



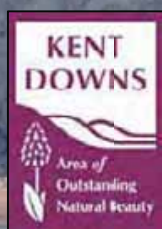
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Seascape Character Assessment for the Dover Strait

Final Report **(full version)**

Prepared by LUC for Kent County Council as part of the NOSTRA (Network Of STRAits) Project
July 2015



Project Title: Seascape Character Assessment for the Dover Strait

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

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3.0	10/07/15	Final report with additional SCA and SCT profiles for Kent.	Sally Parker	Kate Ahern	Kate Ahern

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Ecology
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Foreword

Kent County Council and Pas-de-Calais Council have a long history of cooperation. Through the European Straits Initiative and Interreg IVC NOSTRA project (Network Of STRAits), we have been working together to realise the opportunities for our shared coastal and maritime space; the world famous Dover Strait. Our cooperation has resulted in a partnership Dover Strait Implementation Plan, “highlighting our priorities to deliver our joint vision to ensure that by 2034 the Dover Strait becomes recognised as a “cohesive maritime and coastal area, with a rich natural environment combined with a long and fascinating cultural history” and that “the features representing this strong identity will be part of innovative economic activities, including a recognised tourism offer.”

To support delivery of our vision, this Seascape Character Assessment presents a detailed picture of the Dover Strait, capturing the unique natural and cultural character of the area. We have worked with stakeholders and undertaken detailed research to identify our valued seascape features and key issues as well as putting forward guidelines for future management, decision making and policy development. We hope you will agree that the study makes for fascinating reading and brings out the similarities between our two shorelines.

In the UK the assessment will form part of the evidence base for marine planning by the Marine Management Organisation (MMO) and will complement the strategic-scale Seascape Assessment completed by the MMO for the South Marine Plan. The assessment can be used for terrestrial planning too, as Seascape Character Assessment has parallels with the long-established tool of Landscape Character Assessment. We hope that this therefore provides a very useful resource for coastal authorities in ensuring that the value of our seascapes is an important consideration in planning their future coastlines.

Seascapes are an important part of our national identities and help to support our economies and quality of life; we hope you find this Seascape Character Assessment for the Dover Strait a relevant and engaging document to support you in your work.



Matthew Balfour

Matthew Balfour

Cabinet Member for Environment & Transport,
Kent County Council

1 Background and context

1 Background and context

Background

- 1.1 This study, to complete a Seascape Character Assessment for the Dover Strait, follows on from previous work undertaken in March 2013 to pilot an approach for the Strait¹. The project forms part of the wider Interreg-funded NOSTRA (Network Of STRAits) project, which is seeking to share ideas and best practice in marine spatial planning as applied to strait seascapes across Europe.
- 1.2 This study 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'.

The international importance of the Dover Strait

- 1.3 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 Opal 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.



- 1.4 Despite fierce tidal currents, and the presence of shifting and unstable sandbanks such as the 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

¹ Pilot report available at <http://www.nostraproject.eu/News/NOSTRA-Workshop-n-1-Seascapes-Report-Available>

migration of fish and some cetaceans. Here, internationally and 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 and popular sites for scuba diving.

Figure1.1: The natural assets of the Dover Strait



- 1.5 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 Opal 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 and rugged sand dunes.

Figure1.2: The physical influences that have shaped the Dover Strait



- 1.6 Defence and invasion is one of the long-standing 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 Nature Park and Grand Site (France) – and greatly valued for tourism and recreation.

Figure 1.3: The rich cultural heritage of the Dover Strait

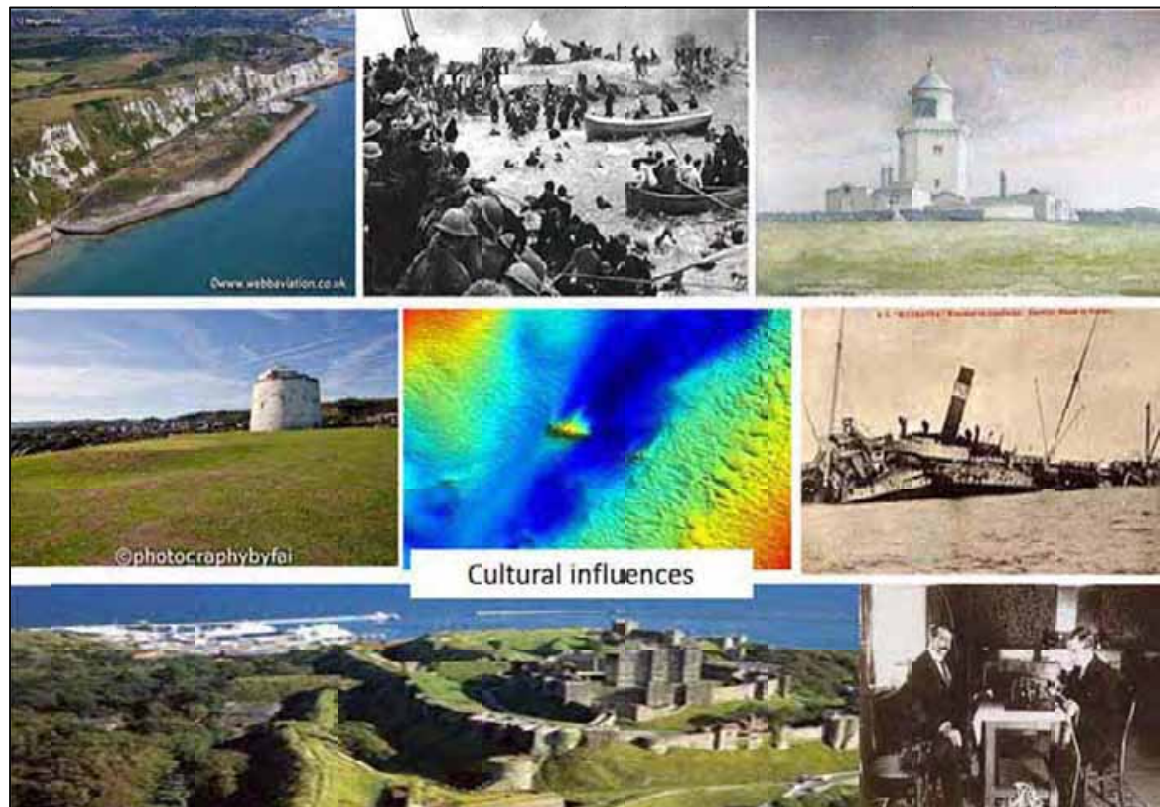


Figure 1.4: One of the busiest shipping areas in the world²



² <http://www.marinetraffic.com/ais/>

- 1.7 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.

Figure 1.5: The Dover Strait: a major contributor to the local economy



Figure 1.6: A popular area for recreation (a visit by French Interreg partners in 2009)



- 1.8 This seascape character assessment will provide an important spatial tool for marine and coastal management, protection and planning.

Structure of this report

1.9 The remainder of this report is set out as follows:

- **Chapter 2** summarises the method undertaken for this study and presents the full classification of the Dover Strait into Seascape Character Types (SCTs) and Areas (SCAs);
- **Chapter 3** sets out seascape guidelines and actions for a selection of Seascape Character Types, and provides an overview for the Dover Strait as a whole;
- **Chapter 4** discusses the applications and uses of this work; and
- **Chapter 5** sets out character descriptions for a selection of Seascape Character Areas found on the English and French sides of the Strait.
- **Appendix 1** sets out a table showing the classification of Seascape Character Areas and Types, linking back to the pilot study and explaining decisions relating to their boundaries.
- **Appendix 2** lists the people and organisations that have inputted into this study.

2

**Method for
undertaking a
Seascape
Character
Assessment for the
Strait**

2 Method for undertaking a complete Seascape Character Assessment for the Strait

Seascape classification produced for the Dover Strait

- 2.1 **Figures 2.1 to 2.3** present the spatial classification of Seascape Character Types (SCTs) and Seascape Character Areas (SCAs) identified for the Dover Strait. This chapter explains the method that was followed to complete the assessment.

'Seascape' and Seascape Character Assessment

- 2.2 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"

- 2.3 To ensure compatibility with national marine planning in England, the study is also consistent with the Marine Policy Statement's own definition for seascape, which states that:

"...references to seascape should be taken as meaning landscapes with views of the coast or seas, and coasts and the adjacent marine environment with cultural, historical and archaeological links with each other".

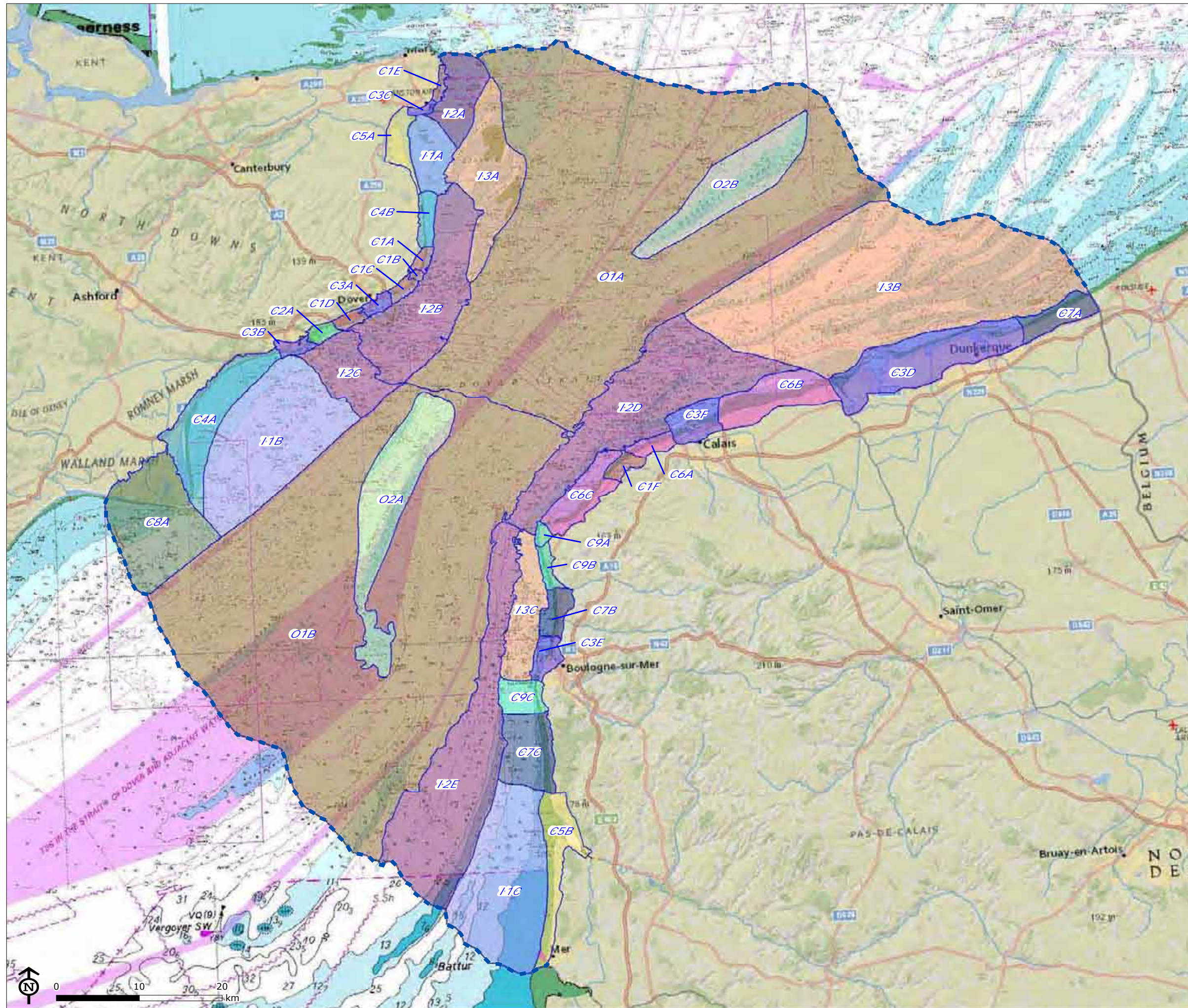
- 2.4 The 'Seascape Wheel' (see **Figure 2.4** below) provides a helpful illustration of all the different factors that interact to produce **seascape character**. The interactions between 'people' and 'place' are fundamental to an appreciation of seascape.

Figure 2.4: The Seascape Wheel (Natural England, 2012)



Dover Strait Seascape Assessment

Figure 2.1: Classification for Whole Dover Strait



Seascape Character Types and Areas

- C1: Chalk Cliffs and Reefs/Coastal Waters**
 C1A - Kingsdown Chalk Cliffs
 C1B - St Margaret's Bay
 C1C - White Cliffs of Dover
 C1D - Shakespeare and Abbot's Cliffs
 C1E - Broadstairs to North Foreland
 C1F - Les Deux Caps
- C2: Greensand Cliffs and Reefs/Coastal Waters**
 C2A - East Wear Bay and The Warren
- C3: Ports, Harbours and Seafront Development**
 C3A - Dover Port, Harbour and Historic Defences
 C3B - Folkestone Harbour & Seafront
 C3C - Ramsgate Harbour
 C3D - Ports de Dunkerque et Gravelines et côte urbanisée
 C3E - Port de Boulogne
 C3F - Port de Calais
- C4: Shingle Beaches and Coastal Waters**
 C4A - Romney Coast, Hythe Flats & Roar Bank
 C4B - Deal Seafront & Deal Bank
- C5: Tidal Estuaries and Flats**
 C5A - Sandwich & Pegwell Bays
 C5B - Baie de Canche et littoral dunaire d'Opale
- C6: Sand Dunes, Wetlands and Coastal Waters**
 C6A - Dunes du Fort Mahon et littoral de Sangatte
 C6B - Platier d'Oye et littoral dunaire de Calais
 C6C - Les Deux Caps
- C7: Sand Dunes, Beaches and Coastal Waters**
 C7A - Littoral dunaire de Bray Dunes
 C7B - Littoral des falaises d'Opale
 C7C - Littoral dunaire d'Opale
- C8: Shingle Headlands and Coastal Waters**
 C8A - Dungeness, Denge Marsh & Eastern Rye Bay
- C9: Sandstone, Mudstone and Limestone Cliffs & Coastal Waters**
 C9A - Les Deux Caps
 C9B - Littoral des falaises d'Opale
 C9C - Littoral dunaire d'Opale
- I1: Inshore Bays**
 I1A - Sandwich & Pegwell Bays
 I1B - Hythe Bay
 I1C - Baie de Canche et littoral dunaire d'Opale
- I2: Active Inshore Waters**
 I2A - Broadstairs Knolls & Ramsgate Road
 I2B - Inshore Dover Strait, The Downs & Trinity Bay
 I2C - Folkestone Pomerania
 I2D - Zone d'approche de Calais
 I2E - Bassure de Baas
- I3: Inshore Sandbanks and Shoals**
 I3A - Goodwin Sands, Gull Stream & North Sand Head
 I3B - Bancs Des Flandres
 I3C - Rade d'Ambleteuse
- O1: Offshore Shipping Channels**
 O1A - Dover Strait Channel (North)
 O1B - Dover Strait Channel (South)
- O2: Offshore Sandbanks and Shoals**
 O2A - The Varne - Le Colbart Ridge and Les Ridens
 O2B - Sandette Bank

Map Scale @ A3: 1:450,000

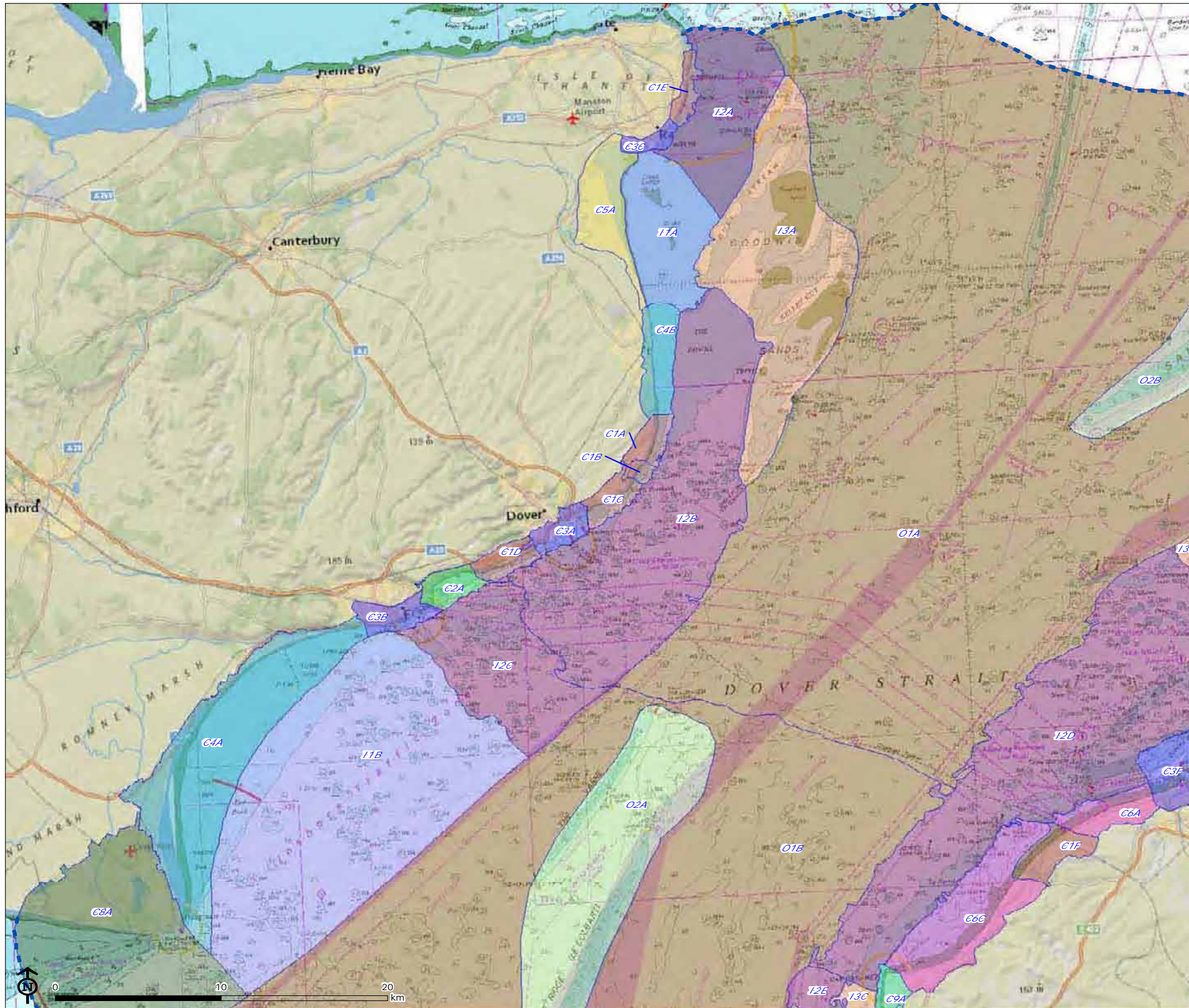


Dover Strait Seascape Assessment

Figure 2.2: Classification for the Kent Coast

Seascape Character Types and Areas Kent Coast

- C1: Chalk Cliffs and Reefs/Coastal Waters**
 C1A - Kingsdown Chalk Cliffs
 C1B - St Margaret's Bay
 C1C - White Cliffs of Dover
 C1D - Shakespeare and Abbot's Cliffs
 C1E - Broadstairs to North Foreland
 C1F - Les Deux Caps
- C2: Greensand Cliffs and Reefs/Coastal Waters**
 C2A - East Wear Bay and The Warren
- C3: Ports, Harbours and Seafront Development**
 C3A - Dover Port, Harbour and Historic Defences
 C3B - Folkestone Harbour & Seafront
 C3C - Ramsgate Harbour
 C3F - Port de Calais
- C4: Shingle Beaches and Coastal Waters**
 C4A - Romney Coast, Hythe Flats & Roar Bank
 C4B - Deal Seafront & Deal Bank
- C5: Tidal Estuaries and Flats**
 C5A - Sandwich & Pegwell Bays
- C6: Sand Dunes, Wetlands and Coastal Waters**
 C6A - Dunes du Fort Mahon et littoral de Sangatte
 C6C - Les Deux Caps
- C8: Shingle Headlands and Coastal Waters**
 C8A - Dungeness, Denge Marsh & Eastern Rye Bay
- I1: Inshore Bays**
 I1A - Sandwich & Pegwell Bays
 I1B - Hythe Bay
- I2: Active Inshore Waters**
 I2A - Broadstairs Knolls & Ramsgate Road
 I2B - Inshore Dover Strait, The Downs & Trinity Bay
 I2C - Folkestone Pomerania
 I2D - Zone d'approche de Calais
- I3: Inshore Sandbanks and Shoals**
 I3A - Goodwin Sands, Gull Stream & North Sand Head
 I3B - Bancs Des Flandres
- O1: Offshore Shipping Channels**
 O1A - Dover Strait Channel (North)
 O1B - Dover Strait Channel (South)
- O2: Offshore Sandbanks and Shoals**
 O2A - The Varne - Le Colbart Ridge and Les Ridens
 O2B - Sandette Bank

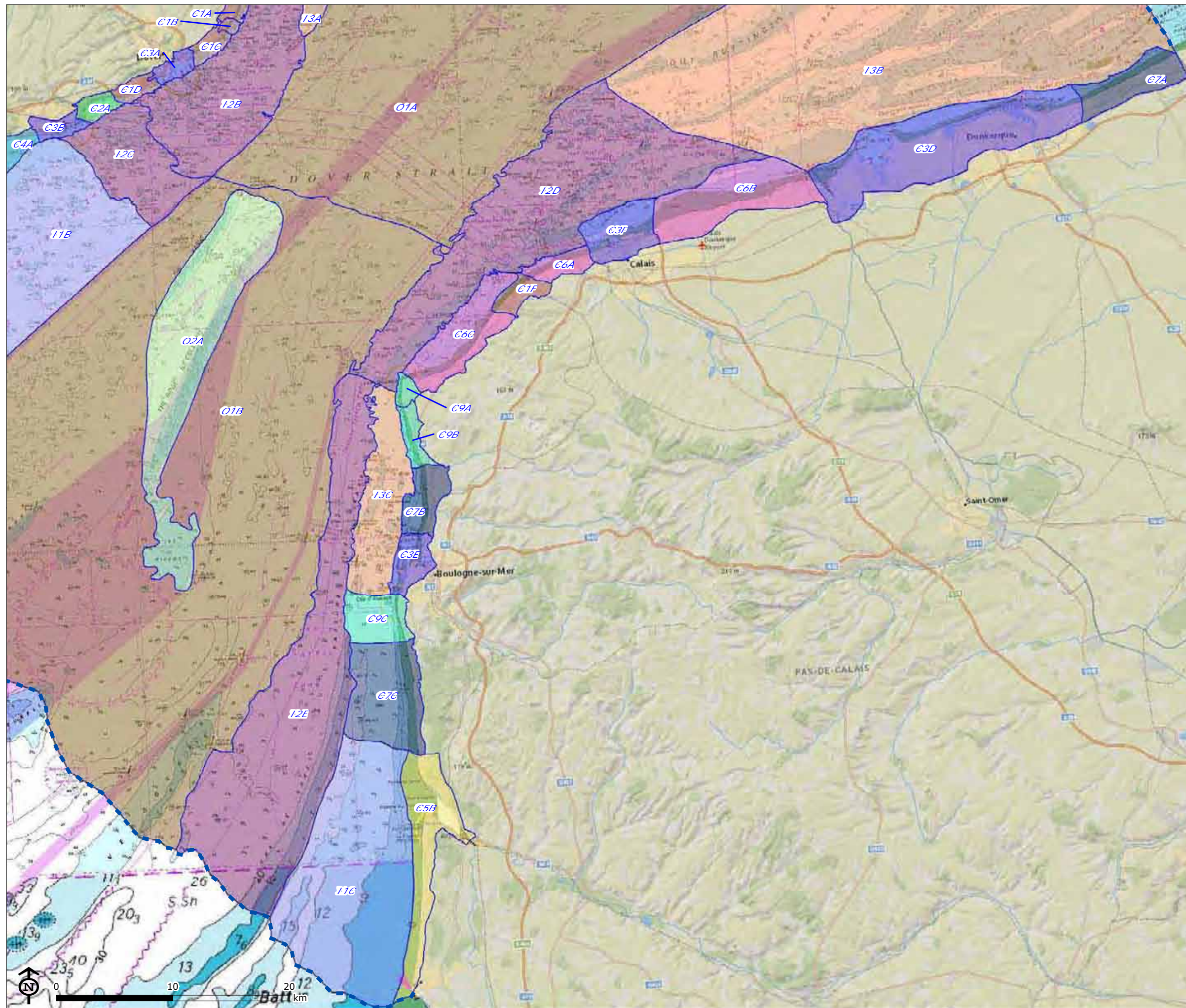


Map Scale @ A3: 1:225,000



Dover Strait Seascapes Assessment

Figure 2.3: Classification for the French Coast



Seascape Character Types and Areas

- C1: Chalk Cliffs and Reefs/Coastal Waters**
 - C1A - Kingsdown Chalk Cliffs
 - C1B - St Margaret's Bay
 - C1C - White Cliffs of Dover
 - C1D - Shakespeare and Abbot's Cliffs
 - C1E - Broadstairs to North Foreland
 - C1F - Les Deux Caps
- C2: Greensand Cliffs and Reefs/Coastal Waters**
 - C2A - East Wear Bay and The Warren
- C3: Ports, Harbours and Seafront Development**
 - C3A - Dover Port, Harbour and Historic Defences
 - C3B - Folkestone Harbour & Seafront
 - C3C - Ramsgate Harbour
 - C3D - Ports de Dunkerque et Gravelines et côte urbanisée
 - C3E - Port de Boulogne
 - C3F - Port de Calais
- C4: Shingle Beaches and Coastal Waters**
 - C4A - Romney Coast, Hythe Flats & Roar Bank
 - C4B - Deal Seafront & Deal Bank
- C5: Tidal Estuaries and Flats**
 - C5A - Sandwich & Pegwell Bays
 - C5B - Baie de Canche et littoral dunaire d'Opale
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 - C6C - Les Deux Caps
- C7: Sand Dunes, Beaches and Coastal Waters**
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 - C7C - Littoral dunaire d'Opale
- C8: Shingle Headlands and Coastal Waters**
 - C8A - Dungeness, Denge Marsh & Eastern Rye Bay
- C9: Sandstone, Mudstone and Limestone Cliffs & Coastal Waters**
 - C9A - Les Deux Caps
 - C9B - Littoral des falaises d'Opale
 - C9C - Littoral dunaire d'Opale
- I1: Inshore Bays**
 - I1A - Sandwich & Pegwell Bays
 - I1B - Hythe Bay
 - I1C - Baie de Canche et littoral dunaire d'Opale
- I2: Active Inshore Waters**
 - I2A - Broadstairs Knolls & Ramsgate Road
 - I2B - Inshore Dover Strait. The Downs & Trinity Bay
 - I2C - Folkestone Pomerania
 - I2D - Zone d'approche de Calais
 - I2E - Bassure de Baas
- I3: Inshore Sandbanks and Shoals**
 - I3A - Goodwin Sands, Gull Stream & North Sand Head
 - I3B - Bancs Des Flandres
 - I3C - Rade d'Ambleteuse
- O1: Offshore Shipping Channels**
 - O1A - Dover Strait Channel (North)
 - O1B - Dover Strait Channel (South)
- O2: Offshore Sandbanks and Shoals**
 - O2A - The Varne - Le Colbart Ridge and Les Ridens
 - O2B - Sandette Bank

Map Scale @ A3: 1:320,000



- 2.5 Seascape Character Assessments provide a spatial classification of Seascape Character Types (SCTs) and Seascape Character Areas (SCAs), as has been produced for the Dover Strait. Definitions of both types of unit are provided below:
- 2.6 Definitions of SCTs and SCAs are provided below, explaining their relative uses in this type of study.

Seascape Character Types

These are distinct types of seascape that are relatively homogeneous in character. They are generic in nature in that they may occur in different locations but wherever they occur they share broadly similar combinations of geology, bathymetry, ecology, human influences and perceptual and aesthetic attributes. For example, sheltered bays, rocky coves, sandy beaches or harbours are recognisable and distinct seascape character types.

Seascape Character Types provide a good framework for analysing seascape change since many influences and pressures affect seascapes with similar character in similar ways. Analysis of SCTs can provide a foundation upon which to develop coastal or marine planning or management strategies.

Seascape Character Areas

These are single unique areas which are the discrete geographical areas comprising one or more component Seascape Character Types. Each has its own individual character and identity, even though it can share the same generic characteristics with other SCAs that are formed of the same SCT(s). Whilst sharing the same generic characteristics, each SCA has its own identity.

Seascape Character Areas provide a good framework within which to draw out patterns of local distinctiveness and those factors influencing sense of place. They can be used to develop more tailored policies or strategies, reflecting the things that make a particular area of seascape different, distinctive or special. SCAs may also be more recognisable and identifiable for non-specialists (e.g. local communities).

- 2.7 Natural England has recently published a national approach document in the method of Seascape Character Assessment³, and English Heritage has its own a method statement for Historic Seascape Characterisation⁴. This work is in line with the approach recommended by Natural England.

Key steps in the approach

- 2.8 The approach taken to completing this Seascape Character Assessment built on the method that was developed for the pilot study, described in the accompanying project report (March 2013). This method is set out again in this section, including additional steps that were taken to complete the study for the whole of the Strait, including the French coastal and inshore areas.
- 2.9 This study followed a five-stage process, in line with national best practice and LUC's experience in undertaking similar landscape and seascape studies in the UK:
- Confirming the scope of the study
 - Desk study (including data collection and GIS analysis)
 - Stakeholder engagement

³

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/366847/An_Approach_to_Landscape_Character_Assessment.pdf

⁴ http://www.seazone.com/uploads/event-HSC_Method_Statement_2008R024.pdf

- Field and boat survey
- Classification and description

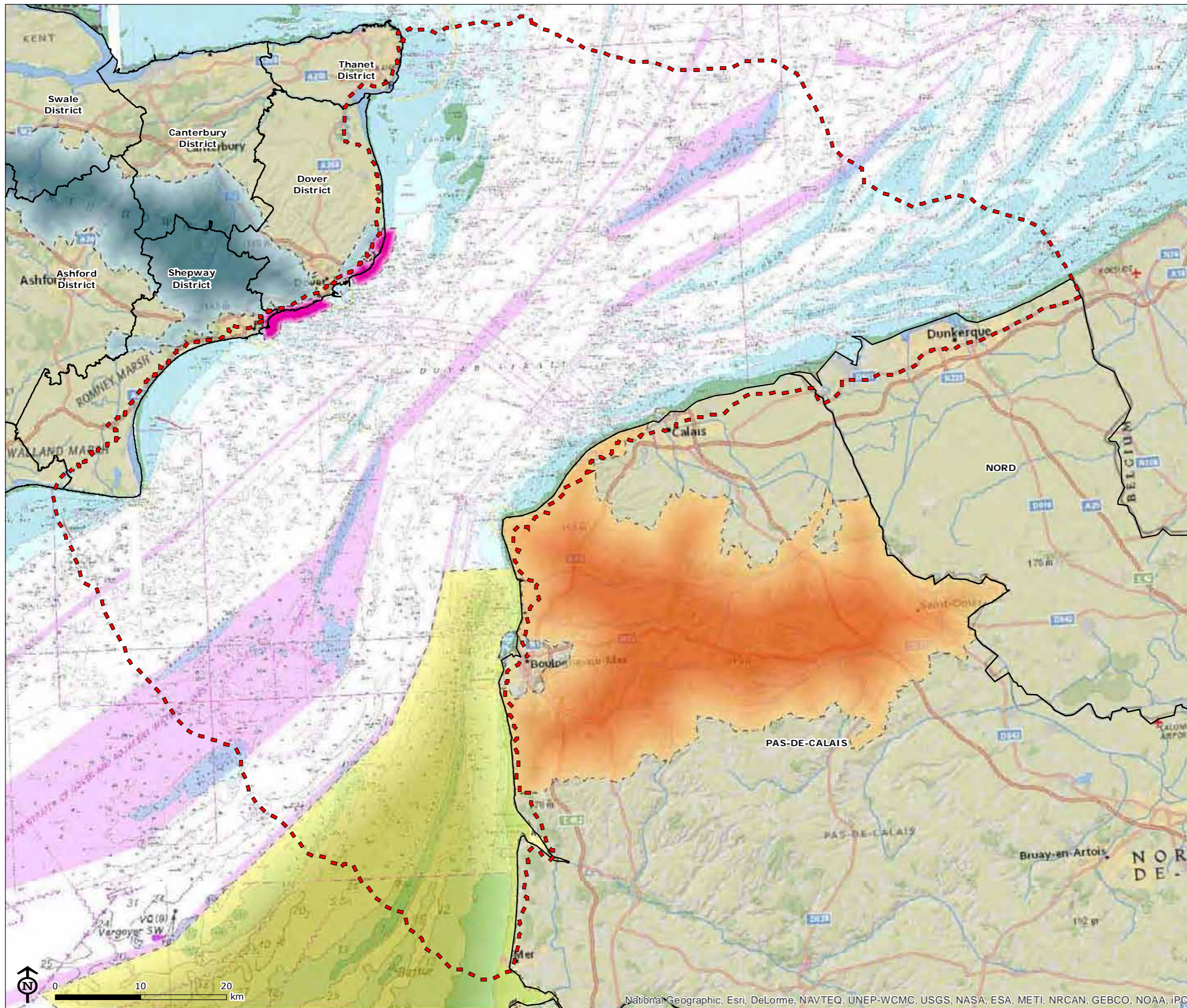
2.10 A short summary of each of the above steps, as applied to this study, is included below.

Step 1: Confirming the scope of the assessment

- 2.11 This relates to a) the 'need' or 'purpose' of the seascape character assessment; and b) the geographic scope of the Study Area. The purpose this study was to build on the pilot project to complete a full Seascape Character Assessment for the Dover Strait, using a hierarchy of Seascape Character Areas and Seascape Character Types. Further information on its applications is set out in Chapter 4.
- 2.12 Whilst the pilot study considered a selected part of the Strait to test the approach (with a focus on the Kent side), this study considered a larger area designed to represent the full Dover Strait. This followed the recommendations set out in the pilot report, as summarised below:
- Include a larger area of the Strait as recognised in maritime/navigation terms but be based around its narrowest part;
 - Include the full extent of chalk seascape, plus the main areas of sand banks – Goodwin, Sandette, 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; and
 - Include main cross channel ports – Dover, Folkestone, Boulogne, Calais.
- 2.13 **Figure 2.5** shows the full study area boundary in the context of the protected landscapes and seascapes.
- 2.14 The inland (terrestrial) study area limits were defined by considering an appropriate coastal hinterland that represents areas where land-sea interactions are greatest. In Kent, this was often contiguous with the boundary of the Heritage Coast designation or the county Landscape Character Areas; whilst elsewhere, topography and features with a strong relationship with the sea (e.g. navigation marks, prominent headlands) formed a guide to where the terrestrial boundary lines were drawn. Either contours or roads were chosen to draw inland boundaries against in the absence of existing appropriate boundaries reflecting character.







Step 2: Desk study

- 2.15 Available information was collected and organised in a logical sequence to help inform this stage of the study, building on the resources available from the pilot study. This included digital [GIS] data and mapping, as well as any written information (e.g. from navigational publications such as coastal pilots).
- 2.16 GIS information was organised by the key themes of the seascape wheel (Figure 2.6) and queried in an interactive map – see **Figure 2.3**.
- 2.17 The desk-based study sought to extend the SCT and SCA classification trialled for the pilot assessment to provide full coverage for the Dover Strait. This involved the extension or modification of some boundaries from the pilot study, as well as the identification of new SCAs and SCTs. The table in **Appendix 1** sets out the results of this task, explaining links back to the pilot study classification of Seascape Character Areas, and summarising the key information that informed the classification of the units and drawing of boundaries. The results of the final classification are explained and shown at the end of this chapter.



Dover Strait Seascape Assessment

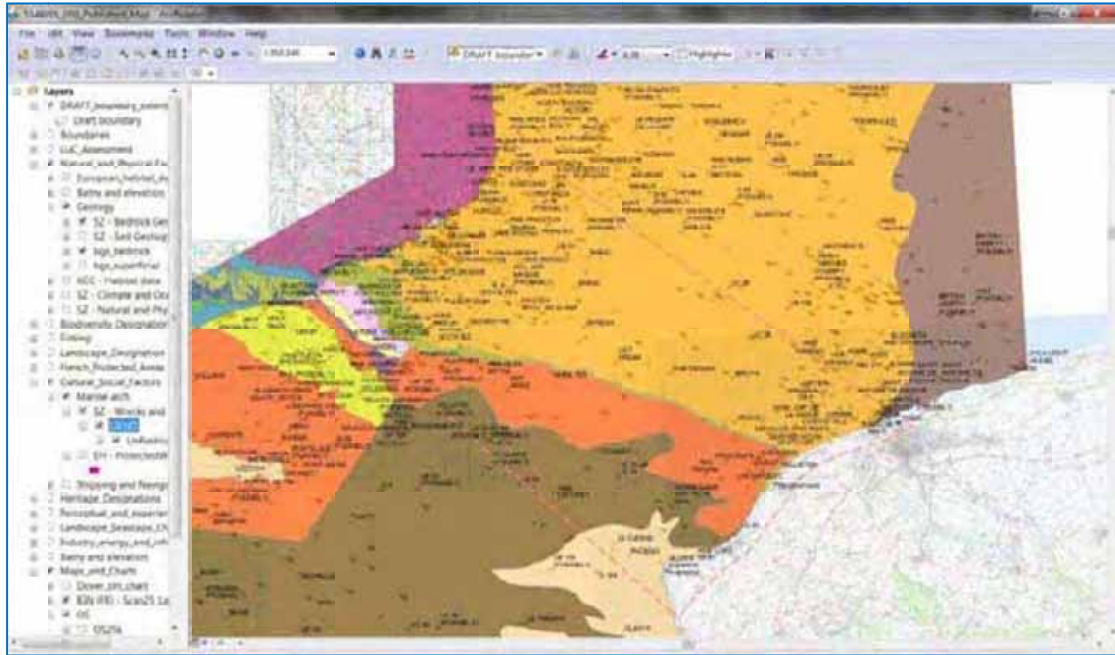
Figure 2.5: National Landscape and Seascape Designations

-  Study area
-  Local Authority boundary
-  Dover - Folkestone and South Foreland Heritage Coasts
-  Kent Downs Area of Outstanding Natural Beauty
-  Parc Naturel Regional des Caps et Marais d'Opale
-  Parc Naturel Marin Estuaires picards Mer d'Opale

Map Scale @ A3: 1:435,000

LUC

Figure 2.6: Interactive GIS mapping used to inform the desk study



Step 2: Stakeholder consultation

- 2.18 In addition to guidance and input provided by the project steering group⁵ throughout the course of the project, views were sought from a range of stakeholders at key points in the study. These were to gauge information on the following aspects in particular:
- The mapped boundaries and names given to the SCTs and SCAs;
 - The key characteristics of the SCAs written up for this study; and
 - Forces for change and issues impacting on the SCTs written up for this study, as well as the Dover Strait as a whole.
- 2.19 A workshop event was held to gauge views on the above at the newly opened education shelter at Samphire Hoe on September 2nd 2014. Comments were also welcomed from people attending the Kent Downs AONB Countryside Day on 3 October 2014, where information on the project was available. Details of the study were also presented at a joint NOSTRA meeting of UK/French stakeholders on 10 September in Calais. A list of all stakeholders who have provided input into this study is included at Appendix 2.

Step 3: Field and boat survey

- 2.20 Boat and field survey observations are an extremely helpful means of verifying the desk-based assessment, as was also found in the pilot. Boat and field survey exercises were conducted on both the Kent and French sides of the Strait for this study. The Kent & Essex IFCA provided assistance for a day's boat survey off the Kent coast in August 2014, while a private charter was arranged to survey the French coastline and inshore waters in September. Observations were also made on the central Strait and approaches to both shores from the Dover-Calais ferry crossing.
- 2.21 The field and boat surveys helped incorporate further information not available from data alone (e.g. perceptions of different parts of the seascape; information on condition and/or sensitivity).

⁵ The Steering Group comprised Chris Drake and Ruth Childs, Kent County Council; Nick Johannsen, Kent Downs AONB; and Stéphane Louhaur and Antoine Surget, Pas-de-Calais County Council.

Figure 2.7: IFCA (Kent and Essex Inshore Fisheries Conservation Authority) boat used to survey the Kent side of the study area



Step 4: Classification and description

- 2.22 The full classification of Seascape Character Types (SCTs) and Seascape Character Areas (SCAs) is shown at the beginning of this chapter (**Figures 2.1 to 2.3**) and set out in **Table 2.1** below. These have been coded according to their location in the 'coastal' (C), 'inshore' (I) and 'offshore' (O) parts of the Dover Strait.
- 2.23 This divides the Strait into a total of nine Coastal SCTs (with 27 component SCAs), three Inshore SCTs (with 11 component SCAs) and two Offshore SCTs (with four component SCAs). It is important to note that some SCAs fall within more than one SCT. Combined coding is used to reflect this for reporting purposes – an example is C1F_C6C_C9A: Les Deux Caps. The majority of SCAs, however, fall within just one SCT, and therefore only have one code. This is also shown in the table at **Appendix 1**.
- 2.24 Character descriptions are provided in **Chapter 5** for a large selection of SCAs found in the study area. In addition, the next chapter presents seascape guidelines and actions for a selection of SCTs found across the Strait. Those SCAs and SCTs selected for write-ups are shaded in purple in Table 2.1. They were chosen to reflect a balanced selection of different types of seascape, as well as a good geographic spread across the coastal, inshore and offshore parts of the Strait.
- 2.25 It is hoped that further funding can be secured at a future to complete the descriptive work for the 11 remaining SCAs and seven SCTs identified for the Strait through this study.

Table 2.1: Classification of the Dover Strait into SCTs and component SCAs (colour shading indicates those written up in this report)

Seascape Character Type	Seascape Character Area ⁶
COASTAL	
C1: Chalk Cliffs and Reefs/Coastal Waters	C1A: Kingsdown Chalk Cliffs
	C1B: St Margaret's Bay
	C1C: White Cliffs of Dover
	C1D: Shakespeare and Abbot's Cliffs
	C1E: Broadstairs to North Foreland
	C1F: Les Deux Caps
C2: Greensand Cliffs and Reefs/Coastal Waters <i>(unique SCT)</i>	C2A: East Wear Bay and The Warren
C3: Ports, Harbours and Seafront Development	C3A: Dover Port, Harbour and Historic Defences
	C3B: Folkestone Harbour and Seafront
	C3C: Ramsgate Harbour
	C3D: Ports de Dunkerque et Gravelines et côte urbanisée
	C3E: Port de Boulogne
	C3F: Port de Calais
C4: Shingle Beaches and Coastal Waters	C4A: Romney Coast, Hythe Flats and Roar Bank

⁶ Please note that a small number of SCAs fall within more than one SCT. In these cases, the codes are combined on the maps and the descriptions to create one SCA record.

Seascape Character Type	Seascape Character Area ⁶
	C4B: Deal Seafront and Deal Bank
C5: Tidal Estuaries and Flats	C5A: Sandwich and Pegwell Bays
	C5B: Baie de Canche et littoral dunaire d'Opale
C6: Sand Dunes, Wetlands and Coastal Waters	C6A: Dunes du Fort Mahon et littoral de Sangatte
	C6B: Platier d'Oye et littoral dunaire de Calais
	C6C: Les Deux Caps
C7: Sand Dunes, Beaches and Coastal Waters	C7A: Littoral dunaire de Bray Dunes
	C7B: Littoral des falaises d'Opale
	C7C: Littoral dunaire d'Opale
C8: Shingle Headlands and Coastal Waters <i>(unique SCT)</i>	C8A: Dungeness, Denge Marsh and Eastern Rye Bay
C9: Sandstone, Mudstone and Limestone Cliffs & Coastal Waters	C9A: Les Deux Caps
	C9B: Littoral des falaises d'Opale
	C9C: Littoral dunaire d'Opale
INSHORE	
I1: Inshore Bays	I1A: Sandwich and Pegwell Bays
	I1B: Hythe Bay
	I1C: Baie de Canche et littoral dunaire d'Opale

Seascape Character Type	Seascape Character Area ⁶
I2: Active Inshore Waters	I2A: Broadstairs Knolls and Ramsgate Road
	I2B: Inshore Dover Strait, The Downs and Trinity Bay
	I2C: Folkestone Pomerania
	I2D: Zone d'approche de Calais
	I2E: Bassure de Baas
I3: Inshore Sandbanks and Shoals	I3A: Goodwin Sands, Gull Stream and North Sand Head
	I3B: Bancs des Flandres
	I3C: Rade d'Ambleteuse
OFFSHORE	
O1: Offshore Shipping Channels	O1A: Dover Strait Channel (North)
	O1B: Dover Strait Channel (South)
O2: Offshore Sandbanks and Shoals	O2A: The Varne-Le Colbart Ridge and Les Ridens
	O2B: Sandette Bank

3

Seascapes

Guidelines and

Actions for the

Dover Strait

(selected SCTs)

3 Seascapes Guidelines and Actions for the Dover Strait (selected SCTs)

Introduction

- 3.1 This chapter considers the key issues that are affecting the natural, cultural and perceptual qualities of the Dover Strait, as described in the SCA descriptions in Chapter 5. It uses the framework of Seascape Character Types to present the information, but begins with an overview of the findings for the Dover Strait as a whole.
- 3.2 The SCT-specific information that follows has been prepared for a selection of SCTs, chosen to reflect a good geographic spread (including all of the Kent coastline) and range of seascapes in the Dover Strait. These are as follows:
1. C1: Chalk Cliffs and Reefs/Coastal Waters
 2. C2: Greensand Cliffs and Reefs/Coastal Waters
 3. C3: Ports, Harbours and Seafront Development
 4. C4: Shingle Beaches and Coastal Waters
 5. C5: Tidal Estuaries and Flats
 6. C8: Shingle Headlands and Coastal Waters
 7. I1: Inshore Bays
 8. I2: Active Inshore Waters
 9. I3 and O2: Inshore and Offshore Sandbanks and Shoals (combined document)
- 3.3 For each SCT, the following information is provided:
- An overview map showing the location of the SCT in the context of the Dover Strait
 - A list of component SCAs
 - A summary list of the 'valued seascape attributes' that would be sensitive to change
 - A list of the key issues affecting the seascape's valued attributes
 - A 'shaping the future seascape' section, setting out guidelines and actions to help address the key issues identified by this study.
- 3.4 As for the SCA descriptions, it is hoped that future funding can be secured to complete this exercise for all of the SCTs in the Strait. In addition, it is envisaged that further information will be added to this section as a result of ongoing research and dialogue. As such, it is hoped that this chapter sets a strong foundation for further work to address, in partnership, the range of issues that are affecting the seascapes of the Dover Strait.
- 3.5 Before presenting the information by SCT, an overview of the information for the Dover Strait as a whole is provided, showing the common themes that have emerged.

Overview of the key issues affecting the Dover Strait as a whole

Transport and development

- 3.6 Under this theme, the following forces for change have been identified as affecting many of the seascapes within the Dover Strait:

- Views to development behind the coastal edge (e.g. wind turbines near Calais which are visible from the Kent coast) can impact on the rural backdrop and setting of the Strait.
- Current and future port developments impacting on the levels of tranquillity and dark night skies of surrounding seascapes.
- Sulphur emissions from shipping currently causing pollution (smog and deposition, including on valued chalk grassland habitats on the cliff-tops adjacent to the main ports).
- North Sea Sulphur Control Area legislation will in future limit sulphur emissions from shipping, but conversely will make the shorter Dover-Calais crossing more economically viable than longer shipping routes elsewhere.
- The predicted increase in shipping (as above) is likely to result in a linked increase in road freight – resulting in traffic congestion, pollution from road transport, and need for further infrastructure (e.g. lorry parks).
- Limited recognition of international natural and cultural importance of the area leading to inappropriate management and development proposals which may have a negative impact on the area's special qualities.

Coastal land and marine resource management

3.7 Under this theme, the following forces for change have been identified as affecting many of the seascapes within the Dover Strait:

- Scrub encroachment and a spread of invasive species are affecting areas of open coastal habitat due to a decline in traditional grazing management. This includes the symbolic swathes of chalk grassland topping the white cliffs on both sides of the Strait.
- Diffuse pollution from intensively farmed land backing the coast affecting the quality of some water courses and drainage ditches feeding into the estuaries and surrounding bays, then into the wider Strait.
- This issue is compounded by the disposal of industrial effluent into watercourses, leading to increased pollution of rivers and eutrophication of estuaries.
- Lack of understanding of the undersea environment makes conveying a conservation and enhancement message to different audiences difficult.
- Impacts of fishing activity (particularly benthic trawling) on fragile marine habitats, contributing to sites being put forward and designated as marine protected areas.

Tourism and recreation

3.8 Under this theme, the following forces for change have been identified as affecting many of the seascapes within the Dover Strait:

- Future growth plans and housing developments within the surrounding landscapes may lead to further pressure on valued recreational green spaces along the coast (and accessible, sheltered stretches of water).
- Harbour re-development proposals (e.g. Folkestone) may see a resurgence in marine tourism, particularly sailing and cruising activities.
- The popularity of accessible sections of coastline and adjacent waters for a range of recreational activities can cause conflicts with nature and heritage conservation aims (terrestrial and marine), as well as the use of the waters for commercial activities such as fishing.
- Dover and Calais seen by many as entry/exit ports rather than visitor destinations in their own right. Dover in particular is not recognised by many passing through as a gateway to an adjacent seascape of significant natural and cultural heritage value.

Aquaculture and fishing

3.9 Under this theme, the following forces for change have been identified as affecting many of the seascapes within the Dover Strait:

- Uncertain economic viability for community fishing fleets and individual fishermen operating from the historically important small ports and harbours of the Strait (e.g. Folkestone, Deal, Ramsgate, Wissant and Wimereux).
- Uncertainty and misunderstandings about the potential impact of Marine Conservation Zone designation on fishing activity.

Environmental processes and climate change

3.10 Under this theme, the following forces for change have been identified as affecting many of the seascapes within the Dover Strait:

- Climate change, including warmer, wetter winters and more frequent summer droughts, is likely to lead to increased levels of species migration, as well as an increased prevalence of pests and diseases affecting characteristic semi-natural habitats.
- The policy of 'no active intervention' across many undeveloped sections of coastline will see the dynamic nature of the coast sustained, and likely accelerated due to climate change. Some natural, geological and archaeological assets will be lost to the sea (coastal squeeze), whilst new ones will be revealed.
- Future sea level rise and an increased strength and frequency of storm surges are also likely, affecting low-lying sections of coast in particular. Some engineered intervention may be required to protect valued assets.
- The Strait's natural and culturally significant sand banks and shoals, such as Goodwin Sands and Bancs des Flandres, may be subject to more intense natural modification from storm surges. This could have knock-on effects for marine transportation (increasing demands for dredging), ecological integrity and their role in providing shelter to other parts of the Strait.

Guidelines and actions for the Dover Strait as a whole

3.11 In response to the issues identified for the SCTs and summarised above, a number of Strait-wide guidelines have emerged to help guide an appropriate, co-ordinated response. Further detail and additional guidelines/actions are provided for each SCT, but headline guidelines/actions are summarised below (using the same themes as above), using bold text to capture the key points for ease of reference:

Transport and development

3.12 Under this theme, the following guidelines and actions have been identified to help respond to the key issues affecting many parts of the Strait:

- **Any new developments within or adjacent to the seascapes of the Dover Strait should respect and enhance the characteristics and qualities of the area** – using the information provided in this Seascape Character Assessment. This includes considering the impact of new developments on the setting of the Strait.
- While accommodating transport growth and regeneration is clearly important, **the impact of development and regeneration proposals within SCT C3: Ports and Harbours on surrounding seascapes should be recognised, understood and managed/mitigated.** This should reflect the international importance of the Strait's natural and heritage assets, and the character of its landscape and seascape (including both direct and indirect impacts on natural and cultural assets as well as levels of tranquillity).
- Through the Dover Strait Implementation Plan and further cross-Channel collaboration, **continue to explore opportunities to encourage greater use of the rail freight network** to mitigate the impact of road freight increases. Barriers to increasing rail freight through the Channel Tunnel and establishing a better road/rail balance need to be understood and acted upon.

