

Natural England Commissioned Report NECR105

An Approach to Seascape Character Assessment

First published 11 October 2012

www.naturalengland.org.uk



Foreword

Natural England commission a range of reports from external contractors to provide evidence and advice to assist us in delivering our duties. The views in this report are those of the authors and do not necessarily represent those of Natural England.

Background

Seascape, like landscape, reflects the relationship between people and place and the part it plays in forming the setting to our everyday lives. It is a product of the interaction of the natural and cultural components of our environment, and how they are understood and experienced by people.

Seascape character assessment (SCA) has emerged as a method for assessing, characterising, mapping and describing seascape character. The process of SCA follows the well-established, and widely used, process of Landscape Character Assessment. This report on assessing seascape character was commissioned by Natural England to contribute to the strategic and integrated management of our seas, as part of the implementation of the Marine and Coastal Access Act 2009 and Marine (Scotland) Act 2010.

These findings are being published so they may be used by individuals and organisations whose activities affect coastal and marine environments or who are concerned about the way that coastal and marine resources are managed and protected.

SCA is not mandatory. The approach will depend on the purpose, scope and scale of the assessment being undertaken and the skills and resources that are available to carry it out. It is open to interpretation and innovation. The publication of this report should help to generate discussion and encourage methods, techniques and skills involved in SCA to evolve.

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Keywords - seascape, character assessment, seascape character assessment, landscape character assessment, European Landscape Convention, Seascape Characterisation Around the English Coast Pilot Study

Further information

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ISSN 2040-5545

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AN APPROACH TO SEASCAPE CHARACTER ASSESSMENT

OCT 2012



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ACKNOWLEDGEMENTS

■■■■■ ‘An Approach to Seascape Character Assessment’ has been coordinated by Project Officer Christine Tudor (Natural England) and authored by Ian Houlston at *LDA Design*. William Wheeler, *LDA Design*, was a specialist advisor.

Preparation of this document has been influenced by stakeholder engagement carried out to inform the ongoing revision of the well used Landscape Character Assessment Guidance for England and Scotland (2002). It was felt that the principles of the Landscape Character Assessment method should also apply to seascape.

This document has benefitted significantly from the input of an Advisory Group made up of Russell Gadbury, Marine Management Organisation; Dave Hooley, English Heritage; John Briggs, Countryside Council for Wales; Richard Copas, Environment Agency; Ness Smith, Dorset County Council/ C-SCoPE; Nick Johannsen, Kent Downs, AONB; Kate Ahern, LUC.

Thanks are also extended to stakeholders who attended related Workshops in Autumn 2010.

The GIS/Data Procurement Advisor was Ian Saunders, Natural England, and general support was given by Rachael Mills, Natural England.

‘An Approach to Seascape Character Assessment’ was developed in tandem with work on the revision of the Landscape Character Assessment Guidance noted above. Where appropriate it shares common principles, structure and ways of working with Landscape Character Assessment. Thanks are extended to LUC in their role as consultants to Natural England in the revision process of the Landscape Character Assessment Guidance for England and Scotland (2002).



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FOREWORD

Within the UK, implementation of the Marine and Coastal Access Act 2009 will lead to strategic and integrated management of our seas.

The UK Marine Policy Statement provides clarity and consistency in the management and use of UK waters and the framework for producing Marine Plans. For the first time we will be planning what we want to achieve with our seas and integrating this with our terrestrial planning system, recognising the strong interconnectivity of onshore and marine environments.

This document presents an approach to seascape character assessment that mirrors that for terrestrial areas as set out in Landscape Character Assessment Guidance for England and Scotland, published in 2002.

The objective is to provide consistency in the way that terrestrial, coastal and marine areas are assessed, planned and managed.

PART I:

INTRODUCTION TO SEASCAPE CHARACTER ASSESSMENT



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i. OVERVIEW

AN APPROACH TO SEASCAPE CHARACTER ASSESSMENT

Like Landscape Character Assessment (LCA) Seascap Character Assessment (SCA) is not mandatory. The approach to Seascap Character Assessment will depend on the purpose, scope and scale of the assessment being undertaken and the skills and resources that are available to carry it out.

The approach is open to interpretation and innovation but it is important that

all Seascap Character Assessments are undertaken in a robust, transparent and structured way. It is recommended that each of the four steps set out in this approach should be addressed and that the five key principles, such as the protocols for naming seascap character types and seascap character areas, are adhered to.

Box 1 describes where Landscape Character Assessment and Seascap Character Assessment approaches are applicable.

Box 1: Relationship between Landscape Character Assessment and Seascap Character Assessment Approaches – What to Use Where

Seascap Character Assessment principally applies to coastal and marine areas seaward of the low water mark.

Landscape Character Assessment principally applies to areas lying to the landward side of the high water mark.

The assessment of intertidal areas (located between the high water mark and the low water mark) can follow either Landscape Character Assessment or Seascap Character Assessment approaches, the selection of the appropriate approach being dependent on the scope and purpose of the assessment being undertaken. In some cases it will be necessary to refer to both approaches. For Landscape Character Assessments and Seascap Character Assessments covering coastal areas, assessments will find it necessary to ensure adequate consideration has been given to assessing the relationship between terrestrial and marine areas, such as physical relationships and dependencies, the effect of inter-visibility of contrasting environments and the way that this influences perceptions and experiences.

The definition of seascape

Seascape, like landscape is about the relationship between people and place and the part it plays in forming the setting to our everyday lives. Seascape results from the way that the different components of our environment – both natural and cultural - interact together and are understood and experienced by people.

Seascape is defined by Natural England in its position statement on All Landscapes Matter (2010) as:

“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”.

The UK Marine Policy Statement (2011) records that:

“The effects of activities and developments in the marine and coastal area on the landscape, including seascape, will vary on a case-by-case basis according to the type of activity, its location and its setting.”

It adds:

“There is no legal definition for seascape in the UK but the European Landscape Convention (ELC) defines landscape as an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. In the context of this document, 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”. (Paragraph 2.6.5.1)

A summary of what constitutes seascape is presented in Figure 1. A three dimensional hypothetical representation of an English seascape is presented in Figure 2.

FIGURE 1: WHAT IS SEASCAPE?

