planning

6.10 A range of comments were made during the workshop in January 2013, with some examples (including responses where provided) below:

- One comment related to the range of data available for Seascape Character Assessment, and where this could be obtained. LUC mentioned Seazone as a source of international offshore data (which is utilised in the UK's work on SCA)
- A NOSTRA partner from Fehmarn Belt asked the MMO about their links in Europe. The MMO have been liaising with European authorities relevant to their offshore plans and will do this as work starts on new plan areas.
- A NOSTRA partner from Pas-de-Calais commented on a new marine park in the channel (Parc Naturel Marin des Estuaires picards et de la mer d'Opale) recognising that this Dover Strait pilot would be helpful to this project and offering to provide the link.
- Another question was whether seascapes could help with temporal issues as well as spatial, the conclusion was that seascapes can help to consider how future trends are considered in plan making etc and that there is the need to update SCAs over time.
- A delegate suggested that socio –economic factors should be considered more prominently in seascapes work.
- Another delegate asked if the potential for a European wide menu of generic seascape character types, and whether there are generic issues which required integrated management.
- Another question was whether there is a priority for what defines a SCT – e.g. geology; LUC pointed out that this is dependent on the area, sometimes other issues have a greater influence on character (e.g. marine activities).
- An officer from Dover District Council wanted clarification on the uses of a Seascape Character Assessment – LUC/MMO commented that it is not there to set policy, but to provide a baseline for informed decision making.

7 Conclusions and next steps

7.1 It is hoped that the Pilot assessment for the Dover Strait and this report will be a useful resource for anyone wishing to develop an understanding of Seascape Character Assessment and the applications for this approach, particularly in the context of European Straits and European Landscape Convention.

7.2 Kent County Council and Pas-de-Calais County Council hope to be able to complete this pilot assessment with descriptions for the for the remaining local Seascape Character Areas, including the French side of the strait. In addition to this, some stakeholder review would be desirable; a missing element of this pilot work (due to the available budget).

7.3 The NOSTRA territorial group for Dover Strait will be presented with this report, but is also a suitable group for providing local input on the SCAs through workshops, as it includes stakeholders from both sides of the strait.

7.4 As useful as this pilot assessment is, a complete Seascape Character Assessment for Dover Strait would have even greater potential use in the following areas: -

- Evidence base for any future cross border designations; SCA is invaluable in demonstrating the strong cultural identity of this strait and geological features.
- Evidence base for informing decisions in the marine environment; a completed SCA would be available to a wide range of organisations involved in the sustainable management of Dover Strait.
- Assisting with Marine Planning under the Marine and Coastal Access Act 2009; strategic level seascape assessment will take place for the Southern Marine Plan, which includes the shipping channel. The Dover Strait work can be used here but also for the South East Marine Plan which will be initiated in a few years' time and cover the rest of the Kent coast.
- Input into Management Planning for protected landscapes such as the AONB and the Opal coast.

7.5 LUC would like to thank all those who assisted in completing this pilot assessment, including Kent and Essex Inshore Fisheries and Conservation Authority for providing a boat trip to carry out the fieldwork element.

7.6 As follow up to the NOSTRA seascapes workshop where this work was presented, partner authorities from across Europe were asked to complete an exercise, analysing the benefits of adopting a seascapes approach for their respective straits - further information is available from the NOSTRA project. Kent County Council would be happy to discuss any future use of this work area including potential partnerships.

Appendix 1: Data list

	Theme	Data Layers	Source	Source projection	Basemap / context	Boundaries	Descriptions	Notes on use
Baseline information								
	Maps and Charts	Admiralty Charted Raster	UK Hydrographic Office	WGS84	Y	Y	Y	
		Hyrdospatial Charted vector features	Seazone	WGS84		Y	Y	
		OS maps – 1:50,000	Ordnance Survey(OS)	BNG	Y		Y	
		OS maps – 1:25,000	Ordnance Survey(OS)	BNG	Y	Y	Y	Used for digitising onshore boundaries
		France - Scan 25	IGN (FR)	Lambert93			Y	
	Boundaries/ Extent of Jurisdictions	Mean High Water Mark	OS Open Data	BNG			Y	
		Unitary Authority boundaries	OS Open Data	BNG	Y			
		Harbour limits	SeaZone	WGS84		Y	Y	
		Ports	SeaZone	WGS84		Y	Y	
		French department boundaries	IGN (FR)	WGS84	Y			
		UK Continental Shelf Limit	SeaZone/BGS	WGS84	Y			
Character Assessment								
	Land/ Seascape Character	Landscape Character Areas	KCC	BNG	Y			
		Kent Downs AONB	Natural England	BNG		Y	Y	
Natural Factors								
	Bathymetry and elevation	OS Landform Panorama	OS Open Data	BNG	Y	Y	Y	
		Seazone Bathymetry and Elevation	SeaZone	WGS84	Y	Y	Y	
	Geology and Geomorphology	Bedrock,Sedimentary and Superficial	SeaZone	WGS84	Y	Y	Y	Used for digitising offshore boundaries. Needs to be simplified into broader categories to identify patterns
	Tides and Climate	Hydrospatial Climate and Oceanography	Seazone	WGS84			Y	
	Landcover/ vegetation/ habitats	Intertidal Phase 1 Habitat Survey	KCC	BNG		Y	Y	
		European Habitat designations	Natura 2000	ETRS 1989			Y	

Cultural/Social Factors								
		UKHO wrecks and obstructions database	Seazone	WGS84			Y	
	Shipping and navigation	Activity and Licence	SeaZone	WGS84			Y	
		Transportation and routes	SeaZone	WGS84			Y	
		National limits	SeaZone	WGS84			Y	
	Industry, Energy and Infrastructure	Infrastructure	SeaZone	WGS84			Y	
		Tidal Energy Resource	UK Renwables Atlas	WGS84			Y	
		Wave Power Resource	UK Renwables Atlas	WGS84			Y	
	Fishing	Fishing vessel sightings	KEIFCA	UTM Zone 31N			Y	
	Landscape	AONB	Natural England	BNG			Y	
	Heritage Designations	Heritage Coast	Natural England	BNG			Y	
		Conservation Areas	KCC	BNG			Y	
		Historic Parks and Gardens	English Heritage	BNG			Y	
		Listed Buildings	English Heritage	BNG			Y	
		Protected Wreck Sites	English Heritage	BNG			Y	
		Scheduled Monuments	English Heritage	BNG			Y	
		Hydrospatial Conservation and environmental protection	SeaZone	WGS84			Y	
	Biodiversity Designations	Special Areas of Conservation (SAC)	Natural England	BNG			Y	
		National Nature Reserves (NNR)	Natural England	BNG			Y	
		Ramsar sites	Natural England	BNG			Y	
		Site of Special Scientific Interest (SSSI)	Natural England	BNG			Y	
		Marine Conservation Zones	KEIFCA	UTM Zone 31N			Y	
		Important Bird Areas	RSPB	BNG			Y	
		Special Protection Area (SPA)	Natural England	BNG			Y	
Perceptual/Experiential Factors								
	Light pollution	Night skies	CPRE	BNG			Y	
	Intrusion	Intrusion mapping	CPRE	BNG			Y	
	Tranquillity	Tranquil Areas	CPRE	BNG			Y	