



Marine  
Management  
Organisation

**South Marine Plan  
Sustainability Appraisal Report  
Non-Technical Summary  
Draft for consultation  
November 2016**



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# 1 Introduction

## 1.1 This report

The Marine Management Organisation is currently preparing marine plans for England's South inshore and offshore areas (known as the South Marine Plans). These will eventually set out how the UK Marine Policy Statement (MPS) will be implemented in the Plan areas.

These will be the third and fourth marine plans to be produced under the Marine and Coastal Access Act 2009 and will seek to take account of social, economic and environmental factors that affect the south marine areas and the communities that are dependent on or have an interest in the marine area.

As part of the marine plan-making process, a Sustainability Appraisal (SA) has been undertaken. The SA process and subsequent report (including this Non-Technical Summary) is a requirement of the Marine and Coastal Access Act 2009<sup>1</sup> and incorporates the requirements of international and national regulations.

The SA has been carried out by Ramboll Environ, Marine Planning Consultants, ClearLead Consulting Ltd and Peter Brett Associates on behalf of the Marine Management Organisation (MMO).

This is the Non-Technical Summary of the South Marine Plans Sustainability Appraisal Report (SA report). The SA report is split into a number of parts:

- Non-Technical Summary (this report)
- The SA Report
  - Part 1: Introduction and Methodology;
  - Part 2: Scoping Information; and
  - Part 3: Results of the Assessment;

All reports are available at the following weblink:

<https://www.gov.uk/south-inshore-and-south-offshore-marine-plan-areas>

## 1.2 What is a sustainability appraisal?

SA is a process, incorporating the requirements of the SEA Directive<sup>2</sup>, which considers the economic, social and environmental impacts of an emerging plan (the three dimensions of sustainable development). The aim in undertaking SA is to identify a plan's likely significant effects and take steps to avoid and/or mitigate the negative effects as well as identify opportunities to maximise a plan's contribution to sustainability.

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<sup>1</sup> The UK Marine and Coastal Access Act 2009

<sup>2</sup> European Commission Directive 2001/42/EC

The Marine and Coastal Access Act (2009) requires that the MMO carry out an appraisal of the sustainability of their proposals within the Marine Plans. The SEA Directive sets out a series of requirements for reporting assessing plans and policies and then for reporting on the findings of this process. The SA Report and this NTS conforms to these requirements, and so the layout and feel of both the full Report and this NTS is influenced by the requirements under the SEA Directive. The SA has been undertaken throughout the development of the marine plans and has informed the consideration of Options (alternatives) which underpin them.

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## 2 Background to the South Marine Plans

### 2.1 Introduction

Marine plans set the direction for decision making to ensure efficient and sustainable use of our marine resources. Once prepared the Plans will cover a 20 year period and will be reviewed regularly throughout this time.

Marine plans are intended to:

- Guide users to the most suitable locations for different activities;
- Manage the use of marine resources to ensure sustainable levels;
- Consider all marine users to ensure everyone with an interest has an opportunity to contribute to marine plans;
- Take a holistic approach to decision making and consider all the benefits and impacts of all the current and future activities that occur in the marine environment.

### 2.2 The South Marine Plans

The South Marine Plans have been written as one document and consider social, economic and environmental factors that affect the South Marine Plan areas and the communities that are dependent on or have an interest in the marine areas.

The vision for the South Marine Plan areas in 2036 is *'Beautiful, busy and beneficial for all'*. This vision is supported by a set of 12 objectives that are listed in Table 2.1 below:

Table 2.1: Summary of South Marine Plan Objectives	
Objective 1	To promote effective use of space to support existing, and facilitate future sustainable economic activity through the encouragement of co-existence, mitigation of conflicts and minimisation of development footprints
Objective 2	To manage existing, and facilitate the provision of new, infrastructure supporting marine and terrestrial activity
Objective 3	To support diversification of activities which improve socio-economic conditions in coastal communities
Objective 4	To support marine activities that increase or enhance employment opportunities at all skills levels among the workforce of coastal communities, particularly where they support existing or developing industries within the South Marine Plan areas
Objective 5	To avoid, minimise or mitigate displacement of marine activities, particularly where of importance to adjacent coastal communities, and where this is not practical to ensure adverse effects on social benefits are avoided
Objective 6	To maintain and enhance access to, and within, the South Marine Plan areas appropriate to its setting and in a way that is equitable to users



**Table 2.1: Summary of South Marine Plan Objectives**

Objective 7	To reduce the environmental, social and economic impacts of climate change, through the implementation of mitigation and adaptation measures that: a) reduce vulnerability b) improve resilience to climate and coastal change or c) reduce indirect contributions of proposals to climate change.
Objective 8	To identify and conserve heritage assets that are significant to the historic environment of the South Marine Plan areas
Objective 9	To consider the seascape and landscape of the South Marine Plan areas, and their constituent marine character and visual resource
Objective 10	To support the objectives of Marine Protected Areas and the delivery of a well-managed ecologically coherent network by ensuring enhanced resilience and the capability to adapt to change
Objective 11	Activities within and adjacent to the South Marine Plan areas must contribute to the achievement or maintenance of Good Ecological Status under the Water framework Directive and Good Environmental Status (GES) under the Marine Strategy Framework Directive with respect to descriptors on litter, non-indigenous species and underwater noise, particularly where current measures need to be reconsidered or enhanced and where new measures are under development
Objective 12	To safeguard space for, and improve the quality of, the natural marine environment, including to enable continued provision of ecosystem goods and services, particularly in relation to coastal and seabed habitats, fisheries, estuarine and coastal water quality and cumulative impacts on highly mobile species.

The Plans are divided into 6 chapters:

- Chapter 1: Introduction and background  
This chapter outlines the purpose of marine plans, the legislative framework and describes the plan area.
- Chapter 2: How to apply and use the marine plans  
This chapter outlines how the Plans should be used, some general considerations for their use and some helpful hints about how to read the Plans.
- Chapter 3: Vision  
This chapter sets out a vision statement for the Plans to 2036.
- Chapter 4: Objectives and policies overview  
This chapter outlines the Plans' objectives and how these contribute to the High Level Marine Objectives and the Marine Strategy Framework Directive.
- Chapter 5: Objectives and policies (broken down by the 12 objectives)  
This sets out the policy context, how the policies will be implemented and sets out signposting for further information.
- Chapter 6: Monitoring, review and reporting

This chapter outlines details of the three year progress report which will be produced as a legal requirement under Section 61 of the Marine and Coastal Access Act.

### 2.3 Relationship with other plans and programmes

The South Marine Plans fit into an existing hierarchy of plans, programmes, strategies and environmental protection objectives and these are set out in detail in Part 2 of the SA report. The South Marine Plans have the following relationships with other plans and programmes:

- International legislation and policy which sets a number of targets, objectives and obligations which the South Marine Plans should seek to achieve;
- National legislation and policy which outlines measures to achieve many of these obligations through setting regional and local targets for public bodies to achieve and by outlining principles which planning policies and decisions needs to adhere to; and
- Local and regional policy which sets out more specific local targets and local actions needed to achieve them.

Particularly important for the South Marine Plans are the following:

- The national Marine Policy Statement<sup>3</sup> and the United Kingdom-wide High Level Marine Objectives<sup>4</sup> which together provides the policy framework for the preparation of marine plans;
- The National Planning Policy Framework<sup>5</sup> and associated National Policy Statements;
- The EU Maritime Spatial Planning Directive (2014/89/EU)<sup>6</sup> which came into force in July 2014 in support of the Integrated Maritime Policy for the European Union. The Directive introduces a framework for maritime spatial planning and aims to promote the sustainable development of marine areas and marine resources. It also sets out a number of minimum requirements for marine plans.

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<sup>3</sup> HM Government (2011) UK Marine Policy Statement

<sup>4</sup> HM Government (2009) Our seas: a shared resource, high level marine objectives

<sup>5</sup> Department for Communities and Local Government (2012) National Planning Policy Framework

<sup>6</sup> Directive 2014/89/EU of the European Parliament

## **2.4 Habitat Regulations Assessment (HRA)**

As well as SA, the South Marine Plans are also being subject to a Habitat Regulations Assessment (HRA). This process is being undertaken as a requirement of the Habitats Regulations and will assess if the plans will have any likely significant adverse effects on European designated sites of nature conservation importance such as Special Areas of Conservation and Special Protection Areas.

So far a pre-screening review and the screening stage of the assessment have been undertaken. This process has screened in 196 European/RAMSAR sites for consideration at the assessment stage and has identified two draft plan policies (S-DD-1 and S-AQ-1) where there is the potential for a 'likely significant effect' from the South Marine Plans.