Coastal land and marine resource management

- 3.13 Under this theme, the following guidelines and actions have been identified to help respond to the key issues affecting many parts of the Strait:
- **Explore opportunities to undertake further research into the characteristics and management of the marine environment and seabed**, furthering an understanding of important aspects to conserve, enhance and communicate.
 - **Continue to utilise land management schemes such as Environmental Stewardship to support local farmers** to sustainably manage (including through grazing) the seascape's valued coastal and intertidal habitats as an integral part of their farming systems. Continue close working between statutory conservation agencies, landowners and land managers.
 - **Work with surrounding landowners and farmers to implement measures to protect watercourses from diffuse pollution**, including through the appropriate targeting of agri-environment options (e.g. buffer strips).

Tourism and recreation

- 3.14 Under this theme, the following guidelines and actions have been identified to help respond to the key issues affecting many parts of the Strait:
- **Continue to explore the costs, benefits and opportunities and submit bids for international designation status** for the Dover Strait as a whole.
 - **Promote tourism which supports the character and quality of the coastal landscapes and seascapes**. This should form part of a wider marketing effort for the Dover Strait as a whole, drawing on the information in this Seascape Character Assessment to communicate its unique identity and importance.
 - **Support the work of the East Kent Green Infrastructure Partnership to produce a sustainable strategic access and recreation management strategy**, initially aimed at protected nature conservation sites, but with the potential to consider other parts of the Strait's coastline too. Consider extending the remit of this strategy to cover adjacent coastal and inshore waters to further links between terrestrial and marine planning. Work with French partners to explore an equivalent approach in Pas-de-Calais.
 - **Support the implementation of mitigation measures associated with new developments, including addressing further recreational pressures** on valued coastal spaces, heritage assets and access routes (including building on the proposals set out in the East Kent Green Infrastructure Partnership's *Approach to Green Infrastructure and Recreation* (April 2014) and the Kent Downs AONB Management Plan 2014-19).
 - **Collate information from different providers on marine activities** e.g. seal trips, dive trips, fishing charters etc. This will allow for a more accurate picture of the uses of the coastal and inshore waters to be gained, allowing for their monitoring and appropriate management response.

Aquaculture and fishing

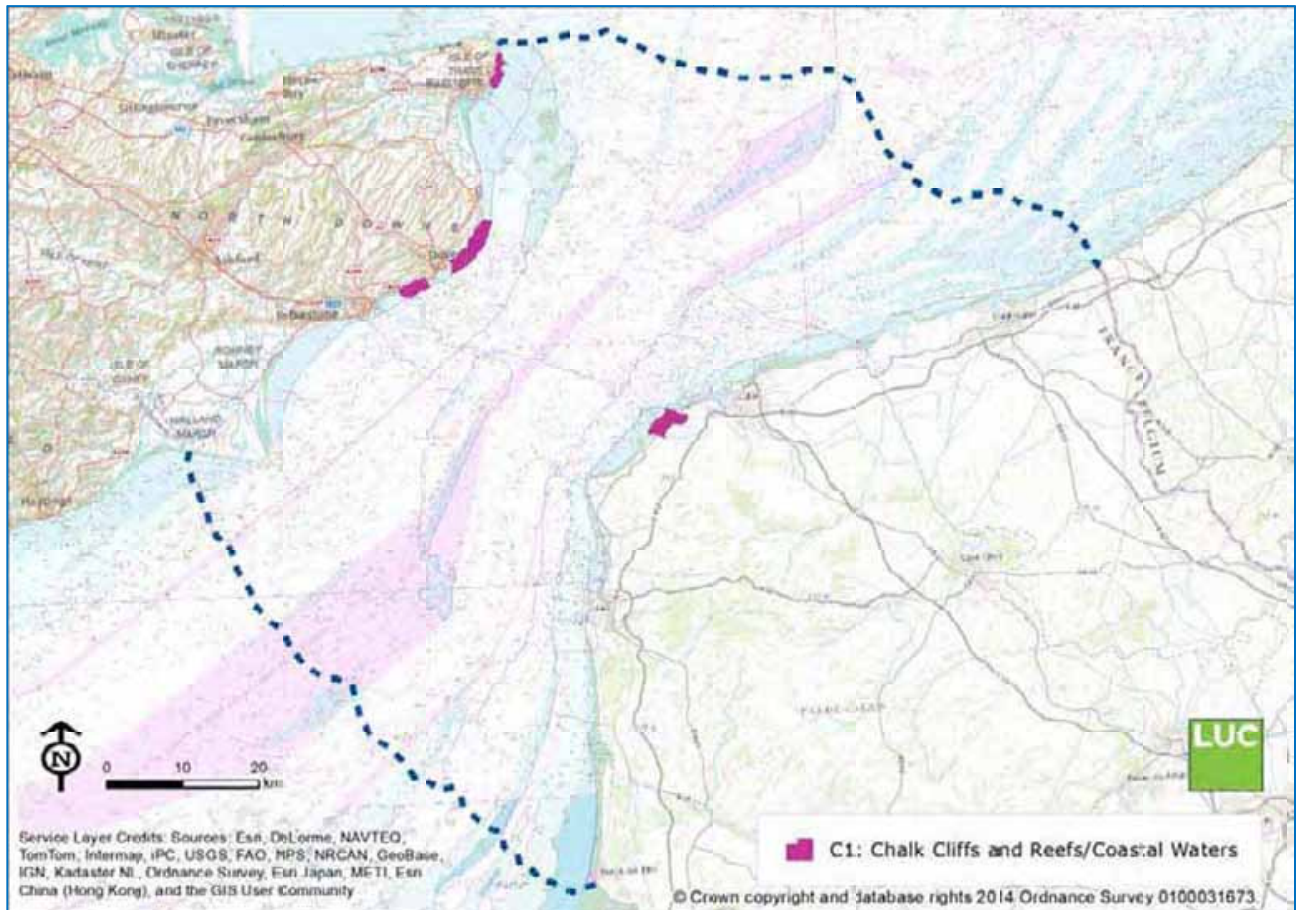
- 3.15 Under this theme, the following guidelines and actions have been identified to help respond to the key issues affecting many parts of the Strait:
- **Seek to explore opportunities to support and enhance the overall sustainability of traditional small-scale industries**, including the long-standing fishing fleets of the smaller ports and harbours (e.g. through the establishment of a Fishing Local Action Group, as proposed in the Kent Downs AONB Action Plan 2014-19).
 - **Support the work of the IFCA and Natural England (and their French counterparts), encouraging further partnership working with the fishing industry**. Collaborative working and open dialogue to agree how to sustainably manage the marine resource whilst supporting the economic viability of local fishermen should be a priority.

Environmental processes and climate change

- 3.16 Under this theme, the following guidelines and actions have been identified to help respond to the key issues affecting many parts of the Strait:
- **Plan at a strategic level for the impacts of a changing climate on the coastline**, allowing natural processes to take place whilst considering how habitats and access provisions can be expanded or relocated to account for coastal squeeze. Consider species migration and responses to an increased prevalence of pests and diseases.
 - **Work with statutory authorities/agencies to raise awareness of the natural processes affecting the coast and marine area**, including communicating the positive aspects of an eroding coastline (e.g. in revealing new archaeological and geological sites/features).
 - **Ensure sympathetic and appropriate responses are taken to protect valued assets**, where it is agreed this course of action is required (e.g. through the Shoreline Management Plan process).
- 3.17 The remainder of this chapter presents an evaluation for each of the selected SCTs in turn, starting with C1.

C1: Chalk Cliffs and Reefs/Coastal Waters

Map of SCT in context of the Dover Strait



Component Seascape Character Areas

- C1A: Kingsdown Chalk Cliffs
- C1B: St Margaret's Bay
- C1C: White Cliffs of Dover
- C1D: Shakespeare and Abbot's Cliffs
- C1E: Broadstairs to North Foreland
- C1F: Les Deux Caps

Summary of valued seascape attributes (sensitivities)

- a) Dramatic, visually prominent sheer white chalk cliffs which are popular and well-recognised tourism destinations.
- b) Cliff top habitats of chalk downland, grassland and scrub.
- c) Chalk character continuing offshore in the seabed, and in ledges, boulders and gullies.
- d) Historical associations with coastal defence, particularly World War II.
- e) Sections with high levels of tranquillity and remoteness, with long uninterrupted views across the Strait.

Key issues affecting valued seascape attributes

Development and transport

- Development pressures have the potential to impact on the natural and cultural assets found within this SCT (particularly locations adjacent to settlements).
- Water-borne litter can gather along the coast at the foot of the cliffs, impacting on its unspoilt qualities (e.g. Lydden Spout).
- **Strait-wide issue:** Views to development behind the coastal edge (e.g. wind turbines near Calais which are visible from the Kent coast) can impact on the rural backdrop and setting of the Strait.
- **Strait-wide issue:** Sulphur emissions from shipping currently causing pollution (smog and deposition, including on valued chalk grassland habitats behind Dover port).
- **Strait-wide issue:** Current and future port developments in adjacent SCAs impacting on the levels of tranquillity and dark night skies of surrounding seascapes.

Tourism and recreation

- Increasing popularity of 'honeypot' cliff-top sites within the SCT for recreation, such as the National Trust's White Cliffs centre and Cap Blanc-Nez. This brings both benefits (e.g. to the local economy and to promote understanding and appreciation), as well as impacts such as habitat erosion, wildlife disturbance, demand for infrastructure and reduced levels of tranquillity/remoteness.
- Access to some sections of cliff limited (so therefore retaining levels of remoteness and allowing wildlife to flourish). Cliff falls and erosion is an ongoing issue which can cause previously accessible areas to be cut off.
- Illicit wreck diving on the fragile chalk reefs causing damage to the marine ecosystem, as well as impacts on the maritime archaeology associated with the wrecks.

Coastal land and marine resource management

- Limited recognition of international natural and cultural importance of the area leading to inappropriate management and proposals which may have a negative impact on the area's special qualities.
- Scrub encroachment on remaining areas of semi-natural chalk grassland threatening the habitat's species diversity and open character. Programmes of mechanical clearance and grazing management are in place along designated sections of coastal downland.
- Lack of understanding of the undersea environment makes conveying a conservation and enhancement message to different audiences difficult.
- The popularity of the cliffs and coastal waters for a range of recreational activities can cause conflicts with nature and heritage conservation aims (terrestrial and marine).

Aquaculture and fishing

- Uncertain economic viability for community fishing fleets operating from small ports and harbours nearby, and fishing in the waters of this SCT.
- Impacts of fishing activity (particularly benthic trawling) on fragile marine habitats, contributing to sites being put forward for designation as Marine Conservation Zones.
- Uncertainty and misunderstandings about the potential impact of Marine Conservation Zone designation on fishing activity (the recommended sites of Dover to Folkestone and Dover to Deal will be put forward for designation in the next tranche).

Environmental processes and climate change

- The Shoreline Management Plan policy of 'no active intervention' across much of the Kent SCT will see the dynamic nature of the coast sustained, and likely accelerated due to climate change. Some

natural, geological and archaeological assets will be lost to the sea (coastal squeeze), whilst new ones will be revealed.

- Natural processes of erosion along the cliff line can be exacerbated by intensive arable farming (semi-natural grassland cover can help stabilise the soil).
- **Strait-wide issue:** Climate change, including warmer, wetter winters and more frequent summer droughts, is likely to lead to increased levels of species migration, as well as an increased prevalence of pests and diseases affecting characteristic semi-natural habitats.

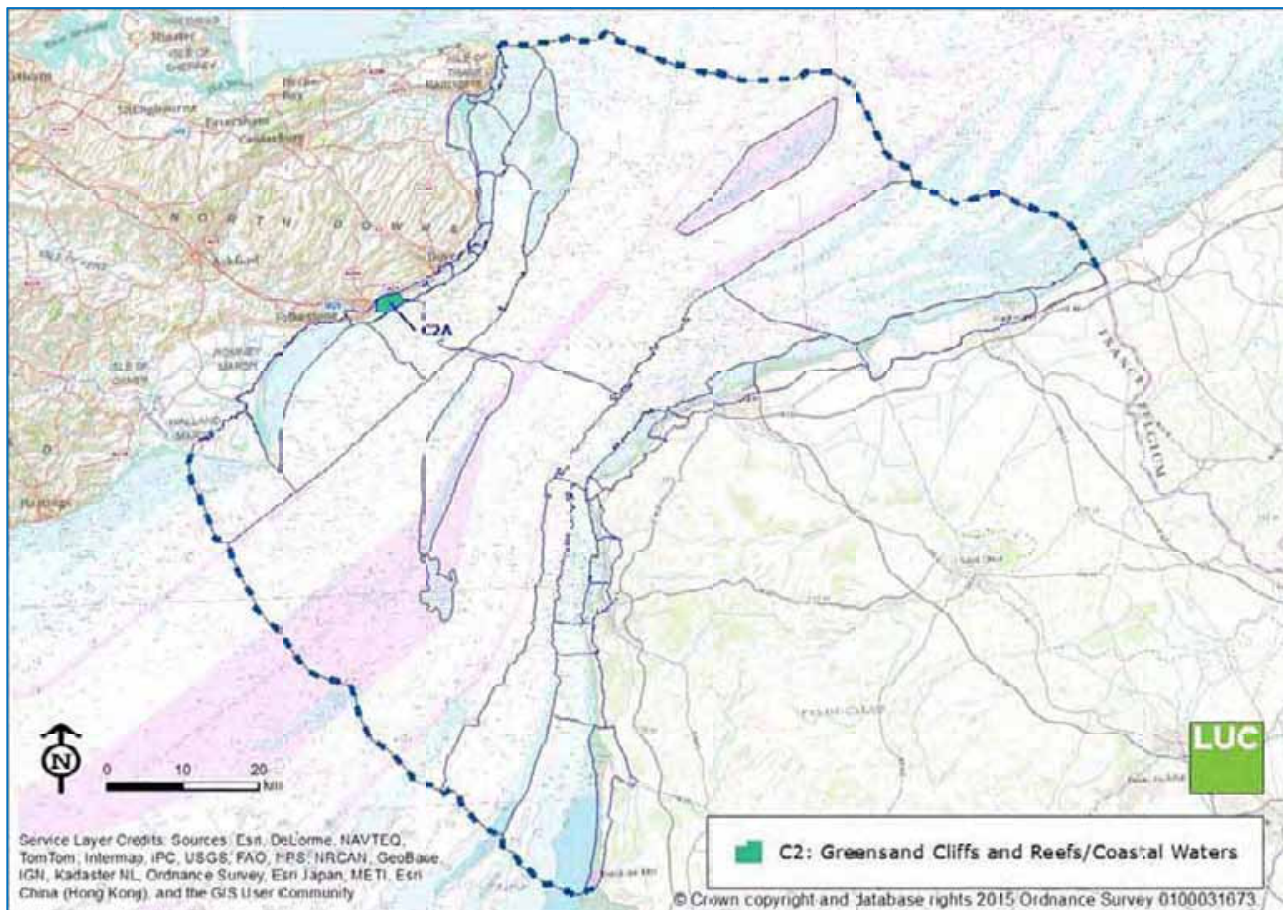
Shaping the future seascape

Guideline	Link to valued attributes
DEVELOPMENT AND TRANSPORT	
<p>While accommodating transport growth and regeneration is clearly important in the area, the impact of development and regeneration proposals within SCT C3: Ports and Harbours on areas within this SCT should be recognised, understood and managed/mitigated. This should reflect the international importance of the Strait's natural and heritage assets, and the character of its landscape and seascape (including both direct and indirect impacts on natural and cultural assets as well as levels of tranquillity).</p> <p>This should consider information in this Seascape Character Assessment and other available Landscape Character Assessments, Heritage Asset surveys and Heritage Strategies (e.g. for Dover District).</p>	<ul style="list-style-type: none"> b) cliff habitats d) historical associations e) tranquillity
TOURISM AND RECREATION	
<p>Work with local, regional and national tourism organisations and businesses (in both England and France) to support initiatives that promote the sustainable use of assets within this SCT to people arriving by sea. Include information on the dynamic nature of the coastline as well as its current natural, geological and cultural/archaeological assets. Also ensure information on the underwater environment, including particularly the area's chalk reefs and the creation of the Strait, is included.</p> <p>Promote tourism which supports the character and quality of the coastal landscapes and seascapes.</p> <p>Strait-wide guideline: This should form part of a wider marketing effort for the Dover Strait as a whole, drawing on the information in this Seascape Character Assessment to communicate its unique identity and importance.</p>	<ul style="list-style-type: none"> a) popular cliffs b) cliff habitats c) offshore chalk d) historical associations
<p>Strait-wide guideline: Support the work of the East Kent Green Infrastructure Partnership to produce a sustainable strategic access and recreation management strategy, initially aimed at protected nature conservation sites, but with the potential to consider other parts of the Strait's coastline too. Consider extending the remit of this strategy to cover adjacent coastal and inshore waters to further links between terrestrial and marine planning. Work with French partners to explore an equivalent approach in Pas-de-Calais.</p>	<ul style="list-style-type: none"> a) popular cliffs b) cliff habitats e) tranquillity
<p>Ensure any new development or infrastructure relating to the area's recreational uses is sympathetically integrated into its landscape and seascape setting, particularly where located in open cliff-top locations. Sympathetic lighting schemes should be explored to reduce light pollution.</p>	<ul style="list-style-type: none"> a) popular cliffs e) tranquillity
<p>Support the implementation of mitigation measures associated with new developments, including addressing further recreational pressures on valued coastal spaces, heritage assets and access routes (including building on the proposals set out in the East Kent Green Infrastructure Partnership's <i>Approach to Green Infrastructure and Recreation</i> (April 2014) and the Kent Downs AONB Management Plan 2014-19).</p>	<ul style="list-style-type: none"> a) popular cliffs b) cliff habitats d) historical associations e) tranquillity

Guideline	Link to valued attributes
<p>Strait-wide guideline: Continue to explore the costs, benefits and opportunities and submit bids for international designation status for the Dover Strait as a whole.</p>	<p>a) popular cliffs b) cliff habitats c) offshore chalk d) historical associations e) tranquillity</p>
COASTAL LAND AND MARINE RESOURCE MANAGEMENT	
<p>Explore opportunities to extend areas of arable reversion to chalk grassland, working with the Kent Downs AONB, Natural England, the PNR des Caps et Marais d'Opale, and major landowners such as the National Trust and Conservatoire du Littoral.</p>	<p>b) cliff habitats</p>
<p>Explore opportunities to undertake further research into the characteristics and management of the marine environment and seabed, furthering an understanding of important aspects to conserve, enhance and communicate.</p>	<p>c) offshore chalk</p>
AQUACULTURE AND FISHING	
<p>Strait-wide guideline: Seek to explore opportunities to support and enhance the overall sustainability of traditional small-scale industries, including the long-standing fishing fleets of the smaller ports and harbours (e.g. through the establishment of a Fishing Local Action Group, as proposed in the Kent Downs AONB Action Plan 2014-19).</p>	<p>c) offshore chalk</p>
<p>Strait-wide guideline: Support the work of the IFCA and Natural England (and their French counterparts), encouraging further partnership working with the fishing industry. Collaborative working and open dialogue to agree how to sustainably manage the marine resource whilst supporting the economic viability of local fishermen should be a priority.</p>	<p>c) offshore chalk</p>
ENVIRONMENTAL PROCESSES AND CLIMATE CHANGE	
<p>Plan at a strategic level for the impacts of a changing climate on the coastline, allowing natural processes to take place whilst considering how habitats and access provisions can be expanded or relocated to account for coastal squeeze. Consider species migration and responses to an increased prevalence of pests and diseases.</p>	<p>a) popular cliffs b) cliff habitats</p>
<p>Work with statutory authorities/agencies to raise awareness of the natural processes affecting the chalk cliffs, including communicating the positive aspects of an eroding coastline (e.g. in revealing new archaeological and geological sites/features).</p>	<p>a) popular cliffs b) cliff habitats d) historical associations</p>
<p>Ensure sympathetic and appropriate responses are taken to protect valued assets, where it is agreed this course of action is required (e.g. through the Shoreline Management Plan process).</p>	<p>a) popular cliffs b) cliff habitats d) historical associations</p>

C2: Greensand Cliffs and Reefs/Coastal Waters

Map of SCT in context of the Dover Strait



Component Seascape Character Areas

This is a unique SCT and contains just one Seascape Character Area:

C2A: East Wear Bay and The Warren

Summary of valued seascape attributes (sensitivities)

- Unique area of Gault clay and Greensand Cliffs in the Dover Strait at Copt Point headland running west to Sandgate, with chalk/marly chalk and clay at Folkestone Warren and East Way Bay Cliffs.
- The only area of harder coastal, intertidal and subtidal rock in Kent (and one of only two in SE England) supporting species of algae not found elsewhere in Kent. Rich and diverse marine ecosystem of chalk reefs, ledges and gullies forming part of the recommended Dover to Folkestone Marine Conservation Zone. Copt Point recognised as important Plant Area by Plantlife.
- Majority of coastline within Folkestone Warren SSSI valued for its calcareous and maritime grasslands, woodland and scrub providing a rich habitat for birds and invertebrates.
- Fossil-rich exposures of Folkestone Beds and Gault representing the single most important locality in England for studying the sedimentology and stratigraphy of these formations.
- Internationally significant prehistoric settlement and trading site, succeeded by a Roman villa (Scheduled monument) on the cliff top overlooking East Wear Bay.

- f) Other important archaeological sites including from Iron Age to WW2 on the cliffs with archaeological material on the foreshore.
- g) Large scale bay accessible for recreation, without road or traffic access or large scale development providing valued resource of tranquillity and sense of wildness in this part of the Dover Strait despite close proximity to the ports.

Key issues affecting valued seascape attributes

Development and transport

- Developments around Folkestone Harbour – with potential direct and indirect impacts on habitat and biodiversity within this area, including potential conflicts between dredging and marine conservation.

Tourism and recreation

- Increased tourism and recreational pressures potentially on cliffs and within the Bay impacting on the only area of harder coastal, intertidal, sub tidal rock around Kent and associated habitats and levels of tranquillity and quiet enjoyment. Positive management of The Warren for recreation by the White Cliff Countryside Project.
- Increased geological/fossil hunting interest associated with this unusual geological feature resulting in loss of natural resource.
- Emergency sewage outlet at Copt Point resulting in occasional high level of pollution of East Wear Bay.
- **Strait-wide issue:** The English Coastal Path is in the process of being developed around the Kent coast, with positive benefits including increased access provision, but increased potential for wildlife disturbance.

Coastal land and marine resource management

- Scrub encroachment and invasive species resulting in loss of chalk grassland on The Warren, now in positive management through the White Cliffs Countryside Project.

Aquaculture and fishing

- Potential uncertainty for fishing fleet at Folkestone regarding the impact of the recommended Marine Conservation Zones (MCZ) along this coastline. Although this is being managed to conserve viability of fishing and biodiversity.

Environmental processes and climate change

- A dynamic coastal seascape, future sea level rise and an increased strength and frequency of storm surges due to climate change will further shape this coastline, currently protected by coastal defences.
- Land slips of chalk over impermeable clays.
- In the long term maintenance of the toe defences that prevent cliff erosion and protect the railway line along the Warren may not be feasible resulting in unmitigated impacts of extreme weather events. Positively, this will result in a more natural functioning landscape and geomorphological processes, creating new exposures.
- At Copt Point the policy is for no intervention and the increased landslips will result in loss of the important historic landscape, including WWII Pill Boxes and, at Copt Point, the Roman Villa SM and associated areas of great archaeological interest.

Shaping the future seascape

Guideline	Link to valued asset(s)
DEVELOPMENT AND TRANSPORT	
<p>Regeneration is clearly an important priority for Folkestone. Ensure any future development and regeneration proposals within adjacent SCT 3B contribute positively to the character and enhancement of the adjacent SCTs, including the Greensand Cliffs and Coastal Waters and notably conservation of qualities of wildness and tranquillity.</p>	<p>b & c) marine and coastal biodiversity d) fossil rich exposures e & f) archaeology g) tranquillity and wildness</p>
<p>Strait-wide guideline: The impact of development and regeneration proposals within adjacent SCTs on the valued seascape and assets of this area should be considered (particularly in terms of impacts on natural and cultural assets and levels of tranquillity).</p> <p>This should consider information in this Seascape Character Assessment and other available Landscape Character Assessments and Heritage Asset surveys.</p>	<p>as above</p>
TOURISM AND RECREATION	
<p>Work with the White Cliffs Countryside Project (and others) to manage recreational pressures within this highly sensitive seascape and promote sustainable recreation which supports the character and quality of the coastal landscape and seascape.</p>	<p>b & c) marine and coastal biodiversity d) fossil rich exposures e & f) archaeology g) tranquillity and wildness</p>
<p>Kent coast-wide guideline: Support the work of the East Kent Green Infrastructure Partnership to produce a sustainable strategic access and recreation management strategy, initially aimed at protected nature conservation sites, but with the potential to consider other parts of the Strait's coastline too and extending west to include sites in Shepway. Consider extending the remit of this strategy to cover adjacent coastal and inshore waters to further links between terrestrial and marine planning.</p>	<p>as above</p>
COASTAL LAND MANAGEMENT	
<p>Continue to utilise land management schemes such as Environmental Stewardship to sustainably manage (including through grazing) the seascape's valued coastal and intertidal habitats as an integral part of their farming systems. Continue close working between Natural England, landowners and land managers.</p>	<p>c) coastal biodiversity</p>
<p>Work with surrounding landowners and farmers to implement measures to protect watercourses from diffuse pollution, including through the appropriate targeting of agri-environment options (e.g. buffer strips).</p>	<p>c) coastal biodiversity</p>

ENVIRONMENTAL PROCESSES AND CLIMATE CHANGE

Continue to plan at a strategic level for the impacts of a changing climate on this coastline, recognising that this area will remain defended to protect the railway in the medium term. In the longer term continue to consider opportunities created by an undefended landscape and creation of new geological exposures.

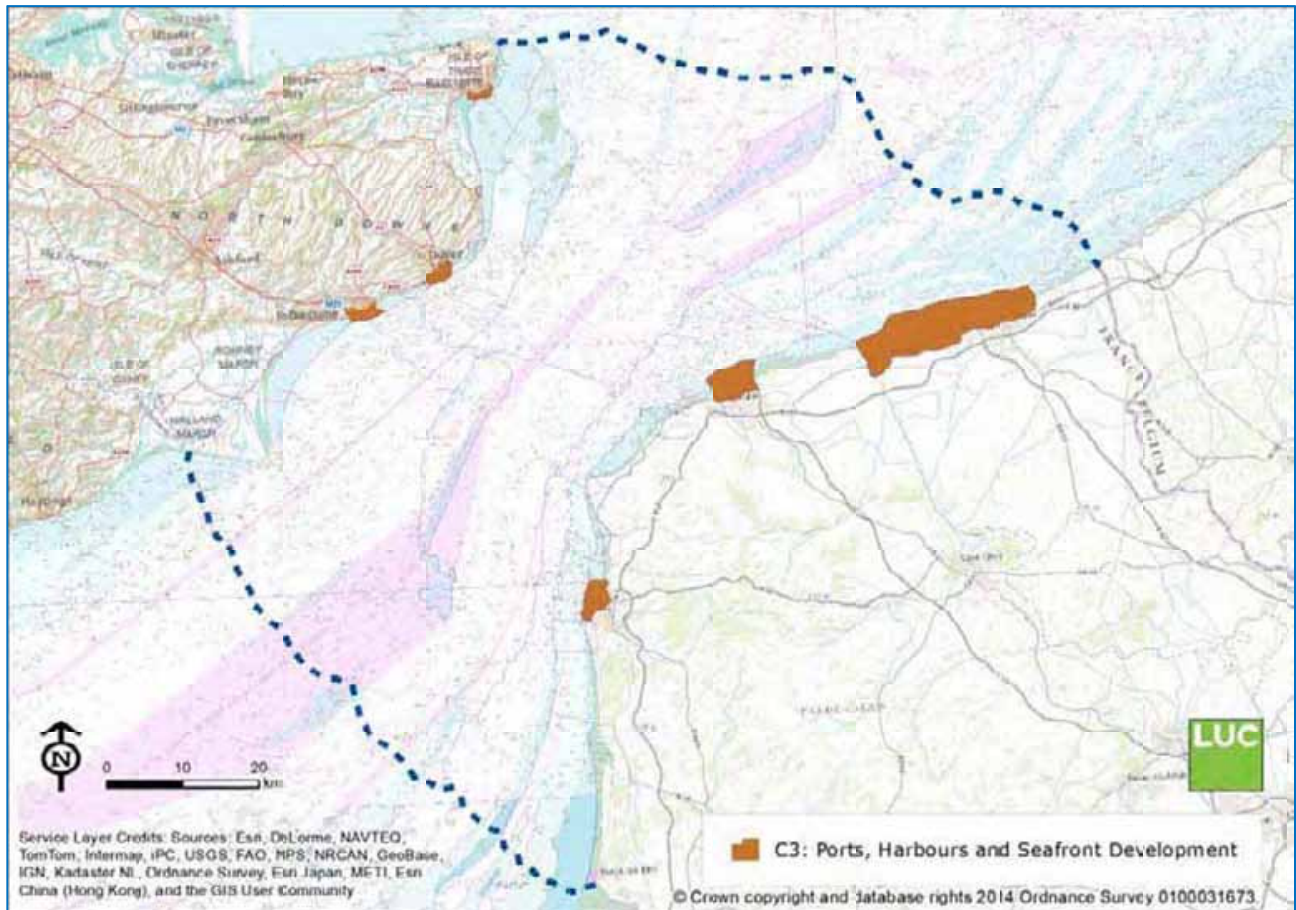
a & d) geodiversity

At Copt Point develop a plan to investigate and record all sites of archaeological interest that will be lost, through the result of coastal processes including opportunities for interpretation off site.

e & f) archaeology

C3: Ports, Harbours and Seafront Development

Map of SCT in context of the Dover Strait



Component Seascape Character Areas

- C3A: Dover Port, Harbour and Historic Defences
- C3B: Folkestone Harbour and Seafront
- C3C: Ramsgate Harbour
- C3D: Ports de Dunkerque et Gravelines et côte urbanisée
- C3E: Port de Boulogne
- C3F: Port de Calais

Summary of valued seascape attributes (sensitivities)

- a) Ports and harbours with a long strategic importance for trade and defence.
- b) Busy seascapes with large numbers of ship and boat movements, including both passenger and cargo traffic.
- c) Frequent historic buildings and structures associated with past defensive and military activities, forming key local landmarks.

Key issues affecting valued seascape attributes

Development and transport

- **Strait-wide issue:** Sulphur emissions from shipping currently causing pollution (smog and deposition).
- **Strait-wide issue:** North Sea Sulphur Control Area legislation will in future limit sulphur emissions from shipping, but conversely will make the shorter Dover-Calais crossing more economically viable than longer shipping routes elsewhere.
- The predicted increase in shipping is likely to result in a linked increase in road freight – resulting in traffic congestion, pollution from road transport, and need for further infrastructure (e.g. lorry parks).
- Concentration of port-related activity and infrastructure at Dover and Calais with linked demands for further development and infrastructure provision.
- Economic decline of the Strait's other ports and harbours, particularly following the loss of ferry services from Folkestone, Ramsgate and Boulogne.
- **Strait-wide issue:** Current and future port developments impacting on the levels of tranquillity and dark night skies of surrounding seascapes.
- **Strait-wide issue:** The regeneration of the area's major ports could lead to pressure for development elsewhere in the coastal landscapes (e.g. housing to support increased economic activity).

Tourism and recreation

- The regeneration of Folkestone harbour, including in support of marine and coastal leisure activities, may see a local resurgence of sea-based tourism and activities.
- Dover and Calais seen by many as entry/exit ports rather than visitor destinations in their own right.
- Dover in particular is not recognised by many passing through as a gateway to an adjacent coastline of significant natural and cultural heritage value.

Coastal land management

- Development pressures relating to port expansion/re-development has the potential to impact on the seascape's natural and cultural assets.
- Historic defences in need of repair and interpretation - illegal and inappropriate activity taking place due to a lack of investment in appropriate management (e.g. Western Heights). The Dover Heritage Strategy (2013) is working to protect the district's heritage assets.

Aquaculture and fishing

- Uncertain economic viability for small fishing fleets operating from the smaller ports and harbours (e.g. Folkestone and Ramsgate).
- Port restrictions around Dover and Calais restricting east-west movements of vessels through the coastal waters.

Environmental processes and climate change

- Sea level rise and changes in coastal process (as a result of climate change) necessitating a policy to 'hold the line' to protect ports and harbours. This can result in a change to port/ harbour frontages – from amenity to defensive, with consequential impacts on character and local vernacular.

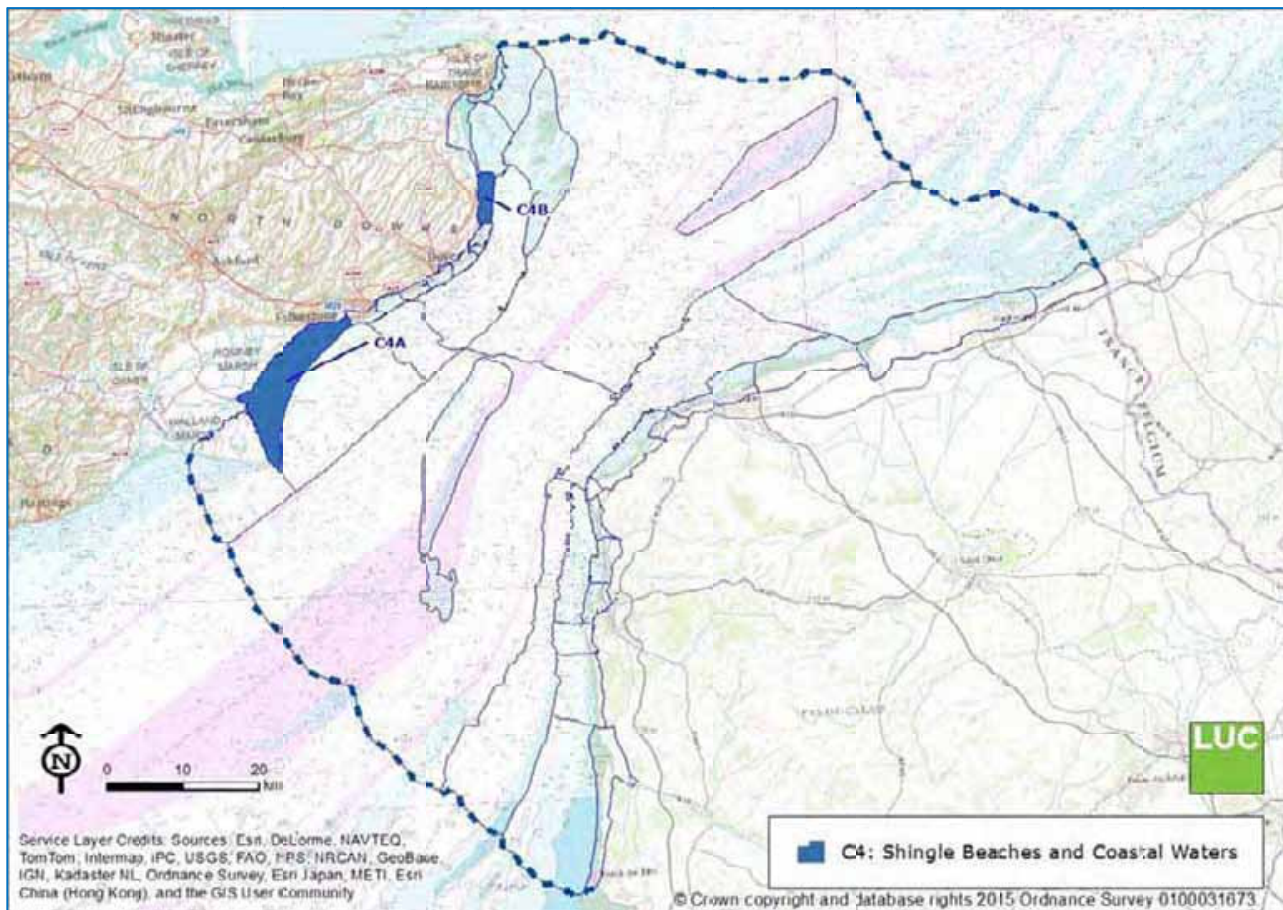
Shaping the future seascape

Guideline	Link to valued attributes
DEVELOPMENT AND TRANSPORT	
<p>Through the Dover Strait Implementation Plan and further cross-Channel collaboration, continue to explore opportunities to encourage greater use of the rail freight network to mitigate the impact of road freight increases. Barriers to increasing rail freight through the Channel Tunnel and establishing a better road/rail balance need to be understood and acted upon.</p>	<p>a) strategic importance b) busy seascapes</p>
<p>Ensure any future development and regeneration proposals contribute positively to the character and enhancement of historic ports and harbours.</p>	<p>c) historic landmarks</p>
<p>Strait-wide guideline: While accommodating transport growth and regeneration is clearly important in the area, the impact of development and regeneration proposals within this SCT on surrounding landscapes and seascapes should be recognised, understood and managed/mitigated. This should reflect the international importance of the Strait's natural and heritage assets, and the character of its landscape and seascape (including both direct and indirect impacts on natural and cultural assets as well as levels of tranquillity).</p> <p>This should consider information in this Seascape Character Assessment and other available Landscape Character Assessments, Heritage Asset surveys and Heritage Strategies (e.g. for Dover District).</p>	<p>a) strategic importance b) busy seascapes c) historic landmarks</p>
TOURISM AND RECREATION	
<p>Work with local, regional and national tourism organisations and businesses (in both England and France) to support initiatives that promote the assets of the port towns and surrounding coastal landscapes and seascapes as visitor destinations in their own right. This should include making visitor information readily available both upon port exit/entry and on the ferries themselves.</p> <p>Promote tourism which supports the character and quality of the coastal landscapes and seascapes.</p> <p>Strait-wide guideline: This should form part of a wider marketing effort for the Dover Strait as a whole, drawing on the information in this Seascape Character Assessment to communicate its unique identity.</p>	<p>a) strategic importance c) historic landmarks</p>
<p>Promote and further develop integrated public transport routes from the main entry ports into the town centres (signposting to points of interest) and surrounding coastal landscapes.</p>	<p>a) strategic importance c) historic landmarks</p>
<p>Strait-wide guideline: Continue to explore opportunities and submit bids for international designation status for the Dover Strait as a whole.</p>	<p>a) strategic importance c) historic landmarks</p>
AQUACULTURE AND FISHING	
<p>Strait-wide guideline: Seek to explore opportunities to support and enhance the overall sustainability of traditional small-scale industries, including the long-standing fishing fleets of the smaller ports and harbours (e.g. through the establishment of a Fishing Local Action Group, as proposed in the Kent Downs AONB Action Plan 2014-19).</p>	<p>a) strategic importance</p>

Guideline	Link to valued attributes
<p>Strait-wide guideline: Support the work of the IFCA and Natural England (and their French counterparts), encouraging further partnership working with the fishing industry. Collaborative working and open dialogue to agree how to sustainably manage the marine resource whilst supporting the economic viability of local fishermen should be a priority.</p>	<p>a) strategic importance</p>
<p>COASTAL PROCESSES AND CLIMATE CHANGE</p>	
<p>Work with statutory authorities/agencies to ensure engineered sea defences are sympathetic to the historic fabric of the ports and harbours. Seek opportunities to enhance the character of the built vernacular.</p>	<p>c) historic landmarks</p>

C4: Shingle Beaches and Coastal Waters

Map of the SCT in the context of the Dover Strait



Component Seascape Character Areas

- C4A: Romney Coast, Hythe Flats and Roar Bank
- C4B: Deal Seafront and Deal Bank

Summary of valued seascape attributes (sensitivities)

- a) Important coastal and foreshore shingle habitats, including an area of high dunes, are designated by for their biodiversity interest (SSSI, SAC) in C4A supporting rich birdlife and invertebrate assemblages.
- b) Muddy seabed at Hythe Bay rMCZ resulting from former inflow of the River Rother provides important habitat contrasting with the chalk reefs forming part of the Dover – Folkestone rMCZ close to Deal.
- c) A low-lying, defended coastline with Martello Towers along Hythe Bay, Dymchurch Redoubt, plus Henry VIII's trio of castles at Deal, Sandown and Walmer – providing important historic features.
- d) Valued fishing heritage - with small boats drawn up on the shingle beaches providing a charismatic feature. Also important for commercial fishing.
- e) Cultural heritage associated with the Cinque Ports; Hythe and New Romney established as original Cinque Ports, Deal being a 'limb' to Sandwich and Lydd a 'limb' of New Romney. Associated strong time depth.

- f) Busy, recreational coastline, with historic town of Deal and seaside/holiday development at Dymchurch and New Romney. Sheltered coastal waters are enjoyed for beach angling, kayaking, rowing, wind/kite surfing and sailing.
- g) Large scale open seascape with wide vistas along the coastline and out across the Strait, and views inland through gaps in a largely built up sea front (historic town at Deal and ad hoc linear development along the Romney coastline).

Key issues affecting valued seascape attributes

Development and transport

- Intensification of development along the coastline, filling in of gaps resulting in a more urban seascape and potential greater pressures on fragile habitats and pollution of coastal waters.

Tourism and recreation

- Increased recreational pressure and disturbance of sensitive biodiversity/habitats including shingle beaches and dunes - the need to manage recreational activities in sympathy with the natural environment (e.g. considering associated impacts on the fragile coastal and inshore environments).

Aquaculture and fishing

- Uncertain economic viability for small fishing fleets, which are much valued as part of the community and local economy.

Environmental processes and climate change

- Climate change resulting in extreme weather events - low lying land at risk of flooding as a result of sea level rise plus damage to beach front (even with sea defences recently updated to 1 in 300 year risk (C4B).
- On-going demand for beach replenishment, and increased pressure for hard sea defences, impacting on intertidal habitats through smothering and coastal squeeze and changing the natural character of the coastline.

Shaping the future seascape

Guideline	Link to valued asset(s)
DEVELOPMENT AND TRANSPORT	
<p>Monitor development proposals to ensure they respect landscape and seascape character. Refer to this seascape character assessment and relevant landscape character assessments. The remaining open, undeveloped, gaps between development connecting the rural hinterland and the sea are important and should be conserved.</p>	<p>g) Landscape and seascape character</p>
TOURISM AND RECREATION	
<p>Work with the Countryside Projects (Romney Marsh and White Cliffs) to manage recreational pressures within these highly sensitive seascapes and promote sustainable recreation based around their unique natural cultural assets in a way which supports the character and quality of the coastal landscape and seascape.</p>	<p>a) biodiversity e) cultural & maritime heritage</p>
<p>Kent coast-wide guideline: Support the work of the East Kent Green Infrastructure Partnership (and others) to produce a sustainable strategic access and recreation management strategy, initially aimed at protected nature conservation sites, but with the potential to consider other parts of the Strait's coastline too and extending west to include sites in Shepway. Consider extending the remit of this strategy to cover adjacent coastal and inshore waters to further links between terrestrial and marine planning.</p>	<p>a) biodiversity f) recreation</p>
<p>Strait-wide guideline: Continue to explore opportunities and submit bids for international designation status for the Dover Strait as a whole.</p>	<p>All</p>
MARINE RESOURCE MANAGEMENT	
<p>Continue to undertake further research into the marine environment (Hythe Bay rMCZ, Dover and Folkestone rMCZ) and future management needs to conserve and enhance marine biodiversity.</p>	<p>b) marine biodiversity</p>
<p>Monitor impact of recreation activities within the coastal water on biodiversity, e.g. effect of kite surfing and sea birds.</p>	<p>b) marine biodiversity f) recreation</p>
AQUACULTURE AND FISHING	
<p>Seek to explore opportunities to support traditional small-scale industries, including the long-standing fishing fleets of the smaller ports and harbours (e.g. through the establishment of a Fishing Local Action Group, as proposed in the Kent Downs AONB Action Plan 2014-19).</p>	<p>d) fishing</p>
<p>Support the work of the IFCA and Natural England (and their French counterparts), encouraging further partnership working with the fishing industry to agree how best to sustainably manage the marine resource.</p>	<p>b) marine biodiversity d) fishing</p>

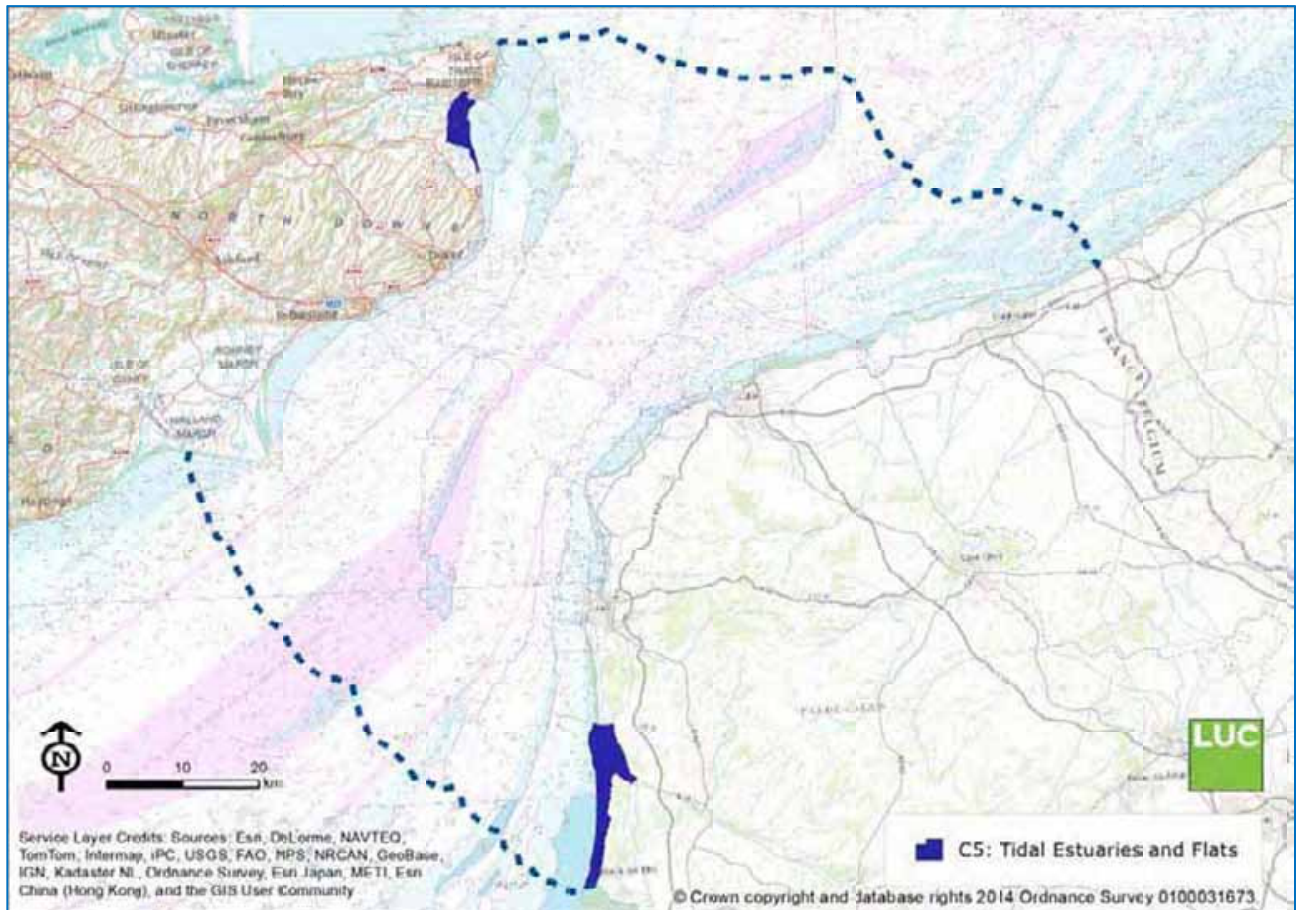
ENVIRONMENTAL PROCESSES AND CLIMATE CHANGE

Work with statutory authorities/agencies to understand and monitor the effects of coastal processes and sea level rise on this area, recognising that the objective here is to hold the line and prevent flooding of this low lying, developed coastline. To this extent sea defences should be designed in sympathy with the character of the coastal environment, reduce impact on valued intertidal habitats and coastal squeeze, and enhance the character of the townscape and natural landscape.

a & b) marine and terrestrial biodiversity
c & e) archaeology and cultural heritage
g) natural and townscape heritage

C5: Tidal Estuaries and Flats

Map of SCT in context of the Dover Strait



Component Seascape Character Areas

C5A: Sandwich and Pegwell Bays

C5B: Baie de Canche et littoral dunaire d'Opale

Summary of valued seascape attributes (sensitivities)

- A complex mosaic of internationally important habitats, including intertidal mudflats, salt marsh, shingle beach and dune pasture.
- Internationally important populations of migratory and over-wintering waders and wildfowl, as well as seal colonies.
- Varied seascape valued for a range of land, coast and water-based recreational activities.
- Strong historic associations with early settlers, trade and defence.
- A dynamic and ever-changing seascape, with a strong sense of naturalness.

Key issues affecting valued seascape attributes

Tourism and recreation

- For both SCAs within this type, tourism and recreational pressures on land surrounding the estuaries is a key issue. For the Canche, the impacts of hunting are an additional threat to the ecosystem.
- Growth in coastal recreation and tourism affecting levels of tranquillity and quiet enjoyment (e.g. jet skis/ fast motor craft).
- Research undertaken by Kent Wildlife Trust (2012) provides strong evidence to indicate that recreational and commercial activities including dog walking, walking without dogs, bait digging and kite surfing are having a detrimental impact on bird populations in Pegwell Bay.
- Future growth plans and housing developments within Dover and Thanet Districts may lead to further pressure on valued recreational green spaces along the coast such as Pegwell Bay.
- The English Coastal Path is in the process of being developed bringing positive benefits for public access, but with increased potential for further wildlife disturbance within Pegwell Bay.

Coastal land management

- Some scrub encroachment and invasive species affecting habitat condition and characteristic features (e.g. drainage ditches). Elsewhere, appropriate grazing levels by livestock and rabbits is maintaining coastal habitats in favourable condition.
- Diffuse pollution from surrounding agricultural land affecting some water courses and drainage ditches feeding into the estuaries and surrounding bays. Eutrophication has led to the growth of algae in some watercourses in Pegwell Bay.

Environmental processes and climate change

- A dynamic coastal seascape, future sea level rise and an increased strength and frequency of storm surges due to climate change will further shape this coastline.
- The current policy is for minimal intervention (maintaining existing flood defences where present) and to continue to utilise the natural protection from the sea provided by sand dunes and intertidal habitats. The increased frequency and strength of storm surges might, however, require further intervention.
- **Strait-wide issue:** Climate change, including warmer, wetter winters and more frequent summer droughts, is likely to lead to increased levels of species migration, as well as an increased prevalence of pests and diseases affecting characteristic semi-natural habitats.