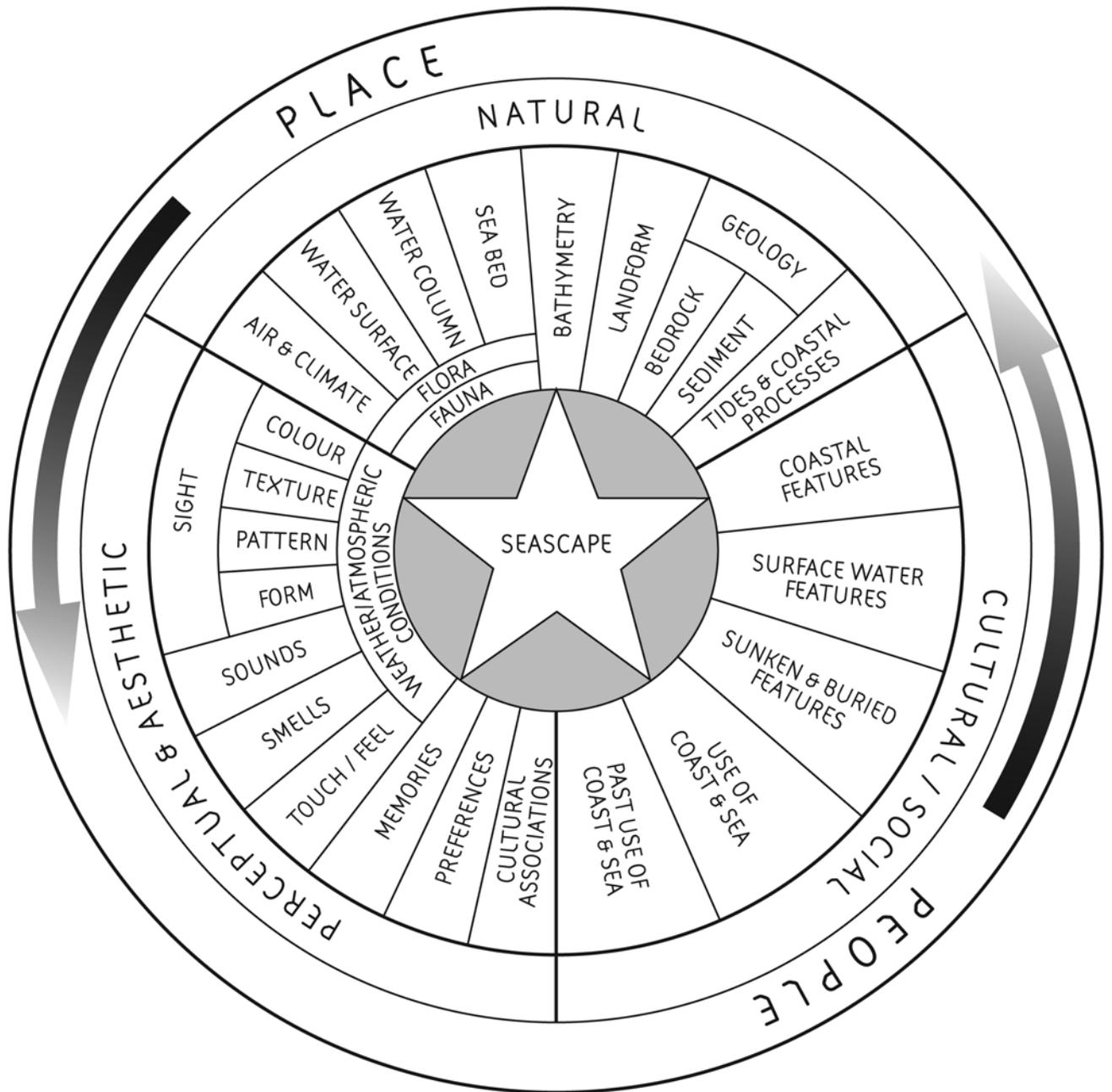
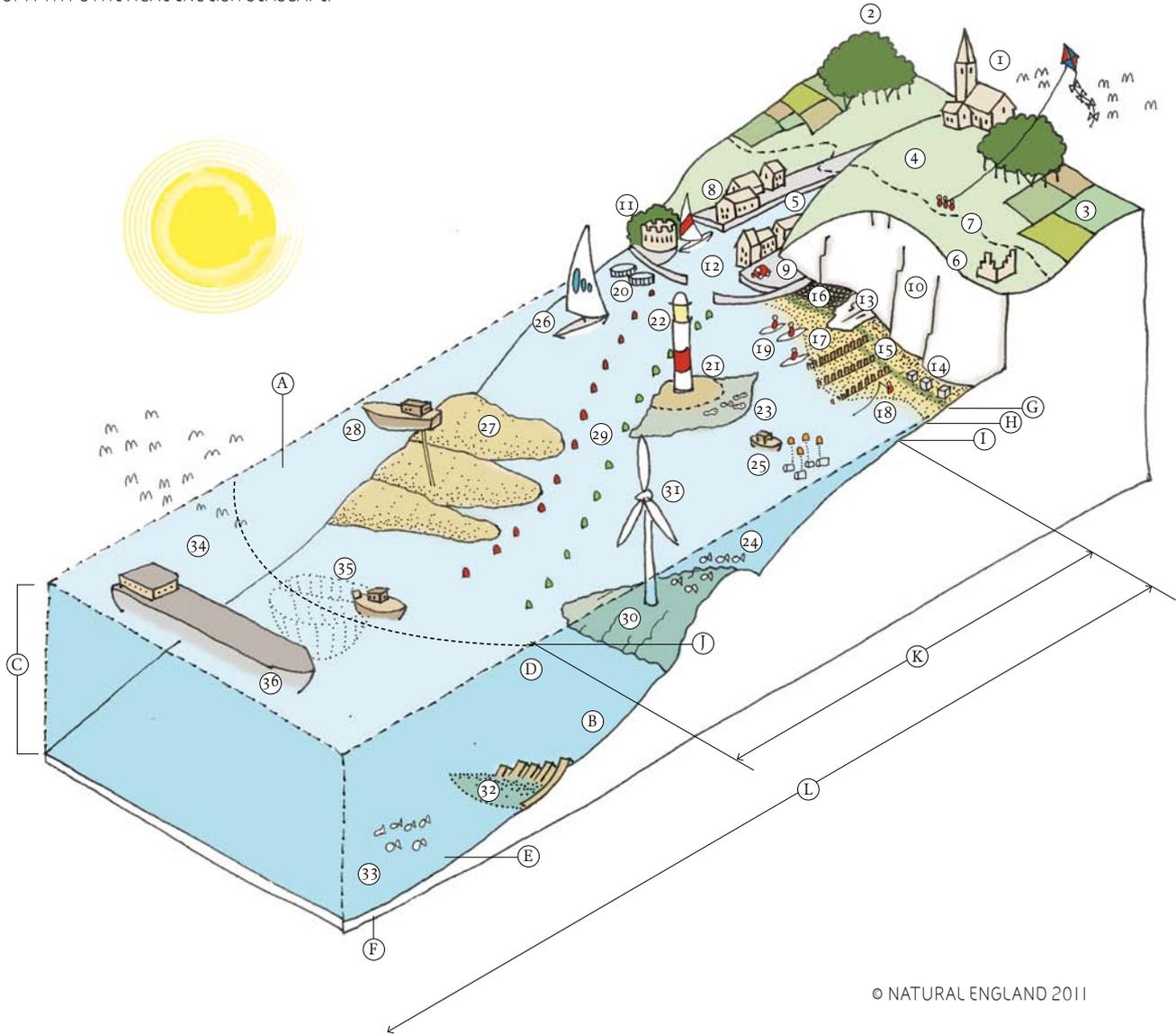


FIGURE 2: THREE-DIMENSIONAL REPRESENTATIONAL DIAGRAM OF A HYPOTHETICAL ENGLISH SEASCAPE.



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LANDSCAPE FEATURES AND ACTIVITIES

- 1 Hilltop village
- 2 Ancient woodland
- 3 Arable farmland
- 4 Grazed pasture
- 5 River
- 6 Collapsing cliff & partially ruined farmhouse
- 7 Coastal path
- 8 Fishing village
- 9 Tourist car park

SEASCAPE FEATURES AND ACTIVITIES

- 10 Rocky cliffs
- 11 Medieval castle
- 12 Estuary/Harbour
- 13 Rock ledge
- 14 Coastal defence
- 15 Groynes
- 16 Pebble beach
- 17 Sandy beach
- 18 Fishing
- 19 Surfing
- 20 Aquaculture
- 21 Rocky outcrop
- 22 Lighthouse
- 23 Seals basking
- 24 Shoal of fish
- 25 Lobster potting
- 26 Pleasure boating
- 27 Sandbanks
- 28 Dredging
- 29 Navigation buoys
- 30 Submerged rock outcrop
- 31 Wind farm
- 32 Partially submerged wreck
- 33 Site of fully submerged wreck
- 34 Site of naval battle
- 35 Commercial fishing
- 36 Container ship

TECHNICAL TERMS

- A Sea surface
- B Seabed
- C Water column
- D Pelagic habitat
- E Benthic habitat
- F Continental shelf
- G High Water Mark
- H Foreshore/intertidal zone
- I Low water mark (Baseline)
- J 12 nautical miles (from Baseline)
- K Extent of UK Territorial Sea (Baseline to 12 nm)
- L British Fishery limits, Renewable Energy Zone/UK Pollution Zone and Exclusive Economic Zone (up-to 200 nm from Baseline)

WHAT IS SEASCAPE CHARACTER ASSESSMENT?

Seascape Character Assessment (SCA) has emerged as an appropriate way to assess, characterise, map and describe seascape character. The process of Seascape Character Assessment follows the well-established and widely used principles and stages set out in Landscape Character Assessment guidance, with emphasis given to particular issues that need to be considered when assessing coastal and marine environments.

The process of evaluating or making judgements about seascape quality or value, or decisions about the appropriateness of development, are separate from the Seascape Character Assessment process, even though they are informed by the outputs of a character assessment.

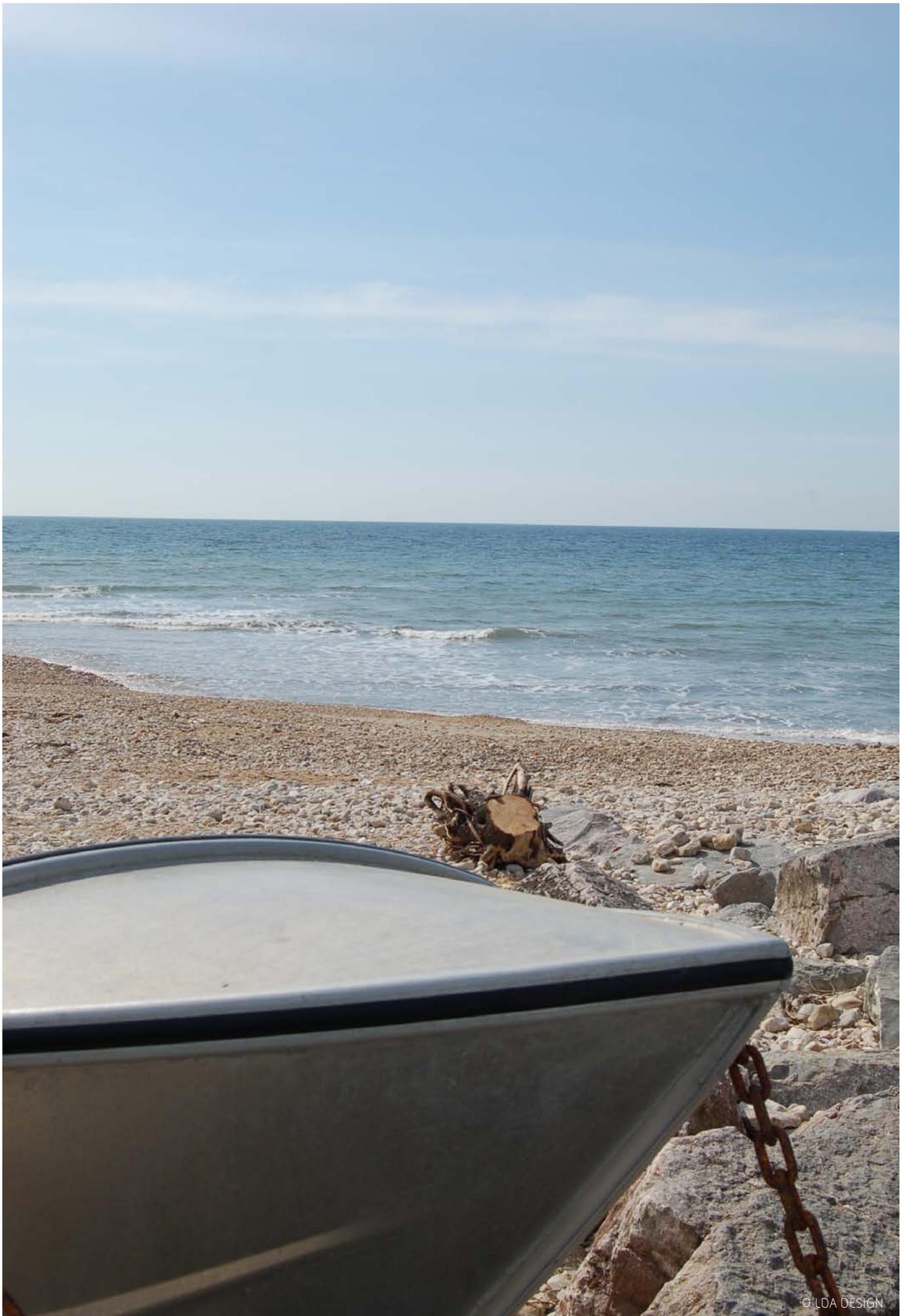
THE AUDIENCE FOR THIS APPROACH

This document is being published so that the approach it describes may be considered by individuals and organisations whose activities affect coastal and marine environments or who are concerned about the way that coastal and marine resources are managed and protected.

