



HM Government

UK Marine Policy Statement: A draft for consultation

HM Government
Northern Ireland Executive

Scottish Government
Welsh Assembly Government



UK Marine Policy Statement: A draft for consultation

Presented to Parliament pursuant to paragraph 10 of Schedule 5 to the Marine and Coastal Access Act 2009

Laid by the Scottish Ministers under paragraph 10 of Schedule 5 to the Marine and Coastal Access Act 2009

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Executive Summary

The UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive are taking action to achieve our vision for *clean, healthy, safe, productive and biologically diverse oceans and seas*. A key step in realising this vision is the introduction of the new systems of marine planning provided for in the Marine and Coastal Access Act 2009, the Marine (Scotland) Act 2010 and proposed legislation in Northern Ireland.

The Marine Policy Statement (MPS) is the framework for preparing Marine Plans and taking decisions that affect the marine environment. It will also set the direction for new marine licensing and other authorisation systems in each Administration. The MPS will apply to all UK waters.

The MPS sets out our collective ambition for the policies that shape the management and use of our marine resources. It will create the framework for consistent and evidence-based marine planning and decision making, and will contribute to the sustainable development of the UK marine area.

This consultation document invites your views on the draft MPS and supporting documents which have been published today. The draft MPS has been shaped by comments we received from a wide range of interested parties during an 8 week pre-consultation held between March and May 2010, as part of the wider engagement programme set out in our revised Statement of Public Participation.

We are seeking your views and suggestions to ensure that the MPS is an appropriate UK framework for marine planning and taking decisions that affect the marine area.

**The deadline for comments is
13 October 2010.**

Introduction

The UK Administrations are committed to joint adoption of the MPS as the first stage in the development of new marine planning systems across the UK.

This consultation seeks views on the draft MPS as a framework for marine planning and for taking decisions that affect the marine area in the absence of a Marine Plan. The MPS is a high level UK policy statement and reflects the devolved nature of many aspects of marine policy. It needs to be a clear framework that will guide and enable the delivery of social, economic and environmental benefits through the marine planning process and marine licensing decisions.

One of the aims of the new marine planning system is to ensure that coastal areas, the activities within them and the problems faced are managed in an integrated and holistic way. As such, the MPS reflects that integration. This includes close interaction with town and country planning regimes and, in England and Wales, the new regime for Nationally Significant Infrastructure Projects (NSIPs) in key sectors, such as energy and transport.

The draft Marine Policy Statement is accompanied by a supporting Appraisal of Sustainability (including a Strategic Environmental Assessment), a Habitats Regulations Assessment, an Equalities Impact Assessment Screening report and an Impact Assessment. All of these documents fall within the scope of this consultation. **This consultation document contains the draft Marine Policy Statement, the Non Technical Summary of the Appraisal of Sustainability and the Impact Assessment.** These documents, together with a full copy of the Appraisal of Sustainability report, the Habitats Regulations Assessment and Equality Impact Assessment Screening report, can be found at www.defra.gov.uk/corporate/consult/marine-policy/index.htm

The following sections briefly summarise what you can expect to find in each of the documents within this consultation. It includes specific questions we would like you to consider when providing your consultation response.

Summary of the MPS and Supporting Documents

The Marine Policy Statement

The draft Marine Policy Statement (MPS) is the framework for preparing marine plans and taking decisions affecting the marine area. It sets out the sectoral/activity specific policy objectives the UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive are seeking to achieve in the UK marine area in securing the UK vision of clean, healthy, safe, productive and biologically diverse oceans and seas. The process of marine planning will integrate delivery of these objectives, and contribute to the sustainable development of the UK marine area.

The MPS will be used, and referred to, by a wide range of public authorities (including planning authorities) as well as developers and other users of the marine area. The Marine and Coastal Access Act 2009 requires all public authorities taking authorisation or enforcement decisions that affect or might affect the UK marine area to do so in accordance with the MPS and relevant Marine Plans unless relevant considerations indicate otherwise. Public authorities taking decisions that affect or might affect the UK marine area which are not authorisation or enforcement decisions must have regard to the MPS and relevant Marine Plans.

The MPS sets out the high-level approach to marine planning and principles for decision making that will contribute to achieving the UK vision for the marine environment. It sets out the general environmental, social and economic

considerations that need to be taken into account in marine planning. It also provides guidance on the pressures and impacts which decision makers will need to consider when planning for, and permitting development in, the UK marine area.

The MPS and Marine Plans will form a new plan-led system for marine activities. They will provide for greater coherence in policy, and a forward-looking, proactive and spatial planning approach to the management of the UK marine area, its resources and the activities that take place within it.

Marine Plans will set out how the MPS will be implemented in specific areas. Under the Marine and Coastal Access Act 2009 and the Marine (Scotland) Act 2010, Marine Plans must be made in conformity with an agreed MPS unless relevant considerations indicate otherwise. Marine Plans will provide policy and spatial guidance for an area and help ensure that decisions within a plan area contribute to the delivery of UK, national and any area specific policy objectives. The MPS will help ensure an appropriate level of consistency in marine planning at UK level, and contribute to a more streamlined decision making process.

The MPS and marine planning systems will sit alongside and interact with existing planning regimes across the UK. These include town and country planning and other legislation, guidance and development plans in each Administration. Marine policy guidance and plans will seek to

complement existing terrestrial policies and plans for coastal and estuarine areas, recognising that both systems may adapt and evolve over time¹.

The MPS is structured as follows:

- The **Introduction** sets out the purpose, scope and structure of the MPS.
- **Chapter 1** sets out the role of the MPS within the wider marine planning system and its interaction with existing planning regimes.
- **Chapter 2** outlines the vision for the UK marine area, the high-level approach to marine planning and general principles for decision making that will contribute to achieving this vision. It also sets out the strategic environmental, social and economic considerations that need to be taken into account in marine planning.
- **Chapter 3** sets out the policy objectives for the key activities that take place in the marine environment. These objectives are the outcomes which the UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive are seeking to achieve through the sustainable development of the UK marine area. They will be delivered through the marine planning and decision making approaches outlined in Chapter 2. Marine Plans should align with, and contribute to the delivery of these objectives. This chapter also provides guidance on the pressures and impacts associated with these activities, which will need to be considered when planning for

and permitting development in the UK marine area.

We are not asking for comment on the content of the policy objectives in Chapter 3, as they reflect existing policies developed through separate consultation processes. However we would welcome views on additional detail or policy areas that might be included for clarity.

As you review the draft MPS please consider the following questions.

Consultation questions:

Does chapter 1 clearly explain the purpose and scope of the MPS and how it interacts with existing and emerging planning systems?

Does chapter 2 clearly state the vision and how it will be achieved? Are the high-level principles and environmental, social and economic considerations to be taken into account in marine planning clearly expressed?

Does chapter 3 provide a clear statement of policy objectives for the marine environment? Are the key impacts, pressures and issues for consideration in marine planning appropriately identified?

1. The UK Government has announced proposals to reform the terrestrial planning system in England and Wales in respect of the National Planning Policy Framework and planning for major infrastructure. In Scotland the second National Planning Framework under the Planning (Scotland) Act 2006 sets out a number of national development priorities to support the Scottish Government's central purpose of sustainable economic growth.

The Appraisal of Sustainability including Strategic Environmental Assessment

As required by the Marine and Coastal Access Act 2009, an Appraisal of Sustainability (AoS) has been undertaken on the MPS during its development. This has incorporated the requirements of the Strategic Environmental Assessment Directive² (the SEA Directive). The AoS considered social and economic issues, as well as the potential environmental impacts required by the Directive, ensuring coverage of a wide range of sustainability issues.

The AoS has informed the drafting of the MPS, and the AoS report should be read alongside the draft MPS. A Non Technical Summary has also been prepared. An explanation of the AoS process can be found at section 3 of the Non Technical Summary.

In line with the requirements of the SEA Directive, the AoS has appraised the likely significant effects of reasonable alternatives to the MPS. It has appraised the draft MPS and its alternatives against a set of 15 AoS objectives and guide questions (the AoS framework). The framework covers all the topics required by the SEA Directive, and reflects the principles of sustainable development.

The AoS considered two aspects for each of the topics. Firstly, whether the activities in the MPS support the objectives set out in the AoS framework. It proposed additional policy wording to enhance the sustainability of the MPS throughout the AoS process. Secondly,

it considered how environmental, social and economic conditions would change under the MPS compared with the situation under a 'business as usual' scenario (without the MPS and with a continuation of current policy). It considered how any potential negative impacts could be minimised.

The AoS found that the MPS supports achievement of the AoS objectives and is not expected to result in significant change to existing conditions. It recognises that Marine Plans will provide opportunities for further consideration of more detailed sustainability issues.

Consultation questions:

Do you agree with the findings of the AoS?

Do you think there are any areas in the AoS which have not been reflected properly in the MPS?

Do you have any comments on any aspect of the AoS not covered by the previous questions?

2. The SEA Directive is formally known as Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the Assessment of the effects of certain plans and programmes on the environment.

Habitats Regulations Assessment

In tandem with the AoS process, a Habitats Regulations Assessment (HRA) was conducted in accordance with the requirements of the Habitats Directive³ to determine whether the MPS could have significant effects on sites of European nature conservation significance. The HRA process was separate from the AoS process for the MPS.

Due to the strategic nature of the draft MPS, the HRA has only been able to identify high level impacts. As it is not possible to exclude the possibility that the integrity of one or more European Sites could be adversely affected by activities identified in the draft MPS, an assessment of alternative solutions and Imperative Reasons of Overriding Public Interest (IROPI) has been undertaken.

HRAs will be carried out for individual Marine Plans and individual projects as appropriate. It is at this stage that it will be more appropriate to assess the impacts upon individual European Sites (and, most importantly, their qualifying habitats and species).

Consultation question:

Do you have any comments on the HRA?

3. The Habitats Directive is formally known as Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora.

Equalities Impact Assessment Screening Report

An Equalities Impact Assessment (EqIA) screening was carried out to identify any areas in the draft MPS which may give rise to equalities impacts in the areas of gender, race, disability, age, sexual orientation, religion, belief or the Welsh Language. The aim was to examine if the draft MPS can cause potential discrimination and determine if a full assessment is needed to identify ways to mitigate any negative impacts.

This concluded that the MPS would not discriminate against any sections of society and that it supports provisions in equalities legislation and the Welsh Assembly Government's Welsh Language Scheme. Therefore, a full EqIA is not required.

Each Marine Plan will be subject to an EqIA.

Consultation question:

Do you have any comments on the EqIA screening?

The Impact Assessment

The role of the Impact Assessment (IA) is to analyse the costs and benefits of proposed Government interventions to business, the public sector and the third sector (voluntary organisations). The current framework of domestic and international legislation used to manage our seas is complex and this can complicate decision making in the marine environment. The IA explores the costs and benefits of introducing the MPS and enabling marine planning to help the UK Administrations achieve sustainable development of the UK marine area.

The specific aims of the IA carried out on the draft MPS were to:

- Test the evidence for why an MPS is needed;
- Assess the costs and benefits of having an MPS, and show where costs can be reduced and benefits increased;
- Demonstrate whether the MPS will achieve the desired objectives; and
- Provide transparency in the decision-making process.

The IA considered two options:

Option 1 provides the baseline (or 'do nothing') option which outlines the impact of implementing a marine planning system without adopting a UK MPS.

Option 2 considers the costs and benefits of introducing the MPS and having it as a document that integrates existing policies and that sets out how decision makers should approach the difficult choices that will need to be made to achieve sustainable development in the UK marine area.

The IA does not include the substantive impacts of the implementation of marine planning; rather, it focuses on the impacts of having a supporting document which brings policies into a single framework.

For option 2, costs and benefits have been assessed, as well as the impact on business, government, the environment, other marine users and the public. In addition to these, social, economic and environmental impacts were considered.

The analysis and evidence presented in the IA suggests that there are relatively small resource implications in developing the MPS. It also sets out the benefits to government, business and other marine users provided by a coherent explanation of government policy. It states that the MPS provides clarity and enables the consistent management of UK marine resources through marine planning. It recognises that further costs and benefits may be identified by each Administration, should they produce impact assessments on implementing marine planning systems.

Consultation question:

Do you have any comments on the IA and does it fairly represent the draft MPS?

If you wish to supply evidence which you believe would improve the IA this will be taken into account in any revisions.

Purpose of this consultation

Our aim is to ensure that the draft MPS provides an appropriate framework for marine planning and for taking decisions that affect the marine environment.

This consultation seeks your views on the draft MPS and its supporting documents. As indicated above, the supporting documents are the AoS (which includes an SEA), an HRA, an EqIA Screening report and an Impact Assessment. The Marine Plans, which will give the MPS spatial detail, will also each be subject to an SEA, HRA and EqIA where appropriate.

How to respond to this consultation

Consultation responses should be sent to mps@defra.gsi.gov.uk If you wish to copy your response to the relevant Administration, the contact details are:

England: mps@defra.gsi.gov.uk

Wales: marine@wales.gsi.gov.uk

Scotland: marineconsultation@scotland.gsi.gov.uk

Northern Ireland: marineteam@doeni.gov.uk

Responses need to be received by 13 October 2010.

Hard copy replies should be sent to:

England:

Defra
Marine Policy Statement team
Area 2C Nobel House
London SW1P 3JR

Wales:

Marine Branch
Welsh Assembly Government
Cathays Park
Cardiff
CF10 3NQ

Scotland:

Marine Planning and Policy Division
Area 1A (South)
Victoria Quay
Edinburgh EH6 6QQ

Northern Ireland:

Marine Policy Team (PNRD)
Department of the Environment
Calvert House
23 Castle Place
Belfast BT1 1FY

Summary of consultation questions

1. *Does chapter 1 clearly explain the purpose and scope of the MPS and how it interacts with existing and emerging planning systems?*
2. *Does chapter 2 clearly state the vision and how it will be achieved? Are the high-level principles and environmental, social and economic considerations to be taken into account in marine planning clearly expressed?*
3. *Does chapter 3 provide a clear statement of policy objectives for the marine environment? Are the key impacts, pressures and issues for consideration in marine planning appropriately identified?*
4. *Do you agree with the findings of the AoS?*
5. *Do you think there are any areas in the AoS which have not been reflected properly in the MPS?*
6. *Do you have any comments on any aspect of the AoS not covered by the previous questions?*
7. *Do you have any comments on the HRA?*
8. *Do you have any comments on the EqIA screening?*
9. *Do you have any comments on the IA and does it fairly represent the draft MPS?*

Draft UK Marine Policy Statement

HM Government
Northern Ireland Executive

Scottish Government
Welsh Assembly Government



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List of Abbreviations

Air Quality Management Areas (AQMAS)	Marine Protected Areas (MPAs)
Appraisal of Sustainability (AoS)	Ministry of Defence (MoD)
Areas of Outstanding Natural Beauty (AONBs)	National Electricity System Operator (NETSO)
Areas of Special Scientific Interest (ASSI)	National Policy Statement (NPS)
Cabinet Office Briefing room (COBR)	Nationally Significant Infrastructure Projects (NSIPs)
Carbon Capture Ready (CCR)	Offshore Development Information Statement (ODIS)
Carbon Capture and Storage (CCS)	Office of the Deputy Prime Minister (ODPM)
Coastal Impact Study (CIS)	Overarching National Policy Statement for Energy (EN1)
Common Fisheries Policy (CFP)	Water Framework Directive (WFD)
Department of Communities and Local government (DCLG)	World Association for Waterborne Transport Infrastructure (PIANC)
Department of Enterprise, Trade and Investment (DETI – Northern Ireland)	Potential Special Protection Areas (pSPAs)
Environmental Impact Assessment (EIA)	Sites of Special Scientific Interest (SSSIs)
Environmental Permitting (EP)	Special Protection Areas (SPAs)
Equality Impact Assessment (EqIA)	Strategic Energy Framework (SEF)
European Landscape Convention (ELC)	Strategic Environmental Assessment (SEA)
European Union (EU)	System Operator for Northern Ireland (SONI)
Habitats Regulations Assessment (HRA)	United Kingdom Cable Protection Committee (UKCPC)
Integrated Coastal Zone Management (ICZM)	UK Marine Monitoring and Assessment Strategy (UKMMAS)
Imperative Reasons of Overriding Public Interest (IROPI)	United Kingdom (UK)
Impact Assessment (IA)	
Inshore Fisheries and Conservation Authorities (IFCAs)	
Liquid Natural Gas (LNG)	
Low Carbon Energy Statement (LCES)	
Marine Climate Change Impacts Partnership (MCCIP)	
Marine Conservation Zones (MCZs)	
Marine Policy Statement (MPS)	
Marine Strategy Framework Directive (MSFD)	

Introduction

This Marine Policy Statement (MPS) is the framework for preparing Marine Plans and taking decisions affecting the marine environment. It will contribute to the achievement of sustainable development in the United Kingdom marine area⁴.

The UK Administrations (UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive) are working towards joint adoption of the MPS. This will be a key step towards achieving the vision shared by the UK administrations of having **'clean, healthy, safe, productive and biologically diverse oceans and seas'**⁵.

The MPS will facilitate and support the formulation of Marine Plans, ensuring that marine resources are used in a sustainable way and thereby:

- Promote sustainable economic development;
- Enable the UK's move towards a low-carbon economy, in order to mitigate the causes of climate change⁶ and ocean acidification, and adapt to their effects;

- Ensure a sustainable marine environment which promotes healthy, functioning marine ecosystems and protects marine habitats, species and our most important heritage assets; and
- Contribute to the societal benefits of the marine area, including the sustainable use of marine resources to address local social and economic issues.

New marine planning systems for the UK

Across the UK new systems of marine planning are being introduced through primary legislation⁷. The MPS is the framework for these marine planning systems. It provides the high level policy context within which national and sub-national Marine Plans will be developed and will ensure appropriate consistency in marine planning across the UK marine area. The MPS also sets the direction for marine licensing and other relevant authorisation systems. The process of marine planning will:

- Achieve integration between different objectives;

4. The "UK marine area" includes the territorial seas and offshore area adjacent to the UK, which includes the area of sea designated as the UK Exclusive Economic Zone (the Renewable Energy Zone until the Exclusive Economic Zone comes into force) and the UK sector of the continental shelf. It includes any area submerged by seawater at mean high water spring tide, as well as the tidal extent (at mean high water spring tide) of rivers, estuaries and creeks. See Marine and Coastal Access Act 2009 S42 (3) and (4).

5. *Safeguarding our Seas* report (2002) www.defra.gov.uk/environment/marine/documents/marine_stewardship.pdf

6. Stemming from the Climate Change Act 2008 and the Climate Change (Scotland) Act 2009; as implemented through the UK Low Carbon Transition Plan www.decc.gov.uk/assets/decc/White%20Papers/UK%20Low%20Carbon%20Transition%20Plan%20WP09/1_20090724153238_e_@_lowcarbontransitionplan.pdf

See also the Scottish discussion paper at www.scotland.gov.uk/Publications/2010/03/22110408/0

7. Marine and Coastal Access Act 2009; the Marine (Scotland) Act 2010; and the Northern Ireland Marine Bill

- Recognise that the demand for use of our seas, and the resulting pressures on them, will continue to increase;
- Manage competing demands on the marine area, taking an ecosystem-based approach⁸;
- Enable the co-existence of compatible activities wherever possible; and
- Integrate with terrestrial planning.

Scope of the MPS

The Marine and Coastal Access Act 2009 requires all public authorities taking authorisation or enforcement decisions⁹ that affect or might affect the UK marine area to do so *in accordance* with the MPS and relevant Marine Plans unless relevant considerations indicate otherwise. This includes the conditions attached to authorisations, and the enforcement action that will be taken to ensure compliance. Where the decision is not taken in accordance with the MPS and relevant Marine Plans, the public authority must state its reasons. Public authorities taking decisions that affect or might affect the UK marine area which are not authorisation or enforcement decisions (for example decisions about what representations they should make as a consultee or about what action they should carry out themselves) must *have regard* to the MPS and relevant Marine Plans.

8. A practical interpretation of the ecosystem approach is set out in regulation 5 of the draft regulations transposing the Marine Strategy Framework Directive. An ecosystem based approach to the management of human activities means an approach which ensures that the collective pressure of human activities is kept within the levels compatible with the achievement of good environmental status; that does not compromise the capacity of marine ecosystems to respond to human-induced changes; and that enables the sustainable use of marine goods and services.

9. Excepting decisions on applications for an order granting development consent under the Planning Act 2008.

10. See S 44 (4) of the Marine and Coastal Access Act 2009 for details of the authorities.

The interrelationship between marine and terrestrial planning regimes is discussed in more detail in Chapter 1. However it should be noted that in many cases the policies reflected in this MPS are already taken into account in the terrestrial planning system and other consenting regimes which affect or might affect the marine area. If appropriate, further guidance on how these regimes will need to take account of the MPS as part of the marine planning system will be provided by each Administration.

Review and withdrawal process

The MPS will remain in place until it is withdrawn, amended or replaced. As set out in the Marine and Coastal Access Act 2009, it will be reviewed as and when the relevant policy authorities (the Secretary of State in conjunction with devolved authorities¹⁰) consider it appropriate to do so.

When considering whether to review the MPS, the policy authorities will take account of whether there has been a significant change in the evidence underpinning the policies set out in the MPS, whether relevant new policies have been introduced that need to be reflected in the MPS, and whether the policy objectives in the MPS need to be amended. This process will also be informed by monitoring and implementation of the marine planning system.

It is possible for any Administration to withdraw from the MPS by notifying the other policy

authorities and then publishing a notice that the withdrawal has taken place¹¹. Should the Scottish Government, Welsh Assembly Government or the Department of the Environment in Northern Ireland withdraw from the MPS then the MPS would cease to have any further effect on decisions which relate to matters within their competence, although withdrawing from the MPS would mean that marine plans developed by these Administrations after withdrawal would not be relevant in respect of the exercise of retained functions in their Marine Plan. Should the Secretary of State withdraw from the MPS then the MPS is withdrawn in full, and it ceases to have effect. The review or withdrawal of the MPS does not change the effect or validity of any existing Marine Plans which have been prepared in conformity with the MPS.

Appraisal of Sustainability

The MPS has been subject to, and informed by, an Appraisal of Sustainability (AoS). This incorporates the requirements for a Strategic Environmental Assessment¹² (SEA). The AoS identifies and assesses alternatives to the MPS, indicating those that are not considered feasible as they would not deliver sustainable development effectively. The AoS sets out the consideration of each alternative in more detail.

The AoS has assessed the MPS and its alternatives against a set of sustainability objectives. These objectives cover all the individual topics required by the Strategic Environmental Assessment Directive and reflect

sustainable development principles. The AoS concludes that the MPS supports achievement of all the sustainability objectives for all the individual topic areas.

The AoS recognises that the MPS forms part of a wider marine planning system within which detailed and area-specific Marine Plans will be developed. These are likely to provide opportunities in the future for further consideration of more detailed sustainability issues.

The AoS contains suggestions to strengthen and enhance the sustainability performance of the MPS but recognises that some of these may only be appropriate at the more detailed stages of plan-making and project development.

A Habitats Regulations Assessment (HRA) and an Equalities Impact Assessment (EqIA) screening have also been carried out.

The Habitats Regulations Assessment considered the potential effects on sites of European nature conservation significance of implementing the MPS. It reflects the strategic, high level nature of the MPS and so has identified high level impacts only. It concluded that at this stage it is not possible to exclude the possibility that the integrity of one or more European sites could be adversely affected by activities identified in the MPS. For this reason an assessment of alternative solutions and Imperative Reasons of Overriding Public Interest (IROPI) has been undertaken. All marine plans and projects carried out in accordance with the MPS will be subject to the

11. S48 of the Marine and Coastal Access Act 2009.

12. In accordance with EU Strategic Environmental Assessment (SEA) Directive the marine plan authorities will be required to undertake SEAs to inform their Marine Plans (see section 2.4).

appropriate assessment procedure. If they adversely affect the integrity of European sites, issues relating to IROPI, site integrity and compensation will be addressed in accordance with European Commission Guidance.

The Equality Impact Assessment (EqIA) screening exercise was carried out on the MPS to identify any areas of the MPS which may impact on gender, race, disability, age, sexual orientation, religion or belief. This exercise concluded that the MPS would not discriminate against any sections of society and it therefore supports the provisions in equalities legislation and the Welsh Assembly Government's Welsh Language Scheme. It therefore concluded that there is no requirement for a full Equality Impact Assessment.

Structure of the MPS

The MPS is structured as follows:

- **Chapter 1** sets out the role of the MPS within the wider marine planning system and its interaction with existing planning regimes.
- **Chapter 2** outlines the vision for the UK marine area, the high-level approach to marine planning and principles for decision making that will contribute to achieving this vision. It also sets out the general environmental, social and economic considerations that need to be taken into account in marine planning.

- **Chapter 3** sets out the policy objectives for the key activities that take place in the marine environment. These objectives are the outcomes the UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive are seeking to achieve through the sustainable development of the UK marine area. They will be delivered through the marine planning and decision making approaches outlined in Chapter 2. Marine Plans should align with, and contribute to the delivery of these objectives. It also provides guidance on the pressures and impacts associated with these activities, which decision makers will need to consider when planning for and permitting development in the UK marine area.

Chapter 1

This chapter sets out the role of the MPS within the wider marine planning system and its interaction with existing planning regimes.

1.1 Marine Plans

The MPS and Marine Plans form a new plan-led system for marine activities. They will provide for greater coherence in policy, and a forward-looking, proactive and spatial planning approach to the management of the marine area, its resources, and the activities and interactions that take place within it. Marine Plans will be prepared and adopted in accordance with the relevant legislation. If appropriate, an Administration will provide guidance on the content, structure, context for and preparation of Marine Plans.

When the MPS is adopted the Marine and Coastal Access Act 2009 will place a duty on marine plan authorities to seek to ensure that Marine Plans are prepared for all parts of regions where the MPS governs marine planning¹³. The marine plan authorities responsible for developing Marine Plans are the Secretary of State for the English inshore and offshore regions, Scottish Ministers for the Scottish offshore region, Welsh Ministers for the Welsh

inshore and offshore regions and the Department of the Environment in Northern Ireland for the Northern Ireland offshore region. The Scottish inshore is covered, and the Northern Ireland inshore region will be covered, by respective Scottish and Northern Ireland legislation¹⁴. As set out in the Marine and Coastal Access Act 2009, Marine Plans developed within the devolved administrations will influence the exercise of relevant retained functions¹⁵ when this Marine Policy Statement is in effect, and with the agreement of the Secretary of State. Each of the UK Administrations will also continue to exercise functions affecting the marine environment in accordance with the current devolution settlements.

Marine Plans will set out how the MPS will be implemented in specific areas. They will provide detailed policy and spatial guidance for an area and help ensure that decisions within a plan area contribute to delivery of UK, national and any area specific policy objectives¹⁶. The MPS does not provide specific guidance on every activity which will take place in, or otherwise affect, UK waters. The MPS provides a framework for development of Marine Plans to ensure consistency, including in decision making where required. It identifies those activities to which a degree of priority is expected to be given in

13. Marine and Coastal Access Act 2009 – Section 51(2).

14. Planning for the offshore area in Scotland has a different legislative base to the inshore area. It is intended to bring the Marine Plans developed under the different legislation together in one document. A similar approach will be taken in Northern Ireland. The Welsh Assembly Government will consult on the approach in Wales.