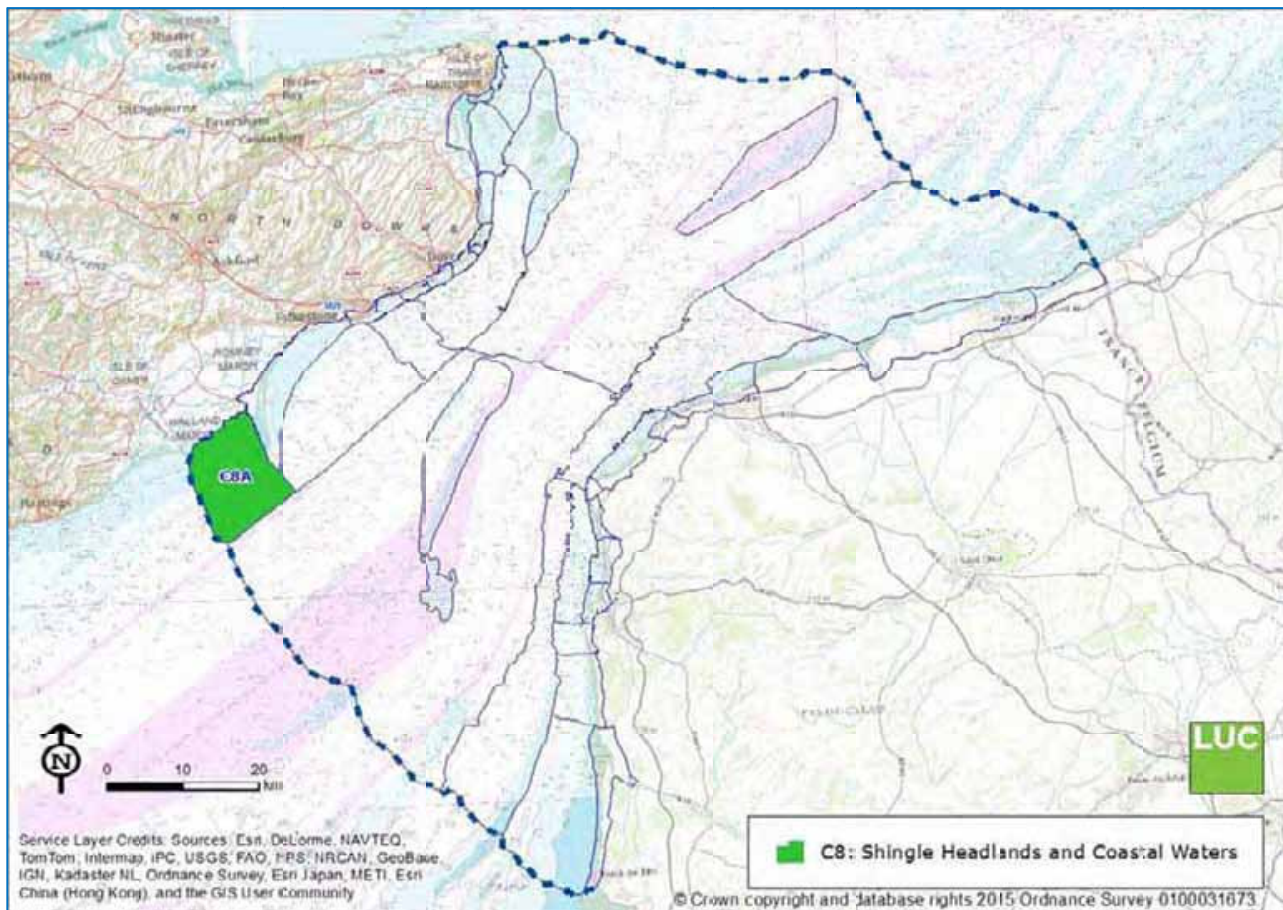
Shaping the future seascape

Guideline	Link to valued attributes
DEVELOPMENT AND TRANSPORT	
<p>Ensure any future development and regeneration proposals contribute positively to the character and enhancement of the SCT's historic built vernacular and naturalistic setting, with wide, uninterrupted views into the Strait.</p>	<p>d) historic associations e) dynamic and naturalistic</p>
<p>Strait-wide guideline: The impact of development and regeneration proposals within this SCT on adjacent landscapes and seascapes should be considered (particularly in terms of impacts on natural and cultural assets and levels of tranquillity). This should consider information in this Seascape Character Assessment and other available Landscape Character Assessments and Heritage Asset surveys.</p>	<p>a) wetland habitats b) wildlife d) historic associations e) dynamic and naturalistic</p>
TOURISM AND RECREATION	
<p>Work with partners including the East Kent Green Infrastructure Partnership to consider the need, scale and funding, in consultation with Natural England, of further ecological study to better understand the links between recreation and wildlife disturbance.</p>	<p>b) wildlife c) recreational activities</p>
<p>Strait-wide guideline: Support the work of the East Kent Green Infrastructure Partnership to produce a sustainable strategic access and recreation management strategy, initially aimed at protected nature conservation sites, but with the potential to consider other parts of the Strait's coastline too. Consider extending the remit of this strategy to cover adjacent coastal and inshore waters to further links between terrestrial and marine planning. Work with French partners to explore an equivalent approach in Pas-de-Calais.</p>	<p>a) wetland habitats b) wildlife c) recreational activities</p>
<p>Ensure any new development or infrastructure relating to the area's recreational uses is sympathetically integrated into its landscape and seascape setting, particularly where located in open coastal locations.</p>	<p>c) recreational activities e) dynamic and naturalistic</p>
<p>Support the implementation of mitigation measures associated with new developments, including addressing further recreational pressures on valued coastal spaces, heritage assets and access routes (including building on the proposals set out in the East Kent Green Infrastructure Partnership's <i>Approach to Green Infrastructure and Recreation</i> (April 2014) and the Kent Downs AONB Management Plan 2014-19).</p>	<p>a) wetland habitats b) wildlife c) recreational activities d) historic associations e) dynamic and naturalistic</p>
<p>Work with local, regional and national tourism organisations and businesses (in both England and France) to support initiatives that promote the sustainable use of assets within this SCT. Promote tourism which supports the character</p>	<p>a) wetland habitats b) wildlife</p>

Guideline	Link to valued attributes
<p>and quality of the coastal landscapes and seascapes.</p> <p>Strait-wide guideline: This should form part of a wider marketing effort for the Dover Strait as a whole, drawing on the information in this Seascape Character Assessment to communicate its unique identity and importance.</p>	<p>c) recreational activities</p> <p>d) historic associations</p> <p>e) dynamic and naturalistic</p>
<p>Strait-wide guideline: Continue to explore the costs, benefits and opportunities and submit bids for international designation status for the Dover Strait as a whole.</p>	<p>a) wetland habitats</p> <p>b) wildlife</p> <p>c) recreational activities</p> <p>d) historic associations</p> <p>e) dynamic and naturalistic</p>
COASTAL LAND MANAGEMENT	
<p>Continue to utilise land management schemes such as Environmental Stewardship to support local farmers to sustainably manage (including through grazing) the seascape's valued coastal and intertidal habitats as an integral part of their farming systems. Continue close working between Natural England, landowners and land managers.</p>	<p>a) wetland habitats</p> <p>b) wildlife</p>
<p>Work with surrounding landowners and farmers to implement measures to protect watercourses from diffuse pollution, including through the appropriate targeting of agri-environment options (e.g. buffer strips).</p>	<p>a) wetland habitats</p> <p>b) wildlife</p>
ENVIRONMENTAL PROCESSES AND CLIMATE CHANGE	
<p>Plan at a strategic level for the impacts of a changing climate on the coastline, allowing natural processes to take place whilst considering how habitats and access provisions can be expanded or relocated to account for coastal squeeze. Consider species migration and responses to an increased prevalence of pests and diseases.</p>	<p>a) wetland habitats</p> <p>b) wildlife</p> <p>d) historic associations</p> <p>e) dynamic and naturalistic</p>
<p>Work with statutory authorities/agencies to understand and monitor the effects of coastal processes and sea level rise on the estuaries and surrounding coastline – including monitoring the frequency and intensity of storm surges.</p>	<p>a) wetland habitats</p> <p>b) wildlife</p> <p>d) historic associations</p> <p>e) dynamic and naturalistic</p>
<p>Work with statutory authorities/agencies to ensure any engineered sea defences are sympathetic to the naturalistic qualities of the seascape and presence of internationally important wildlife assets. Seek opportunities to enhance the character of the local built vernacular.</p>	<p>a) wetland habitats</p> <p>b) wildlife</p> <p>d) historic associations</p> <p>e) dynamic and naturalistic</p>

C8: Shingle Headlands and Coastal Waters

Map of the SCT in the context of the Dover Strait



Component Seascape Character Areas

This is a unique SCT and contains just one Seascape Character Area:

C8A: Dungeness, Denge Marsh and Eastern Rye Bay

Summary of valued seascape attributes (sensitivities)

- Unique shingle headland of Dungeness – largest shingle cusped foreland in Great Britain supporting internationally important wildlife habitats (NNR, SAC, SPA, SSSI)
- Extensive area of wetlands and marshland at Denge Marsh
- Beach fishing fleet at Dungeness – forming distinctive feature of the coastline.
- Distinctive Denge Marsh sound mirrors – one of best known examples of the early warning concrete acoustic mirrors constructed in the 1920s and 1930's.
- 'Otherworldly' wild remote qualities of Dungeness - cultural and artistic associations.
- A remote, largely inaccessible coastline and coastline as a result of Lydd Ranges (MOD), with active firing ranges extending offshore creating distinct 'empty' coast and seascape rare in SE England.

Key issues affecting valued seascape attributes

Development and transport

- Changes in coastal management and development to the west resulting in a reduction in sediment supply.
- Maintaining, rare wild remote character of this unique area in the face in incremental small scale changes and large scale energy development.
- Large scale gravel extraction

Environmental processes and climate change

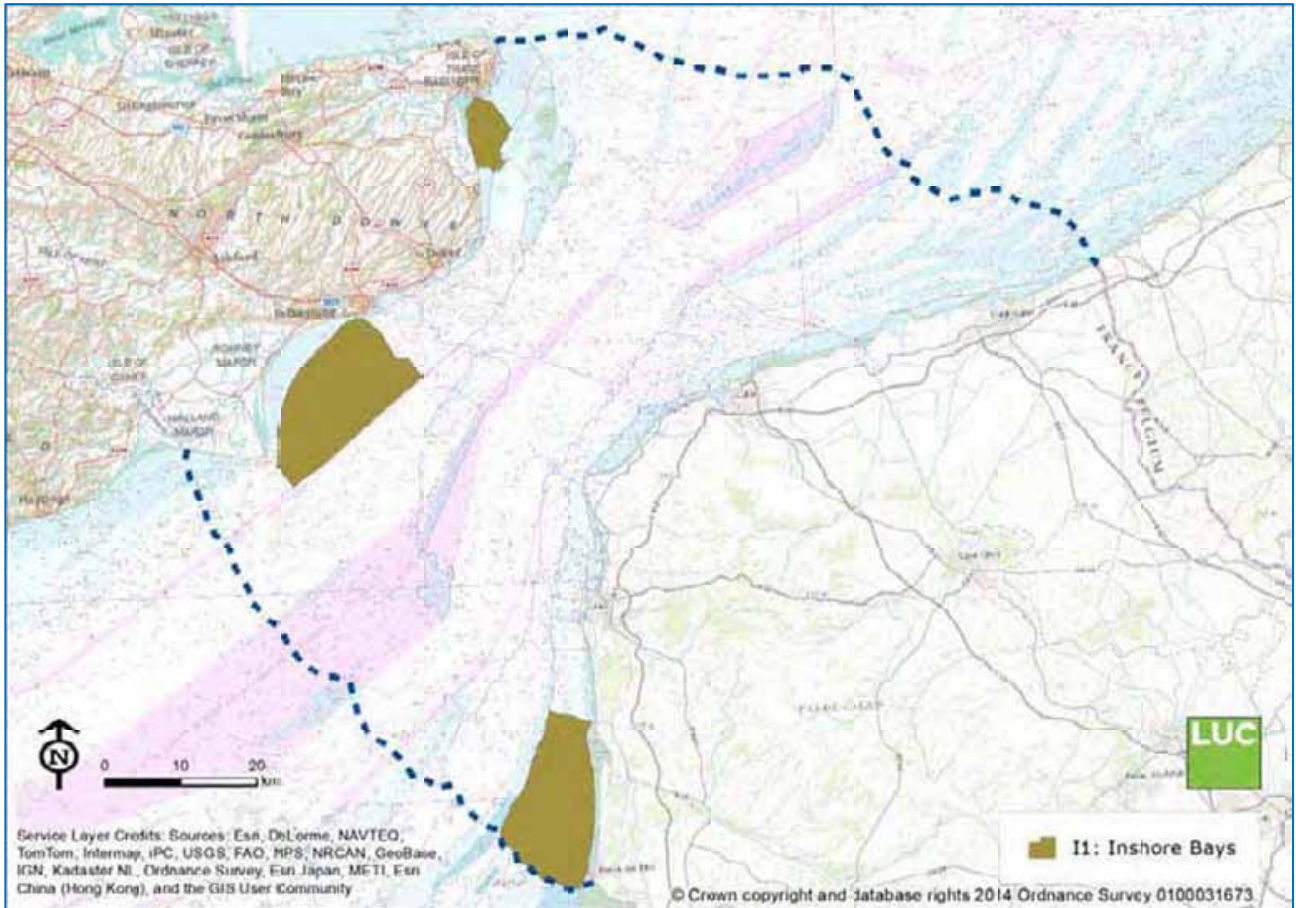
- Reduction in sediment supply and long term erosion of this coastline – overall policy of managed realignment plus need to 'hold the line' to protect MOD interests at Lydd.
- Sea-level rise and challenge of managing flooding and beach replenishment to protect the SAC designated habitats and viability of MOD firing range.

Shaping the future seascape

Guideline	Link to valued asset(s)
DEVELOPMENT AND TRANSPORT	
Continue to monitor planning applications and development proposals and overall effect on rare remote qualities of Dungeness and Denge Marsh. Refer to this seascape character assessment and relevant landscape character assessments. The informal, 'otherworldly' character is important and should be conserved.	e) distinctive character f) sense of remoteness
TOURISM AND RECREATION	
Continue to promote small scale low key tourism e.g. through the Romney Marsh Countryside Project in relation to features of cultural, historical and natural interest. Strait-wide guideline: This should form part of a wider marketing effort for the Dover Strait as a whole, drawing on the information in this Seascape Character Assessment to communicate its unique identity.	a) & b) biodiversity d) cultural heritage
Strait-wide guideline: Continue to explore opportunities and submit bids for international designation status for the Dover Strait as a whole.	All
AQUACULTURE AND FISHING	
Seek to explore opportunities to support traditional small-scale industries, including the long-standing beach fishing fleets of Dungeness (e.g. through the establishment of a Fishing Local Action Group, as proposed in the Kent Downs AONB Action Plan 2014-19).	c) fishing
Support the work of the IFCA and Natural England, encouraging further partnership working with the fishing industry to agree how best to sustainably manage the marine resource.	c) fishing
ENVIRONMENTAL PROCESSES AND CLIMATE CHANGE	
Work with statutory authorities/agencies to continue to understand and monitor the effects of coastal processes and sea level rise on this area.	All

I1: Inshore Bays

Map of the SCT in the context of the Dover Strait



Component Seascape Character Areas

- I1A: Sandwich and Pegwell Bays
- I1B: Hythe Bay
- I1C: Baie de Canche et littoral dunaire d'Opale

Summary of valued seascape attributes (sensitivities)

- h) Inshore traffic zone plus valued area for recreational sailing and other water based activities.
- i) Important fisheries sustaining small Kent and larger French fishing fleets including shellfish.
- j) Relatively quiet areas of inshore sea adjacent to main offshore shipping lanes.
- k) High biodiversity value recognised through marine designations – marine habitats of international importance.

Key issues affecting valued seascape attributes

Development and transport

- Potential for an increase in inshore traffic, including as a result of the regeneration of nearby ports and harbours (in SCT C3).

Tourism and recreation

- The need to manage recreational activities in sympathy with the natural environment (e.g. considering associated impacts on the nearby fragile coastal and inshore environments).

Coastal land management (in adjacent areas)

- Intensification of farming practices and urban development, plus disposal of industrial effluent leading to increased pollution of rivers and eutrophication of estuaries. This polluted water then feeds into the enclosed seas of this SCT (relevant to SCAs I1A and I1C).

Aquaculture and fishing and marine resource management

- Uncertain economic viability for fishing fleets operating from the smaller ports and harbours nearby, which are much valued as part of the community and local economy.
- Uncertainty and misunderstandings about the potential impact of Marine Conservation Zone designation on fishing activity (at the time of writing it is not known if the recommended site at Hythe Bay will be put forward for designation in the next tranche).
- Lack of understanding of the undersea environment makes conveying a conservation and enhancement message to different audiences difficult.

Environmental processes and climate change

- Low lying land at risk of flooding as a result of sea level rise – resulting in a change in extent of inshore bays.
- Coastal processes resulting from changes to natural configuration e.g. presence of offshore sandbanks which currently act as a natural break to storm surges.
- Increased storminess and extreme weather events affecting inshore waters potentially resulting in tidal surges along adjacent estuaries (relevant to SCAs I1A and I1C).

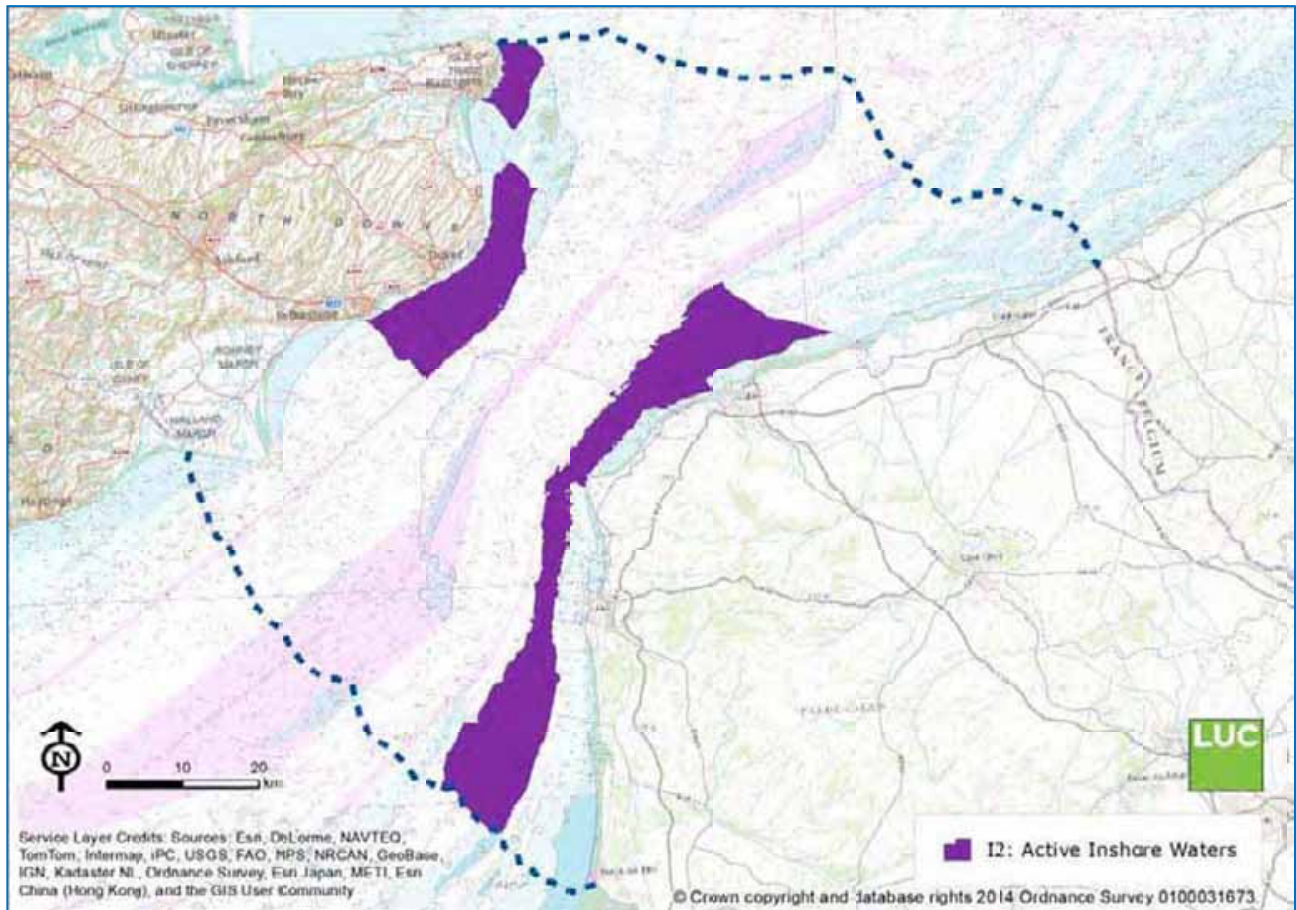
Shaping the future seascape

Guideline	Link to valued attributes
DEVELOPMENT AND TRANSPORT	
Continue to monitor and manage water quality in the inshore bays, including control of discharges within these areas.	d) marine biodiversity
Monitor any linked increases in marine traffic (both commercial and recreational) in this SCT as a result of the re-development and regeneration of ports and harbours in SCT C3.	a) inshore traffic and recreation b) fisheries
TOURISM AND RECREATION	
This SCT includes popular areas for water-based recreational activities. There is an opportunity to collate information from different providers e.g. seal trips, dive trips, fishing charters etc. This will allow for a more accurate picture of the uses of the area to be gained, allowing for their monitoring and appropriate management actions.	c) quiet waters d) marine biodiversity
Work with local, regional and national tourism organisations (in both Kent and Pas-de-Calais) to continue initiatives that promote the natural and cultural assets and identity of the distinctive inshore bays and their coastal hinterland. Strait-wide guideline: This should form part of a wider marketing effort for the Dover Strait as a whole, drawing on the information in this Seascape Character Assessment to communicate its unique identity.	c) quiet waters d) marine biodiversity
Strait-wide guideline: Continue to explore the costs, benefits and opportunities and submit bids for international designation status for the Dover Strait as a whole.	c) quiet waters d) marine biodiversity
AQUACULTURE AND FISHING & MARINE RESOURCE MANAGEMENT	
Explore opportunities to undertake further research into the characteristics and management of the marine environment and seabed, furthering an understanding of important aspects to conserve, enhance and communicate.	b) fisheries d) marine biodiversity
Strait-wide guideline: Seek to explore opportunities to support and enhance the overall sustainability of traditional small-scale industries, including the long-standing fishing fleets of the smaller ports and harbours (e.g. through the establishment of a Fishing Local Action Group, as proposed in the Kent Downs AONB Action Plan 2014-19).	b) fisheries
Strait-wide guideline: Support the work of the IFCA and Natural England (and their French counterparts), encouraging further partnership working with the fishing industry. Collaborative working and open dialogue to agree how to sustainably manage the marine resource whilst supporting the economic viability of local fishermen should be a priority.	b) fisheries

Guideline	Link to valued attributes
ENVIRONMENTAL PROCESSES AND CLIMATE CHANGE	
<p>Work with statutory authorities/agencies to understand and monitor the effects of coastal processes and sea level rise on the enclosed waters of the inshore bays and effects on their associated coastal areas and estuaries e.g. storm surges.</p>	<ul style="list-style-type: none"> a) inshore traffic and recreation b) fisheries c) quiet waters d) marine biodiversity

I2: Active Inshore Waters

Map of the SCT in the context of the Dover Strait



Component Seascape Character Areas

- I2A: Broadstairs Knolls and Ramsgate Road
- I2B: Inshore Dover Strait, The Downs and Trinity Bay
- I2C: Folkestone Pomerania
- I2D: Zone d'approche de Calais
- I2E: Bassure de Baas

Summary of valued seascape attributes (sensitivities)

- a) Diverse sea beds and marine conditions which create a range of rare and valuable ecosystems, some of which are nationally or internationally designated.
- b) Important fisheries sustaining small Kent and larger French fishing fleets including shellfish.
- c) Frequent wrecks from various periods of history found on the seabed, attracting recreational divers. These waters have been of strategic importance throughout history.
- d) Busy seascapes for a range of commercial and recreational activities.

Key issues affecting valued seascape attributes

Development and transport

- Intensification of farming practices and urban development along the coast, plus disposal of industrial effluent in watercourses, leading to polluted water flowing into parts of this SCT.
- **Strait-wide issue:** Sulphur emissions from shipping currently causing pollution (smog and deposition).
- **Strait-wide issue:** North Sea Sulphur Control Area legislation will in future limit sulphur emissions from shipping, but conversely will make the shorter Dover-Calais crossing more economically viable than longer shipping routes elsewhere. This may also lead to parts of this SCT witnessing an increase in marine traffic.

Tourism and recreation

- Popularity of the SCT for a range of water-based recreational activities, including diving, fishing parties and motor craft.
- Illicit wreck diving on the fragile chalk reefs causing damage to the marine ecosystem, as well as impacts on the maritime archaeology associated with the wrecks.
- The regeneration of Folkestone harbour, including in support of marine and coastal leisure activities, may see a local resurgence of sea-based tourism, including cruising and sailing. This could further impact on levels of tranquillity and cause potential conflicts with other marine uses (e.g. fishing).

Marine resource management

- Impacts of fishing activity (particularly benthic trawling) on fragile marine habitats, contributing to sites being put forward and designated as marine protected areas.
- The SCT includes internationally designated marine sites including the Thanet Coast and Cap Gris-Nez SACs, as well as the Parc Naturel Marin Estuaires picards Mer d'Opale which include restrictions on certain types of fishing activity (particularly trawling).
- Lack of understanding of the undersea environment makes conveying a conservation and enhancement message to different audiences difficult.

Aquaculture and fishing

- Uncertainty and misunderstandings about the long-term impacts of Marine Conservation Zone designation on fishing activity – Folkestone Pomerania and Thanet Coast MCZs were both designated in 2013.
- Uncertain economic viability for small fishing fleets operating from the smaller ports and harbours and fishing in these waters (e.g. Folkestone, Deal, Ramsgate, Wissant and Wimereux).
- Port restrictions around Dover and Calais restricting east-west movements of vessels through the waters of this SCT lying closest to the coast.

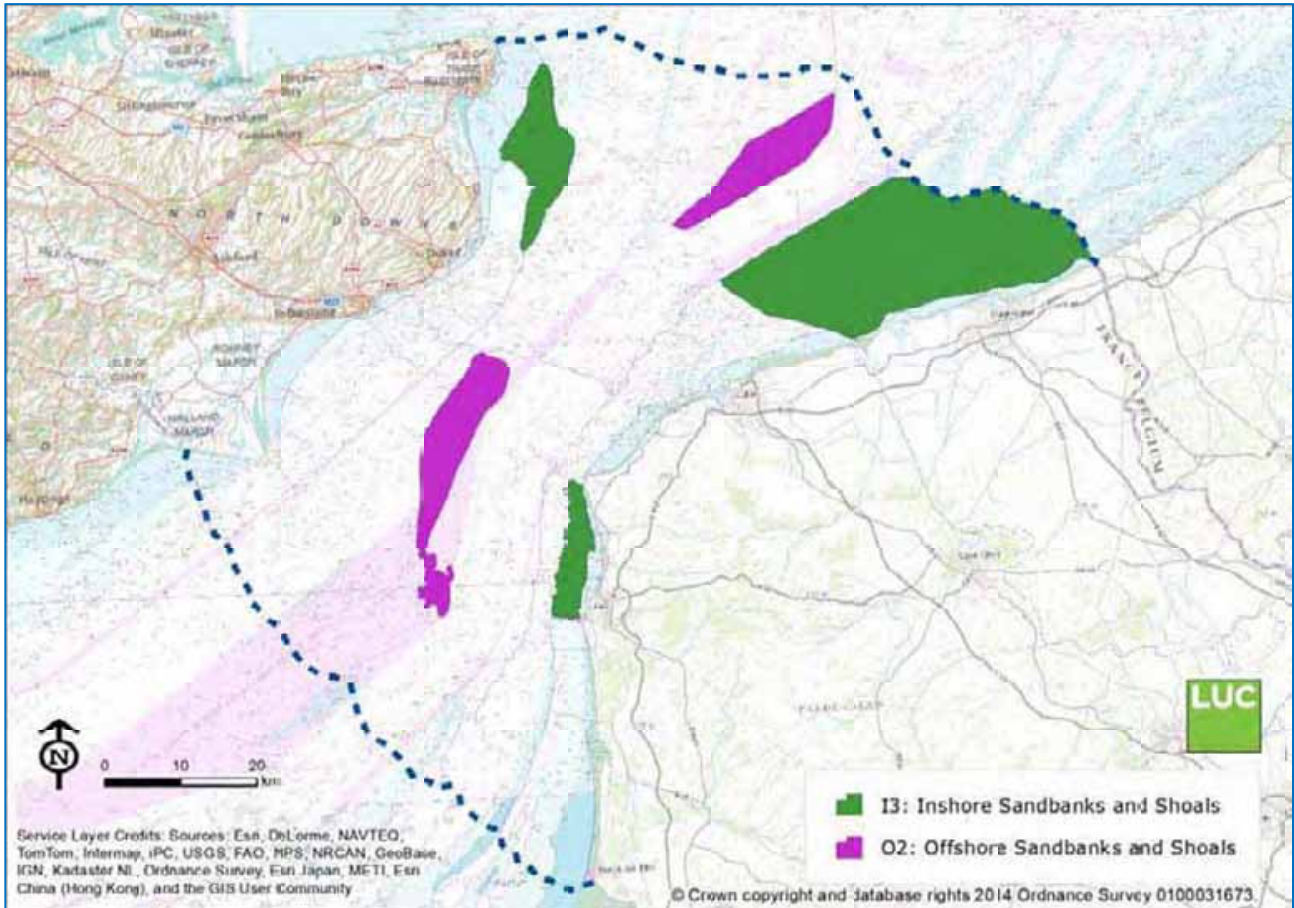
Shaping the future seascape

Guideline	Link to valued attributes
DEVELOPMENT AND TRANSPORT	
Continue to monitor and manage water quality in this SCT, including controlling discharges from the coast flowing into the seas of this area.	a) marine biodiversity b) fisheries d) commercial & recreational importance
Monitor any linked increases in marine traffic (both commercial and recreational) in this SCT as a result of the re-development and regeneration of ports and harbours in SCT C3.	a) marine biodiversity b) fisheries c) maritime heritage
TOURISM AND RECREATION	
This SCT includes popular areas for water-based recreational activities. There is an opportunity to collate information from different providers e.g. seal trips, dive trips, fishing charters etc. This will allow for a more accurate picture of the uses of the area to be gained, allowing for their monitoring and appropriate management actions.	a) marine biodiversity c) maritime heritage
Work with local, regional and national tourism organisations and businesses (in both England and France) to support initiatives that promote the sustainable use of assets within this SCT to people arriving by sea. Include information on the underwater environment, including particularly the area's chalk reefs and the ancient creation of the Strait. Such visitor information should be readily available both upon port exit/ entry and on the ferries themselves. Strait-wide guideline: This should form part of a wider marketing effort for the Dover Strait as a whole, drawing on the information in this Seascape Character Assessment to communicate its unique identity and importance.	a) marine biodiversity c) maritime heritage
Strait-wide guideline: Continue to explore opportunities and submit bids for international designation status for the Dover Strait as a whole.	a) marine biodiversity c) maritime heritage
AQUACULTURE AND FISHING & MARINE RESOURCE MANAGEMENT	
Strait-wide guideline: Seek to explore opportunities to support and enhance the overall sustainability of traditional small-scale industries, including the long-standing fishing fleets of the smaller ports and harbours (e.g. through the establishment of a Fishing Local Action Group, as proposed in the Kent Downs AONB Action Plan 2014-19).	b) fisheries
Strait-wide guideline: Support the work of the IFCA and Natural England (and their French counterparts), encouraging further partnership working with the fishing industry. Collaborative working and open dialogue to agree how to sustainably manage the marine resource whilst supporting the economic viability of local fishermen should be a priority.	b) fisheries
Explore opportunities to undertake further research into the characteristics and	a) marine biodiversity

Guideline	Link to valued attributes
management of the marine environment and seabed, furthering an understanding of important aspects to conserve, enhance and communicate.	c) maritime heritage

I3/O2: Inshore/Offshore Sandbanks and Shoals

Map of SCT in context of the Dover Strait



Component Seascape Character Areas

- I3A: Goodwin Sands, Gull Stream and North Sand Head
- I3B: Bancs des Flandres
- I3C: Rade d'Ambleteuse
- O2A: The Varne-Le Colbart Ridge and Les Ridens
- O2B: Sandette Bank

Summary of valued seascape attributes (sensitivities)

- a) Shoals of sand, gravel, and shell which are constantly shifting due to the action of tidal streams.
- b) Rich waters and sediments which provide important feeding and spawning grounds for a range benthic and pelagic species. These in turn support commercial and recreational fishing activity.
- c) Numerous historic shipwrecks found across the sandbanks and shoals, some of which are nationally protected and are popular dive sites.
- d) Adverse sea conditions, poor weather and strong winds create a sense of danger and wildness.

Key issues affecting valued seascape attributes

Development and transport

- Dredging of shipping channels to maintain transport routes through the inshore sand banks (particularly I3B: Bancs des Flandres which is located near to Dunkirk port) – with associated impacts on sediment stability and ecological integrity.
- All of the SCT has areas within busy shipping routes – which associated effects on perceptions of remoteness as well as direct impacts on the features themselves.
- Potential demand for offshore renewables, capitalising on the natural energy provided by the SCT's strong wind conditions and tidal streams.
- **Strait-wide issue:** Sulphur emissions from shipping currently causing pollution (smog and deposition).

Marine resource management and aquaculture & fishing

- Inshore sandbanks with areas accessible to coastal populations and ports (SCAs I3A and I3B) under a range of pressures, both recreational and commercial (e.g. fishing, diving, marine transport, sub-marine infrastructure).
- The SCT includes internationally designated marine sites such as the Bancs des Flandres SAC and Parc Naturel Marin Estuaires picards Mer d'Opale– with measures in place to try to manage pressures.
- Uncertainty over the status of Marine Conservation Zone designation for Goodwin Sands (at the time of writing it is not known if the recommended site will be put forward for designation in the next tranche).
- Lack of understanding of the undersea environment makes conveying a conservation and enhancement message to different audiences difficult.
- Fragile economic viability for smaller fishing businesses and individual fishermen who use these waters – who are themselves much valued as part of the communities and local economy on both sides of the Strait.

Environmental processes and climate change

- Increased frequency of storm surges and sea level rise as a result of climate change, accelerating the shifting nature of the sandbanks.
- This in turn could present further hazards to navigation (due to sandbanks changing position), further demands for dredging, and impact upon the shelter afforded by the sandbanks to adjoining SCAs – including the historically significant area of safe anchorage provided by The Downs (SCA I2B) .

Shaping the future seascape

Guideline	Link to valued attributes
DEVELOPMENT AND TRANSPORT	
<p>Any development proposals within this SCT should respond to and respect the dynamic nature of the seascape and its valued natural and cultural heritage assets, using the information set out in this Seascape Character Assessment (including the SCA descriptions in Chapter 5).</p>	<ul style="list-style-type: none"> a) shifting shoals b) marine biodiversity c) maritime heritage d) wildness
<p>The impact of development and regeneration proposals within adjacent SCTs (particularly C3) on the key characteristics and qualities of this SCT should be considered. This will include linked demands for increased marine transport passing through the seascape or new sub-marine infrastructure.</p> <p>This should consider information in this Seascape Character Assessment and other available Landscape Character Assessments and Heritage Asset surveys.</p>	<ul style="list-style-type: none"> a) shifting shoals b) marine biodiversity c) maritime heritage d) wildness
TOURISM AND RECREATION	
<p>The Inshore SCTs include popular areas for marine recreation, including sea angling, fishing and wildlife watching. There is an opportunity to collate information from different providers e.g. seal trips, dive trips, fishing charters etc. This will allow for a more accurate picture of the uses of the area to be gained, allowing for their monitoring and appropriate management actions.</p>	<ul style="list-style-type: none"> b) marine biodiversity c) maritime heritage & wreck diving
<p>Work with local, regional and national tourism organisations and businesses (in both England and France) to support initiatives that promote the sustainable use of assets within this SCT to people arriving by sea. Include information on the underwater environment, including particularly the ancient creation of the Strait and the evidence left behind today. Such visitor information should be readily available both upon port exit/ entry and on the ferries themselves.</p> <p>Strait-wide guideline: This should form part of a wider marketing effort for the Dover Strait as a whole, drawing on the information in this Seascape Character Assessment to communicate its unique identity and importance.</p>	<ul style="list-style-type: none"> a) shifting shoals b) marine biodiversity c) maritime heritage & wreck diving
<p>Strait-wide guideline: Continue to explore opportunities and submit bids for international designation status for the Dover Strait as a whole.</p>	<ul style="list-style-type: none"> a) shifting shoals b) marine biodiversity c) maritime heritage d) wildness
MARINE RESOURCE MANAGEMENT & AQUACULTURE AND FISHING	
<p>Explore opportunities to undertake further research into the characteristics and management of the marine environment and seabed, furthering an understanding of important aspects to conserve, enhance and communicate.</p>	<ul style="list-style-type: none"> a) shifting shoals b) marine biodiversity c) maritime heritage d) wildness

Guideline	Link to valued attributes
<p>Strait-wide guideline: Seek to explore opportunities to support and enhance the overall sustainability of traditional small-scale industries, including the long-standing fishing fleets of the smaller ports and harbours (e.g. through the establishment of a Fishing Local Action Group, as proposed in the Kent Downs AONB Action Plan 2014-19).</p>	<p>b) marine biodiversity</p>
<p>Strait-wide guideline: Support the work of the IFCA and Natural England (and their French counterparts), encouraging further partnership working with the fishing industry. Collaborative working and open dialogue to agree how to sustainably manage the marine resource whilst supporting the economic viability of local fishermen should be a priority.</p>	<p>b) marine biodiversity</p>
<p>ENVIRONMENTAL PROCESSES AND CLIMATE CHANGE</p>	
<p>Work with statutory authorities/agencies to monitor the impacts of climate change, particularly an increase in the frequency and intensity of storm surges, on the dynamism of the sandbanks.</p>	<p>a) shifting shoals d) wildness</p>

4

**Applications of the
Seascape
Character
Assessment**

4 Applications of the Seascape Character Assessment

A tool to support integrated terrestrial and marine planning

- 4.1 Seascape character assessments principally apply to coastal and marine areas seaward of the low water mark, while landscape character assessments principally apply to areas lying to the landward side of the high water mark. However, this seascape character assessment does consider coastal areas landward of the high water mark, with the aim of enabling an integrated understanding of character across the 'coastal' and 'marine' zones. It is the hope of Kent County Council that coastal districts will adopt this study as a material consideration in planning decisions and as part of their policy framework, with the potential for it being adopted as a supplementary planning document. There is also the opportunity for coastal parish councils to utilise this assessment for their own plan making. The overall aim is for this seascape character assessment to be viewed and used in the same way as landscape character assessments are, and have been for many years.
- 4.2 In this way, along with marine planning, the natural and cultural character of an area can become a valid consideration in planning and decision making, in order that the seascapes, valued by the public and important for quality of life and tourism, are maintained into the future. As with Landscape Character Assessments, the seascapes approach also works on the basis that all seascapes matter not just the areas with environmental or other designations.
- 4.3 In terms of its role in marine planning, this is the first time that a local Seascape Character Assessment has been able to ensure full compatibility with strategic-scale marine planning work undertaken by the Marine Management Organisation (MMO). Careful consideration has been taken to ensure that the classification of SCTs and SCAs for the Dover Strait sits within the framework of the regional-scale Marine Character Areas (MCAs) developed for the South Marine Plan Areas⁷. These are shown at **Figure 4.1**, with an illustration of the relationships between the two studies provided at **Figure 4.2**. Figure 4.1 shows that the MCAs extend into the western half of the Dover Strait, but do not cover the area in French waters.
- 4.4 The written information provided in this assessment also complements that provided at the strategic scale for the South; thus providing additional local evidence to inform marine planning. It is the MMO's intention to include the boundaries of the Dover Strait's SCTs and SCAs on its Marine Planning Portal⁸, to allow users to query them against the full range of information held in support of marine planning. When the MMO undertakes its Seascape Assessment of the South East Marine Plan Area, the framework provided by this local assessment will be used to ensure full integration into new MCAs identified for the eastern part of the Dover Strait.

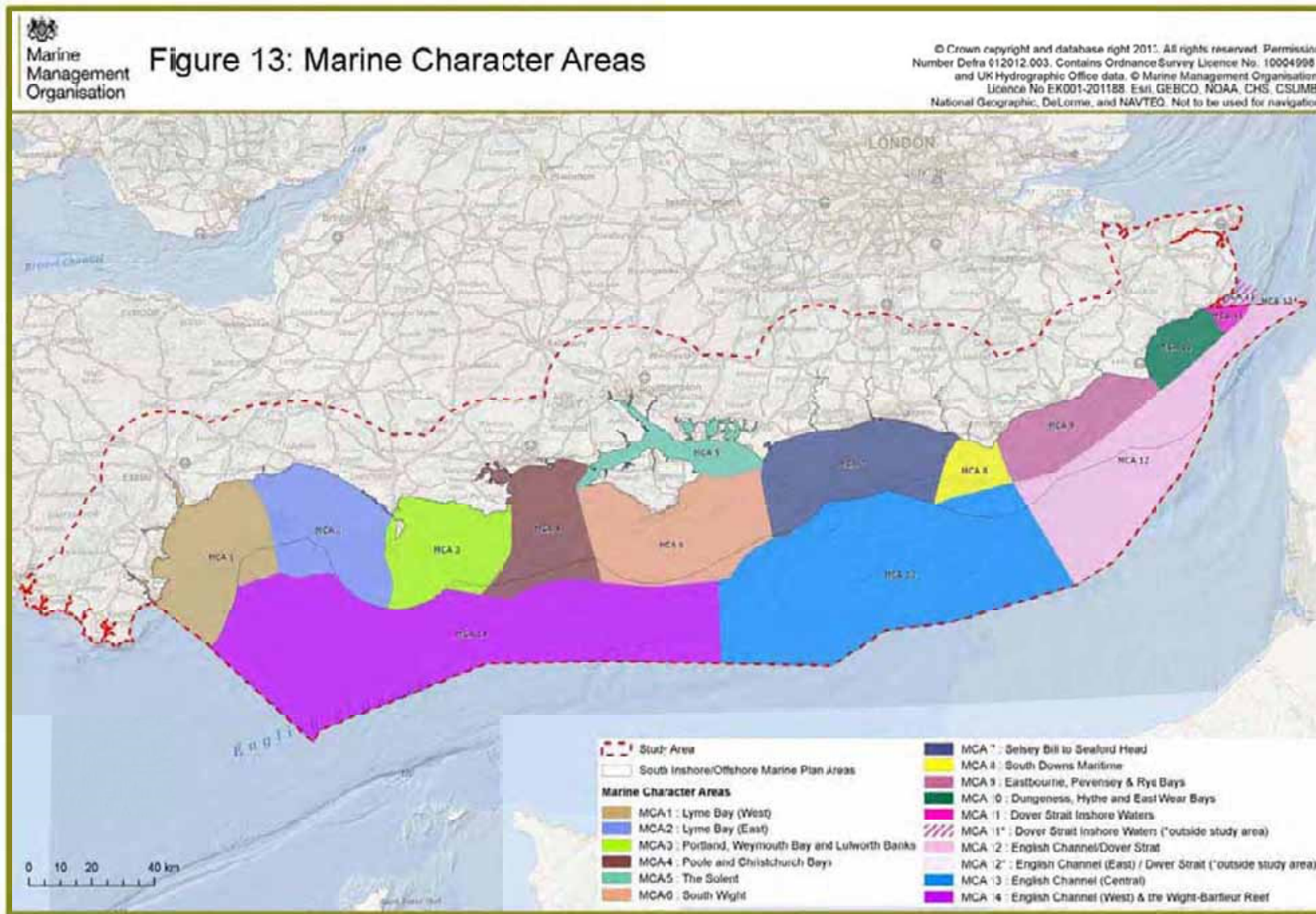
A spatial framework and evidence base to support the Dover Strait Implementation Plan

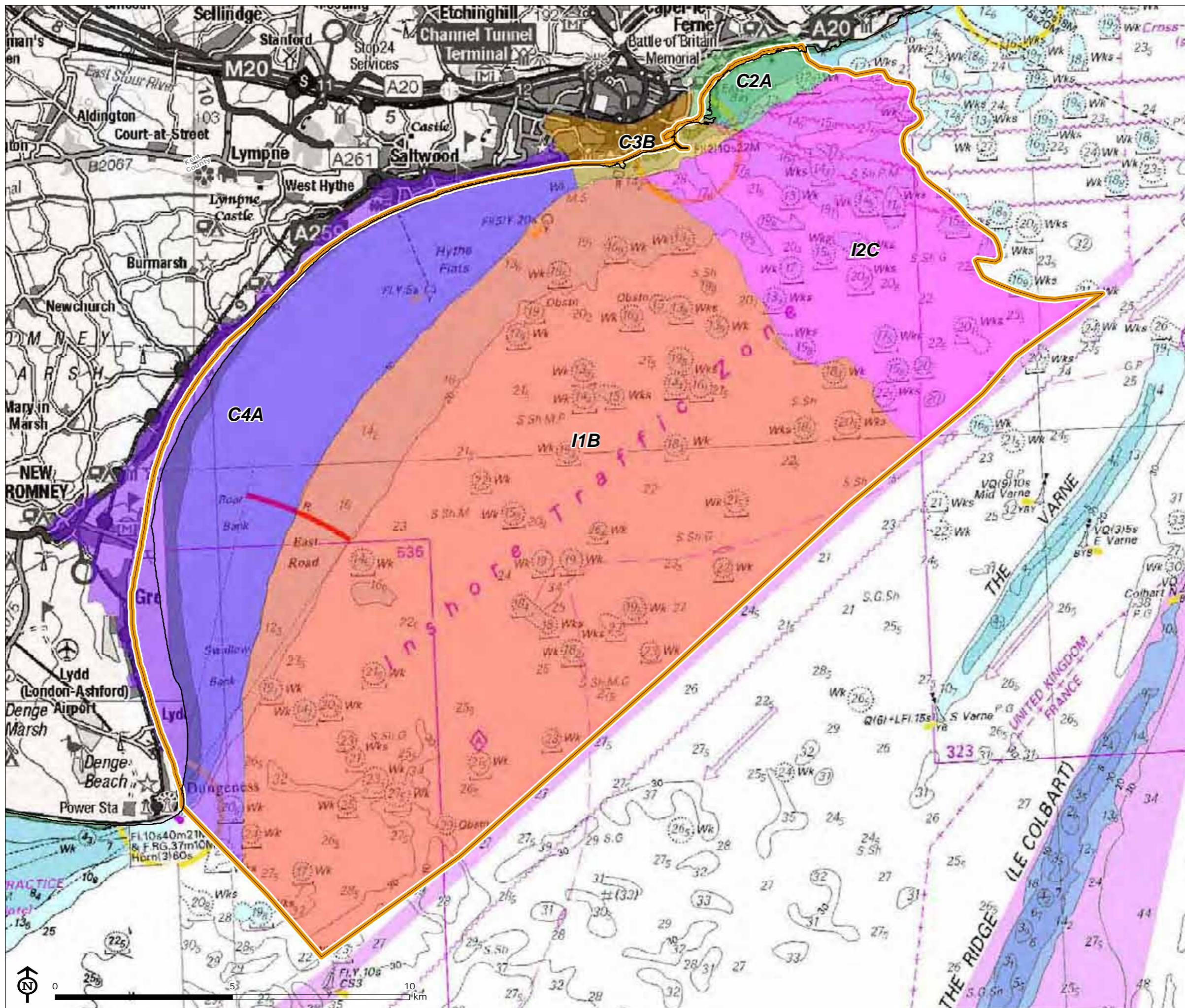
- 4.5 The Dover Strait Implementation Plan was drawn up through the NOSTRA project and can be found on the website www.nostraproject.eu. It represents the shared vision of Pas-de-Calais Council and Kent County Council for the Dover Strait, and covers the same area as this seascape character assessment. The document was drawn together based upon experience and knowledge at the local level, combined with exploration of cross border management of straits from across

⁷ LUC (2014) *Seascape Assessment of the South Marine Plan Areas*. For the Marine Management Organisation, available at <https://www.gov.uk/government/publications/seascape-assessment-for-the-south-marine-plan-areas-mmo-1037>

⁸ <http://planningportal.marinemmanagement.org.uk/>

Figure 4.1: Marine Character Areas identified for the South Marine Plan Areas





Dover Strait Seascape Assessment

Figure 4.2: Demonstrating a national to local SCA hierarchy in the Dover Strait

Marine Character Area

 MCA 10 : Dungeness, Hythe and East Wear Bays

Local Seascape Character Area

-  C2A : East Wear Bay and The Warren
-  C3B : Folkestone Harbour & Seafront
-  C4A : Romney Coast, Hythe Flats & Roar Bank
-  I1B : Hythe Bay
-  I2C : Folkestone Pomerania

Map Scale @ A3: 1:105,000

LUC

- 4.6 Europe. The pilot seascape study, carried out in 2013, helped to inform the plan and this full assessment provides a context and evidence base for some of the actions.
- 4.7 The Implementation Plan will be jointly implemented by Pas-de-Calais County Council and Kent County Council; the two authorities will also support relevant actions and projects taken forward by the stakeholders who helped develop the plan. There is a specific action on seascape aimed at ensuring that this study is utilised for decision making across the strait. Although the NOSTRA project has come to an end, the European Straits Initiative (ESI) will continue and help take forward the work. For the Dover Strait, Nord County Council and the Province of West Flanders joined Kent County Council and Pas-de-Calais County Council on the ESI in October 2014.

A best practice example for the management of straits

- 4.8 The concept of seascape character assessment and how it can assist with implementing the principles of the European Landscape Convention was part of the NOSTRA workshop on seascapes in 2013. It is also featured in the NOSTRA good practice guide, available on the project website.
- 4.9 The NOSTRA Implementation Plans have been drawn up by authorities from the Mediterranean to Scandinavia and includes good practice which authorities for each strait would like to export and implement or adapt at the local level. The Gulf of Finland are aiming to carry out their own seascape character assessment and will be looking to Kent County Council for advice.
- 4.10 The European Straits Initiative will utilise these completed assessments to highlight the benefits of using seascape character assessment as a tool for the cross border management of straits. This Dover Strait study will be distributed to all the NOSTRA/ESI partners.

Forming the basis for future designation applications

- 4.11 Achieving international recognition for Dover Strait has been an objective for Pas-de-Calais County Council and Kent County Council for some years, but will need to be re-examined before any future application to UNESCO is embarked upon. To assist with this, the NOSTRA Implementation Plan includes an action to set up a European project to examine international designation; the opportunities, threats, the process and the evidence base. It is on this latter point that this seascape character assessment will provide an invaluable tool in highlighting the unique natural and cultural characteristics of Dover Strait.

5 Seascape Character Area descriptions (selection)

5 Seascape Character Area descriptions (selection)

5.1 This chapter compiles completed descriptions for a selection of 'Coastal', 'Inshore' and 'Offshore' Seascape Character Areas, including complete coverage of the Kent coast. Each includes:

- A location map and representative photographs of the SCA;
- A short summary of seascape character and the information that has informed its definition;
- Reference to the SCT(s) it falls within – and, where relevant – the MMO's regional Marine Character Areas (for Kent only);
- Key seascape characteristics, arranged under 'Natural', 'Cultural/historical', 'Aesthetic/perceptual' headings; and
- Examples of mapped evidence used to inform the assessments.