The next stage of the assessment will include the combination impacts of the South Marine Plans with other plans, project and activities.

There will be uncertainties about the project details and the impacts arising from the two screened in policies that will not be resolved fully at the assessment stage. This uncertainty also applies to the in-combination effects of all 'spatially-definable policies' and other plans, projects and activities. However this can, in part, be mitigated through the iterative process of the implementation and monitoring of the Marine Plans and through the applying project level HRAs for future activities.

## **2.5 How environmental protection objectives have been taken into account**

Regulations require that the SA considers how environmental protection objectives are taken into account in the development of the plan or programme. For the South Marine Plans SA a full review of the key objectives within other plans and policy documents has been undertaken for each topic and is reported in Part 2 of the SA report (baseline). These objectives have then been used to develop an SA framework. The SA framework is then used to test the South Marine Plans and recommendations are made to strengthen the Plans.

## 3 The Sustainability Baseline

### 3.1 Introduction

It is important to understand the existing conditions (known as baseline conditions) and the key issues that should be covered as part of the SA process. The sustainability baseline comprises information on aspects of the environment, economy and society that could be affected positively or negatively by the implementation of the South Marine Plans. Further information relating to the scope of each of the SA topics and background information is presented in Appendices A-G of Part 2 of the SA report. A summary of this work is presented in Table 3.1.

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**Table 3.1: Sustainability Baseline Summary**

Sustainability baseline/issues/problems/characteristics of the area	Evolution without the plan
<p><b>1. Communities, health and wellbeing</b></p>	
<ul style="list-style-type: none"> <li>• The area generally has a greater proportion of elderly than the national average. Health deprivation and life expectancy is lowest within the urban areas.</li> <li>• Tourism and fishing are key sectors of the economy in the plan area. In addition, the area has a high recreational value. There is a need to support and diversify these industries and communities to improve resilience.</li> <li>• Access to recreation and leisure facilities for all age groups needs to be improved and enhanced to support participation and improve health and wellbeing.</li> <li>• Aquaculture and recreational boating currently provide opportunities for year-round employment.</li> </ul>	<ul style="list-style-type: none"> <li>• Trends of a growing ageing population will continue, placing a potentially increasing burden on health services and making older people in coastal communities more vulnerable to consequences of climate change.</li> <li>• Climate change impacts such as longer hotter summers and rising sea temperatures resulting in a longer tourism season, potentially increased visitor numbers and an increased investment in supporting infrastructure. This could improve health and wellbeing within the plan area; however, it could also lead to loss of culture in rural communities.</li> <li>• Conversely, climate change may lead to increased storminess and damage to coastal facilities which could impact upon tourism demand and reduce employment opportunities.</li> <li>• Declining fish stocks in the short to medium term due to; quotas, environmental policy, climate change, and potential competition for current fishing grounds. This may lead to the erosion of 'way of life' for fishing communities.</li> </ul>
<p><b>2. Cultural Heritage</b></p>	
<ul style="list-style-type: none"> <li>• The marine plan area – from Samphire Hoe near Dover to Dartmouth -- is home to a large number of heritage assets. Relatively few heritage assets within the marine area (i.e. below high water) are subject to statutory designation</li> <li>• There are 17 Protected Wrecks in the plan area, plus a small number of Scheduled Monuments (such as the Solent forts and the D-Day Phoenix Caisson off Littlestone-on-Sea) and Listed Buildings (such as Beachy Head Lighthouse and various piers)</li> <li>• Non-designated heritage assets in the marine plan area include hundreds of merchant vessels and warships lost in the First and Second World War, when the south coast was a critical conduit for transport and for the conduct of each war. There is also high potential for the presence of aircraft wrecks from the Second World War in</li> </ul>	<ul style="list-style-type: none"> <li>• The protection of non-designated heritage assets within the marine plan area is subject to piecemeal consideration in the course of licensing, resulting in unmitigated damage to some heritage assets; and uncertain and uneven expectations with respect to provision by developers for the historic environment in their proposals.</li> <li>• Proposals in the marine plan area damage the setting of heritage assets on the adjacent coast.</li> <li>• Access to heritage assets for tourism and recreation in the marine plan area is prevented or interrupted by poor siting of proposals and by disruption associated with construction.</li> <li>• Opportunities are lost to make full use of the social and economic benefits of heritage in the course of regenerating coastal areas.</li> <li>• Archaeological investigations are able to proceed without being subject to</li> </ul>

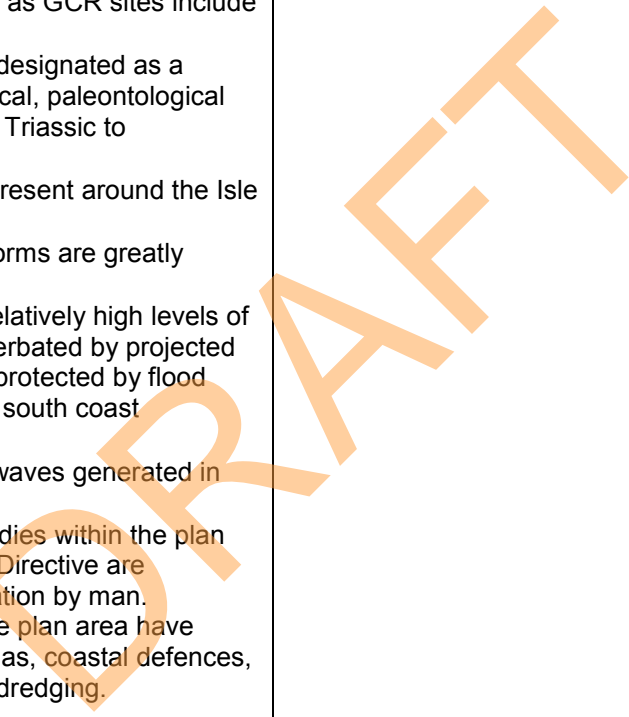
<p>particular.</p> <ul style="list-style-type: none"> <li>• Several discoveries and investigations in the marine plan area point to the presence in the marine plan area of extensive prehistoric land surfaces and deposits which are of tremendous significance to our understanding of the early history of Britain and for the effects of climate change.</li> <li>• The coast adjacent to the plan area contains numerous heritage assets that are subject to statutory designation including Listed Buildings, Scheduled Monuments, Conservation Areas and Registered Historic Parks and Gardens. There are many more heritage assets at the coast that are not designated but which may be of equivalent importance.</li> <li>• Activities directed at heritage assets, including investigations by professional archaeologists and by community groups and volunteers, are an important feature of the marine plan area. Where archaeological investigations require a marine licence, then they are subject to the full range of policies applicable to proposals in the marine plan area.</li> </ul>	<p>other plan policies.</p> <ul style="list-style-type: none"> <li>• Proposals result in adverse impacts on coastal change, which cause erosion that damages and destroys heritage assets at the coast and on the seabed.</li> <li>• The absence of heritage data – especially for the South Offshore marine plan area – continues to hinder effective management of the historic environment.</li> </ul>
<h3>3. Marine Ecology</h3>	
<ul style="list-style-type: none"> <li>• Marine Protected Areas and existing legislation such as Marine Licensing currently afford protection to habitats and species within designated habitat.</li> <li>• Anthropogenic activities such as shipping, commercial fishing and oil and gas exploration produce marine noise which may affect marine mammals, fish and cephalopods.</li> </ul> <p><u>Species specific baseline:</u></p> <ul style="list-style-type: none"> <li>• Plankton - There is a low overall plankton biomass in the plan area.</li> <li>• Benthos - The English Channel is a biogeographical transition zone for many benthic species. The benthic habitats and species found within the area are typical of those found in north eastern Atlantic waters. Elasmobranchs - A number of elasmobranchs are present within the English Channel, with large open water species such as blue, thresher and porbeagle sharks occasionally reported. Dogfish and rays are relatively common and basking sharks are also occasionally sighted.</li> <li>• Diadromous species - Diadromous species e.g. eels are relatively abundant within the plan area, however the future outlook is of major</li> </ul>	<ul style="list-style-type: none"> <li>• Climate change impacts such as rising sea temperatures, decreasing salinity, ocean acidification and rising sea levels pose a challenge to habitats and species will lead to some to a decline species and habitats whilst benefitting others.</li> <li>• Fishing impacts include the potential depletion of commercial fish stocks, damage to benthic habitats, and negative effects on seabirds, marine reptiles and cetaceans.</li> <li>• There is the potential for the spread of non-native species due to climate change which, when coinciding the introduction of hard substrates from offshore activities and developments to act as 'stepping stones' in the migration of non-native species.</li> <li>• Ocean acidification is predicted to have a negative impact on calcifying organisms which will resonate at higher trophic levels.</li> <li>• There is likely to be impacts upon benthic communities as a result of aggregate extraction, renewable energy installations and other anthropogenic activities</li> <li>• Species disturbance may arise from recreation activities, barrier and collision risk associated with offshore development.</li> </ul>