15. Being those functions which affect or might affect the whole or any part of UK marine area, as set out in section 58 of the Marine and Coastal Access Act 2009

16. In Scotland, a national Marine Plan will be developed which will be in accordance with the MPS and which Scottish regional plans must also comply with, unless relevant considerations indicate otherwise.

marine planning, but does not state which activities should be prioritised over any others. Relative priorities will be most appropriately determined through the marine planning process, taking into account a wide range of factors alongside UK policy objectives, including the specific characteristic of the individual marine plan area.

1.2 Cross border planning

The UK Administrations are committed to the coordination of marine planning across administrative boundaries¹⁷, and have made it a requirement of their respective legislation. Coordination will include planning for activities which extend across national or Marine Plan area boundaries, the sharing of data, and the timing of the development of Marine Plans for any area.

This will be facilitated by the UK-wide marine evidence base collected through monitoring programmes under the UK Marine Monitoring and Assessment Strategy (UKMMAS) community and its reports on the state of the UK seas. For example, "Charting Progress 2" to be published in July 2010, will provide a comprehensive assessment of how clean, safe, healthy, biologically diverse and productive the UK seas are, on the basis of the eight biogeographical areas into which UK seas have been divided. Furthermore, the UK Marine Science Co-ordination Committee, under which UKMMAS sits, provides a platform for addressing the research necessary to fill gaps in knowledge about how both natural and

anthropogenic pressures impact on marine ecosystems and how they function.

Coordination will also be needed with other Member States and countries sharing the same regional seas, including the Republic of Ireland with which the UK shares a land and sea boundary¹⁸.

1.3 Integration with terrestrial planning regimes

The MPS and marine planning systems will sit alongside and interact with existing planning regimes across the UK. These include town and country planning and other legislation, guidance and development plans in each Administration. In England and Wales this also includes the development consent order regime for nationally significant infrastructure projects (NSIPs). In Scotland the second National Planning Framework¹⁹ under the Planning (Scotland) Act 2006 sets out a number of national development priorities to support the Scottish Government's central purpose of sustainable economic growth²⁰. In Northern Ireland the Regional Development Strategy and Planning Policy Statements are the key planning documents which set the policy framework for terrestrial planning decisions.

In England and Wales, consents for nationally significant infrastructure projects, including the larger offshore renewable energy and port developments, need to be determined in accordance with the Planning Act 2008. Where

17. The UK marine plan authorities are committed to cross border co-operation; in particular in the Solway Firth, Severn and Dee estuaries

18. Other countries include the Faroe Islands, Norway, Denmark, Germany, Netherlands, Belgium and France.

19. www.scotland.gov.uk/Publications/2008/12/12093953/0 – this includes references to national developments relating to ports and harbours and onshore and offshore (sub-sea) grid transmission capacity to realise and deliver renewable energy.

20. The Scottish Government's Economic Strategy can be found at www.scotland.gov.uk/Publications/2007/11/12115041/0

a relevant National Policy Statement (NPS) has been designated, nationally significant infrastructure project applications must be decided in accordance with the NPS, subject to certain exceptions, and having regard to the Marine Policy Statement; in other circumstances, the decision is for the Secretary of State. The marine plan authorities in England and Wales should have regard to any relevant National Policy Statement in developing Marine Plans, and in advising other bodies.

The Marine and Coastal Access Act 2009 and the Marine (Scotland) Act 2010 require the marine plan authority to notify local planning authorities of its intention to prepare a Marine Plan, whose area of jurisdiction adjoins (or under the Marine and Coastal Access Act 2009, is adjacent to) the Marine Plan area²¹. As the Marine Plan area boundaries will extend up to the level of mean high water spring tides while terrestrial planning boundaries generally extend to mean low water spring tides, the Marine Plan area will physically overlap with that of terrestrial plans. This overlap ensures that marine and land planning will address the whole of the marine and terrestrial environments respectively, and not be restricted by an artificial boundary at the coast. The geographic overlap between the Marine Plan and existing plans will help organisations to work effectively together and ensure that appropriate harmonisation of plans is achieved²².

Integration of marine and terrestrial planning will be achieved through:

- Consistency between marine and terrestrial policy documents and guidance. Terrestrial planning policy and development plan documents already include policies addressing coastal and estuarine planning. Marine policy guidance and plans will seek to complement rather than replace these, recognising that both systems may adapt and evolve over time;
- Liaison between respective responsible authorities for terrestrial and marine planning, including in plan development, implementation and review stages. This will help ensure, for example, that developments in the marine environment are supported by the appropriate infrastructure on land and reflected in terrestrial development plans, and vice versa; and
- Sharing the evidence base and data where relevant and appropriate so as to achieve consistency in the data used in plan making and decisions.

Activities taking place on land and in the sea can have impacts on both terrestrial and marine environments. The coast and estuaries are highly valued environments, as well as socio-economic assets. The UK Administrations are committed to ensuring that coastal areas, and the activities taking place within them, are managed in an integrated and holistic way in line with the principles of Integrated Coastal Zone Management (ICZM)²³.

21. As set out in Schedule 6 of the Marine and Coastal Access Act 2009 and Schedule 1 of the Marine (Scotland) Act 2010.

22. In preparing a Marine Plan in the English and Welsh inshore regions, a marine plan authority must take all reasonable steps to secure that the Marine Plan is compatible with the relevant Planning Act plan (as defined under the Marine and Coastal Access Act 2009) for any area in England, Wales or Scotland which is related to the Marine Plan area. See also Schedule 1 of the Marine (Scotland) Act 2010 in relation to Scottish regional Marine Plans.

23. The EU ICZM Recommendation. See www.eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:148:0024:0027:EN:PDF

Chapter 2

This chapter outlines the vision for the UK marine area, the high-level approach to marine planning and general principles for decision making that will contribute to achieving this vision. It also sets out the strategic environmental, social and economic considerations that need to be taken into account in marine planning.

2.1 UK vision for the marine environment

The UK vision for the marine environment is for 'clean, healthy, safe, productive and biologically diverse oceans and seas'. The UK high level marine objectives published in April 2009 set out the broad outcomes for the marine area in achieving this vision, and reflect the principles for sustainable development (see Box 1). The process of marine planning will integrate delivery of the high level marine objectives alongside the achievement of sectoral/ activity specific policy objectives. This approach will help ensure the sustainable development of the UK marine area and deliver the UK vision.

2.2 Achieving the vision through marine planning

Marine Plans will formulate and present outcomes for a marine plan area. These outcomes will be consistent with the MPS, and be supported and informed by evidence specific to the plan area. Marine Plans will set out how marine resources can best be managed in order to achieve the Plan outcomes, policies and objectives. Marine Plans will provide a clear, spatial and locally-relevant expression of policy, implementation and delivery. They will ensure that different and potentially competing activities are managed in such a way that they contribute to the achievement of sustainable development. An overriding principle will be to promote compatibility and reduce conflict. Monitoring of implementation will ensure that activities within a Marine Plan area contribute to the delivery of the MPS, as well as its future revisions.

Not all of the policies in the MPS will be applicable to each Marine Plan. Nor will all activities occurring in, or policies relevant to, a marine plan area be considered by the MPS. Similarly, while the MPS sets out the UK objectives for our marine resources within each Administration the role that different sectors will play in contributing to sustainable development will vary²⁴.

24. Plans made under the Marine (Scotland) Act 2010 must include specific objectives as set out in section 5(4) of that Act.

Box 1: The high level marine objectives**Achieving a sustainable marine economy**

- Infrastructure is in place to support and promote safe, profitable and efficient marine businesses.
- The marine environment and its resources are used to maximise sustainable activity, prosperity and opportunities for all, now and in the future.
- Marine businesses are taking long-term strategic decisions and managing risks effectively. They are competitive and operating efficiently.
- Marine businesses are acting in a way which respects environmental limits and is socially responsible. This is rewarded in the marketplace.

Ensuring a strong, healthy and just society

- People appreciate the diversity of the marine environment, its seascapes, its natural and cultural heritage and its resources and act responsibly.
- The use of the marine environment is benefiting society as a whole, contributing to resilient and cohesive communities that can adapt to coastal erosion and flood risk, as well as contributing to physical and mental wellbeing.
- The coast, seas, oceans and their resources are safe to use.
- The marine environment plays an important role in mitigating climate change.
- There is equitable access for those who want to use and enjoy the coast, seas and their wide range of resources and assets and recognition that for some island and peripheral communities the sea plays a significant role in their community.
- Use of the marine environment will recognise, and integrate with, defence priorities, including the strengthening of international peace and stability and the defence of the UK and its interests.

Living within environmental limits

- Biodiversity is protected, conserved and where appropriate recovered and loss has been halted.
- Healthy marine and coastal habitats occur across their natural range and are able to support strong, biodiverse biological communities and the functioning of healthy, resilient and adaptable marine ecosystems.
- Our oceans support viable populations of representative, rare, vulnerable, and valued species.

Promoting good governance

- All those who have a stake in the marine environment have an input into associated decision-making.
- Marine, land and water management mechanisms are responsive and work effectively together, for example through integrated coastal zone management and river basin management plans.
- Marine management in the UK takes account of different management systems that are in place because of administrative, political or international boundaries.
- Marine businesses are subject to clear, timely, proportionate and, where appropriate, plan-led regulation.
- The use of the marine environment is spatially planned where appropriate and based on an ecosystems approach which takes account of climate change and recognises the protection and management needs of marine cultural heritage according to its significance.

Using sound science responsibly

- Our understanding of the marine environment continues to develop through new scientific and socio-economic research and data collection.
- Sound evidence and monitoring underpins effective marine management and policy development.
- The precautionary principle is applied consistently in accordance with the UK Government and devolved administrations' sustainable development policy.

2.3 High level approach to marine planning

In developing Marine Plans the process needs to be:

- Conducted in a manner that is consistent with statutory requirements under UK and EU legislation and our obligations under international law;
- Conducted in a way that achieves the relevant UK Administrations' policy objectives affecting the marine area (as set out in Chapter 3);
- Carried out with regard to other relevant projects, programmes, plans and national policies and guidance;
- Based on an ecosystem approach²⁵;
- Participative and informed by data provided by consultees, stakeholders, regulators and relevant experts;
- Streamlined and efficient, for example making effective use of existing data and management arrangements where appropriate; and
- Sufficiently forward looking and flexible to anticipate, and accommodate, a range of

future demands and scenarios, including innovation and the best use of available technologies and techniques.

Marine Plans will be based on a sound evidence base. This will identify issues to be addressed in the plan and inform plan development. The evidence base will be developed from a wide range of sources including existing plans, the plan area community, science advisors, statutory and other advisors, industry and other marine users. Where evidence is inconclusive, decision makers need to apply precaution within an overall risk-based approach, in accordance with the sustainable development policies of the UK Administrations.

In developing, monitoring and implementing a Marine Plan, the marine plan authority will work with a wide range of planning and regulatory organisations with direct and indirect involvement in marine planning, at national level and/or for individual Marine Plan areas. This will include the existing work of the terrestrial planning community, complemented by the role of the marine plan authority; in particular in relation to Integrated Coastal Zone Management (ICZM). In addition, marine plan authorities and decision makers should liaise, as appropriate, with those responsible for responding to marine emergencies to ensure that Marine Plans do not

²⁵. See footnote 8

inhibit or unknowingly alter an emergency response plan, and to ensure that risks can continue to be managed in a proportionate way.

The rest of this chapter sets out some key considerations that marine plan authorities should take into account when preparing the required assessments as part of the marine planning and decision making processes. It includes information on the environmental factors to be considered (as set out in the relevant legislation), as well as social and economic considerations. It is not an exhaustive list of all possible considerations and effects; there may be other issues to be taken into account within any Marine Plan, in particular the socio-economic factors that are specific to that area. Many of the general considerations addressed below are devolved policies (for example coastal change and seascape). The aim in the MPS is to set out existing UK and EU requirements in relation to these important issues for marine planning, while also recognising that each Administration has responsibility for policies and processes which may go further.

Marine Plans should reflect and address, so far as possible, the range of activities occurring in, and placing demands on, the plan area. The Marine Plan should identify areas of constraint and locations where a range of activities may be accommodated. This will reduce real and potential conflict, maximise compatibility between marine activities and encourage co-existence of multiple uses. Should conflicts arise, the marine plan authority in reaching a decision must balance economic, social and

environmental considerations in conformity with the MPS and draw on other considerations or supplementary guidance where appropriate. Marine Plans should provide for continued, as well as new, uses and developments in appropriate locations. They should identify how the potential impacts of activities will be managed, including cumulative effects. Close working across plan boundaries will enable the marine plan authority to take account of the cumulative effects of activities at plan boundaries.

Decision making

Enforcement or authorisation decisions must be made in accordance with the relevant marine policy documents²⁶ unless relevant considerations (e.g. advances in scientific knowledge and technology) indicate otherwise. This means that decisions on activities in the UK marine area will be plan led once Marine Plans are in place. In the interim, decisions must be made in accordance with the MPS. In either case, the same approach will apply and the decision maker should weigh the potential benefits and adverse effects of each proposal, drawing on different, identifiable lines of evidence to consider the different impacts of a proposal. When considering potential benefits and adverse effects, decision makers should also take into account any multiple and cumulative impacts of proposals, in the light of other projects and activities. The level of assessment undertaken for any project should be proportionate to the scale and impact of the project as well as the sensitivity of the environment concerned and in accordance with the Environmental Impact

26. See S 62 of Marine and Coastal Access Act 2009 and s15 of the Marine (Scotland) Act 2010

Assessment (EIA) Directive (Directive 85/337/EEC) where applicable²⁷. An Appropriate Assessment in accordance with the Habitats Directive²⁸ (Directive 92/43/EC) may also be required, in accordance with relevant national legislation and Government circulars or guidance.

There are a number of principles that should also be taken into account, specifically that decisions should:

- Be based on the detailed information and advice in the relevant marine policy documents in the respective Administrations;
- Be conducted in a manner that meets statutory requirements under UK and EU legislation and is consistent with our obligations under international law;
- Be conducted in a way that takes into account all of the relevant UK Administrations' policy objectives affecting the marine area;
- Be conducted in a manner that takes account of other relevant projects, programmes, plans and national policies²⁹ and guidance;
- Be taken after appropriate liaison with terrestrial planning authorities and other regulators, and in consultation with statutory and other advisors when appropriate;
- Be streamlined where possible, making effective use of existing data;
- Be taken using a risk-based approach that allows for uncertainty, recognising the need to use sound science responsibly³⁰ as set out in the high level objectives;
- Be sensitive to any potential impacts on sites of particular significance – including sites designated in relation to environmental protection or marine heritage assets, otherwise significant in terms of environmental concerns, or of particular socio-economic interest;
- Take account of potential impacts of climate change in individual applications to ensure that any appropriate adaptation measures have been identified;
- Take account of the benefits that good design (including the best use of available technologies and innovation) can deliver; and
- Look to mitigate negative impacts where possible at various stages of development, including appropriate conditions in line with legal obligations, in a manner that is proportionate to the potential impacts of the proposal under consideration. Where alternative site selection or design could mitigate effects this should be considered, where appropriate.

27. An Environmental Impact Assessment under Directive 85/337/EEC as amended is required for all proposed marine projects of types listed in Annex I of the Directive and for projects in Annex II which are likely to have significant environmental effects. The Directive requires applications for consent to be accompanied by information including the likely significant effects of the proposals, and of any alternatives considered, on the environment

28. The full title of the Habitats Directive is the Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

29. For example any relevant National Policy Statements in England and Wales

30. For example, the Scottish Government and Scottish Natural Heritage are developing a "Deploy and Monitor" policy for marine renewables to guide developers and regulators on deployments where environmental impacts are currently uncertain

2.4 Considering benefits and adverse effects in marine planning

The marine plan authority will need to assess the impacts of their proposals for the Marine Plan area. These may be identified as anticipated benefits, including the contribution that the proposals would make to policy objectives, or anticipated adverse effects. These benefits and adverse effects may be economic, social and environmental in nature.

The precise nature of the benefits or adverse effects will depend on a number of factors including the types of activity under consideration; the specific characteristics of the marine area affected; and compatibility with other activities.

The marine plan authority will need to consider the potential cumulative impact of activities and whether for example:

- The cumulative impact of activities, either by themselves over time or in conjunction with others, outweigh the benefits;
- A series of low impact activities would have a significant cumulative impact which outweighs the benefit;
- An activity may preclude the use of the same area/resource for another potentially beneficial activity.

These considerations will inform the sustainability appraisal that will be carried out for every Marine Plan created under the Marine and Coastal Access Act 2009³¹. The sustainability appraisal will consider the potential social, economic and environmental benefits and adverse effects of the proposals set out in a Marine Plan. The sustainability appraisal will include a Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA).

The Strategic Environmental Assessment (SEA) Directive (Directive 2001/42/EC) requires that during the preparation of the plan, the marine plan authority must prepare an Environmental Report on the likely significant environmental effects, consult designated environmental bodies and the public, and take the report and the results of consultation into account. Requirements for monitoring the effects of implementing the plan must also be met.

An Appropriate Assessment under the Habitats Directive will be required for a Marine Plan, if that plan is likely to have a significant effect, either alone or in combination with other plans or projects, on a Natura 2000 site³² and will also be conducted for any site beyond Natura 2000 sites to which the same protection is applied as a matter of policy. The assessment must be carried out in accordance with relevant legislation. Government circulars or guidance should also be taken into account³³. The relevant nature conservation bodies should also be consulted.

31. Marine Plans developed under other legislation may be subject to other assessment processes. These will also include a consideration of social, economic and environmental factors.

32. For the purpose of the MPS, Natura 2000 sites are European Sites, as defined by regulation 8 of the Conservation and Species Regulations 2010 SI2010/490 and European Offshore Marine Sites as defined by Regulation 15 of the Offshore Marine Conservation (Natural habitats &c.) Regulations 2007 SI2007/1842.

33. Government circular on Biodiversity and geological conservation – statutory obligations and impact within the planning system, Welsh Assembly Government Technical TAN 5, Nature Conservation and Planning (2009) www.wales.gov.uk/topics/planning/policy/tans/tan5/?lang=en. Scottish Government guidance at www.scotland.gov.uk/library3/nature/habd-00.asp and NI Guidance at www.ni-environment.gov.uk/habitat_reggs_guidance_notes.pdf

The rest of this chapter sets out some key considerations that marine plan authorities should take into account when preparing the required assessments³⁴ as part of the marine planning process. They may also apply in decision making, depending on the level of assessment needed. It includes information on the environmental factors to be considered (as set out in the relevant legislation), as well as social and economic considerations. It is not an exhaustive list of all possible considerations and effects; there may be other issues to be taken into account within any Marine Plan, in particular the socio-economic factors that are specific to that area. Many of the general considerations addressed below are devolved policies (for example coastal change and seascape). The aim of the MPS is to set out existing UK and EU requirements in relation to these important issues for marine planning, while also recognising that each Administration has responsibility for policies and processes which may go further and vary in the detail of implementation.

2.5 Economic and social considerations

Activities in the marine area and associated activities on the coast contribute substantially to the UK economy and quality of life. There will therefore be a presumption in favour of sustainable development in the marine planning system. Activities in the marine area provide significant social and economic benefits and can drive economic growth, provide opportunities for investment and generate export and tax revenues. They also provide opportunities for employment, both in long established industries

such as fishing, marine transport and port related storage and processing; as well as new and developing industries such as the renewable energy sector and associated offshore electricity transmission. This employment provides wider and longer term benefits for both national and local economies.

Issues for consideration

Marine planning will also play an important role in improving the quality of life for communities by building strong local economies and improving access to, and enjoyment of, their marine areas. Through integration with terrestrial planning, marine planning will contribute to securing sustainable economic growth both in regeneration areas and areas that already benefit from strong local economies, by enabling the sustainable use of marine resources. The identification of objectives for marine resources, followed by a decision-making process that integrates them with land-based plans and objectives has the potential to promote economic growth and create and sustain jobs. Examples of this could include local infrastructure development, or optimising the potential of environmental resources through eco-tourism and recreational use.

Optimising the potential of environmental resources to support sustainable social, cultural and economic activity can benefit local communities as well as the national economy. Marine planning will therefore help support local economies sustain cultural heritage and improve access to, and enjoyment of, the marine area thereby improving quality of life. Marine planning will play an important role in

34. The precise requirements will depend on the applicable legislation.

contributing to vibrant coastal communities, particularly in remote areas, thus benefiting wider cultural heritage. The marine plan authority must also take into account the social and economic effects of any development, including matters such as employment, equality, community cohesion, well-being and health³⁵.

Chapter 3 includes a more detailed discussion of the economic and social benefits and potential adverse effects that may arise from any activity.

2.6 Marine environment

A healthy marine ecosystem is fundamental to supporting sustainable development, thus ensuring wide social and economic benefits. There is a wide range of legislative provisions (and other biodiversity and ecologically-relevant obligations) at the international and national level that Marine Plans need to take into account. These include the Marine Strategy Framework Directive (MSFD) (Directive 2008/56/EC), Water Framework Directive (WFD) (Directive 2000/60/EC), Habitats Directive and Wild Birds Directive.

The Marine Strategy Framework Directive and the Water Framework Directive are the main legislative frameworks for managing the marine, coastal and estuarine environments. In coastal waters, which extend out to one nautical mile³⁶, both the WFD and the MSFD apply. However, in these areas the MSFD only applies for aspects of good environmental status that are not already addressed by the WFD. This includes issues such as the impacts of marine noise and litter and

certain aspects of biodiversity. Specific environmental objectives for inland, estuarial and coastal waters are set out in statutory River Basin Management Plans. Environmental protection and improvement measures for marine waters and for aspects of coastal waters that are not covered by the Water Framework Directive will be set out in Marine Strategies developed under the Marine Strategy Framework Directive.

The overall aim of the Marine Strategy Framework Directive is to achieve good environmental status in Europe's marine waters by 2020. The key requirements of the Directive for the UK are:

- An assessment of the current state of UK marine waters (by 2012);
- Characterisation of what constitutes good environmental status for UK waters, including the establishment of relevant targets and indicators (also by 2012);
- Development of monitoring programmes to measure progress towards good environmental status (by 2014); and
- Development (by 2015) and implementation (by 2016) of programmes of measures to achieve good environmental status by 2020.

The UK will need to coordinate with other Member States in the North East Atlantic when implementing the Directive. The Directive requires Member States to include spatial protection measures as part of their programmes

35. The assessment process will vary depending on the legislative basis for a Marine Plan

36. Out to three nautical miles in Scotland

of measures, contributing to a coherent and representative network of marine protected areas by 2013.

In estuaries and coastal waters there are similar requirements under the Water Framework Directive for Member States to achieve good ecological status/potential by 2015. There needs to be consideration of whether an activity (as a pressure on the environment) causes, or contributes to causing a failure to meet water body status objectives. New development should not cause a water body or adjacent water bodies to deteriorate in status.

2.7 Marine ecology and biodiversity

Marine plan authorities should be mindful that, consistent with the high level marine objectives, the UK aims to ensure:

- A halting and, if possible, a reversal of biodiversity loss with species and habitats operating as a part of healthy, functioning ecosystems; and
- The general acceptance of biodiversity's essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and non-governmental decisions and policies.

The Marine Strategy Framework Directive requires good environmental status measures to include spatial measures for biodiversity protection. The descriptors of good environmental status include several key objectives in relation to marine ecology and biodiversity:

- Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions;
- Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems;
- Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock;
- All elements of the marine food web, to the extent that they are known, occur at normal abundance and diversity levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity;
- Human-induced eutrophication is minimised, especially the adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters;
- Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems;
- Sea floor integrity is at a level that ensures that the structure and functions of the ecosystem are safeguarded and benthic ecosystems, in particular, are not adversely affected;

- Concentrations of contaminants are at levels not giving rise to pollution effects;
- Properties and quantities of marine litter do not cause harm to the coastal and marine environment;
- Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.

Issues for consideration

Marine planning will be a key tool for ensuring that the targets and measures to be determined by the UK can be implemented. As a general principle, development should aim to avoid harm to marine ecology, biodiversity and geological conservation interests, including through location, mitigation and consideration of reasonable alternatives. Where significant harm cannot be avoided, then appropriate compensatory measures should be sought. If appropriate compensation and mitigation of the impacts cannot be achieved then the development should be refused.

It is also recognised that the benefits of development may include benefits for biodiversity and geological conservation interests and that these may outweigh potential adverse effects. Development proposals may provide, where appropriate, opportunities for building-in beneficial features for marine ecology, biodiversity and geodiversity as part of good design; for example, incorporating use of shelter

for juvenile fish alongside proposals for structures in the sea. When developing Marine Plans, marine plan authorities should maximise the opportunities for integrating policy outcomes.

Marine plan authorities should apply precaution within an overall risk-based approach, in accordance with the sustainable development policies of the UK Administrations. The marine plan authority should ensure that appropriate weight is attached to designated sites of international, national and local importance; to protected species; to habitats and other species of principal importance for the conservation of biodiversity; and to geological interests within the wider environment.

Many individual wildlife species receive statutory protection under a range of legislative provisions³⁷. Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in the UK and thereby requiring conservation action³⁸. Priority marine features are being defined in the seas around Scotland. The marine plan authority should ensure that populations of wildlife species enjoying statutory protection or other species and habitats of principal importance for conservation are protected from the adverse effects of development, where appropriate.

The marine plan authority should also take account of the commitment to develop an ecologically coherent network of marine protected areas across the UK marine area.

37. Certain plant and animal species, including all wild birds protected by the Wild Birds Directive are protected under the Wildlife and Countryside Act 1981. European protected plant and animal species are protected under the Conservation of Habitats and Species Regulations 2010 and the Offshore Marine Regulations 2007, among others. Some other animals are protected under their own legislation, for example the Conservation of Seals Act 1970.

38. Lists of habitats and species of principal importance for the conservation of biological diversity in the UK published in 2007 following a 2 year review are available from the Biodiversity Action Reporting System website at www.ukbap-reporting.org.uk/plans/priority.asp

The implications of this activity are discussed in more detail in Chapter 3.

2.8 Noise

Noise resulting from a proposed activity or development in the marine area or in coastal and estuarine waters can have adverse effects on biodiversity although knowledge of the extent of impacts is limited and there are few systematic monitoring programmes to verify adverse effects. Man-made sound emitted within the marine environment can potentially affect marine organisms in various ways. It has the potential to mask biologically relevant signals; it can lead to a variety of behavioural reactions; can affect hearing organs; and can injure or even kill marine life. Man-made sound sources of primary concern with regard to disturbance of marine life are explosions, shipping, seismic surveys, offshore construction and offshore industrial activities (e.g dredging, drilling, and piling), sonar of various types and acoustic deterrent devices.

It should be noted that for certain animals³⁹, deliberate disturbance⁴⁰ is prohibited and can only be carried out in accordance with the terms of a licence. Achieving good environmental status under the Marine Strategy Framework Directive will mean that underwater noise has to be kept at levels that do not adversely affect the marine environment.

Noise from marine activities can also affect people. An EU Directive on Environmental Noise

(EU 2002/49/EC) that deals with noise impacts on people is currently under review. Excessive noise can have wide ranging impacts on the quality of human life, health, and use and enjoyment of areas, including those with high visual quality. Its impact therefore needs to be considered and managed appropriately.