Its principal audience includes those involved in commissioning, carrying out and using a Seascape Character Assessment. This might include landscape or marine specialists or experts in a range of fields working in local authorities, government departments and agencies, development and utilities companies and private practice.

Communities will have an interest in the assessment process and in the findings of Seascape Character Assessment, as part of the process of shaping their local environment. This audience might include individuals and communities living and working along the coast, members of coastal forums, tourists, and those who use the coast and sea for recreation such as diving or surfing.

Seascape Character Assessment is likely to appeal to a range of organisations and individuals who are perhaps unfamiliar with the concept of character assessment, which has historically been employed for onshore areas.



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ii. APPLICATION OF SEASCAPE CHARACTER ASSESSMENT

WHY SEASCAPE MATTERS

Seascape is important for many reasons and is widely acknowledged as an essential part of a sustainable future, across the social, economic and environmental agendas and managing the process of change.

Change is essential to a living, evolving environment but change should be understood in context and managed to bring about sustainable outcomes. To achieve positive and widely supported change, it is essential that those who have control over the mechanisms for change are well informed about the nature of the baseline environment and the implications that change, whether it be natural or cultural, will have upon it. Seascape character assessments, regardless of their scale and scope, have an important role to play in guiding positive change. A Seascape Character Assessment will present a description of the seascape that can be found in a given locality. An understanding of the intrinsic character and qualities of a place can then guide the location, design, scale, massing and type of change that can be accommodated. A Seascape Character Assessment can provide a baseline against which the effects of change can be judged, perhaps to help determine whether a certain type of change or new development is appropriate. A Seascape Character Assessment can also form the basis of an analysis of trends and forces for change and can help determine mechanisms that can be deployed to guide positive decision-making and action to protect, manage, plan and promote seascape character in the future.

WHAT ARE THE BENEFITS OF SEASCAPE CHARACTER ASSESSMENT AND HOW CAN IT BE USED?

Seascape Character Assessment gives us a description of what the coastal and marine environment is like. For example the mapping of seascape character types and/or areas provides a spatial framework to understand the sea and coastline at any scale and from a wide range of perspectives.

The benefits of Seascape Character Assessment are that it:

- establishes a robust evidence base specifically linked to place;
- provides baseline evidence at the appropriate scale to inform different types of decisions;
- presents a holistic approach to the whole geographic area, rather than focusing on special or protected sites or features;
- forms an agreed spatial framework of seascape character types and/or areas to which different policy applications and decisions can be applied;
- integrates natural and cultural considerations and includes an understanding of how a place is experienced, perceived and valued by people; and
- identifies the key elements, features and characteristics that come together to create the intrinsic sense of place and character of a locality.

Seascape Character Assessment enables the seascape to be properly taken into account in a wide range of applications, such as: the development of planning policy; decision making regarding future change, including guiding the appropriate siting, design and mitigation of new development; and the management of the use

of the sea and coastline. Seascape Character Assessment may be particularly valuable in the development of Marine Plans.

Examples of where Seascape Character Assessment can be applied are set out in the table below:

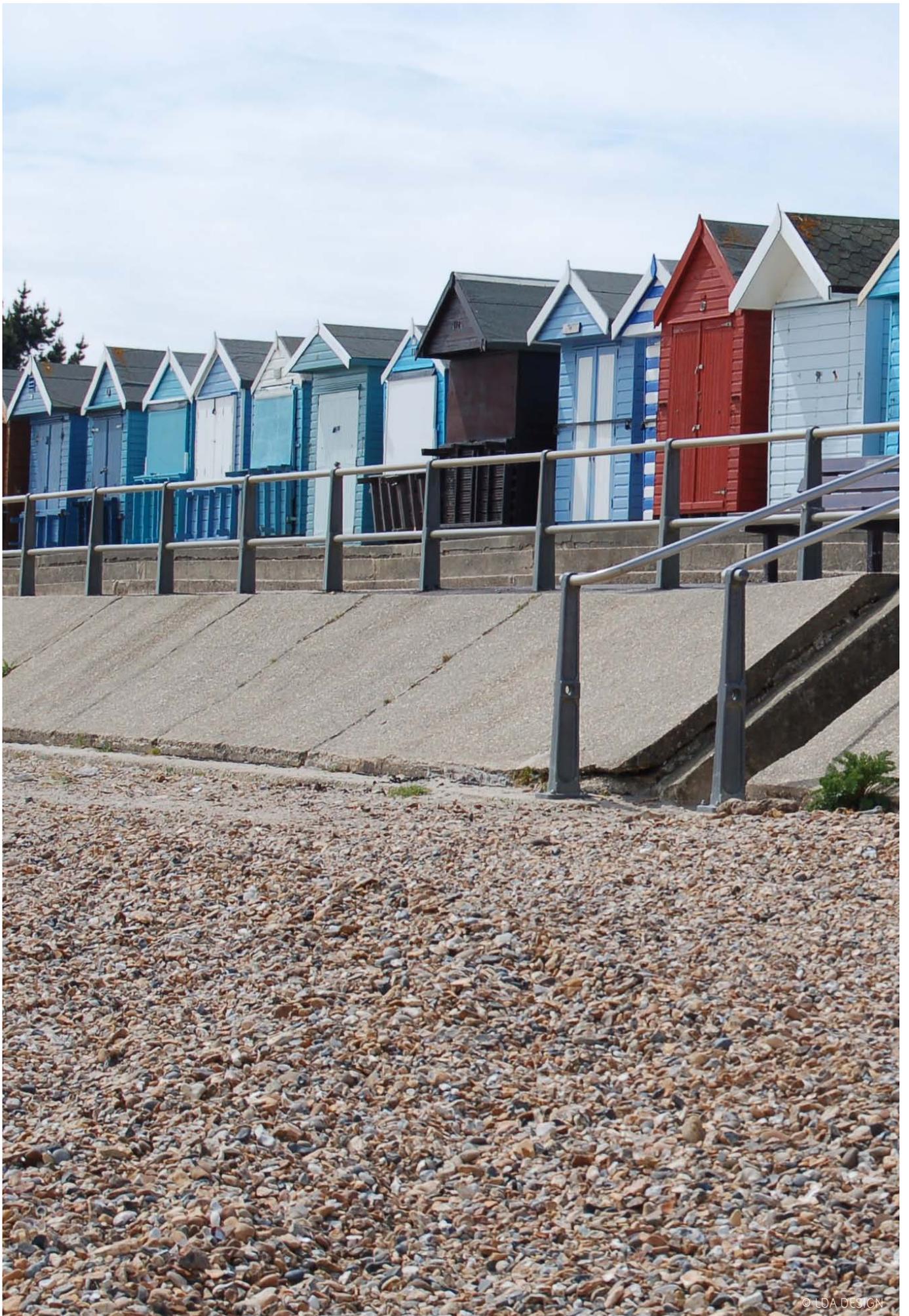
LOCAL AUTHORITY PLANS AND STRATEGIES
Local and Strategic Development Plans
Sustainable Community Strategies
Local Economic Assessments and Economic Strategies
Renewable Energy Strategies
Minerals and Waste Strategies
Recreation and Tourism Strategies
Development Briefs
PLANNING AND MANAGEMENT
Marine Plans
Protected Area Management Plans (National Parks, AONB and Heritage Coasts)
Identification of special/designated area boundaries
Coastal and Estuary Management Plans
Biodiversity management, restoration and enhancement plans
Setting studies
Coastal access route planning
OTHER PLANS AND PROCESSES
Scoping and screening opinions and pre-application discussions
Sectoral activity licencing plans (such as for oil, gas or offshore wind)
Siting and design of new development
Integrated Coastal Zone Management (ICZM) Plans
Sustainability Appraisal (SA)
Strategic Environmental Assessment (SEA)
Environmental Impact Assessment (EIA)
Landscape and Visual Impact Assessment (LVIA)
Climate Change Mitigation and Adaptation responses
Coastal defence and management plans
European Landscape Convention (ELC) Action Plans
Shoreline Management Plans

PART 2:

PRINCIPLES OF SEASCAPE CHARACTER ASSESSMENT



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iii. THE PRINCIPLES OF SEASCAPE CHARACTER ASSESSMENT

INTRODUCTION

Character assessments, whether for rural, urban, coastal or marine contexts can be undertaken for many different reasons. It is important that the purpose of the assessment being undertaken is clear at the outset as this will have a significant influence on the overall scope of the assessment, the nature of the approach taken and the outputs developed.