5.2 The SCAs are arranged in the following order:

Kent Coastal

C1A: Kingsdown Chalk Cliffs	page 73
C1B: St Margaret's Bay	page 77
C1C: White Cliffs of Dover	page 81
C1D: Shakespeare and Abbot's Cliffs	page 85
C1E: Broadstairs to North Foreland	page 105
C2A: East Wear Bay and The Warren	page 109
C3A: Dover Port, Harbour and Historic Defences	page 113
C3B: Folkestone Harbour and Seafront	page 117
C3C: Ramsgate Harbour	page 121
C4A: Romney Coast, Hythe Flats and Roar Bank	page 125
C4B: Deal Seafront and Deal Bank	page 131
C5A/I1A: Sandwich and Pegwell Bays	page 135
C8A: Dungeness, Denge Marsh and Eastern Rye Bay	page 139

Kent Inshore

I1B: Hythe Bay	page 145
I2A: Broadstairs Knolls and Ramsgate Road	page 149
I2B: Inshore Dover Strait, The Downs and Trinity Bay	page 155
I2C: Folkestone Pomerania	page 159
I3A: Goodwin Sands, Gull Stream & North Sand Head	page 163

Nord-Pas-de-Calais Coastal

C1F/C6C/C9A: Les Deux Caps	page 171
C3E: Port de Boulogne	page 175
C3F: Port de Calais	page 179
C6A: Dunes du Fort Mahon et littoral de Sangatte	page 183
C6B: Platier d'Oye et littoral dunaire de Calais	page 187
C7C/C9C: Littoral dunaire d'Opale	page 191

Nord-Pas-de-Calais Inshore

I2D: Zone d'approche de Calais	page 197
I3C: Rade d'Ambleteuse	page 201

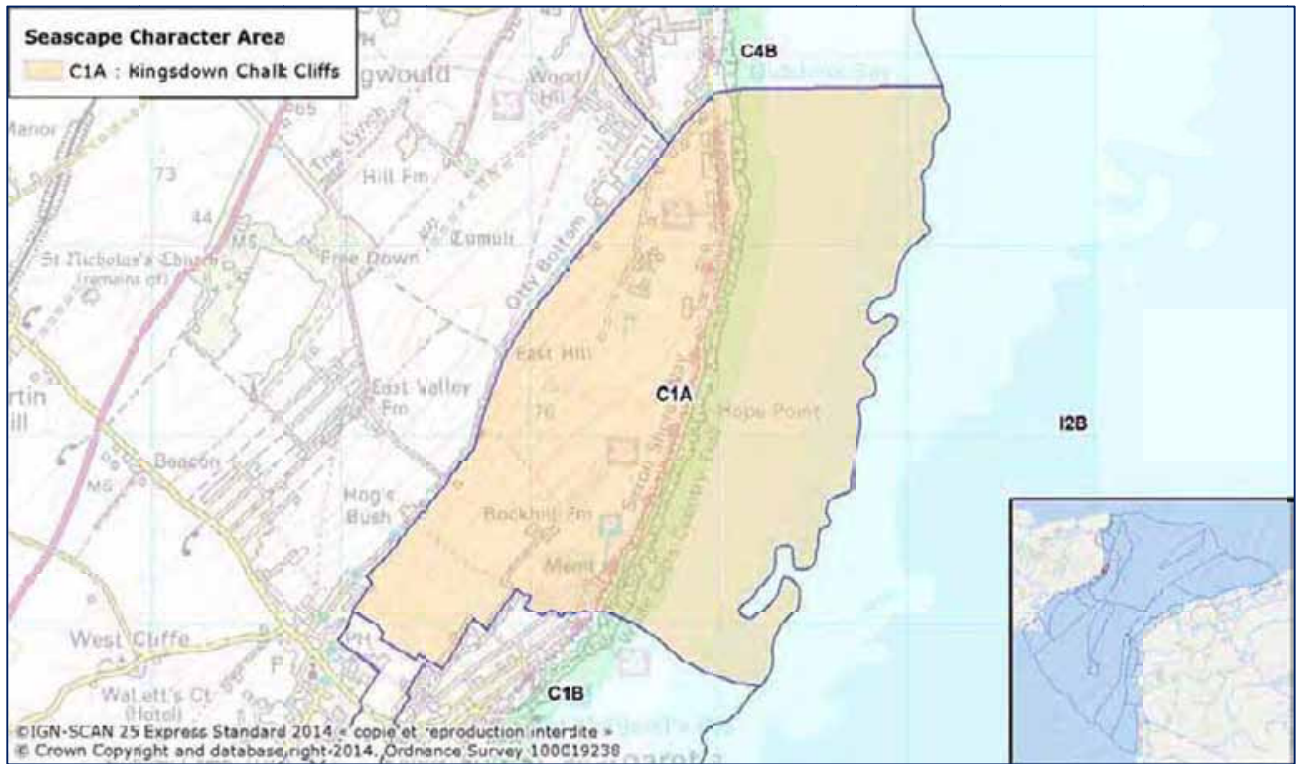
Dover Strait Offshore

O1A: Dover Strait Channel (North)	page 207
O1B: Dover Strait Channel (South)	page 211
O2A: The Varne-Le Colbart Ridge & Les Ridens	page 215

Kent Coastal Seascape Character Areas

C1A: Kingsdown Chalk Cliffs

Location map



Representative photographs



This SCA covers the chalk cliffs extending from the edge of settlement at St Margaret's at Cliffe to the edge of Oldstairs Bay, where the characteristic cliffs give way to shingle beach. The inland boundary is coincident with the South Foreland Heritage Coast, with the SCA extending offshore to a bathymetry depth of 15 metres. The Dover Patrol Monument stands in a prominent position above the cliffs, visible as a landmark from adjacent SCAs and some distance offshore as a reminder of the local Navy command's involvement in WW1. The chalk geology of the cliffs, intertidal and offshore zone gives rise to rich coastal and marine biodiversity of national significance. The high cliffs afford long views across the Strait, with ships and tankers forming frequent features on the horizon.

Seascape Character Type(s):

C1: Chalk Cliffs and Reefs/Coastal Waters

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- Easterly facing coastline with sheer white chalk cliffs rising vertically from the sea, backed by undulating downland reaching 76m AOD at East Hill;
- 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, coastal geomorphology and understanding of evolution (all designated as SSSI);
- Cliff tops consisting of species-rich chalk grassland and scrub supporting important populations of butterflies, moths and beetles. Breeding sea bird colonies on the cliffs include fulmars, rock pipits, ravens, lesser-black backed gulls and the only Kent population of kittiwakes;
- Important chalk foreshore habitats supporting the most species-rich littoral chalk algal flora in south-east England, including rare Rossworm reefs;
- 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 southerly flowing tidal currents, with water flowing parallel to the coastline in the direction of Dover. Rough seas occur in south-westerly winds, when the tides clash with the prevailing weather.

Cultural/historic influences

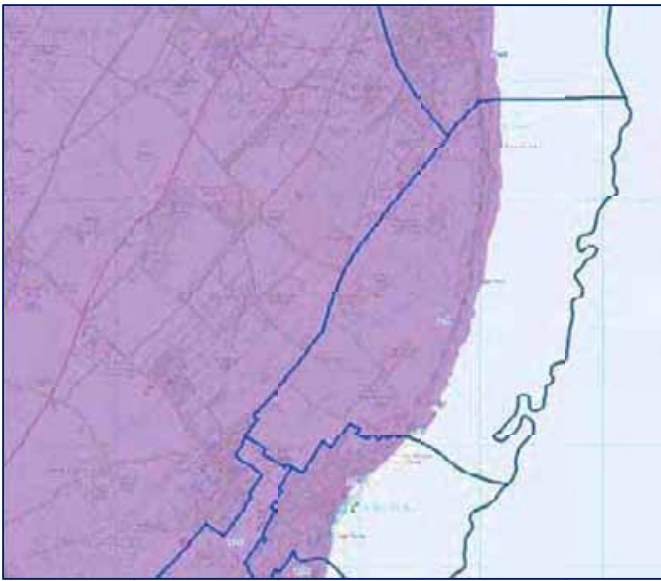
- The Dover Patrol Memorial sits in a prominent cliff-top position forming a strongly recognisable landmark when viewed from the sea. It commemorates the Royal Navy command of WWI, notably its involvement in the 1918 Zeebrugge Raid;
- The Dover Strait as a whole has played a key role in the defence of Britain and formed the location for successive invasions and defence, to as far back as Julius Caesar's invasion attempt in 55 BC and the successful Roman invasion of 43 AD;
- The white chalk cliffs defining the SCA have strong visual and cultural links to the nearby White Cliffs of Dover – collectively an iconic seascape associated with WWII victory and the return of troops;
- A popular area for recreation and bird watching, the cliff tops are crossed by the Saxon Shore Way Long Distance Path⁹ and the White Cliffs Country Trail. Walmer & Kingsdown Golf Club occupies part of the coastal downland.
- The surrounding seas are also used for kayaking, diving, recreational fishing (with angling parties often originating from Deal), anchoring and commercial sight-seeing tours;
- Fishing activity includes both drift and set netting for herring, sprat, sole, whiting and cod; as well as lobster potting. Catches are mainly landed on Deal beach, at Ramsgate or Folkestone.

Aesthetic/perceptual qualities

- The White Cliffs as a whole have long been a source of literary and artistic inspiration;
- Long views from the cliffs across the Strait towards France. In the foreground, the rough breaking waves of the Goodwin Sands can be seen;
- The area retains a sense of isolation and remoteness in parts with the inaccessible shoreline heightening these qualities as well as a sense of danger;
- 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 and frequently rough seas heightening its wild qualities.

⁹ 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



Onshore Chalk



South Foreland Heritage Coast designation



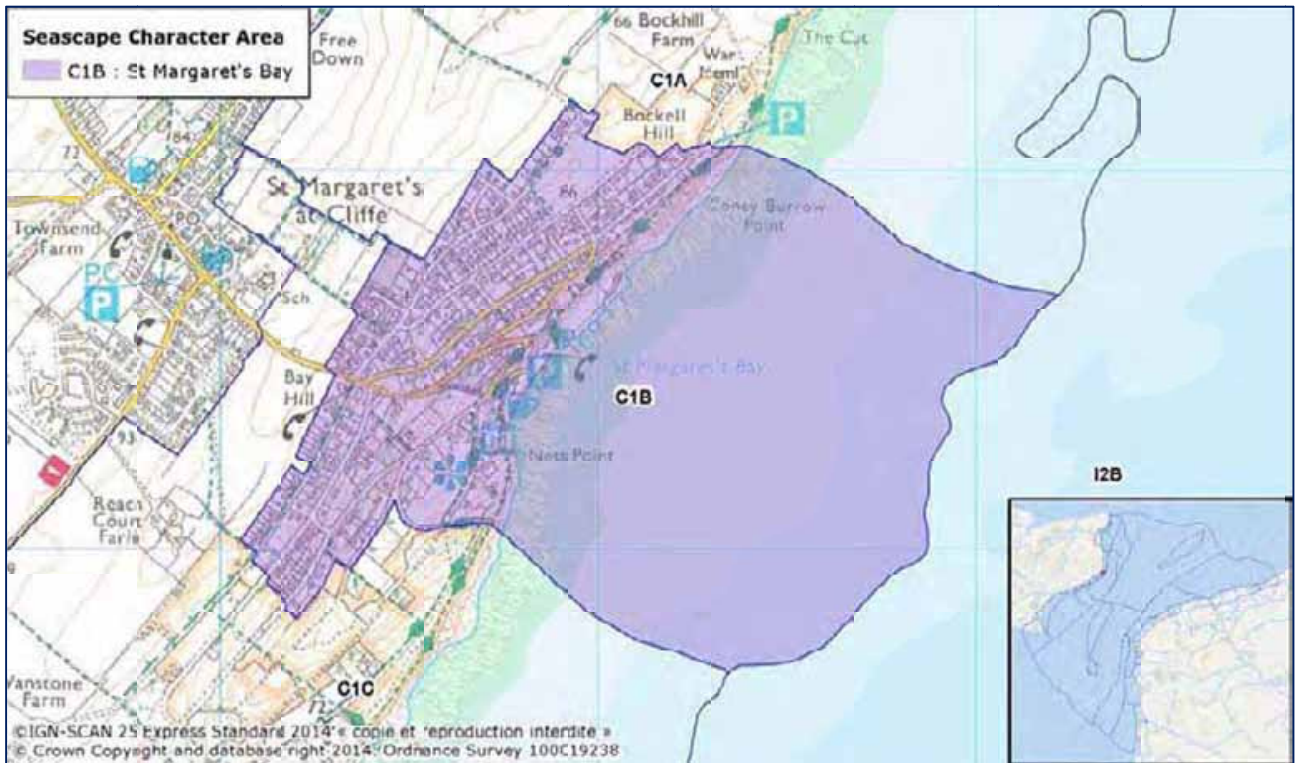
Bathymetry



SSSI and SAC Designations and Recommended Marine Conservation Zone

C1B: St Margaret's Bay

Location map



Representative photographs



The terrestrial boundaries of the St Margaret's Bay Seascope 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 'Dover to Deal'.

Regional Seascope Character Type(s):

C1: Chalk Cliffs and Reefs/Coastal Waters

Regional Marine Character Area(s):

N/A

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;
- South Foreland valley (on the cliffs) is a notable landfall site for migrant birds such as swallows and house martins;
- Breeding sea bird colonies on the cliffs including fulmars, rock pipits, 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 the location for successive invasions and defence;
- World War II pillboxes and tunnel entrances can be seen on the cliffs;
- The strategic location of the settlement of St. Margaret's at a breach in the wall of high chalk cliffs 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 is a Conservation Area, with many large Edwardian houses set within woodland overlooking the sea;
- The ridge immediately behind the Bay is the site of several Bronze Age burial mounds ('barrows') that remained as visible monuments until at least the 1800s. In the 6th to 7th centuries these became the focus for significant clusters of Anglo-Saxon burials;
- A beacon stands at the head of the Bay as an important navigational feature for vessels crossing the Strait;
- Channel swimmers and submarine telephone cables start from St Margaret's Bay;
- The broad shingle beach is a popular destination including for recreational beach-based angling;
- Shallow, accessible coastal waters used for kayaking, recreational fishing (with angling parties often originating from Deal), anchoring and commercial sight-seeing tours;
- Fishing activity includes drift and set netting for herring, sprat, sole, whiting and cod; as well as lobster potting. Catches are mainly landed on Deal beach, at Ramsgate or Dover.

Aesthetic / perceptual qualities

- The cliff tops are crossed by the Saxon Shore Way Long Distance Path, offering panoramic views across the English Channel to France, including the rough water of the Goodwin Sands;
- Strong literary connections – St Margaret's was 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;
- Distinctive historic built character within the sheltered, wooded bay and strong sense of timelessness;

- In contrast to surrounding chalk coastline, the shoreline and base of the cliffs (including caves) are accessible, making this a popular recreational destination;
- Levels of tranquillity and remoteness vary seasonally, from a bustling coastline in the summer months to a more desolate seascape in the winter;
- Frequent sight of ferries and cargo ships on the seaward horizon and entering/leaving the Port of Dover.

Mapped evidence used to inform assessment



South Foreland Heritage Coast designation



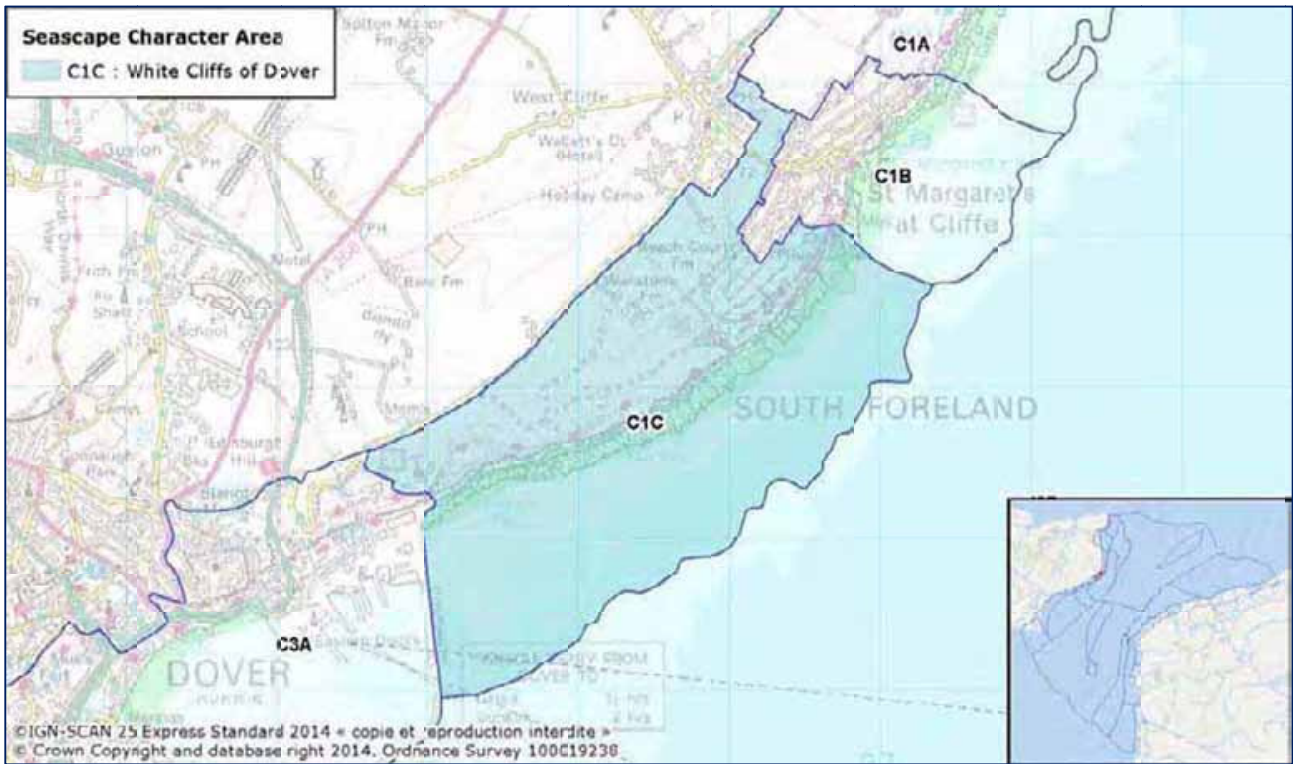
Settlement boundaries and bathymetry



Onshore and offshore chalk

C1C: White Cliffs of Dover

Location map



Representative photographs



The inland boundaries for this coastal Seaside Character Area follow that of the South Foreland Heritage Coast, excluding development at St Margaret's at Cliffe. It extends from 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 highly visible from the waters within the Dover Strait. All of the coastal waters and intertidal area fall within the recommended Marine Conservation Zone 'Dover to Deal'.

Regional Seaside Character Type(s):

C1: Chalk Cliffs and Reefs/Coastal Waters

Regional Marine Character Area(s):

N/A

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 cliff 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 which is visible from France in clear conditions. This probably represents the truncated end of a glacial valley and offers considerable potential for palaeo-environmental analysis;
- Cliff tops consist of nationally important chalk grassland and scrub, supporting breeding sea bird colonies including fulmars, rock pipits, 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. Ravens and peregrine falcons have re-colonised the cliffs in recent decades;
- 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

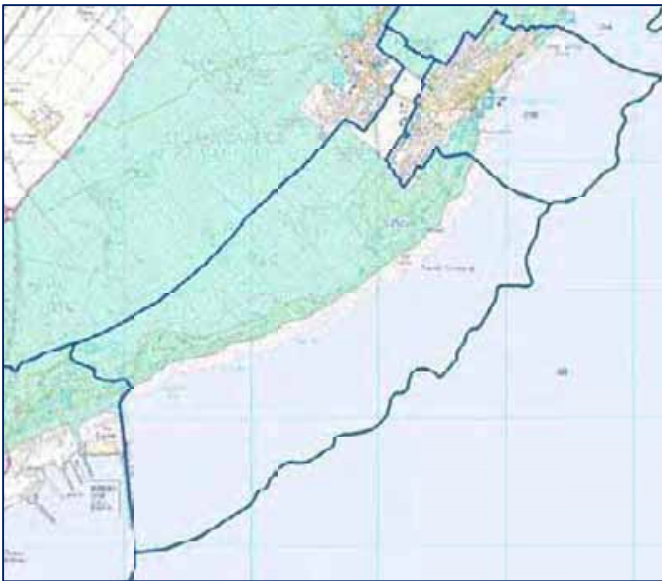
- The protected wreck of the Langdon Bay (English Heritage), located on the edge of Dover Harbour, is thought to be the remains of a Bronze Age vessel carrying a scrap metal cargo from France to Britain, indicating cross-channel trade in the Middle Bronze Age;
- The cliffs formed a physical defence for the first (unsuccessful) invasion attempt by Julius Caesar in 55 BC – with native warriors, horsemen and war chariots reputed to have attacked the invaders from cliff-top positions;
- The SCA contains particular references to World War II, such as the near-complete Wanstone anti-coastal defence battery and a bronze statue of Winston Churchill within The Pines landscaped gardens;
- Following evacuation from Dunkirk the cliffs formed a welcoming backdrop for many thousands of troops;
- Fan Hole is the site of another WWII coastal defence battery, with surviving deep shelter, as well as a pair of sound mirrors dating to WWI and the interwar period;
- 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 the lighthouse in 1899;
- The lighthouse was also the site of experimentation by Faraday and was the first lighthouse in the world to be converted to electric power in the late 19th century;
- Shallow coastal waters used for seasonal fishing (mainly recreational due to the 1 mile exclusion around Dover port), drift netting, lobster potting, recreational anchoring and wreck diving.

Aesthetic / perceptual qualities

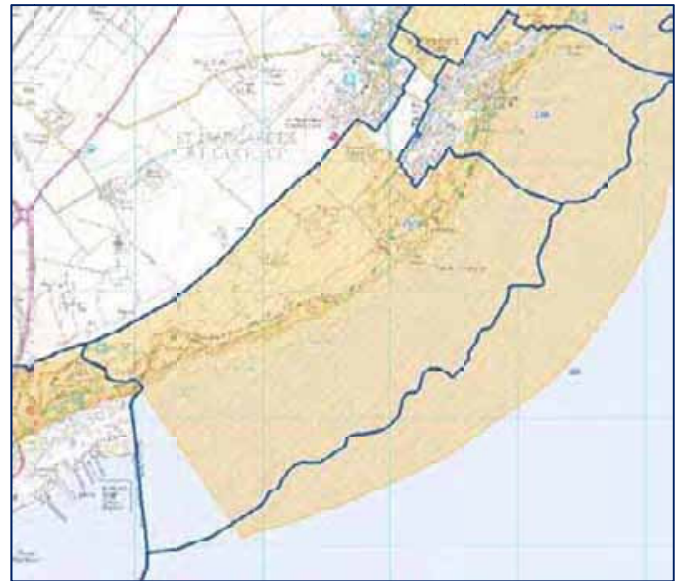
- Iconic seascape – with the white cliffs of Dover forming part of our national identity – a visual reference for leaving and returning to England by sea immortalised in the famous World War II song by Dame Vera Lynn;
- A popular area for recreation, the cliff tops are crossed by the Saxon Shore Way Long Distance Path¹⁰, offering panoramic views across the English Channel to France. At night views feature the blinking red lights of wind turbines near Calais;
- The National Trust's White Cliffs Centre attracts some 250,000 visitors per year. In contrast, the inaccessible base of the cliffs conveys a sense of danger and isolation;
- The sea and sky form vast expanses and backdrop to the cliff-top downland. A general absence of settlement gives rise to a strong relative sense of tranquillity, with exposure to the elements being a key feature;
- 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;
- Telecommunications masts behind the cliffs introduce strong human features into the seascape when viewed from offshore.

¹⁰ 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



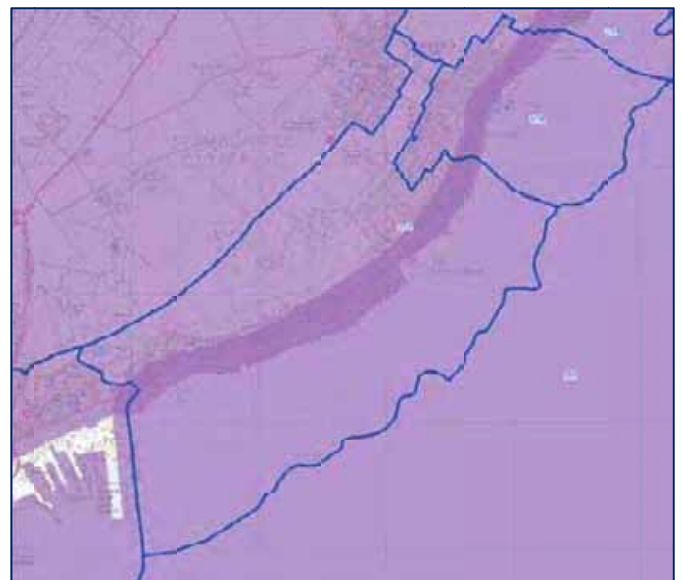
Kent Downs AONB designation



South Foreland Heritage Coast designation



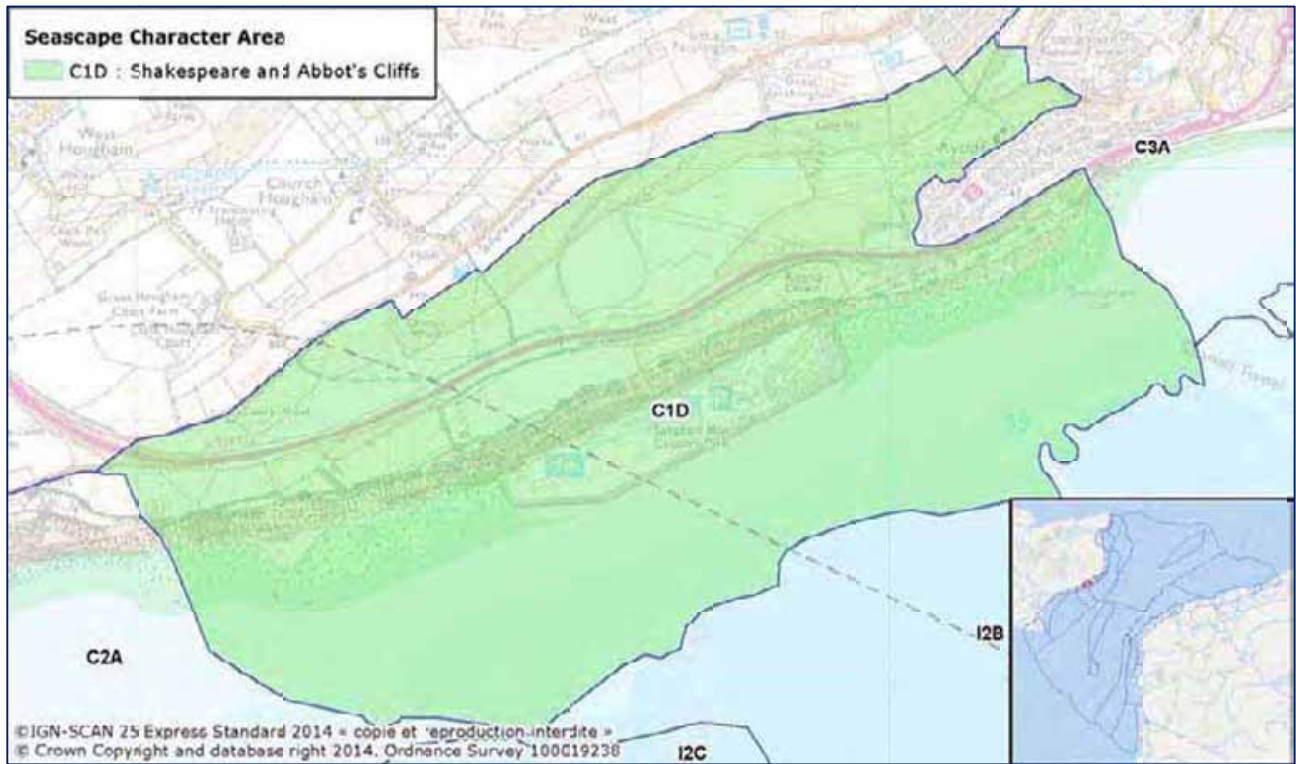
Bathymetry



Onshore and offshore chalk

C1D: Shakespeare and Abbot's Cliffs

Location map



Representative photographs



The Shakespeare and Abbot's Cliffs SCA extends inland to cover the upper slopes of chalk downland backing the cliffs, broadly following the route of the old Folkestone Road. Offshore, the boundary with to East Wear Bay to the west is marked by the transition of the chalk bedrock to clay and greensand. To the east of the SCA lies the busy port and settlement of Dover. The SCA includes the SSSI-designated vegetated chalk cliffs above Samphire Hoe, and chalk reefs, gullies and boulders beneath shallow coastal waters create varied marine ecosystems rich in benthic species. The outer limit broadly follows the 20m bathymetry - all of the coastal waters and intertidal area fall within the recommended Marine Conservation Zone 'Dover to Folkestone'. The Channel Tunnel passes beneath and through this SCA.

Regional Seascape Character Type(s):

C1: Chalk Cliffs and Reefs/Coastal Waters

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- South easterly facing coastline with vegetated white chalk cliffs backed by elevated coastal downland (reaching over 135m AOD). Adjacent coastal waters extend to a maximum depth of 20 metres;
- 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);
- Swathes of nationally important calcareous grassland and scrub on the cliffs and downs, supporting rare plant species such as wild cabbage and a wide variety of invertebrates including butterflies;
- Populations of cliff-nesting birds, including chats, warblers, fulmars and a rare colony of housemartins – creating sound and movement in the seascape;
- Samphire Hoe nature reserve forms an apron abutting the foot of Shakespeare Cliff –created from Channel Tunnel spoil in the 1990s containing an artificial lagoon and coastal grassland;
- Chalk shoreline colonised by a wide variety of marine plants and animals, many nationally rare or at the eastern extent of their range;
- Chalk continues offshore with large boulders, ledges and gullies interspersed with clay and marl bands. These provide a variety of different substrata supporting rare kelp and Rossworm beds;
- Varied seafloor home to diverse sponge fauna, anemones, bryozoans, sea squirts and hydroids, with mobile molluscs, crustaceans, echinoderms and fish;
- Strong south-westerly tidal currents, with water flowing parallel to the coastline in the direction of Folkestone. Exposure to winds funnelling through the Strait can produce 'confused' seas.

Cultural/historic influences

- The Dover Strait as a whole played a key role in the defence of Britain, forming the location for successive invasions and defence;
- Several WWII coastal observation posts and a sound mirror on Abbots Cliff are visible along the clifftop from the sea;
- The chalk cliffs in this SCA form a close visual and cultural connection to the White Cliffs of Dover to the east, together creating an iconic setting for the port of Dover in-between;
- The Channel Tunnel passes through this SCA – a 20th century feat of engineering connecting our island nation with mainland Europe;
- Shakespeare Beach is often the start (or finishing) point for cross-Channel swimmers and the waters are popular for kayaking;
- Rocky seafloor and shallow waters produce ideal conditions for lobster and crab potting, recreational rod-and-line fishing and drift netting for herring and sprat; commercial fishing is more limited due to the exclusion zone around Dover Port;
- Radio mast and church spire at Church Hougham form important navigation marks on the elevated downland behind the SCA, visible above the cliffs in landward views from the sea.

Aesthetic / perceptual qualities

- Shakespeare Cliff features in King Lear (Act 4, Scene 6), hence its modern name;
- Cliff tops crossed by the Saxon Shore Way Long Distance Path and North Downs National Trail, offering panoramic views across the English Channel to France. Samphire Hoe is a valued Green Flag visitor destination;
- The close proximity of Dover 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;

C1 Chalk Cliffs and Reefs/Coastal Waters

- The A20 trunk road cuts through coastal downland, eroding otherwise high relative levels of tranquillity associated with this unsettled section of coast;
- Spectacular views of weather conditions in the Dover Strait, including unusual optical effects in particular light conditions (particularly when viewed from the cliffs or Samphire Hoe).

Mapped evidence used to inform assessment



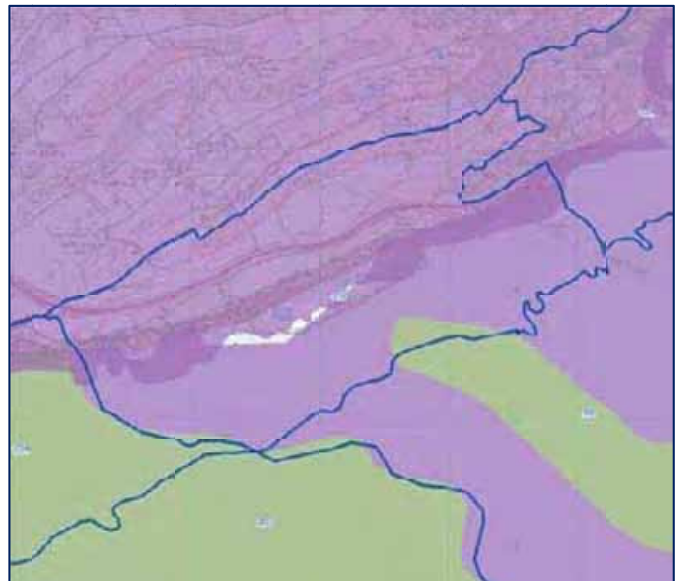
Kent Downs AONB designation



SSSI and Recommended Marine Conservation Zone



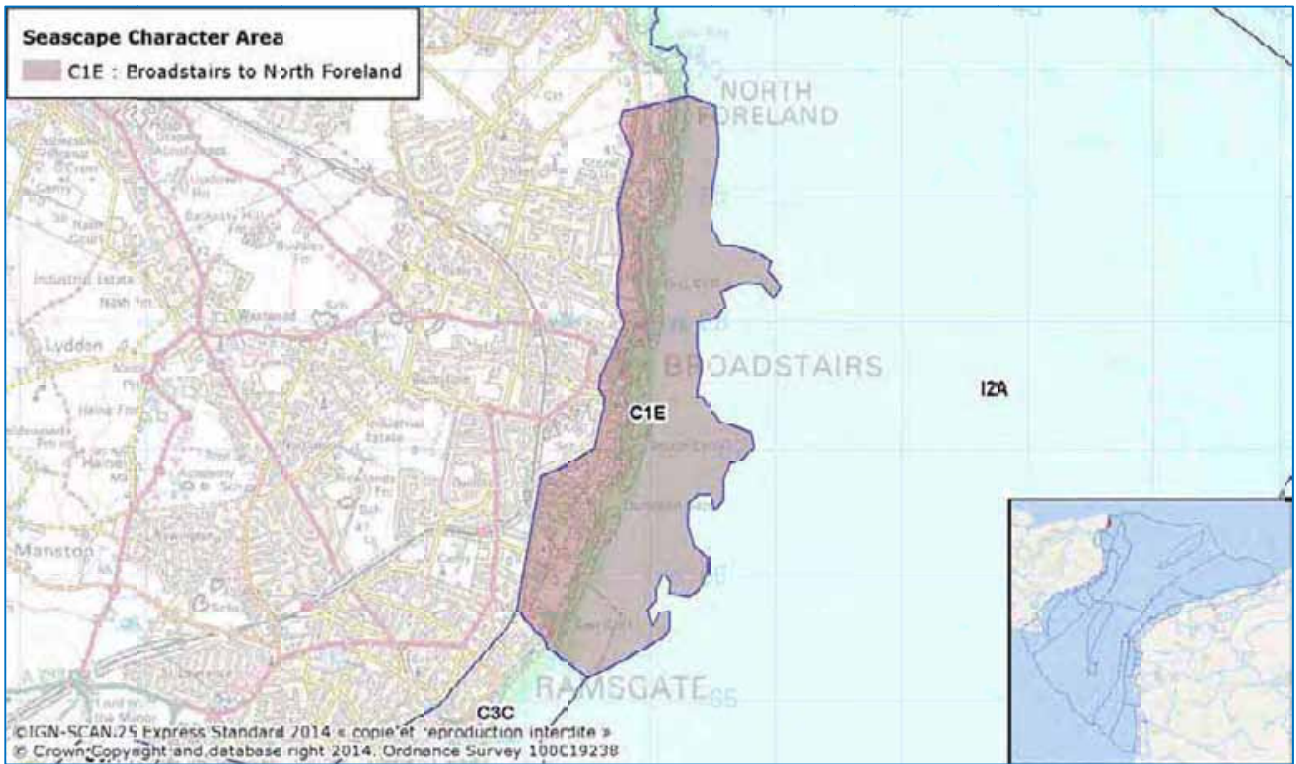
Bathymetry



Onshore and offshore chalk (purple) and offshore clays (green)

C1E: Broadstairs to North Foreland

Location map



Representative photographs



This SCA covers the east facing chalk cliffs of the Thanet coast, part of the longest continuous stretch of coastal chalk in the UK. It extends from the wide sandy beach of Ramsgate to the chalk headland of North Foreland at the eastern extent of Thanet. The North Foreland Lighthouse stands in a prominent position above the cliffs, visible as a landmark from the sea signalling the hazardous waters at the meeting of the tides of the North Sea and the Channel and a reminder of the treacherous seas of the Goodwin Sands offshore in the Strait. The Broadstairs coastline is recognised nationally and internationally for its biodiversity value, with the chalk geology of the cliffs, intertidal and offshore zone giving rise to rich coastal and marine habitats. The high cliffs afford long views across the North Sea and entrance to the Dover Strait, with ships, tankers and the Thanet wind farm forming visible features on the horizon.

Seascape Character Type(s):

C1: Chalk Cliffs and Reefs/Coastal Waters

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- East facing coastline of the Isle of Thanet, where the Thames Estuary meets the English Channel at North Foreland;
- Chalk seabed forming part of the longest continuous stretch of coastal chalk in the UK, outcropping along the coast as distinctive low white cliffs;
- The chalk headland of North Foreland in the north of the area rises to approximately 40m AOD and commands views across the North Sea;
- Sandy bays punctuate the base of the cliffs, with a narrow intertidal band, with tidal rock pools, including Stone Bay, Dumpton Gap and the larger Viking Bay in Broadstairs;
- Coastal waters extending to a maximum depth of 15 metres, with intertidal and subtidal chalk rocks forming sublittoral chalk platforms, reefs and submerged sea caves supporting a diverse range of marine flora and fauna including rich algal communities;
- Internationally valued for wintering birds including turnstone and wader species and a large number of migratory birds;
- The biodiversity value of the coastline is reflected by the large number of marine and coastal designations including the Thanet Coast SAC and Thanet Coast and Sandwich Bay Ramsar site and Thanet Coast MCZ;
- The Thanet Coast MCZ includes a complex intertidal biogenic reef of blue mussel beds and ross worm reefs, and the rare stalked jellyfish;
- Exposed seascape in north-easterly gales at the opening of the Thames Estuary and North Sea;
- Tidal streams sweep down from the North Sea in a north-south direction meeting the westerly tides of the Channel.

Cultural/historic influences

- A heavily developed coastal hinterland, with the town of Broadstairs forming part of the almost continuous conurbation along the Thanet coast;
- Broadstairs developed from an ancient small farming, fishing and boat- building community;
- A popular seaside town, which began its rise in popularity as a fashionable seaside resort at the turn of the 19th century;
- Broadstairs harbour is a working harbour, and part of the town's historic Conservation Area which includes a wealth of architectural heritage such as Victorian terraces along the promenade, narrow winding streets and cottages;
- Proximity of the wider area to mainland Europe means it holds strategic and historical importance – including the reputed arrival of Hengist and Horsa in 449AD on the sands of Broadstairs, the first Kings of the Anglo-Saxon kingdom of Kent;
- North Foreland lighthouse guides ships passing into and leaving the Strait, forming a prominent coastal landmark. Built in 1691, it was the last Trinity Lighthouse to be automated in 1998;
- The coast has been modified by the construction of sea defences, including sea walls to protect the coastline from erosion;
- The seascape is an important resource for tourism and recreation including the main resort beach of Viking Bay and recreational sailing from Broadstairs Sailing Club;
- Relatively limited commercial fishing activity associated with Broadstairs.

Aesthetic / perceptual qualities

- Breath-taking views from the cliff tops, such as across Viking Bay with Bleak House on the horizon;

- Literary links with Charles Dickens who frequently visited Bleak House and wrote David Copperfield whilst staying there;
- Broadstairs hosts an annual Folk Week Festival, attracting thousands of visitors to the town;
- The pattern of bays and headlands provides long sweeping views of the coast enjoyed from the Thanet Coastal Path;
- Colourful beach huts lining the coastline form charismatic features visible the coastal waters.

Mapped evidence used to inform assessment



Bathymetry (as shown on the Marine Charts)



Marine Conservation Zone designation



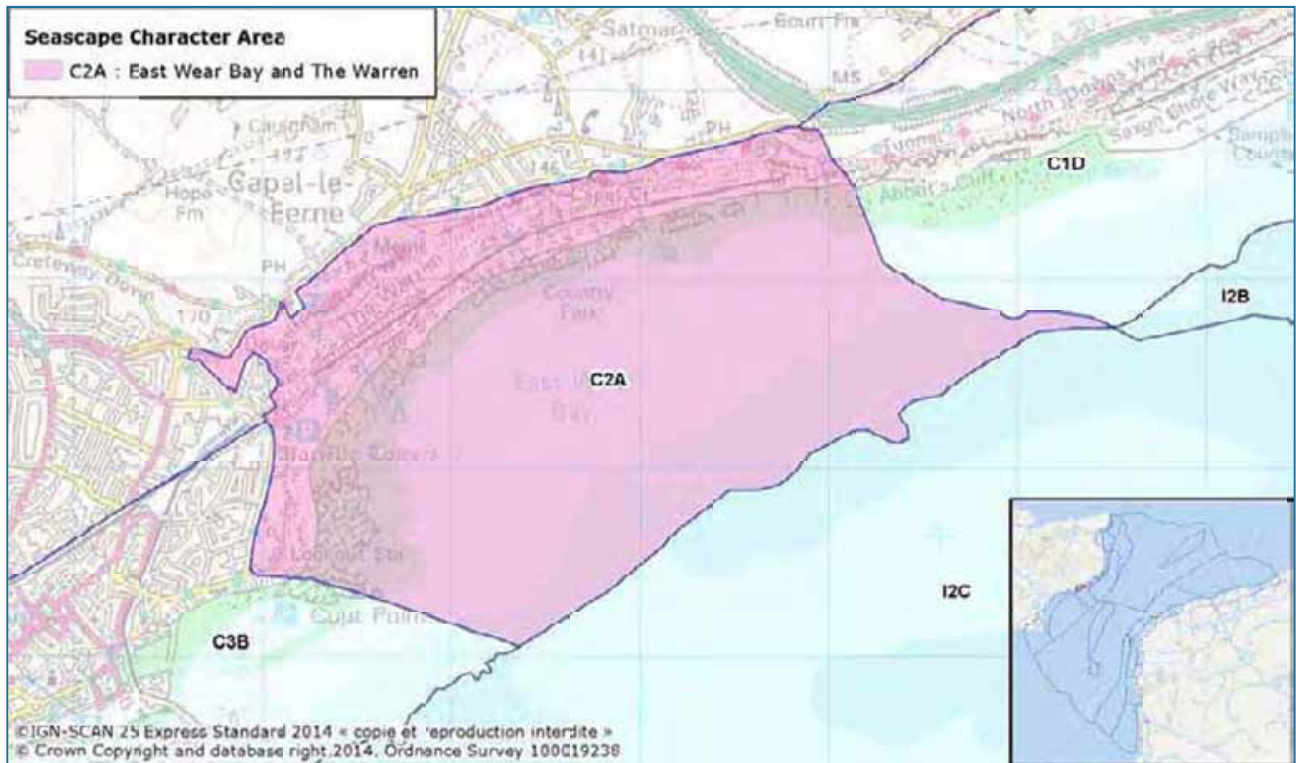
Other coastal and marine nature conservation designations



Offshore geology (chalk)

C2A: East Wear Bay and The Warren

Location map



Representative photographs



This SCA contains East Wear Bay, located immediately east of Folkestone, along with its adjacent SSSI-designated coastline. The varied geology of the area contributes greatly to character, with vegetated chalk/marly chalk cliffs contrasting with a band of Gault clay and greensand cliffs outcropping at Copt Point. This variation continues offshore, creating conditions for a rich and diverse marine ecosystem within the recommended Dover to Folkestone Marine Conservation Zone (MCZ). The area's turbulent history is evidenced by Napoleonic Martello Towers on the cliffs, the Battle of Britain memorial and the debris of a British ship destroyed by long-range German shells in World War 2. The bay's generally sheltered waters reach a maximum depth of 15m and are subject to the strong tidal currents associated with the Strait. The large bay is accessible for recreation; in the absence of road access and large scale development represents strong qualities of tranquillity and remoteness.

Seascope Character Type(s):

C2: Greensand Cliffs and Coastal Waters/Reefs

Regional Marine Character Area(s):

MCA 10: Dungeness, Hythe & East Wear Bays

Seascape Character Description

Natural influences

- South-easterly facing bay with waters reaching a maximum depth of 15m, framed to the west by the prominent headland of Copt Point;
- Bay backed by a distinctive coastline of vegetated chalk cliffs rising to over 150m AOD, overlying contrasting band of soft Gault Clay and Lower Greensand cliffs and subject to landslips;
- Unique area of Gault clay and Greensand cliffs outcropping at Copt Point;
- Majority of the coastline within the Folkestone Warren SSSI, valued for its calcareous and maritime grasslands, woodland and scrub supporting a wide range of birds and invertebrates;
- Chalk reefs, ledges and gullies supporting a diverse range of marine flora and fauna including the short-snouted seahorse and native oyster. Peat and clay exposures are found where the subtidal chalk grades into chalk marl clay;
- Rocky seabed off Copt Point with extensive blue mussel beds; feeding grounds for large numbers of starfish; the Greensand headland itself is home to unique algal assemblages;
- Mixed marine sediment rich in mobile animal species, including brittlestars, squat lobsters, crabs, fish and molluscs, as well as sessile species such as anemones;
- Strong south-westerly tidal currents, with water flowing parallel to the coastline. Dangerous rocky ledges off Copt Point create hazards for navigation;
- The shape of the bay provides some shelter from westerly winds funnelling up the Strait, sometimes used for temporary anchorage.

Cultural/historic influences

- Fossil-rich exposures of Folkestone Beds and Gault representing the single most important locality for studying the sedimentology and stratigraphy of these formations in England. The chalk cliffs have been studied over the centuries to further the science of geology;
- An internationally significant prehistoric settlement and trading site, succeeded by a Roman villa with Roman naval associations (a scheduled monument) is situated on the cliff-top overlooking East Wear Bay;
- Excavations revealed the presence of a Late Iron Age manufacturing site exploiting the locally available Greensand sandstone to produce querns and mortars; considerable quantities of archaeological material are present on the foreshore below;
- Nationally important Martello Towers on East Cliff and the Battle of Britain memorial sited above The Warren, illustrating the wider Strait's long and turbulent history of invasion and defence;
- A number of coastal observation posts and a rocket battery site (the latter now the site of the Battle of Britain memorial) can be found along the top of the Chalk cliffs at Capel-Le-Ferne;
- The remains of a WWII coastal gun battery survive on Copt Point, along with a Cold War ROC post;
- Nationally important Martello Towers on East Cliff and the Battle of Britain memorial sited above The Warren, illustrating the wider Strait's long and turbulent history of invasion and defence;
- SCA includes submerged debris believed to be from the *Empire Lough* – a British steam ship en-route to Normandy during WWII. It was struck by long-range German shells in 1944;
- The SCA is an inshore traffic area for vessels less than 20m length. It occasionally provides 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.

Aesthetic / perceptual qualities

- Long, panoramic views afforded from the cliff tops(which are crossed by the North Downs Way & Saxon Shore Way National Trails) across the Dover Strait;
- An area of coast is popular for recreation, including fossil hunting, although absence of development creates particular qualities of wildness and remoteness within the Bay;
- Marked change in geology from the white chalk to the grey Gault clay is strongly visible when viewing the coast from the sea;
- Naturalistic seascape dominated by sounds of the waves and the elements; interrupted only by the presence of boats and fishing vessels and views to busier seascapes (and coastal development at Folkestone and Dover);
- Prominent telecommunications masts sit above the elevated downland at Capel-le-Ferne, forming day marks visible from long distances offshore;
- The close proximity of Dover and Folkestone harbours means ferries, fishing boats and large cargo vessels are frequent seascape features, sources of movement and sound within the SCA.

Mapped evidence used to inform assessment



Bathymetry



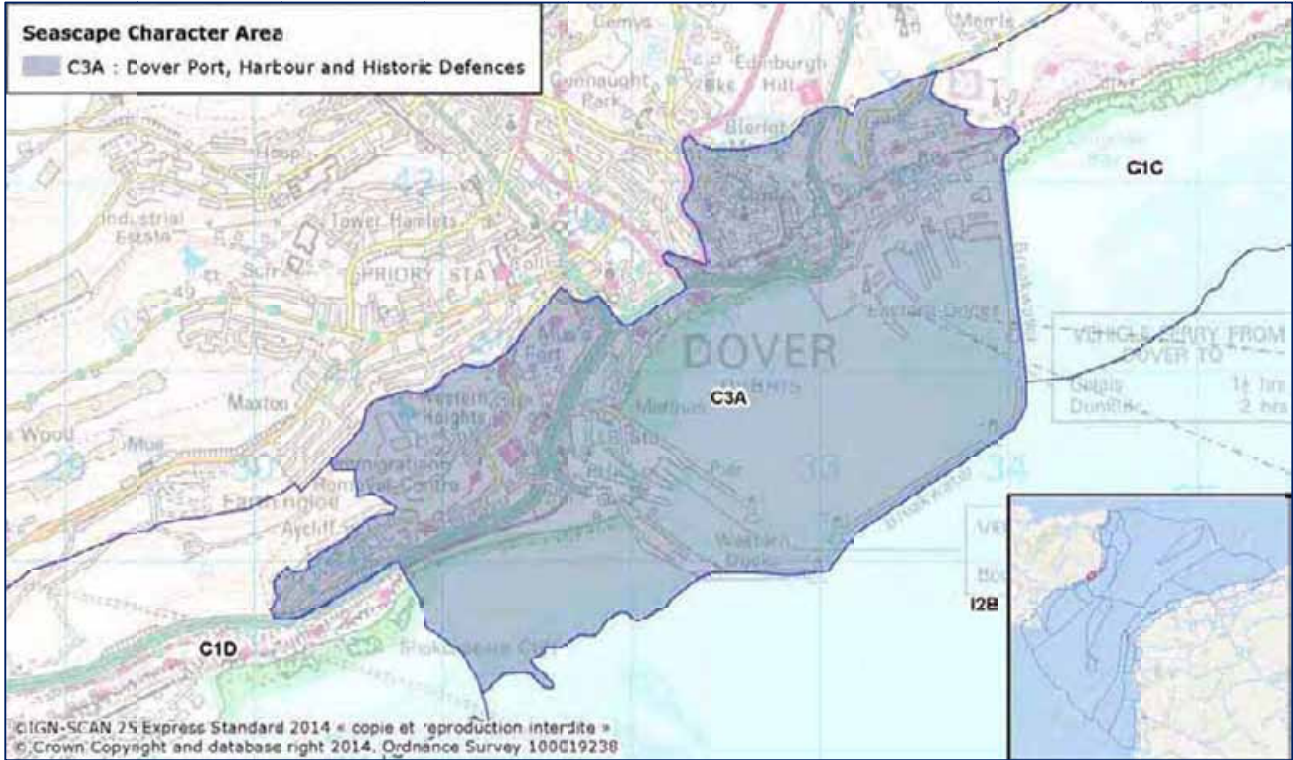
Bedrock geology



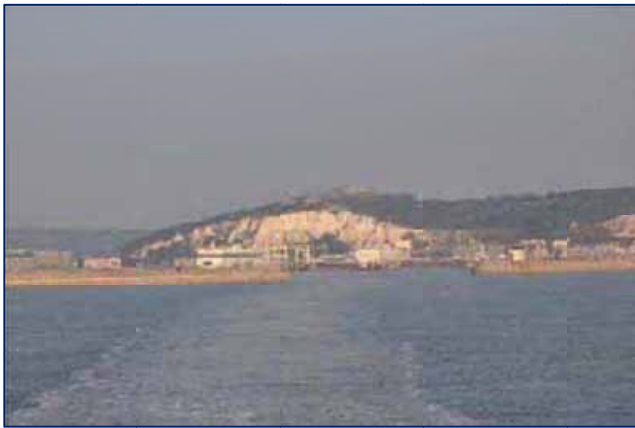
Location of ship wrecks and shipping lanes

C3A: Dover Port, Harbour and Historic Defences

Location map



Representative photographs



This SCA comprises the Port of Dover, where the River Dour breaches the line of soaring white cliffs and includes the Eastern Docks (ferry terminal), Western Docks enclosed by the distinctive harbour arms, plus a small area to the west encompassing the docks and seafront development. The distinctive backdrop of defended hills at Dover Castle and the Western Heights, overlooking the port, form prominent features in the view from the sea. The white cliffs afford iconic views across the Strait to a clear silhouette of the French Coast. The frequent movement of ferries in and out of the port and across the main shipping channels is a dominant visible and audible feature; the offloading of cars and freight onto the road network creates a busy seascape of constant movement. The views of the White Cliffs from ships leaving Dover and returning to England are a deeply held symbol of national identity.

Seascape Character Type(s):

C3: Ports, Harbours and Seafront Development

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- Port of Dover, developed at the point where the where the River Dour breaches the line of soaring white cliffs – a strategic entry and departure point for England;
- Chalk continues from the cliffs to form the seabed;
- Heavy seas common at port entrances – with steep swells particularly in south westerly gales;
- Fishing exclusion zone – limits fishing activity in this area of busy sea traffic;
- Includes part of the more extensive Dover - Kingsdown SSSI on the cliffs above the port with a small area of distinctive chalk grassland.