Issues for consideration

In developing Marine Plans, the marine plan authority should take a strategic overview of man-made noise sources and assess the potential cumulative effects of noise and vibration across sensitive receptors in the marine area, balanced against potential socio-economic benefits. Marine plan authorities should be mindful of guidance issued by relevant statutory conservation agencies. They should consider how the effects of noise and vibration on wildlife can be mitigated and minimised taking account of known sensitivities to particular frequencies of sound, and should consider how significant adverse effects on health can be avoided.

2.9 Historic environment

The historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged. Those elements of the historic environment – buildings, monuments, sites or landscapes – that hold particular significance⁴¹

39. Animals listed in Annex IV(a) to Habitats Directive

40. Disturbance includes in particular any disturbance that is likely to impair their ability to breed or reproduce or to rear or nurture their young, to hibernate or migrate or to affect significantly the local distribution or abundance of the species.

41. Significance is the value of a heritage asset to this and future generations because of its heritage interests.

due to their historic, archaeological, architectural or artistic interest are called 'heritage assets'.

The historic environment of coastal and offshore zones represents a unique aspect of our cultural heritage. In addition to its cultural value, it is an asset of socio-economic and environmental value. It can be a powerful driver for economic growth, attracting investment and tourism and sustaining enjoyable and successful places in which to live and work. However, heritage assets are a finite and often irreplaceable resource and can be vulnerable to a wide range of human activities and natural processes.

The view shared by the UK Administrations is that heritage assets should be enjoyed for the quality of life they bring to this and future generations, and that they should be conserved through marine planning in a manner appropriate and proportionate to their significance. Opportunities should be taken to contribute to our knowledge and understanding of our past by capturing evidence from the historic environment and making this publicly available, particularly if a heritage asset is to be lost⁴².

Some heritage assets have a level of interest that justifies statutory designation, the purpose of which is to ensure that they are protected and conserved for the benefit of this and future generations. In coastal and offshore areas designated heritage assets may include scheduled monuments (designated under the Ancient Monuments and Archaeological Areas

Act 1979) and protected wreck sites (designated under the Protection of Wrecks Act 1973).

Many heritage assets with archaeological interest in coastal and offshore areas are not currently designated as scheduled monuments or protected wreck sites but are demonstrably of equivalent significance. The absence of designation for such assets does not necessarily indicate lower significance and the marine plan authority should consider them subject to the same policy principles as designated heritage assets based on advice from the relevant regulator and/or advisors.

Issues for consideration

Marine activities have the potential to result in adverse effects on the historic environment both directly and indirectly, including damage to or destruction of heritage assets. In developing and implementing Marine Plans, the marine plan authority should take into account the available evidence, including advice from the relevant heritage regulators and advisors, in relation to the significance of any identified heritage asset (or the potential for such assets to be discovered), and consider how they are managed. It should also take into account the historic character of the plan area, with particular attention paid to the landscapes⁴³ and groupings of assets that give it a distinctive identity.

In considering the significance of heritage assets and their setting, the marine plan authority should take into account the particular nature of the interest in the assets and the value they

42. In England and Wales, where development that would result in the loss of the whole or a material part of a heritage asset's significance is justified, the marine plan authority should require developers to record the asset's significance before it is lost, and to deposit copies of the resulting reports with the relevant local authority planning authority, historic environment record and national heritage agency.

43. *Landscape* as defined by the European Landscape Convention

hold for this and future generations. This understanding should be applied to avoid or minimise conflict between conservation of that significance and any proposals for development.

The marine plan authority, working with the relevant statutory regulator or advisors, should take account of the desirability of sustaining and enhancing the significance of heritage assets and should adopt a general presumption in favour of the conservation of designated heritage assets⁴⁴. The more significant the asset, the greater should be the presumption in favour of its conservation. Substantial loss or harm to designated assets should be exceptional, and should not be permitted unless it can be demonstrated that the harm or loss is necessary in order to deliver social, economic or environmental benefits that outweigh the harm or loss. Where loss or harm is to be accepted, appropriate mitigation should be considered.

When considering developments that affect the setting of a heritage asset, the marine plan authority should treat favourably those that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset. When considering activities that do not do this, it should weigh any such harm against the wider benefits.

2.10 Climate change adaptation

Climate change is likely to mean that the UK will experience hotter, drier summers and warmer, wetter winters. There is a likelihood of increased drought, heat waves, changes in seasonal

precipitation and the intensity of weather events such as storms.

For the UK's marine environment, the impacts of climate change might include relative sea level rise, increased seawater temperatures, ocean acidification and changes in ocean circulation. Understanding the impacts and effects of climate change is a key element of knowing what to do to maintain a healthy environment. This will influence how we use and value our coasts and seas both now and in the future. Adaptation, including in the marine environment, is therefore necessary to deal with the potential impacts of these changes which are already in train. Sea level rises, increased flooding and coastal erosion will lead to increased vulnerability for development⁴⁵ and significant change along parts of the UK coast.

As a result, adapting to the impacts of climate change will also be a priority for terrestrial planning on the coast. Marine planning will need to be compatible with these impacts. This will include ensuring inappropriate types of development are not permitted in those areas most vulnerable to coastal change, or to flooding from coastal waters, while also improving resilience of existing developments to long term climate change.

Marine planning will provide an important tool for meeting the long term changes posed by climate change. To aid planning decisions in taking account of the impacts of climate change, UK Administrations produced a set of UK climate change projections and will be undertaking a UK

44. Scheduled monuments and protected wreck sites are subject to statutory consent and licensing regimes, the determination of which is the responsibility of the relevant Secretary of State or Devolved Administrations.

45. Flood Risk Management Plans (under the Floods Directive) highlight such vulnerability and will lead to actions to mitigate it

Climate Change Risk Assessment by 2012 (to be updated every 5 years). The UK has also established the Marine Climate Change Impacts Partnership (MCCIP) which can provide advice to marine plan authorities.

Issues for consideration

In marine planning and decision making consideration will need to be given to how the marine environment can adapt to the impacts of climate change. When developing Marine Plans, marine plan authorities should make an assessment of likely and potential impacts from climate change and their implications for the location or timing of development and activities over the plan period. In doing so they should take account of the findings of the latest UK Climate Change Risk Assessment, relevant national adaptation programmes and the latest set of UK Climate Projections, as well as any other relevant research. Marine plan authorities should consider the opportunities to increase the resilience of the marine environment to adapt to the impacts of climate change by:

- Building in sufficient flexibility to take account of climate change impacts, for example by introducing appropriate criteria for selection or de-selection of protected marine areas, seeking the advice of statutory advisors, changing or moving current uses/spatial allocations, or safeguarding areas for future uses;
- Promoting development/projects that take account of the impacts of climate change over their estimated lifetime, in particular taking account of risks such as increased storminess

and sea level rise and possible increase in risk from extreme events such as flooding and coastal erosion;

- Being in a position to take advantage of the opportunities that climate change may bring to certain marine areas, e.g. increase in leisure activities and the aquaculture of acceptable and commercially desirable species;
- Recognising the benefits of climate change mitigation actions in the marine environment which may include, but are not limited to, offshore renewable energy, carbon capture and storage and certain types of shipping.

The assessment should be made in consultation with the relevant statutory agencies. If any adaptation measures give rise to consequential or additional impacts such as on coastal change (e.g. as a result of protecting a development against flood risk or coastal change) the authority should consider their impacts in relation to the Marine Plan as a whole.

2.11 Coastal change and flooding

Coastal change⁴⁶ and coastal flooding are likely to be exacerbated by climate change, with implications for activities and development on the coast. These risks are a major consideration in ensuring that proposed new developments are resilient to climate change over their lifetime. Marine planners should consider existing terrestrial planning and management policies for coastal development under which inappropriate development should be avoided in areas of highest vulnerability to coastal change and

46. *Coastal change* in this context means physical changes to the shoreline i.e. erosion, coastal landslip, permanent inundation and coastal accretion.

flooding. Development will need to be safe over its planned lifetime and not cause or exacerbate flood and coastal erosion risk elsewhere. When developing Marine Plans the marine plan authorities should take into account any areas identified as Coastal Change Management Areas by terrestrial planning authorities and consult with them to ensure no significant adverse impacts will arise in those areas.

Activities on the coast which may be relevant to marine planning include, for example, dredging, dredged material deposition, cooling water culvert construction, marine landing facility construction, land reclamation and flood and coastal erosion risk management. Any of these could, if not managed properly, result in direct effects on the coastline, seabed marine ecology, heritage assets and biodiversity.

Indirect changes to the coastline and seabed might also arise as a result in response to some of these direct changes. This could lead to localised or more widespread coastal erosion or accretion and changes to offshore features such as submerged banks and ridges. Interruption or changes to the supply of sediment due to infrastructure has the potential to affect physical habitats along the coast or in estuaries.

Issues for consideration

When developing Marine Plans the marine plan authorities should liaise with terrestrial planning authorities, drawing on Shoreline Management Plans⁴⁷ and equivalent plans where available and any other relevant coastal policies⁴⁸ or strategies.

47. In England and Wales, Shoreline Management Plans provide a large-scale assessment of the physical risks associated with coastal processes and present a long term policy framework to reduce these risks to people and the developed, historic and natural environment in a sustainable manner.

48. For example, the Northern Ireland Executive's high level policy statement "*Living with Rivers and the Sea*".

49. See Part IV of the Environment Act 1995.

Marine plan authorities should be satisfied that activities and developments will themselves be resilient to risks of coastal change and flooding, and will not have an unacceptable impact on coastal change. A precautionary and risk-based approach, in accordance with the sustainable development policies of the UK Administrations, should be taken in terms of understanding emerging evidence on coastal process. Account should be taken of the impacts of climate change (consistent with the approach to adaptation outlined) throughout the operational life of a development including any de-commissioning period. Marine plan authorities should not consider development which may affect areas at high risk and probability of coastal change unless the impacts upon it can be managed. Marine plan authorities should seek to minimise and mitigate any geomorphological changes that an activity or development will have on coastal processes, including sediment movement.

2.12 Air quality

When developing Marine Plans, marine plan authorities should be satisfied that air quality impacts have been taken into account. They should also liaise with terrestrial authorities to consider how air quality may be improved, particularly within, or adjacent to, coastal Air Quality Management Areas⁴⁹ (AQMAs). In all cases, the marine plan authority should take account of any relevant statutory air quality limits.

Issues for consideration

Activities and developments in the marine and coastal area can have adverse effects on air quality at various stages. The construction, operation and decommissioning phases of projects can involve emissions to air which could lead to adverse impacts on human health, biodiversity, or on the wider environment. Other key sources that impact air quality include emissions from shipping, oil and gas platforms at sea, oil and gas importing facilities, vehicle emissions as a result of increased coastal activity, and dust from construction. (Impacts on protected species and habitats are covered in section 2.7). The generation of energy from renewable sources has an overall beneficial effect on air quality, as compared with fossil fuels.

2.13 Seascape

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. 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.

Issues for consideration

When developing Marine Plans, marine plan authorities should consider at a strategic level visual, cultural, historical and archaeological impacts on not just those coastal areas that are particularly important for seascape, but for all coastal areas, liaising with terrestrial planning authorities as necessary. In addition, any wider social and economic impacts of a development or activity on a coastal landscape and seascape should be considered.

In considering the impact of an activity or development on seascape, the marine plan authority should take into account existing character and quality, how highly it is valued and its capacity to accommodate change specific to any development. Landscape Character Assessment methodology may be an aid to this process.

For any development proposed within or relatively close to nationally designated areas⁵⁰ the marine plan authority should have regard to the specific statutory purposes of the designated areas. The design of a development should be taken into account as an aid to mitigation.

50. For example Areas of Outstanding Natural Beauty (AONBs) or National Parks.

2.14 Ecological and chemical water quality and resources

When developing Marine Plans the marine plan authority should ensure it has regard to any relevant Water Framework Directive River Basin Management Plan or supplementary plan⁵¹ and the programme of measures devised for the river basin district which is summarised in each plan.

The marine plan authority should satisfy itself where relevant that any development will not cause a deterioration in status of any water to which the WFD applies, subject to the provision of Article 4.7 of that Directive, and is consistent with the requirements of daughter directives of the WFD including those on priority substances and groundwater. Decision makers should also take into account impacts on the quality of designated bathing waters from any proposed development⁵².

Marine plan authorities will also need to take into account, once developed, any relevant targets, indicators or measures aimed at achieving good environmental status under the Marine Strategy Framework Directive. One element of good environmental status involves ensuring that concentrations of contaminants are at levels not giving rise to pollution effects.

Issues for consideration

Developments and other activities at the coast and at sea can have adverse effects on transitional waters⁵³, coastal waters and marine waters. During the construction, operation and

decommissioning phases of developments, there can be increased demand for water, discharges to water and adverse ecological effects resulting from physical modifications to the water environment. There may also be an increased risk of spills and leaks of pollutants into the water environment.

51. Regulation 17 of the Water Environment (Water Framework Directive)(England and Wales) Regulations 2003 and the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2003 and section 16 of the Water Environment and Water Services (Scotland) Act 2003

52. The Bathing Water Directive aims to protect public health and the environment from sewage pollution in bathing waters.

53. As defined in the Water Framework Directive (2000/60/EC), transitional waters are bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows.

Chapter 3

This chapter sets out the policy objectives for the key activities that take place in the marine environment. These objectives are the outcomes which the UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive are seeking to achieve through the sustainable development of the UK marine area. They will be delivered through the marine planning and decision making approaches outlined in Chapter 2. Marine Plans should align with, and contribute to the delivery of these objectives. This chapter also provides guidance on the pressures and impacts associated with these activities, which will need to be considered when planning for and permitting development in the UK marine area.

3.1 Marine Protected Areas

The marine environment contains extremely rich and varied habitats which support a wide variety and abundance of living organisms. The UK Administrations recognise the economic, social and intrinsic value of a healthy marine environment and are committed to halting the loss of biodiversity and restoring it so far as is feasible – this means a “no net loss” approach to biodiversity⁵⁴. A healthy marine environment provides us with many valuable goods and

services such as recycling nutrients, breaking down waste and capturing and fixing carbon. These processes are enhanced by the diversity of the organisms in our seas, their abundance and the ecosystem services they provide. However, many of these habitats and species are subject to pressure from human activities. Some important habitats and species are declining and a number of commercial fish stocks are under pressure. The UK Administrations are committed to allowing damaged ecosystems to recover in order to realise the benefits from the marine environment. This will be achieved through the integration of conservation objectives into marine planning and decision making.

Marine Protected Areas (MPAs)

The UK Administrations are also committed to delivering an ecologically coherent network of Marine Protected Areas (MPAs) by 2012 as part of a broad based approach to nature conservation. The MPA network will comprise existing MPAs as well as new sites. It will be made up of both national (in particular Marine Conservation Zones and Marine Protected Areas under legislation applying to Scottish waters and Sites of Special Scientific Interest) as well as European designations such as Special Areas of Conservation (as designated) and Special Protection Areas (as classified under the Wild Birds Directive) and sites of international

54. The UK has agreed to co-ordinate policies and measures on the marine environment with other countries through international agreements, including the OSPAR Convention for the Protection of the Marine Environment of the North East Atlantic. The OSPAR Commission's Biological Diversity and Ecosystems Strategy has a broad focus and recognises that a mix of approaches is needed: (1) Ecological quality objectives are being developed to support the ecosystem approach to the management of human activities (2) Species and habitats measures: including a list of threatened and declining habitats and species and action for their protection (3) Marine protected areas: an ecologically coherent network of well-managed marine protected areas is being created. (4) Human activities: the human activities in the OSPAR maritime area which may adversely affect it are being assessed and programmes and measures to safeguard against such harm are being developed.

importance (Ramsar sites). This network of MPAs will be a key tool in contributing to achieving good environmental status as required by the Marine Strategy Framework Directive, and particularly in ensuring biodiversity is protected, conserved and where appropriate recovered, and loss of biodiversity halted. It will also contribute to other objectives of good environmental status, such as the protection of sea-floor ecosystems.

International Sites

These are sites identified and designated under European Directives and include Special Areas of Conservation designated under the Habitats Directive, and Special Protection Areas classified under the Birds Directive for rare, vulnerable and migratory bird populations (the Council Directive on the conservation of wild birds (Directive 2009/147/EC)). The Conservation of Habitats and Species Regulations 2010, the Conservation (Natural Habitats &c) Regulations 1994 (for Scotland only) and the Offshore Marine Conservation (Natural Habitats &c) Regulations 2007, among others, provide statutory protection for these sites⁵⁵, but do not provide statutory protection for potential Special Protection Areas (pSPAs) before they have been classified as SPAs. For the purpose of considering development proposals affecting them, as a matter of policy, UK Administrations wish pSPAs to be considered in the same way as if they had already been classified. Listed Ramsar sites also receive the same protection.

Marine Conservation Zones/Marine Protected Areas

Marine Conservation Zones (MCZs) – and Marine Protected Areas (MPAs) in the seas around Scotland – are areas that have been designated for the purpose of conserving marine flora or fauna, marine habitats or types of marine habitats or features of geological or geomorphological interest⁵⁶. The protected feature or features and the conservation objectives for the site are stated in the designation order. International protected sites – alongside national MCZs and MPAs – will also meet the Marine Strategy Framework Directive requirement for spatial protection measures contributing to a coherent and representative network of marine protected areas.

*Sites of Special Scientific Interest (SSSIs)*⁵⁷

A number of SSSIs extend into the marine environment, primarily the inter-tidal zone⁵⁸. The statutory protection afforded to SSSIs, and the procedures to be followed with regard to development proposals that may affect them, are detailed in Wildlife and Countryside legislation.

Issues for consideration

When developing Marine Plans the marine plan authority will identify areas and features of importance for nature conservation and state policies for in connection with the sustainable development of the area⁵⁹. These should inform identification of policies and locations for marine

55. Refer to footnote 37.

56. Scotland also has the provision to designate Historic and Demonstration and Research Marine Protected Areas

57. In Northern Ireland, these sites are called Areas of Special Scientific Interest (ASSI).

58. Other important sites include National Parks and Areas of Outstanding Natural Beauty.

59. Under Scottish legislation Marine Plans will also outline policies on the contribution of MPAs to protection and enhancement.

activities and developments. Activities or developments that may result in unacceptable adverse impacts on biodiversity should be designed or located to avoid such impacts (as discussed in section 2.7).

Marine planners and decision makers should consider how developments will impact on the aim to halt biodiversity loss and take account of the legal obligations relating to MPAs, their conservation objectives, and their management arrangements. Through the process of developing Marine Plans, and their subsequent implementation and monitoring, marine plan authorities may identify that amendments or additions should be made to these spatial designations.

In deciding to designate MCZs, the appropriate authority⁶⁰ will be required under the Marine and Coastal Access Act 2009⁶¹ to have regard to the MPS, if one is in place.

Marine planners and decision-makers should take account of the regime for MPAs and comply with obligations imposed in respect of them. This includes the obligation to ensure that the exercise of certain functions contribute to, but at least do not hinder, the achievement of the objectives of a Marine Conservation Zone or Marine Protection Area (in Scotland). This would also include the obligations in relevant legislation relating to SSSIs and sites designated under the Wild Birds and Habitats Directives.

3.2 Defence and National Security

The primary objective of the Ministry of Defence (MoD) is to provide military defence and, where appropriate, security for the people of the UK and Overseas Territories. The marine and coastal environment is essential to MoD (including HM Armed Forces and the Royal Fleet Auxiliary) in maintaining the operational capability required to achieve this. The MoD has the power to regulate sea areas and restrict the use of them either temporarily or permanently by making byelaws under the provisions of the Military Lands Acts 1892 and 1900 and the Land Powers (Defence) Act 1958.

Marine activities should not prejudice the interest of defence and national security. In case of doubt the MoD should be consulted. The participation of the Ministry of Defence in the development of Marine Plans and their contribution to overall safety, security and resilience will ensure the effective use of marine resources whilst mitigating any incompatible activity or usage. This action should reduce any negative impact on national security or defence.

Defence, through the delivery of security for the UK and overseas territories, contributes to the marine sector by providing survey data and cross-government surveillance⁶² and monitoring activities. It employs people throughout the UK in support of its operations in the marine environment, including through HM Naval bases and MoD ranges and coastal estate.

60. Under the Marine and Coastal Access Act 2009, the appropriate authority is the Welsh Ministers for an MCZ in the Welsh inshore area, the Scottish Ministers (with the agreement of the Secretary of State) for an MCZ in the Scottish offshore region, and in all other cases the Secretary of State

61. The Secretary of State will also designate MCZs under the proposed Northern Ireland Marine Bill

62. The National Maritime Information Centre is responsible for providing situational awareness to central government via the Cabinet Office Briefing Room (COBR) mechanism and lead departments who deal with the impacts of environmental disasters or crises.

It is recognised that there are risks to the marine environment through the activities undertaken to maintain operational capability. The MoD is committed to the protection of the natural environment. It will therefore seek to comply with all environmental legislation unless this limits essential operational capability. The MoD has undertaken to minimise the impact of its activities on the environment and pays due regard to such impacts as part of its decision making process, in line with the Secretary of State for Defence's statement on Safety, Health Environmental Protection and Sustainable Development in the MoD.

Defence activities that utilise the marine environment, directly or indirectly, in support of operational capability are diverse but include HM Naval bases, surface and sub-surface navigational interests, underwater acoustic ranges, maritime exercises, amphibious exercises, coastal training ranges and coastal test and evaluation ranges.

Potential Impacts

The socio-economic benefits from the sector should be recognised within marine policy and planning, particularly employment. In some coastal locations, the MoD is the major employer in the region.

There are a variety of environmental benefits and risks associated with national defence and national security activities. These include range danger areas, protecting areas of sea bed from potentially damaging activities and concerns about noise and disturbance from maritime activities. MoD has well established systems to manage the risks arising from its activities.

Non defence activities in the marine area have the potential to impact the MoD elsewhere. Some onshore coastal defences such as aerodromes, transmitter sites and explosive stores have safeguarding zones extending over the marine area to regulate development that may otherwise affect their operation.

Issues for consideration

The construction and operation of offshore marine infrastructure, installations and activities may impact on defence interests in certain areas. Marine planners and decision makers should take full account of the individual and cumulative effects of marine infrastructure on both marine and land based MoD interests.

Marine planners, decision makers and developers should consult the MoD in all circumstances to verify whether defence interests will be affected.

3.3 Energy production and infrastructure development

A secure, sustainable and affordable supply of energy is of central importance to the economic and social well being of the UK. The marine environment will make an increasingly major contribution to the provision of the UK's energy supply and distribution. This contribution includes the oil and gas sectors which supply the major part of our current energy needs, and a growing contribution from renewable energy and from other forms of low carbon energy supply in response to the challenges of tackling climate change and energy security. Contributing to securing the UK's energy objectives, while

protecting the environment, will be a priority for marine planning.

The UK faces a significant challenge in achieving a secure, affordable low carbon energy supply. The Climate Change Act 2008 and Climate Change (Scotland) Act 2009 established a long-term framework to cut greenhouse gas emissions by at least 80% below 1990 levels by 2050, and the Climate Change Committee recommended that the electricity sector needed to be largely decarbonised by 2030. As part of our move to a low carbon energy economy, the UK must meet a legally binding EU target for 15% of energy consumption to come from renewable sources by 2020. There are specific targets in different parts of the UK⁶³.

Much of the renewable energy required to meet these targets and objectives will come from marine sources. Offshore wind is expected to provide the largest single contribution as we move towards 2020, but wave and tidal stream technologies also have significant potential in the medium to long-term. In some parts of the UK nuclear and other power stations will be sited in coastal locations⁶⁴ and will have a significant role to play within the UK's energy mix as we move towards low carbon energy supply. In addition to mitigating the impacts of climate change, contributing to securing the UK's energy objectives will bring substantial socio-economic benefits such as employment and income opportunities, transferable technology and skills development.

63. The Scottish Government has committed that, by 2020, 20% of energy consumption will come from renewable sources and 50% of electricity consumption will come from renewable sources. In Northern Ireland the draft Strategic Energy Framework has proposed a 40% renewable electricity target by 2020. (The SEF will be published by spring 2010). In Wales the Welsh Assembly Government's A low Carbon revolution sets out the actions it will take to accelerate the transition to a low carbon energy economy, generating more than twice the electrical energy as it consumes from wholly renewable sources by 2020.

64. There are no new nuclear sites planned for Scotland. Northern Ireland has no nuclear sites and none are planned.

65. The Strategic Energy Framework (SEF) will be published in summer 2010.

Issues for consideration for all energy infrastructure

When decision makers are examining and determining applications for energy infrastructure and marine plan authorities are developing Marine Plans they should take into account:

- The national level of need for energy infrastructure, as set out in the Overarching National Policy Statement for Energy (EN-1) which applies in England and Wales, the National Planning Framework which applies in Scotland and the Strategic Energy Framework⁶⁵ in Northern Ireland;
- The UK's policy objective to maximise economic development of the UK's oil and gas resources reflecting their importance to the UK's economic prosperity and security of energy supply;
- The positive wider environmental, societal and economic benefits of low carbon electricity generation and carbon capture and storage as key technologies for reducing carbon dioxide emissions;
- That the physical resources and features that produce wave and tidal energy and form oil and gas fields or suitable sites for gas or carbon dioxide storage occur in relatively few locations and need first to be explored for and can then only be utilised where they are found;

- The potential impact of inward investment in offshore wind, wave, tidal stream and tidal range energy related manufacturing and deployment activity; as well as the impact of associated employment opportunities on the regeneration of local and national economies. All of these activities support the objective of developing the UK's low carbon manufacturing capability;
- The UK's programme to support the development and deployment of Carbon Capture and Storage (CCS) and in particular the need for suitable locations that provide for the permanent storage of carbon dioxide.

When developing Marine Plans marine plan authorities should identify how these will contribute to delivery of national targets and priorities, including legally binding commitments entered into under the Renewable Energy Directive (Directive 2009/28/EC) and our domestic binding target to reduce greenhouse gas emissions by 80% by 2050. This will include taking account of preferred areas for development of different energy sources, generation and distribution infrastructure and, if appropriate, setting out potential new opportunities taking into account the most sensitive areas for biodiversity and considering carefully areas with competing and incompatible uses. Marine plan authorities will need to liaise, as appropriate, with terrestrial planning authorities to ensure the development of any necessary on-shore infrastructure. This will include, for example:

- Sub-stations, to support offshore electricity generation and connection to the national grid;

- New gas and electricity import infrastructure, including conventional import pipelines, gas reception facilities and liquid natural gas (LNG) import facilities;
- Appropriately developed and placed ports and harbours to support construction and maintenance as well as other infrastructure such as roads.

Oil and Gas

Offshore Oil and Gas Exploration and Production

Offshore oil and gas is at present the largest source of UK energy supplies and satisfied about two thirds of primary energy demand in 2008 (91% of oil demand and 73% of gas demand). Although indigenous production is now in long-term decline oil and gas are expected to remain of central importance even as the country moves towards a low carbon economy. On 2009 projections, indigenous production is expected to continue to satisfy about half of the UK's oil and gas demand in 2020. Oil and gas development is also an important source of employment and a significant contributor to tax revenue.