<p>concern.</p> <ul style="list-style-type: none"> <li>• Fish - The Channel supports a highly diverse species of invertebrates which are prey for pelagic and demersal species. The area supports important spawning and nursery grounds.</li> <li>• Shellfish - Substantial shellfish grounds are found along the coastline of the plan area. There are a number of aquaculture initiatives taking place in the marine plan area, with mussels, oysters, clams, cockles and scallops all being cultivated. The Solent native oyster fishery is currently closed due to low population numbers.</li> <li>• Cephalopods - Cephalopods molluscs such as squid, octopus and cuttlefish are present within the plan area.</li> <li>• Birds - The plan area has a range of estuarine and coastal habitats that are notable for breeding, wintering and passage bird species. In addition, the English Channel is a major migration route for a large number of species.</li> </ul>	<ul style="list-style-type: none"> <li>• The Marine Strategy Framework Directive sets out a number of key indicators of Good Environmental Status (GES) that each member state must work towards achieving by 2020.</li> </ul>
<h4>4. Economy</h4>	
<ul style="list-style-type: none"> <li>• Ports: There are 47 ports and harbours within the plan area which are important for supporting the employment of low-skilled labour. The Solent is nationally important and a world leader in terms of commercial port activity, defence, marine leisure and recreation.</li> <li>• Fisheries: More fish is landed in the south marine plan areas than any other marine plan area. Fishing ports of Brixham and Radipole are particularly reliant on the local fishing industry.</li> <li>• Tourism and recreation: The plan area is estimated to support 300,000 jobs (2013/14), with tourism accounting for half of these jobs, however domestic tourism has been declining over the past 15 years due to increased competition from abroad. The GVA of coastal tourism is estimated to be around £1.5 million, with tourism being the largest component of Dorset's economy. Recreational boating within the plan area accounts for over 60% of the overall UK industry.</li> <li>• Marine aggregates: The plan area is the second busiest area in England for marine aggregate extraction (48% of national extraction).</li> <li>• Energy: There are currently no active wind farms, offshore oil and gas operations or commercial carbon capture and storage projects within the plan area. There is one nuclear power station (Dungeness B) within the plan area.</li> <li>• Aquaculture: There are 34 designated shellfish waters within the plan</li> </ul>	<ul style="list-style-type: none"> <li>• Ports: Ports are likely to see an increase in the amount of large vessels, with the port of Southampton expected to increase in size which may have implications for biodiversity and marine conservation. Ports may lose out to cheap flights from regional airports, however the cruise sector is expected to expand.</li> <li>• Fisheries: Future fishing trends are uncertain due to potential impacts of the changes to the Common Fisheries Policy and a range of pressures including increased fuel costs, customer demand, marine conservation measures and climate change which could result in social and economic impacts for local communities within the plan area. However, there are opportunities for future growth in the aquaculture industry.</li> <li>• Tourism and recreation: The tourism market is predicted to increase, however growth may be erratic. The effect of climate change on the tourism economy is uncertain; milder weather and longer summers could increase visitor's numbers, whilst wetter weather and storms may result in a decrease, therefore economic diversification may be necessary to prevent seasonal unemployment and encourage growth.</li> <li>• Marine aggregates: Marine aggregate extraction is set to increase in line with construction activity associated with population growth and continued beach replenishment for coastal protection.</li> <li>• Energy: The marine economy is expected to grow; in particular the low</li> </ul>



<p>area (5% of the marine plan area).</p>	<p>carbon energy industry is developing quickly in response to a range of policy and financial mechanisms, potentially leading to conflict between activities and increased environmental impacts.</p> <ul style="list-style-type: none"> <li>It is likely that there will be a loss of jobs and energy production within the plan area due to the decommissioning of Dungeness A and B nuclear power stations, however there is the potential for increased renewable energy production, especially the development of offshore wind energy. This could provide employment opportunities but may impact upon fishing areas, commercial shipping routes and visual impact.</li> </ul>
<p><b>5. Geology, geomorphology and coastal processes</b></p>	
<p><b>Substrates and Topography</b></p> <ul style="list-style-type: none"> <li>The present distribution of geological strata, sediments and certain topographic features within the marine plan areas is determined by past geological and geomorphological processes.</li> <li>Water depths within the plan area are generally shallow rarely exceeding 60m. Isolated areas of greater depths do occur for example, in the Northern Paleovalley (80-100m) and St Catherine's Deep (60-70m) to the south of the Isle of Wight.</li> <li>A number of extinct rivers form paleovalleys in the marine plans area some of which are now filled with sediments of up to 30m depth.</li> <li>The surficial seabed substrates of the English Channel consist principally of a thin (generally 0-5m, though often only up to 0.5m) coarse, immobile lag deposits. Such deposits are derived from the underlying solid geology which is sometimes at or close to the seabed.</li> <li>Less coarse sediments occur to the west and east of the Channel lag deposit where it is overlain by deeper (5-10m) sands and gravelly sands which have developed into large, mobile sandbanks.</li> <li>A bedload parting zone is present in the central of the English Channel with a sediment sink located near the Straights of Dover where extensive tidal sand ridges and sandwaves/megaripples occur. Sand and gravel waves also occur in the West Solent.</li> </ul> <p><b>Coastal Features and Processes</b></p> <ul style="list-style-type: none"> <li>Coastal topography is highly variable throughout the plan area including low lying estuary areas (e.g. Poole Harbour) and cliffs ranging in elevation from between less than 5m to nearly 200m (e.g. at Golden Cap, Dorset) with iconic formations at the White Cliffs of</li> </ul>	<ul style="list-style-type: none"> <li>There are a number of marine activities which, without the South Marine Plans may individually, or cumulatively, affect geological and geomorphological receptors adversely, including:</li> <li>The South Plan Area is adjacent to a number of areas of high, and increasing, population. Developmental pressure in the form of 'coastal squeeze' may result in the loss of geomorphological features and the narrowing of beaches in some locations.</li> <li>Gas and oil exploration activities may be undertaken within the English Channel and result in future production dependant on the commercial viability.</li> <li>Sea level within the English Channel is expected to increase by 12-76cm over the next 100 years, outpacing isostatic uplift figures and exacerbating flooding in low lying coastal areas, resulting in the greater risk of erosion. This may lead to the realignment and reinforcement of current coastal defences, beach steepening or loss of coastal archaeological resource and potential land reclamation.</li> <li>A number of planning policies and initiatives (e.g. SMPs, RBMPs, the National and Regional Flood and Coastal Erosion Risk Management Strategies and Plans) are already in place that would assist with management of erosion and coastal flooding in the absence of a marine plan.</li> <li>Where polices in the South Marine Plans allow some changes to the shoreline may take place as it becomes uneconomic or undesirable to continue with current lines of flood defence.</li> </ul>



<p>Dover (Kent) and the Severn Sisters chalk cliffs in Sussex.</p> <ul style="list-style-type: none"> <li>• The coastline of the plan area is geologically diverse and as such is designated by a number of Geological Conservation Reviews (GCR), earth science SSSI sites and geosites (e.g. Portland Bill GCR, Hastings Cliffs to Pett Beach SSSI, Needles Geosite).</li> <li>• Barrier beaches have formed at Hastings, Eastbourne and along an almost continuous stretch between Brighton and Chichester Harbour.</li> <li>• Notable shingle structures which are recognised as GCR sites include Chesil Beach and Dungeness.</li> <li>• The Jurassic Coast (Dorset and East Devon) is designated as a World Heritage Site for a combination of geological, paleontological and geomorphological features, and is noted for Triassic to Cretaceous rock cliffs.</li> <li>• Additional varied, coastal geological interest is present around the Isle of Wight.</li> <li>• Sediment flows, erosion rates and coastal landforms are greatly influenced by the tidal and wave environment.</li> <li>• The coast of the English Channel is subject to relatively high levels of coastal erosion and isostatic readjustment exacerbated by projected sea-level rise. A high proportion of the coast is protected by flood defences protecting infrastructure and populous south coast communities.</li> <li>• The waves in the area are dominated by storm waves generated in the Atlantic and the English Channel.</li> <li>• The majority of transitional and coastal water bodies within the plan area are classified under the Water Framework Directive are considered to be highly modified due to modification by man. Nearshore coastal processes across much of the plan area have been affected by structures such as ports, marinas, coastal defences, groynes, navigational dredging and aggregates dredging.</li> </ul>	
<p><b>6. Landscape and seascape</b></p>	
<ul style="list-style-type: none"> <li>• Landscapes are currently protected through statutory mechanisms and are considered in the planning process through various terrestrial/national policy statements and the Marine Spatial Plan.</li> <li>• There are four statutory and three non-statutory landscape designations in the South inshore marine plan area.</li> </ul>	<ul style="list-style-type: none"> <li>• Developments in the coastal zone have the potential to affect the landscape and seascape within the plan area.</li> </ul>