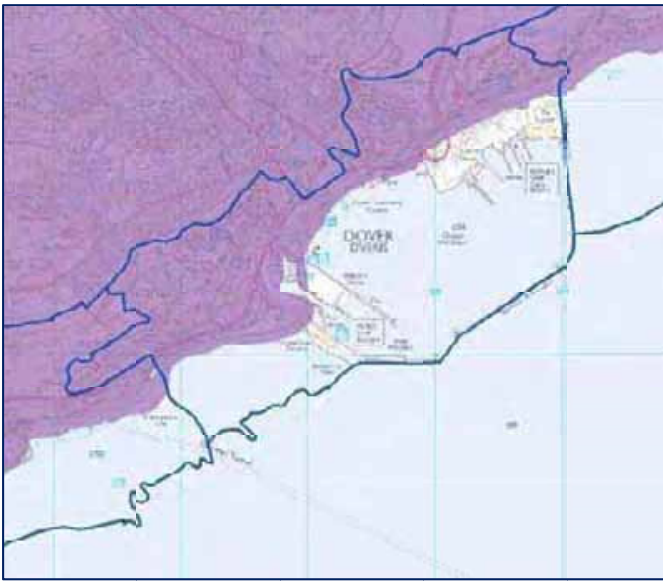
Cultural/historic influences

- The deep cleft in the chalk cliffs at Dover has long provided shelter for ships plying the Strait;
- A long history of seafaring – point of departure and arrival by sea. A Bronze Age boat preserved in Dover Museum is evidence for early maritime activity;
- Strategic importance as closest port to mainland Europe –the Dover Harbour Board was established in 1606;
- Skyline dominated by Dover Castle strategically located overlooking the town below – long forming an important land and navigation mark – perpetuating the role of the Roman lighthouse and symbolic of the successive invasion and defence of the British Isles;
- Huge scale and complexity of fortified hills above Dover at the Western Heights built as protection from Napoleonic invasion including miles of tunnels constructed in the chalk bedrock as barracks;
- World War II front line fortifications and defences at Dover Castle and the Western Heights including the secret tunnels – re-used as a military command centre, air raid shelter and underground hospital;
- Prince of Wales/Admiralty Pier built in mid19th century enclosing the bay to enclose a huge sheltered harbour area and yielding impressive views back to the port;
- Eastern docks now form large car ferry terminal; western docks formerly the terminal for cross channel rail services (Golden Arrow) now redeveloped as Dover Cruise terminal;
- Setting and departure/arrival point for numerous channel crossings including Blériot's landing after making the first manned flight across the Channel in 1909, the departure of Royal Flying Corps first flight to France in August, 1914, plus numerous cross channel swims;
- Dominated by large scale port infrastructure, often with huge cruise ships dwarfing the local townscape;
- A smaller scale townscape of nineteenth century white stuccoed terraces and impressive seaside crescents in front of soaring chalk cliffs.

Aesthetic/perceptual qualities

- Port of Dover and associated white cliffs are a visual reference for leaving and returning to England by sea, epitomised in Vera Lynn's popular World War II song;
- Recorded in art and literature e.g. JMW Turner's 'View of Dover from the sea' (1822) and evocatively described in Mathew Arnold's poem Dover Beach "*Upon the straits; on the French coast the light Gleams and is gone; the cliffs of England stand, Glimmering and vast, out in the tranquil bay*";
- Europe's busiest ferry port – creating an active seascape of constant movement and noise;
- Harbour actively used for recreational watersports including dinghy sailing, paddle-boarding, windsurfing and kayaking, plus marina facilities for visiting yachts;
- Lighting and movement contribute to a complex night time seascape with lights of shipping activity, navigation aids, plus those on French coastline (including wind turbines) visible on the horizon;

Mapped evidence used to inform assessment



Onshore Chalk



Shipping zones and restricted areas



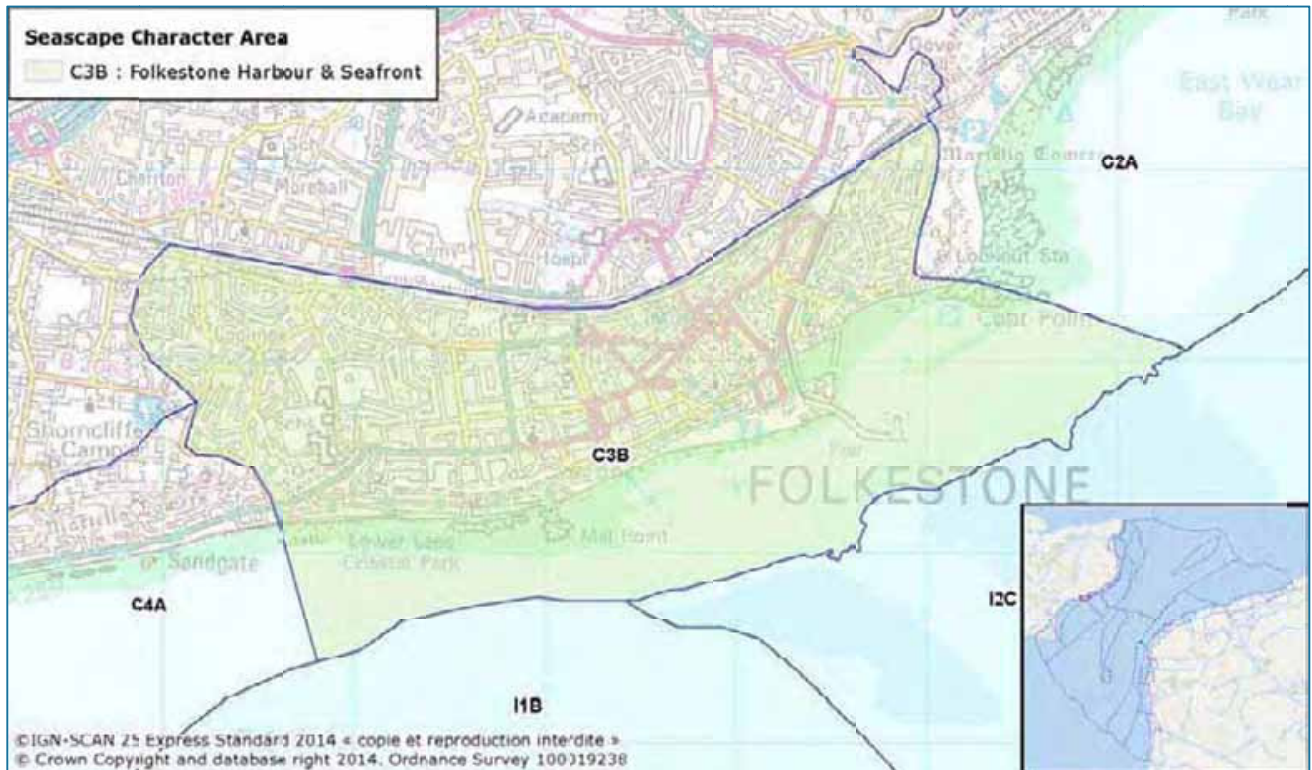
Bathymetry



Nearby terrestrial and marine nature conservation designations

C3B: Folkestone Harbour and Seafront

Location map



Representative photographs



The Folkestone Harbour and Seafront SCA covers the historic harbour of Folkestone (originally built by Thomas Telford in 1809), and seafront development stretching to Sandgate on the edge of Hythe Bay. This is an eroding and historically heavily defended coastline, strategically located at one of the closest entry points to the British Isles from France. Narrow shingle beaches, coastal defences and groynes are fronted by gently shelving coastal waters exposed to the winds and strong tidal currents of this part of the Strait. Although Folkestone no longer functions as a commercial transport port, it is an important hub for fishing activity, a range of coastal activities and as the UK terminal for the Channel Tunnel.

Seascape Character Type(s):

C3: Ports, Harbours and Seafront Development

Regional Marine Character Area(s):

MCA 10: Dungeness, Hythe & East Wear Bays

Seascape Character Description

Natural influences

- South and south-easterly facing harbour and developed coastline with gently shelving coastal waters reaching a maximum depth of 20m bathymetry;
- Distinctive backdrop to Folkestone formed by the elevated chalk downland of the Kent Downs AONB – including Castle Hill (with 11th century earthworks), Sugar Loaf Hill and Dover Hill;
- Underlying geology comprising mudstones, sandstones and siltstones of the Folkestone, Sandgate and Hythe Beds (Lower Greensand group). This is a dynamic, eroding coastline fronted by shingle beaches, groyne and sea defences;
- The western headland overlooking the harbour has yielded significant Pleistocene faunal remains, including mammoth, straight-tusked elephant and hippopotamus;
- The Greensand headland of Copt Point, with its associated dangerous ledges, frames the harbour to the east (see SCA 2A description);
- Submerged rocky ledges at Mole Head (east of the outer breakwater, marked by a red seaward buoy) and Oak End Rocks create hazards to vessels approaching Folkestone Harbour;
- Challenging harbour entry owing to exposure to south and easterly winds, coupled with strong tidal streams (up to two knots). Both the Inner and Outer harbours dry out completely at Low Water.

Cultural/historic influences

- The importance of Folkestone as a trading port was officially recognised in the 13th century, when it became a corporate 'limb' of the Dover Cinque Port;
- The western headland, now known as the Bayle, was the site of an Anglo-Saxon minster founded c. AD 640, a medieval castle (hence the name Bayle, from bailey) and a post-medieval gun battery;
- Martello towers and Sandgate Castle in the west formed part of Henry VIII's string of coastal defences – still visible today as landmarks from the sea. These illustrate the centuries of defence required along this vulnerable section of coastline;
- Transport and trade links to Boulogne established in the 1840s (fast ferry services ceased in 2000). The pier with its prominent lighthouse and breakwater, and now defunct railhead remains as a legacy, affording temporary deep-water shelter to small vessels from westerly weather;
- The port was a major embarkation point for British troops heading to France and the Western Front in WWI. This association was recently commemorated by the Step Short Memorial Arch opened by Prince Harry in August 2014;
- The port was also used by up to 44,000 military personnel during the Dunkirk Evacuation in WWII, with troops disembarking to connect to trains for London;
- Today, the harbour retains a commercial fishing fleet, including trawlers frequenting Hythe Bay. Recreational fishing close to the shore includes lobster and whelk potting, shore and drift netting and beach/sea angling;
- The local beaches and coastal amenities provide valuable recreational opportunities, contributing to the local economy.

Aesthetic / perceptual qualities

- This is a seascape strongly influenced by past and present human activity and development – both on and offshore (including activities linked to the Channel Tunnel terminal north of Folkestone);
- The coastline can be heavily exposed to the elements, particularly the winds funnelling along the Strait in any direction. Complex and strong tides add to a sense of danger and frequently 'confused' seas;

C3 Ports Harbours and Seafront Development

- The AONB-designated chalk downland rising above the SCA provides a unique and distinctive setting to the town, intervisible with Hythe Bay and the wider Strait;
- The area has provided the inspiration for artists over the centuries, including JW Turner in his *Ideas of Folkestone Sketchbook* from 1845 (which contains a range of watercolours of the harbour and surrounding natural and cultural heritage features)¹¹;
- The famous painting '*Landing of the Belgian Refugees*' by Fredo Franzoni depicts the moment in 1914 where 64,000 Belgians fleeing the German invasion at the start of World War I, sought refuge and shelter in Folkestone;
- The town was the home of H.G. Wells for thirteen years, with the local area featuring in *The Sea Lady* and *Kipps* and becoming a renowned literary centre in the Edwardian period. It is now regenerating as a centre for artists.

¹¹ <http://www.tate.org.uk/art/artworks?gid=65976&ws=page&wv=list>

Mapped evidence used to inform assessment



Bathymetry



Offshore bedrock geology



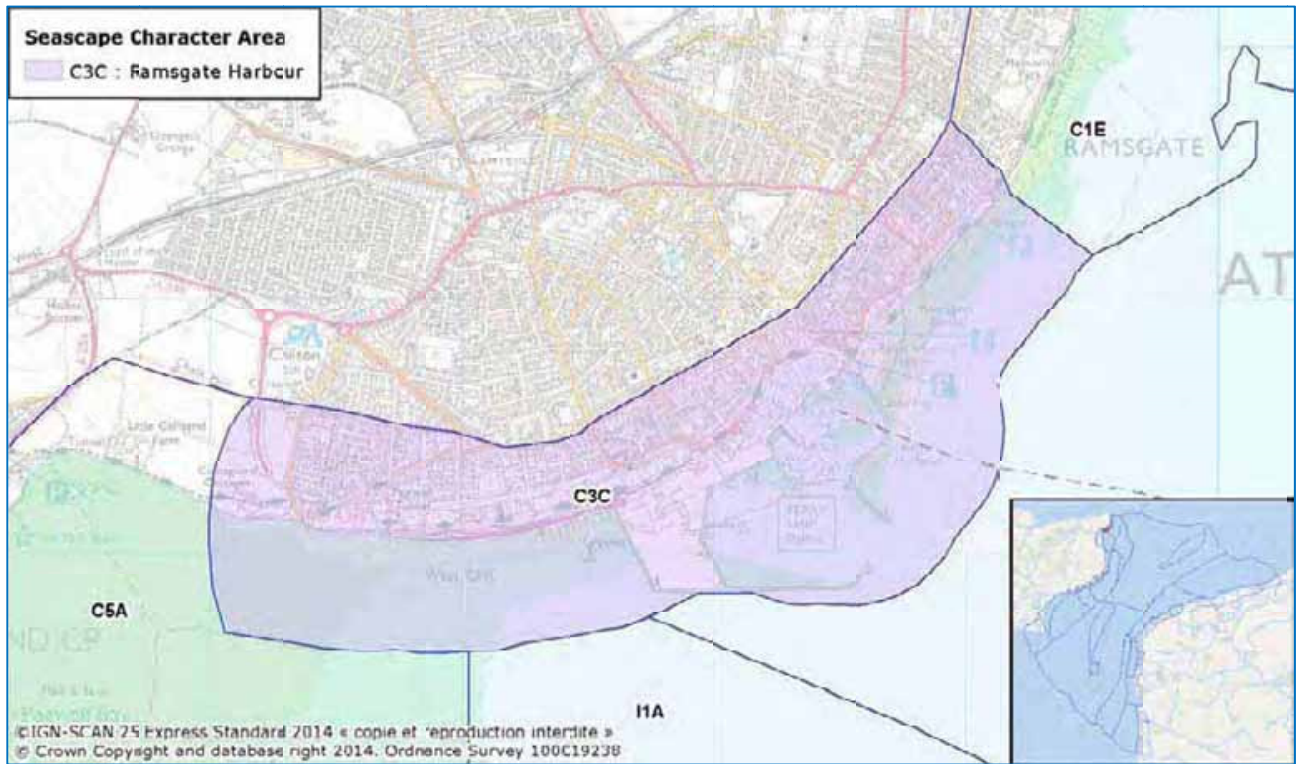
Location of ship wrecks and shipping lanes



Kent Downs AONB

C3C: Ramsgate Harbour

Location map



Representative photographs



The Ramsgate Harbour SCA embraces the historic harbour of Ramsgate (the UK's only Royal Harbour), and seaside development and resort of Ramsgate, stretching to West Cliff and Pegwell Village on the edge of Pegwell Bay. The harbour and port of Ramsgate is historically and strategically important due to its proximity to mainland Europe. The relatively low white cliffs form part of the longest continuous stretch of coastal chalk in the UK and are fronted by sandy beaches and chalk reefs, home to rich algal communities. Although Ramsgate no longer runs ferry services, the commercial port has become a construction and operational base for three nearby offshore wind farms and the harbour marina provides important anchorage for recreational boats.

Seascape Character Type(s):

C3: Ports, Harbours and Seafront Development

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- South and south east facing coastline of the Isle of Thanet, consisting of sandy beaches and relatively low chalk cliffs forming part of the longest continuous stretch of coastal chalk in the UK;
- Chalk bedrock forms ledges, sublittoral chalk platforms along the shore, and reefs - an unusual feature because of the scarcity of hard substrates in the area;
- High turbidity of water and relatively harsh environmental conditions in the extreme southern area of the North Sea where it meets the Channel;
- At the western end of the cliffs in Pegwell Bay, the strata are of great geological interest, where the chalk is overlain by the Thanet Beds and other more recent soft deposits;
- Caves in Pegwell Bay in which unusual algal communities occur with some species unique to Britain;
- High biodiversity value recognised by designations including Thanet Coast SAC, part of the Sandwich and Pegwell Bay SPA, NNR, SSSI and Ramsar site in the western part of the SCA. The eastern part of the SCA is within the Thanet MCZ;
- Tidal streams run fast across the dredged channel to the port of Ramsgate, often making entry to the harbour hazardous for vessels;
- The port of Ramsgate and Royal Harbour provides protection from the severe channel weather and safe anchorage for large numbers of recreational vessels.

Cultural/historic influences

- A heavily developed coastal hinterland, with the town of Ramsgate, forming part of the almost continuous conurbation along the Thanet coast;
- The coming of the railway in the 19th century made Ramsgate an accessible seaside resort for day trips from London, and was also important to the growth of the fishing industry with catches landed in Ramsgate rushed to Billingsgate.
- The town of Ramsgate is situated between two chalk cliffs (the East Cliff and the West Cliff) and developed from a small fishing community and farming community inland;
- The importance of Ramsgate as a trading port was officially recognised in the 13th century, when it became a corporate 'limb' of the Sandwich Cinque Port;
- The harbour was built in 1749, and was bestowed the title of Royal Harbour by King George IV in 1820 and remains is the only Royal Harbour in the UK;
- Ramsgate has long-standing strategic importance, due to its proximity to mainland Europe: Ramsgate was a chief embarkation harbour during the Napoleonic Wars and for the Dunkirk evacuation in 1940;
- The commercial port was built on reclaimed land to the west of the Royal Harbour, in the 1970s. Until recently it operated ferry services to Dunkerque and Ostende and has become a construction and operational base for three offshore wind farms;
- A long history of fishing activity associated with Ramsgate serving a base for fishing from North Sea grounds. Locally the principal species caught are sole, skate, plaice and cod, and a large array of shellfish;
- History of smuggling at Pegwell Bay, and Pegwell Village, where the soft chalk cliffs surrounding the bay made it easy for smugglers to dig tunnels from the beach to the houses and pubs in the nearby village.

Aesthetic / perceptual qualities

- Wide, simple and unrestricted views along the coastline including to Pegwell Bay to the south, from high points such as West Cliff;

- The Thanet Coastal Path follows the cliff tops along the coast and provides long ranging views out;
- In view from the sea the looming shapes of the Pegwell Bay Hotel and golf clubhouses are dominant in this flat open coastal landscape, with long shingle beach evident;
- The Royal Harbour is a busy tourist and leisure attraction and forms an important visual link between Ramsgate's historic waterfront and the open sea and contains marinas for commercial and leisure craft;
- The popularity of Ramsgate as a seaside resort was captured in a famous painting by William Powell Frith 'Ramsgate Sands (Life at the Seaside)' (1851 – 54) which was bought by Queen Victoria, who had visited Ramsgate several times with her mother and where she bathed in the sea for the first time;
- The artist Vincent Van Gogh lived in Ramsgate in April 1876 at the age of 23.

Mapped evidence used to inform assessment



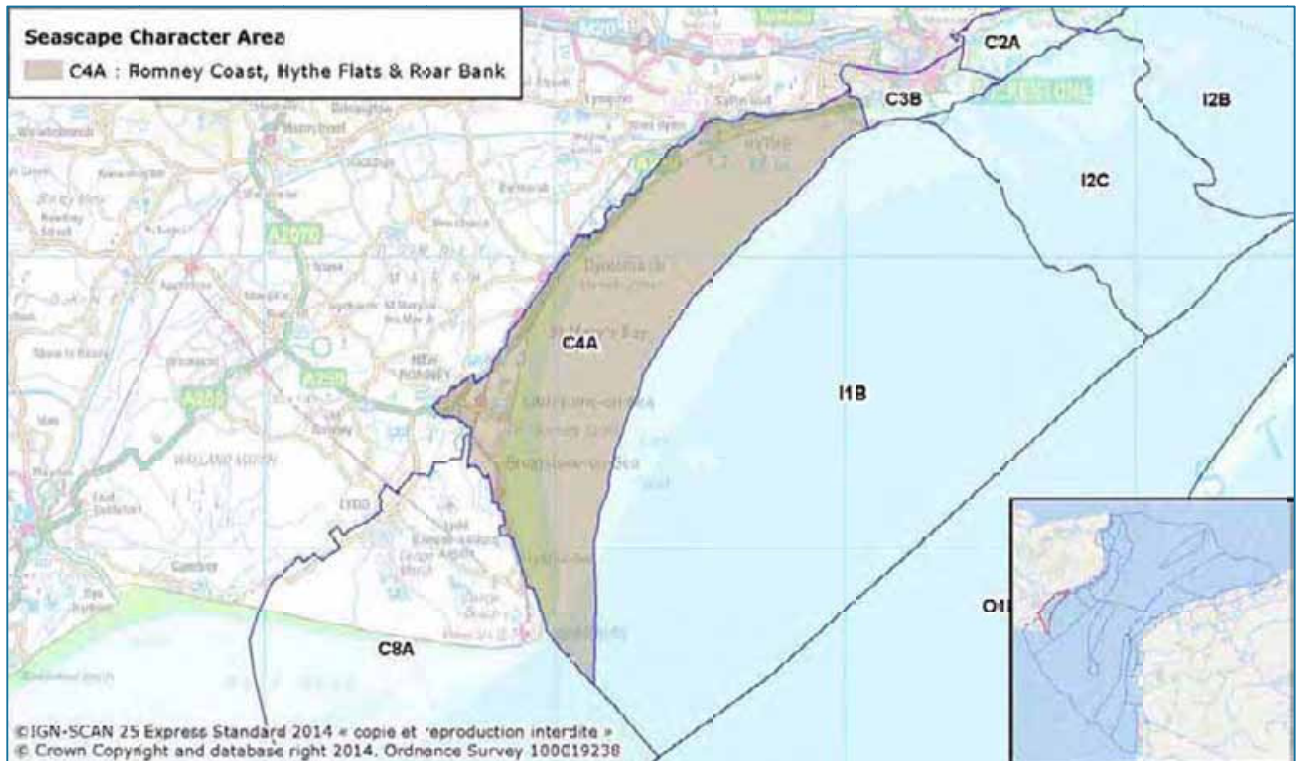
Nature conservation designations



Fishing and navigational activities

C4A: Romney Coast, Hythe Flats and Roar Bank

Location map



Representative photographs



This Seascope Character Area covers the Romney Coastline from Dungeness Point to the edges of Folkestone, extending offshore to comprise shallow coastal waters above a muddy sea bed. A varied coastline of tidal mudflats, shingle and sandy beaches, dunes and saltmarsh provide internationally important habitats and havens for birds. The muddy sediments of the seabed are valuable marine habitats, including within the Hythe Bay recommended Marine Conservation Zone (rMCZ). Martello towers, Dymchurch Redoubt, historic flood defences and the maritime heritage associated with Hythe Cinque Port provide time depth along this popular stretch of coastline. Fishing and a range of coastal and sea-based recreational activities bring the seascape to life, particularly during the summer months.

Seascope Character Type(s):

C4: Shingle Beaches and Coastal Waters

Regional Marine Character Area(s):

MCA 10: Dungeness, Hythe & East Wear Bays

Seascape Character Description

Natural influences

- A flat, open and highly dynamic coastal landscape, strongly shaped by the actions of the sea. The expansive coastal plain of marshes and dykes is fronted by long shingle and sandy beaches with areas of high dunes;
- The coastline and foreshore from Dungeness Point to St Mary's Bay is SAC and SSSI designated, with diverse shingle and wetland habitats supporting rich birdlife and invertebrate assemblages;
- Shallow, sheltered coastal waters reaching a maximum depth of eight metres. The sea bed is characterised by muddy sediments forming Hythe Flats, Roar Bank and Swallow Bank;
- The muddy sea bed resulting from the outflow of the former River Rother to Hythe Bay (rMCZ) is home to sea pen and burrowing megafauna such as spoonworms, burrowing anemone and large burrowing shrimps;
- The site also contains foraging grounds for great cormorant, tern and gull species; as well as nursery and spawning areas for fish such as the undulate ray and sole;
- Hythe military firing range includes an exclusion zone extending offshore. Long-term restricted land and sea access has allowed coastal and marine wildlife to flourish (including within the rMCZ);
- A distinct lowlying coastline.

Cultural/historic influences

- The coastal foreland represents some 5,000 years of coastal evolution and environmental change, which are well documented through both geological study and historical records;
- Hythe was established by Royal Charter in 1155 as one of the original Cinque ports – their primary duty being to maintain ships ready for the Crown in case of need;
- Four early 19th century installations of squat Martello Towers provide historic references along a coastline otherwise characterised by scattered 20th century housing behind the shoreline;
- Dymchurch Redoubt, a nationally important fortification perched on a massive earth bank, is an imposing feature viewed from land and sea. It creates a further historic link to the Napoleonic era;
- Prominent sea defences include the 19th century Kentish ragstone sea wall at Dymchurch, lines of groynes and huge 20th century concrete structures designed to prevent inundation by the sea;
- The sheltered waters are used as a refuge area for ships when stormy conditions occur in the central strait;
- The 1920s Romney, Hythe and Dymchurch miniature steam railway runs along the edge of the urban area – a renowned feature of this coastline and a popular visitor attraction;
- Colourful huts and boats drawn up on the beach form symbolic features of the area's fishing heritage;
- Rich, sheltered seas attract both commercial and recreational fishing, including whelk and lobster potting, trawling for flat-fish, cod and whiting, scalloping towards Dungeness, beach angling and more limited herring and sprat drift netting;
- Other recreational activities include sea kayaking, wind surfing and kite surfing.

Aesthetic / perceptual qualities

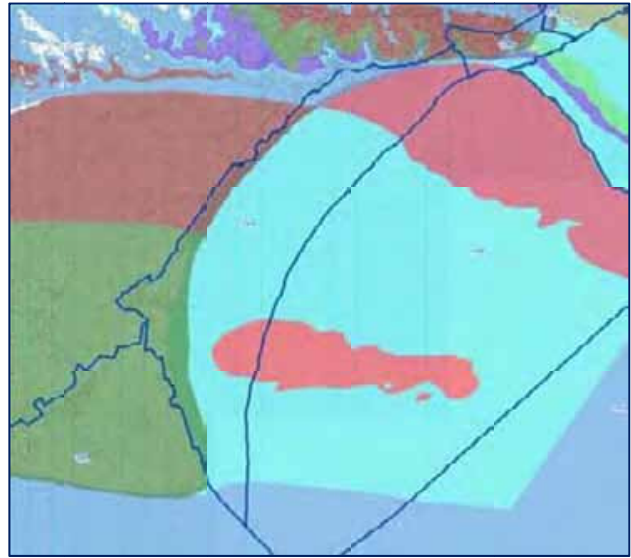
- Perceptual qualities vary according to the season and weather, ranging from bleak and exposed to a bustling hive of activity on a summer's day;
- Caravan parks and sporadic housing developments are strung along the coastal road, visible from the sea above the shoreline. The white sea wall at Hythe also stands out in landward views from the sea;
- Westerly views are dominated by the grey bulk of Dungeness Nuclear Power station and related infrastructure, with associated red and white lights characterising the night-time horizon;

- The wooded slopes and elevated skyline of the Kent Downs AONB form a valued backdrop and rural contrast and texture against the low-lying coastline;
- At night, orange flares can sometimes be seen from the Hythe firing ranges. This is a patrolled area, forming a distinctive 'empty' inshore seascape, with fishing and recreational boats absent;
- Bleak and timeless character of the area has long inspired artists and writers, including the artists' community on the nearby Dungeness shingle (SCA C8A);
- Uninterrupted views into the central strait are often marked by the sight of ships and tankers, as well as associated orange smog in still conditions.

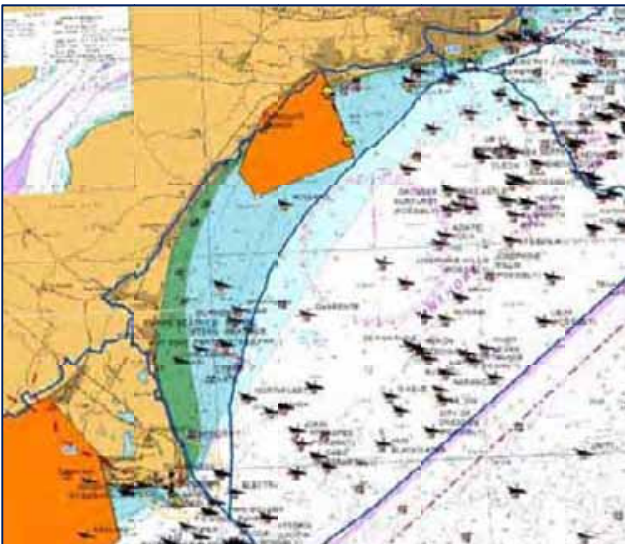
Mapped evidence used to inform assessment



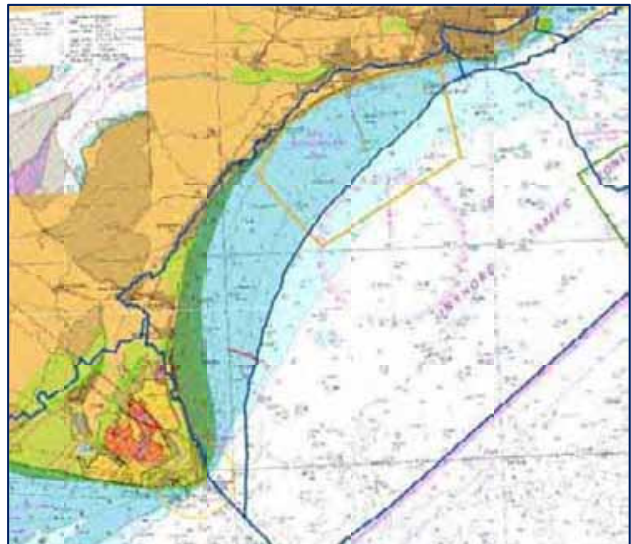
Bathymetry



Bedrock geology



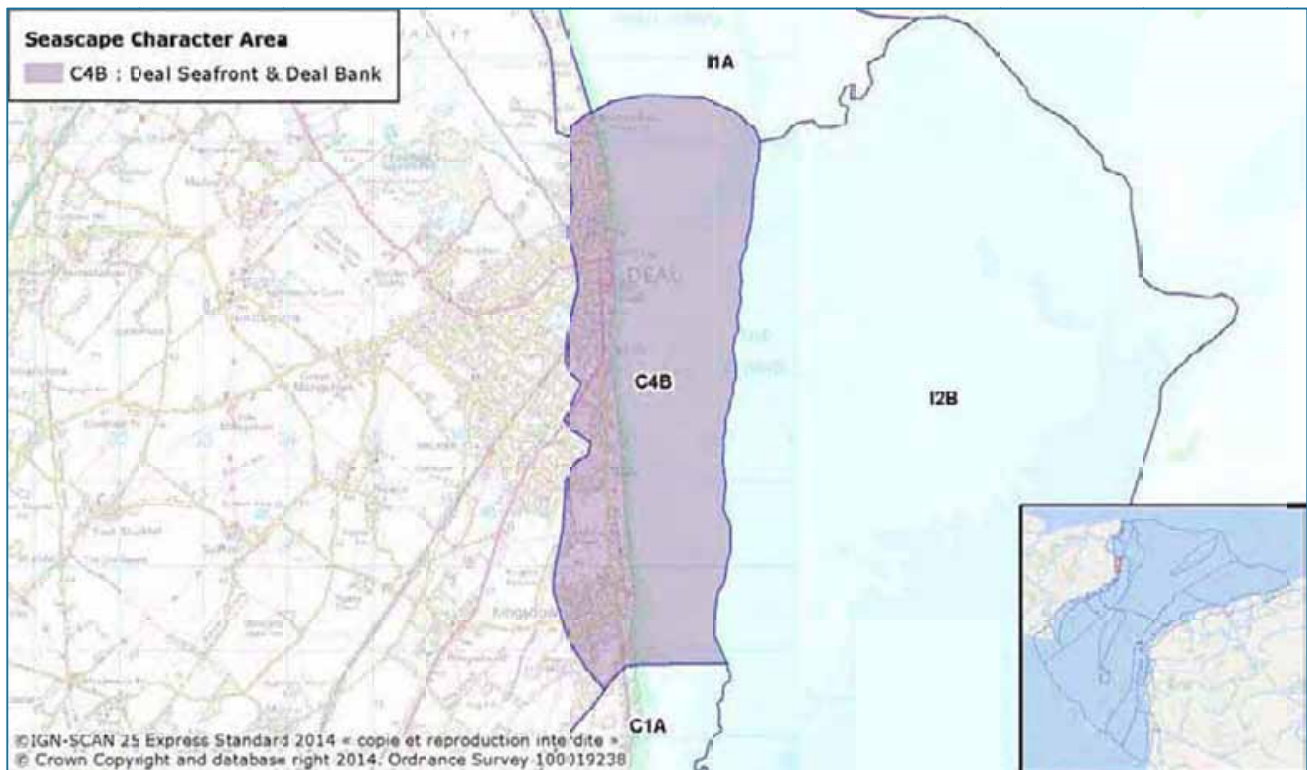
Ship wrecks and military practices areas (orange)



SAC, SSSI and Recommended Marine Conservation Zone

C4B: Deal Seafront and Deal Bank

Location map



Representative photographs



This SCA covers the coastline from the northern fringes of Deal to the edge of the chalk cliffs at Kingsdown. Offshore, it extends up to 1.5 kilometres to the edge of The Downs (SCA I2B), with shallow waters characterising the foreshore (formed by a chalk reef). Development lines the back of a wide and long shingle beach with an open, easterly aspect. Coastal waters are generally sheltered by the Kingsdown headland to the south and Goodwin Sands further offshore, with a rich marine life supporting the local commercial and recreational fishing industry. This is an area steeped in maritime history; the reputed arrival point of Julius Caesar on his first invasion attempt of *Britannia* and the location of the 'trio of castles' built by Henry VIII to protect the anchorage area of The Downs. Expansive views are afforded along the coast to Ramsgate and as far as Dungeness, out to the central shipping lanes and to Thanet offshore windfarm.

Seascape Character Type(s):

C4: Shingle Beaches and Coastal Waters

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- East-facing coastline defined by a long, shingle beach backed by a flat, open coastal plain. The white chalk cliffs of Kingsdown dramatically frame the SCA to the south;
- The gently undulating fields of the East Kent arable reach the coast through gaps in development, providing a rural backdrop to landward views;
- The shingle at Kingsdown is SSSI-designated, with valued plant communities such as sea sandwort, the rare sea pea *Lathyrus japonicus*, sheep's fescue and colonies of the early spider orchid;
- Sea depths gradually increase to a maximum of 12m bathymetry on the edge of The Downs. The Goodwin Sands create sheltered coastal waters in this SCA during north-easterly winds;
- Chalk reefs along the shoreline present hazards to navigation, with waters of less than four metres extending up to a kilometre offshore;
- The southern coastal waters fall within the Dover to Deal rMCZ, with intertidal and subtidal chalk reefs, ledges and gullies supporting a diverse range of marine flora and fauna.

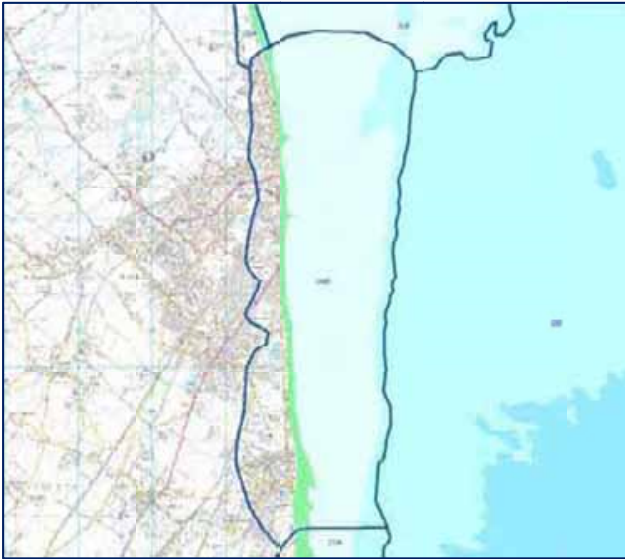
Cultural/historic influences

- The beach at Walmer is thought to be the landing point for Julius Caesar's first invasion attempt of Britain in 55 BC;
- Sandown, Deal and Walmer Castles form a trio of artillery fortresses built by Henry VIII to defend the safe anchorage provided by the nearby Downs. The latter two form recognisable landmarks in views from the sea;
- In 1708 Walmer Castle was the residence of the Lord Warden of the Cinque Ports. Deal is a 'limb' to Sandwich – one of five established by Royal Charter in 1155 to maintain ships ready for the Crown in case of need;
- The Deal Timeball Tower, a Victorian maritime Greenwich Mean Time signal, was used by ships on the Downs for accurate longitudinal navigation. It remains a prominent and symbolic landmark of the town's maritime heritage;
- Coastline famously associated with the 'Boatmen of Walmer, Deal and Kingsdown' – who, as well as saving lives, rushed to be the first to stricken ships to salvage their valuable cargo;
- Boatmen from Deal saved some 200 men from ships wrecked on The Downs during the Great Storm of 1703;
- Deal pier is the last fully intact leisure pier in Kent and a Grade II listed building. The previous Victorian iron pier was stuck and destroyed by a mined Dutch ship in WWII;
- Small fishing boats hauled onto the beach are distinctive features of the area's fishing heritage, with direct fish sales taking place upon landing;
- Dredging for young mussels, lobster and whelk potting, netting for thornback, cod and bass and surface netting for herring and bass take place in the coastal waters;
- Angling from the beach and pier is a popular recreational activity. Other sea-based leisure activities include swimming, kayaking, rowing and sailing.

Aesthetic / perceptual qualities

- Development backs much of the beach, including tightly-packed Georgian and Victorian four-storey houses at Deal, and tall church spires forming conspicuous day marks on the skyline;
- Due to its open profile, wide vistas are afforded along the coastline and out to sea, including to Thanet windfarm, marine traffic in the Strait and as far south as Dungeness Point;
- A strong maritime heritage defines this coastline, shaped by the close, constant relationships between land and sea.

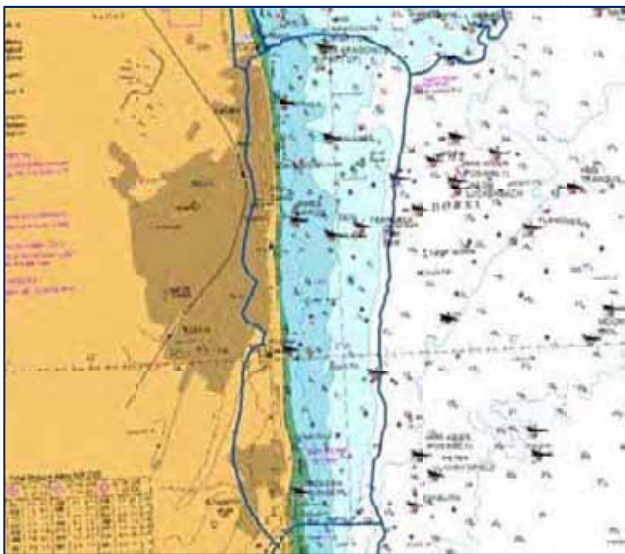
Mapped evidence used to inform assessment



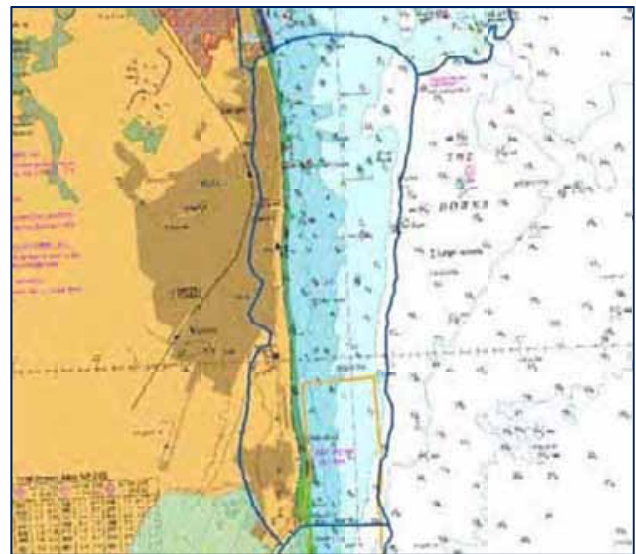
Bathymetry



Bedrock geology



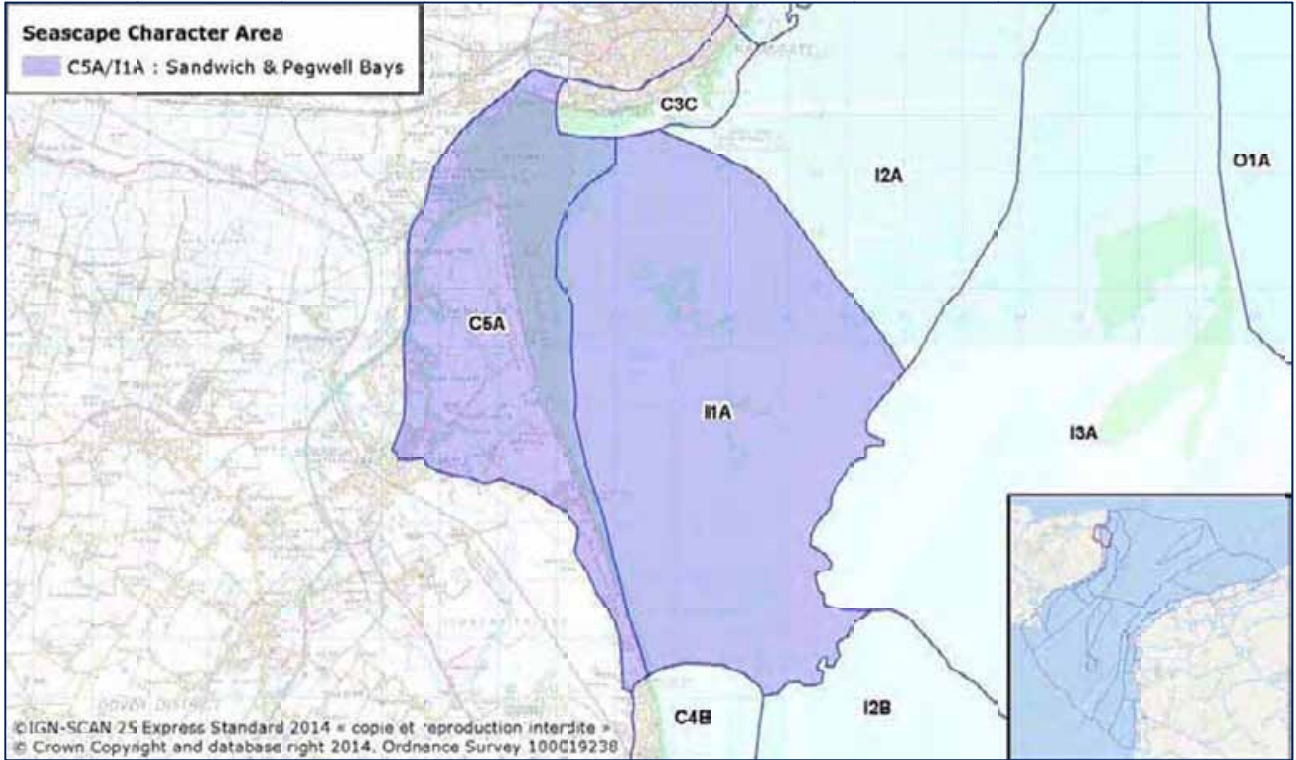
Fishing activity and location of ship wrecks



SSSI and Recommended Marine Conservation Zone

C5A/I1A: Sandwich and Pegwell Bays

Location map



Representative photographs



This SCA represents the point where the Stour enters the Strait and covers the distinctive wide sweeping bay of mud, sand flats and shallow waters contained by the low chalk and flint cliffs at Ramsgate to the north and the transition with the more open seascape off Deal to the south. The inland boundary incorporates the tidal river Stour to Sandwich – an area of former shallow sea. The offshore boundary is formed by the deeper channel of the Gull Stream marking the edge of the Goodwin Sands. The distinctive bay is perceived from both land and sea; a low lying windswept coast of salt marsh, mudflats and shallow waters invoke a strong sense of remoteness in places. A dynamic seascape of uncovered mudflats and shallow waters according to the tides, and shifting sands changing the shape of the coastline. Long history as a place of entry and departure to the Strait and mainland Europe, and strategically important as site of numerous cross channel landings in England, the first cross Channel Hover service, and an important bird migratory flight path.

Seascape Character Type(s):

C5: Tidal Estuaries and Flats

I1: Inshore Bays

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- Shallow inlet onto the Strait at estuary of the River Stour providing strategic entry point to the river and inland;
- Formerly one end of the Wansum channel marking separation of the coast from the Isle of Thanet;
- Huge intertidal area of extensive area of mud and sandflats and shallow offshore waters including small areas of drying land at Cross Ledge and The Brake;
- The offshore sandbank at the Brake plays an important role in moderating storm surges up the Stour;
- Distinguished by distinct area of sedimentary sandstone and mudstone extending out from the bay;
- Flat coastal land and inshore waters enclosed by prominent chalk and flint cliffs at Ramsgate to the east creating distinctive bay with wave cut platform;
- A dynamic seascape – extensive uncovered mudflats contrast with high tide waters;
- Tide floods quickly into the bay with a slack tide out creating a bay of full water for greater length of time;
- Complex mosaic of habitats – including extensive inter tidal mudflats, salt marsh, shingle beach and dunes plus the only area of ancient dune pasture in Kent designated as SSSI, NNR and as a Ramsar site;
- Internationally important for waders and wildfowl both on spring and autumn migration and over winter, large colony of harbour seals;
- The saltmarsh is home to sea lavender and rare golden samphire and the dune pasture provides a habitat for orchids.

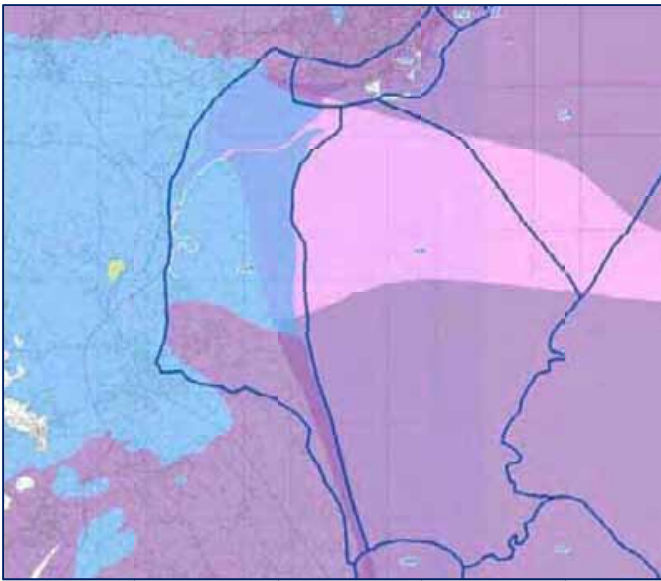
Cultural/historic influences

- Sheltered bay – strategically important as site of numerous cross channel landings in England – Romans, St. Augustine, Saxons, Vikings the launch of the first cross channel Hover service, an important bird migratory flight path;
- Symbolically important Richborough Roman Fort marking the beginning and end of Roman rule in Britain – a major Roman Port – the entry point to Watling Street the Roman Road to Canterbury and London;
- Ebbsfleet was the landing of St. Augustine – the first Christian mission to England in 597AD, commemorated by St Augustine's Cross;
- Sandwich forms one of the five head ports of the Cinque Ports, developed to defend the realm, now more than 3km from the sea and no longer a port;
- Site of early Viking landings and the fabled arrival point of Hengist and Horsa, commemorated by a replica Scandinavian longboat;
- Cross Channel hoverport operating between 1969 and 1982 with concrete apron still discernible;
- Sheltered bay is characterised by lower density of wrecks compared to other parts of the Strait, despite hazardous navigation of shallow/ drying waters and shifting sands;
- Dunes and coastal grassland are the location for two historic golf clubs; The Royal St. George is considered to be one of England's finest links course – internationally renowned for hosting The Open Championship;
- Long history of smuggling at Pegwell;
- Relatively limited fishing activity, apart from local lobster potting, plus occasional set netting (limited by local bylaw) and drifting for bass.

Aesthetic/perceptual qualities

- Distinctive stretch of low lying windswept coast invoking strong sense of remoteness and wildness in places – with sounds of sea, wind and birds;
- Strong sense of movement created by changing tides, watersport activity and birds in flight;
- Recorded in a famous landscape painting by William Dyce in 1858 depicting the area as a popular Victorian pleasure resort;
- Shallow seas provide a safe place for recreational watersports and the bay is regularly used for windsurfing and kitesurfing;
- Recreational boat trips and seal watching on the exposed mudflats of the River Stour are popular activities;
- Extensive mudflats used for bait digging – a distinctive historic scene perpetuated today by lonely figures viewed far from shore at low tide;
- In view from the sea the looming shapes of the Pegwell Bay Hotel and golf clubhouses are dominant in this flat open coastal landscape, with long shingle beach evident.

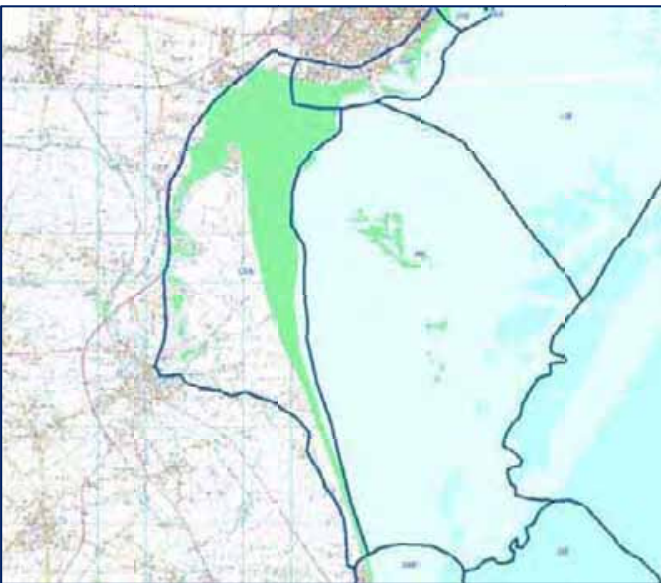
Mapped evidence used to inform assessment



Onshore and offshore geology



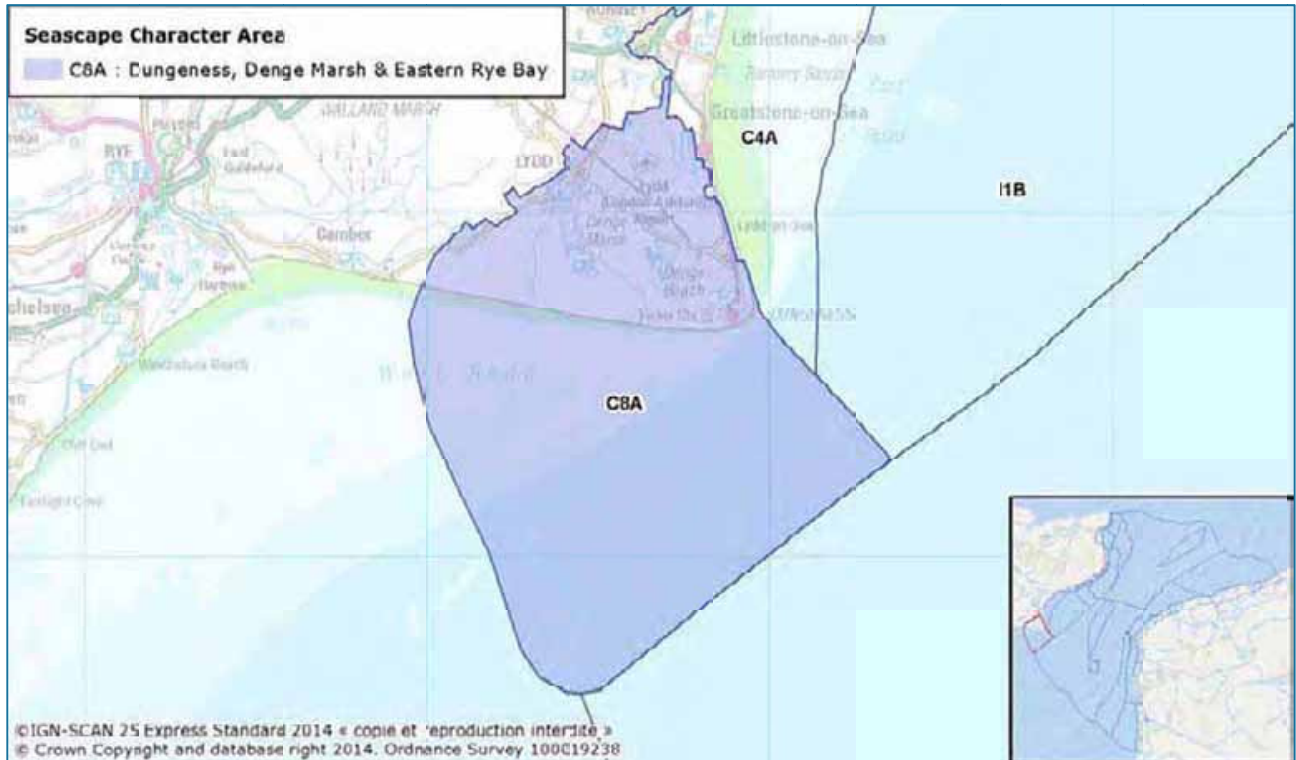
SSSI and SAC Designations and Recommended Marine Conservation Zone



Bathymetry

C8A: Dungeness, Denge Marsh and Eastern Rye Bay

Location map



Representative photographs



This Seascope Character Area comprises the unique shingle headland of Dungeness and the surrounding wetlands of Denge Marsh, extending offshore to the edge of the inshore shipping lane of the Strait. Water depth drops down dramatically from Dungeness Point, quickly reaching over 30m bathymetry. Strong tidal streams and overfalls are associated with the Point, contrasting with the calm, sheltered conditions of Rye Bay. The largest shingle foreland in Britain, much of the area is designated as SAC, SPA, SSSI, NNR and RSPB reserve. Dungeness Power Station forms a conspicuous feature in the flat, empty landscape. It is a popular site for wildlife watching and recreational fishing, with its 'other-worldly' character long attracting writers and artists.