Obtaining the UK's hydrocarbon supplies from indigenous sources minimises dependence upon foreign imports and thus enhances our security of energy supply. Maximising the economic recovery of UK oil and gas resource sustainably is therefore a priority in the UK's energy supply and energy security strategies.

Oil and gas can only be produced where they are found, though current technology allows a degree of flexibility over the precise location of

production facilities. Moreover, the development of oil and gas fields can take a number of years owing to the uncertainty over location, the reservoir characteristics and its potential productivity. In general, the majority of offshore oil resource is found to the north of the UK's continental shelf while the main offshore gas province is to the south. In general, these hydrocarbons are also found at some distance from coastal areas. Some parts of the UK marine area are well explored and understood. However, in all areas it is likely that there are new discoveries still to be made and these resources need to be accessed to achieve the objective of maximum economic recovery. Initial exploration for oil and gas is generally undertaken by seismic survey vessels. Continued access to areas of interest for exploration surveys is necessary but this exploration need not be a permanent barrier to other uses of the sea. Where economically recoverable quantities of hydrocarbons are found, the exclusion footprint of any drilling or offshore production facilities required can be relatively small and may have only a limited impact on other resources and uses of the sea.

Looking ahead, the recovery of remaining oil and gas reserves will require additional investment in both money and expertise, while the ending of production in particular fields will lead in due course to decommissioning of the facilities. Around 500 installations are expected to be decommissioned over the next three decades.

Offshore gas supply infrastructure and storage

The UK is highly dependent on natural gas, which is used in roughly equal quantities in domestic households (largely for space heating purposes), for electricity generation (generating

over two fifths of electricity in 2008) and across a range of business. Although the UK plans to reduce its reliance on fossil fuels transition will take a significant time and gas will continue to play an important part in the UK fuel mix for years to come. The UK will remain heavily dependent on gas and is expected to rely on imports to meet around half of its net gas demand in 2020. Consequently significant investment in new gas infrastructure will be required.

Offshore storage of gas, offshore unloading of gas and provision of gas import facilities are activities which are of increasing importance to our security of supply as indigenous gas supplies decline. A range of offshore infrastructure is required to increase the UK's storage capacity including:

- New import infrastructure, including conventional import pipelines, gas reception facilities and liquid natural gas (LNG) import facilities. These will be necessary to provide import capacity for the increasingly import dependent UK gas market;
- New subsea gas storage facilities and pipelines to allow the offshore uploading of LNG.

Although there is only one offshore gas storage facility currently in operation in the UK there is likely to be increasing economic activity in sub-sea storage of gas reserves due to increasing levels of gas imports.

Potential impacts

There are a number of socio-economic benefits from the sector including employment, taxes,

export business and energy security, all of which are of substantial scale in national terms. The majority of oil and gas fields on the UK Continental shelf are located in the North Sea and the largest region of related employment in the UK is in Scotland.

There are a number of environmental risks associated with oil and gas extraction, the most notable being the risk of oil spill, noise from exploration (e.g. seismic survey) and production, historical oil based cuttings piles, and inputs of exploration and production chemicals. Oil discharges in produced water have fallen in the UK and most oil spills are now of less than 1 tonne. Dependent upon the location, manner of installation and size of the pipeline there are potential impacts from pipeline installation on habitats. However, these are generally spatially minor with short-term noise and disturbance impacts. Use of existing storage features and infrastructure is likely to result in negligible additional impacts although the production of salt caverns may result in significant local impacts and interference with other users of the area.

Renewable energy

The low-carbon energy industry is developing rapidly in response to strategic Government policy and financial mechanisms. The UK has amongst the highest exploitable renewable energy resource in the world and has the potential to become a global leader in renewable energy production. The offshore region also contains important natural assets for storing carbon dioxide. Increasing the generation of energy from low carbon sources will lessen the UK's dependence on fossil fuels and improve

energy security by increasing the diversity of electricity supply.

The UK Administrations have undertaken a large number of studies to assess the environmental implications and spatial interactions of increasing renewable energy sources in UK waters. From these studies, it was concluded that there are no overriding environmental reasons to prevent the achievement of our current assessed plans for offshore wind and sub-sea grid development, if mitigation measures are implemented to prevent, reduce and offset any significant adverse effects. Further studies are underway to strategically assess the implications of draft plan/programmes to enable further leasing for offshore energy, including carbon capture and storage (CCS) and marine renewables.

Marine Plans should take account of areas where different renewable energy technologies will be specifically encouraged. Measures should be taken to avoid and, where that is not possible, mitigate the potential negative impacts in line with legislative requirements.

Offshore wind

The UK has some of the best wind resources in the world and offshore wind will play an important and growing part in meeting our renewable energy and carbon emission targets and improving energy security by 2020, and afterwards towards 2050. Harnessing and connecting offshore wind is more technologically challenging and more expensive than harnessing and connecting onshore wind. However offshore wind has a larger potential, due to a stronger and more consistent wind source at sea leading to higher power outputs per turbine and greater

generating capacity each year. As the most mature of the offshore renewable energy technologies, it has the potential to have the biggest impact in the medium-term security of energy supply and carbon emission reductions through its commercial scale output. Expansion of the offshore wind supply is likely to require significant investment in new high-value manufacturing capability with potential to regenerate local and national economies and provide employment.

Tidal range, tidal stream and wave

Research by organisations such as the Carbon Trust⁶⁶ and Renewable UK⁶⁷ has suggested that up to 20% of the UK's current energy demand could be supplied by wave and tidal energy. There is potential to produce wave and tidal energy throughout the UK; and there are examples of sector progress across the UK⁶⁸. The technology to enable wave and tidal energy generation is at an early stage of development. However, it is anticipated that the amount of wave and tidal energy being generated will increase markedly up to and beyond 2020. However, the technology to enable wave and tidal generation is at an early stage of development. It is important for marine planning to take account of appropriate locations for such developments alongside more established uses of marine space and to recognise the timescales and stages against which the sector is likely to progress, including the lead time for grid and infrastructure development. For example, pre-commercial demonstration deployments will need to manage the potential environmental

impacts in relation to the scale of risks and legislative requirements while recognising that not all uncertainties can be addressed in the early life of this technology.

Potential Impacts

It should be recognised that the potential benefits and adverse effects of renewable energy developments will vary greatly, depending for example on their size, structure and geographical location.

Renewable energy offers the potential for significant broad-scale environmental benefits through mitigating greenhouse gas emissions from energy production. In addition there are a number of potentially significant socio-economic benefits from the sector including employment opportunities, export business and energy security. As yet, the potential for benefits such as introduction of artificial reef structures, which can yield biodiversity benefits and fishing opportunities around wind farm sites, have not been fully explored. These should be considered further in the context of marine planning, and for individual developments.

For marine fish and mammals one of the greatest potential adverse effects from marine renewable energy is from construction noise. Of greatest concern are behavioural effects caused by intermittent but prolonged (over several years) noise inputs that could disturb organisms from migration routes, breeding and feeding grounds. Research is ongoing to try to better determine the nature and scale of such

66. The 2006 Carbon Trust report (2006)

67. The 2006 BWEA report

68. The Scottish Government has established a framework to promote the development of this sector, including a prize for successful development. In Northern Ireland, the Department of Enterprise, Trade and Investment (DETI) has published its draft Offshore Renewable Energy Strategic Action Plan 2009-2010. Details of the offshore energy SEA for England and Wales can be found at www.offshore-sea.org.uk

effects and the efficacy of mitigation measures. There are also potential socio economic impacts through displacement of fishing activity, particularly on some smaller vessels which do not have capacity to shift activity to other fishing grounds.

Offshore wind turbines also have the potential to displace birds from key areas, to form a barrier to migration or to present a collision risk. There are also concerns regarding indirect effects on birds through, for example, acoustic effects on prey species (fish) which may need to be considered.

Turbines can have a variety of foundation designs (including monopile, gravity base or jacket). These will interact with the seabed in different ways, but will all have an effect on the hydrodynamics of the area and consequent sediment movement. This includes potential scouring of sediments around the bases which may be of both engineering and environmental significance. Research into the characteristics of scouring effects around traditional turbine technologies (monopoles) indicates that effects are generally localised. A similar level of understanding for the other foundation types is lacking.

Marine energy deployments may pose potential risks to the environment if inappropriately sited. However, the level of risk and ecological significance is largely unknown since, in particular, tidal stream and wave technologies are at an early stage of development. Research is needed to develop understanding of the risks posed by these technologies to potentially sensitive environmental features and to underpin the marine planning process. For example,

adaptation and mitigation methods for such impacts may be supported by detailed monitoring programmes and coordinated research initiatives, including post deployment of devices.

Offshore Electricity Networks

The UK has historically had a centralised electricity generation network relying on large scale generation from conventional power stations, some clustered in specific parts of the country. However, the move to diversify the UK's electricity generation including major increases in offshore wind, wave and tidal generation will require the expansion, connection and reinforcement of the UK's electricity networks both onshore and offshore. Timely development of the offshore electricity network in all parts of the UK is vital to help ensure the continued deployment of offshore renewable power generation. The UK Government has established a new offshore transmission regime to help ensure that the substantial investment required to connect offshore generation projects to the onshore grid is delivered in a cost effective manner to maximise the benefits to consumers and renewable energy developers. In addition potential new sub-sea cabling to reinforce and better connect certain sections of the onshore grid is a key part of supporting the growth of renewable and low carbon generation.

To ensure that the offshore grid can be developed in a strategic and co-ordinated way and remain flexible enough to support links between parts of the UK and also links to Europe, National Grid Electricity Transmission in Great Britain is responsible for operating and co-ordinating both onshore and offshore grid

connections as National Electricity Transmission System Operator (NETSO). NETSO⁶⁹ consulted on an initial Offshore Development Information Statement (ODIS) between December 2009 and May 2010. The ODIS, which will be updated annually, presents potential scenarios and NETSO's best view of the development of the transmission network offshore to 2025, to help ensure it develops in a coordinated and informed manner. The Department of Enterprise, Trade and Investment in Northern Ireland is working with Scotland and the Republic of Ireland on the feasibility of constructing an offshore electricity transmission network linking potential offshore sites on the west of Scotland, the north and north east coasts of Northern Ireland, the Irish Sea and the west coast of the Republic of Ireland.

Electricity interconnections between parts of the UK and other European countries to allow for import and export of electricity will also become increasingly important to ensure that the UK continues to have a secure and stable network, particularly as the penetration of renewables rises and develops capacity to allow export of energy from parts of the UK to Europe.

Potential impacts

There are obvious socio-economic benefits from such an increase in network capacity, most notably the facilitation of marine renewable energy. There are also socio-economic risks associated with such an increase in underwater cabling, which may affect activities such as dredging and the use of certain fishing gear, and impact on other sea users, including existing cable and pipeline operators.

An increase in underwater cables in the UK marine area will cause environmental impacts that are mainly due to the physical disturbance involved with their placement, together with their associated cable protection (e.g. rock armour or concrete mattresses) where cable burial is not feasible. This is particularly the case where cables either run through, or have landfall within, any site designated as being of national or international nature conservation importance or other sensitive areas such as designated shell fisheries, spawning or nursery grounds for economically important fish species or marine archaeological sites. It may also displace fishing activity.

Carbon Dioxide Capture and Storage

Fossil fuels will remain an important source of electricity generation for the foreseeable future. To comply with the UK's legally binding carbon reduction commitments virtually all fossil fuel generation will eventually need to be fitted with technology that captures carbon dioxide and permanently stores it deep underground. All fossil fuel power stations now have to be constructed Carbon Capture Ready (CCR) and new coal-fired power stations are required to demonstrate Carbon Capture and Storage (CCS) on at least part of their capacity from the outset. The expectation is that full retrofit of CCS to older stations will take place by 2025. This programme will generate considerable volumes of carbon dioxide to be permanently stored. The expectation is that storage will take place almost exclusively offshore, which in turn will require the necessary infrastructure to be installed to

69. In Northern Ireland SONI (System Operator for Northern Ireland) operates the electrical system.

transport carbon dioxide from the mainland and inject it deep below the seabed.

Carbon Capture and Storage is a three step process which includes: capturing carbon dioxide from power plants and other industrial sources; transporting it, usually via pipelines (although shipping is also a possibility), to storage points; and storing it safely in deep (at least 800m) offshore geological sites such as saline formations or depleted oil and gas fields. Under the Carbon Storage Directive (Directive 2009/31/EC) a person who intends to operate a geological site for the storage of carbon dioxide will require a permit issued in accordance with the requirements of the Directive. The purpose of the Directive is to ensure environmentally safe geological storage defined as the permanent containment of carbon dioxide in such a way as to prevent or, where prevention is not possible, eliminate as far as possible negative effects and any risk to the environment and human health.

While storage sites themselves will be well below the seabed, for storage to take place it will be necessary to install associated infrastructure such as pipelines and well-heads (though there are also possibilities to re-use existing infrastructure). Facilities for long term monitoring will also be required. There is likely to be preliminary exploration of storage sites with the first storage site intended to be operational from 2014. Initially, attention is likely to focus on depleted oil and gas fields but other structures such as saline aquifers could also be used.

Potential impacts

The deployment of carbon capture and storage technologies will bring significant benefits for the UK in enabling fossil fuel energy generation

to be part of the UK's low carbon, secure energy future. It also allows the UK to demonstrate leadership in deploying greenhouse gas emission mitigation techniques that will be vital in addressing the burgeoning energy requirements of developing economies. Removing carbon dioxide emissions from worldwide electricity generation will considerably reduce the potential for further acidification of the marine environment.

It is possible that leakage of carbon dioxide from a storage site (or more likely from the injection process) could have some localised impact on benthic marine communities and could cause minor localised seawater acidification, although it is not envisaged that such impacts would be either widespread or long term, taking into account the dilution and buffering capacity of our oceans. Once injected into a formation, a number of trapping mechanisms will reduce the risks of carbon dioxide leakage. Remaining risks will be from failure of infrastructure (pipelines and well heads) though, again, impacts from such failures are unlikely to be significant. Appropriate site selection and adherence to regulatory and international guidance will minimise risks significantly.

3.4 Ports and shipping

Ports and shipping play an important role in the activities taking place within the marine environment. They are an essential part of the UK economy, providing the major conduit for the country's imports and exports. Ports also provide key transport infrastructure between land and sea. Ports and shipping are critical to the effective movement of cargo and people,

both within the UK and in the context of the global economy.

In addition, ports are essential to support emerging industries such as renewable energy development and to mitigate the effects of climate change by facilitating the increased movement of freight by sea rather than road. Our ports, particularly in Scotland, provide infrastructure and facilities to support lifeline ferry services to island communities. Their role is crucial not only in supporting the projected future growth of freight traffic but also supporting more fragile and remote communities. The need for further port development should be taken into consideration by those undertaking marine planning.

The operation of our ports and marinas is enabled through the creation, maintenance and development of channels for vessels. This requires dredging and the disposal of the dredged marine sediment. This needs to be facilitated in line with the objective to prevent, reduce and eliminate where practicable pollution caused by dredging operations and the disposal of dredged sediments. Current safeguards have significantly improved the chemical status of the sediments around our coasts. This is due to reductions in the tonnage of contaminants which have been permitted to be disposed of at sea.

The impacts of any increased shipping activity will be considered in line with the principles of sustainable development. However, increased competition for marine resources may affect the sea space available for the safe navigation of ships. Marine planning or decision making on an individual application which impacts on shipping

activity should take account of environmental, social and economic effects and be in compliance with international maritime law.

This section encompasses the transport of both freight and passengers by water, including for commercial and recreational purposes. Water transport is supported by a diverse range of ancillary activities including shipbuilding and repair, the construction of ports and marinas and activities associated with navigation including dredging and the production of charts.

Shipping is an essential and valuable economic activity for the UK. There are significant movements of ships around the UK coast and into and out of UK ports serving the UK's economic interests. There are also significant levels of legitimate passing traffic, for example through the English Channel and other ships freely using the navigable seas adjacent to the UK.

Potential impacts

Environmental impacts can be through accidental pollution from ships in the course of navigation or lawful operations, pollution caused by unlawful operational discharges by ships (e.g. oil, waste, sewage) or physical damage caused by groundings or collisions. Other pressures on the environment from shipping relate to noise, airborne emissions and the introduction and spread of non-indigenous species (transported on the hulls of ships or in ballast water).

Issues for consideration

When considering any potential increase in shipping activity the socio-economic benefits and environmental impacts should be taken into

account. When planning or considering an application, the decision maker should take into account and seek to minimise any negative impacts on shipping activity, freedom of navigation and navigational safety. In particular, international maritime law should be respected.

Port Development

Relevant national planning policy documents set out the level of need for larger scale port development based on port forecasts⁷⁰. These capacity needs will create opportunities for developments of various kinds across a range of ports. In almost all cases, port developments that affect the marine environment will need to be licensed by the relevant licensing authority, although some activities may be exempted from marine licensing⁷¹. Both types will need to be considered in marine planning. Where a port has worked with stakeholders to produce a Master Plan, this may provide marine plan authorities with a strategic view of the potential direction of future port development. In the case of harbour maintenance works, a Master Plan may also create an opportunity for a licensing authority to approve a programme of works to be carried out.

Potential impacts

Positive impacts from port development include job creation and benefits to local fishermen, as well as wider benefits to national, regional or local economies.

Adverse effects from the development of new ports are similar to those from any coastal development and will primarily result from the construction phase, although associated impacts such as increases in shipping traffic and dredging can cause impacts during the operational phase. The precise nature of the impacts will vary depending on the local conditions, ecosystems and other factors. However, as port developments are generally located in estuarine environments, particular impacts might include: impacts to the local hydrodynamic and sedimentary regime; loss of intertidal habitats; disturbance of historical contamination during capital works; impacts on migratory and juvenile fish; impacts on important bird populations; and impacts on heritage assets⁷².

In addition, projects may be subject to the Environmental Permitting (EP) regime⁷³, which also incorporates operational waste management requirements for certain activities.

Issues for consideration

When decision makers are advising on or determining an application for an order granting development consent in relation to ports, or when marine plan authorities are developing Marine Plans, they should take into account the contribution that the development would make to the national, regional or more local need for the infrastructure, against anticipated adverse effects including cumulative impacts. In considering the need for port developments in England and Wales, reference should be made

70. In England and Wales the National Policy Statement for Ports. In Scotland National Planning Framework 2 identifies a number of port and related proposals as National Developments. Projects such as Scotland's national renewable infrastructure plan also identify ports and infrastructure for supporting the development of marine renewable projects.

71. For example some specific dredging and associated deposits are exempt under the Marine and Coastal Access Act 2009

72. Further details are set out in the Ports NPS, which applies in England and Wales.

73. This regime does not apply in Scotland or Northern Ireland, where activities may be subject to the Pollution Prevention and Control regime.

to interpretations of need as set out in the Ports NPS. In Scotland, reference should be made to the second National Planning Framework which identifies known large-scale port developments.

3.5 Marine aggregates⁷⁴

The UK has some of the best marine aggregate resources in the world. Marine sand and gravel makes a crucial contribution to meeting the nation's demand for construction aggregate materials, essential for the development of our built environment. They are particularly important in England, accounting for 38% of the total regional demand for sand and gravel in the South East (80% in London), 46% in the North East and 22% in the North West. South Wales is also highly dependent on marine-dredged sand, which meets more than 80% of the demand⁷⁵. In addition there are no practicable alternative sources to marine aggregate for the maintenance of coastal defences required for climate change adaptation. Marine aggregates contribute to energy security and economic development through provision of fill for major coastal infrastructure projects, for example ports, renewable energy and nuclear energy projects. The extraction of marine dredged sand and gravel should continue to the extent that this remains consistent with the principles of sustainable development and in line with the relevant guidance⁷⁶ and legislation.

Land-based construction aggregate resources are unevenly distributed and many regions are

heavily dependent on supplies from other areas. Marine aggregates are ideally located to meet part of these regional deficits, contributing to diversity of supply and delivering high-quality aggregate into the centre of areas of high demand with minimum disruption.

Potential impacts

Marine aggregates can present reduced impacts on local communities compared to the extraction of land-won aggregates, in particular with regard to the extraction process and transportation. Substantial volumes of marine aggregates are landed on wharves close to where they are needed and locally distributed by rail, water (through barges) and road. Wider socio-economic benefits include skilled, stable employment and the generation of income through the construction industry supply chain.

Potential adverse impacts include changes to the hydrodynamic regime that may alter coastal processes; loss of seabed habitat; impacts on fisheries and secondary impacts to marine life and habitat associated with sediment plumes; disturbance of fish spawning, migration routes, nursery and overwintering areas; overflows from dredging vessels; impacts on geodiversity; and potential changes to heritage assets.

Issues for consideration

Marine plan authorities should as a minimum make provision within Marine Plans for a level of supply of marine sand and gravel that ensures that marine aggregates (along with other

74. Not applicable to Scotland.

75. There is currently no aggregate extraction for construction in Scotland or Northern Ireland. Policies on aggregate extraction set out in this MPS do not apply to Scotland.

76. For example Marine Minerals Guidance 1, ODPM (2002); Minerals Policy Statement 1: Planning and Minerals, DCLG (2006); Marine Minerals Guidance 1 (Northern Ireland) 2007

sources of aggregates) contribute to the overarching Government objective of securing an adequate and continuing supply to the UK for various uses. In doing so, marine plan authorities should consider the potential long-term requirement for marine-won sand and gravel, taking into account trends in construction activity, likely climate change adaptation strategies and major project development.

The assessment by the decision maker should be based on sustainability criteria and should take into account the existing sea bed within the Marine Plan area that is currently being dredged; offshore movements of aggregates; the importance of meeting regional and national needs, beach replenishment and contract fill; and the need to safeguard reserves for future extraction. Since 2007 all marine mineral dredging applications have been subject to a full statutory Environmental Impact Assessment. This includes assessment of the physical effects of the proposed dredging operation and its implications for coastal erosion by way of a Coastal Impact Study (CIS). A permission to dredge should only be issued if the marine plan authority is content that the proposed dredging is environmentally acceptable.

3.6 Marine dredging and disposal

Since 1998, in compliance with its international obligations, the UK Administrations have – with some minor exceptions – only licensed the disposal at sea of capital and maintenance dredgings and small amounts of fish waste.

The amount of dredged material disposed of at sea each year from the UK has been relatively

consistent since 1985, the variation in annual tonnage being most marked in the quantities of capital dredgings associated with port expansion and channel deepenings; the fluctuations in dredgings reflecting a combination of economics and weather.

Potential impacts

Dredging is an enabling activity which is essential to the functioning of ports and marinas and the social and economic benefits which derive from these. It can also allow specific construction activities to be taken forward.

Appropriately targeted disposal of dredged sediment can have an ancillary benefit in maintaining sedimentary systems and, where the sediment is constituted appropriately, can have socio-economic benefit in providing material for alternative uses such as construction, beach nourishment or salt marsh restoration.

The primary environmental considerations include the potential risk to fish and other marine life from the release of sediments, chemical pollution and morphological changes including burial of seabed flora and fauna; hydrological effects; interference with other marine activities; increases in turbidity; increases in marine noise; possible adverse effects for designated nature conservation areas and potential destruction or destabilisation of known or unknown features of historic environmental interest. Removal of dredged material can also cause adverse impacts to the natural sedimentary systems.

Dredging may cause significant environmental and health concerns through exposure to

contaminants in the dredging plume. These contaminants arise from diverse sources such as the legacy of industrial pollution (e.g. metals and poly chlorinated biphenyls) or historical and current use of antifoulants including tributyltin and heavy metals and new contaminants which are now finding their way into the marine environment (e.g. flame retardants including poly brominated diphenyl ethers).

Issues for consideration

In considering an application, a detailed evaluation of the potential adverse effects of any deposit on the marine ecosystem and others using the sea should be undertaken. This should have full regard to any accompanying environmental statement or additional data that may be requested in support of the application and international obligations under the OSPAR Convention 1992 and London Protocol 1996, as well as any other available guidance. Account should also be taken of the views expressed by other consultees before a decision is taken whether to grant approval.

Applications to dispose of wastes must demonstrate that appropriate consideration has been given to the internationally agreed hierarchy of waste management options for sea disposal. Wastes should not be accepted for disposal where appropriate opportunities exist to re-use, recycle or treat the waste without undue risks to either human health or the environment, or disproportionate costs⁷⁷. The decision maker

should give appropriate consideration to alternative uses of the sediment⁷⁸.

The potential adverse effects on the marine environment, habitats and wildlife from dredging activity should be considered by decision makers. Particular recognition should be given to the implementation and use of the maintenance dredge protocol⁷⁹ to minimise impacts on habitats and wildlife and help meet statutory obligations in relation to European Sites. There also needs to be compliance with requirements of the Water Framework Directive and other EU Directives⁸⁰.

3.7 Telecommunications cabling

Submarine cables are part of the backbone of the world's power, information and international telecommunications infrastructure, and socially and economically crucial to the UK. Submarine telecommunication cables carry more than 95% of the world's international traffic including telephone, internet and data, as well as many services for the UK's local communities, major utilities and industries. The transatlantic cables landing in the United Kingdom carry more than 70% of Europe's transatlantic internet traffic⁸¹.

Potential Impacts

Impacts from cable installations on the sea bed are low and spatially minor. The importance of telecommunication and power cabling as vital infrastructure of the global economy should be

77. The most up to date guidance on beneficial use is: PIANC (2009) Dredged material as a resource: Options and constraints. PIANC Report No. 104, 54pp.

78. In Scotland, the Best Practicable Environmental Option Assessment approach is used to determine that there are no practicable alternatives to sediment disposal.

79. This does not apply in Scotland or Wales.

80. As set out in the voluntary framework for England and Wales 'Clearing the Waters – a user guide for marine dredging activities' which can be found at www.environment-agency.gov.uk/marinedredging

81. UKCPC calculation of total UK cable capacity.

recognised in Marine Plans, and for integrating across Marine Plan boundaries.

Any failure to take into account the existing network of telecommunication and power cables and future requirements would potentially have a hugely detrimental impact, not only for the functioning and prosperity of the UK economy but also on worldwide telecommunications, for example the Internet. All effort should be taken to protect and include them in considerations regarding activities in the UK marine area. In particular, other uses of the sea bed should not impede the ability of cable owners to maintain and repair damaged cables or to install new cables in the future.

Issues for consideration

Despite cables being buried deep in the sea bed and installers and operators promoting marine safety and protection, cable installations on the UK continental shelf and surrounding waters are still subject to damage. Human activity is the main cause of submarine cable faults due to damage caused by fishing trawlers and anchors. Damage can also occur through natural causes. Given the increased activity in the UK marine area, there is a risk that the number of incidents may increase. The marine planning process should help facilitate the coordination of marine activities, a better understanding among relevant industries, and the development of clearer guidelines to ensure both the safety of these installations and safe access to them for maintenance purposes.

3.8 Fisheries

Fish is an important source of protein, can be part of a healthy diet and has a role in achieving food security, which is an objective of the UK Administrations. The marine fisheries sector comprises all socio-economic activities related to the capture of wild marine organisms (fish and shellfish), and the subsequent handling and processing of catches. Shellfish and demersal fish species currently contribute around 40% each to the total catch value, with the remaining 20% comprising pelagic species such as mackerel and herring. The UK has a long history of fishing both inshore and offshore waters, which the UK Administrations wish to see continue.