Landscape Character Assessment more generally, and Seascape Character Assessment assessing the character of coastal and marine areas set out in this document, together offer a framework of techniques that can be used in combination according to the scope and purpose of the work being undertaken and the resources available. The methodology presented in this approach to Seascape Character Assessment is not intended to be

overly prescriptive and practitioners have the flexibility to respond to local circumstances or the restrictions imposed on them, perhaps by the skills and resources they have available. Users of this approach are encouraged to develop creative and innovative approaches, while adhering to several important principles.

THE FIVE KEY PRINCIPLES OF SEASCAPE CHARACTER ASSESSMENT

The following five principles should be adhered to whatever the scope and methodology adopted in a seascape character assessment and regardless of the location, scale or purpose of the assessment being undertaken.

The five principles are listed in the table below and described in the pages that follow.

PRINCIPLE 1:	Landscape is everywhere and all landscape and seascape has character.
PRINCIPLE 2:	Seascape occurs at all scales and the process of seascape character assessment can be undertaken at any scale.
PRINCIPLE 3:	Seascape character assessment should involve an understanding of how the seascape is perceived and experienced by people.
PRINCIPLE 4:	Seascape character assessment provides an evidence base to inform a range of decisions and applications.
PRINCIPLE 5:	Seascape character assessment can provide an integrating spatial framework.

PRINCIPLE 1: LANDSCAPE IS EVERYWHERE AND ALL LANDSCAPE AND SEASCAPE HAS CHARACTER.

Landscape is the rural and marine environment, inland waters, towns, villages and cities. Landscape Character Assessment and Seascape Character Assessment approaches recommend a seamless approach to the character assessment of land and sea – following a common approach, albeit tailored to the particular environment being assessed. The approach set out in this document is relevant to assessing seascape character.

All seascape has character. The process of seascape character assessment identifies and describes character. It is not concerned with what makes one seascape better or worse than another. An understanding of the concept of seascape character is therefore essential.

PRINCIPLE 2: SEASCAPE OCCURS AT ALL SCALES AND THE PROCESS OF SEASCAPE CHARACTER ASSESSMENT CAN BE UNDERTAKEN AT ANY SCALE.

National and regional assessments are typically carried out at a range of scales from 1:250,000 to 1:150,000 with an emphasis on mapping and describing broad patterns of seascape character rather than on presenting detailed information. Boundaries usually represent broad zones of transition that may extend over several hundreds of metres. Assessments at this scale provide the starting point for more detailed assessments. However, they inevitably involve a degree of generalisation, which limits their application to decision making and judgements at more local scales.

Local assessments for marine areas - comparable to landscape character assessments undertaken for counties, districts or unitary authorities, usually conducted at 1:50,000 or 1:25,000, can be undertaken at comparable scales or up to 1:150,000 which is the scale of some Admiralty charts. Much of the country is covered by landscape character assessments at 1:50,000 or 1:25,000 scale, providing the starting point for the assessment of the coastal fringe and basis to explore the visual relationship between land and sea. Existing assessments for onshore areas at this scale may need to be reviewed to ensure the character of the coastal and intertidal zone is adequately mapped and described.

PRINCIPLE 3: SEASCAPE CHARACTER ASSESSMENT SHOULD INVOLVE AN UNDERSTANDING OF HOW THE SEASCAPE IS PERCEIVED AND EXPERIENCED BY PEOPLE.

As the European Landscape Convention emphasises, people provide the link that turns land into landscape and by extension, sea into seascape. Therefore, seascape is not just the concern of professionals and marine specialists - it is important to everyone's quality of life. Many individuals and groups have an interest in the seascape - maybe through their direct involvement in the management of the coast and sea, their knowledge of and interest in a particular subject, or because they have an attachment to a particular place as residents or visitors. Empowering people to make decisions about how their local places are managed and changed is a key part of government policy. It is therefore important to understand how seascape is perceived and experienced by people as part of the process of seascape character assessment. In addition to reviewing the various natural and cultural forces that have influenced seascape character.

Seascape is not just perceived or experienced visually but also through memory and association, and senses of hearing, smell, touch and taste. It may also include an awareness and appreciation of the seascape in art, literature, music and the media.

People value the seascape for different reasons, often reflecting the ecosystem services or benefits it provides for them, or the contribution it makes to their personal or community identity. In undertaking seascape character assessment, there is an important role for these subjective inputs, but these must be recorded and reported in a systematic and transparent way.

PRINCIPLE 4: SEASCAPE CHARACTER ASSESSMENT PROVIDES AN EVIDENCE BASE TO INFORM A RANGE OF DECISIONS AND APPLICATIONS

The process of seascape character assessment involves practical steps to identify areas of common character and to classify, map and describe character.

Characterisation concentrates on making clear what makes one area different or distinctive from another. It results in the identification of seascape character types and/or seascape character areas. The end product of the characterisation process will usually be a classification and map of seascape types and /or areas together with descriptions of their character and identification of key characteristics. Box 2 presents a definition of seascape character types and areas.

The outputs of a Seascape Character Assessment can provide an evidence base to contribute to wider environmental decision-making. For example, knowledge of seascape character can help in defining how sensitive an area of coast or sea is to a particular development proposal and/or what conditions or mitigation might be required to make it acceptable.

PRINCIPLE 5: SEASCAPE CHARACTER ASSESSMENT CAN PROVIDE AN INTEGRATING SPATIAL FRAMEWORK

The process of seascape character assessment involves an understanding of how a wide range of physical, natural, cultural and social influences come together to create place.

Characterisation requires effective integration of information on natural processes, the historic environment and how character has evolved overtime, as well as an understanding of the way that the seascape is perceived and experienced. The product of characterisation of the seascape is a map and accompanying descriptions of seascape character types and/or areas. The outputs of Seascape Character Assessment can, therefore, provide an integrating spatial framework for decision making to help manage change.

Seascape character assessment is only concerned with the contribution that natural and cultural factors make to character; it does not seek to provide specialist information on biodiversity such as species data or detailed historic environment information, for example in relation to submerged or buried heritage features or palaeolandscape. Seascape character will often be one theme to be considered alongside other environmental dimensions, such as biodiversity and historic environment/cultural heritage (as for example in Environmental Impact Assessment), although the linkages and cross referencing between these themes should be acknowledged. Work carried out by English Heritage on Historic Seascape Characterisations may also be used to inform seascape character assessments directly. In applying seascape character assessment to inform decisions, specialist knowledge will usually be required to interpret specific natural and cultural information.

Box 2: Definition and applications of seascape character types and seascape character areas

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 seascape with similar character in similar ways. Analysis of seascape character types 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 of a particular seascape character type. Each has its own individual character and identity, even though it shares the same generic characteristics with other seascape character types. So, taking a simple example of the sheltered bay seascape character type, Lantic Bay, Lantivet Bay and Talland Bay (all bays on the south Cornwall Coast) would be separate seascape character areas of the sheltered bay seascape character type. Whilst sharing the same generic characteristics, each 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. Seascape character areas can be used to develop more tailored policies or strategies, reflecting the things that make a particular area of seascape different, distinctive or special. Seascape character areas may also be more recognisable and identifiable for non-specialists.

PART 3:

OVERVIEW OF THE SEASCAPE CHARACTER ASSESSMENT PROCESS



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iv. THE PROCESS AND OUTPUTS OF SEASCAPE CHARACTER ASSESSMENT

THE PROCESS OF SEASCAPE CHARACTER ASSESSMENT

The sequence of work involved in carrying out a Seascape Character Assessment is the same as that for a Landscape Character Assessment.

There are four main steps in the process.

Figure 3 illustrates the four steps involved in the assessment process. These steps are summarised below.

Step 1 – Defining the purpose and scope of the assessment. All Seascape Character Assessments need a clearly defined purpose. Consideration of purpose at the outset will influence the scope of the assessment, including scale and level of detail of the assessment, how much (if any) work is carried out regarding the underwater environment, the resources required, those who should be involved in its preparation and the types of judgements that are needed to inform decisions.

Step 2 – Desk study. This involves a review of relevant background documents and spatial (mapped) information. The analysis of various sources and types of data assists in the identification of areas of common character, the mapping of draft seascape character types and/or areas, along with the preparation of initial descriptions of natural and cultural influences.