Seascope Character Type(s):

C8: Shingle Headlands and Coastal Waters

Regional Marine Character Area(s):

MCA 10: Hythe & East Wear Bays

Seascape Character Description

Natural influences

- Largest shingle cusped foreland in Great Britain at Dungeness, supporting rich internationally important wildlife habitats, particularly important for birds and invertebrates;
- Extensive areas of wetlands and marshland behind the coast at Denge Marsh, creating a distinctive land/sea interface;
- The unique coastal habitats were formed when the rivers draining the Weald to the north were diverted by the barrier beaches, creating a sheltered saltmarsh and mudflat environment. This was gradually in-filled by sedimentation;
- Water depth increases steadily out into the Channel, with the exception of the Dungeness headland where it deepens rapidly, reaching 30 m depth in a matter of metres;
- Dungeness forms a watershed where the two tides meet - from the North Sea to the east and from the Channel to the west. The strong tidal streams are known as the 'gravy train' as they allow quick passage for vessels traversing the coastline;
- An uneven sea bed combined with the deep water and fast tidal streams make sailing around Dungeness challenging;
- By contrast, Rye Bay is characterised by relatively sheltered, shallow calm waters;
- Prevailing south-westerly waves result in transportation of sediment west to east along the coast, although there is an important reversal at Dungeness where eddies around the foreland cause accretion on the eastern side of Dungeness Point.

Cultural/historic influences

- The coastal foreland represents some 5,000 years of coastal evolution and environmental change, which are well documented through both geological study and historical records;
- The resultant intertidal habitats have been reclaimed on a piecemeal basis by man over many centuries. Human activities have further modified the site, including gravel extraction creating valued wetlands;
- New Romney was established by Royal Charter in 1155 as one of the original Cinque ports – their primary duty being to maintain ships ready for the Crown in case of need. Lydd was an official 'limb' of New Romney;
- Offshore and along the coastal edge are a number of shipwrecks, illustrating the significance of this area of seascape for trade, war and transport for thousands of years;
- Scallop dredging takes place off Dungeness Point, and recreational fishing and sea angling is popular from the shingle beach. Fishing boats and gear hauled onto the beach are charismatic features;
- Denge Sound Mirrows – huge concrete 'listening ears' are one of the best examples of acoustic mirrors constructed in the 1920's and 1930's;
- Lydd Range used by the MOD as a training facility; the restricted zone for live firing extending offshore to the Stephenson Shoal. It forms a distinctive 'empty' inshore seascape;
- Dungeness National Nature Reserve is a popular site for wildlife watching, particularly bird watching and porpoise spotting.

Aesthetic / perceptual qualities

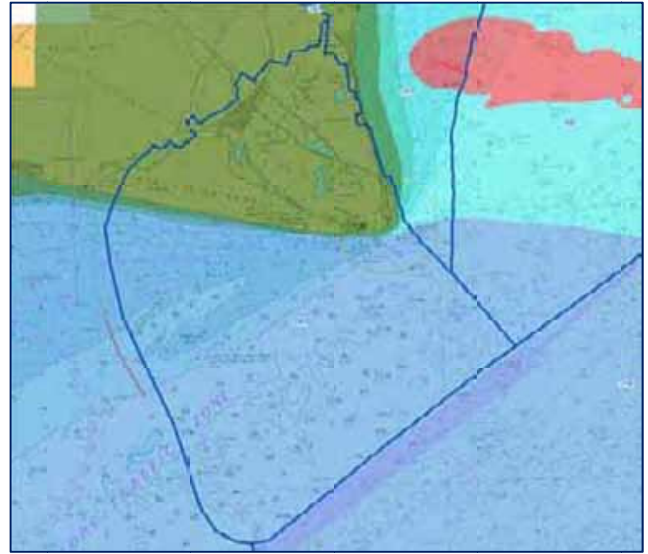
- Dungeness Nuclear Power Station dominates views, towering above the surrounding flat, low landscape;
- The bulk of the power station is visible from far out to sea as the low lying coast disappears from view, appearing as a large grey block or huge container ship, sometimes appearing separated from the land; Closer to land the lighthouse at Dungeness are a prominent feature in views from the sea;

- Distant views to cargo ships and tankers in the busy offshore shipping lanes. There is sometimes an orange haze visible on the horizon as a result of sulphurous emissions from shipping –making the air thick and brown;
- The wind farm to the west of Dungeness and line of associated pylons add to the built up and industrial character, forming a strong contrast of vertical lines on a flat horizon;
- The red lights from the power station, orange military flares and flashing white light from Dungeness lighthouse are features of the night-time seascape;
- Dungeness is classed as the UK's only official desert – it is also sometimes referred to as the sixth continent for its 'otherworldly' remote, wild character;
- These characteristics have attracted artists and writers for centuries, including Derek Jarman – whose vernacular timber cottage and famous shingle garden lie in the shadow of the power station (C4);
- Air traffic movements to and from Lydd airport intermittently break the tranquillity and sounds of nature;
- The dynamic nature gives the coastline a feeling of constant evolution, exposure and suppression to nature's elements. A remote and wild seascape.

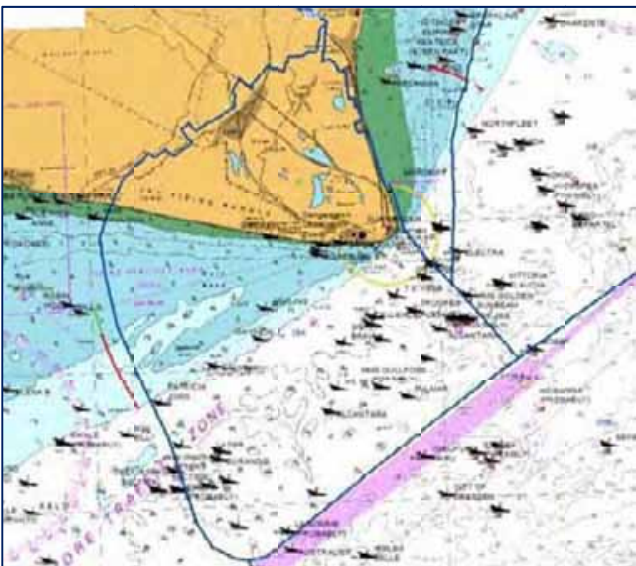
Mapped evidence used to inform assessment



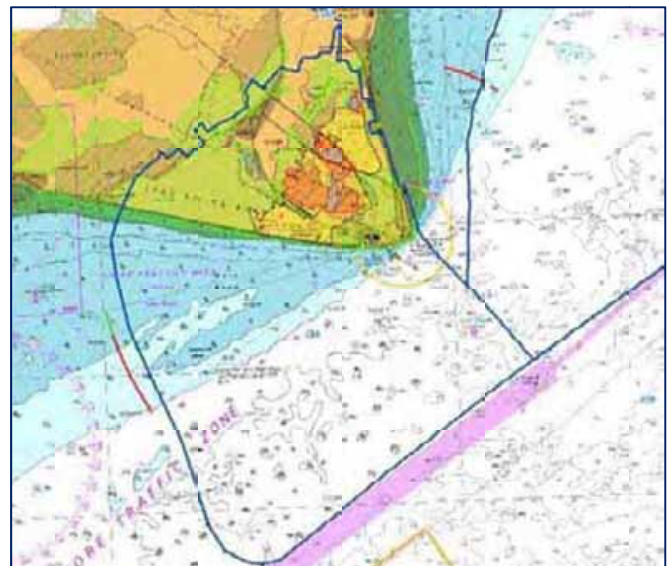
Bathymetry



Bedrock geology



Location of ship wrecks

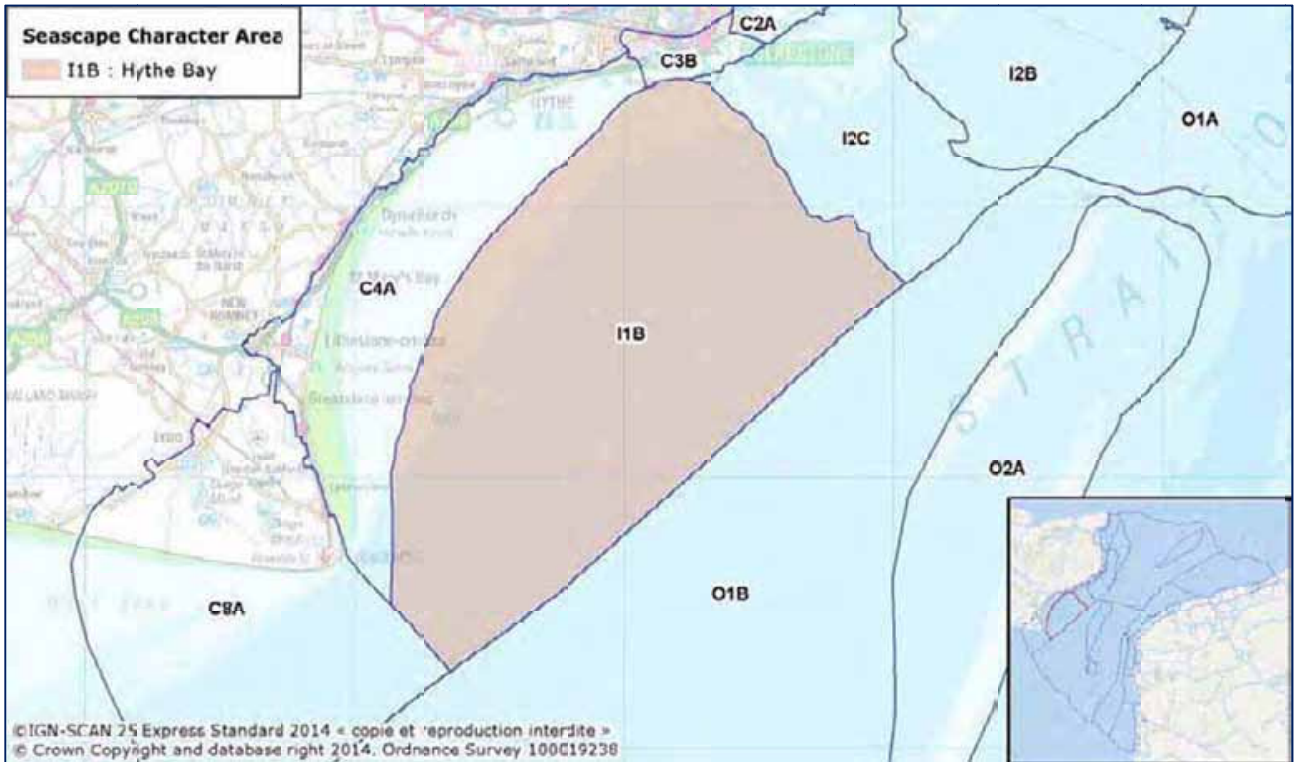


SAC and SSSI designations

Kent Inshore Seascape Character Areas

I1B: Hythe Bay

Location map



Representative photographs



The Hythe Bay SCA is equivalent to the inshore traffic zone lying between the Hythe Flats (coastal waters) and the 30m bathymetry contour, marking the boundary between the inshore and offshore traffic separation zones. The lateral boundaries of the bay are formed by the distinctive shingle spit at Dungeness to the west and the smaller headland at Folkestone to the east. It is an expansive open seascape with long sea views to the low-lying coast with few landmarks discernible from the sea, other than the bulk of the power station at Dungeness which looms out of the sea often appearing marooned from the land like a huge container ship.

Seascape Character Type(s):

I1: Inshore Bays

Regional Marine Character Area(s):

MCA 10: Hythe & East Wear Bays

Seascape Character Description

Natural influences

- A seabed geology of mudstone and sandstone, with some limestone to the west and argillaceous rocks to the east, covered by a complex range of soft sand and gravel sediments;
- Includes part of the designated Folkestone Pomerania MCZ (mainly within I2C) and the recommended Hythe Bay MCZ (mainly within C4A);
- From the sea the wooded slopes rising beyond the coast are visible as a low green edge and form an important backdrop;
- The flat coastal landform means views to the coastal edge are limited –new sea wall defences appear as a gleaming white feature in some views from offshore;
- Generally south westerly tidal currents with rough seas characteristic at Dungeness Point where tides coming up the channel from the Atlantic meet tides from the North Sea.

Cultural/historic influences

- As in much of the Strait there is a high density of wrecks attesting to the intensity of shipping in often hazardous sea conditions;
- Inshore fishing fleet of small boats based at Dungeness, Hythe and Folkestone catching sole, bass and turbot by trawling.
- Further fishing activity includes fixed netting, lobster potting, some scallop dredging and recreational angling;
- A military danger area linked to the firing range extends offshore west of Hythe (largely within C4A) – a patrolled area characterised by absence of offshore activity.

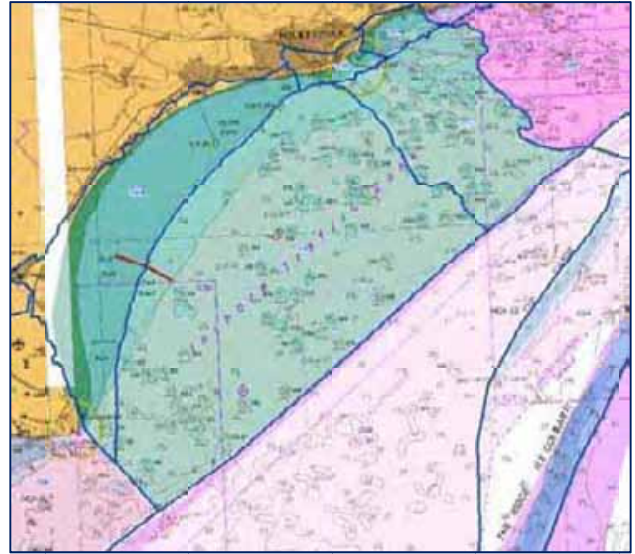
Aesthetic / perceptual qualities

- A vast and comparatively empty seascape compared to much of the Strait. Scale exaggerated by the low lying coast and extensive sea views;
- To the south there are views to larger vessels ships in the shipping channel;
- The looming bulk of Dungeness power station is often the only discernible feature seen in views to the coast;
- Disorientating perception with the power station often appearing to be looming out of the sea, where lower lying land has receded from view;
- Occasional booming noise from the firing range, plus lit flares forming night-time seascape features;
- Long-distance views are afforded in clear conditions to the offshore wind farm at The Caps in France.

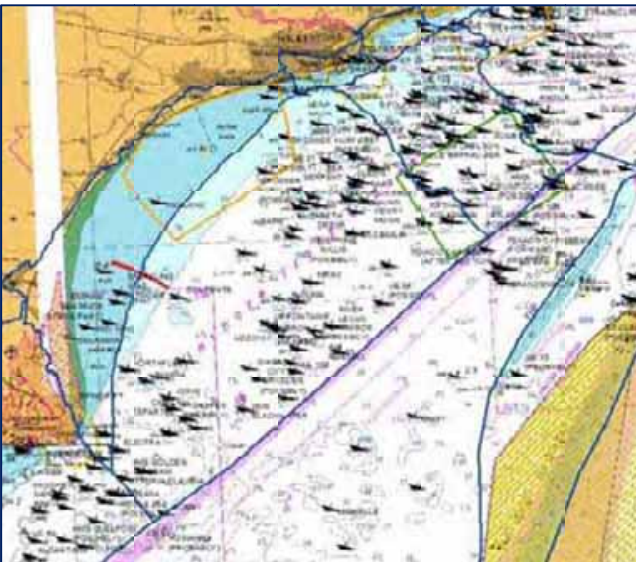
Mapped evidence used to inform assessment



Offshore bedrock geology



MMO Boundary



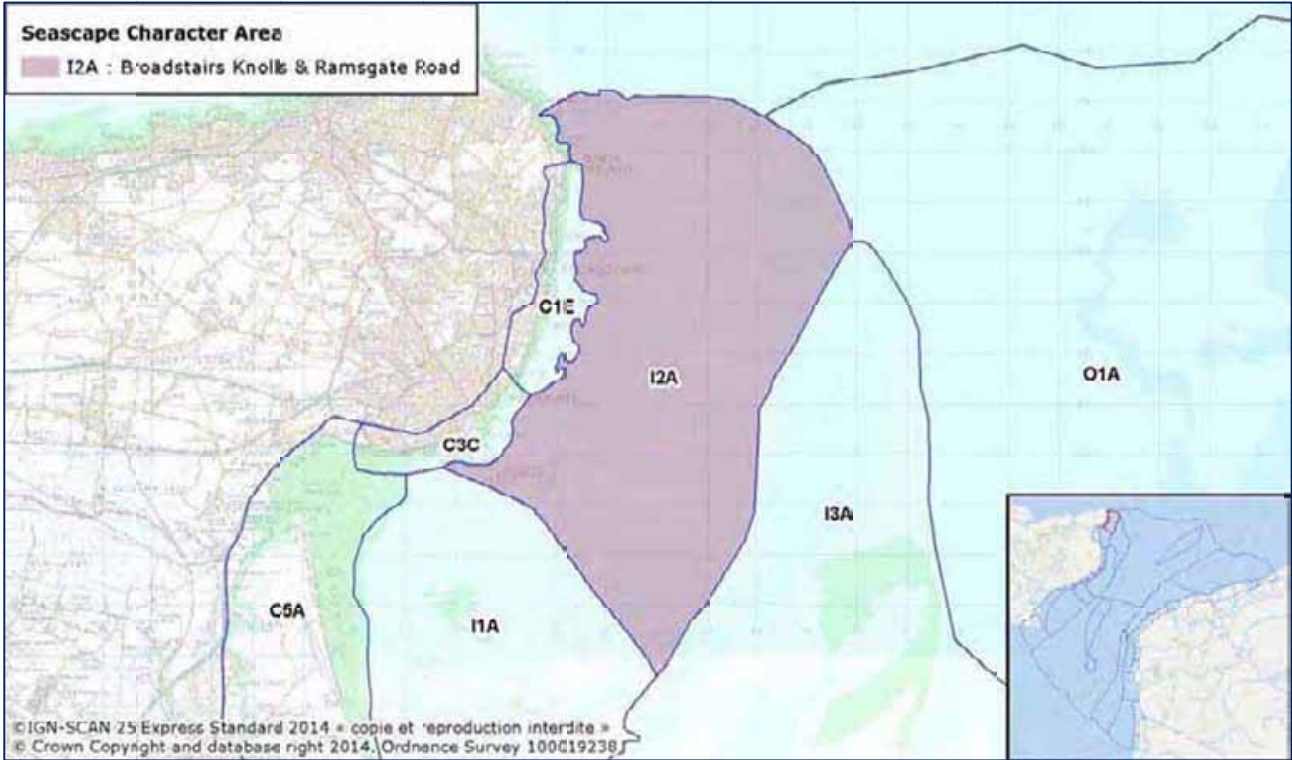
Ship wrecks and Marine Conservation Area



Shipping Separation Zone and Restricted Areas

I2A: Broadstairs Knolls and Ramsgate Road

Location map



Representative photographs



This inshore SCA is located around half a kilometre from the coast, stretching offshore to around five kilometres. It is parallel with the coastline from Ramsgate to North Foreland. The chalk geology exposed in the adjacent white cliffs extends to form the seabed of this SCA, forming part of the longest continual stretch of chalk in the UK (designated as SAC and now MCZ). The shoals, flinty ‘knolls’ and reefs are important marine habitats and influence the character of the sea itself – creating areas of shallow, rough water which form hazards to navigation. Its open aspect to the Thames Estuary and North Sea can create forboding conditions in northerly gales. The wider area’s strategic importance for defence and trade reflects its location in proximity to mainland Europe, including its role in the Dunkirk evacuations of WWII.

Seascape Character Type(s):
I2: Active Inshore Waters

Regional Marine Character Area(s):
N/A

Seascape Character Description

Natural influences

- Chalk seabed forming part of the longest continuous stretch of coastal chalk in the UK, outcropping along the coast as distinctive low white cliffs;
- Areas of shallow water (of less than 5m) and short, steep waves associated with the underlying shoals, flinty knolls and reefs. Broadstairs Knolls is marked by a red lighted buoy;
- The western edge of the area is within the Thanet Coast SAC, internationally valued for its sublittoral chalk platforms, reefs and submerged sea caves with rich algal and lichen communities;
- The recently designated Thanet Coast MCZ affords further protection for the inshore area; an unusual composition of blue mussel beds and ross worm reefs. These include habitats for rare stalked jellyfish;
- Exposed seascape in north-easterly gales owing to the SCA's position at the opening of the Thames Estuary and North Sea. Tidal streams sweep down from the North Sea in a north-south direction;
- The Goodwin Sands (SCA I3A) provide some protection from south-easterly winds and gales funnelling up the Strait.

Cultural/historic influences

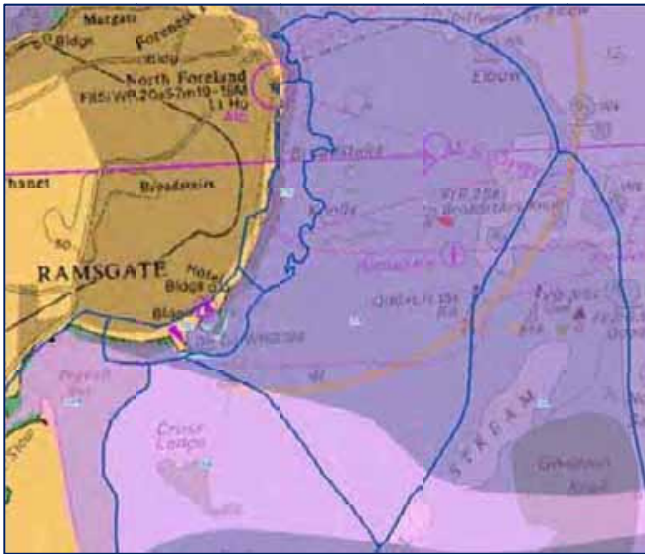
- Long-standing strategic importance of the wider area, and the nearby port of Ramsgate, due to its proximity to mainland Europe;
- A number of shipwrecks form obstructions on the sea bed, including a WWI German submarine destroyed by one of its own mines; and the wreck (and stone cargo) of a barge being towed to Ramsgate in 1983;
- The SCA includes the dredged entrance channel to Ramsgate Harbour. This is marked by numerous buoys to facilitate safe passage past the surrounding shoals;
- The Royal Navy established the HMS Fervent coastal forces base in Ramsgate, which operated motor torpedo boats, motor gun boats and motor launches on missions into the Strait during WWII;
- From 27 May 1940, Ramsgate harbour was the main assembly point for the build-up of small craft needed for Operation Dynamo, the evacuation of the British Expeditionary Force from Dunkirk;
- Once the Dunkirk evacuation was under way, Ramsgate became the second-busiest port after Dover, and just under 43,000 men passed through the port, transported onwards by 82 special trains;
- Once a busy transport hub, cross-Channel ferry services from Ramsgate have recently ceased. Fishing and recreational sailing activity is served by the Royal Harbour and Marina at Ramsgate and Broadstairs harbour;
- North Foreland lighthouse guides ships passing through this part of the Strait, forming a prominent coastal landmark. Built in 1691, it was the last Trinity Lighthouse to be automated in 1998;
- Trawling is limited, including due to the presence of marine protection designations. Fishing activity is generally characterised by seasonal netting for cod and bass, with boats originating from Ramsgate and Broadstairs;
- The inshore and adjacent coastal waters are valued for recreational sailing, with clubs based at both Broadstairs and Ramsgate (within C1E);
- Submarine cables, including some disused lengths, run seaward from the coast between Ramsgate and North Foreland, crossing the seabed of this SCA en-route to the Belgian and Dutch coasts.

Aesthetic / perceptual qualities

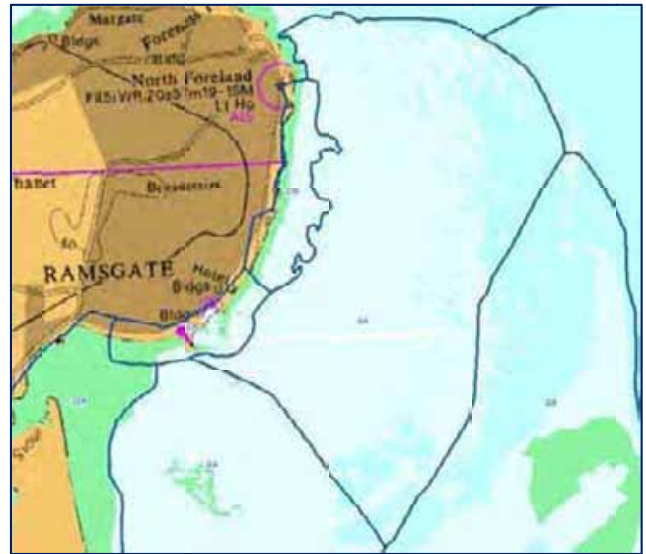
- During stormy and exposed conditions the seas can become wild and unpredictable, creating a sense of danger and isolation.

- Varied coastal backdrop of chalk cliffs and pebble beaches, with three to four storey houses perched on top of the cliffs.
- Colourful beach huts lining the coastline form charismatic features visible from this SCA;
- Offshore, views are often characterised by large vessels in the main shipping channels, as well as long-distance views to wind farms at Thanet, Gunfleet and the London Array.

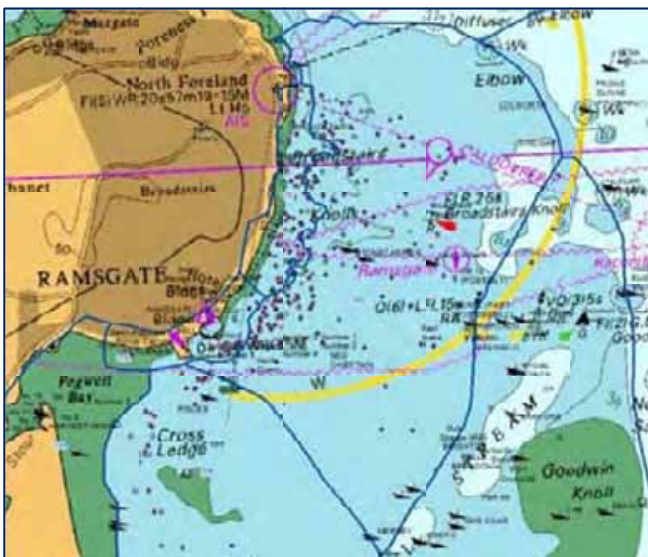
Mapped evidence used to inform assessment



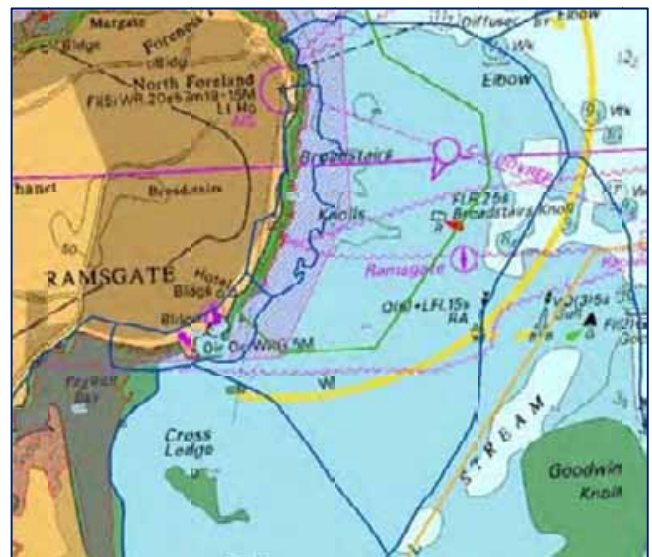
Chalk bedrock geology (purple)



Bathymetry and Traffic Separation Zones



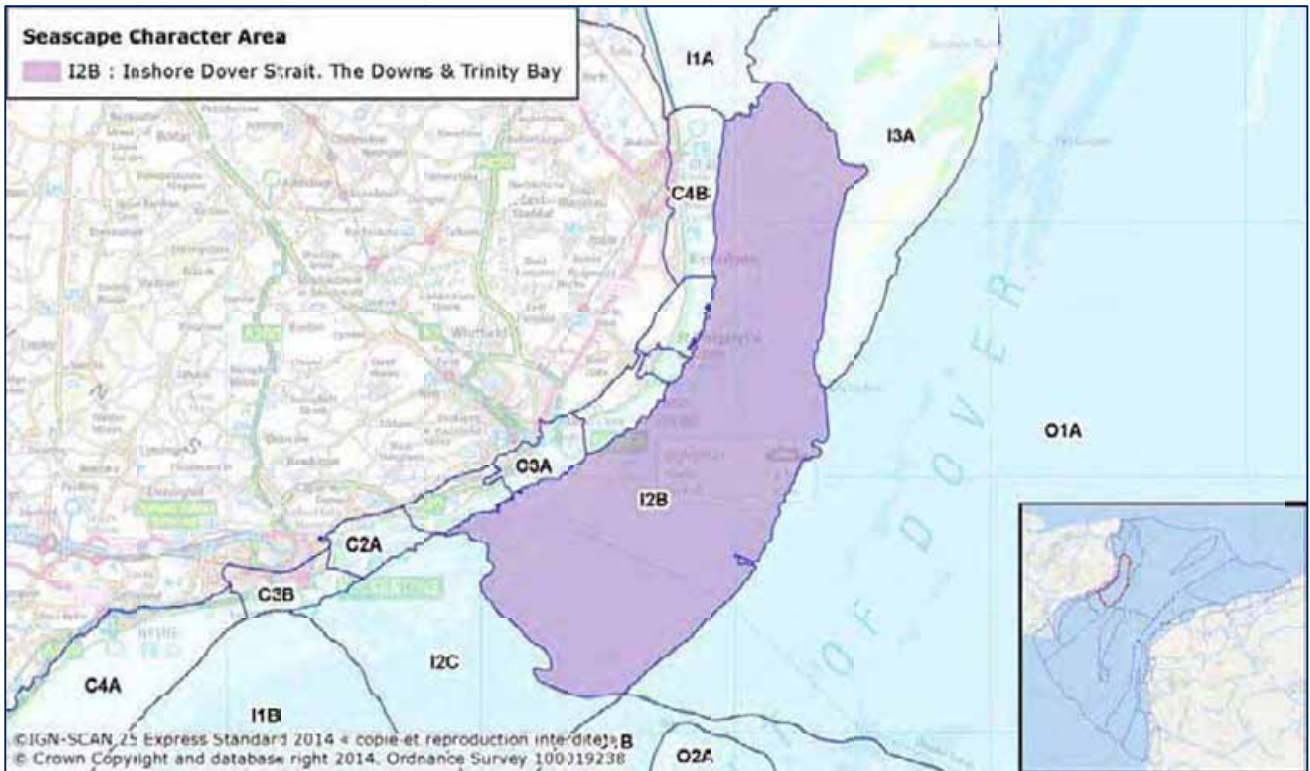
Ship wrecks and fishing sites



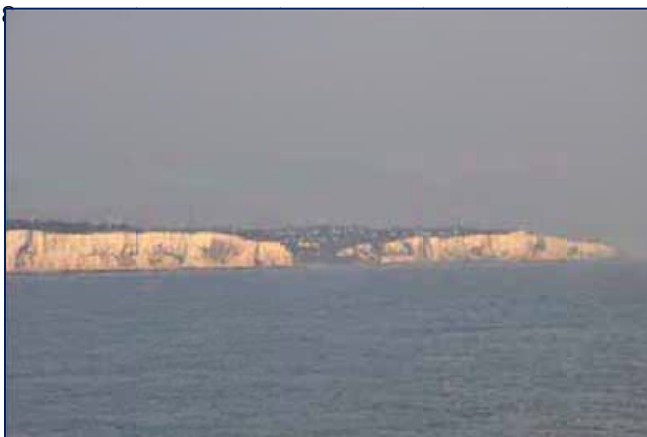
Marine biodiversity designations

I2B: Inshore Dover Strait, The Downs and Trinity Bay

Location map



Representative photographs



This inshore SCA is located around one kilometre from the coast, offshore from Abbot's Cliff to Deal. The chalk geology exposed in the famous white cliffs extends to form the seabed of this SCA, covered by gravel and sand sediments creating valued ecological habitats. The exposure of this seascape to gales funnelling up the Strait, combined with strong tidal currents, can create dangerous sea conditions. Numerous wrecks littering the seabed are testament to these, as well as the turbulent human history witnessed by this SCA owing to its strategic position in front of the Dover coastline.

Seascape Character Type(s):

I2: Active Inshore Waters

Regional Marine Character Area(s):

MCA 11: Dover Strait Inshore Waters

Seascape Character Description

Natural influences

- Gently shelving inshore waters extending approximately nine kilometres from the coast, with depths ranging from 15m (including within The Downs) to 30m bathymetry;
- Chalk reefs overlain by a layer of sand and gravel sediments; the chalk continues landward, outcropping to form the famous adjacent coastline (including the White Cliffs of Dover);
- Subtidal sands and coarse sediments within and surrounding Trinity Bay within the Goodwin Sands rMCZ. These are important marine habitats for a range of benthic species, and spawning grounds for fish including sand eel and cod;
- Western part of the SCA within the Dover to Deal rMCZ, including nationally rare areas of sublittoral chalk supporting rich benthic communities;
- During southwesterly gales a confused and steep swell can develop especially around the Kingsdown headland, as winds funnelling up the Strait clash with the strong tidal currents travelling in the opposite direction.

Cultural/historic influences

- The SCA's position as a frontage to the Dover coastline (and in the narrowest part of the Strait) means that it has witnessed many centuries of battle and defence – from Julius Caesar's 55 BC sea-based invasion attempt to the two World Wars;
- Long-standing anchorage role of the Downs (protected from north-easterly winds by the nearby Goodwin Sands) – including for merchant ships awaiting a westerly wind to take them through the Strait to London, warships patrolling the North Sea and newly built ships coming out of Chatham Dockyard;
- The Deal Timeball Tower, a Victorian maritime Greenwich Mean Time signal located on the roof of a four-storey tower at Deal, was used by ships on the Downs for accurate longitudinal navigation;
- The Downs were also the site of the 1639 Battle of the Downs – where the Dutch Navy destroyed a Spanish fleet seeking refuge in neutral waters;
- Numerous wrecks litter the sea floor, many now popular diving spots – including trawlers downed by German aircraft in WWII and the passenger liner *Strathclyde* which collided with another vessel in 1876 en route to Bombay;
- Rich seas used for commercial set and drift netting with species caught including herring, cod, spotted dog, bass, mackerel and sprat. Boats largely originate from Deal or Ramsgate;
- The Channel Tunnel passes beneath the seabed – a 20th century feat of engineering connecting our island nation with mainland Europe;
- A number of sub-marine cables and telecommunication lines originating from Folkestone also traverse the sea floor – crossing beneath the Channel to make landfall at Sangatte, west of Calais.

Aesthetic / perceptual qualities

- Strong visual connections to the symbolic white cliffs of the Kent coastline which provide a dramatic backdrop to the seas of this SCA;
- This is a busy seascape, with hundreds of ship movements per day, including the main Dover to Calais passenger ferry route. The bright white ferries are frequent large-scale features associated with this SCA;
- During stormy and exposed conditions the seas can become wild and unpredictable, creating a sense of danger and isolation despite the SCA's proximity to land.

Mapped evidence used to inform assessment



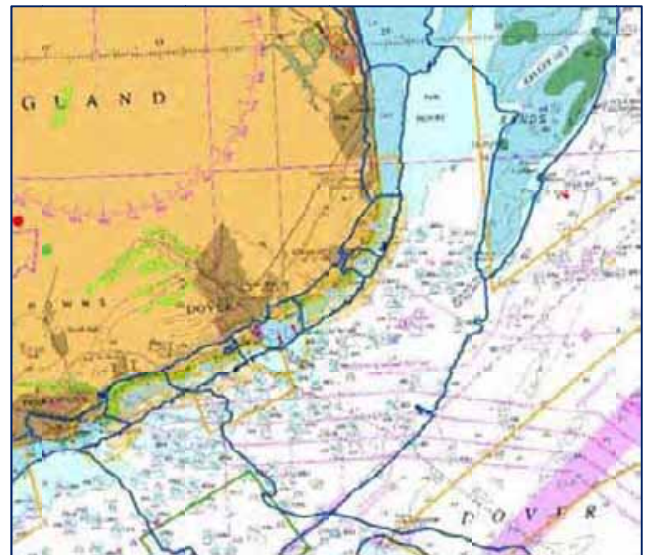
Chalk bedrock geology (purple)



Bathymetry



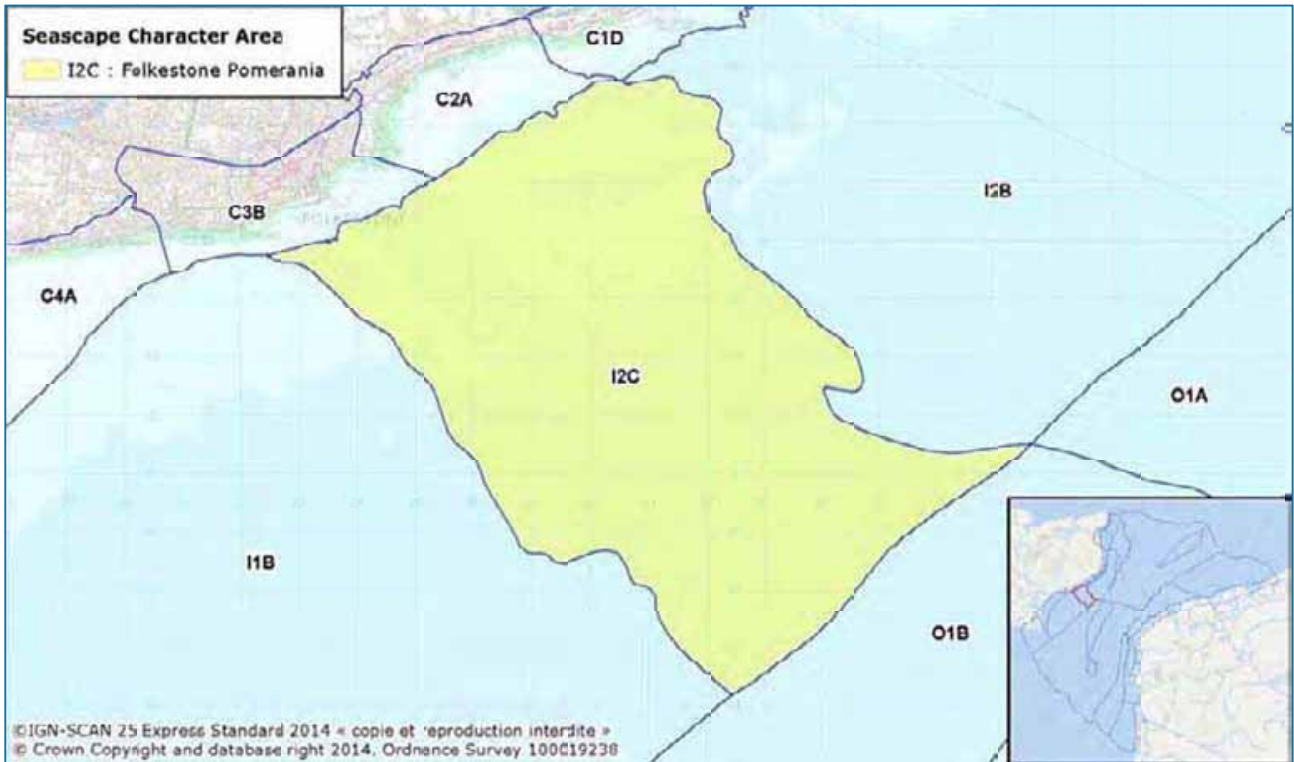
Ship wrecks and fishing locations



Heritage Coast and Marine biodiversity designations

I2C: Folkestone Pomerania

Location map



Representative photographs



This SCA covers the inshore waters located to the south and 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. This includes the majority of the Folkestone Pomerania Marine Conservation Zone (MCZ), designated in November 2013. The waters are also the location of a number of ship wrecks, demonstrating centuries of conflict and seafaring culture within the Strait. SCA boundaries are closely informed by the bedrock geology of the sea floor, particularly the break to chalk in the east and sandstone/limestone to the west.

Seascape Character Type(s):

I2: Active Inshore Waters

Regional Marine Character Area(s):

MCA 10: Dungeness, Hythe & East Wear Bays

Seascape Character Description

Natural influences

- Complex underwater geology comprising outcropping Greensand (resulting in a hard and complex subtidal reef system), sandstone, limestone, 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 within the Folkestone Pomerania MCZ, with a rich fauna including sponges, coral, anemones 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;
- A Bronze Age rapier (sword) recovered by a fishing boat in this area could be derived either from a wreck or from eroded Bronze Age coastal activity;
- 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, limited 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.

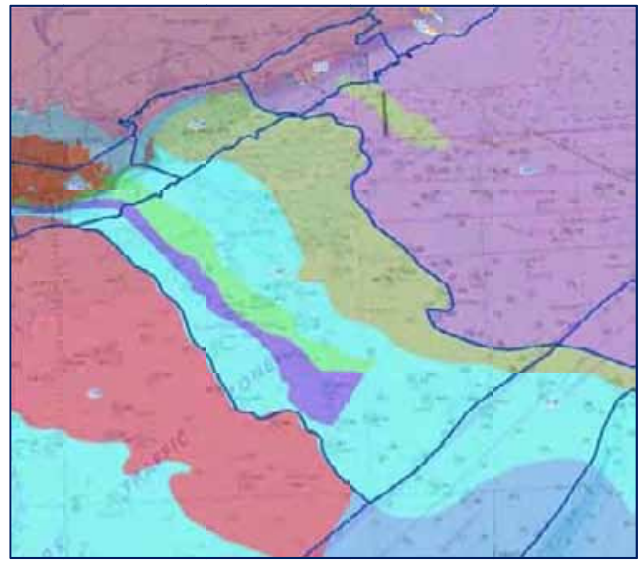
Aesthetic / perceptual qualities

- 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.

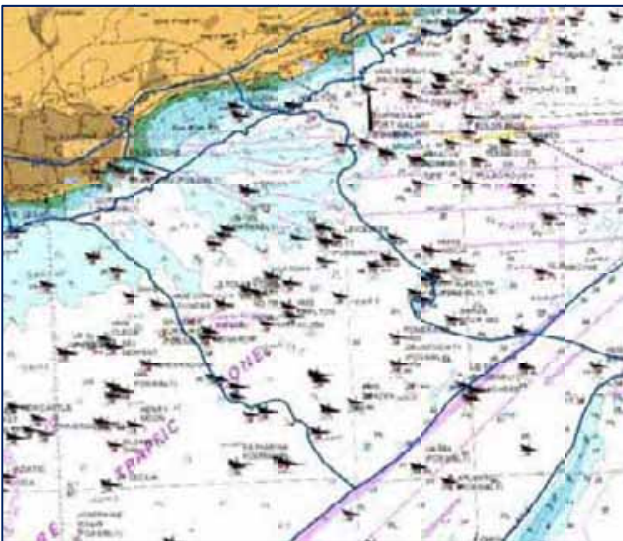
Mapped evidence used to inform assessment



Bathymetry



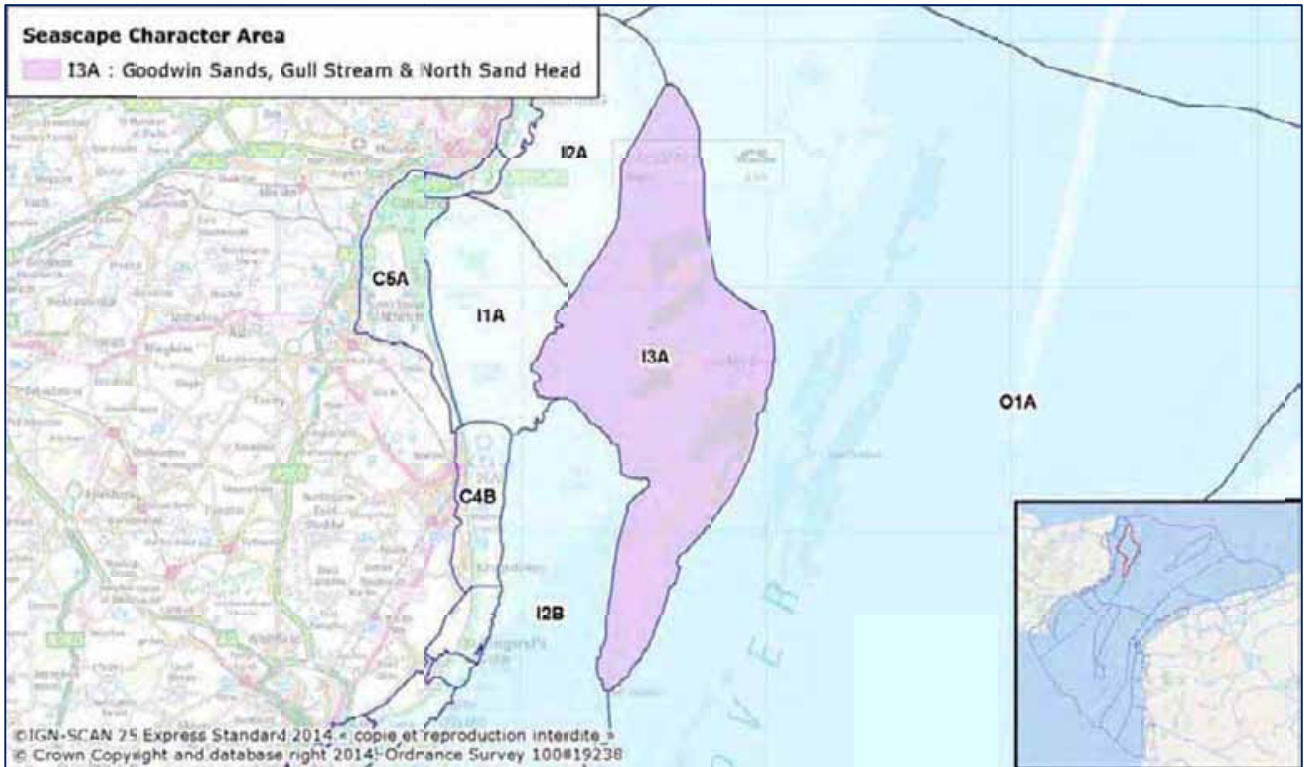
Bedrock geology



Location of ship wrecks

I3A: Goodwin Sands, Gull Stream & North Sand Head

Location map



Representative photographs



This SCA comprises the distinctive and large-scale sandbanks and shoals of Goodwin Sands, along with the channels crossing through the area, including Gull Stream. The dynamic, varied sediments and unique tidal conditions associated with this part of the Strait create an area of rich natural and cultural heritage. It is a recommended Marine Conservation Zone owing to the importance of the Sands for marine biodiversity, including as habitats for a range of fish, seals and sea birds. It also has the densest concentration of wrecks in the Strait owing to its dangerous sea conditions, including five nationally protected wrecks. These tell the story of both the treacherous conditions of the Goodwin Sands and the important role the wider Strait has played in international trade and defence over the centuries.

Seascape Character Type(s):

I3: Inshore Sandbanks and Shoals

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- SCA dominated by Goodwin Sands; a large, dynamic and constantly shifting area of subtidal sands and coarse sediments. North Sand Head forms the northern headland to the main body of the Sands;
- The underlying seabed is primarily chalk, apart from a finger of mudstone, sandstone and tuff extending out from Pegwell Bay;
- The shifting nature of the shoals and sandbars, modified constantly by tidal streams, are particularly hazardous to navigation particularly at High Water. Erosion following storms also contributes to the dynamic system;
- Gull Stream and Kellet Gut form sudden channels of deeper water flowing through and around the sands. These reach a maximum depth of approximately 18 metres, though parts can be less than 10m – still posing a challenge for vessels passing through;
- Strong rotary tidal streams flowing through and around the sands, with flows increasing in velocity through the channels;
- The area is an important haul-out site for common and grey seals (the most important in the South of England) and foraging habitat for great cormorant, black kittiwake, fulmar and gannet;
- Important habitats include blue mussel beds, Rossworm reefs and the rich sediments themselves – home to a range of benthic and pelagic species including thornback ray, sand eel, bass, mackerel, smoothhounds and sprat.

Cultural/historic influences

- The sands are marked by numerous lit cardinal buoys and the East Goodwin lightvessel. The South Goodwin lightvessel was itself wrecked in 1954 with all seven crew lost;
- The Sands are famously associated with the 'Boatmen of Walmer, Deal and Kingsdown' – who, as well as saving lives, rushed to be the first to a shipwreck to salvage its valuable cargo;
- Nationally protected wrecks include the *Stirling Castle*, *Restoration* and *Northumberland* – part of a squadron of Navy gunships returning from the Mediterranean and wrecked during the Great Storm of 1703;
- The *Admiral Gardner* blew onto the Sands while sheltering on The Downs during a gale in 1809 – bound for Madras with a cargo of East India Company copper tokens (currency for native workers). The *Rooswijk* also foundered on the sands en-route to the East Indies in 1739. Both sites are nationally protected.
- The wreck of a German World War II bomber was lifted intact from the sands in 2013 – believed to have been shot down in the *Battle of Britain* and the only example of its kind in the world¹²;
- The wrecks frequently move position due to the constantly changing sediments. These now provide popular recreational dive sites as well as valued artificial wildlife habitats;
- The dangerous sea conditions, hazards provided by the sandbanks and presence of seals mean fishing is generally limited to the inside edge where currents are weaker. Some static gill netting for bass takes place within the SCA;
- The annual cricket match on the Sands at low tide (now banned) was seen as one of the country's great sporting traditions.

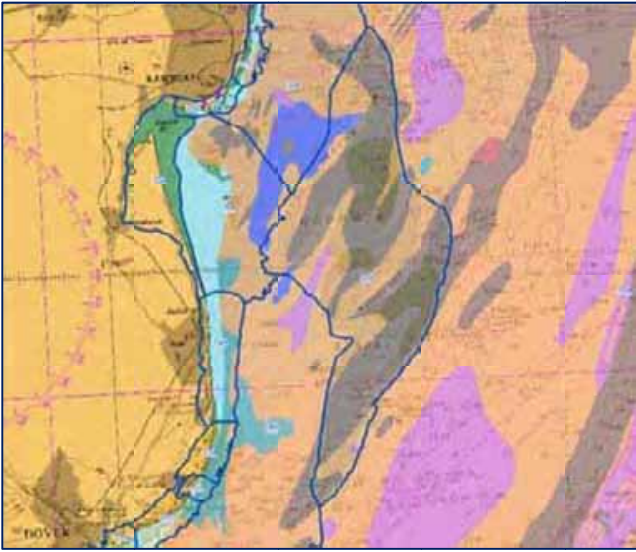
Aesthetic / perceptual qualities

- This is an eerie seascape, with a strong sense of history and pervading sense of danger. White water breaking on the sandbanks reinforces the unpredictable nature of the Goodwin Sands;
- Shakespeare mentions the dangerous nature of the Goodwin Sands in *The Merchant of Venice*;

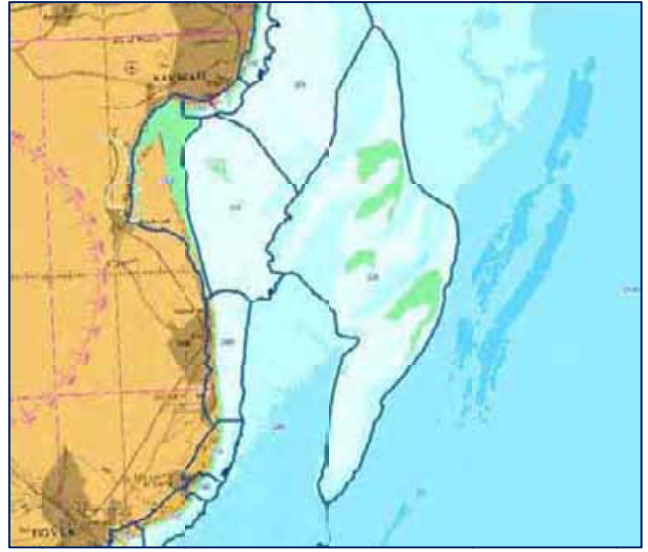
¹² <http://www.bbc.co.uk/news/uk-22846645>

- Distant views to France are afforded from the SCA in clear conditions, with the White Cliffs of Dover forming an iconic backdrop to the seascape on the English side.