The Common Fisheries Policy (CFP) provides the main framework for decisions concerning the management of fisheries in EU waters, although it enables Member States to apply more restrictive measures to those fisheries operating within their 0-6 and 6-12 nautical mile zones, both in respect of national fleets and, subject to the approval of the Commission and other Member States, other EU vessels as well. Decision makers must therefore have regard to the provisions of the CFP in developing any plans or proposals affecting fisheries. The CFP is currently being reviewed with the aim of introducing a reformed vision by 1 January 2013. The view of the UK Administrations is that the overall aim of the reformed CFP should be to attain ecological sustainability by optimising the wealth generation of marine fish resources.

A reformed Common Fisheries Policy should contribute to the delivery of the effective management of our seas and be integrated into wider marine policy including marine nature

conservation. This will be key in delivering good environmental status under the Marine Strategy Framework Directive. Good environmental status requires populations of all commercial fish and shellfish stocks to be exploited within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock. Achieving good environmental status will also involve better managing and mitigating the impact of fisheries on the wider marine environment (e.g. wider biodiversity impacts).

Potential impacts

Sustainable fish stocks have the potential to maintain a prosperous and efficient fishing industry, and provide social, cultural and economic benefits to often fragile coastal communities. The dependence of jobs on fishing can be as high as 20% or more in some communities.

Fishing activity is sensitive to changes in other sea uses. Marine developments have the potential to prevent, displace or encourage fishing activities. There are potential social, economic and environmental impacts of displacement of fishing activity caused by other sea uses, particularly if from well established fishing grounds. In addition to marine fish stocks associated with commercial sea fishing, the coastal environment is important as a corridor for migrating Atlantic salmon and European eel, and in providing the marine feeding ground for sea trout. These important species that support coastal and inland commercial fishing and recreational angling could be vulnerable to a wide range of coastal activities.

Fishing can have negative environmental impacts. As well as over-exploitation of

commercial fish stocks, this can include threats to vulnerable or rare species, including by-catch, and can cause extensive damage or destruction to habitats and the historic environment. Such impacts can often be associated with particular gear types and the intensity of fishing activity. Interactions between fishing activity and marine developments and their consequent impacts on fish stocks and the environment are complex and need to be considered.

Issues for consideration

The marine plan authorities should have regard to the UK Administrations' priorities for fisheries management set out above. They should also take into account the UK Administrations' aim to promote greater decentralisation of decision-making in fisheries management, to Member States working together regionally, in order that measures reflect local conditions.

Marine plan authorities should consider the potential socio-economic impacts of other developments on fishing activity, as well as potential environmental impacts. They should, for example, have regard to the impacts of displacement and whether it is possible for vessels to relocate to other fishing grounds. They should also consider the potential impacts of this displacement on the viability of fish stocks in the alternative fishing grounds. They will also wish to consider the impacts on local communities of any reduction in fishing activity or redistribution of fishing effort as the result of a marine development. Wherever possible, decision makers should seek to encourage opportunities for co-existence between fishing and other activities. Inshore Fisheries Groups in Scotland and Inshore Fisheries and Conservation

Authorities (IFCAs) in England, will be expected to participate fully in wider marine planning. Welsh Ministers are also seeking to put in place a mechanism to enable local and national input into fisheries management plans and policies.

3.9 Aquaculture

Aquaculture is the process of farming or culturing aquatic organisms. Food security is an objective of the UK Administrations and aquaculture also makes an important and growing contribution to this. All Administrations support and encourage the development of efficient, effective, competitive and sustainable aquaculture industries subject to suitable governance and safeguards⁸². UK environmental policy will seek to improve the quality of shellfish harvesting areas (including those for wild shellfish) by seeking to adopt appropriate microbiological standards when implementing the Water Framework Directive.

Marine aquaculture is important to communities throughout the UK and in particular on the west and north coasts of Scotland and the Western and Northern Isles and in parts of North and South Wales, and in Northern Ireland. Aquaculture operations are also viewed as a key focus for future development of a sustainable food source and as a possible source of employment for those in inshore fishing communities. These factors need to be taken into account when developing Marine Plans.

The majority of marine aquaculture is currently related to Atlantic salmon, shellfish, sea-reared trout and halibut. The sector also includes the operation of marine worm farms to produce angling bait. The farming of seaweed as a food or fuel is a growing part of this sector including as a part of polyculture processes such as sea fish production. The majority (99%) of existing UK marine based finfish aquaculture activity is located in Scotland, which is the largest producer of farmed salmon in the EU, and the second largest in the world, although aquaculture activity is increasing in other areas of the UK. Shellfish production is evenly spread throughout the UK and is an expanding activity. Trends in the industry are closely tied in with changes in wild fisheries, the availability of investment, and site availability. More intensive types of aquaculture can use space and resources more efficiently if they are carefully planned and managed. The overall future outlook is dependent on site availability and environmental carrying capacity.

Potential impacts

The status of global fish stocks has been identified as 'very unfavourable' in a recent assessment of UK food security⁸³. Increased UK aquaculture production could help to contribute to increased food security and local production as a means of securing future supply in a way which is carbon efficient and fits local economies. Finfish aquaculture can alleviate fishing pressure on some wild stocks, while providing additional nutrients for shellfish production when well sited. Mitigation of

82. The Scottish Government's current strategy for aquaculture: "A Fresh Start: The Renewed Strategic Framework for Scottish Aquaculture" can be found at: www.scotland.gov.uk/Publications/2008/08/06103512/0 The Welsh Assembly Governments Fisheries Strategy Aquaculture action plan can be found at www.wales.gov.uk/topics/environmentcountryside/foodandfisheries/fisheries/walesfisheriesstrategy/?lang=en

83. UK Food Security Assessment: Our Approach- August 2009.

pollution of shellfish waters will help provide a sustainable base for development of the inshore aquaculture sector, as well as reducing public health risks. The health benefits of fish consumption remain clear, with increased consumption in the UK population advised.

The environmental impacts of aquaculture activity are diverse, reflecting the broad scope of the industry. The precise nature of impacts will vary depending on the nature of the activity and local conditions. As the largest sector, finfish aquaculture has a number of potential impacts. These can include organic enrichment which may result in de-oxygenation of the water column and sediments, and changes in the diversity of benthic invertebrates. They can also include inorganic enrichment, which may contribute to eutrophication and changes in plankton communities. Other impacts can include the genetic alteration of local populations from escapees; changes in biodiversity caused by the escape or release of non-native species which may compete with native species, or cause changes in the natural ecosystem processes; increased potential for exchange of disease between farmed and wild fish; and contamination from antiparasiticides and heavy metals. Aquaculture and associated infrastructure may also impact on the visual appearance of coastal locations.

Issues for consideration

Marine plan authorities should consider the benefits of encouraging the development of efficient, competitive, and sustainable aquaculture industries in line with the policies set out above. They should ensure that proposed activity has minimal wider effect and should seek

to embrace the significant opportunities for co-existence of aquaculture and other marine activities in developing Marine Plans.

In developing Marine Plans, marine plan authorities should take account of existing aquaculture activity in the area and seek information on possible future aquaculture operations in areas not previously used, assessing the suitability of those areas for development. Planners should also take account of the financial and environmental impact that new aquaculture operations might have on existing marine activities in the area and ensure that activities are consistent with the environmental objectives of the Water Framework Directive.

The EC Regulation on Alien Species in Aquaculture (708/2007) requires Member States to establish a process by which the risk of introducing alien species for aquaculture is fully assessed before any introductions of such species are consented. The use of this legislation will be an essential part of any consideration of aquaculture development and native species protection, and should be incorporated into the marine planning process.

3.10 Waste water treatment and disposal

The objective shared by the UK Administrations is to contribute to sustainable development including the health and well being of the community and the protection of the environment by maintaining and developing a policy and regulatory system which provides modern, high quality water and sewerage services. The collection, treatment and disposal

of waste water from housing, agriculture and industry, the effective drainage of storm water and runoff to the sea, and mitigating the effects of diffuse pollution are key activities to achieve this. An important aim is ensuring that infrastructure is in place and maintained for necessary disposal activity to be carried out in compliance with EU legislative requirements⁸⁴. Sewerage infrastructure and drainage is also essential in providing for economic and social development, and for reducing the risk of flooding in urban areas⁸⁵. Marine plan authorities should generally seek to support national priorities for growth, in particular where coastal or estuarine areas have been identified as suitable for new housing and associated infrastructure adjacent to marine areas, balanced against any consequential impacts on the marine environment.

Marine Plans must support future social and economic development and growth and the provision of supporting infrastructure and services. Allocating sufficient space to facilitate future growth of current sewerage services is therefore essential to the integration of land-use plans with Marine Plans. In developing Marine Plans, or considering individual applications for new marine activities, the marine plan authority should balance the benefits of the new activities against any consequential costs for the continued provision of sewerage services.

Potential impacts

The wastewater treatment industry can support economic development on land and in the

marine environment, can reduce the risk of flooding, and deliver compliance with the water quality requirements of the Water Framework Directive. The location of existing waste water infrastructure will therefore impact upon and shape future terrestrial and marine planning decisions.

There are significant socio-economic benefits in the provision of appropriate infrastructure for waste water collection, treatment and drainage in coastal areas. These include improvements in public health, local amenity value and the provision of essential infrastructure in support of national priorities for growth and economic development. The waste water industry impacts upon marine activities such as aquaculture, fishing and bathing by enabling coexistence with other activities, as well as wider socio-economic development on land.

Waste water collection and treatment is governed by quality requirements in European legislation including the Shellfish Waters Directive, Revised Bathing Water Directive (2006/7/EC) and Water Framework Directive. These requirements aim to protect and where necessary improve the quality of water in the aquatic environment. Proposals for new or extended waste water treatment facilities are bound by these requirements ensuring minimal impact and a sustainable co-existence with other existing marine activities such as aquaculture, fishing and bathing.

84. This includes compliance with the requirements of the Urban Waste Water Treatment Directive, Water Framework Directive, Shellfish Waters Directive, Bathing Waters Directive and in due course the Marine Strategy Framework Directive.

85. Specific objectives for water and sewerage services are set out in guidance issued to the industry for each price review or price control period and in England, the government's future water strategy 'Future Water'

Issues for consideration

The majority of developments will be subject to an appropriate permitting regime⁸⁶, which may also incorporate operational waste management requirements for certain activities and permit requirements for discharges (water discharge activities, ground water activities). The physical aspect of discharging to sea in the form of the design, construction and maintenance of Sea Outfalls should be considered in the development of the Marine Plan. The impact of coastal and estuarine change, and the risk of flooding in such areas, should be taken into account to avoid inappropriate development in vulnerable areas and in line with the considerations in sections 2.11-2.14.

3.11 Tourism and recreation

The sea can provide a variety of recreational opportunities including pleasure boating, sailing diving, sea angling and surfing as well as wildlife experiences⁸⁷. Tourism can generate a considerable amount of income for the economy and is a mainstay for many coastal resorts, with local communities and businesses relying on the marine environment for their livelihoods⁸⁸. Outdoor recreation on the coast also provides physical and mental well being benefits. The UK Administrations' aim for tourism is to take steps to improve the competitiveness of the industry, recognising the important part that it plays in the national economy.

Good access to the coastline, to attractive and well-maintained beaches, seashore and clean

bathing water quality are an essential part of tourism. A well-managed and healthy marine environment is therefore essential to attract visitors to our coasts. Both economic and environmental factors need to be taken into consideration in planning decisions.

Potential impacts

The use of the marine area for tourism can impact on its ability to be used for other activities and vice versa. Environmental effects/impacts may include the removal of marine fauna and flora, the physical or visual disturbance of wildlife, pollution from wastewater and litter. Socio-economic benefits include the positive benefits to local communities through increased visitors and tourism. Improving access may also attract more visitors.

Issues for consideration

Decision makers should consider the potential for tourism and recreation in the marine environment and consider the likely implications on other activities, both in the marine environment and on shore. Many of these activities will be closely linked to onshore tourism strategies and plans which will need to be taken into account. It will be important to ensure that local authorities, local tourism stakeholders and other marine users are engaged and consulted during the plan making process and before decisions are taken.

86. The operating regimes vary across the UK Administrations

87. For example see www.scotland.gov.uk/Publications/2010/05/12164456/0

88. For example see www.shu.ac.uk/_assets/pdf/cresr-seaside-tourism-report.pdf



HM Government

Draft Non Technical Summary of the Appraisal of Sustainability

HM Government
Northern Ireland Executive

Scottish Government
Welsh Assembly Government



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Abbreviations

The following abbreviations have been used in this report:

Abbreviation	Description
AoS	Appraisal of Sustainability
CCS	Carbon Capture and Storage
CO ₂	Carbon Dioxide
EIA	Environmental Impact Assessment
ELC	European Landscape Convention
EU	European Union
GHG	Greenhouse Gas
HLO	High Level Marine Objectives
HRA	Habitats Regulations Assessment
MCAA	Marine and Coastal Access Act 2009
MCZ	Marine Conservation Zone
MMO	Marine Management Organisation
MPA	Marine Protected Area
MPS	Marine Policy Statement
MSFD	Marine Strategy Framework Directive
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SPA	Special Protection Area
UK	United Kingdom
WFD	Water Framework Directive

1 Introduction

The United Kingdom (UK) Administrations (UK Government, Scottish Government, Welsh Assembly Government and Northern Ireland Executive) are preparing a Marine Policy Statement (MPS) to guide sustainable development in the marine environment. An Appraisal of Sustainability (AoS) has been undertaken on the MPS during its development. The purpose of the AoS is to appraise the sustainability of the content of the MPS and

its alternatives. This is to ensure that the environmental, social and economic consequences of the MPS are assessed and taken into account prior to its adoption, in order to contribute to the achievement of sustainable development.

This document presents a summary of the AoS process and findings.

2 Background and Purpose of the MPS

The MPS is the first part of new systems of marine planning being introduced around the UK. It seeks to set out policies that ensure developments and activities in the UK marine area contribute towards the achievement of sustainable development. It aims to provide the high level policy framework under which Marine Plans will be developed and set the direction for marine licensing and other relevant authorisation systems affecting the marine area.

The MPS has to take into consideration the priorities of the different UK Administrations and to be forward looking, over 20 years and longer where possible. It aims to explain how UK Administrations are addressing the UK's international obligations and commitments and taking them forward through domestic policies.

All public authorities taking authorisation or enforcement decisions that affect or might affect the UK marine area are required to do so in accordance⁸⁹ with the MPS and relevant Marine Plans unless relevant considerations indicate otherwise. Where such a decision is not taken in accordance with the MPS and Marine Plans, the public authority must state its reasons. Decisions on Nationally Significant Infrastructure Projects (NSIPs) in the English or Welsh marine area must have regard to the MPS. Public authorities taking decisions that affect or might affect the UK marine area which are not authorisation or enforcement decisions must also have regard to the MPS.

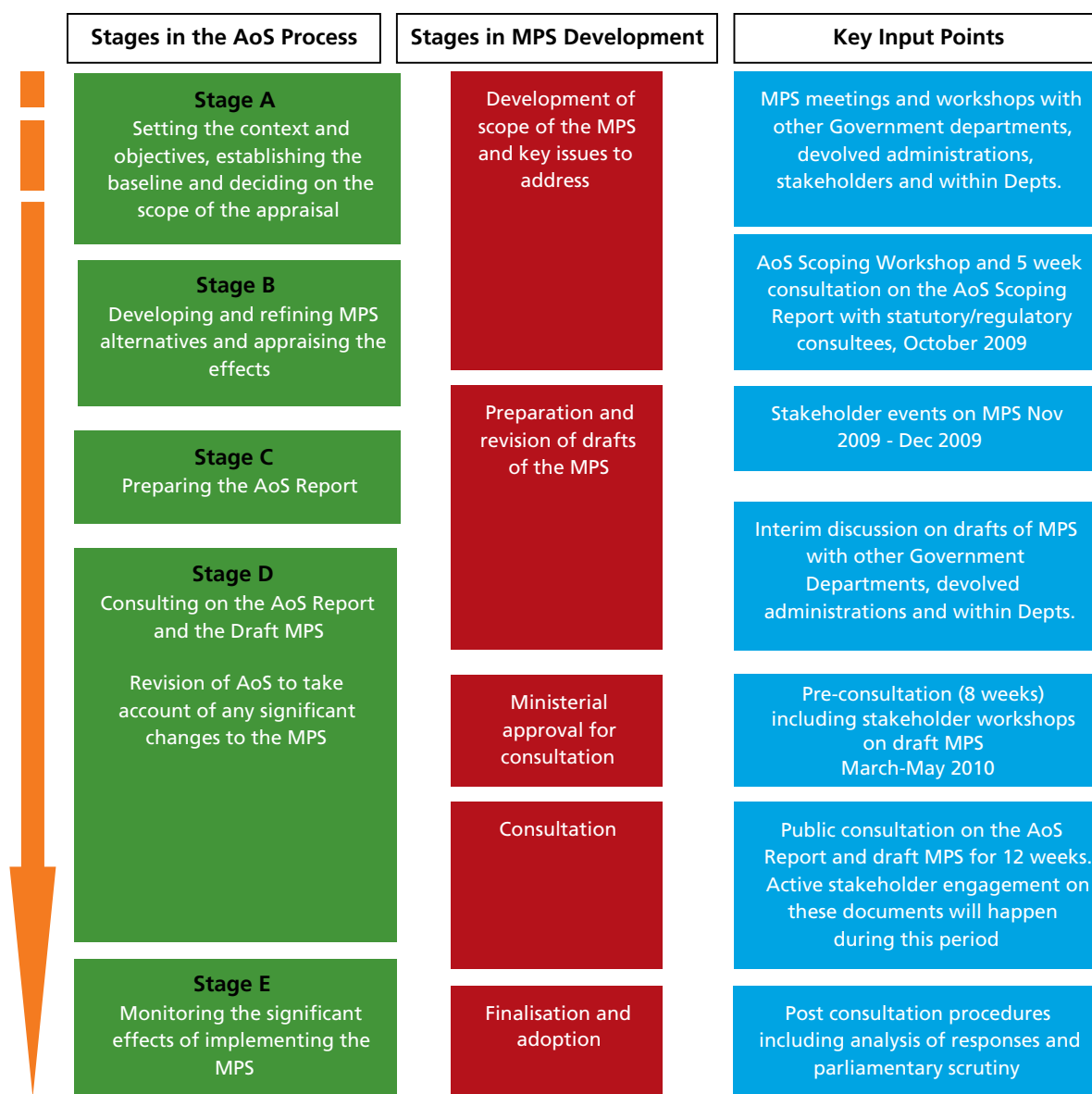
89. Except for decisions for development consent orders under the Planning Act 2008.

3 The AoS Process

The Marine and Coastal Access Act (MCAA) requires that the MPS should be subject to an AoS. The UK Administrations have determined that this should include a Strategic Environmental Assessment (SEA), as required by the European SEA Directive⁹⁰. The AoS considers social and economic issues as well as the potential environmental impacts required by the Directive. This ensures coverage of a wide range of sustainability issues.

Figure 3.1 shows the five stages followed in the AoS of the MPS, how they are integrated with the development of the MPS and the key stages of input. The MPS and AoS have evolved in tandem, with recommendations made in the AoS being incorporated into subsequent drafts of the MPS. These iterations are identified in the AoS Report.

Figure 3.1 Stages in the AoS Process



90. Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.

3.1 Stage A: The Scope of the AoS

It is essential to understand the scope of the appraisal to ensure that all reading the AoS and the MPS understand what the appraisal is seeking to achieve and what it is not intended to address. The scope of the AoS was established in the Scoping Report which was consulted upon with the statutory SEA consultation bodies for the prescribed five week period in November 2009.

Geographical Scope of the AoS

As the MPS is UK wide, the AoS covers the UK marine area as defined in the Marine and Coastal Access Act.

Temporal Scope of the AoS

The MPS does not have a specific end date. However, a lifespan of applicability for the AoS has been determined as 20 years from writing. Making predictions beyond 20 years into the future would greatly increase the levels of uncertainty in the prediction of effects.

Topics Covered in the AoS

The scope of the AoS includes the environmental, social and economic effects of the MPS. The 2005 UK Sustainable Development Strategy defines the goal of sustainable development as *“to enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life, without compromising the quality of life of future generations”*. It sets out the following five guiding principles to achieve it:

- living within environmental limits
- ensuring a strong, healthy and just society
- achieving a sustainable economy
- promoting good governance
- using sound science responsibly.

The topics to be addressed in the AoS have been developed with these principles in mind together with the requirements of the SEA Directive. This includes a number of environmental topics as well as social and economic topics. It should be noted that no one strand of sustainable development is more or less important than another. Table 3.1 identifies the topics covered in the AoS and their relationship with the topics listed in Annex I of the SEA Directive. Many of the AoS topics overlap and are interrelated.

Table 3.1 Topics covered in the AoS and relevant SEA Directive topics

Topics covered in the AoS	Relevant topics listed in Annex I of the SEA Directive
Marine Economy, Other Users and Material Assets	Population; material assets
Population and Human Health	Population; human health
Air Quality	Air
Climate Change	Climatic factors
Coastal Processes	Climatic factors
Cultural Heritage	Cultural heritage including architectural and archaeological heritage
Geology and Substrates	Soil
Landscape and Seascape	Landscape
Marine Ecology Conservation Sites	Biodiversity; flora; fauna
Water Environment (including Marine Noise)	Water

Stage B: Developing and refining MPS alternatives and appraising the effects

Treatment of Alternatives

In line with the requirements of the SEA Directive, this AoS has appraised the likely significant effects of reasonable alternatives to the MPS, taking into account its objectives and geographical scope.

A number of strategic alternatives were identified in the Scoping Report which have been further developed following the scoping consultation. Further detail is provided in section 5 of this Non Technical Summary of how the alternatives were identified and appraised.

The AoS Framework and its Application

The MPS has been appraised against a set of 15 AoS Objectives. A set of guide questions provide more detailed guidance about the issues that need to be considered as part of the appraisal process. These are collectively known as the AoS Framework and cover all the topics required by the SEA Directive and reflect the principles of sustainable development. The AoS Objectives are listed in Table 3.2.

Table 3.2 The AoS Framework

AoS Topic	AoS Objective	Guide Questions
Marine Economy, Other Users and Material Assets	1) To support the development of a sustainable marine economy.	<p>Will the MPS ensure infrastructure is in place to support and promote safe, profitable and efficient marine businesses?</p> <p>Will the MPS promote sustainable activity, prosperity and opportunities for all while also preventing interference with legitimate users of the sea?</p> <p>Will the MPS protect the safety and freedom of navigation?</p> <p>Will the MPS ensure aviation safety, efficiency and capacity?</p> <p>Will the MPS recognise, and integrate with, defence priorities, including the strengthening of international peace and stability and the defence of the United Kingdom and its interests?</p> <p>Will the MPS promote the efficient production of energy within the boundaries of sustainability and security of energy supply?</p> <p>Will the MPS support and consider other spatial plans covering terrestrial, coastal and estuarine areas on which it may have an influence?</p>
Marine Economy, Other Users and Material Assets	2) To promote the protection of marine assets and resources.	<p>Will the MPS promote sustainable fisheries and protect regionally and locally important fishing grounds?</p> <p>Will the MPS recognise the economic value of healthy and biodiverse marine and coastal ecosystems?</p>
Population and Human Health	3) To support the development of sustainable coastal communities.	<p>Will the MPS support the development of safe, vibrant and sustainable coastal communities? This may include sustaining incomes, employment opportunities, population sizes and demography.</p>
Population and Human Health	4) To contribute to a reduction in levels of social deprivation and inequality.	<p>Will the MPS support a reduction in socio-economic inequalities within coastal communities?</p> <p>Will the MPS support the appropriate consideration of equalities concerns such as age, race, gender and religious beliefs in the decision-making process?</p>
Population and Human Health	5) To protect and where possible enhance the physical and mental health of populations living in the marine and coastal environment.	<p>Will the MPS help to reduce physical and mental health inequalities in coastal communities and those working within the marine environment?</p> <p>Will the MPS support the promotion of healthy lifestyles by supporting appropriate coastal leisure and access opportunities?</p> <p>Will the MPS help to protect coastal communities from, and help them to adapt to, the risk of coastal erosion and flooding?</p>
Air Quality	6) To minimise emissions of atmospheric pollutants from marine activities.	<p>Will the MPS support the protection and enhancement of air quality?</p> <p>Will the MPS support actions which will not exacerbate existing areas of poor air quality?</p> <p>Will the MPS support reductions in atmospheric emissions from marine activities?</p>

AoS Topic	AoS Objective	Guide Questions
Climate Change	7) To minimise emissions of greenhouse gases (GHGs) from marine activities and maximise adaptation to the effects of climate change.	<p>Will the MPS support reductions in GHG emissions from marine activities?</p> <p>Will the MPS encourage resilience against the effects of climate change (e.g. sea-level rise, coastal flooding, change in weather patterns, species migration)?</p> <p>Will the MPS support the development of renewable energy technologies in appropriate locations?</p> <p>Will the MPS support the role of the marine environment in minimising and adapting to global climate change?</p>
Coastal Processes	8) To maintain the integrity of coastal processes.	<p>Does the MPS recognise the role of coastal processes in the maintenance of natural coastal defences, and coastal and intertidal habitats, fauna and flora?</p> <p>Will the MPS reduce risk to people and the developed and natural environment from flooding and coastal erosion by encouraging the provision of technically, environmentally and economically sound and sustainable defence measures where appropriate?</p> <p>Will the MPS prevent inappropriate development which would affect coastal processes so as to increase risk to people and the developed and natural environment from flooding and coastal erosion?</p> <p>Will the MPS ensure that value is given to the importance of coastal processes in amenity uses?</p>
Cultural Heritage	9) To protect the marine heritage and archaeological resource.	<p>Will the MPS support the protection of marine cultural heritage and archaeological resources?</p> <p>Will the MPS support the protection and enhancement of historic coastal landscapes?</p> <p>Will the MPS support the protection of socio-cultural heritage and the maintenance of a historic association with the sea?</p>
Geology and Substrates	10) To protect and maintain the quality and character of the geology and geomorphology of seabed sediments.	<p>Will the MPS ensure that the integrity of submarine geological/geomorphological features is protected through management and planning?</p> <p>Will the MPS lead to maintenance of the integrity of the seabed at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected?</p>
Landscape and Seascape	11) To maintain the quality and character of the coastal landscape and seascape and enhance where possible.	<p>Will the MPS promote the protection of landscape/seascape through management and planning?</p> <p>Will the MPS protect landscape/seascape as an essential component of the diverse, shared cultural and natural heritage and identity and as an important contributor to well being and quality of life?</p> <p>Will the MPS promote increased awareness among the public, stakeholders, and government of the value of landscapes/seascapes and their role in protecting and shaping them?</p> <p>Will the MPS ensure that the importance of all landscapes/seascapes, as well as those which are recognised as outstanding are factored into marine planning in line with present guidance and European obligations??</p>

AoS Topic	AoS Objective	Guide Questions
Marine Ecology and Conservation Sites	12) To protect, conserve and where appropriate recover biological diversity and ecosystem functionality.	<p>Will the MPS promote healthy marine and coastal habitats occurring across their natural range, and the functioning of healthy, resilient and adaptable marine ecosystems, with the distribution and abundance of species in line with prevailing physiographic, geographic and climatic conditions?</p> <p>Will the MPS promote maintenance of all elements of the marine food webs, at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity?</p> <p>Will the MPS protect and promote viable populations of representative, rare, vulnerable, and valued marine and coastal species?</p> <p>Does the MPS recognise the ecosystem importance of land/sea coupling for example through diadromous fish?</p> <p>Will the MPS help prevent the adverse alteration of ecosystems through the introduction of non-indigenous species by human activities?</p> <p>Will the MPS promote maintenance of populations of all commercially exploited fish and shellfish within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock?</p> <p>Will the MPS promote the achievement of good ecological and chemical status for water bodies as outlined at a European level?</p>
Marine Ecology and Conservation Sites	13) To protect and where appropriate improve the condition of the range of sites designated for their notable geological features, habitat, flora, fauna, historical and cultural, importance or natural beauty.	<p>Will the MPS prevent or appropriately manage activities which would result in significant effects on designated sites?</p> <p>Will the MPS promote improvement in those aspects important for the integrity of the site?</p> <p>Will the MPS promote awareness of the value and importance of such sites?</p> <p>Will the MPS promote the delivery, and support the functioning of, an ecologically coherent network of sites?</p> <p>Will the MPS encourage activities towards less environmentally sensitive locations?</p>

AoS Topic	AoS Objective	Guide Questions
Water Environment (including Marine Noise)	14) To maintain or improve the quality and character of surface and subsurface waters.	<p>Will the MPS promote the achievement of good status for the terrestrial and marine water environment as outlined at a European level?</p> <p>Will the MPS contribute to the minimisation of human-induced eutrophication, and its adverse effects, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters?</p> <p>Does the MPS recognise the ecosystem importance of land/sea coupling for example through riverine inputs?</p> <p>Will the MPS prevent the permanent alteration of hydrographical conditions leading to adverse effects on marine ecosystems?</p> <p>Will the MPS promote management of the introduction of energy, including underwater noise, at levels that do not adversely affect the marine environment?</p> <p>Will the MPS contribute to reduction of inputs of marine litter such that they do not cause harm to the coastal and marine environment?</p> <p>Will the MPS assure that concentrations of contaminants are at levels not giving rise to pollution effects?</p> <p>Will the MPS assure that contaminants in fish and other seafood for human consumption do not exceed levels established by National and European legislation or other relevant standards?</p>
Effective Management of the Marine Environment	15) To promote effective marine, land and water management mechanisms that are based upon sound science and knowledge.	<p>Will the MPS establish the mechanisms for a spatial planning system that promotes integrated coastal zone management?</p> <p>Will the MPS promote inclusive decision-making?</p> <p>Will the MPS promote the use of the precautionary principle in decision-making affecting the marine environment?</p> <p>Will the MPS promote effective dialogue and engagement with other administrative systems as necessary?</p> <p>Will the MPS support a better understanding of the marine environment to support evidence-based decision-making?</p> <p>Will the MPS support the sharing of evidence to ensure effective management mechanisms that are based on sound science and knowledge?</p> <p>Will the MPS contain policies which can be used to assist the preparation of terrestrial spatial plans?</p>

The AoS Framework has been used to appraise the MPS and has been applied in two ways. First, an 'objectives-led' appraisal tests whether the activities in the MPS support the Sustainability Objectives. It then proposes additional avoidance and mitigation measures where appropriate. This appraisal asks 'is the MPS going as far as reasonably possible to support the UK Administrations sustainability agenda'?