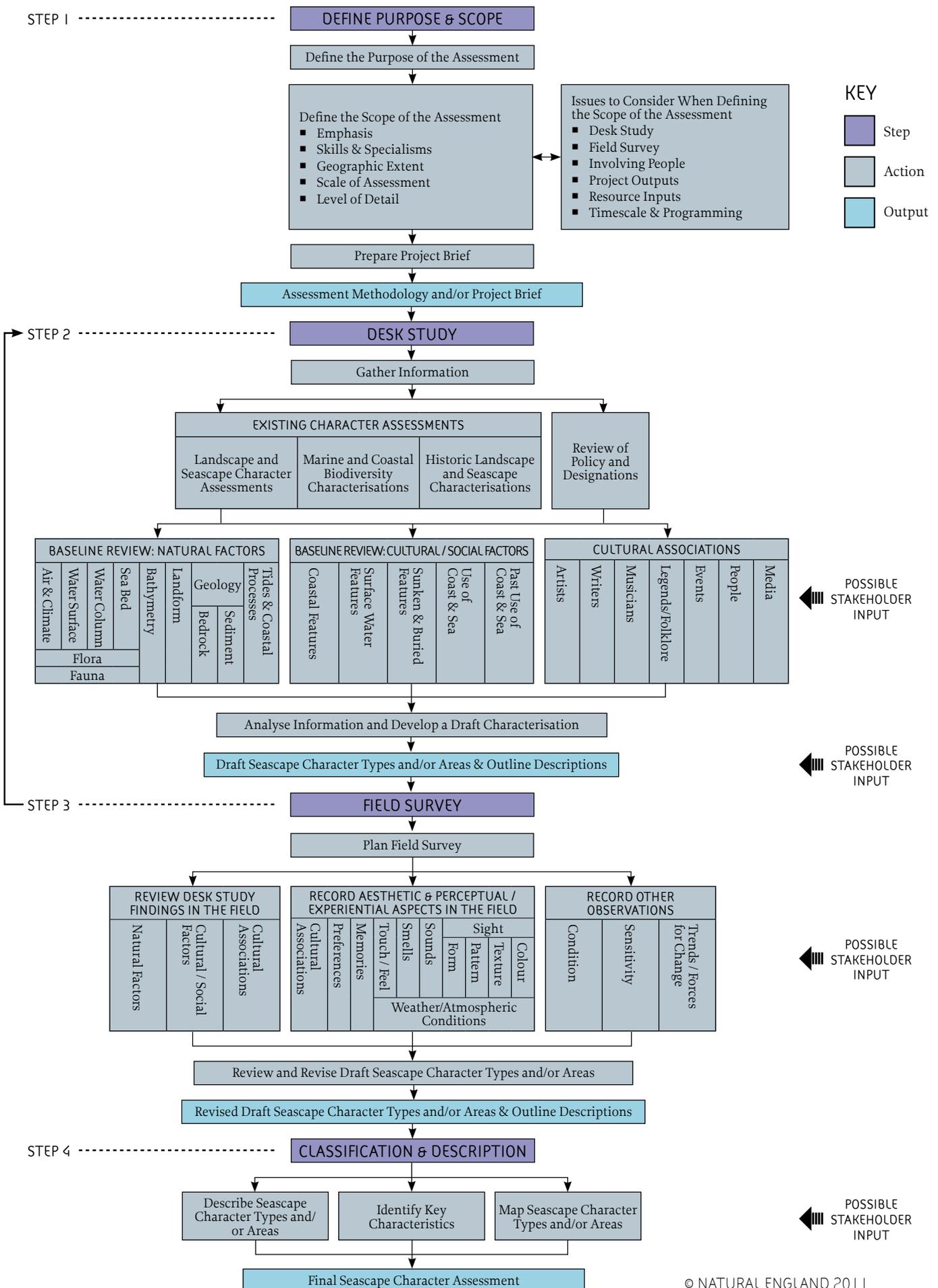
Step 3 – Field survey. Information is collected ‘in the field’ in a rigorous way to test and refine the draft seascape character types and/or areas identified in Step 2 and to inform written descriptions, notably in order to capture aesthetic, perceptual and experiential qualities.

Step 4 – Classification and description. This final step refines and finalises the outputs of the character assessment process by classifying, mapping and describing seascape character types and/or areas.

APPLICATION OF SEASCAPE CHARACTER ASSESSMENT

It is important to distinguish between the process of character assessment, which maps and describes seascape character types and/or areas, and the way in which the results of the assessment process are applied in seascape management, planning and protection. The four steps described above cover the process of character assessment.

FIGURE 3: FLOW DIAGRAM OF THE SEASCAPE CHARACTER ASSESSMENT METHODOLOGY



ISSUES TO CONSIDER WHEN APPLYING THE SEASCAPE CHARACTER ASSESSMENT APPROACH

THE INVOLVEMENT OF PEOPLE IN THE CHARACTER ASSESSMENT PROCESS

The nature and timing of stakeholder participation and consultation will vary according to the scope of the assessment and the available resources.

SEASCAPE CHARACTER ASSESSMENT IS AN ITERATIVE PROCESS

When undertaking a Seascape Character Assessment, the steps related to desk study, field survey and classification and description should be iterative. The desk study should not be overly deterministic, in recognition that differences in seascape character may exist that are not obvious from mapped or documented information and can only be identified through participation, consultation or field survey. In addition, the findings of desk study may also need to be verified and tested in the field as some differences that appear clear 'on paper' may not be evident experientially. Equally, field survey may highlight questions that need to be checked through further desk study or clarified through stakeholder participation and consultation.

When planning and undertaking a Seascape Character Assessment, adequate provision should be made to allow the findings of desk study and field survey stages to influence each other and where appropriate, to be discussed with stakeholders.

THE OUTPUTS OF A SEASCAPE CHARACTER ASSESSMENT

All Seascape Character Assessments must clearly state their purpose and make a distinction between the outputs of the characterisation process and the outputs associated with making judgements to meet particular needs or requirements – which is a separate but related exercise. This may be achieved by producing two separate reports (for example a Seascape Character Assessment and companion Seascape Strategy and Guidelines document). However, some studies successfully combine the findings of assessment and making judgements into one report, covering both aspects for each seascape character type and/or area in turn. This approach is particularly useful when dealing with a large study area, where the end user is likely to need to refer to all available information related to a specific area of coast or sea in order to understand the baseline conditions and judgements/ recommendations made about a particular seascape character type or area, in order to influence design or management decisions that relate specifically to it.

The outputs from a Seascape Character Assessment should:

- summarise the project brief that forms the basis of the assessment and describe the purpose and the scope of the study, including the role played by stakeholders and the intended audience;
- explain the methodology followed;
- include a contextual description of the study area;
- indicate how the assessment fits with other landscape, seascape or townscape character assessments at larger and smaller scales and in adjacent administrative or geographic areas;
- include a map (or maps) at an appropriate scale that show the extent of the seascape character types and/or areas identified;
- include clear and accurate descriptions of the character of each seascape character type and/or area identified, avoiding value laden terminology;
- include photographs and/or diagrams, as appropriate, to illustrate the character being described; and
- identify key characteristics for each seascape character type and/or area in order to capture the combination of elements that make a particular contribution to creating distinctive character.

Outputs related to making judgements should:

- make fully transparent the approach adopted to making judgements, including the specific criteria used;
- explain the reasons for adopting a particular approach to making judgements;
- state who made the judgements and the role played by stakeholders; and
- ensure that the judgements made are clearly linked to the results of the characterisation.

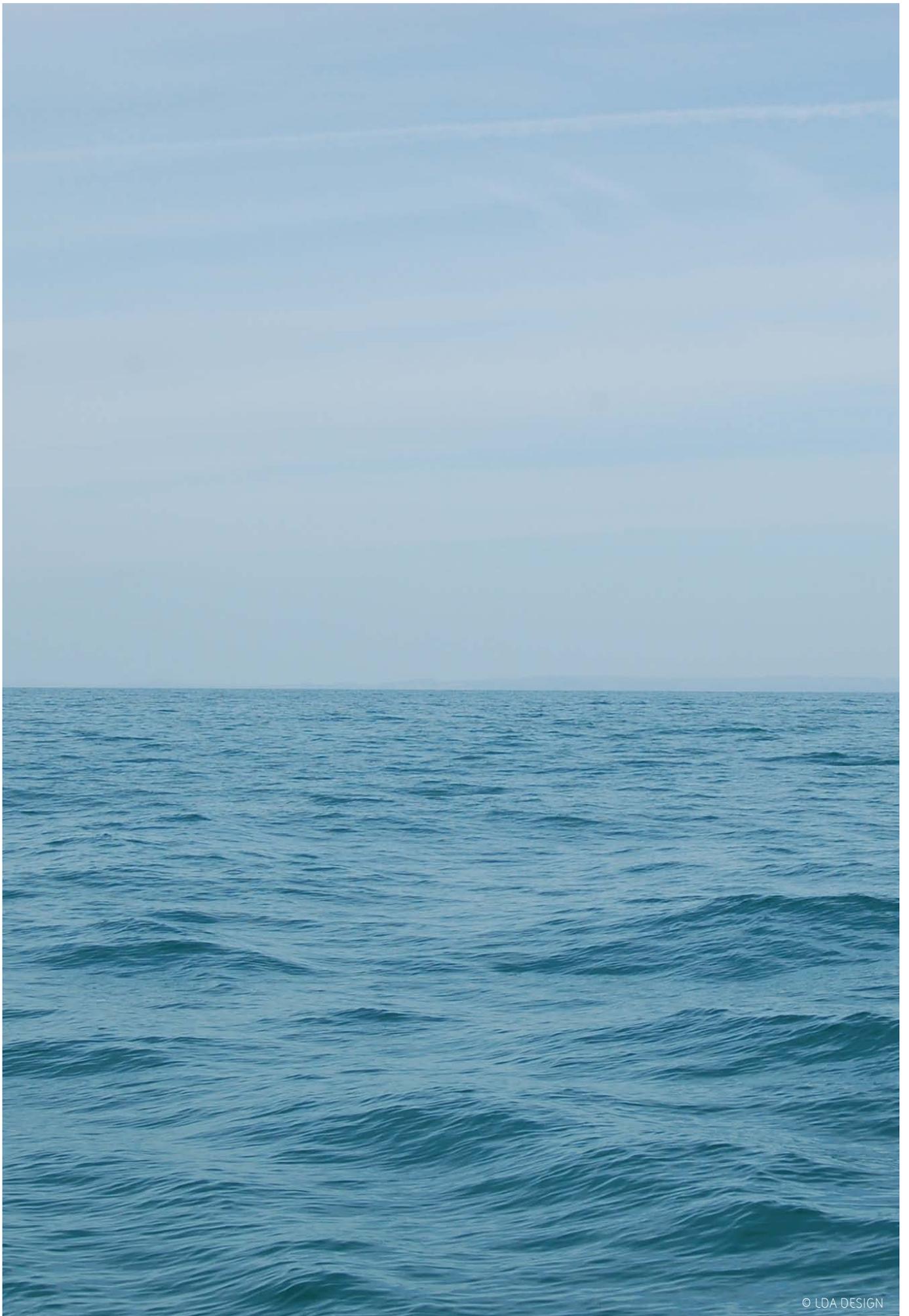
Common approaches include the formation of strategies, guidelines, sensitivity assessments or evidence forming the basis for attaching status to areas of landscape or seascape, perhaps through formal designation.