## 7. Water Environment

- There are two river basin management plans within the plan area. All coastal water bodies within the plan area are currently achieving moderate or good ecological status. One water body is failing to meet good chemical status.
- There are high concentrations of water treatment works and sewerage disposal points around the main settlements within the plan area.
- Marine pollution is decreasing but there is still a legacy input of substances from industrialised areas.
- There is a downward trend in the density of coastal and marine litter within the plan area; however the current presence of litter currently results in aesthetic, ecological and economic problems.
- Dredging activities result in temporary effects in the water column, resulting in increased turbidity.
- Climate Change impacts are likely to result in increased sea temperatures (between 1.5°C and 4°C by the end of the 21<sup>st</sup> Century), strength of seasonal stratification, wave heights and a decrease in the salinity. Coupled with topography of the south coast, this may result in the generation of currents and amplified flow or eddies.
- Population growth and associated infrastructure could lead to urban creep which has the potential to alter river catchment dynamics and may also result in additional demand on the sewage network.
- A decline in the pH of the ocean due to increased CO<sub>2</sub> uptake.
- The predicted expansion in nuclear power station in the region may result in an increase in radioactive discharge to the marine environment.
- The Water Framework Directive is likely to be a key driver of change for improving the ecological and chemical status within territorial waters.

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## 4 How the Assessment was Undertaken

### 4.1 The SA Process

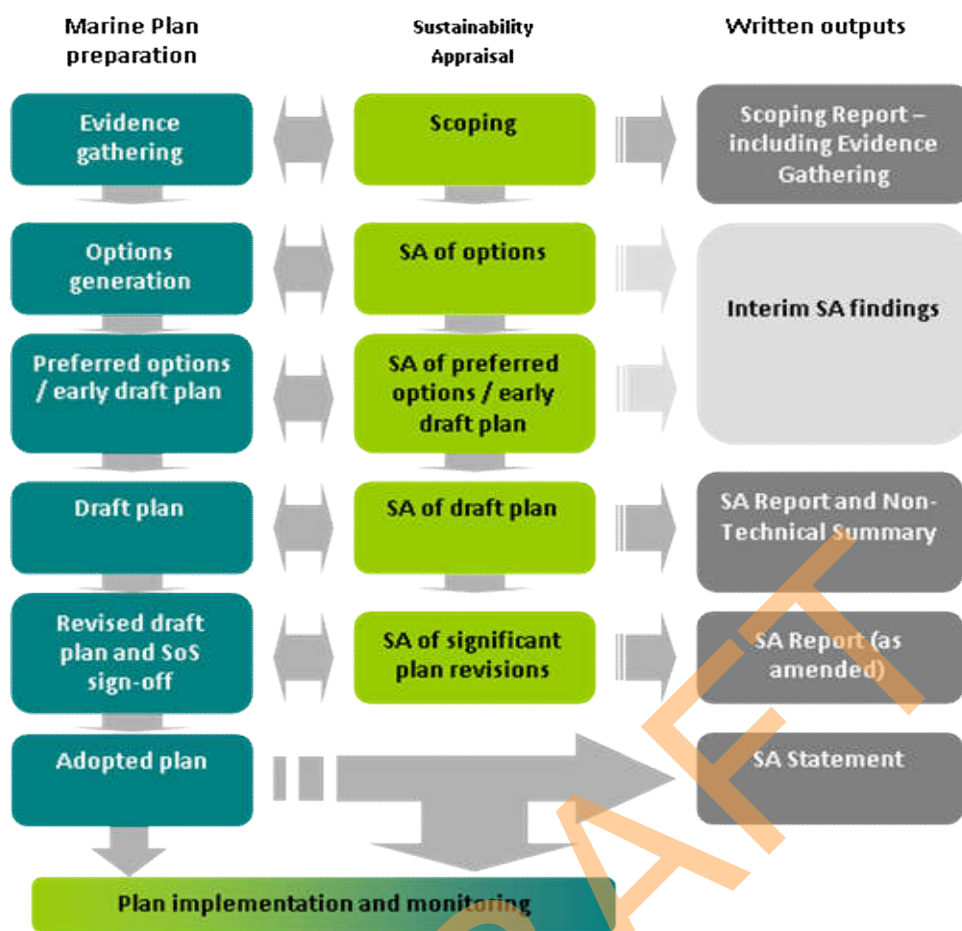
The stages in the SA process have been developed to take into account the five procedural stages of SEA:

- Stage A: (Scoping) Setting the context, establishing the baseline and deciding on the scope of the appraisal;
- Stage B: Developing and refining alternatives (options) and appraising the effects;
- Stage C: Preparing the SA report (this Report);
- Stage D: Consulting on the SA report and the Draft South Marine Plans and assessing any significant changes; and
- Stage E: Monitoring the significant effects of implementing the South Marine Plans.

In practice, the SA is an iterative process which is being undertaken in parallel with the development of the South Marine Plans and has fed into the Plans' development at appropriate intervals – see Figure 4.1 below.

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**Figure 4.1: Stages in the SA Process**



## 4.2 Stage A - Scoping

The purpose of the scoping stage of the assessment is to decide on the level of detail and coverage of the SA. A draft scoping report was published in April 2014 and was finalised in March 2015 after public consultation. The scoping report outlines a SA framework that the Plans are measured against in order to test their sustainability. This SA framework is shown in Table 4.1.

Overarching SA topic	Proposed SA sub topic
Communities, health and well being	<ul style="list-style-type: none"> <li>• Health and wider determinants of health</li> <li>• Coastal communities</li> <li>• Fishing communities</li> <li>• Tourism focused communities</li> </ul>
Cultural heritage	<ul style="list-style-type: none"> <li>• Coastal assets</li> <li>• Marine assets</li> </ul>

**Table 4.1: SA framework.**

Marine ecology	<ul style="list-style-type: none"> <li>• Plankton</li> <li>• Seabed habitats/Benthos</li> <li>• Fish and Shellfish</li> <li>• Cephalopods</li> <li>• Birds</li> <li>• Marine mammals</li> <li>• Conservation sites</li> </ul>
Economy	<p>Economy activity and GVA</p> <ul style="list-style-type: none"> <li>• Ports and shipping</li> <li>• Fisheries</li> <li>• Leisure (which includes recreation)</li> <li>• Tourism</li> <li>• Marine manufacturing and defence<sup>7</sup></li> </ul> <p>Other marine activities</p> <ul style="list-style-type: none"> <li>• Aggregates</li> <li>• Oil and gas</li> <li>• Renewables</li> <li>• Carbon capture and storage</li> <li>• Nuclear</li> <li>• Subsea cabling<sup>8</sup></li> </ul> <p>Coastal typologies</p>
Geology, geomorphology and coastal processes	<ul style="list-style-type: none"> <li>• Seabed substrates and topography</li> <li>• Coastal features and processes</li> </ul>
Landscape and seascape	<ul style="list-style-type: none"> <li>• Statutory and non-statutory landscape designations</li> <li>• Wider landscape and seascape character</li> </ul>
Water environment	<ul style="list-style-type: none"> <li>• Tides and currents</li> <li>• Water temperature and salinity</li> <li>• Pollution and water quality</li> <li>• Eutrophication</li> <li>• Contaminants</li> <li>• Marine litter</li> </ul>

The scoping process also sets out the geographical and temporal scope of the SA:

- **Geographical** – The South Marine Plans will cover the South Inshore and South Offshore areas stretching from the river Dart in the west to Folkestone in the east. The inshore area extends out to 12 nautical miles from the coast and the offshore area extends from the limit of the inshore area to the external limits of the Exclusive Economic Zone (EEZ).

<sup>7</sup> This sub-topic has been altered from 'Marine industry' more accurately describe the coverage of this sub-topic.

<sup>8</sup> This sub-topic has been altered from 'Subsea communications' to reflect the fact that not all sub-sea cables relate to communications e.g. energy infrastructure.

- Temporal - The marine plans will cover a twenty year period and therefore the SA will consider the effects of the Plans over the next 20 years and beyond where possible.