Secondly, a 'baseline-led' appraisal considers how marine planning under the MPS will be different from marine planning under a 'business as usual' scenario (without the MPS but with a continuation of current policy), including its likely future influence on, and implementation through, Marine Plans. It also considers how alternative approaches to the MPS could be different from the 'business as usual' scenario. This appraisal asks 'how will environmental, social and economic conditions change under the MPS compared with 'business as usual'?

Integral to the appraisal process has been the development of mitigation measures that can be used to avoid, reduce or offset any potential adverse effects of the MPS. Opportunities have also sought to improve or enhance the MPS to benefit all aspects of sustainability.

The results of the appraisal for each topic considered in the AoS are summarised in section 6 of this Non Technical Summary.

Appraisal of Cumulative, Secondary and Synergistic Effects

In line with the requirements of the SEA Directive, this AoS has considered cumulative, secondary and synergistic effects. The approach taken in the AoS of the MPS has been to consider at a strategic level if there is the potential of policy or guidance contained in the MPS to cause cumulative⁹¹, synergistic⁹² or secondary or indirect effects, or to lead to the avoidance of such effects. This includes cumulative effects of a number of MPS elements on the same topic, for example air quality, and the cumulative effects of the MPS and other plans and projects upon those topics.

Appraisal of Transboundary Effects

When assessing the performance of the MPS against the AoS Objectives consideration has been given to the potential risks of effects occurring over a wide area of influence including any effects of the MPS in other European Union (EU) member states.

3.3 Stage C: Preparing the AoS Report

Stage C corresponds with the preparation of the AoS Report and this Non Technical Summary. The AoS Report presents the findings of the appraisal to-date including the information collated during scoping, the results of the appraisal together with any mitigation measures.

3.4 Stage D: Consulting on the AoS Report and the Draft MPS

Stage D corresponds to the consultation on the AoS Report and the Draft MPS. This will be a twelve week public consultation in which comments will be invited on both documents.

Following the close of the consultation period, UK Administrations will review the feedback and revise the MPS as appropriate. If significant amendments are made to the MPS, the AoS may also need to be updated to reflect the appraisal of these amendments prior to the MPS finally being adopted.

3.5 Stage E: Monitoring the Significant Effects of Implementing the MPS

The SEA Directive requires that the plan or programme is monitored to test the actual significant effects of implementing the plan against those predicted through the assessment. It, therefore, helps to ensure that any undesirable effects are identified and remedial action is implemented accordingly.

91. Cumulative effects arise from a combination of two or more effects, for instance, where several developments each have insignificant effects but together have a significant effect; or where several individual effects of the plan or programme have a combined effect.

92. Synergistic effects – synergy occurs where the joint effect of two or more processes is greater than the sum of individual effects. Synergistic effects may result from physiological interactions (for example, through inhibition of immune response systems) or through the interaction of different physiological and ecological processes (for example through a combination of contaminant toxicity and habitat disturbance).

This will be undertaken following adoption of the MPS.

3.6 Links to Other Forms of Appraisal

In parallel to the AoS, a Habitats Regulations Assessment (HRA) and Equalities Impact Assessment screening have been completed. Both of these are reported separately.

4 Key Characteristics of the Existing UK Marine Environment











In line with the requirements of the SEA Directive a review of data was undertaken to characterise the existing environment based around the topics identified above. This included identifying how trends in this data might change in the future in the absence of the MPS and

what key problems and opportunities exist. This drew from a large body of data and appraisal work already undertaken for previous SEA studies in the UK marine area. A summary of the key findings is provided in Table 4.1.

Table 4.1 Summary of Key Characteristics of the existing UK Marine Environment by Topic

Current baseline conditions in absence of MPS	Predicted future baseline conditions in absence of MPS
<ul style="list-style-type: none"> ■ Current conditions are not particularly problematic, or are problematic in only localised areas, or there is no agreed criterion for whether it is problematic ■ Current conditions are already problematic 	<ul style="list-style-type: none"> ■ Future conditions are expected to be better than current ■ Future conditions are expected to be roughly the same as current, or some aspects are expected to get better and others worse ■ Future conditions are expected to be worse than current

Current conditions	Future conditions	Topic Summary
■	■	<p>Marine Economy, Other Users and Material Assets:</p> <p>The UK coasts and seas are intensively used for activities such as shipping, oil and gas production, fishing, aggregate extraction, renewable energy generation, military practice, tourism and recreation. Port activities are increasing; the fishing industry has generally declined in recent years (though there has been little change in numbers employed since 2003, and the value of landings has increased considerably since 2005); possible future uses include gas storage in geological formations and further renewable energy projects. Some of these uses may conflict and could cause adverse environmental impacts, e.g. decline in fish stocks, underwater noise, air and water pollution. Some coastal settlements have high levels of multiple deprivation, due to e.g. their remoteness and recent economic decline. These factors can also act as barriers to inward investment and regeneration. Conversely, development within the marine area has the potential to bring a number of long-term positive economic benefits, for example, by providing investment and employment opportunities both directly and indirectly and by stimulating regeneration within coastal communities and potentially across a wider area depending upon the level of benefits achieved.</p>

Current conditions	Future conditions	Topic Summary
		<p>Population and Human Health:</p> <p>Residents of many coastal areas are generally less healthy than those who live inland, though this reflects other aspects of demographics (e.g. age and deprivation). The UK population is expected to increase by 7.3% between 2006 and 2016, with growth lower in Scotland and Wales. Overall health is improving, though this varies by individual and area. Deprivation levels, demography, health and well-being in coastal settlements can be influenced by, for example, marine pollution incidences, coastal erosion and flood risk, air quality in coastal areas, access to the coast, and integration between terrestrial and marine planning. The provision of new employment opportunities as a result of development within the marine area could also offer a number of positive health impacts. It is widely recognised that work is good for health and well-being. Therefore, there is scope, through the promotion of new economic opportunities within the marine environment to offer long-term health and well-being benefits.</p>
		<p>Air Quality:</p> <p>Port infrastructure and shipping can cause air pollution in port/harbour areas; particulate matter is of particular concern for human health. Sources of marine air pollution include shipping and offshore oil and gas platforms. Pollution can also be caused by increased freight and transport flows arising from new port and coastal developments.</p>
		<p>Climate Change:</p> <p>Since the industrial revolution, the acidity of surface ocean waters has risen by 30% as the oceans have absorbed anthropogenic carbon dioxide (CO₂) emissions. This will worsen in the future, threatening marine ecosystem functioning. Temperature changes are likely to affect the ranges of some species. However, offshore renewable energy developments and emerging carbon capture and storage (CCS) technology, which has the potential to use depleted oil and gas fields to store CO₂, will play a significant role in reducing carbon emissions and thereby help to mitigate climate change. Such developments may also have environmental implications, but, subject to any appropriate mitigation measures, these are expected to be manageable. Shipping is a significant source of CO₂ emissions; however it can be a lower carbon method of moving goods and people than air or road.</p>
		<p>Coastal Processes:</p> <p>Sea levels rose by about 3mm per year between 1993 and 2003, and are expected to increase by 12-76cm over the next 100 years. Rising sea levels and increased storminess will affect wave energy, and will increase the risk of coastal erosion and flooding in many locations, particularly in the south-east and east of the UK. In areas with negative sediment budgets, or where coastal defence prevents the shoreline from naturally realigning, sea-level rise may result in the loss of some important mudflat, sandflat and dune environments.</p>
		<p>Cultural Heritage:</p> <p>Many coastal areas hold the remains of historic activities. A long history of fishing and maritime trade has led to many shipwrecks in UK waters. Aircraft remains (primarily World War II) may also be found on the seabed. Many of these could deteriorate over time anyway through the actions of waves etc. Dredging and fishing methods may damage exposed sites, and increased scour due to coastal defence works may expose or erode archaeological deposits. Knowledge of offshore archaeology is limited by the practical and economic problems involved in searching large areas of sea floor. Cultural heritage is not restricted to physical features but socio-cultural associations with particular areas and sense of place. This can be important for coastal communities which have strong historical connections with, for example, industrial heritage such as fishing, shipbuilding and trade. This topic is also linked to the population and human health and landscape and seascape topics.</p>

Current conditions	Future conditions	Topic Summary
■	■	<p>Geology and Substrates:</p> <p>Certain topographic features are important for the quality of habitat they provide, and several Special Areas of Conservation (SACs) with marine components have qualifying features that are geological or geomorphological (e.g. submerged sea caves). The MCAA, the Marine (Scotland) Act and the Northern Ireland Marine Bill provide a new means for conserving 'features of geological and geomorphological interest'. Currently no human activities cause significant regional scale geological changes, though trawling and dredging causes localised scour and sediment plumes. Future offshore and other developments may cause similar problems. Most marine pollution comes from land-based activities, but contaminant levels exceed those where harm may occur in only a few areas.</p>
■	■	<p>Landscape and Seascape:</p> <p>Much of the UK coast is protected by landscape-related designations (e.g. Area of Outstanding Natural Beauty, Heritage Coast). Future housing, commercial/industrial development, a significant increase in offshore wind farms, and other marine renewable projects have the potential to affect the landscape/seascape. The number of offshore oil and gas facilities is likely to decline as hydrocarbon reserves deplete, but they could continue to be used for CCS.</p>
■	■	<p>Marine ecology:</p> <p>The ecology of UK coast and marine areas varies greatly from area to area. Some fish stocks are subject to considerable fishing pressure in UK waters. This has led to regional scale ecological consequences including reductions in the abundance and distribution of a number of fragile and long lived species. Future climate change, ocean acidification and potentially eutrophication⁹³ are expected to further affect the abundance, distribution, recruitment and migration of species. The UK coast is important for seabirds and waterbirds – every year over 7 million seabirds breed in the UK. Recent years have been poor for some breeding seabirds, in part due to changes in climate and over-fishing.</p> <p>Most currently designated sites are terrestrial or terrestrial with marine components; few are exclusively marine. Several large offshore SACs are being designated, work is underway to identify new marine Special Protection Areas (SPAs), and the boundaries of some coastal and marine sites are being extended. Requirements for identification and designation of Marine Conservation Zones (MCZs) / Marine Protected Areas (MPAs) are being implemented.</p>
■	■	<p>Water Environment (Including Marine Noise):</p> <p>Nutrient inputs from land-based activities such as agriculture reach coastal and offshore marine areas and can contribute to eutrophication, effects on plankton and benthic enrichment and. marine noise comes from many sources, e.g. wind, rain, sediment transport, fish, shipping and military activities. On calm, clear days, shipping noise dominates large parts of the UK continental shelf. Noise from offshore installation operations and construction, particularly pile driving, may also be significant. This could be expected to worsen in the future with increased development in marine areas.</p>

93. Eutrophication is an increase in the concentration of chemical nutrients in an ecosystem to an extent that increases the primary productivity of the ecosystem

5 Treatment of Alternatives

5.1 Identification and Development of Reasonable Alternatives

The AoS process has proposed a range of alternatives at various times during the development of the MPS. A series of strategic alternatives were identified in the AoS Scoping Report and have since been developed further.

Alternatives Identified at the Scoping Stage

The AoS Scoping Report of October 2009 raised issues and opportunities for the MPS, which could act as triggers for considering different approaches to the MPS. The following strategic alternatives were developed at the scoping stage and presented in the Scoping Report:

1. High-level strategic alternatives to overall MPS approach and level of intervention, for example:
 - Production of an MPS which only outlines high-level Government and EU policy for the marine environment
 - Production of an MPS which also provides specific criteria-based policy guidance for activities
 - Production of an MPS which also prioritises certain activities over others where there are conflicts

2. Alternative policy options, priorities or direction. This would be undertaken as part of an ongoing iterative appraisal of the policies and/or policy themes as they are developed.

No additional alternatives were proposed as part of the scoping consultation.

Revised set of alternatives

Between November 2009 and May 2010 a number of interim AoS reviews were undertaken on the initial drafts of the MPS. Comments and recommendations on the drafts were fed back to Defra. During the period January – March 2010 further consideration was given to the issue of alternatives and those agreed for appraisal through the AoS are set out below. The alternatives have been grouped as follows:

- Alternatives to MPS production
- Alternative approaches to the MPS production
- Alternative priorities for the MPS
- Alternative forms of decision-making through the MPS

The alternatives proposed are identified in Table 5.1. Only those alternatives considered reasonable have been included in the table, i.e. those possible alternatives given the objectives and geographical scope of the MPS.

Table 5.1 Summary Assessment of Alternatives

Alternative proposed	Assessment/Outcome
<i>Alternatives to MPS production</i>	
<p>1. Do not produce an MPS</p>	<p>This is the business as usual scenario against which the preferred MPS has been appraised. This would see a continuation of existing policies and practices including existing environmental protection legislation. Marine activities are predicted to continue to expand and put further pressure on environmental resources. Spatial variations in social inequalities are expected to continue. There would also be no consistent basis for marine planning across the UK.</p> <p>There is an opportunity cost of not producing an MPS which could guide more sustainable patterns of marine development.</p> <p>Outcome: <i>This was considered to be a feasible option, being a continuation of existing practice. However, the benefits of producing an MPS were considered to outweigh those of not producing an MPS. Without the MPS, it is considered that Marine Plans would be harder to produce and Devolved Administration plans would be limited in scope as they could not include all activities in the marine area. There would be no planning powers for Scottish Ministers for retained matters if there were no MPS, for example. As such, this option has not been pursued.</i></p>
<i>Alternative approaches to the MPS production</i>	
<p>2. Produce an MPS which outlines existing high-level UK and EU policy for the marine environment, provides a framework for Marine Plans and guides decision-making affecting the marine area</p>	<p>This is the current preferred approach and has been looked at in more detail through the AoS. The production of an MPS presents an opportunity to provide a clear steer to marine planners and decision takers and users of the marine area in order to deliver more sustainable patterns of marine planning. The reiteration of existing policy enables decision takers to access the key principles of environmental, social and economic policy in one document and sets the key principles for Marine Plans. The integrated delivery of the High Level Marine Objectives (HLOs), alongside the achievement of sectoral/activity specific policy objectives, will help further ensure the sustainable development of the UK marine area. Significant emphasis would be placed on the forthcoming Marine Plans to provide additional detail and further positive outcomes and the MPS sets out the consideration of how this should be done.</p> <p>Outcome: <i>This is the preferred option taken forward in the proposed MPS. It is consistent with broader UK Administrations policies and objectives and will help ensure the sustainable development of the UK marine area, with a balance between economic, environmental and social considerations, and deliver the HLOs and the UK vision.</i></p>

Alternative proposed	Assessment/Outcome
3. Produce an MPS which also provides specific criteria-based policy guidance for activities such as:	<p>Whilst the actual implications would depend upon the exact details of the criteria, limits or zoning, this approach would provide significant opportunities to improve levels of environmental protection and enhancement in line with the emerging criteria for good environmental status. This approach would have mixed effects upon the social and economic AoS objectives depending upon how the criteria are developed. It is possible that this approach could result in restrictions on marine activities which could restrict economic growth and in some cases social regeneration. Equally, it could create more sustainable patterns of growth and more targeted socio-economic interventions based upon a more strategic and integrated form of planning. However, by trying to determine this at the UK level with collective policies it is likely that more areas would be negatively impacted upon than positively impacted. The MPS would be attempting to fulfil the function of area specific Marine Plans which will be tailored to local needs as well as national objectives in the MPS.</p> <p>There are also potential issues surrounding the feasibility and appropriateness of delivering this highly prescriptive approach in a consistent manner across all the UK Administrations. It is also noted that the UK Government and the devolved administrations as the Competent Authorities under the Marine Strategy Framework Directive (MSFD) Regulations will be under a duty to contribute to the achievement of good environmental status in UK seas.</p> <p>Outcome: <i>This would mean a much more detailed and prescriptive MPS than the current high level approach envisaged which would be very difficult to develop between UK Administrations in view of the different approaches being taken to developing Marine Plans as well as devolved responsibilities. It would also have potential to constrain Marine Plans and not allow flexibility for considering projects on a case by case basis based on the geographic features of the area and area-specific policy objectives. For these reasons, this alternative is not considered justified and has not been pursued further.</i></p>
3a. An MPS which provides specified criteria based policy guidance for activities within different zones	
3b. An MPS which considers environmental limits or standards that marine activities should achieve	
3c. An MPS which stipulates temporal restrictions for activities in certain areas	
<i>Alternative Priorities for the MPS</i>	
4. An MPS which prioritises the protection of biodiversity and, in particular designated sites, above all other activities	<p>This would involve taking an approach when licensing activities to ensure that there would be no possibility of a loss of biodiversity and no potentially damaging activities would be licensed in MPAs. Clearly this option would perform very strongly against the AoS objectives pertaining to marine ecology, designated sites and water quality and it would contribute strongly to the achievement of good environmental status. It does not preclude the continued licensing of economic activities in the marine environment but is likely to pose greater restrictions than the preferred option, and may result in greater costs to the developer in mitigation and/or the creation of compensatory habitat where appropriate. This is likely to significantly restrict economic growth and have mixed social and health impacts. There could be adverse impacts upon a wide range of marine area development opportunities which are economically very important. This could indirectly restrict job creation in areas at need.</p> <p>Outcome: <i>In reality, there are many aspects of this option which are consistent with existing requirements and which have been included in the preferred option. However, this option also goes beyond existing legislative requirements by requiring zero impacts upon biodiversity and no development in MPAs. This alternative would not reflect the balance between economic, environmental and social aspects to contribute to achievement of sustainable development which is the stated aim of the MPS. It is not consistent with either the UK HLOs or the 2005 UK Sustainable Development Strategy, and would be likely to have significant adverse impacts on the national economy by generally constraining economic development opportunities. For these reasons, this alternative has not been pursued further.</i></p>

Alternative proposed	Assessment/Outcome
<p>5. An MPS which prioritises activities which will assist in delivering the UK's carbon emissions targets above all other activities</p>	<p>This option would maximise renewable energy deployment and reduce focus on more carbon intensive industries in the marine environment. This option would contribute strongly towards achieving the UK's carbon reduction targets and may reduce adverse environmental effects associated with non low-carbon activities. Jobs in this industry would increase, potentially at the expense of jobs in other sectors, although there would be a number of transferable skills. However, it would lead to a premature end to offshore hydrocarbon production and could significantly restrict national economic growth resulting in mixed economic fortunes for coastal (and national) communities and resultant health and social effects. There is also a risk that there may be shortfalls in energy supply</p> <p>Outcome: <i>This would not reflect the balance between economic, environmental and social aspects to contribute to achievement of sustainable development which is the aim of the MPS, and would not be consistent with the UK HLOs. It would be contrary to the free market approach. It would constrain Marine Plans and remove flexibility to be able to consider projects on a case by case basis based on the geographic character of the area and area specific policy objectives. It would also be likely to have significant adverse impacts on the UK economy and the achievement of security of energy supply objectives by severely constraining the UK's ability to store gas offshore and maximise oil and gas production on the UK Continental Shelf. For these reasons, this alternative has not been pursued further.</i></p>
<p>6. An MPS which gives preference to multiple uses in a given area in all cases over activities which would prevent the use of that area for other activities</p>	<p>The preferred option for the MPS encourages the co-existence of multiple activities but this option goes much further. It has the potential to restrict a number of activities which cannot readily co-exist with others such as wind energy developments, oil and gas platforms and tidal barrages. This may also inhibit economic growth associated with single use per area activities that in combination constitute important economies within the marine environment. By indirectly restricting certain key industries this option could have adverse knock-on effects for coastal communities reliant on those activities for employment. This option may also give rise to greater cumulative environmental effects.</p> <p>Outcome: <i>This option would be restrictive as it would require multiple use in all except exceptional cases and so would constrain some key activities. It also has the potential to constrain marine economic development opportunities which are of increasing importance. It would constrain Marine Plans by removing the opportunity for area-based decisions to be made on a case-by-case basis. This would not reflect the balance between economic, environmental and social aspects to contribute to achievement of sustainable development which is the aim of the MPS, and would not be consistent with the UK HLOs. For these reasons, this alternative has not been pursued further.</i></p>
<p><i>Alternative forms of decision-making through the MPS</i></p>	
<p>7. An MPS which encourages decisions to be made taking a zero-risk approach in contrast to a risk-based approach</p>	<p>This option would seek to avoid all risks to aspects of the environment (not just biodiversity). It is likely to perform strongly against a number of the environmental AoS objectives although it is possible that this option may work against the AoS objective to adapt to climate change as some renewable energy schemes may not be licensed on a zero-risk basis. This approach would restrict economic growth opportunities in marine areas. For coastal communities, this option could produce both benefits by restricting development which may cause harm to coastal populations and adverse effects by restricting developments which are essential for our present everyday lives such as energy developments and their associated employment opportunities.</p> <p>Outcome: <i>Applying a zero-risk approach would mean that many activities, including deployment of offshore renewables, CCS, oil and gas exploration and extraction and offshore gas storage could not proceed. This would be likely to have significant adverse impacts on the UK economy and jobs in the industries affected. It would not reflect a balance between environmental, economic and social aspects, would be contrary to the aim of the MPS which is to contribute to achievement of sustainable development, and would not be consistent with the UK HLOs. For these reasons, the option has not been pursued further.</i></p>

A key consideration in the development of the MPS has been that the MPS should apply as consistently as possible across all UK Administrations, whilst respecting current devolution arrangements. This poses a challenge, since the different administrations have different mechanisms for marine management, planning and licensing different types of project, whereas the MPS is intended to apply to the UK as a whole. In practice, this has meant that the UK

Administrations have opted for an MPS which identifies issues that should be considered in devising Marine Plans. The MPS does not set UK wide priorities, criteria or limits. The preferred approach to the MPS outlines existing high-level UK and EU policy for the marine environment only and provides overarching considerations for the preparation of Marine Plans and decision making affecting the marine area.

6 Results of Topic-Specific Appraisals and Mitigation

6.1 Marine Economy, Other Users and Material Assets

The policy objectives of the MPS are set within the context of wider government plans (e.g. the low carbon transition plan), which includes the encouragement of certain activities (e.g. increased renewables deployment and CCS demonstration). The MPS has a presumption in favour of sustainable development, and recognises that marine activities can drive economic growth (section 2.5).

Most or all marine activities will be covered by the high-level policy context in Chapter 2 and by one or more of the policies which relate to specific impacts on parts of the marine environment, for instance their influence on air quality and their integrity in the face of climate change. Both these and the principles underpinning decision making in Chapter 2 of the MPS, namely to be consistent with UK, EU and international law and to take into account other plans, projects, programmes and policy statements, should provide protection for marine assets and resources, including socio-economic aspects. The MPS identifies the vital importance of marine activities for the UK economy, in particular for job creation, energy security and economic growth.

The MPS does not specifically promote or prioritise particular activities in any particular area, though Marine Plans may set out such priorities, but rather it sets out the broad policy and guidance that should be used by the Marine Management Organisation (MMO), Scottish,

Welsh and Northern Ireland Ministers and decision takers having regard to the MPS, including those responsible for NSIPs.

The high level considerations in Chapter 2 encourage co-existence of marine activities, and indicate that marine plan authorities should seek to accommodate multiple uses of the marine environment, which encourages efficient and effective use of the marine environment and recognises the vital contribution of marine activities to the economic well-being of the UK as a whole. It also notes that potential cumulative impacts must be considered, as well as how an activity may preclude the future use of an area or resource.

The MPS recognises the importance of a number of marine activities to the UK economy and it reiterates this importance in a single policy document. It also recognises the economic, social and intrinsic value of a healthy marine environment. The MPS provides in a single place greater clarity over the range of policies and legislation which affect the marine area. However, the MPS alone will not achieve significant further support to the marine economy, other users and material assets over and above what already exists through current policy as it focuses only on the broad-based promotion of sustainable development. Greater benefits are expected to result from Marine Plans which are expected to be more specific about activities and locations.