PART 4:

TECHNICAL APPENDICES



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TECHNICAL APPENDICES

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TECHNICAL APPENDIX A: GLOSSARY - TERMS AND DEFINITIONS

TERMS AND DEFINITIONS USED IN SEASCAPE CHARACTER ASSESSMENT	
Characterisation	The process of identifying areas of similar character, classifying and mapping them and describing their character.*
Characteristics	Elements, or combinations of elements, which make a particular contribution to distinctive character.*
Classification	Concerned with dividing the seascape into areas of distinct, recognisable and consistent common character and grouping areas of similar character together. It requires the identification of patterns in the seascape, created by the way the natural and human influences interact and are perceived and experienced to create character in the seascape.**
Description	Capturing the overall essence of the character of the seascape, with reference to geology, landform, bathymetry, habitats, use of the coast and sea, cultural associations etc., drawing out the ways in which these factors interact together and are perceived and experienced and are associated with events and people.**
Elements	Individual components which make up the seascape, such as beaches, cliffs, sheltered bays, open sea, submerged reefs, rocky outcrops, islands. **
Features	Particularly prominent or eye-catching elements, such as lighthouses, rock stacks and coastal cliffs.**
Key Characteristics	Those combinations of elements which help give an area its distinct sense of place. They tend in many cases to be 'positive' characteristics but they may also in some cases be 'negative' features which nevertheless are important to the current character of the seascape.**
Landward limits (of a Seascape Character Assessment)	The distance which the Seascape Character Assessment will extend onshore and inland. Such considerations relate to the mainland, peninsulas and islands, regardless of their distance out at sea. Dependent on the purpose and/or scope of the assessment being undertaken, the Seascape Character Assessment may extend to the Low Water Mark or High Water Mark to include the intertidal zone. Beyond the High Water Mark, Landscape Character Assessment guidance should be used to assess landscape character.
Seascape	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.***
Seascape Character	Seascape character is a distinct and recognisable pattern of elements in the seascape that makes one seascape different from another, rather than better or worse.**
Seascape Character Assessment (SCA)	Seascape Character Assessment is the process of identifying and describing variation in the character of the seascape, and using this information to assist in managing change in the seascape. It seeks to identify and explain the unique combination of elements and features that makes seascape distinctive.**
Seascape Character Areas	These are single unique geographical areas of a particular seascape character type. Each has its own individual character and identity, even though it shares the same generic characteristics with other seascape character areas of the same type.**
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.**

Seascape Guidelines	Actions required to ensure that distinctive seascape character is maintained, enhanced or if appropriate, changed through the creation of new character.**
Seascape Quality	The physical state of the seascape. It includes the extent to which typical character is represented in individual areas, sometimes referred to as strength of character, the intactness of the seascape from visual, functional and ecological perspectives and the condition or state of repair of individual elements of the seascape.**
Seascape Sensitivity	The ability of a seascape to respond to and accommodate change. It reflects seascape character, the nature of change and the way both are perceived and experienced by people.**
Seascape Strategy	The objectives and overall vision of what the seascape should be like in the future, and what is thought to be desirable for a particular seascape character type or area, as a whole.**
Seaward limits (of a Seascape Character Assessment)	The distance out to sea the Seascape Character Assessment will extend. A seascape character assessment does not necessarily rely on there being a coastal component as part of the study area, and as such a study area can be entirely out at sea.
Perception	‘Perception’ combines the sensory (that which we receive through our senses) with the cognitive (our knowledge and understanding gained from many sources and experiences).****

TECHNICAL TERMS AND DEFINITIONS RELATED TO THE MARINE ENVIRONMENT

Baseline	The marine area around the UK coast is subdivided into a number of zones. These are measured from a ‘baseline’, usually the low water mark around the coast or occasionally a straight line across the mouths of bays. Rocks, reefs and similar features, if above the sea at low water but submerged at other times, extend the baseline if they are within 12 nautical miles (nm) of the mainland or island. Note: The UK baseline is delineated in the territorial Waters Order in Council 1964 (as amended by the Territorial Sea (Amendment) Order 1988, SI 1998/2564). ****
Bathymetric	The depth of a body of water and its measurement (bathymetry). Maps showing depths of water above the floor use lines of equal depth (isobaths) in a similar way to contours on a land surface.****
British Fishery Limits	British fishery limits currently extend 200 nm from the baseline. Similar to the apportioning of the territorial seas, Scotland and Northern Ireland have their own areas known as the Scottish and Northern Ireland Zones. The Marine and Coastal Access Act also includes provision for the designation of a Welsh Zone for fisheries matters.*****

Continental Shelf	References to areas of the sea within the UK sector of the continental shelf are always referenced to the area of the sea outside the UK territorial sea but within the area specified in an order having effect under section 1(7) of the Continental Shelf Act 1964. Rights in the continental shelf extend to mineral and other non-living resources and the seabed and subsoil together with living organisms belonging to sedentary species.*****
Exclusive Economic Zone	The Marine and Coastal Access Act includes a clause allowing an Exclusive Economic Zone to be declared by Order in Council. By their nature such zones are capable of extending to 200 nm from baseline.*****
Isobath	A line joining points on the sea bed (or lake bed) situated at an equal vertical distance beneath the surface. Sometimes referred to as a depth contour. *****
Nautical Mile (nm)	A Nautical Mile is 1.852km in length.*****
Pelagic	(1) The environment of the open ocean as distinct from the ocean floor. (2) The marine organisms which flourish independent of the ocean floor and shoreline environments. (3) The deep sea sediments unaffected by land-derived material and derived mainly from the remains of pelagic and marine organisms. *****
Renewable Energy Zone/ UK Pollution Zone	The Renewable Energy Zone was declared under Section 84 of the Energy Act 2004 and extends up to a maximum of 200 nm from the baseline. The UK has claimed exclusive rights in this area with respect to production of energy from water or winds within an area to be designated by Order in the Council. The UK has also claimed rights in relation to a similar area (UK Pollution Zone) in relation to the protection and preservation of the marine environment (Under the Merchant Shipping (Prevention of Pollution) (Limits) Regulations 1996 and 1997).
Territorial Sea	<p>Territorial Sea: The UK territorial sea (i) extends 12nm from the baseline. For the most part the territorial sea of the UK does not adjoin that of any other state. Where it does so the limits of the territorial sea have been defined in accordance with an agreement between the UK and France.(ii) Between the UK and the Republic of Ireland the situation is more complex with no boundary having been agreed. (iii) Within the UK territorial sea, the UK has jurisdiction for the sea, the seabed subjacent and the air above. (iv) (v)</p> <p>Notes: i) The UK territorial sea is defined by the Territorial Sea Act 1987. ii) Territorial Sea (Limits) Order 1989 (SI 1989/482). iii) Arrangements have been put in place under the Belfast Agreement for joint management of the Loughs that form the border. iv) This is subject to the right of innocent passage by ships of all other states. v) Parts of the UK territorial sea form part of Scotland, Northern Ireland and Wales for the purpose of exercising devolved functions. *****</p>
A Glossary of Marine Nature Conservation and Fisheries terms is available at the following website: www.jncc.gov.uk/pdf/glossary.pdf	

OTHER TERMS AND DEFINITIONS	
Communities of Interest	Different groups of stakeholders who have an interest in the landscape or seascape.*
Communities of Place	Individuals who live or work in a particular area, or visit it, who can be thought of as making up communities of place.*
Ecosystem Services	Ecosystem services are services provided by the natural environment, that benefit people. Some of these ecosystem services are well known including food, fibre and fuel provision and the cultural services that provide benefits to people through recreation and cultural appreciation of nature. Other services provided by ecosystems are not so well known. These include the regulation of the climate, purification of air and water, flood protection, soil formation and nutrient cycling. (Source: Defra (2007) An introductory guide to valuing Ecosystem Services).*
Environmental Impact Assessment (EIA)	The process by which identification, prediction and evaluation of key environmental effects of a development are undertaken and by which the information gathered is used to reduce likely negative effects during the design of the project and then to inform the decision-making process.*
Geographical Information Systems (GIS)	A system that captures, stores, analyses, manages and presents data linked to location. It links spatial information to a database.*
Historic Environment	All those physical remains in the landscape and seascape which are reflective of past human activity.**
Historic Landscape Characterisation (HLC) and Historic Land-use Assessment	Historic landscape characterisation and historic landuse assessment is the identification and interpretation of the historic dimension of the present day landscape or townscape within a given area. It is term given to a range of approaches that have been developed to contribute to a rounded understanding of place.*
Historic Seascape Characterisation (HSC)	Historic seascape characterisation is the identification and interpretation of the historic dimension of the present day coastal and marine environment.*
Landscape and Visual Impact Assessment (LVIA)	Landscape and Visual Impact Assessment is an established methodology which is used to assess the impacts of a development or other land use change on landscape and visual amenity. It includes analysis of the effects during the construction, operation and decommissioning phases of a development, including any restoration or after uses. (Guidelines for Landscape and Visual Impact Assessment, second edition, The Landscape Institute with the Institute for Environmental Management and Assessment, 2002).*
Landscape Typology	A national classification of landscape types derived from national datasets and Landscape Character Assessment reports. It has not been field tested or verified by consultation. It is available from Natural England.*
National Character Areas (NCA's)	England has been divided into character areas with similar landscape character; previously known as Joint Character Areas (JCAs).*
Protected Landscape	Areas deemed to be of particular landscape value are usually designated as protected landscapes including National Parks, Areas of Outstanding Natural Beauty (England).**
Sense of Place	The essential character and spirit of an area.*.
Stakeholders	A person, group, or organisation which is directly or indirectly affected or can affect an assessment. For example: representatives of commissioning and partner organisations, usually represented on a project steering group or an advisory group; wider communities of interest, which could include representatives of neighbouring authorities, land owners and managers, NGOs, parish or community council members, recreation bodies; communities of place, made up of groups such as local residents, visitors or workers.*
Time Depth	The imprint of the past on the contemporary landscape.*