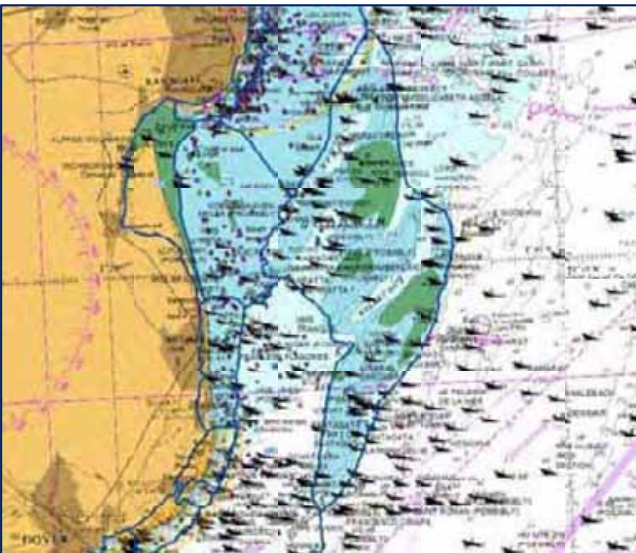
Mapped evidence used to inform assessment



Offshore sediment



Bathymetry



Ship wrecks and Fishing locations



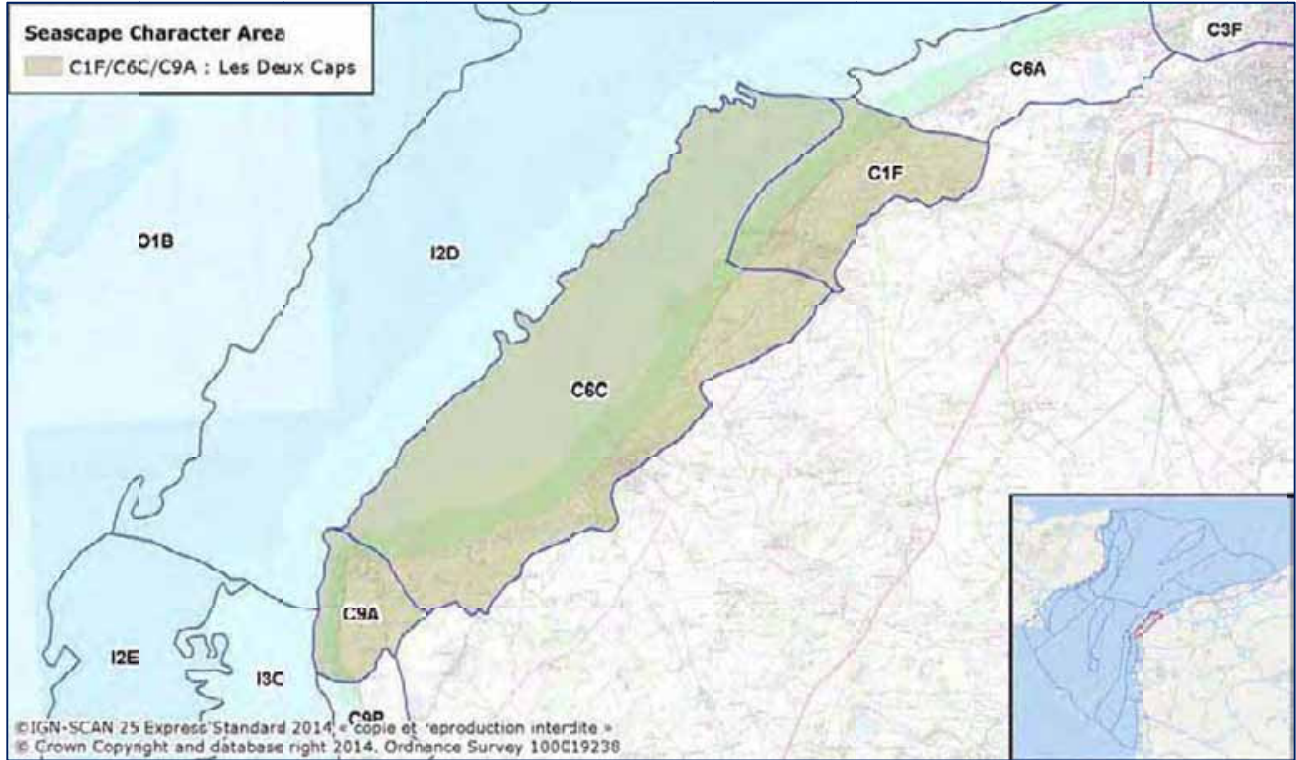
Recommended Marine Conservation Zone

Nord-Pas-de-Calais Coastal Seascape Character Areas

C1 Chalk Cliffs and Reefs/Coastal Waters; C6 Sand Dunes, Wetlands and Coastal Waters; C9 Sandstone, Mudstone and Limestone Cliffs & Coastal Waters

C1F/C6C/C9A: Les Deux Caps

Location map



Representative photographs



This strongly recognisable SCA is framed by the 'deux caps' of Cap Blanc-Nez (to the east) and Cap Gris-Nez (to the west), extending offshore to cover the adjacent shoaling, shallow coastal waters. The diverse nationally protected coastline between the caps includes strongly undulating sand dunes, lagoons, rock flats and wide sandy beaches – combining to create maritime habitats of international importance. Cap Gris-Nez is home to a number of sea bird colonies with the wider offshore area forming important passage and feeding grounds, designated as SPA. Positioned at the closest point to England, the coast and seas have witnessed centuries of battle and defence, with military fortifications and ship wrecks testament to this. Intervisibility with the White Cliffs of Dover brings unity across the Strait.

Seascape Character Type(s):

C1: Chalk Cliffs and Reefs/Coastal Waters

C6: Sand Dunes, Wetlands and Coastal Waters

C9: Sandstone, Mudstone and Limestone Cliffs & Coastal Waters

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- Distinctive north-westerly facing coastline marked by the prominent cliffs of Cap Blanc Nez in the east (158m AOD) and Cap Gris Nez in the west (47m AOD);
- Complex and renowned geology and geomorphology, with white chalk cliffs defining Cap Blanc-Nez ('white nose') and fossil-rich Jurassic mudstones, sandstones and limestones characterising Cap Gris-Nez ('grey nose');
- Varied coastline of wide sandy beaches and rocky flats between the cliffs, backed by undulating sand dunes and wetlands. Rising land forms a smooth, rounded backdrop with a tapestry of fields and woodland blocks;
- Shallow, shoaling coastal waters with an uneven, muddy sand sea floor and rocky shelves extending offshore from Cap Gris-Nez. A sandbank and detached reefs run in front of the coast with depths of less than 10m –locations of a number of dangerous wrecks;
- The reefs and sandbanks fall within the Récifs Gris-Nez Blanc-Nez SAC, important habitats for species including the common porpoise, grey seals and common seals;
- Strong tidal streams and eddies off Cap Gris-Nez present further hazards to navigation, whilst the Baie de Wissant can provide temporary safe anchorage in south easterly weather;
- SPA-designated coastal and marine habitats supporting large numbers of seabirds. Cap Blanc-Nez is home to breeding colonies of northern fulmars, kittiwakes, herring gull and nesting peregrine falcons;
- The rich maritime vegetation along the coast, including lagoons, sand dunes, maritime grasslands and saltmarshes are SAC-designated.

Cultural/historic influences

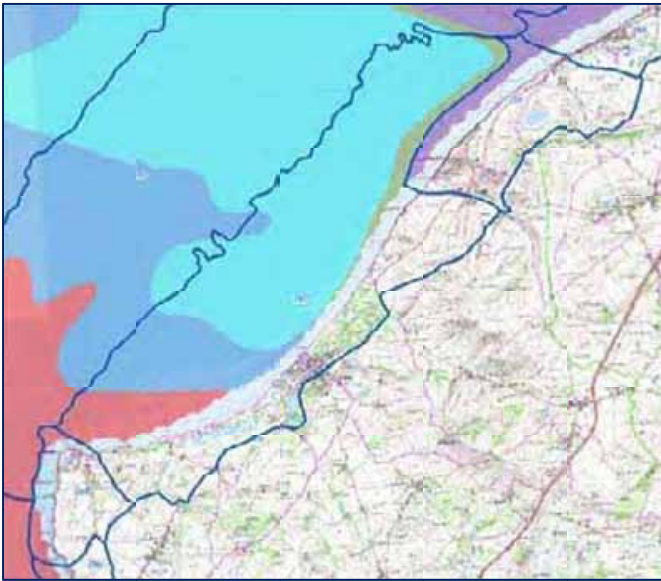
- This coastline is the closest point of France to England – at the forefront of the Strait's turbulent past. Defensive features include the ruins of a Henry VIII fortress with a later blockhouse added by the Germans in the 1940s;
- Napoleon recognised the area's strategic importance, leading to the installation of a cross-Channel semaphore in the early 1800s, as well as a battery of 300 guns which saw off a British flotilla battling with the Dutch in the waters off the cape;
- The coastline also includes several WWII bunkers, heavy artillery sites and part of the Atlantic Wall – built by the Germans between 1942 and 1945 in anticipation of Allied invasion;
- Vessels wrecked off this dangerous coast include the Royal Navy ship *HMS Lord Grey* which foundered on shoals in 1917, a German submarine stranded and blown up along the coast, and the *Gloire a Sainte Therese* which ran ashore on Cap Gris-Nez in 1980;
- Conspicuous navigation marks include the prominent lighthouse and radar station on Cap Gris-Nez and Dover Patrol Memorial obelisk on the summit of Cap Blanc-Nez. The memorial matches an identical obelisk above St Margaret's Bay on the opposite side of the Strait.
- Fishermen from Wissant use tractors to tow their boats out into the shallow coastal waters – a charismatic scene associated with this stretch of coastline. Netting takes place off Cap Gris-Nez;
- This coastline is the official end point for cross-Channel swimmers.

Aesthetic / perceptual qualities

- The high cliffs are a perfect vantage point for viewing hundreds of ships, from oil tankers to small fishing trawlers, plying the waters of the Dover Strait;
- On a clear day, the emblematic white cliffs of Dover on the English shore can be seen – providing visual unity with the chalk cliffs of Cap Blanc Nez in this SCA;
- Large sections of the coastline convey a strong sense of wilderness and remoteness with little human influence. This is reinforced in heavy weather when crashing waves pound the shoreline;

- Many artists have been inspired by the wider Côte d'Opale, including composer Henri Dutilleux, the writers Victor Hugo and Charles Dickens, and the painters J. M. W. Turner, Carolus-Duran, Maurice Boitel and Eugène Boudin.
- It was the painter Édouard Lévêque who coined the name for the coastline in 1911 to describe the distinctive opal quality of its light;
- The striking landscape, seascape and natural assets of this coastline are recognised nationally as a Grand Site– the first in the country to be designated (in 1978);
- It also forms a spectacular frontage to the wider Parc Naturel Regional des Caps et Marais d'Opale, designated in 1986.

Mapped evidence used to inform assessment



Diverse bedrock geology



Very shallow bathymetry



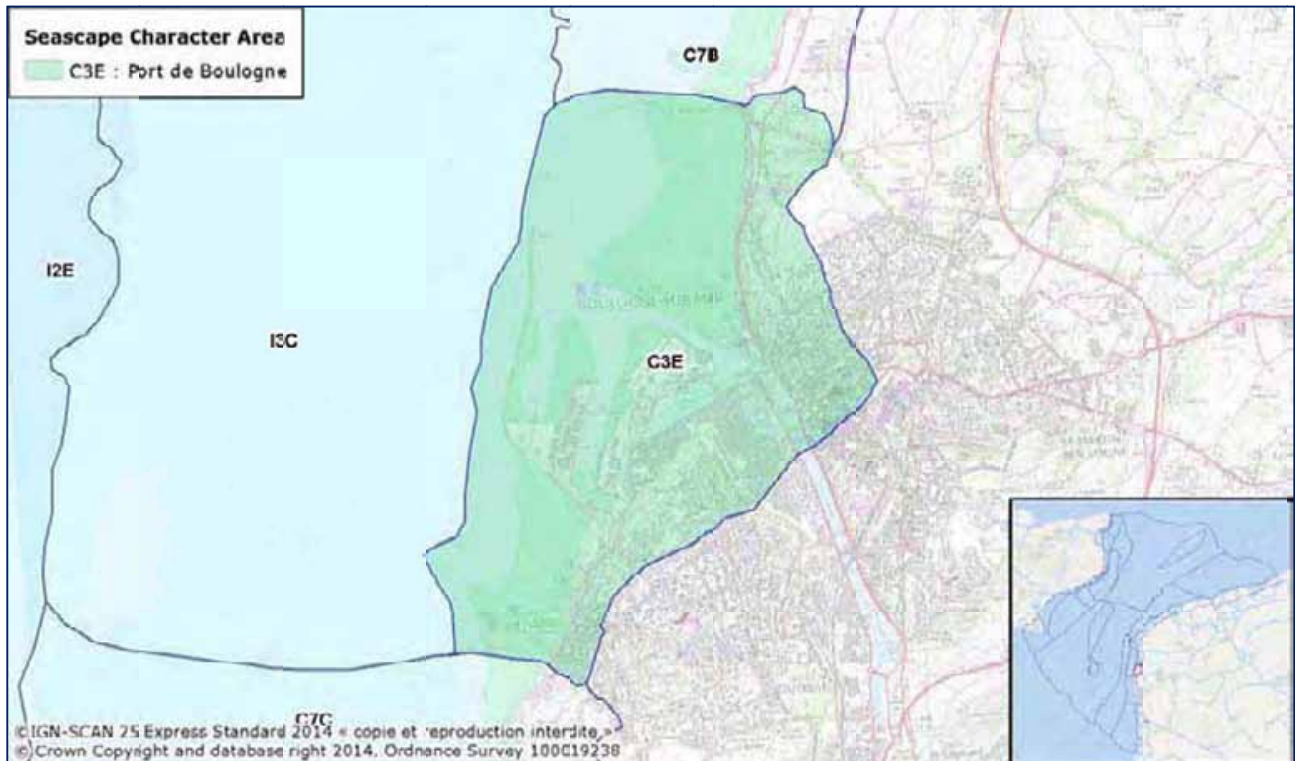
Location of wrecks



Natura 2000 designations (yellow hatch) and Regional Nature Park (blue)

C3E: Port de Boulogne

Location map



Representative photographs



The Port de Boulogne SCA covers the harbour, marina and seafront development associated with Boulogne-sur-Mer – the second largest town (after Calais) in the department of Pas-de-Calais. Its coastal extent stretches from Fort de la Crèche in the north to the edge of development at Le Portel in the south. The port’s strategic importance dates back to the Roman period – serving as the main trading post between Roman Gaul and Britannia. Further developed in the medieval period, the walled old town with internationally important belfry tower creates a strong historic sense of place contrasting with industrial structures in the adjacent port. Wind turbines form prominent moving structures visible from along the coast and out to sea, contrasting with the historic landmark formed by the dome of Notre Dame cathedral and backdrop provided by the walled old town. Boulogne is France’s largest fishing port and a gateway town to the surrounding Côte d’Opale – a popular tourism destination.

Seascape Character Type(s):

C3: Ports, Harbours and Seafront Development

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- Water depths within the outer breakwaters (Digue Nord and Digue Carnot) reach a maximum depth of eight metres bathymetry. The entrance channel is dredged to a minimum of five metres;
- Mudstone, sandstone and limestone bedrock geology outcrops along the adjacent cliffed coastline framing the harbour;
- The seabed is covered by sand sediments extending from the adjacent Bassure de Baas and Rade d'Ambleteuse shoals;
- The in-going tidal stream in the vicinity of Digne Carnot is strong. A heavy sea can develop in the entrance during bad weather;
- The port and town of Boulogne is centred on the mouth of the tidal La Liane river. Sluices control water levels to the east of the marina, creating currents across the berths when open.

Cultural/historic influences

- Strategic importance of the port over many centuries, being the main trading post between Roman Gaul and Britannia;
- Emperor Claudius used this town as his base for the Roman invasion of Britain, in AD 43. Until AD 296 it was the base of the naval fleet of the *Classis Britannica*;
- The town developed around a castle in the medieval period, with the 13th century walls remaining as strong vernacular features. The 12th century belfry tower in the old town is designated as a World Heritage Site;
- During the Napoleonic Wars, Napoleon amassed *La Grande Armée* in Boulogne to invade the UK in 1805. Although the invasion did not happen, a 143m column marks this event;
- The dome of the 19th century Notre Dame cathedral, standing at over 100m, is a prominent landmark traditionally used as a navigation mark (showing on the marine charts);
- The town played an important role in both World Wars – it was one of the main ports used by Commonwealth fighters in WWI. In WWII, much of the harbour was destroyed by bombing;
- Large concentrations of wrecks within the harbour, some forming dangerous obstructions;
- The varied fish stocks in the surrounding waters support a nationally important and long-standing fishing industry; they also attract English, Belgian and German trawling and netting vessels;
- Today, Boulogne is the largest fishing port in France, handling 35,000 tonnes of fish per year (specialising in herring). Fish processing warehouses frame the port entrance;
- The town is also home to IFREMER (the French Research Institute for Exploitation of the Sea) and the Pasteur Institute;
- It is a tourism hub, acting as a gateway town to the surrounding Côte d'Opale – a major visitor destination for both French and international holiday makers. Fishing off the harbour wall and within the harbour itself is a popular recreational activity.

Aesthetic / perceptual qualities

- The previous cross-Channel ferry services have recently ceased, resulting in reduced levels of activity and abandoned infrastructure evident in the marina;
- Wind turbines and cranes in the outer harbour form prominent man-made structures visible from along the surrounding coastline and out to sea;
- The modern, moving turbine structures contrast markedly with the strong historic backdrop provided by the old walled town and the symbolic Notre Dame cathedral dome;
- Red-roofed houses create a unifying sense of place to the town backing the harbour;
- Despite the loss of ferry services, the harbour remains a bustling seascape strongly centred on its long-standing fishing and trade heritage and role as a coastal tourism hub.

Mapped evidence used to inform the assessment



Shipping corridor and navigation marks



Large number of wrecks



Bathymetry

C3F: Port de Calais

Location map



Representative photographs



The *Port de Calais* Seascape Character Area covers the port and seafront development of Calais, extending offshore to the shoal of the Ridens de la Rade which runs parallel to the shoreline. The fourth largest port in France, the strategic importance of Calais and its close connections to England have been recognised since at least Roman times. Entry to the port can be a challenge in northerly gales, where a large tidal swell can develop. Nationally important historic landmarks mark the skyline, contrasting with modern port-related structures visible from the Strait and Kent coastline in clear conditions. Day and night, the seascape is dominated by the sights and sounds of marine traffic – with the twinkling lights of the navigation marks and lighthouses characterising the night-time skyline.

Seascape Character Type(s):

C3: Ports, Harbours and Seafront Development

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- The waters surrounding the port entrance and approach channels gently shelf to a maximum depth of 9m bathymetry, but are dominated by the Ridens de la Rade;
- The Ridens sandy shoal runs parallel to the port entrance, forming an immediate hazard to entry/exit. It varies in depth, sometimes drying to up to 0.5m;
- The geology of the sea floor displays the distinctive break between chalk to the west (outcropping at Cap Blanc-Nez and the corresponding White Cliffs of Dover) and a band of mudstone, sandstone and tuff to the east – looping across the Strait to Reculver, in the Thames Estuary;
- Tidal streams can be strong (up to 3 knots). When combined with northerly gales, a swell of up to 1.5m can develop into the Avant Port. Small vessels are advised against attempting to enter the port during these times.

Cultural/historic influences

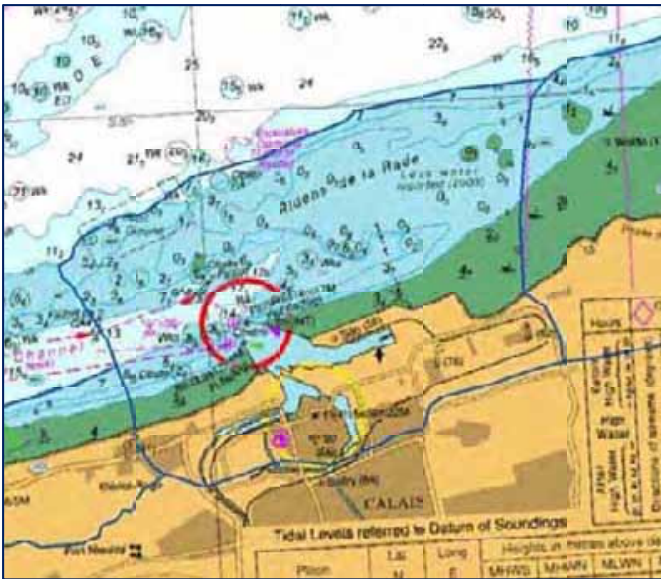
- Long history of Calais as a strategically important port with close links to England – just 21 miles away. Julius Caesar used the port as a launching point for his invasion of *Britannia*;
- It was occupied by the British from 1347 to 1558, when it was known as "*brightest jewel in the English crown*" owing to its importance as a gateway for the tin, lead, cloth, lace and wool trades;
- Dick Whittington was simultaneously Lord Mayor of the City of London and Mayor of the Staple in 1407. Calais was returned to French control during the reign of Queen Mary;
- The town's 53m lighthouse (operational since 1848) is a major landmark for ships travelling through the Strait and entering the port. It is a distinctive white, octagonal tower– visible from the Kent coast in clear conditions;
- Other historically important landmarks visible from the Strait include the town hall's clock tower and belfry (74m high), the 13th century Tour de Guet (watch tower), and the 15th century tower of the Église Notre-Dame;
- The 16th century Citadel, built on the site of an earlier medieval castle, was used as an air raid shelter during World War II. The walls of the fort are a distinctive feature of the town;
- A number of dangerous wrecks and other submerged obstructions serve as a reminder of the dangerous sea conditions associated with the port approaches;
- Today, Calais is the fourth largest port in France and the largest for passenger traffic with around 140 ship movements per day;
- Cargo traffic has tripled over the past two decades – in 2007 more than 41.5 million tonnes of traffic passed through Calais with some 11.52 million passengers, 1.4 million trucks and trailers, over 2 million cars and 4,700 ferry crossings¹³;

Aesthetic / perceptual qualities

- This is a very busy seascape defined by ship movements and dominated by port-related development. Modern structures such as cranes contrast with historically important landmarks on the skyline;
- Day and night, the sounds and sights of marine traffic dominate – flashing navigation markers and the beam from the town's lighthouse are visible as twinkling lights from the Kent coastline;
- Expansive views across the Channel to the White Cliffs of Dover – panoramic views are afforded from the top of the lighthouse (which is open to the public);
- The dense development of the town stands in marked contrast to the naturalistic coastline of dunes, wetlands and sandy beaches lying either side.

¹³ https://openlibrary.org/books/OL24872324M/Northern_France

Mapped evidence used to inform assessment



Marine chart



Location of ship wrecks



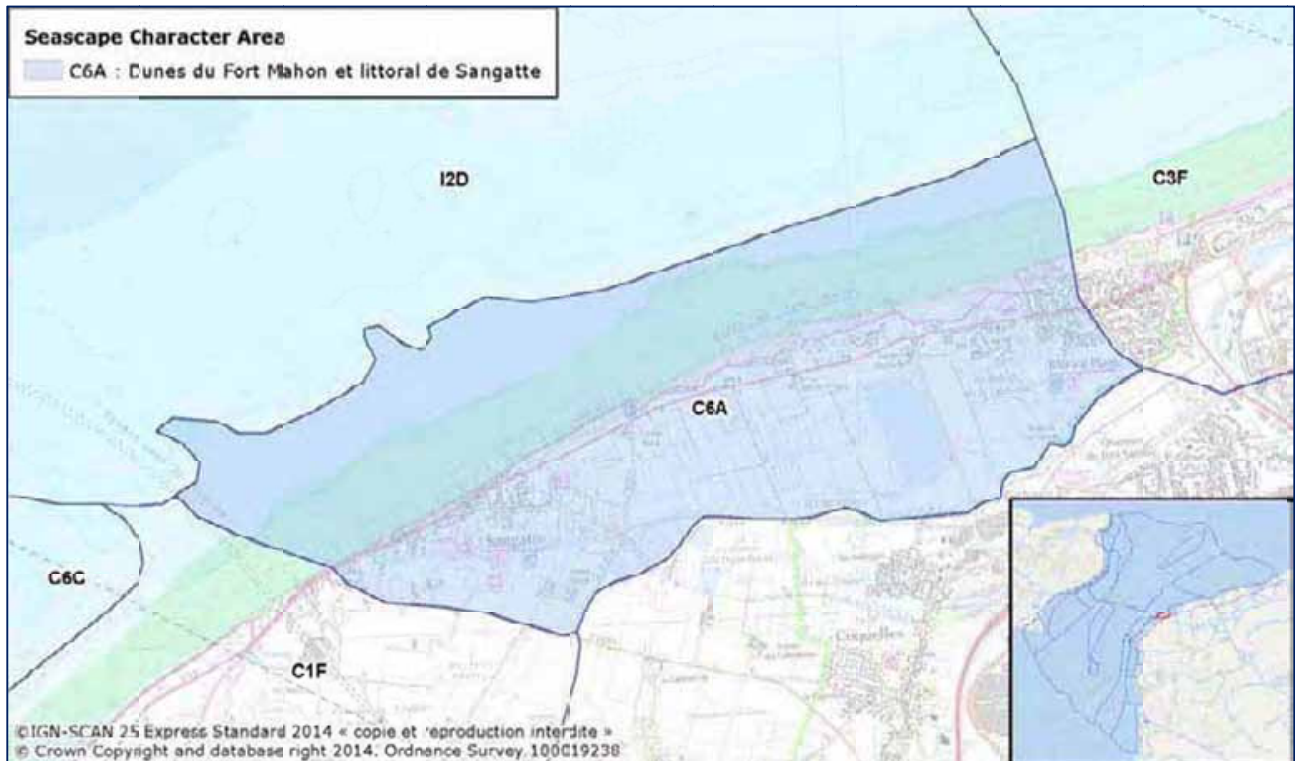
Bathymetry



Offshore chalk (purple) and offshore mudstone, sandstone and tuff (pink)

C6A: Dunes du Fort Mahon et littoral de Sangatte

Location map



Representative photographs



This SCA covers the coastline between Calais west to Sangatte, including the shallow coastal waters, extensive sandy beach and the distinctive dunes and low lying drained marsh and open water behind the coast. A mixed mosaic of natural habitats – sand dunes, open water and marshland support a relatively rich wildlife. It is a bleak, windswept, lonely stretch coast in sharp contrast to the adjacent port of Calais and industrial zone of Cocquelles to the south. Views of ferries approaching and departing Calais are a key feature offshore. The flat coastal edge has limited visibility in onshore views from the sea, apart from the dunes and seaward facing housing on the immediate coastal edge, but there are longer views to the rising chalk downland inland forming a prominent distant backdrop.

Seascape Character Type(s):

C6: Sand Dunes, Wetlands and Coastal Waters

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- Underlain by a mix of sandstone and mudstone, with the chalk of the 'Caps' extending from the west;
- Low-lying coastline - long sandy beach, backed by low dunes;
- Low flat coast limits views inland with rising downland behind creating rounded skylines often marked by woodland blocks;
- A mixed mosaic of natural habitats – sand dunes, open water and marshland support a relatively rich wildlife (including land owned and managed by the Littoral and Lakeside Conservancy);
- Shallow coastal water extending to about 10m depth at the boundary with I2D Zone d'Approche de Calais.

Cultural/historic influences

- Blériot Plage named to commemorate Blériot's first flight over the English Channel in 1909 landing on the cliffs above Dover;
- World War II defences in the dunes including batteries forming part of the German Atlantic Wall;
- Site of notorious refugee camp, fencing and security measure still visible in the dunes;
- Sangatte forming main access shaft on French side for construction of the Channel Tunnel (equivalent to Samphire Hoe);
- Shifting sands stabilised by planting and distinctive lines of timber – forming very visible linear features, notably in views from the sea;
- Seaward facing housing on the dunes – square church tower at Sangatte forms a conspicuous feature in views from the sea.

Aesthetic / perceptual qualities

- Inshore waters are important for watersports including kite surfing, wind surfing and dinghy sailing creating a busy seascape with views to ferries approaching/departing Calais;
- Distant views to the white Cliffs of the English coast plus views to infrastructure and large scale development at port of Calais to the east;
- Extensive sand beach extending to the cliffs of Cap Blanc-Nez provides opportunities for many recreational activities including beach fishing, yachting, speed-sailing, kite flying, horse riding and polo;
- Away from the coastal activities on the beach and foreshore this is a bleak, windswept, lonely stretch coast in sharp contrast to the adjacent port of Calais (west) and industrial zone of Cocquelles to the south.

Mapped evidence used to inform assessment



Underwater structures



Offshore geology



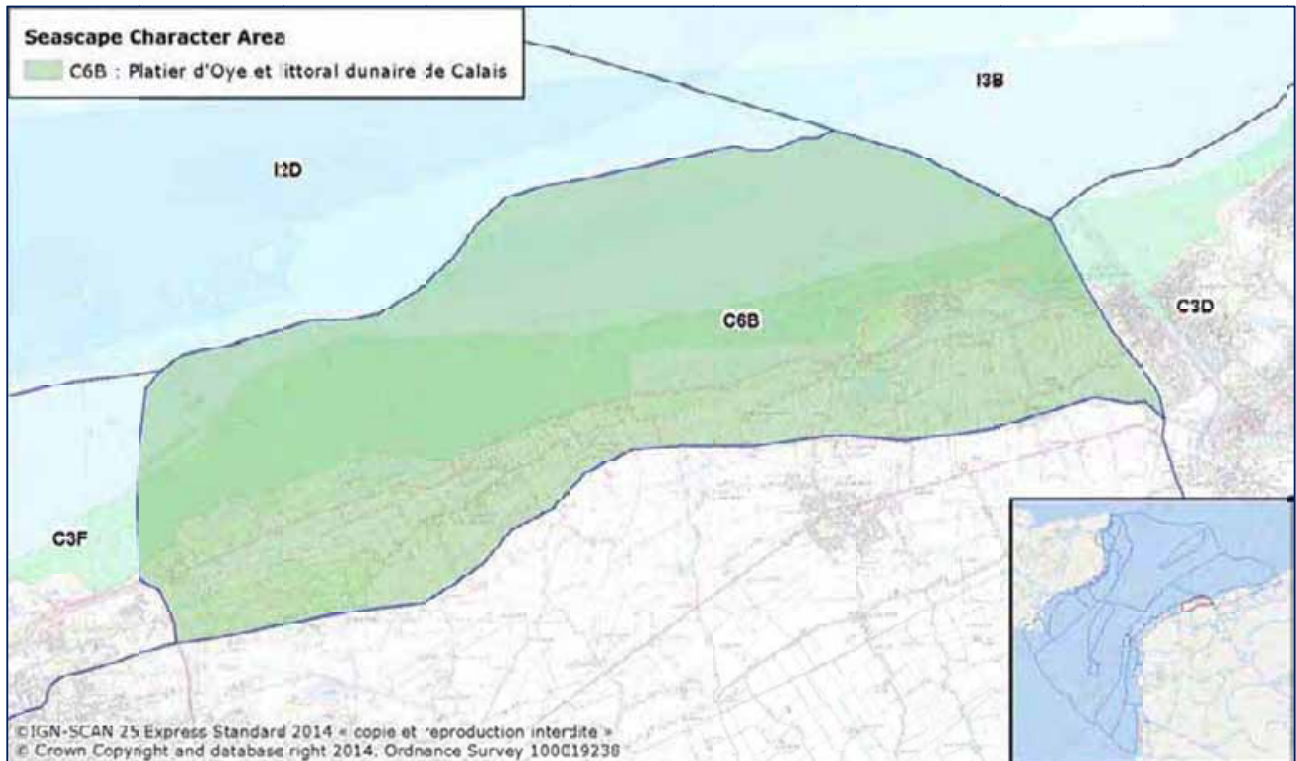
Bathymetry



Location of ship wrecks

C6B: Platier d'Oye et littoral dunaire de Calais

Location map



Representative photographs



This SCA covers the coastline between Calais and Gravelines, covering low-lying reclaimed farmland, wetlands and sand dunes behind a wide intertidal zone of sand and mudflats. Shallow coastal waters with strong tidal streams, and the presence of submerged sandbanks, can prove hazards to navigation. The SCA includes the Platier d'Oye national nature reserve and SPA; home to varied flora and fauna including large numbers of migratory birds. The seascape is a haven for tranquillity and presents a contrasting sense of naturalness on the doorstep of busy major ports.

Seascape Character Type(s):

C6: Sand Dunes, Wetlands and Coastal Waters

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- Low-lying, flat coastline with a north/north-westerly aspect situated between the ports of Calais and Gravelines;
- Gently shelving coastal waters above a wide sand bank (the eastern extent of the Ridens de la Rade), reaching a maximum depth of 10 metres bathymetry;
- The SCA is defined by its wide intertidal zone comprising expansive sandy beaches;
- Rich and varied intertidal and coastal habitats, including broad sand/mud flats, sand dunes, saltmarshes, freshwater ponds and reclaimed coastal farmland divided by drainage ditches;
- Platier d'Oye national nature reserve protrudes out into the intertidal zone to form a distinctive headland in the east;
- The above wetland site was created by banks of sand deposited in the 17th century. Also designated as SPA, the reserve – designated in 1987 - is home to numerous species of migratory birds;
- Strong tidal streams – up to 3.5 knots at springs– characterise the waters of this coastline;
- The shallow waters and shore are home to a rich sealife including numerous species of shellfish, commercially harvested mussel beds, sea urchins, cuttlefish, rays and skate.

Cultural/historic influences

- This is a man-made landscape created by drainage works dating back to the 17th century. The patchwork of regular fields divided by brackish ditches and dykes forms a managed backdrop to the naturalistic coastal habitats fringing the foreshore;
- Numerous blockhouses and sections of the Atlantic Wall –built to defend against Allied invasion in WWII –found along the coastal edge and visible as historic landmarks from the sea;
- Wrecks illustrate the SCA's wartime history and the hazardous sea conditions – including WWI torpedoes buried in the sand, the French steamship *Pavon* which was sunk by enemy fire in 1940, and the *Saint Antoine de Padoue* which was stranded and broken up in 1973;
- The remains of the French cargo vessel *Portrieux* were visible on the Platier d'Oye beach at low tide until 2003¹⁴ – the ship was bombed by the Luftwaffe when leaving Gravelines port in 1940;
- The expansive sandy beaches are valued for informal recreation, including horse riding and walking.

Aesthetic / perceptual qualities

- On the doorstep of the urban communities of Calais and Dunkerque, the coastline is a valued area of relative tranquillity and remoteness;
- A strong sense of 'emptiness', the sights and sounds of birdlife and exposure to the elements contrasts with nearby large-scale port developments;
- Seaward views are frequently marked by ferries and cargo ships entering and exiting the nearby ports;
- Breaking waves on the sand banks evoke a sense of danger associated with the coastal waters.

¹⁴ In 2003 the wrecked remains were removed from the beach due to public safety concerns. See: http://platier.free.fr/histoire_portrieux_02.php

Mapped evidence used to inform assessment



Biodiversity designation (Natura 2000)



Location of ship wrecks



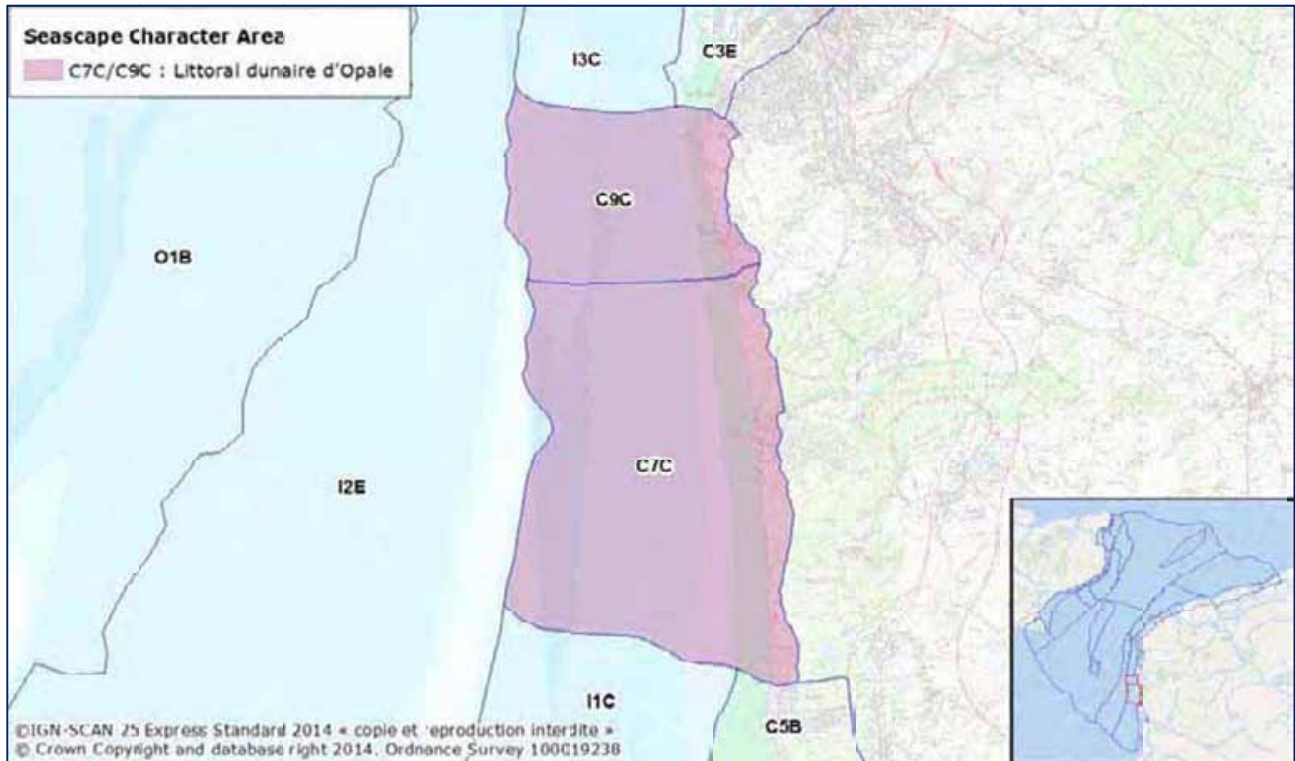
Bathymetry



Bedrock geology: mudstone, sandstone and tuff

C7C/C9C: Littoral dunaire d'Opale

Location map



Representative photographs



This Seascape Character Area covers the stretch of the Côte d'Opale extending from Le Portel to Ste-Cecile. It is strongly characterised by its rugged coastline of vegetated dunes, forests and wetlands, forming a distinctive backdrop to a rich marine area entirely designated as part of the Parc Naturel Marin Estuaires picards Mer d'Opale. The spectacular coastline also fronts the wider Parc Naturel Regional des Caps et Marais d'Opale; a popular tourism destination and inspirational seascape for many artists over the centuries. The rich seas are both valued marine ecosystems and important fishing grounds that support a thriving, long-standing industry centred on the nearby port of Boulogne.

Seascape Character Type(s):

C7: Sand Dunes, Beaches and Coastal Waters
 C9: Sandstone, Mudstone and Limestone Cliffs & Coastal Waters

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- Westerly stretch of the Côte d'Opale extending from Le Portel to Ste-Cecile, including the adjacent coastal waters which gradually deepen to a maximum of 20m;
- Jurassic mudstone, sandstone and limestone bedrock of the seafloor overlain by sand and gravel sediments;
- A linear channel of deeper water forms a boundary to the Bassure de Baas sandbank lying further offshore to the west;
- Coastline defined by rugged, strongly undulating sand dunes and wetlands, fronted by wide sandy beaches. The underlying geology is displayed in rugged cliffs between Equihen Plage and Le Portel;
- The extensive forested dunes of Hardelot and Ecault extend inland to form a distinctive backdrop to the northern part of the SCA, whilst land rises dramatically in the south to form the Massif du Mount St-Frieux (153m AOD);
- Large coastal sections designated as SCI and managed by the Littoral and Lakeside Conservancy; a mosaic of ancient vegetated sand dune systems, salt marshes, reedbeds and sedge meadow, home to a wide variety of flora and fauna;
- The intertidal and marine area falls entirely within the recently designated Parc Naturel Marin Estuaires picards Mer d'Opale, on merit of its nationally important marine ecosystems;
- The rich waters provide feeding and/or nursery grounds for a range of fish species including sole, plaice, herring, cod, seabass, sole and flounder;
- In turn the rich sea life of the Parc Naturel Marin creates feeding areas for a number of important seabird species.

Cultural/historic influences

- The presence of wrecks demonstrates the hazardous sea conditions that can affect the area – including the dangerous wreck of the *Amandine* – a small French fishing boat that was lost near the southern entry point to Boulogne in 1987;
- During the Second World War, Hardelot was occupied and looted by the Germans but subsequently destroyed by Allied bombing in 1944;
- The varied fish stocks support a nationally important and long-standing fishing industry, with the wider Parc Naturel Marin also attracting English, Belgian and German trawling and netting vessels;
- The nearby port of Boulogne-sur-Mer is the largest fishing port in France, handling 35,000 tonnes of fish per year;
- A popular tourism destination, with visitors drawn to the coast's sandy beaches and spectacular coastal scenery.

Aesthetic / perceptual qualities

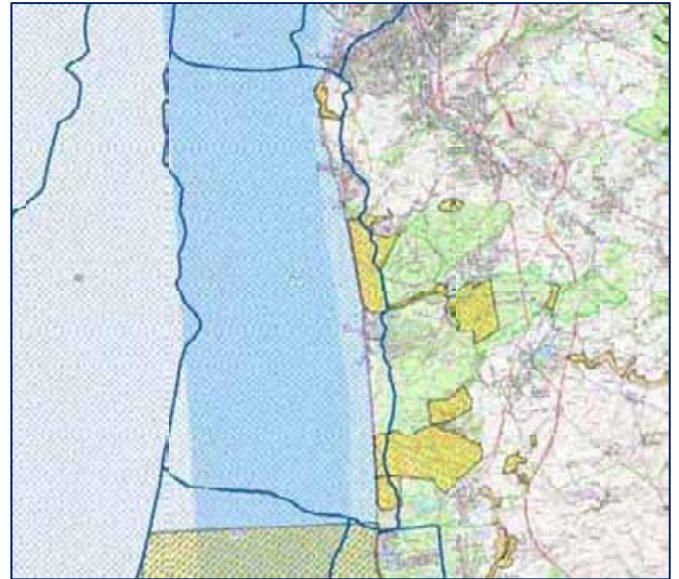
- The straight coastline affords long views along the shoreline. White/cream tower blocks at Ste Cecile and Hardelot form prominent built features in stark contrast to the naturalistic coastal edge;
- Camp sites, a motorcross circuit, golf courses and other tourism-development is associated with the popular holiday resorts of Hardelot-Plage and Equihen-Plage;
- A contrasting sense of naturalness and remoteness is associated with the rugged dunes, forests and expansive shoreline away from the tourist hotspots;
- Open, empty views out to sea are afforded, creating a sense of space and exposure within the seascape;

- Many artists have been inspired by the Côte d'Opale, including composer Henri Dutilleux, the writers Victor Hugo and Charles Dickens, and the painters J. M. W. Turner, Carolus-Duran, Maurice Boitel and Eugène Boudin.
- It was the painter Édouard Lévêque who coined the name for the coastline in 1911 to describe the distinctive quality of its light;
- The high scenic qualities of the seascape create a spectacular frontage to the wider Parc Naturel Régional des Caps et Marais d'Opale, designated in 1986.

Mapped evidence used to inform assessment



Location of ship wrecks



Parc Naturel Marin (blue) and Natura 2000 (yellow)



Bathymetry

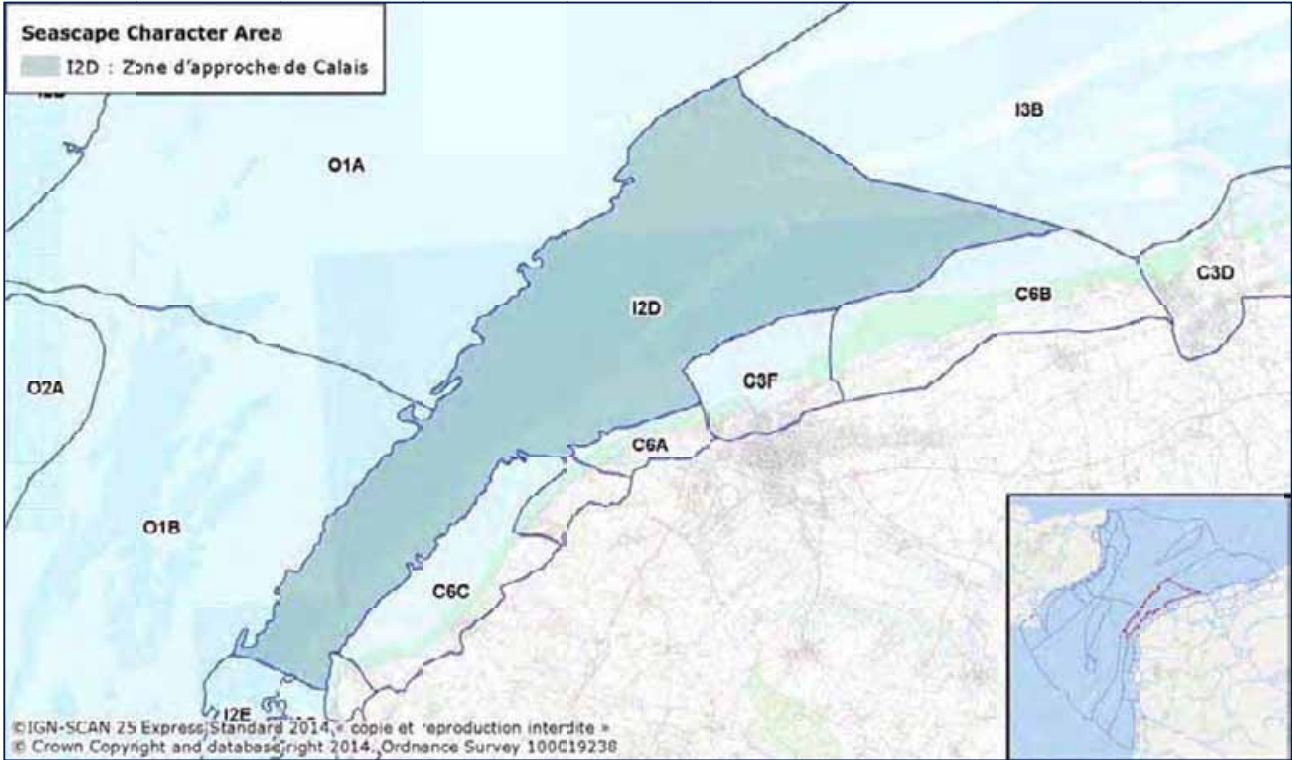


Mudstone, sandstone and limestone (red) and mudstone (blue)

Nord-Pas-de-Calais Inshore Seascape Character Areas

I2D: Zone d'approche de Calais

Location map



Representative photographs



This Seascape Character Area comprises the inshore waters and approach channels to Calais port, stretching between Cap Gris-Nez to the Bancs des Flandres. The natural influences on character are shaped particularly by the presence of large linear banks of sand and gravel sediments, as well as rocky ledges – creating dangerous sea conditions including breaking sand waves and strong tidal streams. These also create marine habitats of European importance, with SAC and SPA designations covering the western half of the area. A busy seascape with multiple uses, marine traffic – including cross-Channel ferries – dominates the scene. Dangerous wrecks illustrate the hazardous waters as well as the strategic role of the area in the two World Wars.

Seascape Character Type(s):

I2: Active Inshore Waters

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- Inshore waters broadly coincident with the northern French coastline from Cap Gris-Nez (to the west) and the edges of the Bancs de Flandre (to the east);
- Calais approach channels with depths of up to 28m, weaving around long linear sand and gravel banks and rocky ledges including the Ridens de Calais, Banc à la Ligne, La Barrière and the western edges of the Ridens de la Rade;
- The shifting sand and gravel sand banks, along with a large concentration of dangerous wrecks and obstructions, create hazards to navigation in this busy part of the Strait;
- In stormy conditions, the sea breaks heavily on the sandbanks creating sand waves which create further dangers to marine traffic;
- The Banc à la Ligne, extending NE of Cap Gris-Nez, is formed and modified by a strong counter current running east from the cape;
- The diverse marine conditions create valued ecosystems. The western half is SAC-designated, with the sandbanks and reefs providing habitats for grey and common seals and common porpoises;
- The marine area associated with Cap Gris-Nez (designated as SPA) supports 76 protected bird species, ranging from guillemots, terns and plovers to puffins, peregrines and goshawks.

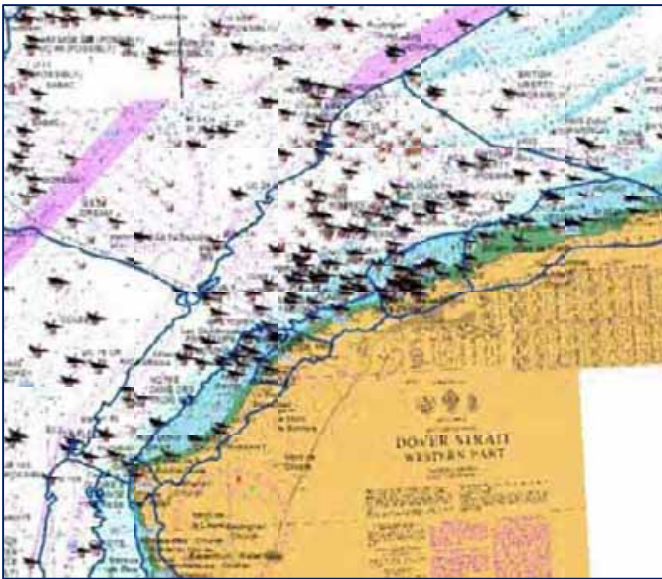
Cultural/historic influences

- The physical dangers of the seascape, as well as its location in the narrowest part of the Strait putting it at the heart of historic conflicts, have seen the loss of many vessels over the centuries;
- Wrecks include British steamships torpedoed by submarines in WWI, the *HMS Wessex* – a British destroyer bombed and sunk by German fighters in 1940, and a number of more recent wrecks from boats which have foundered in the hazardous waters;
- The 53m lighthouse in the centre of Calais – a white, octagonal tower operational since 1848, is a significant navigation mark for ships passing through the Strait. It is visible from the English coastline in clear conditions;
- These inshore waters are busy with maritime traffic, including cross-channel ferries. The waters include dedicated anchoring and waiting areas, as well as restricted zones;
- Numerous under-water cables traverse the sea floor, including disused lines. An explosives dumping ground is also present north of Calais;
- Fishing activity is restricted within the main approach channels,

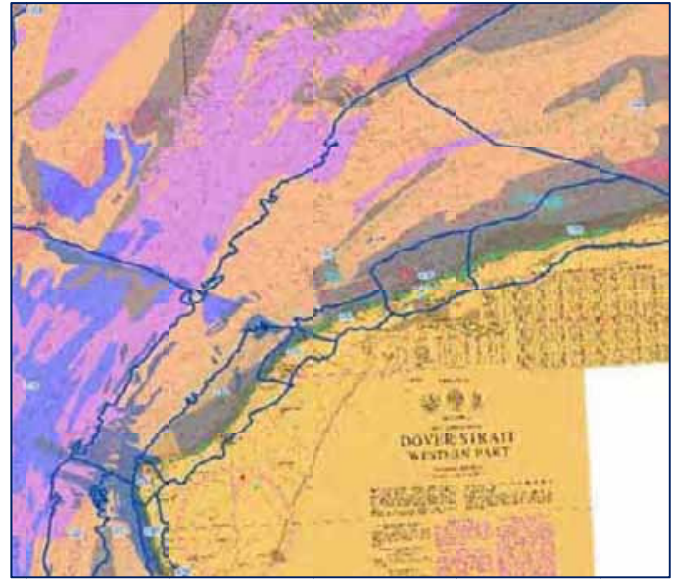
Aesthetic / perceptual qualities

- This is a busy seascape, strongly influenced by multiple activities and uses of the waters and coastline;
- Large scale development at Calais and Gravelines, including smoke plumes from numerous chimneys, dominate many views.
- Wind turbines located in the countryside behind Calais form tall moving structures standing above the skyline. The red lights on the turbines are often visible from the Kent coastline;
- Cross-channel ferries and other marine traffic form dominating, moving features within the scene;
- The southern and western parts of the SCA evoke a contrasting sense of remoteness and exposure (particularly around the Cap Gris-Nez headland);
- Views to the nationally important coastline of 'Les Deux Caps' form a spectacular backdrop to the western part of the SCA and first view of France for people crossing the Strait on ferries from Dover.