Summary of Proposed Mitigation and Enhancement Measures

The following mitigation and enhancement measures have been identified.

Table 6.1 Proposed Mitigation and Enhancement for Marine Economy and Material Assets

Alternative policy wording or mitigation proposed	Outcome for the MPS
Despite UK renewable energy and carbon reduction targets, there is no presumption of use for certain activities which may make a strong contribution to these aims. It is understood that in the preparation of Marine Plans, marine plan authorities will take account of preferred areas for different types of renewable generation and associated infrastructure, and if appropriate set out new opportunities taking into account the most sensitive areas for biodiversity and considering carefully areas with competing and incompatible uses.	This may be something that will be considered in Marine Plans but at the level of the MPS it is inappropriate to give priority to certain uses over others as the specific characteristics of the marine area being planned need to be taken into account.

In previous iterations of the MPS, the following aspects have also been amended:

- Chapter 2 of the MPS now indicates that the marine plan authorities should work closely with authorities across marine plan boundaries to understand opportunities to encourage co-existence or accommodation of multiple uses and avoidance of possible cumulative effects of activities taking place at their boundaries.

6.2 Population and Human Health

The MPS may have impacts on population both directly, by promoting or discouraging activities that affect populations, or indirectly, as a result of changing socio-economic or environmental conditions. Health is closely allied to indicators of deprivation, notably employment, housing and access to services.

There are likely to be indirect human health benefits as a result of an improvement in the economic prosperity of certain settlements which are close to activities that may expand in the future e.g. energy infrastructure. Conversely there could be some localised adverse health effects associated with new infrastructure although it should be possible to mitigate these potential adverse environmental effects.

Chapter 3 of the MPS highlights the role and importance of fisheries and the management of the marine environment to ensure that the fisheries sector is sustainable and efficient. A prosperous fisheries sector may have positive health benefits in the long-term as fish is an important source of protein.

The MPS provides guidance on the consideration of climate change and coastal change issues which should ensure that physical risks to vulnerable coastal communities are considered in the decision-making process. The MPS also provides a general emphasis on the potential recreational benefits of the coastal and marine environment.

In the long-term the expansion of a number of activities including shipping, energy, ports, leisure and recreation, in addition to providing wider socio-economic benefit to the UK, could

also contribute to the vitality of coastal settlements, particularly where there is currently an overdependence on one specific industry or activity. However, the MPS does not provide specific details about issues in particular areas, as this is something that should be addressed in the emerging Marine Plans as necessary.

Related to the issue of vibrancy and vitality in coastal communities is the issue of the quality of the local environment. Together with access to services, this is a key component of quality of life. Some coastal settlements suffer from poor quality living environments either as a consequence of economic decline and a lack of inward investment or as a result of environmental degradation suffered through coastal industry. The MPS identifies the value and importance of a number of industries which are expected to grow and potentially increase the economic fortunes of settlements which depend on them. In time this has the potential to encourage inward investment in parallel with local authority regeneration initiatives.

The ability for the UK to have a secure and affordable access to energy is essential for business and society, in particular for powering and heating our homes. This is especially important for the elderly. The MPS identifies the importance of this in a number of areas, notably in its guidance on the offshore oil and gas industry, renewable energy and electricity infrastructure.

The expansion of marine activities in the future is likely to offer long-term educational and skills benefits through the development of emerging technologies such as CCS which could help to create niche markets and new business opportunities across the UK.

Summary of Proposed Mitigation and Enhancement Measures

The following mitigation and enhancement measures have been identified.

Table 6.2 Proposed Mitigation and Enhancement for Population and Human Health

Alternative policy wording or mitigation proposed	Outcome for the MPS
In Chapter 3, under Tourism and recreation, the MPS should consider the aim of promoting improved access to the coastline through Marine Plans and through new developments. It could also encourage outdoor pursuits and a greater appreciation of nature that improve health and foster both physical and mental well-being.	The MPS includes text on encouraging tourism of which coastal access is an essential part. The MPS includes text to encourage a greater enjoyment of the marine environment, which could benefit health and well-being.
In Chapter 2, the MPS should seek to more clearly identify social and health impacts through encouraging social and health impact assessments for certain, potentially damaging activities.	The MPS includes provisions for human health issues and impacts to be considered by marine plan authorities under 'Economic and social considerations' in Chapter 2.
Throughout the MPS, decision takers should give particular attention to applications which could address social and health deprivation in more deprived areas at need and to avoid activities which may result in worsening levels of deprivation in those areas. This could be especially highlighted in the high-level considerations of Chapter 2.	The MPS covers reference to economic and social aspects/regeneration and at more detailed level it would be for consideration on an individual basis under Marine Plans, so is not appropriate for the MPS.
The MPS identifies how developments need to give consideration to impacts upon coastal tourism. It should also identify the role of the MPS in helping to develop tourism in areas which have suffered socio-economic decline in the past e.g. seaside towns. This could be included within Chapter 3.	The importance of tourism to coastal communities is now discussed in Chapter 3 and in the socio economic consideration sections of Chapter 2 which also recognises the need for regeneration.
The MPS could emphasise the positive role that ecosystem services play in maintaining the quality of the marine environment and its consequent socio-economic benefits. This could be acknowledged in the Marine Environment section of Chapter 2.	Further reference has been made to ecosystem services in the 'Marine Environment' section of Chapter 2. However, socio-economic benefits are not specifically detailed.

In previous iterations of the MPS, the following aspects have also been amended:

- In response to the suggestion to include a separate section on how Marine Plans should consider social, health and equalities issues, the MPS now includes provisions for human health issues and impacts to be considered by marine plan authorities under 'Economic and social considerations' in Chapter 2.
- The AoS highlighted that the MPS should emphasise the importance of activities in the

marine environment for stimulating economic activity in coastal settlements and the role this has in stimulating inward investment and encouraging the creation of vibrant communities at the coast as well as the wider UK socio-economic benefits. References to economic and social benefits were subsequently included under several activities, predominantly with regard to job creation as well as in Chapter 2.

- Reference to the effects of marine noise on people is now included in Chapter 2.

- Further text was added into the MPS which identified that many local seaside communities and businesses rely on the marine environment for their livelihoods and regeneration.

6.3 Air Quality

A number of activities are identified in the MPS as being likely to expand in the future, including defence, energy, shipping, ports and recreation. Each of these activities has the potential to affect air quality, both for the worse in the case of additional emissions, and for the better from the application of new cleaner technology. Increased emissions may result from the construction of new facilities onshore, and the operation of installations, including transport. The health of people living in coastal communities may be affected by poor local air quality originating from coastal activities (including for example port expansion), and deposition of pollutants from offshore activities may also lead to the acidification or eutrophication of terrestrial, aquatic and marine ecosystems (impacting on biodiversity and damaging valued habitats). Air pollution, particularly from shipping, is a

transboundary issue requiring co-ordination with authorities in neighbouring countries.

The MPS requires that marine planning authorities take air quality impacts into account when making decisions, but it does not detail particular criteria for the consideration of air quality for particular activities. As such, it does not add to existing statutory and regulatory requirements or provide additional protection for air quality. Baseline conditions are not anticipated to change significantly as a result of the implementation of the MPS.

By requiring that air quality impacts are considered in decision-making, the MPS supports the AoS objective and the guide questions. It re-emphasises the importance of legislative controls and the need to improve air quality. There is potential for more detailed policies to be developed related to this topic in the Marine Plans to be developed in accordance with the guidance in the MPS. Many of the uncertainties arising from the appraisal, such as the location and nature of particular projects, may be addressed at this stage of the marine planning process.

Summary of Proposed Mitigation and Enhancement Measures

The following mitigation and enhancement measures have been identified.

Table 6.3 Proposed Mitigation and Enhancement for Air Quality

Alternative policy wording or mitigation proposed	Outcome for the MPS
Developments and activities are encouraged to use effective and appropriate emissions abatement technologies in order to minimise the release of atmospheric pollutants. Innovative approaches that deliver reductions in emissions of atmospheric pollutants are encouraged. This should be made clear in Chapter 2.	Additional text included in Chapter 2 of the MPS regarding how Marine Plans should accommodate and encourage innovation and best use of available technologies and techniques.
All activities should be encouraged to use best practice construction environmental management techniques to minimise the adverse effects of construction dust. Similar practice would be required during decommissioning. This should be made clear in Chapter 2.	Point addressed with regard to encouraging the best use of the available technologies and techniques as above.

In previous iterations of the MPS, the following aspects have also been amended:

- The text in Chapter 2 was strengthened to reflect a wider range of sources of emissions to air and potential air quality impacts for consideration in Marine Plans.
- The MPS was amended to identify that air quality considerations should be given more weight if likely to affect an Air Quality Management Area.

6.4 Climate Change

The marine environment is vulnerable to the potential impacts of climate change. The MPS contains guidance for marine planning authorities on assessing the impacts from climate change when preparing Marine Plans. This is concerned with measures to adapt to the possible and likely effects of changing weather patterns and higher sea levels. Guidance is also

provided within the coastal change section that includes the requirement to consider climate change in decision-making.

Several activities in the offshore and coastal zones both contribute to, and help to mitigate against, the emission of GHG into the atmosphere. Such activities, including oil and gas extraction, shipping, renewable energy and CCS, are not directly promoted by the MPS but their expansion is predicted through a reiteration of other policies. Topic specific guidance on climate change in relation to these activities is not provided.

The MPS is considered to be broadly supportive of the AoS framework, but without proposing any additional policy or guidance beyond what already exists. The baseline conditions are not expected to change significantly as a result of the implementation of the MPS.

Summary of Proposed Mitigation and Enhancement Measures

The following mitigation and enhancement measures have been identified.

Table 6.4 Proposed Mitigation and Enhancement for Climate Change

Alternative policy wording or mitigation proposed	Outcome for the MPS
It should be made clear in Chapter 2, under Climate Change Adaptation, that assessments should cover the effects of GHG emissions from activities as well as measures to adapt to climate change. This should include indirect effects in addition to direct effects such as downdrift implications for flooding as a result of coastal defence works as discussed in the section introduction. Similarly, it may include the need to consider alternative coastal flood defence options downdrift.	Chapter 2 of the MPS includes mention of recognising the benefits of climate change mitigation actions under issues for consideration on climate change adaptation. It is not felt appropriate for the MPS to provide greater detail as suggested.
It is recommended that stronger text is included on GHG emissions in Chapter 2 such as: "Activities which make significant or cumulative contributions to greenhouse gas emissions should be accompanied by appropriate mitigation measures, e.g. carbon capture technologies once commercially viable".	Chapter 2 of the MPS now includes mention of recognising the benefits of climate change mitigation actions under issues for consideration on climate change adaptation. It is not felt appropriate for the MPS to include the specific detail indicated.
It is recommended that the MPS should state in Chapter 3 that renewable energy technologies will only be supported in locations which seek to maximise sustainability benefits and minimise harm.	This has not been included. Every decision should ensure that impacts on the environment are minimised and that mitigation measures are put in place where appropriate, so it would run contrary to this approach to be prescriptive regarding renewable energy technologies.
The guidance under coastal change in Chapter 2 should refer to the need for Marine Plans and project assessments to be made of the impact of climate change on coastal erosion and deposition as well as on coastal flooding.	Chapter 2 in the MPS includes reference to marine planners having to be satisfied that activities and developments will be resilient to coastal change and flooding, taking account of climate change.

In previous iterations of the MPS, the following aspects have also been amended:

- Ocean acidification was identified as an issue in the MPS.

6.5 Coastal Processes

A number of activities are identified in the MPS as being likely to expand in the future largely due to existing UK policy, including: energy, shipping, ports and recreation which have the potential to have direct and indirect effects upon coastal processes. For example, new port infrastructure may require maintenance dredging which can affect sediment movements.

Chapter 2 of the MPS provides specific guidance for marine plan authorities in relation to coastal processes in the Coastal Change section and indirectly in the Climate Change Adaptation section. These recognise the possible influence of climate change on coastal processes and a number of activities which may result in negative effects at the coast (e.g. through effects resulting from the interruption/alteration of sediment transport) and associated receptors, for instance the physical coastline, seabed ecology, heritage assets and biodiversity. The section therefore provides a limited level of information

that marine plan authorities should consider in the preparation of Marine Plans.

The MPS does not provide specific guidance with regard to mitigation of undesirable effects resulting from activities, rather it emphasises the need to mitigate negative impacts where possible at various stages of a project's development in accordance with legal requirements, as well as ensuring that a risk-based approach is adopted. Whilst there is a lack of specific detail, the wording of the MPS will allow it to remain current as research and mitigation measures for this topic evolve with time.

The MPS is considered broadly supportive of the AoS Framework. However, the guidance presented within the MPS does not provide any further measures to mitigate coastal change over and above what already exists and as such it is not considered that the future baseline conditions are likely to be significantly affected by the implementation of the MPS.

Summary of Proposed Mitigation and Enhancement Measures

The following mitigation and enhancement measures have been identified.

Table 6.5 Proposed Mitigation and Enhancement for Coastal Processes

Alternative policy wording or mitigation proposed	Outcome for the MPS
<p>In the Coastal Change section of Chapter 2, the potential benefits and impacts of coastal defence works should be considered with reference as appropriate to the relevant policy and guidance on flood and coastal erosion risk management.</p>	<p>Not included. In England and Wales, Shoreline Management Plans which are already mentioned in MPS, and appraisal guidance (from the Environment Agency) which relates to funding issues, are the relevant key documents.</p>
<p>In Chapter 2, the Coastal Change section could stipulate that developers or planning authorities should consider the vulnerability of coastal regions to climate change using the most recent scenarios and projections (e.g. UKCP09 sea-level projections), and the implications for any given development and that of existing infrastructure and biodiversity. The appropriate projections could be used to provide an assessment over the lifetime of the development, and help inform any required adaptation/mitigation of effects.</p> <p>The requirement to assume the high emissions scenario for development lifetime in previous iterations of the MPS was more in line with the precautionary approach of the HLOs, and the MPS could be strengthened by its reinstatement.</p>	<p>Not included. There is already reference in the climate change adaptation section about using the latest risk assessments and projections. The requirement to assume high emissions scenarios goes beyond existing practice.</p>
<p>With reference to the marine plan authority's guidance in Chapter 2 for Coastal Change, there is no specific mention of adaptation measures, nor that applications should be reconsidered if new climate projections become available following the production of an Environmental Statement (ES).</p>	<p>Section on climate change refers to ensuring appropriate adaptation measures are identified. Adaptation measures are covered in Shoreline Management Plans (SMPs) in England and Wales. Footnote added on SMPs. The MPS does not mention that applications should be reconsidered if new climate change projections become available.</p>
<p>Suggest including under the Coastal Change issues for consideration (Chapter 2) that "marine plan authorities should not consider development which may contribute to undesirable geomorphological alteration or significant habitat loss in areas at high risk and probability of coastal change, taking into account the possible indirect effects of any development."</p>	<p>Not included as considered too definite/prescriptive.</p>
<p>No wider information/guidance is provided or signposted in Chapter 2 for marine plan authorities about how undesirable coastal change may be managed. For instance could this be through the provision of compensatory habitat, or the imposition of hard or soft engineering at the coast, which may be of medium- to long-term significance depending on the life of the development, and may have significant wider effects.</p>	<p>Not included as this information is already covered in SMPs which will inform Marine Plans.</p>

6.6 Cultural Heritage

The waters around the British Isles are rich in heritage assets, ranging from prehistoric artefacts on former land surfaces now submerged by higher sea levels to modern wrecks and the remains of wartime aircraft. In the absence of actions to protect archaeological resources in the coastal and offshore zones it can be assumed that they will experience deterioration over time from a combination of natural change and human interference.

The MPS requires the identification and assessment of heritage assets potentially affected by development proposals. Specific consideration of heritage assets in the preparation of Marine Plans is required but activity-specific guidance is

generally not provided. The MPS therefore reinforces the present regulatory obligations under the SEA and EIA Regulations and emphasises the importance of thorough and accurate heritage assessment.

However, it is unlikely to significantly alter existing practice or regulatory and assessment regimes which follow established policy and legislation. As such, it is unlikely that future baseline conditions will change significantly as a result of the MPS alone.

Summary of Proposed Mitigation and Enhancement Measures

The following mitigation and enhancement measures have been identified.

Table 6.6 Proposed Mitigation and Enhancement for Cultural Heritage

Alternative policy wording or mitigation proposed	Outcome for the MPS
Where terrestrial designations are identified it should be clear that these are likely to be affected indirectly (i.e. in terms of their setting or the need for associated onshore developments) or directly if the site extends into an area subject to marine planning and licensing.	This has not been made explicit, but by recognising various categories of terrestrial designations and by highlighting the need for consideration of both direct and indirect impacts, the MPS is considered to provide sufficient coverage of this topic.
The archaeological resource on the UK continental shelf is much more diverse than stated in the draft and includes submerged landscapes, evidence of past cultures and military aircraft. This should be made clearer in Chapter 2 of the MPS.	It is considered that the examples presented in the MPS are sufficient.
The benefits of the MPS for maintaining the vitality of coastal communities, particularly those in remote parts of the UK, could be better identified and emphasised. Links between this aspect of cultural heritage and other topic areas that impact upon socio-economic well-being (i.e. energy, ports and harbours, fisheries, aquaculture) should be emphasised in Chapter 2.	Reference to the role of the historic environment and heritage assets in maintaining the vitality of certain coastal communities has been included in Chapter 2. Specific references are made to inter-relationships with tourism and regeneration.
The MPS should, in the overarching considerations of Chapter 2, promote good design in marine developments which is both sympathetic to existing heritage and will give longevity to the quality and perceptions of the development.	The MPS has included text on the need for good design generally.

In previous iterations of the MPS, the following aspects have also been amended:

- An earlier draft of the MPS identified more specific guidance on how more important heritage assets should be afforded greater protection and that material loss of assets of highest value would be unacceptable. This has been reinstated in Chapter 2.
- The MPS now makes clear, in Chapter 2, that indirect effects upon cultural heritage should also be key considerations in determining applications and developing Marine Plans.
- It was recommended that heritage assets that are less tangible, ie undesignated sites, landscapes and cultural aspects are also recognised as being important factors in decision-making. This is now included in Chapter 2.

6.7 Geology and Substrates

Energy from renewable sources, the storage of gas and carbon dioxide (CCS) in depleted hydrocarbon reservoirs and salt caverns, the exploitation of oil and gas reserves, as well as aggregate extraction and fishing all have direct and indirect effects on geology and substrates of the UK Continental Shelf.

Those activities generating physical disturbance to the seabed or which result in the discharge of contaminants to the sea are already subject to regulation and environmental protection

measures including EIA and are identified in Chapter 3. The MPS recognises the possible designation of marine sites of geological or geomorphological interest as outlined in the MCAA and Marine (Scotland) Act, though it does not present any new policy with regards to geological conservation.

Chapter 2 recognises the need to avoid harm to, and protect, the most important geological conservation interests including MCZs and Sites of Special Scientific Interest as well as providing consideration to those sites found in the wider environment. The MPS refers to the MSFD qualitative descriptors of good environmental status, one of which is applicable to Geology and Substrates: *“Sea floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected”*. The MPS also recognises the possibility that good design in developments through building-in beneficial biodiversity or geological features could make a positive contribution to the environment.

It is not anticipated that the policies in the MPS will further contribute to environmental protection measures for the marine environment already in place through existing legislation, and those new measures generated by the MCAA and Marine (Scotland) Act, though they do positively contribute towards the achievement of the AoS objective and guide questions.

It is unlikely that future baseline conditions will change significantly as a result of the MPS alone.

Summary of Proposed Mitigation and Enhancement Measures

No specific outstanding mitigation recommendations have been developed with regard to Geology and Substrates.

6.8 Landscape and Seascape

An increase in the number of offshore wind farms and the deployment of other forms of offshore marine renewable devices are likely to lead to an increase in offshore surface infrastructure and resultant visual impacts. The development of CCS and the maximisation of oil and gas exploration may lead to some new infrastructure, or the maintenance of some existing offshore infrastructure. However these are likely to be too far from the shore to be perceptible from most coastal locations.

Seascape is mentioned as part of the HLOs in the MPS and in a dedicated section in Chapter 2. The MPS identifies that the nature of visual impacts are site and development specific.

The guidance in Chapter 2 identifies that when preparing Marine Plans the marine plan authorities should consider visual impacts on all coastal areas, not just those that are particularly important for seascape. Furthermore, when considering the impact of an activity on seascape, the guidance identifies that the authority should take account of existing character and quality and how highly it is valued and its capacity to accommodate change.

Overall, the guidance provided in the MPS does not extend greatly beyond what is already

contained within existing terrestrial policy statements. However, the requirement for marine planners to consider visual impacts and seascape character and quality for all seascapes, to carry out a strategic assessment of visual impacts as part of the Marine Plan processes, and to consider the historical, social and economic importance of seascapes, is positive and should provide a suitable level of environmental protection.

Summary of Proposed Mitigation and Enhancement Measures

No specific mitigation or enhancement measures have been made on the most recently assessed version of the MPS.

However, in previous iterations of the MPS, the following aspects have been amended:

- The Seascape section in Chapter 2 (formerly Chapter 3) was amended to reflect the development specific nature of seascape impacts, and that the capacity of seascapes to accommodate change of specific developments should be accounted for.
- The design of developments to aid mitigation has been added to the issues for consideration in Chapter 2.
- The European Landscape Convention (ELC) definition of landscape has been referenced in Chapter 2.
- Reference to the economic and social aspects of landscape/seascape has been made.

- The Seascape section in Chapter 2 highlights the need to consider landscapes which are both designated as exceptional, and those with no designation. This broadens the consideration of landscape impacts and is more consistent with the principles of the ELC than previous iterations of the MPS.
- Landscape Character Assessment is referenced as a technique which may be used to aid the consideration of the impacts of specific developments on seascape.

6.9 Marine Ecology and Conservation Sites

The protection of biodiversity is central to the UK Administrations' vision for clean, healthy, safe, productive and biologically diverse oceans and seas and is enshrined within the MPS through the incorporation of a number of relevant HLOs. The MPS summarises high level potential impacts on marine ecology and biodiversity associated with a range of marine activities and provides guidance for marine plan authorities and other relevant decision takers.

The UK supports a wide range of designated conservation sites which cover significant areas of the coastal and marine environment. These sites may be adversely impacted by some of the activities of relevance to the MPS including defence, energy, shipping and ports, marine dredging and disposal, marine aggregates, aquaculture, fisheries and leisure activities. Potential impacts include physical disturbance and destruction, noise, physical presence and potential barrier/collision risks, emissions of pollutants, accidental spillages etc.

The MPS indicates that marine plan authorities should be mindful that the UK aims to ensure a halting/reversal of declines in priority habitats and species, and biodiversity conservation as a consideration in all decisions and policies.

The MPS provides guidance for the marine plan authorities to consider in the development of its Marine Plans which are also applicable at a development specific level, and includes a number of issues for consideration, for instance that development should avoid significant harm and where appropriate provide suitable compensatory measures, and aim to provide built-in beneficial biodiversity features. In the context of marine ecology and conservation, marine plan authorities are to take into account legislative provisions at the international and national level and ensure the protection of regulatory protected species and habitats (and other species of principal importance for biodiversity conservation), and take account of the commitment to develop an ecologically coherent network of MPAs.

The MPS identifies that the MSFD will put in place a programme of measures to achieve good environmental status for seas by 2020 and these should be taken account of by marine plan authorities. This supplements the obligation under the Water Framework Directive (WFD) to achieve good ecological status of inland, transitional and coastal waters (out to 1nm in England, Wales and Northern Ireland and 3nm in Scotland). The guidance on climate change is also of relevance.

Whilst the MPS does not provide new policy in relation to biodiversity/marine ecology, it is considered that the MPS is generally supportive

of the relevant AoS objectives. It is not considered that the guidance in the MPS achieves any further protection of biodiversity and conservation sites over and above what already exists through established processes and legislative requirements. As such, it is unlikely that future baseline conditions will change significantly as a result of the MPS alone.

Summary of Proposed Mitigation and Enhancement Measures

The following mitigation and enhancement measures have been identified.

Table 6.7 Proposed Mitigation and Enhancement for Marine Ecology and Conservation Sites

Alternative policy wording or mitigation proposed	Outcome for the MPS
Under MPAs in Chapter 2, no reference is made to Marine Nature Reserves. Reference should also be made to the Natura 2000 sites in the process of being designated i.e. draft, candidate and possible equivalents of SACs and SPAs and Sites of Community Importance.	References to SACs and SPAs have been included in section 3.1. Also a footnote reference to Natura 2000 sites has been added in Chapter 2 which will include future SACs. There are footnote references to Areas of Special Scientific Interest (ASSIs) in section 3.1. Also references to Ramsar sites in section 3.1.

In previous iterations of the MPS, the following aspects have also been amended:

- Further clarity was added to section 2.7 highlighting that marine plan authorities should ensure that appropriate weight is attached to designated sites of international, national and local importance. Additional text also indicates that the marine plan authority should ensure that wildlife species enjoying statutory protection or other species and habitats of principal importance for conservation are protected from the adverse effects of development, where appropriate.
- Text was added to encourage consideration of how the effects of noise on wildlife can be mitigated and minimised.
- Further references were added regarding the role of the MSFD.
- The MPS noted a wider range of potential effects relating to ports than had previously been included, notably with respect to coastal and estuarine ecology.
- The MPS now recognises the importance of maintaining biodiversity and marine conservation through an ecosystem based approach.

- Clarity has been added regarding the HRA process.
- Text was modified to indicate that decision takers should ensure activities do not hinder achievement of the objectives of an MCZ or MPA as set out in the designation order for the MCZ.
- The text now makes reference to ASSI and Ramsar sites, and the MPS recognises the importance of pSPAs.
- The MPS now recognises that those developments which cannot avoid or mitigate harm, or provide appropriate compensation, should be refused.
- The goal to conserve an ecologically coherent network of sites has been included in the MPS.

6.10 Water Environment (including Marine Noise)

The MPS provides summary information on the range of impacts that marine activities covered by the MPS may have on the water environment including noise generation, pollution, hydrological and hydrodynamic changes, and marine litter. Relevant guidance for marine plan authorities is provided within the MPS.

Whilst the MPS recognises the importance of maintaining or improving the quality and character of surface and subsurface waters, it offers little in addition to existing legislation and regulation. However, the MPS will likely facilitate the implementation of the MSFD which will put in place a programme of measures to achieve or maintain good environmental status for seas by 2020. The MPS recognises that decisions need to take account of the WFD which seeks to achieve good ecological status/potential by 2015, and requires the prevention of deterioration in status of all water bodies now and in the future. It also recognises a number of activities that may, without mitigation, negatively contribute to the achievement of MSFD and WFD objectives with regard to the water environment.

Of particular value is that marine plan authorities should consider how the effects of noise and vibration on wildlife can be mitigated and minimised, taking account of known sensitivities to particular frequencies of sound, and should consider how significant adverse effects on health can be avoided. However, in general, the MPS is unlikely to significantly alter existing practice and existing regulatory and assessment regimes which follow established policy and legislation. As such, it is unlikely that future baseline conditions will change significantly as a result of the MPS alone.