TERMS FROM THE EUROPEAN LANDSCAPE CONVENTION

This Convention applies to the entire territory of the Parties and covers natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as everyday or degraded landscapes. *****

Article 1 definitions for key landscape terms are presented below:

Landscape	An area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.
Landscape Policy	An expression by the competent public authorities of general principles, strategies and guidelines that permit the taking of specific measures aimed at the protection, management and planning of landscapes.
Landscape Quality Objectives	For a specific landscape, the formulation by the competent public authorities of the aspirations of the public with regard to the landscape features of their surroundings.
Landscape Protection	Actions to conserve and maintain the significant or characteristic features of a landscape, justified by its heritage value derived from its natural configuration and/or from human activity.
Landscape Management	Action, from a perspective of sustainable development, to ensure the regular upkeep of a landscape, so as to guide and harmonise changes which are brought about by social, economic and environmental processes.
Landscape Planning	Strong forward-looking action to enhance, restore or create landscapes.

The European Landscape Convention can be viewed at the following website:

www.coe.int/t/dg4/cultureheritage/heritage/Landscape/default_en.asp

Sources:

- * Natural England (Ongoing work) *An Approach to Landscape Character Assessment*.
- ** Based on Natural England (Ongoing work) *An Approach to Landscape Character Assessment*.
- *** Natural England (2010) *Natural England's Position on All Landscapes Matter*.
- **** Based on Hooley, D. (2012) 'Enabling the character of England's past to shape its sustainable future', in: H. Harnow, D. Cranstone, P. Belford and L. Høst-Madsen (eds): *Across the North Sea: Later Historical Archaeology in Britain and Denmark c. 1500-2000 AD*, 73-83. Odense: University Press of Southern Denmark See also: <http://www.english-heritage.org.uk/professional/research/landscapes-and-areas/characterisation/historic-seascape-character/>
- ***** Based on Whittow John B. (1984) *Dictionary of Physical Geography*. Penguin
- ***** Defra (2009) *Marine and Coastal Access Act*. (Explanatory Notes iii)
- ***** Council of Europe (2000) *European Landscape Convention*. Florence

TECHNICAL APPENDIX B: CHECKLIST FOR DEFINING THE PURPOSE AND SCOPE OF A SEASCAPE CHARACTER ASSESSMENT AND WRITING A PROJECT BRIEF

1. Why is the Seascape Character Assessment being carried out and how will its results be used?

2. Is it possible to make use of existing Landscape Character Assessment and Seascape Character Assessment information?

- What existing Landscape Character Assessment and Seascape Character Assessment information is available for the study area?
- Are existing Landscape Character Assessments and Seascape Character Assessments up to date in terms of methods, data sources and other information?
- To what extent were stakeholders involved in preparation of existing Landscape Character Assessments and Seascape Character Assessments?
- Are existing Landscape Character Assessments and Seascape Character Assessments fit for purpose?
- How much landscape and seascape change has taken place since existing Landscape Character Assessments and Seascape Character Assessments were completed?
- What is the scale and level of detail of existing Landscape Character Assessments and Seascape Character Assessments?
- Are there any cross-boundary issues where the study area includes or is adjacent to one or more existing Landscape Character Assessments and Seascape Character Assessments?
- Does the purpose of the current Seascape Character Assessment exercise differ from that of existing Landscape Character Assessments and Seascape Character Assessments?

3. What is the emphasis or focus of the Seascape Character Assessment?

- Broad or detailed assessment of seascape character?
- Focus on specific characteristics which could be affected by a particular type of seascape change?
- Focus on community led approach?

4. What skills or specialisms are needed?

- Landscape and marine specialists and planners?
- Additional specialist skills?

5. What is the geographic extent of the seascape character assessment?

- What are the seaward extents of the Seascape Character Assessment?
- What are the landward extents of the Seascape Character Assessment?
- Is there a requirement to revisit existing landscape character assessments to refine how coastal landscape is assessed and described landward of the high water mark?
- Will the assessment require partnership working with neighbouring administrative areas/owner interests?
- Study area reflecting the area affected by a particular use of the coast and sea, or the presence of a particular seascape feature?
- The inclusion of surrounding area to ensure that any visual issues are properly included?

6. What scale is most appropriate to the seascape character assessment's purpose?

- National or regional assessments are most likely to work at a scale of 1:250,000 or 1:150,000. More detailed analysis will have significant resource implications.
- Local authority assessments are most likely to work at a scale of 1:50,000 (1:25,000 for more detailed assessment of intertidal and coastal areas. For marine environments a larger scale may be more appropriate, perhaps up to 1:150,000 scale which is the scale of Admiralty Charts. Broader scale analysis will risk providing information that is too general, while more detailed analysis could have significant resource implications.
- Site specific assessments are usually carried out at a scale of 1:10,000 to 1:5,000 for coastal landscape. A larger scale of assessment may be appropriate for marine areas where the grain of the seascape is broader.

7. How much detail is needed?

- Should the seascape character assessment focus on identifying generic seascape character types, for example to inform broad strategies or policies?
- Is there a need to identify seascape character areas, for example to provide geographically specific descriptions or inform design guidance?
- Is there a need to break seascape character areas down further, to look at variations in landscape condition, for example?
- Is there a need to analyse the location or extent of specific seascape elements or features?

8. What project outputs are required?

- Is the seascape character assessment intended to provide a comprehensive baseline, or is there to be focus on a particular issue?
- What is the balance between descriptive information, the definition of key characteristics, maps, sketches, diagrams and photographs, and the inclusion of information about judgements and recommendations?
- What is the audience for the seascape character assessment and what implications are there for the ways in which the outputs are presented? Should there be a distinction between technical and non-technical outputs?
- What format should the outputs take?

9. What are the implications for the desk study?

- What is the extent of the study area, what scale of work is needed, and what level of detail is appropriate (see above)?
- What is the balance between policy review, spatial analysis and use of secondary data sources?
- What is the availability of other information including cultural associations, perhaps with writers, musicians and artists?
- What specialist information or data required?

10. What are the implications for the field survey?

- What is the extent of the study area, what scale of survey and analysis is needed, and what level of detail is appropriate (see above)?
- Is there a particular focus which requires the field survey work to be tailored to the way in which the seascape character assessment will be used?
- Are there any accessibility issues that need to be considered and is there a requirement for assessment to be undertaken by boat? Does this initiate further considerations related to timing field survey and allocated fees?
- What outputs from the field survey are required?

11. What are the implications for the way stakeholders are involved in the assessment?

- Who should be included in the process of designing, commissioning and managing the seascape character assessment?
- Who should be provided with opportunities to input to the seascape character assessment process?
- Who should be provided with opportunities to comment on the draft Seascape Character Assessment or drafts of the plans or strategies based on the Seascape Character Assessment?
- How should the results of the Seascape Character Assessment be disseminated?
- What methods of stakeholder engagement are most appropriate to these different levels of involvement?

12. Taking account of the purpose, required skills, time inputs, scale and detail of the work, availability and suitability of existing Landscape Character Assessment/Seascape Character Assessment information and the outputs that are required from the project, what resources are required to undertake the seascape character assessment?

13. What is an appropriate timescale for the seascape character assessment given the extent and detail of the assessment, the suitability of existing Seascape Character Assessment information, the nature of stakeholder involvement and factors such as seasonality?

TECHNICAL APPENDIX C: SEASCAPE CHARACTER ASSESSMENT DATA LIST

The following table provides a list of mapping products and GIS datasets that can be used to inform a Seascape Character Assessment. It principally applies to the assessment of coastal and marine areas. Reference should be made to Landscape Character Assessment Guidance which contains comprehensive details of data relevant to assessing terrestrial areas.