The scoping report is also the primary mechanism for consulting on the scope and level of detail of the SA. The scoping consultation began on the 24th November 2014 and closed on 2nd January 2015 and was issued to the following statutory environmental bodies:

- Natural England;
- English Heritage; and
- The Environment Agency

### **4.3 Stage A - Assessing the options**

The SEA Directive requires that the assessment identifies and evaluates reasonable 'alternatives' to what is proposed within the Plan. Section 5 of this report summarises the alternatives considered.

The South Marine Plans also set out policies to deliver a set of fifteen high level objectives. These objectives were slightly different at the options assessment stage and were tested to ensure the objectives had an adequate sustainability coverage. This is reported in the 'South Marine Areas Sustainability Appraisal Options Assessment Report' produced in March 2015.

The next step was to test each of the three options against the SA objectives. The approach to the SA of the options 1, 2 and 3 was to provide information to enable a selection to be made between the options. The options assessment has been set out in a number of tables which can be used to compare each option and provide a commentary. These tables are set out in Part 3 of the SA report and are summarised in Section 6 of this Non-Technical Summary report. The appraisal has evaluated the possible effects of pursuing the options in relation to each of the seven SA topics. For each topic, an appraisal score has been assigned relating to how the baseline characteristics are predicted to evolve following each of the strategic policy approaches. The notation used is described in Table 4.2 (and this is the same notation used for the assessment of the Draft Plans). Please note that a significant effect has been defined as a Major Positive or Major Negative effect.

**Table 4.2: Notation for the assessment**

Notation	Description
<b>Degree to which baseline conditions may change (significance of change) compared with the future baseline situation</b>	
++	<b>Major Positive Effect (significant positive)</b> The Plan is likely to lead to significant improvements in baseline conditions.
+	<b>Minor Positive Effect</b> The Plan is likely to lead to some improvements in baseline conditions.
0	<b>Neutral Effect</b> The Plan is unlikely to alter baseline conditions significantly.
-	<b>Minor Negative Effect</b> The Plan is likely to lead to a deterioration in baseline conditions.
--	<b>Major Negative Effect (significant negative)</b> The Plan is likely to lead to a significant deterioration in baseline conditions.
+/-	<b>Positive and Negative Effect</b> The Plan is likely to lead to both a deterioration and an improvement in baseline conditions, perhaps in different areas or ways.
?	<b>Uncertain Effect</b> It is not known whether the Plan would lead to an improvement or deterioration in the baseline conditions.
<b>Direct / Indirect</b>	
D	Direct effect
I	Indirect effect
<b>Reversibility of effects</b>	
R	It is considered that the effects upon the receptor group could be reversed if activities were to change in the future. The receptor may hence be able to recover or indeed improvements could be diminished.
IR	It is considered that the effects upon the receptor group could not be reversed and would be permanent. This may apply to situations where, for example, features are destroyed for ever or systems/trends are irrevocably changed.
<b>Certainty of prediction / Likelihood</b>	
H	There is a high level of confidence in the assessment prediction. No identified data gaps.
M	There is a medium level of confidence in the assessment prediction. This means that the appraiser is largely certain of the direction of impact and some of the elements of prediction but there remains some doubt or certainty about some other elements.
L	There is low level of confidence in the assessment prediction. This may be as a result of significant baseline data gaps, there being very little control over how an activity may come forward or there is limited evidence to support the prediction.

#### **4.4 Stage B - Assessing the Draft Plans**

The SA of the South Marine Plans has been undertaken as a 'baseline-led' appraisal which considers how marine planning under the South Marine Plans will be different from marine planning under a 'business as usual' scenario.

This is set out within Part 3 of the SA report and for each of the SA topics the table and the supporting commentary clarifies whether effects are positive, negative or neutral, whether they are permanent or temporary and, where relevant, the likely geographical and temporal scale of the effect.

Following the discussion of appraisal results, a section is provided on recommended measures to mitigate or further enhance the Draft Plan policies. Assessment of the Draft Plan is summarised within Section 6 of this Non-Technical Summary report.

#### **4.5 Stage C – Preparing the Draft SA Report**

The SA report (in all its three parts) constitutes the SA report for the South Marine Plans. A considerable amount of material has been generated as part of the SA process and relevant documents are available at the following website:

<https://www.gov.uk/topic/planning-development/marine-planning>

#### **4.6 Stage D – Consulting on the SA Report**

The SA report has been produced for comment alongside the South Marine Plans and both the Plans and the related SA report will be put out for consultation in spring 2016. The current timescale is to adopt the Plans in 2017.

#### **4.7 Stage E – Monitoring**

Monitoring the effects of the Plans will be the responsibility of the MMO guided by a monitoring programme to be included in the SA Adoption Statement. A draft monitoring programme is summarised in section of this Non-Technical Summary report.

#### **4.8 Difficulties encountered**

The South Marine Plans are regional scale plans which are not intended to address site or project-specific details. The large majority of the policies in the Draft Plans are generic or criteria-based policies and do not have a clear spatial dimension. The South Marine Plans can only provide guidance for decision makers to help in consenting (or otherwise) activities in the marine plan areas. As such, the exact



location and nature of new activities will also depend upon market forces and development applications being received. This results in uncertainty when predicting the effects of activities and consequently strategic impacts can be identified with the most certainty, together with the extent to which the marine plans seek to avoid or offset these impacts. Correspondingly, this SA's predictions and proposed mitigation measures will primarily be at a strategic level.

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## 5 Assessing Alternative Options

### 5.1 Introduction

As well as assessing the effects of the Draft South Marine Plans the SA process has tested reasonable alternative options as developed by the MMO.

### 5.2 The alternatives developed

Three options for the development of the South Marine Plans have been formulated, each delivering the objectives as a whole, but distinct from one another in terms of how the different policies achieve the desired outcomes. These options are shown in Table 5.1.

Table 5.1: Alternative Options	
<b>Option 1 – Balanced Option</b>	A high strength option that includes the highest possible number of high-strength policies. To enable compatibility of high strength policies, some require clauses allowing an applicant to state the case for proceeding with a proposal even when it does not conform with a policy. There is no guarantee that if a case is stated, it will be successful. This is because the high-strength policies require a greater level of consideration of other policies than medium and low-strength policies do. This means that greater weight may be attached to any impacts identified. This should lead to a relatively greater degree of certainty that the intent of the policy and its desired outcome will be realised in most, but not all, cases.
<b>Option 2 – Flexible Option</b>	An option that looks to find the middle ground across objectives (and therefore contains primarily medium strength policies). This option most closely resembles the East Inshore and Offshore Marine plans, in terms of phrasing and strength of policies and in terms of the likelihood of the outcomes gained from the policies. As the strength of requirements in the policies are less than those in option 1, there is more chance that a case can be made to proceed with a proposal or activity even if it is not in line with a policy. Therefore outcomes from the policies are less certain and there may be more scope for variation in how they are applied. This is also likely to give rise to greater uncertainty to any potential impacts and may make avoidance and mitigation more difficult.

**Table 5.1: Alternative Options**

<b>Option 3 – Prescriptive Option</b>	<p>An option that seeks to be more prescriptive and looks to achieve more certain outcomes for issues that have been highlighted as being particularly important for the South Marine Plan areas. These primarily relate to:</p> <ul style="list-style-type: none"><li>a). the protection of the environment (both for its intrinsic value, the ecosystem services it provides and to help sectors reliant upon it for some of their appeal, such as tourism and recreation),</li><li>b). a number of sectors of very high economic or social importance, namely:<ul style="list-style-type: none"><li>i. Tourism and recreation</li><li>ii. Ports</li><li>iii. Shipping</li><li>iv. Fishing</li><li>v. Aggregates</li></ul></li></ul> <p>Policies under this option provide the highest degree of certainty of outcome for the sectors and topics above, by removing the opportunity to state the case for proceeding when not in line with the policy. In so doing, it means that other sectors and topics can only be compatible with the above sectors and topics through use of a lower-strength policy that places fewer requirements on the decision maker and/or applicant in its implementation. This option is therefore a mix of strengths of policy and involves a degree of trade-offs between sectors and topics.</p>
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### 5.3 Reasons for selecting the alternatives

The South Marine Plan Areas Options Report<sup>9</sup> discusses the development of, and reasons for, the selection of the alternative options tested within the SA. The information below summarises this information.

The MMO tested various approaches to developing options with the selected approach illustrated in Figure 5.1. This process was applied to each sector or topic and the policy variants devised using the methodology shown within Phase 1 of the diagram.

When it was decided that a policy needed to address the issues identified, a ‘high’, ‘medium’ and ‘low’ strength policy varied was allocated. When policies were not necessary a justification was produced.