Summary of Proposed Mitigation and Enhancement Measures

The following mitigation and enhancement measures have been identified.

Table 6.8 Proposed Mitigation and Enhancement for Water Environment (including Marine Noise)

Alternative policy wording or mitigation proposed	Outcome for the MPS
In the guidance for marine plan authorities on noise in Chapter 2 recommend adding that mitigation or minimising of effects of noise on wildlife should take into account seasonality and impacts particularly on auditory sensitive species.	MPS section 2.8 has included text as follows: <i>In developing Marine Plans, the marine plan authority should take a strategic overview of man-made noise sources and assess the potential cumulative effects of noise and vibration across sensitive receptors in the marine area, balanced against potential socio-economic benefits. Marine plan authorities should be mindful of guidance issued by relevant statutory conservation agencies. They should consider how the effects of noise and vibration on wildlife can be mitigated and minimised, bearing in mind any known sensitivities to particular frequencies of sound, and should consider how significant adverse effects on health can be avoided.</i>
The guidance in Chapter 2 should promote careful design which should also consider physical modification and flow maintenance, not just pollution control.	MPS section 2.3 has been revised to reflect that decision making should take account of the benefits that good design can deliver.
Marine litter is highlighted in Chapter 3 of the MPS as a potential environmental issue exclusively for aquaculture and tourism and recreation, and this could be made more widely applicable.	Reference has now been made to the MSFD indicator relating to marine litter which is widely applicable.

In previous iterations of the MPS, the following aspects have also been amended:

- Text regarding ocean acidification as a result of CO₂ leakage and CCS was clarified.
- The importance of the WFD and achievement of good environmental status under the MSFD has been emphasised within the MPS.

6.11 Effective Management of the Marine Environment

This chapter is cross-cutting and does not relate to a particular topic area. It seeks to assess the effectiveness of the MPS in promoting marine, land and water management mechanisms that are based upon sound science and knowledge.

The MPS performs well against some of the AoS Objective Guide Questions. It requires that decisions be made with reference to the HLOs, two of which are specifically to Promote Good Governance and Use Sound Science Responsibly. References are also made that where evidence is inconclusive, decision makers need to apply precaution within an overall risk based approach in accordance with the sustainable development policies of the UK Administrations.

Guidance is also included on the importance of gaining input from relevant stakeholders when making decisions on consent applications in the marine environment, and of using the best and latest information available.

The MPS reiterates good sustainability principles within its guidance and seeks to steer the sustainable development of the marine area. However, given its very high-level nature, the MPS alone cannot be solely responsible for delivering this and it will be for the Marine Plans (which the MPS enables) to provide further details. The MPS does not seek to control the quantity or location of activities, and it is not therefore possible to exclude the possibility of cumulative adverse environmental impacts. However the MPS does address the need for decision-makers to consider cumulative effects in the high level approach to marine planning in Chapter 2, and for specific developments in Chapter 3, and thereby ensures delivery through Marine Plans.

It is recognised that the MPS forms part of a new marine planning system. The decision-making systems established across the UK Administrations should help promote an approach that seeks to take a strategic and

consistent view wherever possible. More detailed and spatially specific Marine Plans will help to address issues at a local level not covered within the MPS.

Summary of Proposed Mitigation and Enhancement Measures

Specific mitigation has not been proposed in this chapter. Recommendations in the topic-specific chapters seek to address any required improvements.

6.12 Cumulative and Transboundary Effects

The cumulative effects of the implementation of the MPS cannot be considered in isolation. There is a wide range of existing and forthcoming UK, EU and international initiatives designed to obviate or reduce adverse effects of human activities to sustainable levels.

The MPS does not provide spatial information on the nature and extent of potential marine activities but rather provides a high level policy context within which Marine Plans will be developed. The approach of the MPS (and subsequent Marine Plans) is “to recognise that pressures on the use of our seas will continue to increase; to integrate competing demands on the marine environment; and to encourage the co-location of compatible activities wherever possible”. It is likely given this approach that cumulative impacts are possible from the implementation of Marine Plans.

When considering cumulative impacts at the plan or project level, the MPS notes that decision takers will need to consider whether:

- the cumulative impact of an activity, either by itself over time or diffuse activities in conjunction with others, outweighs the benefits.
- a series of low impact activities would have a significant cumulative impact which outweighs the benefit
- an activity may preclude the use of the same area/resource for another activity which is of national significance.

Given the range of marine activities and environmental sensitivities that will be covered by Marine Plans, the identification of potential cumulative impacts at the strategic level of the MPS is difficult. However, based on previous marine SEAs, the following cumulative impacts may have to be addressed as part of future Marine Plan formation (and/or project proposals):

- Underwater noise
- Physical damage to seabed features and habitats
- Physical presence of coastal and offshore infrastructure
- Hydrographic alteration
- Coastal and marine discharges
- Atmospheric emissions
- Tangible and intangible cultural resources
- Commercial harvest of living resources

- Commercial extraction of non-living resources
- Ecosystem alteration
- Sustainability of multiple uses

In the short to medium term, it is likely that potential cumulative impacts are most likely to be generated in coastal and nearshore waters given the large number of activities and environmental sensitivities within this area. In the future, as many industries go further offshore, the potential for cumulative impacts in offshore areas is likely to grow.

The AoS has concluded that the MPS alone is unlikely to result in significant changes to existing environmental, social and economic conditions, rather it will be the Marine Plans which are expected to have a greater influence. As such, it is not considered that the MPS would result in significant adverse cumulative effects in its own right.

The scale and consequences of environmental effects in adjacent state territories due to activities covered by the MPS would typically be less than those in UK waters. In view of the range of existing controls and mitigation measures, and those anticipated for example through implementation of the MCAA and the MSFD, it is considered that such transboundary effects are unlikely to be significant. It is anticipated that the marine plan authorities and other competent authorities will give due weight to the potential for and mitigation of transboundary effects in the development of Marine Plans and in the consideration of consent/permit applications for activities and developments.

7 Monitoring

The final stage of the AoS process is to monitor the MPS to test how it performs against the effects predicted during the AoS. Monitoring therefore helps to ensure that any undesirable sustainability effects are identified and allows remedial actions to be directed accordingly.

The MPS itself will not lead to direct sustainability effects, but there could be indirect effects when its guidance is used by decision takers. The MPS is not spatially specific and the exact types, locations or quantities of development that will be granted consent or a licence are not known.

For these reasons, a wide range of potential sustainability effects are possible and the likelihood of such effects occurring will depend upon how the guidance presented in the MPS is used and applied. Monitoring will therefore focus upon key trends within the marine environment generally, although it will not necessarily be possible to attribute these specifically to the MPS.

The monitoring framework proposed for the MPS consists of a number of indicators that have been developed to record potentially significant sustainability effects related to each of the AoS Objectives. It is intended that a review of monitoring for each indicator will be undertaken on a six yearly basis. Monitoring the MPS will make use of data collected for existing programmes wherever possible, for example, the MSFD.

Conclusions and Next Steps

The AoS Report will be presented for consultation alongside the draft MPS from July-October 2010.

As part of this consultation we would appreciate your feedback. Feedback received from consultees in relation to the AoS will be reviewed and considered. A Post Adoption

Statement will be published alongside the Final MPS which will summarise the consultation responses received and explain how the AoS has influenced and been integrated into the development of the MPS. The target date for publication of the Final MPS is spring 2011 with the preparation of Marine Plans likely to commence (on a phased basis) at that time.

Draft UK Marine Policy Statement: Impact Assessment

HM Government
Northern Ireland Executive

Scottish Government
Welsh Assembly Government



Title: Marine Policy Statement Lead department or agency: Department for Environment Food and Rural Affairs Other departments or agencies:	Impact Assessment (IA) IA No: Defra1009 Date: 09/06/2010 Stage: Consultation Source of intervention: Domestic Type of measure: Other Contact for enquiries: Rhonda Scobie-Crago
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Summary: Intervention and Options

What is the problem under consideration? Why is government intervention necessary?
 Our seas are subject to competing demands, pollution and other damage, and yet the ecosystem services they provide are invaluable (e.g. regulation of climate change, flood risk and water quality and cultural services such as recreation). The current system for management is ad hoc, inconsistent, incoherent and fails to fully consider the cumulative impact the decisions we take have on the environment. It is also considered to be a burden to both regulators and industry, acting as a barrier to economic growth. Government intervention is necessary to introduce a more integrated forward looking policy and evidence driven approach; simplifying the system and enabling a consistent, coherent approach to decision-making and for industry to be clear on how their proposals may be viewed.

What are the policy objectives and the intended effects?
 The objective of marine planning is to manage marine activities in a more strategic way, avoiding and managing conflicts and taking account of how ecosystems function. The overall policy goal is to contribute towards clean, healthy, safe, productive and biologically diverse oceans and seas. The approach is guided by 5 high level marine objectives to which this proposal should contribute (known as the 'high level marine objectives'): to achieve a sustainable marine economy; ensure a strong, healthy and just society; live within environmental limits; promote good governance and use sound science responsibly.

What policy options have been considered? Please justify preferred option (further details in Evidence Base)
 Several public consultations since the Marine Stewardship Report in 2002 have sought views on marine planning and the approach to it. As a result of these considerations the Marine and Coastal Access Act 2009 provided for a system of marine planning. There are two distinct components of marine planning set out in the Act. 1) the UK MPS which sets out the policy framework 2) Marine Plans which implement those policies in marine plan areas. The current consultation concerns 1), seeking views on a draft of the UK MPS. The Impact Assessment therefore has two options for implementing the requirements of the Act:
 1) An option where no UK MPS is developed and we continue with the status quo.
 2) There is a UK MPS.
 This IA does not include the substantive impacts of the implementation of marine planning; it focuses instead specifically on the impacts of creating a document which brings policies into a single framework.

When will the policy be reviewed to establish its impact and the extent to which the policy objectives have been achieved?	It will be reviewed when the policy authorities consider appropriate as set out in the MCAA 2009 and in line with criteria established in the MPS.
Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?	Yes

Ministerial Sign-off For consultation stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister:  Date: 18 June 2010

Summary: Analysis and Evidence Policy Option 1

Description:

Introduce a Marine Policy Statement

Price Base Year N/A	PV Base Year N/A	Time Period Years 20	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	High: Optional	Best Estimate: None

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	None	None	None

Description and scale of key monetised costs by 'main affected groups'

The UK MPS guides the implementation of the marine planning system and of management of the marine environment before marine planning is fully implemented. No direct costs associated with having a UK MPS have been identified.

Other key non-monetised costs by 'main affected groups'

None

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	None	None	None

Description and scale of key monetised benefits by 'main affected groups'

All benefits are currently non-monetised. We will attempt to capture further information on the benefits of the MPS where possible during the consultation. In addition, further details of the benefits of the MPS and its enabling activity may be provided should any UK Administrations consider it appropriate to provide guidance with an accompanying impact assessment on how their planning system will be implemented.

Other key non-monetised benefits by 'main affected groups'

A coherent system of marine planning would be much harder to achieve in the absence of the UK MPS. Therefore, to some extent, the UK MPS enables the impacts associated with marine planning to be realised. The integrated nature of the UK MPS provides greater clarity for marine industries and developers. There is likely to be some benefit in terms of time savings to marine stakeholders in being able to refer to a single statement rather than multiple documents. This has not been quantified.

Key assumptions/sensitivities/risks N/A	Discount rate (%) N/A
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Impact on admin burden (AB) (£m): New AB: N/A	AB savings: N/A	Net: N/A	Impact on policy cost savings (£m): Policy cost savings: N/A	In scope Yes/NO
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Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?			United Kingdom		
From what date will the policy be implemented?			01/04/2011		
Which organisation(s) will enforce the policy?			Marine planning authorities and other public bodies		
What is the annual change in enforcement cost (£m)?			N/A		
Does enforcement comply with Hampton principles?			Yes		
Does implementation go beyond minimum EU requirements?			N/A		
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)			Traded: N/A	Non-traded: N/A	
Does the proposal have an impact on competition?			No		
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?			Costs: 0	Benefits: 0	
Annual cost (£m) per organisation (excl. Transition) (Constant Price)	Micro 0	< 20 0	Small 0	Medium 0	Large 0
Are any of these organisations exempt?	No	No	No	No	No

Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...?	Impact	Page ref within IA
Statutory equality duties ⁹⁴ Statutory Equality Duties Impact Test guidance	No	10
Economic impacts		
Competition Competition Assessment Impact Test guidance	No	10
Small firms Small Firms Impact Test guidance	No	10
Environmental impacts		
Greenhouse gas assessment Greenhouse Gas Assessment Impact Test guidance	No	10
Wider environmental issues Wider Environmental Issues Impact Test guidance	No	10
Social impacts	No	
Health and well-being Health and Well-being Impact Test guidance	No	11
Human rights Human Rights Impact Test guidance	No	11
Justice system Justice Impact Test guidance	No	11
Rural proofing Rural Proofing Impact Test guidance	No	11
Sustainable development Sustainable Development Impact Test guidance	No	11

94. Race, disability and gender Impact assessments are statutory requirements for relevant policies. Equality statutory requirements will be expanded in 2011, once the Equality Bill comes into force. Statutory equality duties part of the Equality Bill apply to GB only. The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

References

Include the links to relevant legislation and publications, such as public impact assessment of earlier stages (e.g. Consultation, Final, Enactment).

Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

Annual profile of monetised costs and benefits* - (£m) constant prices

	Y ₀	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅	Y ₆	Y ₇	Y ₈	Y ₉
Transition costs										
Annual recurring cost										
Total annual costs										
Transition benefits										
Annual recurring benefits										
Total annual benefits										

* For non-monetised benefits please see summary pages and main evidence base section

Evidence Base (for summary sheets)

Introduction

The purpose of the proposed UK Marine Policy Statement (UK MPS) is to provide an overarching policy framework to guide the development of Marine Plans. Its role is largely to consolidate a wide range of existing policies that are relevant to marine management into a single document to make the job of developing marine plans easier and to make the process more transparent; it is also to set out the approach and principles for marine planning.

This Impact Assessment is at the stage of public consultation on a full draft of the UK MPS. The UK MPS is UK wide and will inform Marine Planning in each UK administration. Where appropriate each UK administration will be producing guidance, accompanied by their own IAs, to set out the detail of the marine planning system.

This Impact Assessment (IA) covers the impact specifically of the decision to have the UK MPS in place. This is therefore compared with a situation where a marine planning system is implemented but Marine Plans are guided by an array of relevant policies without having them consolidated into one place. IAs accompanying any guidance on the marine planning system within each administration will, as appropriate, cover the full impacts of having a marine planning system in place. The current IA is therefore relatively brief; any IA covering the relevant planning systems will be more detailed.

An Appraisal of Sustainability (incorporating a Strategic Environmental Assessment) (and a Habitats Regulation Assessment and Equality Impact Assessment) is being undertaken. This will appraise the UK MPS to ensure sustainable development principles are incorporated. The outputs of the Appraisal of Sustainability are expected to feed into the final version of this IA.

Problem under consideration

Increasingly, there are competing and conflicting demands for UK marine space and resources e.g. from renewable energy, aggregate extraction or fisheries. Overall, this increases pressure on marine ecosystems resulting in a decline in the socioeconomic value derived from them. Decisions on individual activities are, to varying degrees, taken independently making it challenging to avoid and manage conflicts and to take account of the way ecosystems function. This problem is documented in a series of reviews and reports dating from the Marine Stewardship Report in 2002.

Rationale for intervention

The market alone is not able to deliver the best solution because externalities imposed by different marine uses are often not taken into account, in part owing to inadequate information. A wide range of potential approaches to address this problem have been considered and consulted upon several times since 2002. Through this process it was

concluded that government intervention is necessary to introduce a more integrated forward looking policy and evidence driven approach. That is the rationale for a system of marine planning in the first place.

This IA considers the impact specifically of the UK MPS. There is a wide range of policies relevant in varying degrees to how different activities in the marine environment should be managed. There are also overarching policy goals for marine sustainable development as set out in: “Safeguarding our Seas: A strategy for the conservation and sustainable development of our marine environment” (see reference 1). Given what may sometimes be a complex landscape of interacting policies, in the absence of a policy framework to consolidate them, it is unlikely to be clear to marine planning authorities how marine plans should give effect to these policies.

Description and impact of options being considered

Background to the Marine Policy Statement

Enacted on 12 November 2009, the Marine and Coastal Access Act 2009 has introduced a new system of marine planning, which includes a Marine Policy Statement. This is to provide a clear and consistent framework for marine planning authorities when developing Marine Plans. The UK MPS will also be relevant to other decision makers who make decisions on specific activities or uses which affect the marine area. Marine Plans are expected to be developed in stages over a ten year period: the UK MPS should also guide decision-making during that

transitional period. The UK MPS is a UK document and is being developed by the UK Government and Devolved Administrations.

The MPS gives effect to the High Level Marine Objectives published in April 2009 in *Our Seas – A shared resource: High Level Marine Objectives*. These set out the outcomes the UK Government and Devolved Administrations are seeking which will contribute towards the achievement of sustainable development in the marine area and the wider context. The UK MPS explains how these objectives should be applied for each marine sector taking account of the various policy frameworks relevant to each sector. It explains the approach to the range of environmental impacts that need to be managed and what should be included in Appraisals of Sustainability. It also explains the wider principles that should govern marine planning: such as being evidence based, participatory, forward-looking and streamlined, taking account of international obligations, being compatible with the terrestrial planning system and based on an ecosystem approach.

The UK MPS will be the framework under which Marine Plans are developed. These plans will set out how the UK MPS will be implemented in specific areas. Each Marine Plan will be subject to its own Sustainability Assessment/SEA depending on the requirements of the legislation governing it. The process of developing the plan will also involve considering socio economic and environmental implications. The UK MPS will also set the direction for new marine licensing systems. The Marine and Coastal Access Act 2009 gives the UK MPS, when adopted, a legal effect on decision-making by public authorities. This means that licensing (or other authorisation)

of activities which affect or might affect the marine area and enforcement of licensing conditions will be in accordance with the MPS, unless relevant considerations indicate otherwise.

The options

Two options are considered:

- **The do nothing option** which outlines the impact of implementing a marine planning system without a UK MPS and provides a baseline for option 1.
- **Option 2** considers the impact of introducing the UK MPS.

The 'do nothing' option

This 'do nothing' option entails introducing a marine planning system but without the UK MPS in place. This would mean that the UK planning authorities and other relevant decision-making bodies would need to be guided by the range of relevant policies without reference to an overarching policy framework to guide how Marine Plans should be developed and other decisions made. It would also mean that in the transitional period until Marine Plans are in place, licensing and other marine management activities would continue referencing the range of policy documents rather than being governed by the UK MPS.

Under this option marine planning and marine management would still be possible. However:

- a) It would make developing marine plans more challenging, because marine planning

authorities would need to determine how the range of policies relevant to the management of marine activities should be applied to marine planning and particularly how the High Level Marine Objectives should be delivered.

- b) This is likely to lead to less consistency across authorities and even across different Marine Plans developed by the same authority.
- c) It would be less transparent how the development of Marine Plans had implemented the range of relevant policies and be more open to challenge.
- d) It would provide industry with less certainty on how Marine Plans will be developed and how to prepare for marine planning.
- e) Overall it would make it harder to achieve the intended objectives of marine planning, once Marine Plans have been implemented.

Introduce the UK Marine Policy Statement

This option is to introduce the UK MPS to guide how Marine Plans are developed and implemented as well as to govern decisions affecting the marine environment more widely even before Marine Plans are in place.

This section covers the costs and benefits of introducing the UK MPS. The benefits are, to a large extent, in avoiding the risks identified at a) to e) above.

Costs

In general terms the UK MPS consolidates existing policies and in doing so does not introduce new costs for any party. There have been some relatively small resource implications in bringing policies together into a single document. These will very largely have been incurred when the decision this IA is intended to inform – of whether to go ahead with the UK MPS – is taken: so these are considered sunk costs.

Benefits

In essence, the ‘do nothing’ option covers the ways in which not introducing the UK MPS risk the achievement of the potential benefits of a coherent approach to marine management and marine planning. This section is therefore the converse, explaining the ways in which an MPS will help to secure those benefits. It is not immediately possible to quantify the extent to which the benefits of marine planning will increase as a result of having an MPS.

Benefits to government (central, devolved, local, agencies) include:

- An overarching policy statement setting out a coherent picture of Government policy will make it easier for marine planning authorities to develop Marine Plans.
- Even before Marine Plans are implemented, license authorities and others will benefit from not having to weigh up the combined intent of many different national and local policies in coming to the decisions they make.

- A common document is expected to make co-ordination between different government bodies more straightforward, including co-ordination with the terrestrial planning system.
- It is expected to make decision-making more transparent and consistent, reducing the risk of challenge.
- The fact the UK MPS is UK-wide allows common principles to be applied across UK Administrations and, although not legally required, will encourage the consistency and coherence of approach to management.
- Although devolved administrations could produce Marine Plans without adopting the UK MPS, they would not be able to plan where responsibilities have not been devolved. This includes certain ‘retained’ functions and in the area beyond 12 miles from the coastline; this would prevent the full benefits of integrated UK marine planning.
- Local Authorities who take decisions that affect the marine environment will have a central point of reference to guide them.
- Clear specification of objectives of marine planning in the UK MPS will provide a sound basis for evaluating the effectiveness of the marine planning system.

Benefits to business, other marine users and the public include:

- The overall framework for marine management will be clearer and more transparent, making it easier for marine users to know what is expected of them.

- It will be clearer to the wider public what the Government's objectives and level of ambition for the marine environment is.
- It will facilitate more efficient and strategic use of the marine environment.

Benefits to the environment include:

- Further embedding of sustainable development principles into marine management
- Integrating policies may help to take better account of and address cumulative impacts.
- Integrating all policies into a high level framework for marine planning and decision making that requires consideration of climate change impacts should help to ensure that where climate change impacts act in combination with other more directly controllable pressures, the latter are managed to avoid irreversible damage.

Specific Impact Tests

Statutory equality duties

*Race, disability and gender equality***

While it is thought that marine activities referred to in the UK MPS have the potential to result in benefits and costs upon coastal communities and groups of society, which may have equalities target groups embedded within them, the UK MPS is guided by the High Level Marine Objectives which make specific provisions to ensure that decisions on marine activities benefit society as a whole and are made in the context of ensuring a strong healthy and just society.

Therefore, this suggests that the UK MPS is unlikely to discriminate against any sections of society.

Economic impacts

Competition Assessment

Since the UK MPS draws together and clarifies existing policies in the marine environment it is unlikely in itself to have any material impact on competition. Where there is impact on competition this is expected to be positive by producing a more equitable situation both across and within different industry sectors. Set up costs and current barriers to market entry for new or potential firms are expected to reduce as a result of increased transparency and the clear communication of the strategic plan for sustainable marine development. This will be beneficial to both new entrants and existing firms, facilitating economic growth. Further details of the benefits of the MPS and its enabling activity may be provided should any UK administrations consider it appropriate to provide guidance with an accompanying impact assessment on how their planning system will be implemented .

Small Firms Impact Test

Since the UK MPS draws together and clarifies existing policies in the marine environment its additional impact on small firms is anticipated to be minimal. Some positive benefits may be expected due to the greater ease and simplification of accessing information and greater alignment of policies within the MPS.

Environmental Impacts

*Greenhouse Gas Assessment**

As part of the wider proposals set out in the Marine and Coastal Access Act, the UK MPS will help the UK Government and Devolved Administrations meet targets to limit greenhouse gas emissions. The objective of managing the marine area in a more sustainable manner will help maintain the sea's crucial role in CO² absorption.

*Wider environmental issues**

To the extent that the UK MPS enables effective marine planning it is likely to improve environmental outcomes – this is covered in the main narrative of this IA.

Social impacts

*Health Impact Assessment**

We are confident that the UK MPS will not raise any negative health issues. It is not expected to affect health and well-being, or health equalities compared to the baseline 'do nothing' option.

Human Rights

The UK MPS is not considered to present a breach of Convention rights. A detailed assessment of the impact of the Marine and Coastal Access Act (2009) and its provisions on human rights was undertaken through the development of the memorandum on the Act's compatibility with Convention rights which accompanied the Act (at Bill stage) upon introduction to Parliament.

Rural Proofing

The UK MPS applies to the UK marine area and activities that take place there mainly affecting the rights of the users of the marine area and the wider public interest of protecting the marine environment. However, there is some inevitable overlap between marine and land issues. Rural communities will benefit from increased certainty that will be generated for marine and coastal developers, and better management of marine and coastal resources.

Sustainable Development*

Marine planning will help the UK Government and Devolved Administrations achieve their sustainable development objectives. The Marine and Coastal Access Act 2009 makes it clear that the UK MPS should contribute to the sustainable development of the UK marine area. Overall sustainable development benefits will be generated from better use of the marine area brought about by the MPS.

Legal Aid

Since the UK MPS draws together and clarifies existing policies in the marine environment its additional impact on legal aid is anticipated to be minimal.

*An Appraisal of Sustainability (AoS), which includes an assessment of impact relating to sustainability (including the topics listed within these specific impact tests) and a Strategic Environmental Assessment, is being undertaken.

**An Equalities Impact Assessment (EqIA) is being undertaken

Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added where the Specific Impact Tests yield information relevant to an overall understanding of policy options.

Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below

Basis of the review: [The basis of the review could be statutory (forming part of the legislation), it could be to review existing policy or there could be a political commitment to review];

The Marine and Coastal Access Act 2009 provides that the UK MPS should be reviewed as and when the policy authorities (the Secretary of State in conjunction with devolved authorities) consider it necessary.

Review objective: [Is it intended as a proportionate check that regulation is operating as expected to tackle the problem of concern?; or as a wider exploration of the policy approach taken?; or as a link from policy objective to outcome?]

Reviewing the UK MPS is to ensure that it remains fit for purpose – in particular whether there has been a significant change in evidence underpinning policies, whether there are new policies that need reflecting in the MPS and whether the UK MPS' policy objectives need amending.

Review approach and rationale: [e.g. describe here the review approach (in-depth evaluation, scope review of monitoring data, scan of stakeholder views, etc.) and the rationale that made choosing such an approach]

Each Marine Plan is to be kept under review and a report written at intervals of not more than three years. This will enable identification of any specific problems. In addition 6 years after the passing of the Act and every 6 years up to 2030 there must be a report on all Plans. This will provide the opportunity to evaluate the effectiveness of the UK MPS at informing the development of plans.

Baseline: [The current (baseline) position against which the change introduced by the legislation can be measured]

The review of the planning system as part of which the UK MPS will be reviewed, will use a baseline of continuing to manage the marine environment without marine planning. The specific question of the effectiveness of the MPS will use a baseline of marine planning continuing without the UK MPS. Should international obligations for marine planning be introduced the baseline may have to be reconsidered.

Success criteria: [Criteria showing achievement of the policy objectives as set out in the final impact assessment; criteria for modifying or replacing the policy if it does not achieve its objectives]

These will be set out in the final impact assessment.

Monitoring information arrangements: [Provide further details of the planned/existing arrangements in place that will allow a systematic collection of monitoring information for future policy review]

Monitoring indicators will be developed to determine whether marine plans are achieving their objectives. More detail is included in the consultation on the marine planning system.

Reasons for not planning a PIR: [If there is no plan to do a PIR please provide reasons here]



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