BASEMAPPING		
THEME	POTENTIAL DATA LAYERS	POTENTIAL SOURCE
Maps and Charts	Admiralty Charted Raster - Approaches - 1:15,000	United Kingdom Hydrographic Office (UKHO)/Seazone/ Astrium
	Admiralty Charted Raster - Berthing - 1:5,000	
	Admiralty Charted Raster - Coastal - 1:50,000	
	Admiralty Charted Raster - General - 1:150,000	
	Admiralty Charted Raster - Harbour - 1:5,000	
	Admiralty Charted Raster - Overview - 1:500,000	
	UKHO Charted vector features	Seazone (Hydrospatial)/Astrium/Defra*
	OS map - 1:250,000**	Ordnance Survey(OS)
	OS maps - 1:50,000 ***	
	OS maps - 1:25,000 ***	
	OS maps - 1:10,000 ***	
	OS mastermap ***	
	OS mastermap ITN ***	
OS Meridian **		
OS Vectormap District **		
OS Vectormap Local ***		
Aerial Photography	Aerial Photographs	Getmapping / Bluesky / Bing Mapping / Google Earth / Local Authority/ Astrium
Boundaries/ Extent of Jurisdictions	Mean High Water Mark	OS Open Data
	Mean Low Water Mark	
	12 nautical mile territorial sea limit	UKHO/Seazone/Astrium/Defra*
	UK Continental Shelf Limit	SeaZone / UKHMO/ Astrium/ DEFRA*/ Department of Energy and Climate Change
	Renewable Energy Zone	Department of Energy and Climate Change
	County/ District/ Parish/ Community Council boundaries	OS Open Data
	Harbour limits	Seazone/ UKHMO/ Astrium/ DEFRA*
	Ports	Seazone/OS/ UKHMO/ Astrium/ DEFRA*

CHARACTER ASSESSMENT

THEME	POTENTIAL DATA LAYERS	POTENTIAL SOURCE
Biodiversity Character	Terrestrial Natural Areas	Natural England
	Coastal Natural Areas	
	Marine Natural Areas	
Historic Landscape / Seascape Character	Historic Landscape Characterisation	Local Authority / other commissioning bodies (e.g. English Heritage)
	Historic Seascape Characterisation	
Landscape/ Seascape Character	National Landscape Character	Natural England
	National Landscape Typology	
	Regional Landscape/ Seascape Character	Natural England
	County/ District Landscape/ Seascape Character	Local Authority

NATURAL FACTORS

THEME	POTENTIAL DATA LAYERS	POTENTIAL SOURCE
Geology and Geomorphology	LiDAR Mapping	Environment Agency / Geoinformation Group
	Derived Aerial Photography Terrain Mapping – DSM and DTM	Getmapping / Bluesky
	OS Landform Profile ***	OS
	OS Landform Panorama **	OS
	UKHO Bathymetry and Elevation	SeaZone / Astrium/ DEFRA*
	Gridded Digital Survey Bathymetry	Seazone (TruDepth)/ DEFRA*
	Coastline Geology, Geomorphology and Erosion Trend	European Environment Agency
	DiGMapGB-10	BGS
	DiGMapGB-50	
	DiGMapGB-250	
	DiGMapGB-625	
DigBath250 (DigRock250 & DigSBS250)	BGS/ Seazone	
Air and Climate	UKHO Climate and Oceanography	Seazone Hydrosatial/ Astrium/ DEFRA*
Landcover/ vegetation/ habitats	Habitat and Species Surveys	Natural England, Local Authorities and Wildlife Trusts
	National Inventory of Woodland Types	Forestry Commission
	Ancient Woodland	Natural England
	Natural features	OS Open Data
	National Soil Map	National soil resource institute
	Landcover Map 2000 and 2007	DEFRA/ Centre for Ecology and Hydrology
	UKSeaMap 2006 and 2010	JNCC
Rivers and drainage systems	Flood maps	Environment Agency
	River Channels	

CULTURAL/SOCIAL FACTORS

THEME	POTENTIAL DATA LAYERS	POTENTIAL SOURCE
Historic sites and features	Historic Environment Record Data	Local Authorities (England)
	Wrecks	SeaZone/UKHO/ Astrium/DEFRA* For more detail see English Heritage (National Monuments Record Centre)
	Marine archaeological sites	Inter-tidal and coastal - Local Authorities (England) For more detail see English Heritage (National Monuments Record Centre)
	National Monuments Record	English Heritage- For more detail see English Heritage (National Monuments Record Centre)
	Palaeolandscape - Waterlands	ABP Mer (CEFAS)
	Palaeoenvironmental mapping	Marine ALSF
	UKHO wrecks and Obstructions database	UKHO/ SeaZone/ Astrium/ DEFRA*
	War graves	MOD / English Heritage
Shipping and Navigations	All Ship Routes	ShipAIS (note not full UK coverage) / Department of Transport
	Cargo Ship Routes	
	Local Traffic Vessel Routes	
	Military Vessel Routes	
	Passenger Vessel Routes	
	Sailing Vessel Routes	
	Shipping Density	
	Tanker Vessel Routes	
	Towing Vessel Routes	
	High Speed Craft Routes and Zones	
	Anchorage, Anchor berths and bad weather refuge anchorages	UKHO/ SeaZone/ ASTRIUM/ DEFRA*
	Buoys	
	Ferry Terminals	
	Fog signals	
	Shipping traffic densities	ANATEC
Traffic Separation Zones	Department of Energy and Climate Change / Seazone / Astrium/ Defra*	

CULTURAL/SOCIAL FACTORS (CONTINUED)

Recreation	Coastguard Stations	SeaZone / OS / Astrium/ DEFRA*
	Definitive Rights of Way	Local Authorities
	EU Listed Bathing Waters	European Environment Agency
	Cycling Routes	SUSTRANS
	National trails	Natural England
	Open Access (CROW)	
	Sailing areas	RYA
	Sailing Training Centres	
	Slipways	
	Yacht Clubs	
	Yacht Cruising Routes	
	Small craft mooring areas	SeaZone / Harbour Authorities / Astrium/ DEFRA*
	Tourism sites	OS Open Data / relevant Tourist Authority
	Water Skiing Areas	SeaZone / Astrium/ DEFRA*
	Wind Surfing and Kite Surfing Areas	
Yacht Harbour and Marina Areas		
Military Activity	Army Firing Ranges (land and sea)	MOD / Seazone/ Astrium/ DEFRA*
	Military Practice Areas (sea)	
	Offshore testing ranges	
	Submarine exercise areas	

CULTURAL/SOCIAL FACTORS (CONTINUED)

Industry, Energy and Infrastructure	Dredger Transit Routes	British Marine Aggregates Producers Association
	Dredging disposal areas	SeaZone / Astrium/ DEFRA*
	Shoreline Construction	
	Pipelines	
	Land Wind Power Resource	Department of Energy and Climate Change The Department for Business, Enterprise & Regulatory Reform (BERR)
	Licensed / leased aggregate extraction areas	Crown Estate
	Marine Wind Power Resource	Department of Energy and Climate Change Department for Business, Enterprise & Regulatory Reform
	Oil and Gas Wells drilled	Oil & Gas UK DEAL
	Round 3 Windfarm zones	The Crown Estate
	Tidal Energy Resource	Department of Energy and Climate Change Department for Business, Enterprise & Regulatory Reform
	Wave Power Resource	Department of Energy and Climate Change Department for Business, Enterprise & Regulatory Reform
Fishing	Aquaculture Sites	CEFAS, Seazone / Astrium/ DEFRA*
	Classified Bivalve Mollusc Harvesting Areas	CEFAS
	Fish Nursery Areas (various species)	CEFAS
	Fish Spawning Areas (various species)	CEFAS
	Coastal Land Use	EROCIPS
	ICES Fishing Areas	ICES
Hydrology and flood defence	Areas benefiting from flood defences	Environment Agency
	Flood Defences	
	Flood Zones (Coastal and River) - Zone 2	
	Flood Zones (Coastal and River) - Zone 3	
	Rivers (center lines)	OS Open Data
	Water bodies	OS Open Data

CULTURAL/SOCIAL FACTORS (CONTINUED)

Landscape Designations	AONB	Natural England
	Heritage Coast	
	Local Landscape Designations	Local Authorities
	National Parks	Natural England
	Community Forests	Forestry Commission
Heritage Designations	Conservation Areas	Local Authorities
	Historic Parks and Gardens	English Heritage
	Listed Buildings	
	Protected Wreck Sites	
	Scheduled Monuments	
	World Heritage Sites	
Biodiversity Designations	Marine Conservation Zones	Natural England
	Local Nature Reserves (LNR)	Natural England
	Marine Special Areas of Conservation (mSAC)	
	National Nature Reserves (NNR)	
	Ramsar sites	
	Regionally Important Geological or Geomorphological Sites	
	Site of Special Scientific Interest (SSSI)	
	Special Areas of Conservation (SAC)	
	Special Protection Area (SPA)	
	Biosphere Reserves	

PERCEPTUAL/EXPERIENTIAL FACTORS		
THEME	POTENTIAL DATA LAYERS	POTENTIAL SOURCE
Light pollution	Night Sky	Campaign to Protect Rural England
Tranquillity	Tranquillity Map of England	Campaign to Protect Rural England
Intrusion	Intrusion (England – 1960's, 1990's and 2007)	Campaign to Protect Rural England

NOTES:

* Public Sector bodies can now licence vector and bathymetry data owned by the UK Hydrographic Office (UKHO) via DEFRA. For commercial organisations working under contract to a public sector body they should obtain a contractor licence from the client organisation to use the datasets available from Defra.

**OS Opendata.

Refer to website (www.ordnancesurvey.co.uk/oswebsite/products/os-opendata.html) for details of the products available under the Opendata licence.

***Public Service Mapping Agreement (PSMA).

Refer to website (www.ordnancesurvey.co.uk/oswebsite/public-sector/mapping-agreement/index.html) for details of what data is available under this agreement. It should be noted that commercial organisations are not excluded from using datasets available under the PSMA. It is possible to licence data commercially directly from the Ordnance Survey. For commercial organisations working under contract to a public sector body it should be possible to obtain a contractor licence from the client organisation to use PSMA datasets as part of the commissioned project.

REFERENCES

- i Council of Europe (2000) *European Landscape Convention*. Florence.
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www.defra.gov.uk/publications/files/pb3654-marine-policy-statement-110316.pdf
- iv English Heritage's work on Historic Seascape Characterisation:
<http://www.english-heritage.org.uk/professional/research/landscapes-and-areas/characterisation/historic-seascape-character/>
- v Hooley, D. (2012) 'Enabling the character of England's past to shape its sustainable future', in: H. Harnow, D. Cranstone, P. Belford and L. Høst-Madsen (eds): *Across the North Sea: Later Historical Archaeology in Britain and Denmark c. 1500-2000 AD*, 73-83. Odense: University Press of Southern Denmark
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