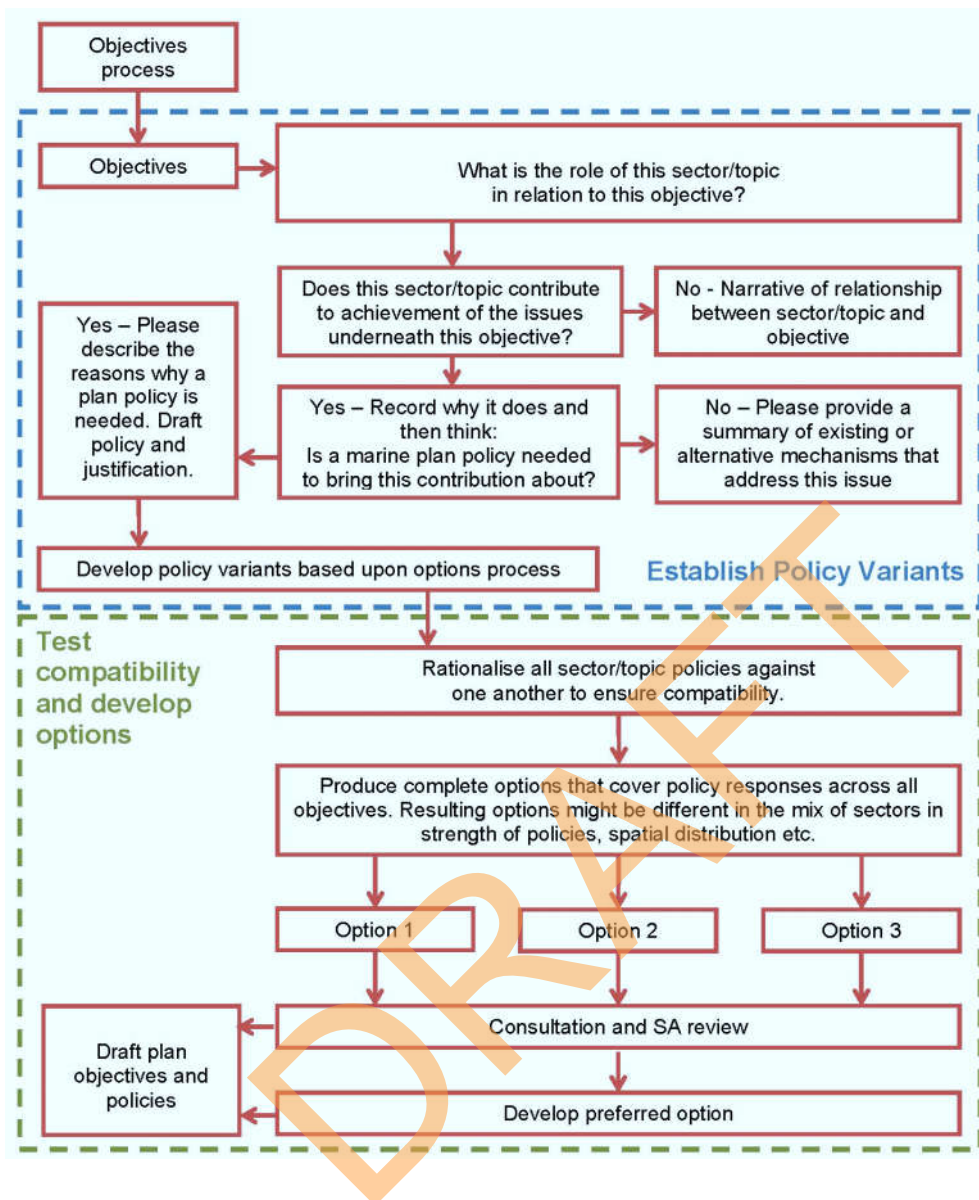
Each policy was then subject to compatibility checking as shown in Phase 2 of the diagram. The results of this exercise can be viewed within Annex 2 of the MMO Options report.

All policy variants under each objective were reviewed to ensure they considered the core issues identified within the South Plan Analytical Report<sup>10</sup>. The three options shown in Table 5.1 were then designed, drawing on experience from stakeholder engagement and knowledge of issues relevant to the plan area.

<sup>9</sup> Marine Management Organisation (February, 2015): South Marine Areas Options Report

<sup>10</sup> Marine Management Organisation (June 2014); South Inshore and Offshore Marine Plan Areas: South Plans Analytical Report

**Figure 5.1: Methodology for devising policy options**



#### 5.4 Reason for choosing the preferred approach

The options were chosen as a result of feedback from respondents, who favoured a combination of the options, and were also supported by the findings of the SA of options. Therefore Table 5.2 summarises the breakdown of each of the objectives presented at the options stage of the planning process and the preferred option chosen for each of these objectives.

<b>Table 5.2: Options Chosen</b>		
<b>Objective</b>	<b>Preferred Option</b>	<b>Reason for choosing this option</b>
Climate Change	Option 3	A stronger policy was preferred at options workshops as well as being supported by the SA of options.
Marine Protected Areas	Option 3	Given the high number of Marine Protected Areas, it was considered that strong protection was needed to retain resilience.
Good Environmental and Ecological Status	Option 3	A stronger policy was preferred as respondents preferred more prescriptive policies.
Ecology and Ecosystem Services	Option 3	A stronger policy was preferred as respondents preferred more prescriptive policies.
Disturbance	Option 1	This was considered by respondents to be a high strength policy.
Water Quality	Option 3	A stronger policy was preferred as respondents preferred more prescriptive policies.
Displacement of Marine Activities and Access	Option 1	This was considered to be a good balance between too flexible and too prescriptive and was favoured in the options consultation.
Heritage Assets	Option 3	This was favoured by respondents as well as being supported by the SA of options.
Seascape	Option 1	This was the most favoured option among respondents.
Co-location	Option 1	This was the most favoured option among respondents.
Infrastructure	Option 1	This was the most favoured option among respondents.
Regeneration and Diversification of Activities	Option 1	This was the most favoured option among respondents.

## 6 Significant Effects of the Plan and Mitigation

### 6.1 Introduction

The assessment of the three options and the Draft Plans is shown in Part 3: Annex C of the SA (Tables C.1 to C.7 – each table representing the impact of the options and the Draft Plans against one of the SA framework issues) and Tables 6.1 to 6.7 below show a summary of the assessment. The tables also identify the mitigation measures recommended for the Draft Plans, the plan makers' response to the suggested mitigation and clarifies what the residual effects of the Draft Plans will be if decision makers implement the changes.. Mitigation measures are measures suggested to prevent, mitigate, reduce or offset negative or uncertain effects. Enhancement measures are measures that can enhance any positive or neutral effects identified. Enhanced measures suggested for other effects can be found in the assessment matrices within Part 3 of the SA.

Impact interactions were also identified in assessment and these are shown in Part 3: Annex C (Tables C.1 to C.9). Some of the impact interactions discussed include:

- Impacts on the environment and especially those that cause effects on landscape and seascape character, litter and bathing water quality should have secondary impacts on health, tourism and recreation;
- Policies on tourism, recreation, skills, public access etc. could increase the environmental, economic and social benefits that arise from heritage assets. Heritage assets both in and adjacent to the marine plan area are of fundamental importance to tourism and recreation;
- The Draft Plans contain numerous policies which may assist with the adaptation of natural heritage resources to the impacts of climate change and these are likely to result in positive effects on the marine ecology of the area of interest;
- There are key impact interactions between economy and skills and coastal communities;
- Policies which protect the coastal area from significant coastal change and in particular protect coastal habitats such as salt marsh should have positive direct effects on ecology and positive indirect effects on landscape and seascape character essentially protecting the vulnerable interface between the sea and the land; and
- Impacts on water quality, contaminants and pollution should have secondary impacts on ecology and vice versa as some species provide water filtration services. There is also a strong link to recreation and tourism which is founded on a clean and safe environment (including clean bathing water).

**Table 6.1: Results of the SA: Communities, Health and Wellbeing**

**Results of the Options Assessment**

The assessment found no major / significant negative effects or uncertain effects. In general the options had a score of minor positive against most of the SA sub topics.

The options performed most positively against the fishing communities sub topic as **option 1 and 3 were found likely to have a major / significant positive effect on fishing communities.**

The options included several policies aimed at protecting the fishing industry and recreational fishing activities including strong policies aimed at protecting feeding grounds, migration routes and spawning areas, reducing the effects of spoil disposal, protecting fishing activity.

**Results of the Draft Plan Assessment**

The assessment found no major / significant negative effects or uncertain effects. In general the options had a score of minor positive against most of the SA sub topics. One major / significant positive effect was found and this is discussed below.