Mapped evidence used to inform assessment



Location of wrecks



Offshore sediments



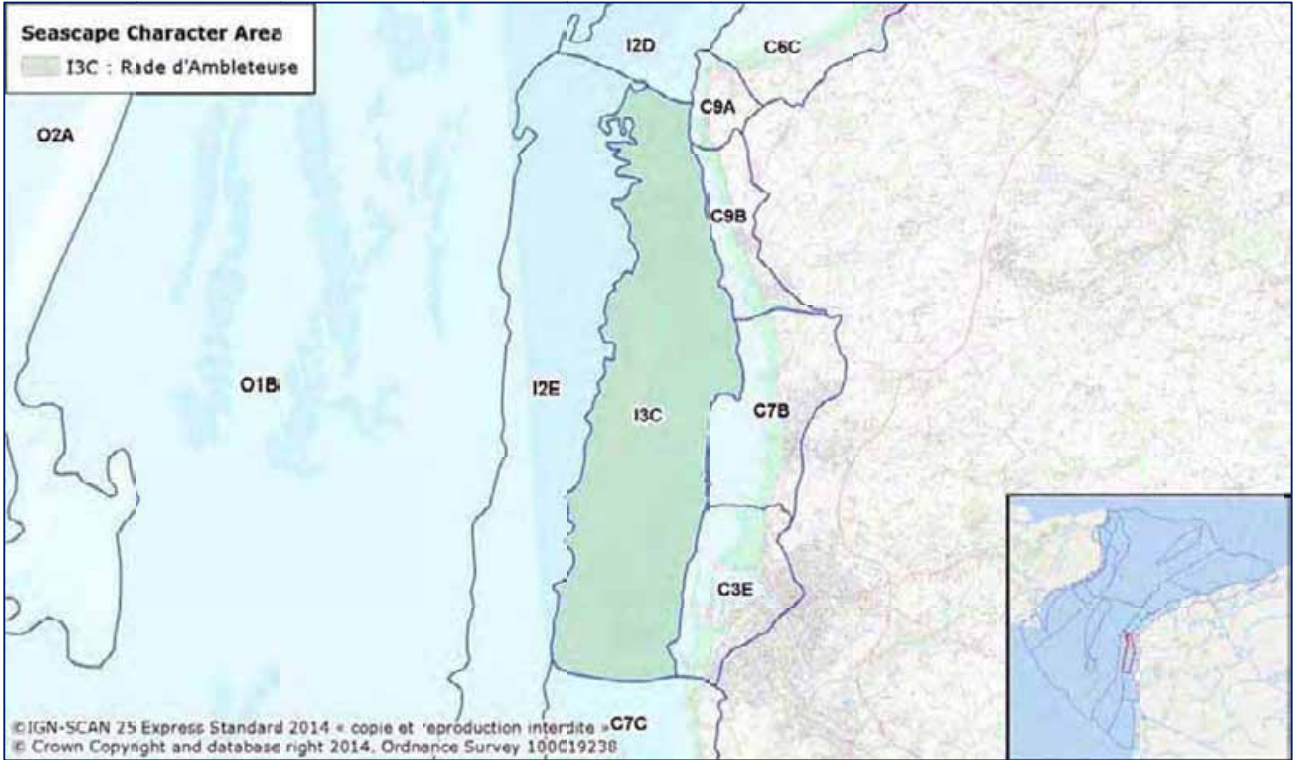
Bathymetry



Busy shipping zone

I3C: Rade d'Ambleteuse

Location map



Representative photographs



This SCA comprises the inshore waters and sand banks of the Rade d'Ambleteuse, situated off the western Côte d'Opale. The linear sandbanks and diverse sea floor create rich and varied marine habitats, designated as SAC and part of the recently designated (Parc Naturel Marin Estuaires picards Mer d'Opale). The numerous fish species present attract an international fishing fleet, serving the major nearby port of Boulogne-sur-Mer. The hazards presented by the shifting sandbanks and exposure of the seascape to storms funnelling through the Strait have resulted in the loss of a number of vessels over many years, now littering the seafloor providing hazards themselves. The role of the SCA in wider historic conflicts witnessed by the Dover Strait is also illustrated in the wreckage of ships lost in wartime.

Seascape Character Type(s):

I3: Inshore Sandbanks and Shoals

Regional Marine Character Area(s):

N/A

Seascape Character Description

Natural influences

- A north-south linear seascape unit covering the inshore waters and sandbanks lying to the west of the Côte d'Opale;
- Mudstone, sandstone and limestone bedrock geology outcropping along the adjacent cliffed coastline;
- Character defined by the presence of shifting sandbanks ('les ridens') and shoals a few metres beneath the sea surface – including part of the wider Bassure de Baas which extends to the south;
- The sea breaks over the sand banks in strong south, west and northerly winds with water depths liable to change;
- Between the sand banks water depths extend to a maximum of 18m bathymetry, allowing safe passage for larger vessels (including ferries to/from Boulogne);
- The majority of the SCA is part of the recently designated Parc Naturel Marin Estuaires picards Mer d'Opale, on merit of its nationally important marine ecosystems;
- The waters are important feeding and/or nursery grounds for a range of fish species including sole, plaice, herring, cod, seabass, sole and flounder;
- In turn the rich sea life of the Parc Naturel Marin creates feeding areas for a range of seabirds;
- The reefs and sandbanks in the north of the SCA fall within the Récifs Gris-Nez Blanc-Nez SAC, important habitats for protected species including the common porpoise, grey seals and common seals.

Cultural/historic influences

- The varied fish stocks support a nationally important and long-standing fishing industry, with the wider Parc Naturel Marin also attracting English, Belgian and German trawling and netting vessels;
- The nearby port of Boulogne-sur-Mer is the largest fishing port in France, handling 35,000 tonnes of fish per year;
- The sandbanks and exposure to heavy weather passing through the Strait have long proved dangerous to passing vessels – a significant number of ship wrecks and other obstructions are found on the seabed and buried within the sandbanks (often creating hazards in their own right);
- The wider area's turbulent past and role within the two World Wars is also illustrated in the presence of wrecks from vessels lost in conflict – including the *Gladys* and *Dotterel* – both British ships struck by mines in WWI;
- Deeper channels within the SCA form important inshore transport routes for traffic travelling to/from the port of Boulogne;
- A number of major submarine cables cross the seafloor.

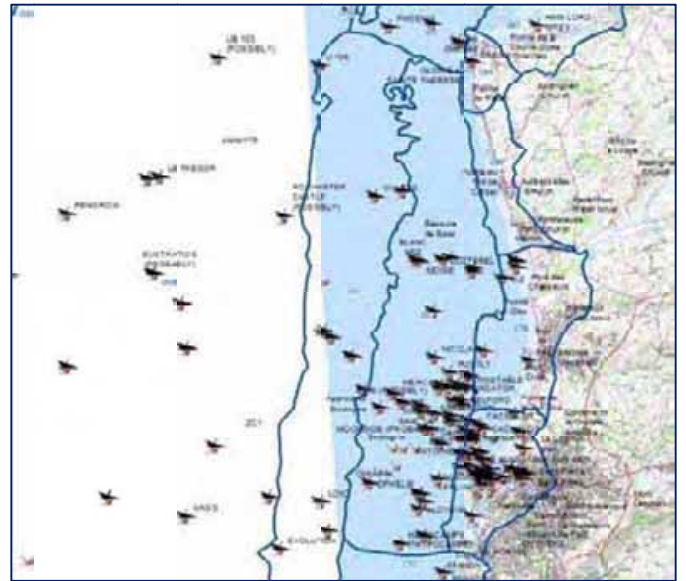
Aesthetic / perceptual qualities

- Winneraus' white painted buildings with red roofs, framed by golden cliffs, forms a characterful coastal backdrop to the SCA;
- Strong feelings of remoteness and emptiness – unbroken, large-scale horizons stretching out to sea, occasionally marked by yachts and fishing boats;
- The remote, empty character of this seascape contrasts with the industrial development marking the entrance to Boulogne port – the wind turbines form prominent features in southerly views.

Mapped evidence used to inform assessment



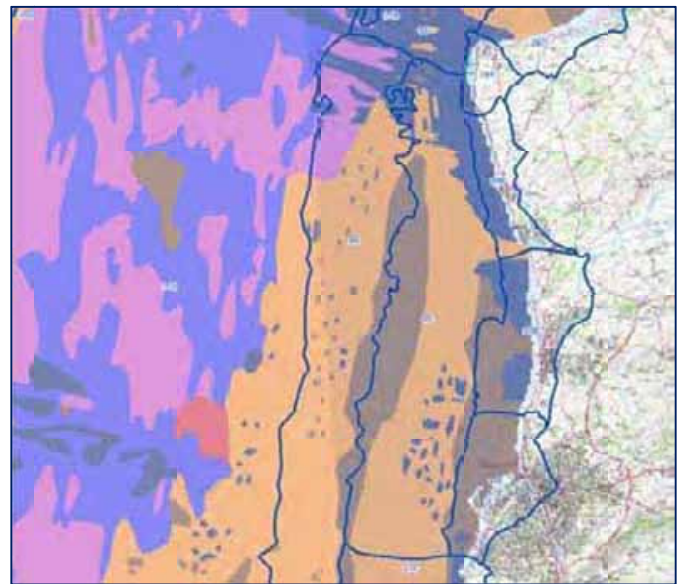
Parc Naturel Marine (blue) and Natura 2000 (yellow)



Location of wrecks



Bathymetry

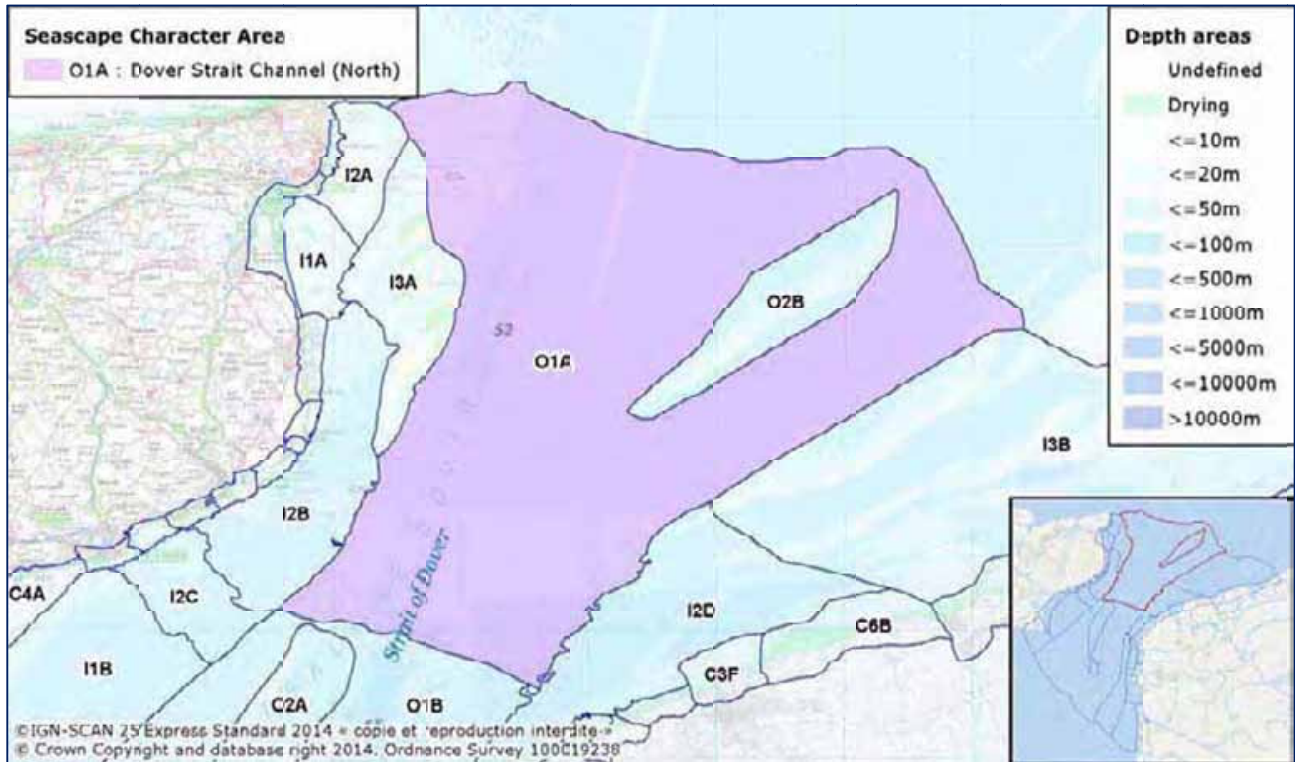


Offshore sediment

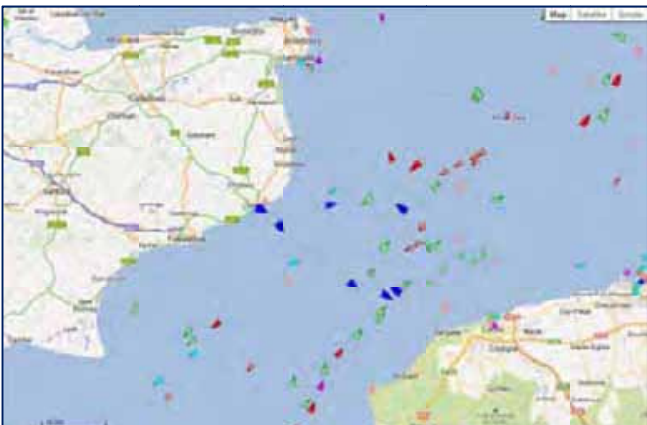
Dover Strait Offshore Seascape Character Areas

O1A: 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 separation zones. This area contains the deeper water shipping and main through traffic of the Dover Strait. Part of its character relates to the chalk bedrock characterising the seabed, with the SCA boundary to the south defined by the transition to argillaceous mudstones and sandstones. To the north the chalk extends out beyond the narrow strait around the North Foreland headland towards the North Sea. The SCA contains both English and French territorial waters.

Seascape Character Type(s):

O1: Offshore Shipping Channels

Regional Marine Character Area(s):

MCA 12: English Channel/Dover Strait

Seascape Character Description

Natural influences

- Broad north-west to south-east deep channel approximately 18km wide forming the eastern section of the main Dover Strait;
- Relatively shallow waters but forming part of the deep water shipping channel. Depths reach 30m either side with a deeper central channel of >50m depth maintained by dredging;
- Underlain by chalk bedrock, extending from the distinctive chalk headland of North Foreland, the White Cliffs of Dover and outcropping at the corresponding chalk coast of France at Cap Blanc Nez;
- Contains part of the English Channel Outburst Mega Flood Feature – a geomorphological feature providing evidence of the North Sea flood which created the channel separating England from mainland Europe. This is thought to be the biggest flood event on Earth to-date;
- Seabed covered by a veneer of sub-tidal sediment with high benthic species diversity. Dynamic sand waves associated with the adjacent Bancs des Flandres are valued feeding grounds for porpoises and seals, whilst the Strait acts as a passage area for important sea bird species.
- The ecological importance of the area is reflected in locations lying within the wider SPAs/Sites of Community Importance of Bancs des Flandres and Cap Gris Nez, as well as the majority of the Offshore Foreland rMCZ and part of the Goodwin Sands rMCZ.
- The area is likely to contain important fish spawning and nursery grounds. Fishing is limited by the marine traffic which dominates this narrow strait, although fishery vessels frequently pass through the area and there is some trawling for cod and other white fish;
- Complex tidal currents meeting from the western English Channel/ Atlantic and the North Sea sometimes creating turbulent conditions depending on wind direction.

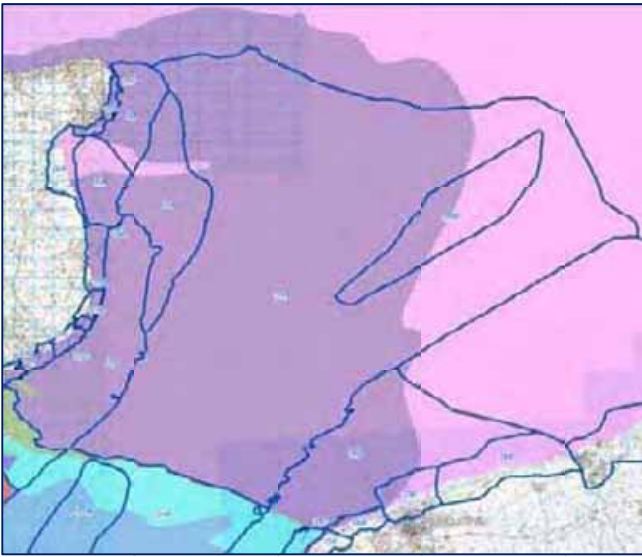
Cultural/historic influences

- 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 and other debris on the sea bed are a testament to past maritime uses including international trade dating back many centuries – and of course the conflicts for which the Strait is renowned;
- This SCA is part of the first IMO 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 Strait is a vessel traffic services (VTS) reporting area for vessels of 299 gross tonnage and above;
- Internationally important telecommunications cables passing through the seabed, including the Atlantic Crossing, which transports speech and data traffic between the USA and Europe;
- The Channel Tunnel route linking England and France passes through the west of the SCA.

Aesthetic / perceptual qualities

- A busy dynamic area defined by transport movement, regularly used by up to 500 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 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;
- 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, the lights of shipping and flashing maritime navigation devices within the Strait and along the adjacent coastlines are key visual influences within the area and from the shore.

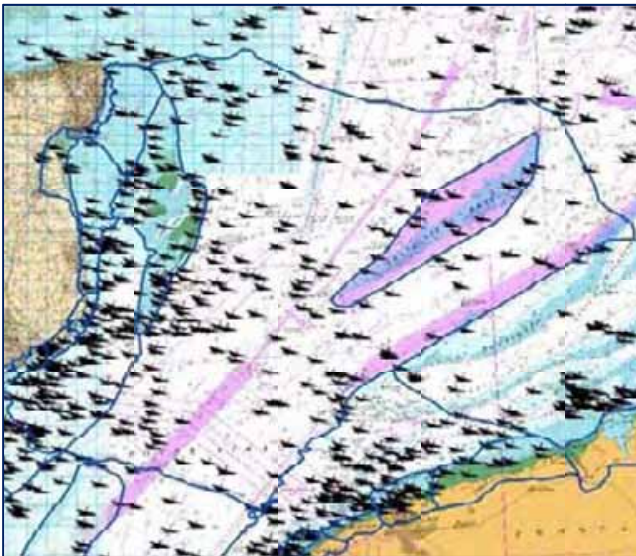
Mapped evidence used to inform assessment



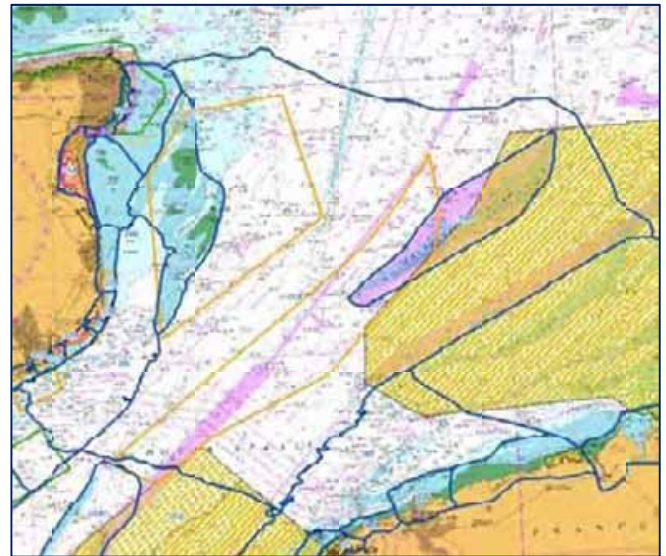
Chalk bedrock geology (purple)



Bathymetry



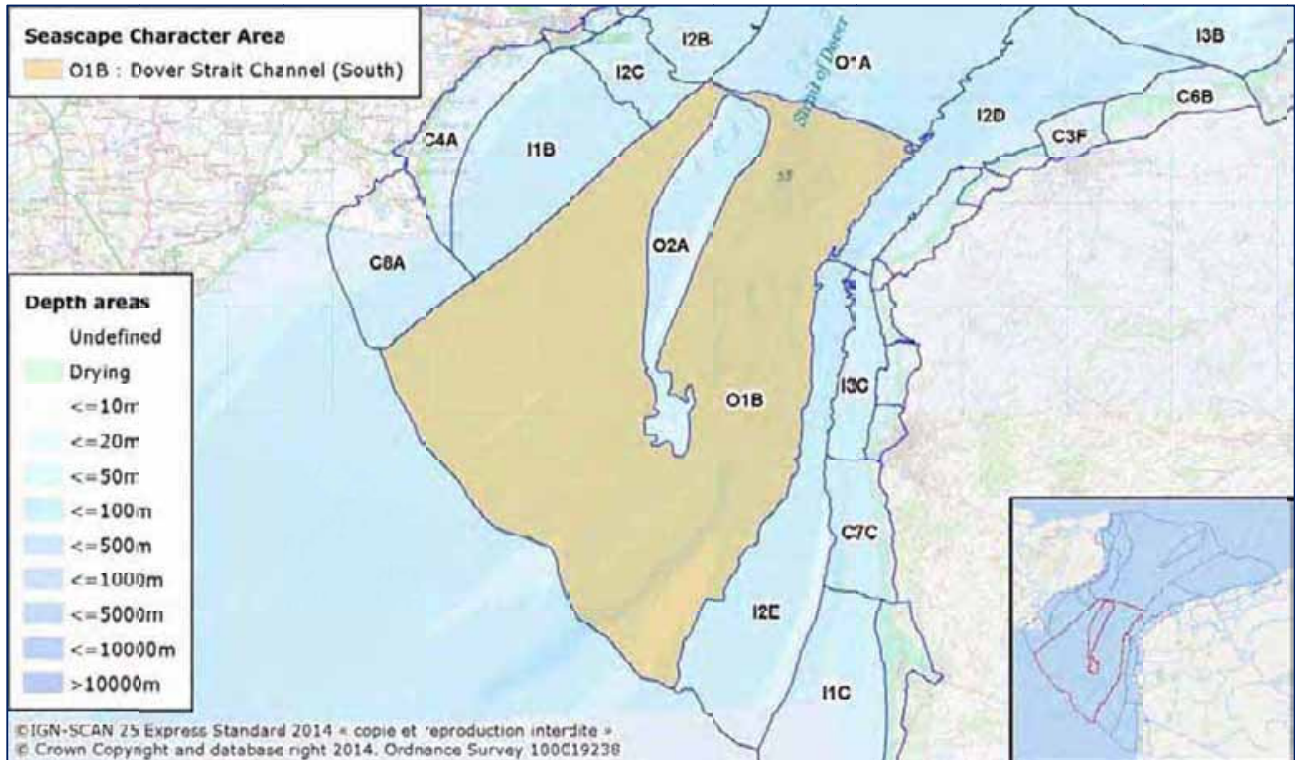
Ship wrecks



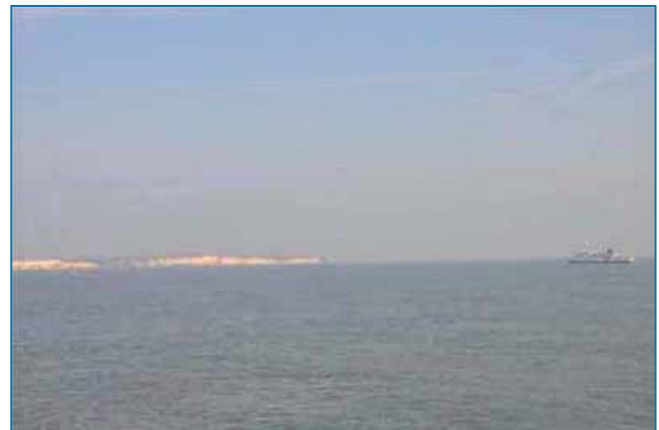
Marine biodiversity designations

O1B: Dover Strait Channel (South)

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 separation zones. Along with SCA 9, which is characterised by chalk rather than mudstone bedrock geology, this area contains the deeper water shipping and main through traffic of the Dover Strait. The SCA contains both English and French territorial waters, with character dominated by marine traffic as one of the busiest shipping routes in the world.

Seascope Character Type(s):

O1: Offshore Shipping Channels

Regional Marine Character Area(s):

MCA 12: English Channel (East)/Dover Strait

Seascape Character Description

Natural influences

- Broad north-west to south-east deep channel forming the central section of the wider Dover Strait;
- Seafloor contains a large part of the English Channel Outburst Mega Flood Feature -providing evidence of the flood which created the channel separating England from mainland Europe. This is thought to be the biggest flood event on Earth to-date;
- Varied bathymetry owing to the presence of seabed sediments, but within the central deep water shipping channel depths can reach 60m (maintained by dredging);
- Predominantly mudstone sea floor, largely concealed by seabed and palaeovalley sediments, including sand, gravels, flints and chalk pebbles - rich habitats for benthic species;
- Narrow, linear sandbanks including Bullock Bank and The Varne (SCA 11) providing important nursery and spawning grounds for fish. These are marked by lit flashing buoys due to their potential hazard to shipping, including from strong tide rips;
- Dynamic sand waves associated with the Ridens et Dunes Hydrauliques du Détroit du Pas-de-Calais SAC/SCI, whilst the Strait acts as a passage area for important sea bird species (as part of the wider Cap Gris-Nez SPA);
- The area is likely to contain important fish spawning and nursery grounds. Fishing is limited by the marine traffic which dominates, although fishery vessels frequently pass through the area and there is some trawling for cod and other white fish;
- 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

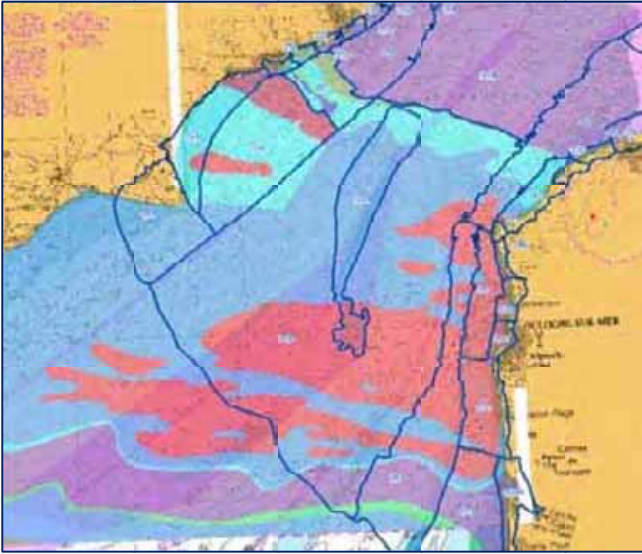
- Strait's turbulent past reflected in the remains of numerous British and enemy shipping, aircraft and other associated debris (including live ordnance) from the two World Wars;
- Scattered wrecks on the seabed testament to the channel's importance as a trade route, including cargo vessels from as far afield as Panama and Japan;
- This SCA is part of the first IMO¹⁵ 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;
- Internationally important telecommunications cables passing through the seabed, including the Atlantic Crossing, which transports speech and data traffic between the USA and Europe.

Aesthetic / perceptual qualities

- 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;
- Weather conditions in the Strait subject to rapid change. Strong tides and the narrow topography 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 which can last for several days;
- Intervisibility with both the English and French coasts which are no more than 16 km distance, but often periods of low visibility due to climatic conditions;
- At night time, the lights of shipping, flashing navigation markers both on the Strait and along the adjacent coastlines are a key visual influence within the area and from the shore.

¹⁵ International Marine Organization

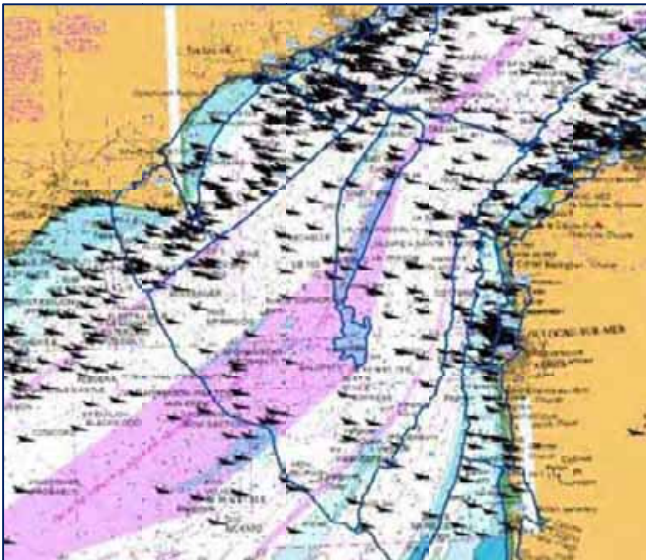
Mapped evidence used to inform assessment



Offshore bedrock geology



Bathymetry



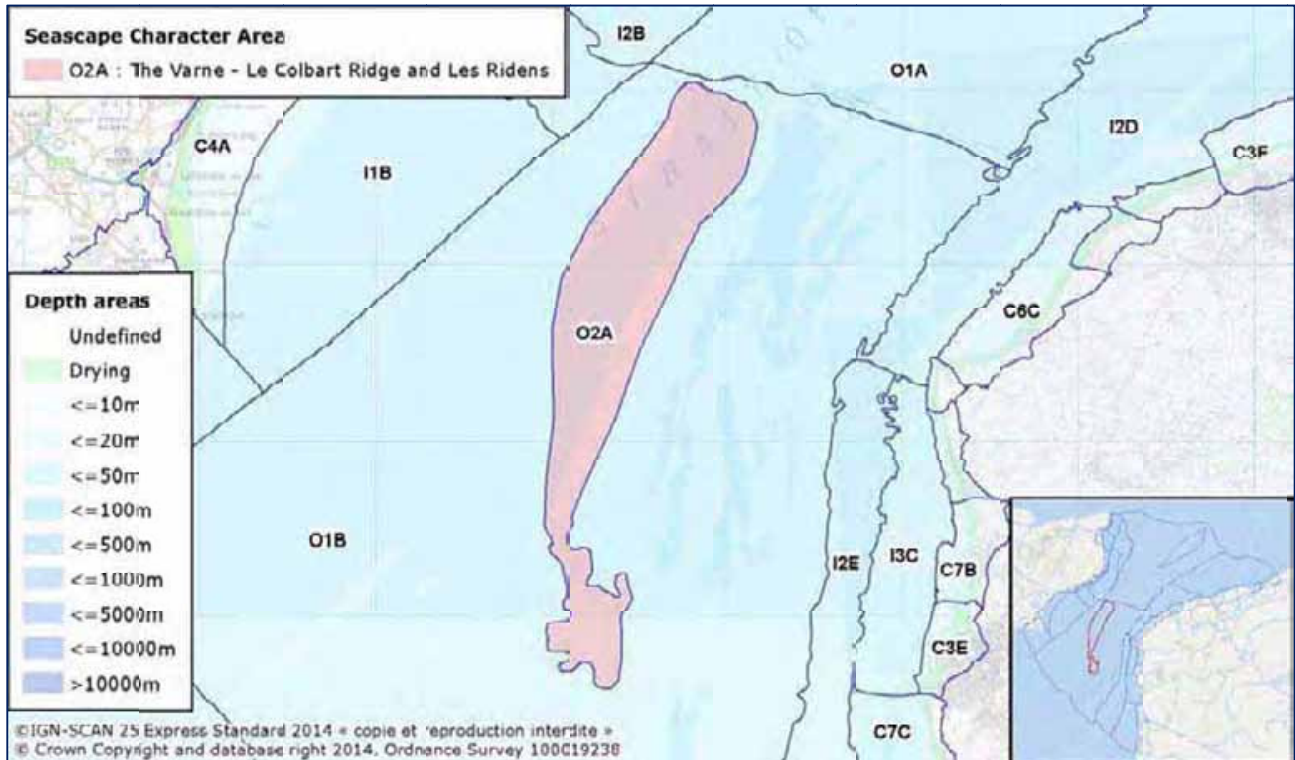
Ship wrecks



Marine biodiversity designations

O2A: The Varne-Le Colbart Ridge & Les Ridens

Location map



This SCA covers the linear ridges of The Varne and Le Colbart Ridge, separated by a deep channel in the centre of the Dover Strait. To the south of Le Colbart lies a further area of shallow shoals – Les Ridens. The sand, gravel and shell shoals create turbulent sea conditions, with steep breaking waves, eddies and strong tidal rips. They are marked by lit navigational buoys to guide safe passage. The rich and varied sediments are feeding and nursery grounds for a number of fish species; in turn a popular fishing area for English and French vessels. The area's location within the Dover Strait, with its history of battle, and the dangerous seas that characterise the shoals are evidenced by a number of wrecks on the seabed. Views from the SCA are dominated by adjacent marine traffic in the shipping lanes, with distant views to the two coasts in clear conditions.

Seascape Character Type(s):

O2: Offshore Sandbanks and Shoals

Regional Marine Character Area(s):

MCA 12: English Channel (East)/Dover Strait

Seascape Character Description

Natural influences

- Narrow, steep shoals of Le Colbart and The Varne located in the central Dover Strait, covered by shallow water of only 2 metres depth in some locations. Les Ridens are a further series of shoals extending south from The Varne;
- The two ridges are of north-westerly orientation separated by a deeper channel reaching a maximum of approximately 40 metres bathymetry;
- Shoals comprise a mixture of sand, gravel and shells deposited over the solid mudstones of the Strait's seabed. These rich sediments provide important nursery and spawning grounds for fish;
- The shoals create dangerous hazards for navigation due to strong eddies, breaking waves and unpredictable tide rips. Light-buoys and a lightvessel on The Varne mark safe passage routes;
- Dynamic sand waves valued as part of the Ridens et Dunes Hydrauliques du Détroit du Pas-de-Calais SAC/SCI.
- The SCA also forms part of a passage area for internationally important sea bird species as part of the wider Cap Gris-Nez SPA.

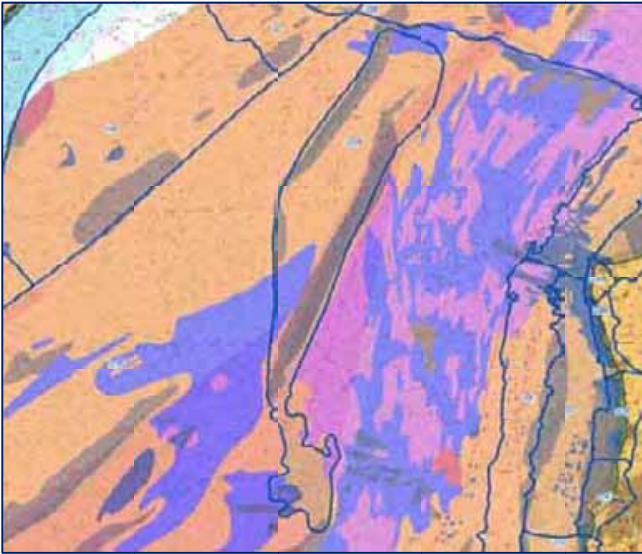
Cultural/historic influences

- 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;
- The braided character and alignment of the sand banks is thought by some to be as a result of the powerful action of water from the Outburst Mega Flood that created the English Channel;
- The dangerous conditions associated with the shoals, as well as the Strait's turbulent war history, is evidenced by a number of ship wrecks (including a number of German U-boats) littering the sea bed – creating further hazards to navigation;
- The area is frequented by both French and English fishermen, with species caught including plaice, dab, whiting, dogfish, turbot, brill and cod.

Aesthetic / perceptual qualities

- The position of the SCA in the centre of the international shipping lanes means that perceptual qualities are dominated by the sights and sounds of marine traffic;
- In times of adverse sea and weather conditions this is a foreboding seascape, with high breaking waves, swirling currents and rip tides creating a sense of danger and isolation;
- In clear conditions views to Cap Gris-Nez and the chalk cliffs of the Kent coastline unify the Strait.

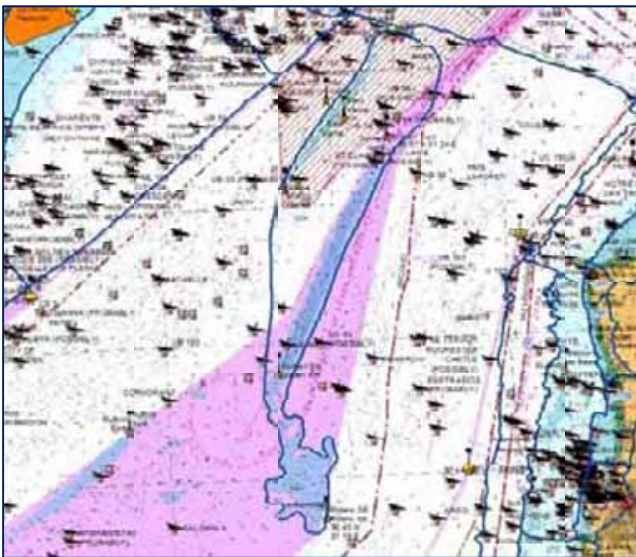
Mapped evidence used to inform assessment



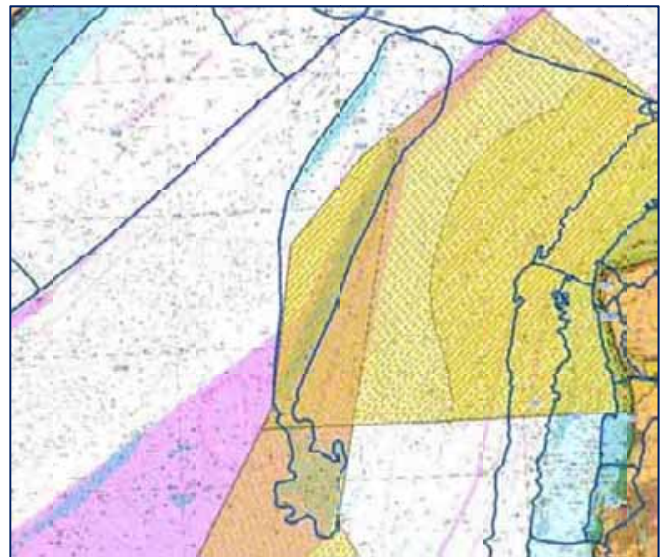
Offshore sediment



Bathymetry



Ship wrecks and Traffic Separation Zones



Marine biodiversity designations – Natura 2000 site

Appendix 1: SCA and SCT classification with boundary rationale

SCA number/ name	Existing SCA (from pilot study)?	SCT	Boundary information (including any changes to those identified in the pilot)
KENT COASTLINE			
C1A: Kingsdown Chalk Cliffs	Yes	C1: Chalk Cliffs and Reefs/Coastal Waters	No changes made
C1B: St Margaret's Bay	Yes	C1: Chalk Cliffs and Reefs/Coastal Waters	No changes made
C1C: White Cliffs of Dover	Yes	C1: Chalk Cliffs and Reefs/Coastal Waters	No changes made
C1D: Shakespeare and Abbot's Cliffs	Yes	C1: Chalk Cliffs and Reefs/Coastal Waters	No changes made
C1E: Broadstairs to North Foreland	N/A	C1: Chalk Cliffs and Reefs/Coastal Waters	Ensure North Foreland lighthouse falls within the SCA at its northern extent
C2A: East Wear Bay and The Warren	Yes	C2: Greensand Cliffs and Reefs/Coastal Waters	No changes made
C3A: Dover Port, Harbour and Historic Defences	Yes	C3: Ports, Harbours and Seafront Development	No changes made
C3B: Folkestone Harbour and Seafront	N/A	C3: Ports, Harbours and Seafront Development	<p>Take in all of Copt Point and "Folkestone Beds" bedrock geology (sandstone)</p> <p>Offshore extent follows boundary with I2C (10m bathymetry)</p> <p>Extend westwards on land to meet 'The Romney Coast' Kent Local LCA.</p> <p>Include the main sea front and development backing the harbour – use logical road routes backing the coast as boundary lines</p>

SCA number/ name	Existing SCA (from pilot study)?	SCT	Boundary information (including any changes to those identified in the pilot)
C3C: Ramsgate Harbour	N/A	C3: Ports, Harbours and Seafront Development	Ramsgate Fort forms western extent, and East Cliff the eastern. Take in immediate coastal development following logical road routes Offshore extent covers harbour limits
C4A: Romney Coast, Hythe Flats and Roar Bank	N/A	C4: Shingle Beaches and Coastal Waters	Follow Local Kent LCA boundary ("The Romney Coast") for inland extent of the SCA Extend offshore to cover Roar Bank and Hythe Flats, out to the 10m bathymetry contour Meet the Dungeness headland by following the MCA 10 boundary (from the MMO seascape assessment)
C4B: Deal Seafront and Deal Bank	N/A	C4: Shingle Beaches and Coastal Waters <i>(note some parts have sand dunes behind the beach, often golf courses)</i> <i>Also frequent presence of linear development backing the beaches)</i>	Use roads/railway line to form inland boundary behind Deal's seafront development Extend offshore to cover consistent area of sea to adjacent SCA (10m bathymetry)
C5A/I1A: Sandwich and Pegwell Bays	N/A	C5: Tidal Estuaries and Flats (including offshore to 'drying area') <i>(include the fringing land including sand dunes rather than splitting off into further SCTs)</i> I1: Inshore Bays	Extend inland to include tidal River Stour and seaward edge of Sandwich and logical coastal hinterland on edge of Ramsgate Include inshore areas 'Cross Ledge' and 'Ramsgate Channel' marked on the marine chart Ramsgate Fort forms eastern landward extent of the SCA
C8A: Dungeness, Denge Marsh and Eastern Rye Bay	N/A	C8: Shingle Headlands and Coastal Waters <i>(unique SCT)</i>	Inland boundary consistent with the 'Dungeness Shingle' Kent Local LCA (extend slightly in the far western corner to include consistent area of wetland/marsh up to study area limits)

SCA number/ name	Existing SCA (from pilot study)?	SCT	Boundary information (including any changes to those identified in the pilot)
			Seaward boundary formed by the Traffic Separation Zone (consistent with the MMO boundary for MCA 9) Include West Road and Stephenson Shoal marked on the marine chart
KENT INSHORE AREA			
I1B: Hythe Bay	N/A	I1: Inshore Bays	Outer boundary follows that of the MMO MCA boundary – coincident with the Traffic Separation Zone.
I2A: Broadstairs Knolls and Ramsgate Road	N/A	I2: Active Inshore Waters	Follow logical bathymetry contours from marine chart, taking in these named areas of sea
I2B: Inshore Dover Strait, The Downs and Trinity Bay	Partial SCA 7	I2: Active Inshore Waters	Extend existing SCA to cover The Downs and Trinity Bay showing on marine chart; use logical bathymetry contour lines as boundaries around these
I3A: Goodwin Sands, Gull Stream and North Sand Head	We had identified this as a potential SCA (but note not the exact boundary, which is now bigger)	I3: Inshore Sandbanks and Shoals	Follow logical bathymetry contour lines around the three features, taking in linked navigation markers shown on the chart
I2C: Folkestone Pomerania	Yes (SCA 8)	I2: Active Inshore Waters	Westward boundary to be amended and extended westwards to follow offshore bedrock geology (outer turquoise band of mudstone/sandstone) The southern boundary to be extended along Traffic Separation Zone (which was previous boundary with SCA 11, now O1B).
FRENCH COASTLINE			
C1F_C6C_C9A: Les Deux Caps	N/A	C1: Chalk Cliffs and Reefs/Coastal Waters C6: Sand Dunes, Wetlands and Coastal	Southern landward extent (around headland of Cap Gris Nez) to include all of the Special Protection Area

SCA number/ name	Existing SCA (from pilot study)?	SCT	Boundary information (including any changes to those identified in the pilot)
		Waters C9: Sandstone, Mudstone and Limestone Cliffs & Coastal Waters	Offshore extent to include shoals and wrecks out to 10m bathymetry contour Inland extent takes in main areas of elevated land surrounding the caps, following logical roads as boundary lines In the east, include the main block of Natura 2000 designation surrounding Cap Blanc Nez
C3D: Ports de Dunkerque et Gravelines et côte urbanisée	N/A	C3: Ports, Harbours and Seafront Development	Use main A-road to south of port-related development for inland boundary Eastern extent marked by change to open sand dunes marked on IGN base See map markup for offshore extent using bathymetry contours
C3E: Port de Boulogne	N/A	C3: Ports, Harbours and Seafront Development	Extend from Pointe de la Creche southwards to cover main port and harbour-related development, ending at the southern extent of development at Le Portel. Ensure the dome of Notre Dame cathedral is within the SCA (a skyline feature) Offshore extent to 10m bathymetry, including the outer harbour marked by the sea walls 'Digue Nord' and 'Digue Carnot'.
C3F: Port de Calais	N/A	C3: Ports, Harbours and Seafront Development	To follow port extent from marine charts, including main outer navigation marks and the Ridens de la Rade. Inland boundary formed by logical road route behind port and main coastal development.
C5B/11C: Baie de Canche et littoral dunaire d'Opale	N/A	C5: Tidal Estuaries and Flats <i>(include the fringing land including sand dunes rather than splitting off into further SCTs)</i>	Include all of the Baie de Canche SAC in offshore extent, using this to inform the western (offshore) SCA boundary

SCA number/ name	Existing SCA (from pilot study)?	SCT	Boundary information (including any changes to those identified in the pilot)
		I1: Inshore Bays	
C6A: Dunes du Fort Mahon et littoral de Sangatte	N/A	C6: Sand Dunes, Wetlands and Coastal Waters	Covering area between Calais and Cap Blanc Nez Low-lying dunes and marshes – follow logical road backing these as inland boundary Extend offshore to 10m bathymetry contour
C6B: Platier d'Oye et littoral dunaire de Calais	N/A	C6: Sand Dunes, Wetlands and Coastal Waters <i>(also often includes sandy beaches in front of dunes but distinct from other sand dunes SCT due to significant wetland areas)</i>	Include all of the Platier d'Oye Natura 2000 site/regional nature reserve Inland boundary formed by coastal road backing the main band of marshy farmland Extend offshore to 10m bathymetry contour
C7A: Littoral dunaire de Bray Dunes	N/A	C7: Sand Dunes, Beaches and Coastal Waters <i>(distinct from other sand dunes SCT due to lack of wetlands/reclaimed farmland)</i>	To cover the sand dunes defining the coast from the eastern edge of Dunkerque development to the Belgian border, extending offshore to approximately 5m bathymetry to the edge of the Bancs des Flandres.
C7B/C9B: Littoral des falaises d'Opale	N/A	C9: Sandstone, Mudstone and Limestone Cliffs & Coastal Waters C7: Sand Dunes, Beaches and Coastal Waters <i>(distinct from other sand dunes SCT due to lack of wetlands/reclaimed farmland)</i>	Out to 10m bathymetry line. Covers coastline with hummocky sand dunes backing wide sandy/shingle beaches with a low eroding cliffline (mudstone/sandstone/limestone)
C7C_C9C: Littoral dunaire d'Opale	N/A	C7: Sand Dunes, Beaches and Coastal Waters C9: Sandstone, Mudstone and Limestone Cliffs & Coastal Waters <i>(distinct from other sand dunes SCT due to lack of wetlands/reclaimed farmland)</i>	Use logical inland boundary (e.g. following roads), ensuring the main areas of dune/intertidal zone is included. Extend offshore to 20m bathymetry contour which marks the edge of the Bassure de Baas. Use IGN map (based on field observations) to divide

SCA number/ name	Existing SCA (from pilot study)?	SCT	Boundary information (including any changes to those identified in the pilot)
			the SCT into 2 types where dunes are replaced by cliffs.
FRENCH INSHORE AREA			
I2D: Zone d'approche de Calais	N/A	I2: Active Inshore Waters	Also including a number of banks and shoals (e.g. Ridens de Calais), associated wrecks, vessel waiting areas and approach channels to Calais port.
I3C: Rade d'Ambleteuse	N/A	I3: Inshore Sandbanks and Shoals	From Cap Gris Nez down to Boulogne, and offshore to 20m bathymetry contour around Bassure de Baas rocky shoals. Also includes the inshore ferry channel to/from Boulogne.
I3B: Bancs des Flandres	N/A	I3: Inshore Sandbanks and Shoals	See map markups – taking in main sandbanks and large proportion of the Bancs des Flandres SAC
I2E: Bassure de Baas	N/A	I2: Active Inshore Waters	Offshore extent marked by Traffic Separation Zone.
CENTRAL STRAIT			
O1A: Dover Strait Channel (North)	Yes (SCA 10)	O1: Offshore Shipping Channels	Just extended to show continuation beyond pilot study area boundary.
O1B: Dover Strait Channel (South)	Yes (SCA 11)	O1: Offshore Shipping Channels	Just extended to show continuation beyond pilot study area boundary.
O2A: The Varne-Le Colbart Ridge and Les Ridens	N/A	O2: Offshore Sandbanks and Shoals	Following outer contours of the banks/ridges as shown on marine chart.
O2B: Sandette Bank	N/A	O2: Offshore Sandbanks and Shoals	See pink area (traffic exclusion) on marine chart

Appendix 2: List of individuals/organisations who inputted into this study

We are grateful for the helpful inputs received from a range of organisations and individuals on this study. This included attendance at a workshop held at Samphire Hoe on 2 September 2014, as well as specific comments provided on an individual basis. A list of all those who contributed is included below.

- Kirk Alexander, Manager, White Cliffs Countryside Partnership
- Bryony Chapman, Kent Wildlife Trust
- Ruth Childs, Landscape Officer, Kent County Council
- Peter Cosgrove, Marine Plan Implementation Officer (South), Marine Management Organisation
- Nick Delany, Ecologist, Dover District Council
- David Deverson, Essex and Kent Inshore Fisheries Conservation Authority
- Chris Drake, Coastal Officer, Kent County Council
- Liz Fagg, Port of Dover
- Pauline Gessant, Conseil générale du Pas-de-Calais
- Xavier Harlay, Agence des aires marine protégées – Parc naturel marin des estuaires picards et de la mer d'Opale
- Mike Hayes, GIS & Mapping Officer, Kent and Essex Inshore Fisheries Conservation Authority
- Paul Holt, Samphire Hoe Site Manager, White Cliffs Countryside Partnership
- David Illsley, Shepway District Council
- Nick Johannsen, Manager, Kent Downs AONB Unit
- Rebecca Korda, Natural England
- Cécile Leclair, Région Nord-Pas-de-Calais
- Stéphane Louhaur, Conseil générale du Pas-de-Calais
- Colette Marie, Conseil générale du Pas-de-Calais
- Cllr Sue Murray, Tonbridge and Malling Borough Council
- Andrew Richardson, Outreach and Archives Manager, Canterbury Archaeological Trust
- Antoine Surget, Conseil générale du Pas-de-Calais
- Mel Wrigley, White Cliffs Countryside Partnership