Potential significant / uncertain effect identified	Mitigation measures identified for significant and uncertain effects	Response of the plan makers	Residual effect
Major / significant positive effect on fishing communities. This is because the Plans include many policies related to protecting and supporting the fishing industry, feeding grounds, essential habitats, reducing the spread of non-indigenous species and the Plans also include additional protection for herring through policy S-FISH-4-HER.	NA	NA	Major / significant positive effect on fishing communities

**Table 6.2: Results of the SA: Cultural Heritage**

**Results of the Options Assessment**

The assessment found no major / significant negative effects or major / significant positive effects. All of the options recorded an uncertain score against both of the sub topics.

With regard to both coastal and marine heritage assets, the effect was uncertain because of a lack of clarity at the options stage regarding whether the Plans have influence over the effects on designated assets.

**Results of the Draft Plan Assessment**

The assessment found no major / significant negative effects or major significant positive effects. The Draft Plans recorded an uncertain score against both of the sub topics and this is discussed below.

Potential significant / uncertain effect identified	Mitigation measures identified for significant and uncertain effects	Response of the plan makers	Residual effect
<p>Uncertain effect on coastal assets and marine assets. This is because the draft policy on heritage (S-HER-1) refers only to 'newly-discovered heritage assets' and 'non-designated assets that are yet to be assessed for designation'. The policy makes no reference to other classes of heritage asset. There is also uncertainty because of the way in which the policy is framed, i.e. 'Proposals with the potential to have a significant adverse impact [on heritage assets] are more likely to be supported if...' This suggests a presumption to support proposals that have significant adverse impacts on heritage assets, which contrasts with Options 1-3 considered previously and the way that other receptors are treated in the Draft Plans.</p>	<p>The uncertain effects of the Draft Plans could be mitigated by rewording the draft policy on heritage so that it is comprehensive in its application to different categories of heritage asset, including heritage assets and their settings; gives effect to a presumption on proposals that affect the conservation of heritage assets that is consistent with the UK MPS and other relevant policies; and is able to balance other plan policies that are likely to have a negative effect on heritage assets.</p>	<p>After discussion with Heritage England policy to be reworded to encompass all heritage assets.</p>	<p>Minor positive effect on coastal assets</p>



**Table 6.3: Results of the SA: Marine Ecology**

**Results of the Options Assessment**

The assessment found no major / significant negative effects, major / significant positive effects or uncertain effects. All of the options were found to have a score of minor positive against all of the SA sub topics.

**Results of the Draft Plan Assessment**

The assessment found no major / significant negative effects or major / significant positive effects. One uncertain effect was found and this is discussed below. The majority of the rest of the scores were minor positive with a few instances of minor negative effects.

Potential significant / uncertain effect identified	Mitigation measures identified for significant and uncertain effects	Response of the plan makers	Residual effect
<p>Uncertain effect on seabed habitats / benthos. This is due to a lack of clarity regarding the policies supporting certain types of development. Policy S-OG-1 regarding oil and gas development, Policy S-AQ-2 on aquaculture and Policy S-INF-1 could be deemed to have higher priority than other plan activities or environmental sensitivities due to the way the policies are phrased.</p>	<p>There is a mismatch between supporting text and the policies (specifically S-OG-1, S-AQ-2 and S-INF-1). The policies as worded imply that these activities will be supported in preference to other considerations. The supporting text does contain information regarding environmental safeguards and issues related to co-existence with other activities. However, we would recommend a stronger link between policy wording and supporting text.</p>	<p>The draft South Marine Plans should be used as a whole which includes policies across all aspects of sustainable development – economic, social and environmental. Proposals would still have to comply with existing legislation such as EIA and therefore there is unlikely to be any additional negative effects caused by the policies in question. The strength of the policies may offer some degree of priority over other activities but as many of the environmental and social policies are also worded strongly (ie are musts) they must also be adhered to</p>	<p>Although it is appreciated that the risk of negative effects is low due to the presence of existing legislation, within the South Marine Plans there is a lack of clarity on the application of the policies. Therefore, an uncertain effect remains related to seabed habitats / benthos.</p>

## Table 6.4: Results of the SA: Economy

### Results of the Options Assessment

No major / significant negative effects were recorded. The options were strongly positive in most regards. The assessment found:

- Options 1 and 3 have potential major / significant positive effects against ports and shipping due to strong policies which protect shipping routes, ports and harbours and support development of skills;
- Options 1 and 3 have potential major / significant positive effects against fisheries due to strong policies which support the diversification of the fishing industry and enhance fishing industry resilience and support development of skills;
- Options 1 and 3 have potential major / significant positive effects against leisure due to strong policies which protect recreational boating routes, policies supporting tourism and recreation proposals and protection of recreation activities during development;
- Option 3 has potential major / significant positive effects against tourism due to strong policies which protect passenger vessel routes, provide protection for the environment and policies directly supporting tourism;
- Options 1 and 3 have potential major / significant positive effects against marine manufacturing and defence due to strong policies which protect Ministry of Defence Danger and Exercise Areas, support the immediate and future development of the skills base within the local community and seek to enhance employment opportunities;
- All of the options have potential major / significant positive effects against aggregates due to strong policies which require the consideration of existing licenses for extraction of aggregates and through support for the use of sustainable sources of aggregate;
- All of the options have a potential uncertain impact on oil and gas as the options did not include any reference to oil and gas;
- Option 1 has potential major / significant positive effects against renewables due to strong policies which aim to increase social benefits of wind and tidal developments, protect the tidal stream resource and support the development of the skills base in local communities;
- Option 1 has potential major / significant positive effects against carbon capture and storage due to a strong policy which offers protection for areas of potential use for Carbon Capture and Storage, requiring compatibility and the minimisation and mitigation of potential effects;
- All of the options have an uncertain impact on the nuclear industry as the options did not include any reference to the nuclear industry;
- Option 3 has potential major / significant positive effects against subsea cabling due to strong policies which require the avoidance of landfall sites and support the development of the skills base;
- All of the options have a potential uncertain impact on coastal typologies as the options did not include any reference to coastal typologies;

Apart from those effects listed above the majority of the effects recorded were minor positive. There was one instance of a minor negative effect recorded.

### Results of the Draft Plan Assessment

No major / significant negative effects were recorded. The options were strongly positive in most regards but there were some uncertainties and these are discussed below.

Potential significant / uncertain effect identified	Mitigation measures identified for significant and uncertain effects	Response of the plan makers	Residual effect
Major / significant positive effect on ports due to strong policies which protect shipping routes, ports and harbours and support development of skills.	NA	NA	Major / significant positive effect on ports
Major / significant positive effect on fisheries due to strong policies which support the diversification of the fishing industry and enhance fishing industry resilience and support development of skills.	NA	NA	Major / significant positive effect on fisheries
Major / significant positive effect on marine manufacturing and defence due to strong policies which protect Ministry of Defence Danger and Exercise Areas, support the immediate and future development of the skills base within the local community and seek to enhance employment opportunities	NA	NA	Major / significant positive on marine manufacturing and defence
Major / significant positive effect on aggregates due to strong policies which require the consideration of existing licenses for extraction of aggregates and through support for the use of sustainable sources of aggregate.	NA	NA	Major / significant positive on aggregates
Major / significant positive effect on oil and gas due to the fact that the Draft Plans give strong support to the oil and gas sector (policy S-OG-1).	NA	NA	Major / significant positive on oil and gas
Uncertain effect on carbon capture and storage because the Draft Plans do not include any policies which specifically support this sector.	By including policy wording to protect areas for carbon capture and storage the Draft Plans could result in positive effects with regards to this sector.		
Uncertain effect on nuclear because the Draft Plans do not include any policies which specifically support this sector.	By including policy wording to respond to future nuclear development the Draft Plans could result in positive effects with regards to this sector.		

**Table 6.5: Results of the SA: Geology, Geomorphology and Coastal Processes**

**Results of the Options Assessment**

The assessment found no major / significant negative effects or uncertain effects. Options 1 and 3 have a potential minor positive impact against both of the SA sub topics and Option 2 scored minor negative. This was because Option 2 provided less protection for Marine Protected Areas and does not provide general protection from development proposals in relation to geomorphology so is weaker than Option 1 and Option 3 in this regard.

**Results of the Draft Plan Assessment**

The assessment found no major / significant negative effects, major / significant positive effects or uncertain effects. The Draft Plans will have a minor positive effect against both of the SA sub topics.

Potential significant / uncertain effect identified	Mitigation measures identified for significant and uncertain effects	Response of the plan makers	Residual effect
None	NA	NA	NA

**Table 6.6: Results of the SA: Landscape and Seascape**

**Results of the Options Assessment**

The assessment found no major / significant negative effects or uncertain effects.

All of the options will have a neutral effect against statutory and non-statutory landscape designations and all of the options could potentially have some minor negative and some minor positive effects on wider landscape and seascape character.

**Results of the Draft Plan Assessment**

The assessment found no major / significant negative effects or major / significant positive effects.

The Draft Plans will have an uncertain effect against statutory and non-statutory landscape designations and this is discussed in below. The Draft Plans will potentially have some minor negative and some minor positive effects on wider landscape and seascape character.

Potential significant / uncertain effect identified	Mitigation measures identified for significant and uncertain effects	Response of the plan makers	Residual effect
<p>Uncertain effect on statutory and non-statutory landscape designations. There is an uncertainty regarding the coverage of the Draft Plans in relation to landscape as it is not clear how the South Marine Plans will implement the intent of the MPS. In addition there is a lack of clarity between the policy and the supporting text.</p>	<p>It is recommended that the Draft Plans need to be clearer regarding the coverage of landscape in the South Marine Plans. This is not necessarily a policy gap but it is felt that better explanation is needed in the supporting text.</p>	<p>As landscape does not feature as a policy area in the MPS we believe inclusion of a policy is going beyond the intent of MPS rather than a gap being created by not having a policy. However, further clarity will be provided to ensure draft South Marine Plans have clarity regarding landscape designations.</p>	<p>There is a lack of clarity regarding how the Plans will implement the intent of the MPS in this version of the Plans however this is likely to be addressed in a revised version Therefore, at present an uncertain effect remains in relation to statutory and non-statutory landscape designations</p>
<p>Uncertain effect on statutory and non-statutory landscape designations. Uncertain effect due a lack of clarity regarding the policies supporting certain types of development. Policy S-OG-1 regarding oil and gas development, Policy S-AQ-2 on aquaculture and Policy S-INF-1 could be deemed to have higher priority than other plan activities or environmental sensitivities due to the way the policies are phrased.</p>	<p>There is a mismatch between supporting text and the policies (specifically S-OG-1, S-AQ-2 and S-INF-1). The policies as worded imply that these activities will be supported in preference to other considerations. The supporting text does contain information regarding environmental safeguards and issues related to co-existence with other activities. However, we would recommend a stronger link between policy wording and supporting text.</p>	<p>The draft South Marine Plans should be used as a whole which includes policies across all aspects of sustainable development – economic, social and environmental. Proposals would still have to comply with existing legislation such as EIA and therefore there is unlikely to be any additional negative effects caused by the policies in question. The strength of the policies may offer some degree of priority over other activities but as many of the environmental and social policies are also worded strongly (ie are musts) they must also be adhered to.</p>	<p>Although it is appreciated that the risk of negative effects is low due to the presence of existing legislation, within the South Marine Plans there is a lack of clarity on the application of the policies. Therefore, an uncertain effect remains in relation to statutory and non-statutory landscape designations</p>

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**Table 6.7: Results of the SA: Water**

**Results of the Options Assessment**

The assessment found no major / significant negative effects or uncertain effects.

Option 1 and 3 have potential major / significant positive effects against contamination due to strong policies which aim to improve estuarine water quality and turbidity. Option 1 and 3 have potential major / significant positive effects against marine litter due to strong policies in relation to the removal of marine litter.

**Results of the Draft Plan Assessment**

The assessment found no major / significant negative effects. The assessment found one major / significant positive effect and one uncertain effect and these are discussed below.

Potential significant / uncertain effect identified	Mitigation measures identified for significant and uncertain effects	Response of the plan makers	Residual effect
<p>Uncertain effect on pollution and water quality.</p> <p>Uncertain effect due a lack of clarity regarding the policies supporting certain types of development. Policy S-OG-1 regarding oil and gas development, Policy S-AQ-2 on aquaculture and Policy S-INF-1 could be deemed to have higher priority than other plan activities or environmental sensitivities due to the way the policies are phrased.</p>	<p>There is a mismatch between supporting text and the policies (specifically S-OG-1, S-AQ-2 and S-INF-1). The policies as worded imply that these activities will be supported in preference to other considerations. The supporting text does contain information regarding environmental safeguards and issues related to co-existence with other activities. However, we would recommend a stronger link between policy wording and supporting text.</p>	<p>The draft South Marine Plans should be used as a whole which includes policies across all aspects of sustainable development – economic, social and environmental. Proposals would still have to comply with existing legislation such as EIA and therefore there is unlikely to be any additional negative effects caused by the policies in question. The strength of the policies may offer some degree of priority over other activities but as many of the environmental and social policies are also worded strongly (ie are musts) they must also be adhered to.</p>	<p>Although it is appreciated that the risk of negative effects is low due to the presence of existing legislation, within the South Marine Plans there is a lack of clarity on the application of the policies.</p> <p>Therefore, an uncertain effect remains in relation to pollution and water quality</p>
<p>Major / significant positive effects on marine litter. This is due to strong policies in relation to the removal of marine litter</p>	<p>NA</p>	<p>NA</p>	<p>Major / significant positive effects on marine litter</p>

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## 6.2 Cumulative effects assessment

The SEA Regulations require an assessment of cumulative effects. Cumulative effects arise, for instance, when several developments each have insignificant effects but together have a significant effect; or where the effects of different elements of a plan will have a combined effect. In this case a cumulative effect might occur where the effects of different elements of the South Marine Plans will have a combined significant effect or the South Marine Plans will have a cumulative effect on a receptor in combination with other plans and programmes

The significance of cumulative effects resulting from a range of activities, or multiple incidences of one activity, may vary based on factors such as the nature of the projects proposed and the sensitivity of the receiving communities and environment. The SA of the South Marine Plans considers the effects of the Draft Plans as a whole against each SA issue rather than the policies assessed, therefore it is considered that this approach will pick up the total (and cumulative effects) as far as possible.

It is not predicted that the policies within the Draft Plans could potentially create conflict with environmental and community policies within the UK to generate adverse effects. This is because, the policies set out in the Draft Plans reflect the existing policy and legislation and the South Marine Plans are additional to existing legislation.

The South Marine Plans are very clear that the acceptability of any development needs to be considered against the policies as a whole. The policies in the plan provide a wide range of community and environmental considerations which should, to an extent, serve to limit the impacts of individual projects. It should also be recognised that Environmental Impact Assessment (EIA) procedures also provide mechanisms to assess and control potential environmental effects.

In terms of effects on adjacent state territories due to activities within the South Marine Plan areas, these are likely to be less than those within UK waters. Given the existing range of control mechanisms it is not anticipated that potential transboundary effects would be significant.

## 7 Monitoring

### 7.1 Introduction

Regulations governing SA state that the significant effects of the plan should be monitored. This is so that any unexpected effects can be identified and action can be taken to reduce / eliminate these effects.

The South Marine Plans process will itself include a comprehensive monitoring programme which is focused on the achievement of the plan's objectives. This is outlined in more detail in Part 3 of the SA report and will be included in the SA adoption Statement (once the plan has been adopted).

The monitoring programme will enable the MMO to track the success of individual policies and also to monitor the baseline environmental, economic and social conditions of the plan area.

Due to the fact that no major / significant effects were identified the monitoring programme proposed focuses on the residual uncertain effects identified (after mitigation has been applied). These are presented in Table 7.1.

Table 7.1 Monitoring measures	
Potential significant / uncertain effect identified	Monitoring required, source and frequency
<p>Uncertain effect on seabed habitats / benthos / landscape / water pollution and water quality / landscape</p> <p>This is due to a lack of clarity regarding the policies supporting certain types of development. Policy S-OG-1 regarding oil and gas development, Policy S-AQ-2 on aquaculture and Policy S-INF-1 could be deemed to have higher priority than other plan activities or environmental sensitivities due to the way the policies are phrased</p>	<p>Information should be collected on how applications for the relevant development (infrastructure, oil and gas and aquaculture) are being decided to ascertain if policies are providing enough protection for the environment and other users of the marine environment. This information should be collected annually and fed into reviews of the effectiveness of South Marine Plans.</p>
<p>Uncertain effect on statutory and non-statutory landscape designations</p> <p>There is an uncertainty regarding the coverage of the Draft Plans in relation to landscape as it is not clear how the South Marine Plans will implement the intent of the MPS. In addition there is a lack of clarity between the policy and the supporting text.</p>	<p>Information should be collected on how applications are using Policy S-SCP-1 and whether matters related to landscape are being addressed adequately in applications. The purpose of this is to ascertain if this policy is providing enough protection for landscape designations. This information should be collected annually and fed into reviews of the effectiveness of South Marine Plans.</p>